EMS District #2

Performance Based EMS: Patient Focused – Value Demonstrated – Outcome Driven

STAFF REPORT

To: **The Participating Jurisdictions of EMS District #2**
Steve Stuart, Chair Clark County Commissioners
Bill Barron, Clark County Administrator
Lisa Walters, Mayor City of Battle Ground
John Williams, Manager City Of Battle Ground
Jim Irish, Mayor City of LaCenter
Suzanne Levis, Finance Director/Clerk City of LaCenter
Ron Onslow, Mayor City of Ridgefield
Phil Messina, Manager City of Ridgefield
Grover Laseke, Mayor City of Woodland
Mari Ripp, Mayor Clerk/Treasurer City of Woodland

From: Doug Smith-Lee, CRESA EMS Manager

Date: May 22, 2013

Re: **2014 EMS System Design Decisions**

Objective: Establish a carefully structured ambulance procurement process to reach the desired outcomes of: Clinical Excellence; Response Time Reliability; Customer Satisfaction; and Economic Efficiency for EMS District #2 (District)

Current Situation: Ambulance procurements begin with the development of EMS System Design Decisions. These Decisions ensure the EMS system and ambulance contract is based on a structured process to ensure clinical excellence, response time reliability and economic efficiency, and not a political process based on special interest lobbying.

Such decisions fall into six broad areas: Service Area Definition, Medical Oversight Structure, Regulatory and Contract Oversight Structure, Control Center Operations, 1st Responder Services, and Ambulance Service.

In the development of 2014 EMS System Design Decisions for the next ambulance procurement process, the District directed staff to take a comprehensive approach in examining all of the current EMS system's key design elements. This examination involved specific workgroups composed of over seven committees, or workgroups and 30 individuals who provided 770 hours of input over a two year period of time.

The EMS System Design Decisions provide the policy level framework and foundation for the 2014 ambulance procurement legal instruments.

The three ambulance procurement legal instruments include:

1. The *Uniform EMS Ordinances* adopted by each participating jurisdiction. Its purpose is to provide for the competitive allocation of ambulance market rights, outline administrative and regulatory responsibilities, and to clarify medical oversight responsibilities.
2. The *EMS Interlocal Cooperation Agreement* adopted by each participating jurisdiction that authorizes: EMS regulatory oversight to Clark County, and for the District to represent the jurisdictions in group purchasing and oversight of ambulance service.
3. The *Paramedic Ambulance Service Contract* that is competitively awarded to a single firm and defines the mark rights and responsibilities for delivering paramedic ambulance service within the District's Contract Service Area.

Background: All of the 2014 EMS System Design Policy Decisions were recommended by November 2012 from the various work groups, with the exception of those related to governance. On March 12, 2013, Vancouver's City Manager sent a letter to EMS District #2 and the EMS Administrative Boards advising on the direction given by the City Council to implement one of two options regarding governance for the 2014 ambulance contract: 1) Vancouver becomes the ambulance contract administrator for all of the District; or 2) Vancouver withdraws from the District and contracts for ambulance service for the City.

Budget and Policy Implications: Expenses related to the ambulance procurement process have been budgeted in the 2013/2014 CRESA EMS Program Budget. Part of the procurement process includes revision and approval of key EMS system design policy decision to be approved by participating jurisdictions.

Next Steps:

1. May/June 2013 - (If jurisdictions request major design changes) Convene a policy level task force to review and recommend revisions to the EMS System Design Decisions.
2. June 2013 – (If there are no major design changes) EMS District #2 considers approval of 2014 EMS System Design Decisions.

Action Requested: Provide written policy level approval, or request for revisions of the 2014 EMS System Design Decisions by June 17, 2013.[1]

_____ Approved _____

Anna Pendergrass, CRESA Director

Attachment: 1) 2014 EMS System Design Decisions Executive Summary
Exhibit: A) 2014 EMS System Design Decisions

[1] CRESA's EMS Program is available to answer questions and attend work sessions/public hearings as requested by participating jurisdictions regarding the 2014 EMS System Design Decisions. You may contact the EMS program by calling (360) 737-1911 ext.3949 or email doug.smith-lee@clark.wa.gov

ATTACHMENT 1

EXHIBIT A

I. EXECUTIVE SUMMARY

This section provides an executive summary of Clark County *EMS District #2's* (District's) 2014 *Emergency Medical Services* (EMS) System Design Decisions. These Decisions are the public policies that create a community's underlying EMS system framework including the following ambulance procurements legal instruments: EMS Interlocal Agreement, *Uniform EMS Ordinance* and the next Ambulance Service Contract scheduled to be awarded October 1, 2014.

In the development of these EMS System Design Decisions, the *EMS Administrative Board* directed staff to take a comprehensive approach in examining all of the current EMS system's key design elements. This examination involved specific workgroups composed of over 30 individuals who provided over 750 hours of input (see Acknowledgements, page i and Development Process, page 12). The examination also included review of numerous EMS design studies (see References, page 14).

As a result of this open and transparent process, the 2012 – 2017 Clark County EMS District #2 Strategic Plan was approved by the EMS District #2 Board on October 23, 2012. This plan in turn helped guide the development of these EMS System Design Decisions.

Having such EMS System Design Decisions at the beginning of the ambulance procurement process ensure decisions are based on the clinical, response time and economic objectives, rather than emotional and special interest lobbying efforts. These objectives are possible if the participating jurisdictions are invested in a subject matter expert/best practices process and not a political process.

The following is summary of the 32 EMS System Design Decisions for the District. These Decisions fall into six areas that compose an EMS system including: Service Area Definition; Regulatory and Contract Oversight; Medical Oversight; Control Center Operations; First Responder Services and Ambulance Service. The details to the summary below can be found in Section III of this document.

A. Service Area Definition

1. Regulation vs. Contract - The *Regulated Service Area* shall include the unincorporated area of Clark County plus the corporate limits of the Cities and all other general purpose jurisdictions which have adopted the Uniform EMS Ordinance and entered into the *EMS Interlocal Cooperation* Agreement. The *Contract Service Area* shall include the geographic area within the County currently served by the *ambulance contractor* excluding the City of Vancouver.

B. Regulatory and Contract Oversight Structure

2. Organization

   a. EMS Administrative Board Membership - EMS system design and administration is quite complex and best carried by an independent,

unaffiliated and objective group of people selected for their expertise in specific professional disciplines required in the development and oversight of the emergency ambulance service.

The job of the EMS Administrative Board is to make complex business and financial decisions. The EMS Administrative Board does not set or alter medical policy within the system. Based on the EMS Administrative Board's responsibilities, membership shall include expertise in business, finance, law, and health care administration. Membership shall specifically include a 5-person Board of community volunteers consisting of:

1) One with expertise in law
2) One with expertise health care administration
3) One with expertise in health care or business administration
4) One with expertise in business and finance
5) One with expertise in insurance

b. EMS District #2 Board Membership - The job of the *EMS District #2 Board* is to make policy decisions related to the recommendations provided by the EMS Administrative Board. This Board shall be composed of:

1) Two County Commissioners; and
2) One participating cities (Battle Ground, LaCenter, Ridgefield and Woodland) councils' member.

3. <u>Delegated Authority and Responsibilities (Complete list see Section III)</u>

a. *Participating Jurisdictions* -

- Uniform schedule of *subsidy/price options* within its own jurisdiction.
- Uniform quality of EMS care

b. Clark County -

- Contract with the *Medical Program Director*
- Enter into agreements with CRESA to carry out the EMS administrative and regulatory responsibilities
- Administer financial and budgeting functions

c. EMS District #2 -

- Approve the competitive process for procuring ambulance services as recommended by *the EMS Administrative Board.*
- Determine whether to award the ambulance service contract as recommended by the EMS Administrative Board.

- Confirm the initial Uniform Schedule of Subsidy/Price Options established by *the* EMS Administrative Board

d. EMS Administrative Board -

- Develop and administer a competitive process for procuring ambulance service
- Establish the ambulance contractor's Uniform Schedule of Subsidy/Price Options
- Determine ambulance contractor's *annual inflation adjustments*
- Conduct ongoing ambulance contract administration and oversight.
- Declare declarations of major default by the ambulance contractor.
- Provide a consolidated annual report to participating jurisdictions.

C. Medical Oversight Responsibilities

4. Organization - The Uniform EMS Ordinance and Interlocal Cooperation Agreement shall recognize a single Medical Program Director who is appointed by the State and shall be contracted by the County to provide a District-wide program of medical quality control and regulation.
5. Scope of Authority - All of the *patient* care delivered in EMS systems is subject to the authority of the medical director. Subject to reasonable due-process constraints, the medical director is empowered to establish and enforce the system's standard of care.
6. System Standard of Care Development and Revision - Medical Program Director develop and revise the *System Standard of Care* as follows:
   a. Establish and appoint committees to secure broad-based input to the regulatory process
   b. No proposed change to the System Standard of Care shall become effective prior to the EMS Administrative Board reviewing a financial impact statement
   c. If financial impact statements show an increase in the ambulance contractor's user-fees and/or subsidies, the proposed standard shall not become effective until approved by the EMS Administrative Board.
7. System Standard of Care Administration – Medical Program Director shall administer the System Standard of Care as follows:
   a. Recommend the State issue, renew, suspend, revoke, and restrict various EMS-related certifications.
   b. Establish and maintain a system of clinical monitoring, medical audit, and medical quality control; and advance the practice of out-of-hospital emergency medicine through clinical research.

D. Control Center Operations

8. Consolidated Processing of Medical Requests - CRESA shall be responsible for 9-1-1 call taking functions and the dispatch of two public ambulance providers and all first response agencies. The ambulance contractor shall be responsible for seven-digit call taking functions and the dispatch of its ambulances.

9. Control Center Accountability - The following information outlines control center assumptions and understandings:

   a. The contractor shall be indemnified and held harmless from causes of action resulting from negligence by CRESA, or its employees.

   b. The contractor shall be exempt from late-run penalties and response time obligations when information obtained by CRESA and conveyed to the contractor is inaccurate, or incomplete.

   c. Contractor's response time clock shall start after initial interrogation and computer transfer of information (location and chief complaint that determines the priority) to contractor by CRESA via Computer Aided Dispatch (CAD) interface.

   d. During periods of temporary malfunction of CRESA's data transfer capabilities; the contractor's response time clock shall start upon oral receipt of response priority code, chief complaint, location/premise information, and callback number.

10. Dedicated vs. Multi-Site Ambulance Control Center - Bidders shall have the option of having a control center that is dedicated to Clark County operations or multi-site operations. Should a bidder elect to dispatch multi-site operations, the following issues will need to be adequately addressed:

    a. Staffing dedicated to Clark County operations

    b. That Clark County dispatch times are not delayed from competing/simultaneous demand for response from other operations

    c. Plans to ensure staff can effectively handle the multiple protocols, policies and procedures as defined by multi-site authorities.

    d. Plans to ensure staff is geographically proficient in Clark County's Service Area.

11. Ambulance Control Center Location Option - The ambulance contractor shall have the option of co-locating a 7-digit call taking and dispatch control center in the Portland/Vancouver metropolitan area, in CRESA, or subcontracting with CRESA for 7-digit call taking and dispatch control functions. Should the ambulance contractor elect to co-locate, or subcontract with CRESA, issues

of personnel, equipment and funding need to be adequately addressed and mutually agreed upon by the contractor and CRESA.

12. CAD Systems - The contractor shall furnish at its own expense a state-of-art SSM-based CAD system and Mobile Computing Devices, capable of two-way interfacing with CRESA's CAD.
13. Streamlined Process - To ensure the speedy transfer of all 9-1-1 medical requests and to eliminate the need to verbally transfer information over the phone and/or pager, the ambulance contractor shall provide and maintain a two-way interface between CRESA's CAD and the contractor's CAD.
14. System-Wide Compatibility - Communications/CAD system components for ambulance services should, if feasible, be made uniform throughout the county.
15. Simultaneous Alert of 1st Response and Ambulance Control - Nothing shall be done which may adversely affect delivery of 1st responder services. In this regard, the following criteria are established:
    a. 1st response units shall continue to be selected and dispatched by 911 control center personnel..
    b. On all 911 medical requests, information initially obtained by the 911 "call-taker" shall be simultaneously and automatically "shipped" via computer transmission to a fire-dispatch console within the 911 center and to the ambulance control center.
    c. Each 1st responder agency shall have the right to choose between responding on all 911 medical requests; or responding only to calls with life-threatening potential, as classified in strict accordance with *Emergency Medical Dispatch (EMD)* priorities approved by the Medical Program Director.
    d. Communications systems shall be configured to allow 9-1-1 dispatch personnel to listen in on any or all 9-1-1 call-taking telephone interrogations, so as to better coordinate 1st response participation.
    e. CAD/communications systems shall be so designed that premise-entry updates and additional medical information shall electronically "ship" to the fire-dispatch console and ambulance mobile data terminals.
16. Countywide Priority Dispatching - CRESA shall provide 9-1-1 medical priority dispatching for all first response agencies and ambulance services in the County. The contractor shall provide medical priority dispatching for all seven-digit requests of its ambulance service. The medical priority dispatching protocols and procedures shall be the Medical Priority Dispatch System.
17. Training Level - CRESA and the ambulance contractor's control center medical call takers shall be NAEMD trained, certified, and accredited as approved by the Medical Program Director.

18. Division of Functions – (See Section III to spreadsheet on the division of functions).

E. First Responder Services

19. Production Method – Since many of the costs for fire services are fixed based on meeting the Standard of Cover (SOC) for fire suppression, the most cost-effective method of providing first responder services is with the use of existing fire fighter personnel. However, some fire services may also deploy one or two person cars, or rescues to more efficiently respond to increased demand (high EMS call volumes) verses SOC for fire suppression, so long as applicable provisions of the System Standard of Care are met.

20. Business Structure and Financing - First responder services should be funded by each respective jurisdiction, or fire district to meet the minimum 1st responder performance requirements established by the Uniform EMS Ordinance and *EMS Administrative Rules*. Costs associated with 1st responder medical supplies used on patients transported by the ambulance contractor, shall be addressed under System Design Decision #25 Financing.

21. Performance Standards -

    a. Response Time Performance. Based on clear research showing the value of early first response with CPR and defibrillation on cardiac arrest survival, as well as other time life priority situations and the need for timely first response on calls requiring additional personnel, rescue and hazmat operations, all fire agencies have the goal of rapid first response (i.e., 4 – 5 minutes). Yet faced with the realities of not all fire agencies operating in an urban setting and the limitations of available funding, current response time performances will be shown in the RFP to assist in designing an EMS system response that encourages agreements between the ambulance contractor and first responders taking full advantage of all EMS resources (see System Design Decision 28. c.)

    b. Clinical Performance. The minimum clinical performance for first response is at the Emergency Responder (EMR) level with AED capabilities. Should a first response agency show that in meeting this requirement it's expected to cause a reduction or loss of existing service due to financial hardship, the Medical Program Director may waive the requirement pursuant to the Clark County EMS Administrative Rules regarding granting variances.

       Each first response service can choose a higher level of clinical performance, so long as applicable provisions of the System Standard of Care are met (i.e., sacrificing timely response in order to provide a higher level of *Advanced Life Support*, *ALS* response).

F. Ambulance Service

22. Market Rights - The ambulance contract for EMS District #2 should assume full exclusivity of market rights based on studies showing that retail competition for 9-1-1 and *routine transport* does not produce clinically sound ambulance service at the lowest possible cost, as well as the court supporting such exclusive contracts.

23. Production Method - The full-service, all-ALS flexible production strategy for 9-1-1 responses; and an ALS/BLS production strategy for non-emergency calls that originate at a medical facility, with a physician or physician assistant on-scene, shall be employed within the system design and contracting method. Proposers may offer a strategy of a multi-tiered ALS/BLS ambulance system for 9-1-1 calls so long as the clinical and economic concerns are addressed to the satisfaction of the review team.

24. Business Model - The business structure shall be a *Franchise Model*. The Contractor shall furnish its own facilities, vehicles and equipment, as well as be the direct retail of services. Based on possible changes in the ambulance service industry due to health care reform, a provision shall be built into the contract to allow for early termination, or buy out.

25. Financing – Ambulance service provided by the contractor and administrative costs of the County and District shall be funded from user-fees, unless individual jurisdictions choose from a uniform schedule of subsidy/price options effective within its own jurisdiction.

    The contractor shall also reimburse, provide, or exchange 1st responder services for Medical Program Director approved ALS medical supplies provided on patients transported within the Contract Service Area. Such reimbursement shall be at the rate the contractor pays for the same ALS medical supplies. The contractor is not obligated to reimburse 1st responders for ALS medical supplies if an EMS levy is implemented to pay for first responder EMS services, or for supplies electively carried by the 1st responder and exceed the minimum Medical Program Director approved ALS supply list.

26. Competitive Bid Variable - The ambulance procurement process shall set the cost variable by establishing a reasonable fee based on the industries Unit Hour Costs (UHCs) for services offering similar levels of service and market conditions (collection rates based on the payor mix); and subsidy (if any). Based on a point scoring system, the contract shall be awarded to the firm offering the best quality of service within the reasonable fee.

27. Duration of Market Rights – The term of the contract shall be for six years, with an opportunity for three “earned” two-year contract renewals at the option of the District. “Earned” renewals shall be based on performance exceeding contract requirements and superior cost containment.

28. Performance Requirements - This shall be a performance-based contract, not a level-of-effort contract. Focus is on performance results with limited restrictions on production methods. The ambulance contractor shall be

retained for expertise in effectively and profitably managing the delivery of paramedic ambulance services. The following list shall include, but is not limited to the following minimum performance requirements:

a. Key Personnel. Authority/responsibilities given to local operations director/manager; focus on clinical/QI manager; and employee to supervisor ratio.

b. Clinical Performance. All-ALS for 9-1-1 response; training and certification that meets the System Standard of Care; current MPD patient care guidelines; formal training and quality improvement program; mandatory inservice training; and research;

c. Response Time Performance. The following response time standards are based on: 1) clinical evidence that shows the efficacy to transport certain time-critical patients for definitive therapy (cardiac arrest, severe respiratory distress, chest pain/STEMI, CVA and severe trauma); 2) research on response times and patient outcomes for non-life threatening emergencies being inconclusive; and 3) the 2012 – 2017 EMS Strategic Plan's Goal II. B. (Exhibit A) to ensure EMS resource deployment is implemented in such a way that all resources (first response and ambulance) are coordinated in an efficient and effective manner.

	Hot - Lights and Siren Response						**Cold – No Lights and Siren Response**		
	Priority 1		Priority 2	Priority 3			Priority 4	Priority 5	Priority 6
	Time Life Priority ≥ 90%			Emergent ≥ 90%			Non-Emergent ≥ 90%		
	Urban	Suburban	Rural	Urban	Suburban	Rural	Urban	Suburban	Rural
ALS (w Agreement or Ambulance w/o Agreement)	8m59s	11m59	19m59s	10m59s	13m59s	21m59s	15m59s	19m59s	29m59s
Ambulance (w Agreement)[1]	10m59s	13m59	21m59s	12m59s	15m59s	23m59s	17m59s	21m59s	31m59s

c. Control Center Performance. [See Sections II and III. D]

d. Fleet and Equipment Operations. Fleet and equipment maintenance practices; feet size and description of vehicles; and MPD equipment requirements.

f. Community Service, Public Education, and Customer Service. Customer service training; customer service surveys; complaint/inquiry practices; and public illness and injury prevention.

[1] The Vancouver Fire Department does not want to enter into a public private partnership with the Contractor and has committed to the "ALS" standard. As a result the Contractor is only obligated to meet the "Ambulance Standard" within the City of Vancouver.

g. First Responder Support. Equipment return practices; ALS medical supplies (see I. 25); allied agency communication, training and quality improvement; public-private partnerships.

h. Accounts Receivable. Electronic billing; assistance in recovering third party reimbursement and financial hardship; policies on billing; notice; and collections.

i. Employee Provisions. Treatment of incumbent workers; employee recruitment, screening and orientation; compensation; reasonable work schedules and working conditions; risk management and safety program; culturally diverse workforce; and non-harassment, intimidation, retaliation and discrimination.

29. Performance Security - Within 30 days after award of the contract, the contractor shall furnish and maintain a performance security in the amount of $2 million in the form of an Irrevocable Letter of Credit, or other security acceptable to the EMS Administrative Board and approved by the District. Additional performance security shall be obtained by the District if necessary through a low interest loan (i.e., general fund, investment pool, etc.) to ensure sufficient financing to continue operations until receipt of billing revenues.

30. Lease Arrangement - Within 60 days after award of the contract, the contractor shall furnish and maintain a three-way leasing program, or a conditional lease arrangement provided that the conditional lease contains equal assurances as the three-way lease.

31. Liquidated Damages - Financial penalties in addition to late run fines shall be established for contractual violations as well as for default.

32. Consideration for Changes in the Industry - The contract shall have “re-opening” provisions in the event of significant health care reforms, anti-trust legislation, or other events that undermine the design of this EMS system.

As a result of these EMS System Design Policy Decisions, the participating jurisdictions within the District have a carefully structured EMS system and ambulance contract to ensure the standards of clinical excellence, response time reliability, and economic efficiency are met. This system was designed so that it can be responsive to changes in economic conditions and advancements in clinical care.

FINAL 05/22/13

2014
EMS System Design Decisions

EMS District #2

Performance Based EMS: Patient Focused – Value Demonstrated – Outcome Driven

CRESA

Clark Regional Emergency Services Agency's
EMS Program

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ACKNOWLEDGEMENTS

A special thanks to Jerry Overton, who at no charge provided his guidance and expertise in these EMS System Design Decisions. Jerry is named as one of the 20 most influential leaders in EMS by JEMS Magazine. He is a past president of the American Ambulance Association and served as a member of the Institute of Medicine's Committee on the Future of Emergency Care in the U. S. Health System. Jerry has provided technical assistance throughout the United States and in Europe, Asia, and Canada, including the design of an implementation plan for an Emergency Medical Transport program in Central Bosnia – Herzegovina.

Thanks also to the following persons for the time and work they provided in helping develop these EMS System Design Decisions.

EMS Administrative Board:

Chair Mike Plymale, (Chair) President
Plymale Inc. PS
Financial Representative

Nancy Retsinas, JD
Retsinas Law Office, PC
Legal Representative

Dan Keteri, VP Patient Care Service
Peace Health SW Medical Center
Healthcare Administration Representative

Vicki Scheel, Administrator
Vancouver Convalescent Center
Business Representative

Jerry Nies, President
Nies Insurance Company
Insurance Representative

EMS Strategic Plan and System Design Work Groups' Representatives:

Michael Albrich MD,	Medical Director, Emergency Dept.	Legacy Salmon Creek Medical Center
Keith Flewelling,	Technical Services Manager	Clark Regional Emergency Services Agency
Mark Gassaway,	Finance Manager	Clark County Auditor's Office
Jay Getsfrid	EMS Captain	Vancouver Fire Department
Jerry Green	Fire Chief	Clark County Fire District #6
Lloyd Tyler,	Chief Financial Officer	Vancouver Financial Management Services
Terrie Handy,	Revenue Cycle Director	Legacy Health
Heather Hewahewa,	Business Analyst	Peace Health SW Medical Center
Mike Hollingsworth,	EMS Captain	Clark County Fire District #6
Elizabeth Kalik,	EMS Data Analyst	Clark Regional Emergency Services Agency
Richard Konrad,	Program Manager	Clark County Public Health
Dennis Mason,	Fire Chief	Clark County Fire & Rescue
Donavan Mattern	Assistant Chief	Clark County Fire District #3
Steve Maynard,	Project Coordinator	Clark County Community Services
Joe Molina,	Fire Chief	Clark Vancouver Fire Department
Marc Muhr	Medical Program Director Assistant	Clark County EMS
Katy Myers	9-1-1 Operations Manager	Clark Regional Emergency Services Agency
Dave O'Brien	Battalion Chief	Clark County Fire District #3
Jennifer Packer,	Director, Emergency Services	Peace Health SW Medical Center

EMS Strategic Plan and System Design Work Groups' Representatives, Cont.

Anna Pendergrass,	Director	Clark Regional Emergency Services Agency
Marti Petri,	Ambulance Services Program Manager	Kaiser Permanente
Adriana Prata	Senior Management Analyst	Clark County Office of Budget
Dave Seabrook,	Battalion Chief	Vancouver Fire Department
Lynn Wittwer MD,	Clark County Medical Program Director	Clark County EMS
Steve Wrightson,	Fire Chief	Clark County Fire District #3
Dan Yager	Deputy Chief of Operations	Clark County Fire & Rescue

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    d. Plans to ensure staff is geographically proficient in Clark County's Service Area.

11. Ambulance Control Center Location Option - The ambulance contractor shall have the option of co-locating a 7-digit call taking and dispatch

control center in the Portland/Vancouver metropolitan area, in CRESA, or subcontracting with CRESA for 7-digit call taking and dispatch control functions. Should the ambulance contractor elect to co-locate, or subcontract with CRESA, issues of personnel, equipment and funding need to be adequately addressed and mutually agreed upon by the contractor and CRESA.

12. CAD Systems - The contractor shall furnish at its own expense a state-of-art SSM-based CAD system and Mobile Computing Devices, capable of two-way interfacing with CRESA's CAD.
13. Streamlined Process - To ensure the speedy transfer of all 9-1-1 medical requests and to eliminate the need to verbally transfer information over the phone and/or pager, the ambulance contractor shall provide and maintain a two-way interface between CRESA's CAD and the contractor's CAD.
14. System-Wide Compatibility - Communications/CAD system components for ambulance services should, if feasible, be made uniform throughout the county.
15. Simultaneous Alert of 1st Response and Ambulance Control - Nothing shall be done which may adversely affect delivery of 1st responder services. In this regard, the following criteria are established:
    a. 1st response units shall continue to be selected and dispatched by 911 control center personnel..
    b. On all 911 medical requests, information initially obtained by the 911 "call-taker" shall be simultaneously and automatically "shipped" via computer transmission to a fire-dispatch console within the 911 center and to the ambulance control center.
    c. Each 1st responder agency shall have the right to choose between responding on all 911 medical requests; or responding only to calls with life-threatening potential, as classified in strict accordance with *Emergency Medical Dispatch (EMD)* priorities approved by the Medical Program Director.
    d. Communications systems shall be configured to allow 9-1-1 dispatch personnel to listen in on any or all 9-1-1 call-taking telephone interrogations, so as to better coordinate 1st response participation.
    e. CAD/communications systems shall be so designed that premise-entry updates and additional medical information shall electronically "ship" to the fire-dispatch console and ambulance mobile data terminals.
16. Countywide Priority Dispatching - CRESA shall provide 9-1-1 medical priority dispatching for all first response agencies and ambulance services in the County. The contractor shall provide medical priority dispatching for all seven-digit requests of its ambulance service. The

medical priority dispatching protocols and procedures shall be the Medical Priority Dispatch System.

17. Training Level - CRESA and the ambulance contractor's control center medical call takers shall be NAEMD trained, certified, and accredited as approved by the Medical Program Director.

18. Division of Functions – (See Section III to spreadsheet on the division of functions).

E. First Responder Services

19. Production Method – Since many of the costs for fire services are fixed based on meeting the Standard of Cover (SOC) for fire suppression, the most cost-effective method of providing first responder services is with the use of existing fire fighter personnel. However, some fire services may also deploy one or two person cars, or rescues to more efficiently respond to increased demand (high EMS call volumes) verses SOC for fire suppression, so long as applicable provisions of the System Standard of Care are met.

20. Business Structure and Financing - First responder services should be funded by each respective jurisdiction, or fire district to meet the minimum 1st responder performance requirements established by the Uniform EMS Ordinance and *EMS Administrative Rules*. Costs associated with 1st responder medical supplies used on patients transported by the ambulance contractor, shall be addressed under System Design Decision #25 Financing.

21. Performance Standards -

    a. Response Time Performance. Based on clear research showing the value of early first response with CPR and defibrillation on cardiac arrest survival, as well as other time life priority situations and the need for timely first response on calls requiring additional personnel, rescue and hazmat operations, all fire agencies have the goal of rapid first response (i.e., 4 – 5 minutes). Yet faced with the realities of not all fire agencies operating in an urban setting and the limitations of available funding, current response time performances will be shown in the RFP to assist in designing an EMS system response that encourages agreements between the ambulance contractor and first responders taking full advantage of all EMS resources (see System Design Decision 28. c.)

    b. Clinical Performance. The minimum clinical performance for first response is at the Emergency Responder (EMR) level with AED capabilities. Should a first response agency show that in meeting this requirement it's expected to cause a reduction or loss of existing service due to financial hardship, the Medical Program Director may waive the requirement pursuant to the Clark County EMS Administrative Rules regarding granting variances.

Each first response service can choose a higher level of clinical performance, so long as applicable provisions of the System Standard of Care are met (i.e., sacrificing timely response in order to provide a higher level of *Advanced Life Support*, *ALS* response).

F. Ambulance Service

22. Market Rights - The ambulance contract for EMS District #2 should assume full exclusivity of market rights based on studies showing that retail competition for 9-1-1 and *routine transport* does not produce clinically sound ambulance service at the lowest possible cost, as well as the court supporting such exclusive contracts.

23. Production Method - The full-service, all-ALS flexible production strategy for 9-1-1 responses; and an ALS/BLS production strategy for non-emergency calls that originate at a medical facility, with a physician or physician assistant on-scene, shall be employed within the system design and contracting method. Proposers may offer a strategy of a multi-tiered ALS/BLS ambulance system for 9-1-1 calls so long as the clinical and economic concerns are addressed to the satisfaction of the review team.

24. Business Model - The business structure shall be a *Franchise Model*. The Contractor shall furnish its own facilities, vehicles and equipment, as well as be the direct retail of services. Based on possible changes in the ambulance service industry due to health care reform, a provision shall be built into the contract to allow for early termination, or buy out.

25. Financing – Ambulance service provided by the contractor and administrative costs of the County and District shall be funded from user-fees, unless individual jurisdictions choose from a uniform schedule of subsidy/price options effective within its own jurisdiction.

    The contractor shall also reimburse, provide, or exchange 1st responder services for Medical Program Director approved ALS medical supplies provided on patients transported within the Contract Service Area. Such reimbursement shall be at the rate the contractor pays for the same ALS medical supplies. The contractor is not obligated to reimburse 1st responders for ALS medical supplies if an EMS levy is implemented to pay for first responder EMS services, or for supplies electively carried by the 1st responder and exceed the minimum Medical Program Director approved ALS supply list.

26. Competitive Bid Variable - The ambulance procurement process shall set the cost variable by establishing a reasonable fee based on the industries Unit Hour Costs (UHCs) for services offering similar levels of service and market conditions (collection rates based on the payor mix); and subsidy (if any). Based on a point scoring system, the contract shall be awarded to the firm offering the best quality of service within the reasonable fee.

27. Duration of Market Rights – The term of the contract shall be for six years, with an opportunity for three "earned" two-year contract renewals at the option of the District. "Earned" renewals shall be based on performance exceeding contract requirements and superior cost containment.

28. Performance Requirements - This shall be a performance-based contract, not a level-of-effort contract. Focus is on performance results with limited restrictions on production methods. The ambulance contractor shall be retained for expertise in effectively and profitably managing the delivery of paramedic ambulance services. The following list shall include, but is not limited to the following minimum performance requirements:

    a. Key Personnel. Authority/responsibilities given to local operations director/manager; focus on clinical/QI manager; and employee to supervisor ratio.

    b. Clinical Performance. All-ALS for 9-1-1 response; training and certification that meets the System Standard of Care; current MPD patient care guidelines; formal training and quality improvement program; mandatory inservice training; and research;

    c. Response Time Performance. The following response time standards are based on: 1) clinical evidence that shows the efficacy to transport certain time-critical patients for definitive therapy (cardiac arrest, severe respiratory distress, chest pain/STEMI, CVA and severe trauma); 2) research on response times and patient outcomes for non-life threatening emergencies being inconclusive; and 3) the 2012 – 2017 EMS Strategic Plan's Goal II. B. (Exhibit A) to ensure EMS resource deployment is implemented in such a way that all resources (first response and ambulance) are coordinated in an efficient and effective manner.

	Hot - Lights and Siren Response						**Cold – No Lights and Siren Response**		
	Priority 1		Priority 2	Priority 3			Priority 4	Priority 5	Priority 6
	Time Life Priority ≥ 90%			Emergent ≥ 90%			Non-Emergent ≥ 90%		
	Urban	Suburban	Rural	Urban	Suburban	Rural	Urban	Suburban	Rural
ALS (w Agreement or Ambulance w/o Agreement)	8m59s	11m59	19m59s	10m59s	13m59s	21m59s	15m59s	19m59s	29m59s
Ambulance (w Agreement)[1]	10m59s	13m59	21m59s	12m59s	15m59s	23m59s	17m59s	21m59s	31m59s

[1] The Vancouver Fire Department does not want to enter into a public private partnership with the Contractor and has committed to the "ALS" standard. As a result the Contractor is only obligated to meet the "Ambulance Standard" within the City of Vancouver.

c. Control Center Performance. [See Sections II and III. D]

d. Fleet and Equipment Operations. Fleet and equipment maintenance practices; feet size and description of vehicles; and MPD equipment requirements.

f. Community Service, Public Education, and Customer Service. Customer service training; customer service surveys; complaint/inquiry practices; and public illness and injury prevention.

g. First Responder Support. Equipment return practices; ALS medical supplies (see I. 25); allied agency communication, training and quality improvement; public-private partnerships.

h. Accounts Receivable. Electronic billing; assistance in recovering third party reimbursement and financial hardship; policies on billing; notice; and collections.

i. Employee Provisions. Treatment of incumbent workers; employee recruitment, screening and orientation; compensation; reasonable work schedules and working conditions; risk management and safety program; culturally diverse workforce; and non-harassment, intimidation, retaliation and discrimination.

29. Performance Security - Within 30 days after award of the contract, the contractor shall furnish and maintain a performance security in the amount of $2 million in the form of an Irrevocable Letter of Credit, or other security acceptable to the EMS Administrative Board and approved by the District. Additional performance security shall be obtained by the District if necessary through a low interest loan (i.e., general fund, investment pool, etc.) to ensure sufficient financing to continue operations until receipt of billing revenues.

30. Lease Arrangement - Within 60 days after award of the contract, the contractor shall furnish and maintain a three-way leasing program, or a conditional lease arrangement provided that the conditional lease contains equal assurances as the three-way lease.

31. Liquidated Damages - Financial penalties in addition to late run fines shall be established for contractual violations as well as for default.

32. Consideration for Changes in the Industry - The contract shall have “re-opening” provisions in the event of significant health care reforms, anti-trust legislation, or other events that undermine the design of this EMS system.

As a result of these EMS System Design Policy Decisions, the participating jurisdictions within the District have a carefully structured EMS system and ambulance contract to ensure the standards of clinical excellence, response time reliability, and economic efficiency are met. This system was designed so that it can be responsive to changes in economic conditions and advancements in clinical care.

II. INTRODUCTION

A. PURPOSE AND OBJECTIVES

Emergency Medical Services (EMS) system design refers to the process of selecting and implementing public policies that create a community's underlying EMS system framework, including: performance requirements, independent oversight, business structure, legal framework and financing strategy. Carefully structured EMS systems and ambulance procurements begin with these EMS System Design Decisions to ensure the participating jurisdictions have an EMS system that meets the following objectives:

1. Clinical excellence;
2. Response time reliability; and
3. Economic efficiency.

The EMS System Design Decisions fall into six areas that compose an EMS system including: Service Area Definition; Regulatory and Contract Oversight; Medical Oversight; Control Center Operations; First Responder Services and Ambulance Service.

The 2014 EMS System Design Decisions will lay the foundation for the 2014 ambulance procurement's legal instruments including the EMS Interlocal Agreement, Uniform EMS Ordinance and Ambulance Service Contract.

Having such EMS System Design Decisions at the beginning of the process will ensure all decisions are based on the clinical, response time and economic objectives and standards established, rather than emotional and special interest lobbying efforts.

B. HISTORY

In July 1992, Clark County EMS District #2 (District) and participating jurisdictions (currently Clark County and the Cities of Battle Ground, LaCenter, Ridgefield and Vancouver) successfully converted from a retail market for ambulance service to a "Fail Safe Franchise" Contract. Based on a U.S. District Court Settlement Agreement the District, participating jurisdictions, and incumbent ambulance providers agreed to a competitive ambulance procurement for a single ambulance contractor in order to address fundamental changes needed to the EMS system. The Agreement required a closed bid with the incumbent ambulance providers and the award of a 40-month "Interim" Contract, to be followed by an open bid for a "Long" Term Contract.

On July 1, 1992, the Interim Contract began for a non-exclusive (9-1-1) only franchise contract. The purpose of the Interim Contract was to: 1) provide a method that safely and fairly allocates the market in a relatively short time; 2) establish a system that maximizes clinical performance and economic efficiency; and 3) give the incumbent contractor and jurisdictions the experience of operating and overseeing a high

performance based system. On July 1, 1995, the District awarded the Long Term Contract, initially non-exclusive converting to exclusive, for a six (6) year term with the opportunity to "earn" up to three one year extensions. This contract was again awarded beginning October 1, 2004, for a for a six (6) year term with the opportunity to "earn" up to three two year extensions.

C. RATIONALE

Prior to the District's ambulance contract, the community had no guarantee of quality, response times, or cost controls. It was recognized that competition within the market fails to provide and reward efficient production of quality patient care for the following reasons:

- Emergency victims have little opportunity and less inclination to "comparison shop" for ambulance services at the time service is required;
- Even where multiple firms operate within the same area, few potential ambulance service customers are prepared to be effective buyers in their moment of need, by comparing services and costs of suppliers in advance;
- Persons dialing 911 in a medical emergency have no opportunity to choose from among competing suppliers of ambulance service, and have no way of knowing which firm's ambulance is nearest their location and staffed and equipped for their needs;
- The retail market transaction is often rendered economically ineffective because the person choosing the ambulance company is neither the patient nor the payer;
- Unlike other health care services, the primary cost of ambulance service is the cost of providing geographic coverage, which cost is only increased when multiple firms must duplicate coverage of the same geographic area; and
- Economies of scale in ambulance service industry are such that the total population of the Contract Service Area is inadequate to support the economically stable delivery of totally or substantially unsubsidized paramedic ambulance services delivered at reasonable rates, if fee-for-service income must support the fixed costs and overhead of multiple firms. Thus, dividing the Contract Service Area into two or more zones for allocation among two or more firms is not in the public interest - clinically or economically.

Wisely, the participating jurisdictions have recognized these problems, and created a system that establishes the standards for ambulance service up front and oversees the quality and cost of service provided by contracting for ambulance service.

D. DEVELOPMENT PROCESS

In the development of these EMS System Design Decisions, the EMS Administrative Board directed staff to take a comprehensive approach in examining all of the current EMS system's key design elements. This examination involved over 30 individuals (see Acknowledgements) and review of numerous EMS design studies. As a result, the 2012 – 2017 Clark County EMS District #2 Strategic Plan was approved by the EMS District #2 Board on October 23, 2012. This plan in turn helped guide the development of the EMS System Design Decisions.

The various workgroups that were formed during the development of the 2012 – 2017 Clark County EMS District #2 Strategic Plan, continue work of the Strategic Plan's Strategies or tasks, as well as the related EMS System Design Decisions. The following is a summary of the Design Decisions addressed by each workgroup:

Regulatory and Oversight Workgroup

Purpose: Examining the regulatory and contract oversight structure.

System Design Decision(s): Regulatory and Contract Oversight Organization – 2; Delegated Authority and Responsibilities – 3; Medical Oversight Organization, Authority, System Standard of Care Development and Administration – 4 through 7.

Strategic Plan Goal(s): A) A governance structure that recognizes policy decisions are multijurisdictional, as well as having an independent and objective group of experts whose professional disciplines are necessary for the development and oversight of the EMS system; B) Maintain a consolidated regulatory and contract oversight structure to administer the District's and participating jurisdictions' responsibilities; and C) System Standard of Care administered by the Medical Program Director.

Membership: Chris Horne, Clark County PA's Office; Judy Zeider and Debra Quinn, Vancouver City Attorney's Office; Brain Snure, legal counsel for fire districts; Mike Plymale and Jerry Nies from the EMS Administrative Board.

Business Models and Production Methods Workgroup

Purpose: Examining EMS business and resource deployment methodologies.

System Design Decision(s): First Response Production Method – 19; First Response Business Structure and Financing – 20; First Response Performance Standards – 21; Ambulance Production Method – 23; Ambulance Business Model – 24.

Strategic Plan Goal(s): A) All requests for out-of-hospital care shall be fully interconnected in a united effort to ensure each patient receives the most appropriate care, at the most optimal location with a minimum of delay; and B) Provide information on appropriate use of EMS and community resources; increase public education in responding to medical emergencies; and increase awareness in how to reduce illness and injuries.

Membership: Jerry Green, CCFD#6; Dennis Mason, CCF&R; Joe Molina, VFD; Steve Wrightson, CCFD#3; Jerry Nies and Nancy Retsinas from the EMS Administrative Board.

Prescriptive Response Workgroup

Purpose: Examining resource deployment based on patient acuity.

System Design Decision(s): Countywide Priority Dispatching - #16; First Response Performance Standards (Response Times) – 21; Ambulance Performance Requirements (Response Times) – 28.

Strategic Plan Goal(s): A) All requests for out-of-hospital care shall be fully interconnected in a united effort to ensure each patient receives the most appropriate care, at the most optimal location with a minimum of delay.

Membership: Lynn Wittwer MD, MPD; Dan Yager, CCF&R; Donavan Mattern, CCFD#3; Dave Seabrook, VFD; Mike Hollingsworth, CCFD#6, Katy Meyers, CRESA; Vicki Scheel from the EMS Administrative Board.

EMS Finance Workgroup

Purpose: Examining EMS cost and funding issues.

System Design Decision(s): Contract Service Area – 1; First Response Production Method – 19; First Response Business Structure and Financing – 20; Ambulance Market Rights – 22; Ambulance Production Method – 23; Ambulance Business Model – 24; Ambulance Financing – 25; Competitive Bid Variable – 26; Duration of Market Rights – 27; Performance Security.

Strategic Planning Goal(s): A) Establish an EMS system design that maximizes efficient operations at an appropriate system standard of care; B) Ensure EMS resources deployment is implemented in such a way that all resources (first response and ambulance) are coordinated in an efficient and cost effective manner; and C) Ensure EMS providers have sufficient funding to meet core EMS performance requirements.

Membership: John Ingram/Mark Gassaway County Auditor's Office; Adriana Prata, County Office of Budget; Lloyd Tyler, Vancouver Chief Financial Officer; Heather Hewahewa, Peace Health Business Analyst; Mike Hollingsworth CCFD #6; Dave Seabrook, VFD; Terrie Handy, Legacy Revenue Cycle Director, Mike Plymale and Jerry Nies from the EMS Administrative Board.

9-1-1 Integrated Access Management and EMS Community Healthcare Workgroups (Note these workgroups are not involved in development of the EMS System Design Decisions)

Purpose: Exploring feasibility of 9-1-1 to triage certain non-emergency patients to other alternate care options. Exploring the feasibility to enroll high medical system users in a home healthcare program. This home healthcare program would provide medical assessments, with the goal is to reduce inappropriate 9-1-1 calls and EMS transports.

System Design Decision(s): [None]

Strategic Plan Goal(s): A) All requests for out-of-hospital care shall be fully interconnected in a united effort to ensure each patient receives the most appropriate care, at the most optimal location with a minimum of delay.

Membership: Michael Albrich MD, Legacy Salmon Creek; Melinda Muller, MD, Legal Health; Anna Pendergrass, CRESA; Marti Petri, Kaiser; Lynn Wittwer, MD, MPD, Steve Maynard, Community Services; Dan Keteri and Nancy Retsinas from EMSAB.

E. REFERENCES

This Plan was developed with the assistance from the following documents:

- ✓ 2004 Master Contract for Paramedic Ambulance Service
- ✓ 5.48A Clark County Uniform EMS Ordinance
- ✓ 2004 EMS Interlocal Cooperation Agreement
- ✓ 2004 Clark County EMS District #2 Request for Proposal
- ✓ 2011 EMS District #2 Annual Report
- ✓ 2012 – 2017 Clark County EMS District #2 Strategic Plan
- ✓ EMS related Revised Codes of Washington (RCWs): 18.71, 35.21, 36.01and Washington Administrative Codes (WACs): 246-976
- ✓ EMS Structured for Quality: Best Practices in Designing, Managing and Contracting for Emergency Ambulance Service. American Ambulance Association, 2008.
- ✓ Principles of EMD, Fourth Ed., 2008.
- ✓ Emergency Medical Services at the Crossroads. Institutes of Medicine, 2007.
- ✓ EMS Makes a Difference: Improved clinical outcomes and downstream healthcare savings. Position Statement of the National EMS Advisory Council, 2009.
- ✓ Building the Evidence Base in Prehospital Urgent and Emergency Care: A review of research evidence and priorities for the future. University of Sheffield, 2010.
- ✓ Emergency Services Review: A comparative review of international ambulance service best practices. National Health Service, Office of Strategic Health Authorities, 2009.
- ✓ All ALS vs. Tiered EMS System Design: An operational perspective. EMS Chiefs of Canada Membership Services Committee Educational Presentation, 2011.
- ✓ *[Over 50 EMS studies and articles referenced in this document's footnotes]*

III. EMS SYSTEM DESIGN DECISIONS

The following section provides the details of the 32 EMS System Design Decisions for Clark County EMS District #2. These Decisions fall into six areas that compose an EMS system including: Service Area Definition; Regulatory and Contract Oversight; Medical Oversight; Control Center Operations; First Responder Services and Ambulance Service.

Each EMS System Design Decision provides a background section that supports the recommended/approved Decision. When a given EMS System Design Decision is impacted by a project addressing one of the strategic issues identified in the 2012 – 2017 EMS Program Strategic Plan, that project is summarized in the callout box as shown below.

EMS Strategic Plan Project – *(Title of Project).*

(Strategic Issue being assessed)

[Summary provided here]

A. SERVICE AREA DEFINITION

1. Regulation vs. Contract.

Background: Since 1992, District, County and the participating Cities have entered into an EMS Interlocal Cooperation Agreement (Agreement) to establish and participate in a cooperative and uniform system of EMS regulation and ambulance service group purchasing through a competitive procurement process.

This Agreement has enabled the County and Cities to exercise uniform regulatory oversight of EMS in the Regulated Service Area. The Regulated Service Area is defined as the unincorporated area of Clark County plus the corporate limits of the Cities and all other general purpose jurisdictions which have adopted the Uniform EMS Ordinance (Ordinance) and entered into the Agreement. The purpose of the regulated service area is to protect against any unequal distribution of services that has the potential of occurring in fee-for-service financing of healthcare. The Agreement ensures there are uniform charges, response time reliability and similar contractor commitments throughout the Regulated Service Area.

The Agreement and Ordinance have also enabled the District and Cities to participate in group purchasing of ambulance service in the Contract Service

Area. The Contract Service Area is defined as the unincorporated area of Clark County plus the corporate limits of the Cities and any other jurisdictions which participated in the Agreement for the purpose of group purchasing of ambulance services.

EMS System Design

The primary cost of emergency ambulance service is not the costs incurred at the time of service, but the costs in having the ambulances staff, equipped and providing the geographic coverage to meet a community's performance standards (i.e., response times, level of care, etc.). Research shows these fixed costs grow more slowly as the service area's population gets larger.[2]

Based on this research, the Contract Service Area must provide a sufficient call volume in order to be economically stable for the ambulance service and to ensure reasonable ambulance rates, if it's a totally or substantially unsubsidized ambulance contract. For example, the Center for Economic and Management Research, composed of members with doctorate level credentials in economics, operations research, finance and accounting at the University of Oklahoma, found that ambulance service cost curve continues to decline as the services production volume increases leveling off at an exclusives (emergency and non-emergency) population of about a million. [3]

In addition, having the Contract Service Area be multi-jurisdictional reduces costs by pooling resources for infrastructure development and ensures the dispatching of the nearest ambulance.[4]

Vancouver's Decision to Withdraw

On March 12, 2013, Vancouver's City Manager sent a letter to the EMS District #2 and the EMS Administrative Boards advising on the direction given by the City Council to withdraw from the District and contract for ambulance service for the City. In that letter, the intent of Vancouver is to work with the District in a joint ambulance RFP process.

Based on concerns being expressed starting in March 2012, that Vancouver may withdraw from the District and divide the Contract Service Area, staff began due diligence to determine the financial impacts caused by this action. On March 21, 2012, staff initially requested the current ambulance contractor to provide information on revenues based on the number, billed and collected for transported patients by primary insurance broken out for the City of Vancouver and the remainder of EMS District #2. The results in are shown in Table 1, "2010/2011 Revenue per Transport."

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[2] Hogan C. AAA 2006 Ambulance Cost Study. McLean, VA: American Ambulance Association; 2007 Jan. p 27-28.

[3] Stout, J., *Public Utility Model Revisited*, JEMS, Feb. 1985, 55-63.

[4] Institutes of Medicine [IOM]. *Hospital-based emergency care at the breaking point*. Washington DC: The National Academies Press; 2007. p 91-93.

Table 1 - 2010/2011 Revenue per Transport

	APC[5]	Collection%[6]	Rev. / Transport
Current Combined	887.02	42.1%	$373.21
Vancouver (only)	864.92	39.6%	$342.31
District	926.37	46.2%	$428.22

On March 12, 2013, the revenue information was updated to also show the number, billed and collected for transported patients by primary insurance broken out for Vancouver Fire Department's current service area that includes City of Vancouver and Clark County Fire District #5. The results in are shown in Table 2, "2010/2011 Revenue per Transport."

Table 1 - 2010/2011 Revenue per Transport

	APC	Collection%	Rev. / Transport
Current Combined	887.02	42.1%	$373.21
Vancouver &CCFD#5	878.13.	40.3%	$354.24
District	912.14	46.8%	$426.84

On April 5, 2012, staff also requested the current ambulance contractor to provide information on the impacts to cost should there be two separate ambulance contracts one for Vancouver and one for the District with different ambulance contractors serving each. The results showed increased costs for Vancouver and the District.

Based on the decrease in the revenue per transport for the Vancouver and the increase in the cost per transport for Vancouver and the District, the EMS Financial Workgroup and EMS Administrative Board recommended the current Contract Service Area remain intact on October 5, 2012 and February 19, 2012 respectively.

Due to a variety of variables that could impact unit hour costs and unit hour utilization, staff revised the cost per transport estimates as an example only (See Table 3 – 2010/2011 Increase in Wages from Lower UHU). These variables include:

- One ambulance contractor verses two ambulance contractors serving Vancouver and the District (Unit Hour Utilization, UHU[7]).

[5] APC (Average Patient Charge) = Total Billed (w/o mi.) ÷ Total Number Invoices for patients transported within the Contract Service Area.

[6] Collection Rate = Total Amount Collected ÷ Total Amount Billed

[7] UHU (Unit Hour Utilization) = Total Transports ÷ Total Unit Hours (measure of efficiency)

- Additional unit hours needed during low levels to cover both contract service areas (UHU).
- Increases administrative costs from duplication on contract oversight (Unit Hour Cost, UHC[8])
- Additional time on task for the ambulance contractor's billing services and performance monitoring due to two contracts being served. (UHC)

While the exact numbers can't be determined, what is known there will be less efficiency (lower UHU) and increases costs (UHC) by dividing the Contract Service Area. In addition, this division will reduce the District's and Vancouver's ability to attract qualified ambulance bidders; and if there are two contractor's the division will also lower the quality of care since the closest ambulance will not always be sent.

Table 3 – 2010/2011 Increase in Wages from Lower UHU

	Transp. / Yr.	UHU	Unit Hours	Unit Hours / Day	Wages / Hr.	Wages / Yr.	Increase Wage Costs
Current: District (w/o COV and CCFD#5)	8,736	.38	22,989	63	$55	$1,264,421	
Example 1: District (w/o COV and CCFD#5)	8,736	.35	24,960	68	$55	$1,372,800	$108,379
Example 2: District (w/o COV and CCFD#5)	8,736	.30	29,120	80	$55	$1,601,600	$337,179
Example 2: Marginal Collection Rate[9] at .25							÷ .25
Example 2: Increase in total billed							$1,348,716

On May 9, 2013 Vancouver re-affirmed its direction to withdraw from the District, despite a letter from the other participating cities, and fire districts 3, 6 and Clark County Fire and Rescue encouraging the Vancouver to reconsider the direction given; as well as a District meeting with Vancouver regarding the same.

Decision: The Regulated Service Area shall include the unincorporated area of Clark County plus the corporate limits of the Cities and all other general purpose jurisdictions

[8] Unit Hour Cost = Total Ambulance Operating Costs ÷ Total Unit Hours (hours ambulances are staffed and available to respond)

[9] Marginal Collection Rate means the amount collected for every new dollar billed. A marginal collection rate of .25 means if costs increase by $1 dollar, $4 dollars will need to be billed.

which have adopted the Uniform EMS Ordinance and entered into the EMS Interlocal Cooperation Agreement. The Contract Service Area shall include the geographic area within the County currently served by the ambulance contractor excluding the City of Vancouver. A provision shall be made in the Ambulance Service Contract to allow expansion of the Contract Service Area, at the option of the Clark County EMS District #2.

Financial Workgroup Proposed (included Vancouver): 10/05/12

EMSAB Recommends (included Vancouver): 02/19/13

District Approved (excludes Vancouver at City's Direction): _____

B. REGULATORY AND CONTRACT OVERSIGHT STRUCTURE

2. Organization.

Background: In the development of 2014 EMS System Design Decisions for the next ambulance procurement process, the EMS Administrative Board and EMS District #2 Board directed staff to take a comprehensive approach in examining all of the current EMS system's key design elements. This examination involved specific workgroups composed of over seven committees, or workgroups and 30 individuals who provided 770 hours of input over a two year period of time. From this work, the 2012 – 2017 EMS District #2 Strategic Plan was developed to: 1) identify the issues confronting the District's EMS system; 2) involve and gain support from a broad spectrum of stakeholders; and 3) produce clear goals, objectives and strategies to address those issues and guide the development of the 2014 EMS System Design Decisions. One of the three priorities established in the Strategic Plan included, "Appropriate Regulatory and Oversight Structure."

EMS System Design

Whenever two or more jurisdictions share the same EMS system, a decision by one jurisdiction regarding the EMS system unavoidably impacts the cost and/or quality of EMS in the other jurisdictions. For example, an efficient and effective EMS system develops its coverage plans based on response time requirements, population densities, natural and manmade barriers, and historic call data. Such coverage does not respect geopolitical lines. Jurisdictions that elect to remove themselves from such coverage plans create "islands" resulting in: additional resources for coverage, increased costs and some areas unable to support service without increased rates and/or subsidies.

The District and the participating jurisdictions have a long history of working together to ensure such islands are not created and the community as a whole is provided efficient and effective EMS.

The following is a summary of the events and legal instruments that created the regulatory and contract oversight structure for the District:

- Creation of EMS District #2 - In 1987, the County adopted an ordinance (1987-10-22) creating EMS District #2 for the purpose of providing EMS as a quasi-municipal corporation with independent taxing authority[10] based on RCW 36.32.480. In 1991, another ordinance amended the District by adding Fire District #6 (1991-09-23). The District now includes the unincorporated areas of the county, excluding Fire Districts 1 and 9 (now known as East County Fire and Rescue) and EMS District #1(aka North Country EMS). Pursuant to RCW 36.32.480, the governing body for the District has been the Board of County Commissioners[11].
- 1991 Settlement Agreement for Single Ambulance Service - In 1991, under a US District Court Settlement Agreement, the court ruled the County (under RCW 36.01.095), the District (under RCW 36.32.480) and the City of Vancouver (under RCW 35.21.766), have the authority under federal and state law to implement a non-exclusive (9-1-1 only) and later an exclusive (9-1-1 and "non-emergency") competitive selection of a single ambulance provider.
- Uniform EMS Ordinances - In 1992 and as amended in 1995 and 2003, the County and Cities adopted Uniform EMS Ordinances that establish the oversight and regulatory standards for the provision of EMS and ambulance service throughout the Regulated Service Area (See System Design Decision #1).
- Interlocal Cooperation Agreement - Also In 1992 and again in 1995 and 2003, the District, County and Cities entered into an EMS Interlocal Cooperation Agreement to enable the County and Cities to exercise uniform regulatory oversight of EMS in the Regulated Service Area; and to enable the District and Cities to participate in the group purchasing of ambulance service in the Contract Service Area.

To ensure a cooperative and uniform system of EMS regulation and group purchasing of ambulance service, the current Ordinances and Agreement designate the County as the regulatory administrator and the District as the contract administrator.

The current Ordinances and Agreement also established a multi-jurisdictional body to carry out the District's business, finance and contract development and oversight. This body is currently called the EMS Administrative Board.

[10] To date, EMS District #2 has not chosen to subsidize the EMS system.

[11] The exception to the District's governing authority being limited to the county legislative authority is when the ordinance creating District includes the corporate limits of a city or town. In such cases the District's governing body may be established in an interlocal agreement pursuant to RCW 39.34.

On November 27, 2012, a joint governance structure for the EMS District #2 Board was proposed to the EMS Regulatory and Oversight Workgroup that was working on this section of the EMS System Design Decisions.

Vancouver's Decision to Withdraw
On March 12, 2013, Vancouver's City Manager sent a letter to EMS District #2 and the EMS Administrative Board advising on the direction given by the City Council to implement one of two options regarding governance for the 2014 ambulance contract: 1) Vancouver becomes the ambulance contract administrator for all of EMS District #2; or 2) Vancouver withdraws from the District and contracts for ambulance service for the City.

Decision: EMS system design and administration is quite complex and best carried by unpaid public-spirited individuals selected for their expertise in business, finance, law and health care administration[12].

a. EMS Administrative Board Membership. The job of the *EMS* Administrative Board is to make complex business and financial decisions. The EMS Administrative Board does not set or alter medical policy within the system. Based on the EMS Administrative Board's responsibilities, membership shall include expertise in business, finance, law, and health care administration. Membership shall specifically include a 5-person Board of community volunteers consisting of:

1) One with expertise in law
2) One with expertise health care administration
3) One with expertise in health care or business administration
4) One with expertise in business and finance
5) One with expertise in insurance

Regulatory and Oversight Workgroup Proposed(disbanded due to Vancouver's withdrawal)

EMSAB Recommends: (no action taken since proposed joint governance

District Approved: _____

b. EMS District #2 Board Membership. The job of the *EMS District #2 Board* is to make policy decisions related to the recommendations provided by the EMS Administrative Board including, but not limited to: award of the ambulance contract; confirmation of the Uniform Schedule of

[12] Stout J. *Public Utility Model Revisited Part Two: Ten essential features*. *JEMS, March 1985, 71-74.*

Subsidy/Price Options; and EMS system infrastructure acquisition and financing. Based on the *EMS District #2 Ordinance,* membership shall specifically include a 4-person Board consisting of:

1) Two County Commissioners; and

2) One participating cities (Battle Ground, LaCenter, Ridgefield and Woodland) councils' member.

Regulatory and Oversight Workgroup Proposed(disbanded due to Vancouver's withdrawal)

EMSAB Recommends: (no action taken since proposed joint governance

District Approved: _____

3. Delegated Authority and Responsibilities.

Background: Because participating jurisdictions must inevitably share in the consequences of decisions made in regard to such matters as bidder selection, contractor compensation, changes in the System Standard of Care, infra-structure development and similar matters of collective concern, the authority for deciding these matters cannot be reserved for individual decision-making by each jurisdiction. Thus, the power to decide these kinds of issues must be delegated to a multi-jurisdictional body[13] known as the EMS District #2 Board.

In addition, an independent oversight body should be established for objective, ongoing (e.g., monthly) reporting with verification that actual performance results meet, or exceed established service requirements. This independent oversight entity should consist of an unaffiliated and objective group of people selected for their expertise in specific professional disciplines required in the development and oversight of the emergency ambulance service[14] -- i.e., the "EMS Administrative Board."

To establish a fully consolidated regulatory and contract oversight structure, the Ordinance and Agreement shall incorporate the policies set forth herein, and shall be adopted by all participating jurisdictions. Based on the Ordinance and Agreement the CRESA EMS Program fulfills the District's responsibilities for ambulance contract administration and the County's responsibilities for uniform EMS regulation.

Decision:

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[13] Krumperman, K., et. al*., EMS Structured for Qualty: Best Practices in Designing, Managing and Contracting for Emergency Ambulance Service*, American Ambulance Association. 2008. p. 61

[14] Krumperman K, et.al., *EMS Structured for Quality: Best Practices in Designing, Managing, and Contracting for Emergency Ambulance Service*, American Ambulance Association; 2008. p 20

a. Participating Jurisdictions. Each participating jurisdiction (Cities and County) shall have the authority and responsibilities for the following:

1) Annually choose from a uniform schedule of subsidy/price options the subsidy/price relationship to be effective within its own jurisdiction. For example, one participating jurisdiction may prefer zero subsidy and higher user-fees, while another jurisdiction may choose to offset a portion of its user-fees through local tax support. These differing fiscal policies can peacefully co-exist within the same multi-jurisdictional out-of-hospital care system.

2) Entitled to a uniform quality of EMS care established by the System Standard of Care, externally monitored and enforced by the Medical Program Director.

3) Access to resources of the ambulance contractor at any given time, subject to fluctuations in consumer demand, weather conditions and disaster situations.

4) Right to contractually enforceable ambulance response time reliability standards, externally monitored by EMS Administrative Board and enforced by the District.

5) Right to service commitments made by the ambulance contractor, externally monitored the EMS Administrative Board and enforced by the District.

b. Clark County. The County shall have the authority and responsibilities for the following:

1) Contract with the Medical Program Director to provide a countrywide program of medical quality control and regulation in accordance with the Uniform EMS Ordinance and Interlocal Cooperation Agreement.

2) Enter into agreements with CRESA to carry out the responsibilities to provide the material and staff necessary for the regulatory provisions of the Uniform EMS Ordinance and Interlocal Cooperation Agreement.

3) Enter into agreements with CRESA to carry out the responsibilities to provide the material and staff support for the EMS Administrative Board.

4) Administer financial and budgeting functions necessary to carry out the administrative and regulatory provisions of the Uniform EMS Ordinance and Interlocal Cooperation Agreement.

c. EMS District #2. The District shall have the authority and responsibilities for the following:

1) Enter into agreements with CRESA to carry out the responsibilities to provide the material and staff necessary for the ambulance

contract administrative provisions of the Uniform EMS Ordinance, Interlocal Cooperation Agreement, and Ambulance Services Contract

2) Approve the competitive process for procuring ambulance services for the Contract Service Area as recommended by the EMS Administrative Board.

3) Determine whether to award the ambulance service contract as recommended by the EMS Administrative Board.

4) Determine whether to confirm the initial Uniform Schedule of Subsidy/Price Options established by the EMS Administrative Board, after providing adequate opportunity for review and comment by the participating jurisdictions.

5) Review and determine whether to accept any recommendation by the EMS Administrative Board for EMS System infrastructure acquisition or financing.

d. Clark County EMS Administrative Board. The Clark County EMS Administrative Board shall have the authority and responsibilities for the following:

1) Develop and administer a competitive process for procuring ambulance service in the contract service area.

2) Establish the ambulance contractor's Uniform Schedule of Subsidy/Price Options, subject to review and comment by the participating jurisdictions.

3) Determine ambulance contractor's annual inflation adjustments to the Uniform Schedule of Subsidy/Price Options, and notify participating jurisdictions.

4) Review and approve, modify or deny *extraordinary adjustments* to the ambulance contract.

5) Review and approve, modify or deny System Standard of Care Upgrades whose projected costs show an increase in user-fees and/or subsidy.

6) Conduct ongoing ambulance contract administration and oversight.

7) Declare declarations of major default by the ambulance contractor.

Provide a consolidated annual report to participating jurisdictions.

Regulatory and Oversight Workgroup Proposed(disbanded due to Vancouver's withdrawal)

EMSAB Recommends: (no action taken since proposed joint governance

District Approved: _____

C. MEDICAL OVERSIGHT STRUCTURE

4. Organization.

Background: Beginning the moment a call is received for medical assistance and continuing to the moment the patient comes under the care of a primary care receiving facility, the combined activities of control center personnel, 1st responders, ambulance crews, and physicians providing on-line medical control are nothing more nor less than the *Medical Program Director's* practice of out-of-hospital emergency medicine. Thus, considerable authority is granted the *Medical Program Director* by state statute, which authority is further strengthened, clarified, and formalized by the Uniform EMS Ordinance (Ordinance) and Interlocal Cooperation Agreement (Agreement). To establish fully consolidated medical oversight throughout the County, the Ordinance and Agreement shall incorporate the policies set forth herein.

The EMS system's medical director's authority regarding clinical care and oversight should be independent from and superior to that of the participating EMS organizations. Without this independence, it may be difficult, or impossible for the medical director to fill the sometimes critical role of helping to resolve clinical care issues among EMS organizations.[15]

Decision: The Uniform EMS Ordinance and Interlocal Cooperation Agreement shall recognize a single *Medical Program Director* who is appointed by the State and shall be contracted by the County to provide a District-wide program of medical quality control and regulation, as specifically defined in a medical oversight contract.

Regulatory and Oversight Workgroup Proposed(disbanded due to COV's withdrawal)

EMSAB Recommends: 03/19/13

District Approved: _____

5. Scope of Authority.

Background: All of the patient care delivered in EMS systems is subject to the authority of the medical director as established as established in Washington

[15] Overton J, Stout J. System design. In: Kuehl AE, editor. *Prehospital systems and medical oversight*. 3d ed. Dubuque, IA: Kendall/Hunt Publishing Company; 2002. p 114-131.

Administrative Code (WAC) 246-976-920. Subject to reasonable due-process constraints (See System Design Decision #6, "System Standard of Care Development and Revision), the medical director is empowered to establish and enforce the system's standard of care.[16]

Decision: The Uniform EMS Ordinance shall define the *Scope of Authority* for medical oversight to include:

a. Citizen CPR training and related public information efforts;

b. Telephone access (911 and other);

c. *Emergency Medial Dispatch*(EMD) and EMS training and continuing Education;

d. Emergency Medial Dispatch(EMD) and EMS certification;

e. Medical priority dispatch protocols;

f. Out-of-hospital care patient care guidelines;

g. Out-of-hospital care medical supplies and equipment;

h. On-line medical control; and

i. Medical quality assurance.

Regulatory and Oversight Workgroup Proposed(disbanded due to COV's withdrawal)

EMSAB Recommends: 03/19/13

District Approved: _____

6. System Standard of Care Development and Revision.

Background: Some of the challenges associated with EMS system standard of care development disappear when the simple five-step process for completing a cost-benefit analysis is adopted and used. By using this process, community leaders can be certain that the dollars they spend are used for real improvements in their systems and that those improvements make a demonstrable difference to customers and improve patient outcome. By conducting a cost/benefit analysis on all issues with the potential to affect patient outcome, community leaders will be assured the process has a high degree of accountability. This analysis then can be presented to the public and to those entities responsible for paying for each component of the EMS system.

Step 1 — Is there a theoretical basis for the proposed change?

Step 2 — Is there scientific research available to support this change?

[16] Overton J, Stout J. System design. In: Kuehl AE, editor. *Prehospital systems and medical oversight*. 3d ed. Dubuque, IA: Kendall/Hunt Publishing Company; 2002. p 114-131.

Step 3 — Is the proposed change clinically important?

Step 4 — Is it practical, teachable, affordable and safe?

Step 5 — If the intended change stands up to scrutiny under the preceding four steps, make the change and carefully monitor its impact on patients, customers, and the system.[17]

Decision: The Uniform EMS Ordinance and Interlocal Cooperation Agreement shall authorize the Medical Program Director develop and revise the System Standard of Care as follows:

a. The Medical Program Director and CRESA EMS Program shall establish and appoint a standing Training and Quality Improvement Committee and, from time to time, ad hoc committees as may be appropriate to secure broad-based input to the regulatory process by physicians, nurses, *Emergency Medical Technic*ians (EMTs) and Emergency Medical Dispatchers (EMDs) having specialized knowledge of, and/or interest in, a given aspect of out-of-hospital emergency medicine which is the focus of a particular committee's charge (e.g., pediatricians will be involved in developing or updating pediatric protocols, trauma surgeons will be involved in developing or updating trauma protocols, field paramedics will be involved in evaluating equipment items under consideration for system wide implementation, etc.).

b. No proposed change to the System Standard of Care shall become effective prior to the Medical Program Director and the Clark County EMS Administrative Board reviewing a financial impact statement estimating the effect of the proposed change upon user-fees and/or subsidy requirements, solicited from each provider organization that would be included in the proposed change.

c. If financial impact statements show an increase in the ambulance contractor’s user-fees and/or subsidies, the proposed standard shall not become effective until approved by the EMS Administrative Board. If financial impact statements from another EMS provider organization show an increase in user-fees and/or subsidies, the Medical Program Director may waive the proposed change unless it’s required to meet state minimum *System Standards of Car,* and pursuant to the Clark County EMS Administrative Rules regarding granting variances.

d. If no financial impact statements are submitted or if the statements show the change can be implemented without an increase in user-fees and/or subsidy, the proposed change shall become effective upon final approval by the Medical Program Director, after a reasonable implementation period.

[17] Adapted from a presentation by Dr. Joseph P. Ornato, Virginia Commonwealth University Health System, Richmond, VA

Regulatory and Oversight Workgroup Proposed: disbanded due to COV's withdrawal)

EMSAB Recommends: 03/19/13

District Approved: _____

7. System Standard of Care Administration.

Decision: As per the Uniform EMS Ordinance and Interlocal Cooperation Agreement, and in accordance with due process requirements approved by the County Prosecutor, the Medical Program Director, pursuant to WAC 246-976-920, shall administer the System Standard of Care as follows:

a. Recommend the State issue, renew, suspend, revoke, and restrict various EMS-related certifications (i.e., certifications for *medical call-taker*s, 1st responders, ambulance personnel and on-line medical control physicians).

b. Establish and maintain a system of clinical monitoring, medical audit, and medical quality control designed to: detect and correct inappropriate deviations from the System Standard of Care; identify and correct deficiencies in the System Standard of Care itself; and advance the practice of out-of-hospital emergency medicine through clinical research.

Regulatory and Oversight Workgroup Proposed: disbanded due to COV's withdrawal)

EMSAB Recommends: 03/19/13

District Approved: _____

EMS Strategic Plan Project – *(Consolidated MPD Contract).*

Strategic Priority I – *Appropriate Regulatory and Oversight Structure*

EMS Agencies within the District and the Medical Program Director's Office will work to establish a professional services contract for medical oversight services by 2014 The current contract is for medical oversight of the ambulance contractor and CRESA's EMD program, with other EMS agencies within the District paying for medical oversight services separately.

The intent is to establish a consolidated contract medical oversight for all EMS agencies within the District for improved integration and coordination of training and quality assurance processes including, but not limited to:

- Coordinate of on-site practical skills training using mobile training resources for improved team approach patient care practices
- Expansion of CRESA *EMS Data Network* that collects clinical and response data for all EMS providers within the District
- Common flag chart/sentinel events that are tracked for protocol compliance trends and patient outcomes
- Design and implementation of a quality improvement and root cause analysis team.

CONTROL CENTER OPERATIONS

During the development of the Interim Ambulance Contract in 1992, EMS Task Force members examined the process then used for managing "system response" to medical requests. The Task Force identified 34 communications-related functions required for managing this response, and a chart was developed to show how these functions were carried out (See "Division of Functional Responsibility, page 34).

The following is background information and related System Design Decisions regarding Control Center Operations that are to be incorporated into the *Ambulance Services Contract*:

8. Consolidated Processing of Medical Requests.

Background: On March 19, 1992, the EMS Task Force unanimously agreed that Clark Regional Emergency Services Agency (CRESA) would be responsible for 9-1-1 EMD (EMD) call taking functions. This decision was based on the following:

- CRESA would still have to maintain staff and equipment to do 9-1-1 medical request dispatching for the other non-EMS District #2 emergency ambulance services and all county first responders; and
- A system-wide approach to medical priority dispatching and system status management of all EMS providers would not be possible if the ambulance contractor provided the 9-1-1 EMD call taking functions.

Decision: EMD call taking functions are currently provided by CRESA and the ambulance contractor's control center. CRESA shall be responsible for 9-1-1 call taking functions and the dispatch of two public ambulance providers and all first response agencies. The ambulance contractor shall be responsible for seven-digit call taking functions and the dispatch of its ambulances. The two-way *Computer Aided Dispatch* (CAD) interface and/or co-location of control centers shall provide for a fully informed management of system resources.

Prescriptive Response Workgroup Proposed: 11/07/12

EMSAB Recommends: 12/11/12

District Approved: _____

9. Control Center Accountability.

Background: Based on an EMS system evaluation scale that evaluates 10 areas of system performance, including dispatching and system status management, all ambulances operating in the Contract Service Area

(emergency[18] and non-emergency[19]) should be exclusively controlled by a single ambulance dispatch center. This control includes all vehicle movements including responses to calls and coverage.[20]

It's in the best interest of the community to require that the ambulance contractor to supply its own dispatch center, thus giving it the responsibility for all decisions related to ambulance unit deployment and resource allocation. This is particularly important since 9-1-1 centers don't provide call taking and dispatch services for non-emergency ambulance service, unless the ambulance contractor elects to co-locate, or subcontract for such services at the 9-1-1 center (see #11). This allows the independent oversight entity to hold the provider accountable for response times and other contractual performance requirements[21] and avoids lengthy investigations to determine responsibility.

Decision: The following information outlines control center assumptions and understandings:

a. The contractor shall be indemnified and held harmless from causes of action resulting from negligence by CRESA, or its employees.

b. The contractor shall be exempt from late-run penalties and response time obligations when information obtained by CRESA and conveyed to the contractor is inaccurate, or incomplete in a manner which could reasonably be expected to impair the contractor's ability to generate a timely response; or in cases where additional premise information or bystander assistance in "leading in" the crew should have been requested but was not requested.

c. Contractor's response time clock shall start after initial interrogation and computer transfer of information (location and chief complaint that determines the priority) to contractor by CRESA via CAD interface.

d. During periods of temporary malfunction of CRESA's data transfer capabilities; the contractor's response time clock shall start upon oral receipt (via "ring down" line installed and maintained at contractor's expense) of response priority code, chief complaint, location/premise information, and callback number.

Prescriptive Response Workgroup Proposed: 11/07/12

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18 "Emergency" is defined as all requests for 9-1-1 ambulance service regardless of patient severity or level of response.

19 "Non-Emergency" is defined as 7-digit requests that don't meet the Medical Program Director's 9-1-1 Transfer Protocol (e.g., patients without priority symptoms being transferred for a routine medical appointment, or direct hospital admit)

20 Stout, J., *Ten Standards of Excellence: Measuring Your System*, JEMS, Jan. 1983, 84-91.

21 Krumperman K, et.al., *EMS Structured for Quality: Best Practices in Designing, Managing, and Contracting for Emergency Ambulance Service*, American Ambulance Association; 2008. p 24

EMSAB Recommends: 12/11/12

District Approved: _____

10. Dedicated verse Multi-Site Ambulance Control Center.

Decision: Bidders shall have the option of having a control center that is dedicated to Clark County operations, or multi-site operations. Should a bidder elect to dispatch multi-site operations, the following issues will need to be adequately addressed:

a. Staffing (including overtime coverage) that is dedicated to Clark County operations.

b. Contingencies in place to ensure that Clark County dispatch times are not delayed from competing/simultaneous demand for response from other operations.

c. Plans to ensure staff can effectively handle the multiple protocols, policies and procedures as defined by multi-site authorities.

d. Plans to ensure staff is geographically proficient in Clark County's Contract Service Area.

Prescriptive Response Workgroup Proposed: 11/07/12

EMSAB Recommends: 12/11/12

District Approved: _____

11. Ambulance Control Center Location Option.

Decision: The ambulance contractor shall have the option of locating a 7-digit call taking and dispatch control center in the Portland/Vancouver metropolitan area, in CRESA, or subcontracting with CRESA for 7-digit call taking and/or dispatch control functions. Should the ambulance contractor elect co-locate, or subcontract with CRESA, issues of personnel, equipment and funding need to be adequately addressed and mutually agreed upon by the contractor and CRESA.

Prescriptive Response Workgroup Proposed: 11/07/12

EMSAB Recommends: 12/11/12

District Approved: _____

12. CAD Systems.

Decision: The contractor shall furnish at its own expense a state-of-art SSM-based CAD system and Mobile Computing Devices, of the contractor's choice (as offered in the winning proposal), capable of two-way interfacing with CRESA's CAD. A provision shall be made within the contract to guarantee "carryover financing" of equipment lease payments (or other financing method) into the next contract cycle, regardless of the contractor selected.

Prescriptive Response Workgroup Proposed: 11/07/12

EMSAB Recommends: 12/11/12

District Approved: _____

13. Streamlined Process.

Decision: To ensure the speedy transfer of all 9-1-1 medical requests and to eliminate the need to verbally transfer information over the phone and/or pager, the ambulance contractor shall provide and maintain a two-way interface between CRESA's CAD and the contractor's CAD prior to implementation of the contract. This interface shall at a minimum provide for the instantaneous transmission of call-related information and unit status updates between CRESA's CAD and the ambulance contractor's CAD.

Prescriptive Response Workgroup Proposed: 11/07/12

EMSAB Recommends: 12/11/12

District Approved: _____

14. System-wide Compatibility.

Decision: Communications/CAD system components for ambulance services should, if feasible, be made uniform throughout the county –(e.g., Mobile Computing Devices, GIS data bases, automated vehicle tracking, etc.)

Prescriptive Response Workgroup Proposed: 11/07/12

EMSAB Recommends: 12/11/12

District Approved: _____

15. Simultaneous Alert of 1st Response and Ambulance Control Center.

Decision: Nothing shall be done which may adversely affect delivery of 1st responder services. In this regard, the following criteria are established:

a. 1st response units shall continue to be selected and dispatched by 911 control center personnel – not by the ambulance contractor.

b. On all 911 medical requests, information initially obtained by the 911 "call-taker" shall be simultaneously and automatically "shipped" via computer transmission to a fire-dispatch console within the 911 center and to the ambulance control center.

c. Each 1st responder agency shall have the right to choose between dispatch on all 911 medical requests; or respond only to calls with life-threatening potential, as classified in strict accordance with EMD priorities approved by the Medical Program Director.

d. Communications systems shall be configured to allow 9-1-1 dispatch personnel to listen in on any, or all 9-1-1 call-taking telephone interrogations, so as to better coordinate 1st response participation.

e. CAD/communications systems shall be so designed that premise-entry updates and additional medical information (i.e., gathered during the EMD process or from the system's medical data base) shall electronically "ship" to the fire-dispatch console and ambulance mobile data terminals.

Prescriptive Response Workgroup Proposed: 11/07/12

EMSAB Recommends: 12/11/12

District Approved: _____

16. County-wide Priority Dispatching Option.

Background: During the formative years of EMS, it made sense to send the "cavalry" galloping on every 9-1-1 medical call and to only allow patients to be transported to hospital emergency departments. At the time, there were no systems that allowed dispatchers to safely prioritize the severity of emergency medical calls; and emergency room physicians were cautiously delegating their authority of care for patients to a new profession of emergency medical technicians. Over the years, this over-response of EMS has contributed to expensive healthcare and overcrowded emergency departments.

Over the years, EMD has evolved in its ability to safely prioritize medical calls. As a result, one of the initial1992 policy decisions stated, ". . . upgrade its current call-processing practices so as to allow bona-fide priority dispatching (i.e., Clawson protocols or equivalent, approved by the Medical Program Director . . ."

In June of 1993, the MPD recommended and the County established a contract to implement the National Academy of Emergency Dispatch (NAED) Medical Priority Dispatch System™ (MPDS). The selection of MPDS was based on:

- Its emphasis to use medically based and tested *protocols* stressing close compliance to pre-determined scripts, thereby ensuring sound medical information in obtained.
- At the time 15 years (now 32 years) of experience with nine (now over 30) published studies and the featured EMD method in the National Association of EMS Physicians position paper on EMD and the American Society for Testing and Materials' Standard Practice for EMD.

A review of medical priority dispatch systems was conducted by staff in 2010. This review confirmed there are two divergent medical dispatch philosophies that have evolved over the years – Guidelines verses Protocols. The proponents of the guidelines approach feel that dispatchers should basically listen rather than interrogate. There are no structured questions to ask after the initial questions to determine the chief complaint and status of consciousness and breathing. Rather, dispatchers are provided a list of vital points, or suggested questions. In addition the guidelines can be modified, or completely eliminated by the dispatch agency. This guidelines approach is what has become known as Criteria Based Dispatching (CBD).

The protocol approach requires that dispatchers follow a structured, predetermined interrogation process to activate pre-programmed response modes and medical instructions to callers prior to EMS arrival. Proponents of using the protocol approach believe a structured interrogation, developed and tested by medical and dispatch experts before the emergency, ensure a better determination of patient acuity and medical instructions over the phone. In addition, having no structured questions makes it very difficult if not impossible to determine compliance to protocols.

The following is a summary on why the EMS Administrative Board and Medical Program Director recommend that MPDS continues as the medical priority dispatching system:

- Used in over 3,200 communications centers internationally.
- Meets all the specifications established in national standard documents.
- Provides structured questions and instructions that are medically based and tested by a group of experts in medicine and emergency dispatch.
- Provides a quantitative coding system for quality assurance and analysis.
- Has over 30 studies showing the accuracy of AMPDS (Some studies footnoted below[22, 23, 24]).

[22] Nicholl, J. P., Gilhooley, K., et al. (1996). *The Safety and Reliability of Priority Dispatch Systems.* Final Report to the Department of Health. Sheffield: Medical Care Research Unit, University of Sheffield.

- Has a formal accreditation program.

Decision: CRESA shall provide 9-1-1 medical priority dispatching for all first response agencies and ambulance services in the County. The contractor shall provide medical priority dispatching for all seven-digit requests of its ambulance service. The medical priority dispatching protocols and procedures shall be the Medical Priority Dispatch System.

Prescriptive Response Workgroup Proposed: 06/27/12

EMSAB Recommends: 12/11/12

District Approved: _____

17. Training Level and Accreditation.

Decision: CRESA and the ambulance contractor's control center medical call takers shall be NAEMD trained, certified, and accredited as approved by the Medical Program Director.

Prescriptive Response Workgroup Proposed: 11/07/12

EMSAB Recommends: 12/11/12

District Approved: _____

18. Division of Functions.

Decision: Based on the control center provisions described above the division of functional responsibilities is outlined on the following chart:

Prescriptive Response Workgroup Proposed: 11/07/12

EMSAB Recommends: 12/11/12

District Approved: _____

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[23] Turner, J., Lattimer, V. and Snooks, H. (2008). *An Evaluation of the Accuracy and Safety of NHS Pathways.* Final Report to the Department of Health. Sheffield: Medical Care Research Unit, University of Sheffield.

[24] Buck, B. H., Starkman, S., et al. (2009). *Dispatcher recognition of stroke using the National Academy Medical Priority Dispatch System.* Stroke, 40(6), 2027–2030.

EMS Strategic Plan – *9-1-1 Integrated Access Management.*

Strategic Priority I – *Efficient and Effective Deployment of Resources*

A secondary triage system is being considered as a further way each 9-1-1 caller receives the most appropriate care, at the most optimal location, with a minimum of delay. This system should link to the 9-1-1 triage system MPDS facilitate access to healthcare services other than traditional EMS response and transport to the emergency department.

When a 9-1-1 caller is determined as having a low acuity medical condition appropriate for an "Omega" response, the caller is transferred to a Clinical Advisor (RN) who uses this secondary triage system. Based on the clinical condition identified, a disposition or level of care is recommended. This information is then matched with the healthcare resource list to schedule an appointment, arrange for home care or assessment, or medical consult.

One of the key requirements for implementation will require support for funding since current reimbursement is tied to transport to the hospital ED on 9-1-1 calls. Interest and support from insurers/providers should be obtainable since an application for CMS demonstration grant showed $1 for such a program saves $5 in downstream health care costs.

Division of Functional Responsibility	911	Ambulance
A. 911 Complaint - Taking Function	✓	
B. Administering Telephone Protocols		
1. 911 Calls	✓	
2. 7 - digit medical requests		✓
C. Priority - Dispatch Determination		
1. 1st Response		
a. For 911 medical requests	✓	
b. For 7 - digit medical requests	✓	
2. Paramedic Ambulance		
a. For 911 medical requests	✓	
b. For 7 - digit medical requests		✓
D. Unit Selection, Unit Alert, and Routing Instructions		
1. 1st Response	✓	
2. Paramedic Ambulance	✓	
a. For 911 medical requests		✓
b. For 7 - digit medical requests		✓
E. Obtaining Location/Premise- Entry Information		
1. 911 Calls	✓	
2. 7 - digit medical requests		✓
F. Enroute Unit Update -- Premise Information		
1. 1st Response	✓	
2. Paramedic Ambulance		
a. For 911 medical requests	✓	✓
b. For 7 - digit medical requests		✓
G. Medical Data-Base Information Search		
1. For 911 medical requests	✓	✓
2. 7 - digit medical requests		✓
H. Pre-Arrival Instructions		
1. For 911 medical requests	✓	
2. For 7 - digit medical requests		✓
I. Enroute Unit Update -- Medical Info.		
1. For 911 medical requests	✓	
2. For 7 - digit medical requests		✓
J. Call - Progress Tracking and Follow up		
1. For 911 medical requests	✓	
2. For 7 - digit medical requests		✓
K. Status Management (SSM)		
1. 1st Response	✓	
2. Paramedic Ambulance		✓
L. Coordination of High-Risk Interfaciltiy Transfer		
1. Special Support		✓
2. Cobra Approvals		✓
3. Business Arrangements		✓
M. Off-Peak Utilization of Surplus Production Cap		✓
N. Pre-Authorization Requirement		✓
O. Special Events Coverage		✓
P. Mutual - Aid Requests		
1. From within the local 911 PSAP area	✓	✓
2. From outside the local 911 PSAP area	✓	✓
R. Monitoring hospital "diversions"	✓	✓

D. FIRST RESPONDER SERVICES

The birth of modern day EMS began in the 1960s when the Institutes of Medicine released the well-known white paper, "Accidental Death and Disability: The Neglected Disease of Modern Society." Since then, fire services have increasingly become the first-line medical responder, or "first responder" for critical illness and injury in virtually every community in America, regardless of who provides ambulance service.

19. Production Method.

Background: Since many of the costs for fire services are fixed based on meeting the Standard of Cover (SOC) for fire suppression, and based on the fact that fires only represent approximately four percent to the total responses.[25] To date, the most common method of providing first responder services is with the use of existing fire fighter personnel responding on existing firefighting equipment.

However, some fire services may also deploy one or two person cars, or rescues to respond on EMS calls. Typically, the decision to use EMS cars or rescues occurs when a fire service is faced with needing to add resources based on demand (high EMS call volumes) verses coverage for fire suppression to maintain the community's fire insurance rating. Adding such resources provides cost savings to the community as compared to the costs of adding a fire engine and the three or four person crew to staff it.

Decision: Since many of the costs for fire services are fixed based on meeting the SOC for fire suppression, the most common method of providing first responder services is with the use of existing fire fighter personnel responding on existing vehicles.

However, some fire services may also deploy one or two person cars, or rescues to more efficiently respond to increased demand (high EMS call volumes) verses SOC for fire suppression.

Business Models and Production Methods Proposed: 06/21/12

EMSAB Recommends: 02/19/13

District Approved: _____

20. Business Structure and Financing.

Background: There are two sources to pay for the costs in providing EMS. First response has historically been funded by each fire services tax structure.

[25] Based on local fire service National Fire Incident Reporting System data.

This has become increasingly difficult to do in light of the ever increasing demand for EMS response due to the aging baby boomers and dwindling public revenues as a result of the recent economic recession[26]. As a result, fire services within the District have had to reduce budgets, close stations and/or lay off personnel.

The other funding source for EMS comes from fees charged by the ambulance service. Actual revenue from these fees have also decreased in comparison to costs due to the economic recession, as well as the new Medicare fee schedule that was fully implemented in 2010. Since Medicare doesn't pay for the cost of ambulance service[27] and because of the growing number under or uninsured patients, the collection rates for ambulance services nationwide continue to shrink[28]. Since the insurance industry restricts reimbursement to only patients transported by ambulance, first response has been very limited in its ability to seek funding from this revenue source.

Since many of the costs for fire services are fixed based on meeting the SOC for fire suppression, most fire services will determine EMS costs through some form of marginal cost allocation methodology. In other words only counting the costs associated with providing EMS occur in addition to the fixed costs, such as: medical equipment and supplies; EMS training; additional health/occupation safety and liability insurance; and personnel fully dedicated to EMS. Yet when you factor in the percent of time fire resources are responding to, or training for EMS, the costs have been estimated to reach 38 percent of a fire services total budget[29].

Unless communities support a special EMS District #2 levy to help pay for EMS services, first response will continue to fund EMS through its shrinking fire service tax structure, and the District's ambulance service will continue to rely on the limited revenues collected from the fees charged.

Decision: First responder services should be funded by each respective jurisdiction, or fire district to meet the minimum 1st responder performance requirements established by the *Uniform EMS Ordinance* and *EMS Administrative Rules*. Costs associated with 1st responder medical supplies used on patients transported by the ambulance contractor, shall be addressed under System Design Decision #25 Financing.

Financial Workgroup Proposed: 10/05/12

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[26] Clark County assessor's office reported a 13.7 percent decrease in assessed property value between 2009 and 2010

[27] The US Government Accountability Office (GAO) reported Medicare reimbursement was 6% below the average cost of urban ambulance service in 2007.

[28] EMS District #2's ambulance contractor's collection rate (total collected ÷ total billed) has gone from 64% in 2001 to 43% in 2010.

[29] *2010 EMS Cost Survey: An Inventory of Clark County EMS District #2's EMS Costs*. Clark Regional Emergency Services Agency.

EMSAB Recommends: 02/19/13

District Approved: _____

21. Performance Standards

Background (Response Time): Historically, fire stations have been strategically placed to meet a community's Standard of Cover (SOC) for fire suppression and emergency medical response. The SOC process is essentially based on two elements of need and the community's ability to realistically meet this need. The time elements that establish the need for service include: 1) the time that it takes for a fire to go from ignition to endangering lives and property; and 2) the amount of time a person can tolerate lack of oxygen to the brain in the event of a serious cardiac or respiratory event.

There is a wealth of literature that shows the value of early *Basic Life Support* with CPR and defibrillation on cardiac arrest survival[30, 31, 32, 33]. For example, one study showed that reducing the 90th percentile response time to five minutes for use of a defibrillator would result in a 100% increased survival rate when compared to the 8-minute target (12% and 5.9% respectively)[34]. There are also a variety of studies in fire science that show the timeline from fire ignition to attack and a fire's manageability. Based on these studies, the National Fire Protection Association (NFPA) adopted the four minute response time standard for urban career fire services (NFPA 1710). Using this as a goal, most fire service policy makers must then consider the factors that impact a service's ability to meet this standard when establishing a community's SOC. These factors include most notably the available funding for the staff and equipment needed to meet the standard; and call processing/dispatch time.

Please note, if a fire service is faced with needing to add additional resources to improve EMS response times, policy makers may question the degree of need since working fires represent approximately four percent and EMS calls represent around 72 percent of total responses[35]. And of the EMS calls, cardiac

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30 Matthew Huei-Ming Ma, *Outcomes from out-of-hospital cardiac arrest in Metropolitan Taipei: Does an advanced life support service make a difference?* Resuscitation 2007, 74, 461-469.

31 Stiell I, et al, OPALS Study Group. *Modifiable factors associated with improved cardiac arrest survival in a multicenter basic life support/defibrillation system: OPALS Study Phase I Results.* Annals of Emergency Medicine. Irving, TX: ACEP. January 1999, 33:1, p 44.

32 Handley AJ, et al. *Guidelines for Resuscitation 2005*. European Resuscitation Council. 2005, p 57-58

33 Thomas H. Blackwell, MD, Jay Kaufman, PhD, *Response Time Effectiveness: Comparison of Response Time and Survival in an Urban EMS System,* Academic Emergency Medicine, April 2002.

34 De Maio, Stiell, *Optimal defibrillation response intervals for maximum out-of-hospital cardiac arrest survival rates*, Annals of Emerg Med, August 2003, Vol 42, pgs 242-250.

35 Based on local fire service National Fire Incident Reporting System data.

arrests only comprise around two percent of the responses[36]. Yet fires and cardiac arrests are not the only calls that require timely response of fire first responders. For example, some time-life priority calls such as stroke, heart attacks, severe respiratory distress and severe trauma need rapid first response. In addition, incidents involving technical rescue and hazardous materials require rapid response for scene control, safety, and rescue operations that ambulance services are not equipped, or trained to provide.

EMS Strategic Plan – *Prescriptive Response*.

Strategic Priority I – *Efficient and Effective Deployment of Resources*

The first phase of the Prescriptive Response Project described in Design Decision #16, Countywide Priority Dispatching Option involved the prioritization of the 350+ Medical Priority Dispatch System (MPDS) call types based on actual patient acuity.

The second phase of the Prescriptive Response Project involved establishing response time standards for first response and ambulance service based on current patient outcomes research. In establishing these standards, the MPD's office first identified Time Life Priority situations where rapid medical intervention makes a difference in patient survival and recovery. Other patient conditions and corresponding priorities were then grouped into emergent and non-emergent categories. When making the delineation between emergent and non-emergent the following questions were asked, "Will time make a difference in the final patient outcome; and how much time leeway is there for this patient condition?"

Time Life Priority	Emergent	Non-Emergent

Response time standards were then assigned to these categories based on research regarding clinical intervention times (i.e., time from cardiac arrest to CPR) and patient outcomes. These standards were then adjusted for those areas not in an urban setting who have the additional challenge of limited staff, equipment and greater travel times. (See Design Decisions #21. a. and 28. c.)

Decision:

a. Response Time Performance. Based on clear research showing the value of early first response with CPR and defibrillation on cardiac arrest survival, as well as other time life priority situations and the need for timely first response on calls requiring additional personnel, rescue and hazmat operations, all

[36] Based on CRESA Computer Aided Dispatch call type data.

agencies have the goal of rapid first response (i.e., 4 – 5 minutes). Yet faced with the realities of not all agencies operating in an urban setting and the limitations of available funding, the fire agencies within the District will provide current response time performance to assist in designing an EMS system response that encourages agreements between the ambulance contractor and first responders taking full advantage of all EMS resources (see System Design Decision 28. c.)

Business Models & Prod. Methods Workgroup Proposed: 11/19/12

EMSAB Recommends: 02/19/13

District Approved: _____

Background (Clinical Performance): In addition to when and how quickly first response resources should be sent, policy makers also need to determine what the level of first response should be. At a minimum, the MPD requires first responders at the Emergency Medical Responder (EMR) level with Automatic External Defibrillation (AED) capabilities. This requirement has been in place for a number of years and is based on studies showing that early CPR and defibrillation have the biggest impact on cardiac arrest survival.

At the option of fire service policy groups, a higher level of first response can also be deployed such as paramedic Advanced Life Support (ALS). When considering ALS first response, policy makers should be familiar with studies that look at the impact that ALS and paramedics have on patient outcomes. While research shows the efficacy of ALS, for example in the treatment of certain heart, stroke and respiratory patients[37, 38, 39, 40, 41, 42] , the research on ALS response

[37] Moyer P, Ornato JP, Brady WJ Jr, Davis LL, Ghaemmaghami CA, Gibler WB, Mears G, et al. *Development of systems of care for ST-elevation myocardial infarction patients: the emergency medical services and emergency department perspective*. Circulation 2007; 116: e43-8.

[38] Garvey JL, MacLeod BA, Sopko G, and Hand MM. *Pre-hospital 12 lead electrocardiography programs: a call for implementation by emergency medical services systems providing advanced life support*--National Heart Attack Alert Program (NHAAP) Coordinating Committee; National Heart, Lung, and Blood Institute (NHLBI); National Institutes of Health. J Am Coll Cardiol, Feb 2006; 47: 485-491.

[39] Millin MG, Gullett T, Daya MR. *EMS management of acute stroke—out-of-hospital treatment and stroke system development (resource document to NAEMSP position statement*). Prehosp Emerg Care 2007; 11:318-325.

[40] Gladstone DJ, Rodan LH, Sahlas DJ, Lee L, Murray BJ, Ween JE, et al. *A citywide prehospital protocol increases access to stroke thrombolysis in Torondo*. Stroke 2009:40:3841-3844.

[41] Stiell IG, Spaite DW, Field B, Nesbitt LP, Munkley D, Maloney J, et al. *Advanced life support of out-of-hospital respiratory distress*. N Engl J Med 2007; 356:2156-2164.

[42] Plaisance P, Pirracchio R, Berton C, Vicaut E, Payen D. *A randomized study of out-of-hospital continuous positive airway pressure for acute cardiogenic pulmonary oedema: physiological and clinical effects*. Europ Heart J 2007; 28:2895-2901.

time standards is inconclusive[43]. The consideration of ALS first response needs to be done in context to the District's EMS system design elements for ambulance service (i.e., response time standards in urban, suburban and rural areas; and how ALS is deployed on ambulances in those areas). See System Design Decision and #23 Production Methods and #28. c. Performance Requirements (Response Time Standards) for further details.

Another important consideration is making sure there is not an over-saturation of paramedics in a given community. Since relatively few EMS calls truly need the Advanced Life Support (ALS) skills of a paramedic[44], it's important to make sure the paramedics in the system to have enough exposure to ALS calls to maintain the experience and skills necessary to effectively manage these infrequent yet critical/high risk patients[45, 46].

Decision:

b. Clinical Performance. The minimum clinical performance for first response is at the EMR level the AED capabilities. Should a first response agency show that in meeting this requirement it's expected to cause a reduction or loss of existing service due to financial hardship, the Medical Program Director may waive the requirement pursuant to the Clark County EMS Administrative Rules regarding granting variances.

Each first response service can choose a higher level of clinical performance, so long as applicable provisions of the System Standard of Care are met (i.e., sacrificing timely response in order to provide a higher level of ALS response).

Business Models & Prod. Methods Workgroup Proposed: 11/19/12

EMSAB Recommends: 02/19/13

District Approved: _____

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43 Swor R, Cone D. *Emergency Medical Services Advanced Life Support Response Times: Lots of Heat, Little Light.* Academic Emergency Medicine. 2002, Vol. 9; 4:320-321

44 Heightman, A.J., *Toronto Tests New ALS/BLS Model*, JEMS.com 2009 Aug 17.

45 Sayre MR, et al. *Cardiac arrest survival rates depend on paramedic experience*. In Academic Emergency Medicine. Lansing, MI: Society for Academic Emergency Medicine; Vol. 13, Number 5, Supplement 1, May 2006. p S55-S56.

46 Gold LS, Eisenberg MS: *The effect of paramedic experience on survival from cardiac arrest.* Prehospital Emergency Care.13(3):341 344, 2009.

E. AMBULANCE SERVICE

22. Market Rights.

Background: Retail competition within the ambulance market is ineffective in determining quality and price of service. In the mid-70s, a privately funded research team took a look at the ambulance industry. Composed of members with doctorate level credentials in economics, organizational psychology, operations research, finance and accounting, they concluded the industry was a natural monopoly. This conclusion was based on the problems noted with retail competition and fact that economies of scale made a single firm more efficient than any combination of multiple firms[47].

For obvious reasons, those calling for emergency ambulance service don't have the inclination to comparison shop when help is needed, and with 9-1-1, the selection of who responds is largely in the hands of local government. For those calling for non-emergency ambulance service, supposedly having the time and ability to comparison shop, research has shown that such calls can end up requiring Advanced Life Support (ALS) intervention[48]. This can be due to the lack of accurate information on the severity of the patient either by the caller not relaying correct information to the dispatcher, or the non-emergency dispatcher not using or non-compliant to the medical priority dispatch protocol.

In addition, paramedics and Emergency Medical Technicians (EMTs) working for an ambulance service that only provides routine non-emergency transports, have a difficult time maintaining the necessary patient skills and recertification requirements. It's important to make sure the paramedics in the system to have enough exposure to ALS calls to maintain the experience and skills necessary to effectively manage these infrequent yet critical/high risk patients[49, 50].
For example, a newly certified paramedic is required to complete 36 endotracheal intubations during the three-year recertification period. Non-emergency paramedics will intubate a patient very rarely (if ever). This will require them to compete for limited clinical rotations with an anesthesiologist to meet this requirement.

If a non-emergency patient was correctly identified as needing 9-1-1 response by the routine non-emergency ambulance dispatch center, or non-emergency ambulance crew, a 9-1-1 ALS ambulance would then have to be dispatched. This results in a delay of appropriate care, additional resources and costs at the

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47 Jack Stout, *Public Utility Model Revisited*, JEMS, Feb. 1985.

48 Bryan Wilson, MD, et.al., *Unexpected ALS Procedures on Non-Emergency Ambulance Calls: The Value of a Single-Tier System*, Prehospital and Disaster Medicine, Dec. 1992.

49 Sayre MR, et al. *Cardiac arrest survival rates depend on paramedic experience*. In Academic Emergency Medicine. Lansing, MI: Society for Academic Emergency Medicine; Vol. 13, Number 5, Supplement 1, May 2006. p S55-S56.

50 Gold LS, Eisenberg MS: *The effect of paramedic experience on survival from cardiac arrest.* Prehospital Emergency Care.13 (3):341 344, 2009.

scene, and increased potential for litigation. The most frequent causes of litigation in an urban EMS system relate to acts of omission, including not providing ALS care and not arriving in a timely manner.[51]

In addition to the medical and legal issues, are the economic arguments that support an exclusive market for ambulance service. The efficiency of an exclusive (9-1-1 and 7-digit non-emergency) ambulance system is realized by spreading the costs out over the emergency and non-emergency market. This optimizes operational capacity thereby providing economic efficiencies. The efficiencies of an exclusive ambulance system was shown in a study involving 13 EMS systems. The purpose of the study was to determine the cost savings, if any, of an exclusive system compared to a non-exclusive system (different providers for 9-1-1 and 7 digit non-emergency ambulance services). Savings were documented in all systems converting to an exclusive system, within a range of 4.9 percent to 19.8 percent, and a median of 12.9 percent. The study concluded that substantial savings could be realized from implementing an exclusive ambulance system, with the percentage of savings determined by operational, demographic, and local regulatory factors.[52]

For example, staff compared the contractor's 2011 Unit Hour Utilization (UHU) under an exclusive contract and modeled out what would happen if it lost 50% of the non-emergency calls under a non-exclusive contract with adjustments being made to the available unit hours based on the reduced transports. Staff determined there would be an estimated 11% increase in the cost per transport.

Example: Exclusive verses Non-Exclusive Contract

Non Exclusive = $140 Unit Hour Cost ÷ .3437 = $407/Transport

Exclusive = $140 Unit Hour Cost ÷ .3837 = $365/Transport

$42 x 30,039 Transports

$1,261,628 Total Increase

9-1-1 ambulance services are also at a competitive disadvantage with non-emergency ambulance services, when it comes to routine transports. This is due to the fact that non-emergency providers don't have to maintain the geographic coverage, higher clinical and response time standards that 9-1-1 providers must do. In addition, non-emergency providers can target those more likely to pay for service, where 9-1-1 providers don't have that option. Jack Stout, in his article titled, "Public Utility Model Revisited" states trying to finance peak-load coverage levels on a fee-for-service basis is extremely vulnerable to financial destruction by such non-emergency, or "cream skimmer" competition[53].

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[51] JP Ornato, MD, *The Need for ALS in Urban and Suburban EMS Systems*, Annals of Emergency Medicine, Dec. 1990.

[52] Overton J, Stout J. System Design. In: Kuehl AE, editor. *Prehospital systems and medical oversight.* 3d ed. Dubuque, IA: Kendall/Hunt Publishing Company; 2002. p 114-131.

[53] Jack Stout, *Public Utility Model Revisited*, JEMS, Feb. 1985, 55-63.

Finally, based on two federal lawsuits, one that reached the original settlement agreement in 1991[54] that led to the District's first exclusive ambulance contract and again in 2011[55], the court has determined a competitive process for the "entire market" is not a violation of any federal anti-trust law.

Decision: The ambulance contract for EMS District #2 should assume full exclusivity of market rights based on studies showing that retail competition for 9-1-1 and routine transport does not produce clinically sound ambulance service at the lowest possible cost, as well as the court supporting such exclusive contracts.

Financial Workgroup Proposed: 10/05/12

EMSAB Recommends: 12/11/12

District Approved: _____

23. Production Method.

Background: There are two types of production strategies for ambulance service. One pursues efficiency through specialization of ambulances (i.e., multi-tiered ALS/BLS ambulance systems). The other pursues efficiency through more flexible multi-purpose ambulances (i.e., single-tiered, all-ALS, full-services systems).

The logic behind the multi-tiered approach is that some patients need less sophisticated care than others. It's expected that money is saved by sending more clinically sophisticated (and more expensive) Advanced Life Support (ALS) ambulance crews to critical patients, while less sophisticated (and less expensive) Basic Life Support (BLS) crews provide care for the less critical patients.

The all-ALS, full-service approach recognizes some patients need less sophisticated care, yet questions whether specialization is appropriate in a profession where peak load demand fluctuations requires considerable surplus production capacity. Efficiency is realized by spreading the costs out over the emergency and non-emergency market, and elimination of duplicate coverage that occurs in tiered ALS/BLS ambulance systems[56].

Based on these savings, many high-performance emergency ambulance services have converted voluntarily to all-ALS, full service fleets, recognizing that

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54 Settlement Agreement No. C91-5229B, Exhibit D - Stipulation and Agreed Order of Dismissal page 11, ln.15-25.

55 Order on Motions for Summary Judgment Case No. C10-5809RJB pages 19-29.

56 Jack Stout, Paul Pepe, MD*, All-Advanced Life Support vs Tiered-Response Ambulance Systems*, Prehospital Emerg. Care 2000;4:1-6

gains in efficiency far outweigh the minimal additional cost of staffing and equipping the entire fleet at the ALS level.[57]

For example, staff compared the contractor's 2011 Unit Hour Utilization (UHU) as an all-ALS ambulance provider and modeled out what would happen it became a tiered ALS/BLS provider with adjustments being made to the available unit hours based on the needed coverage for both ALS and BLS ambulances. Staff determined there would be an estimated 27% increase in the cost per transport.

Example: ALS/BLS verses All-ALS Contract

ALS/BLS = $140 Unit Hour Cost ÷ .3013 = $465/Transport

All-ALS = $140 Unit Hour Cost ÷ .3837 = $365/Transport

$ 100x 33,358 Transports

$3,335,800 Total Increase

In addition to the economic reasons to an All-ALS ambulance system are the medical/legal issues. In large urban systems the multi-tiered ALS/BLS system can enhance utilization of medical skills due to fewer paramedics, primarily through the use of dispatch triage protocols.[58] Yet the efficacy of ALS/BLS systems is based on the premise that priority dispatch protocols and BLS personnel can safety identify the patients requiring ALS.

Research has shown that BLS personnel are unable to safely determine when ALS is needed. In one study it was found 76% of the cases where BLS providers cancelled the responding ALS ambulance met the study criteria for ALS. Of those patients meeting the ALS criteria: 98% had potentially serious chief complaints; 23% had abnormal vital signs; and 25% had physical exam findings that warranted ALS.[59]

In addition, an all-ALS, full-service system eliminates the risk of not sending the appropriate level of ambulance service, and thereby delayed response. It also removes the risks of patient abandonment through handoffs of patients from ALS crews to BLS crews. This risk for delayed response and patient abandonment is a real concern since the most frequent cause of litigation in an EMS system is related to acts of omission, including not providing ALS care in a timely manner.[60]

Decision: The full-service, all-ALS flexible production strategy for 9-1-1 responses; and an ALS/BLS production strategy for non-emergency calls that

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57 American Ambulance Association. *Annual Membership Survey*. McLean, VA: American Ambulance Association; 2008.

58 Jack Stout, *Public Utility Model Revisited*, JEMS, Feb. 1985.

59 David Cone, MD, Gerald Wydo, MD, *Can BLS Personnel Safely Determine that ALS is Not Needed?,* Prehospital Emergency Care, Oct. – Dec. 2001.

60 JP Ornato, MD, *The Need for ALS in Urban and Suburban EMS Systems*, Annals of Emergency Medicine, Dec. 1990.

originate at a clinic or hospital, with a physician or physician assistant on-scene, shall be employed within the system design and contracting method. Proposers may offer a strategy of a multi-tiered ALS/BLS ambulance system for 9-1-1 calls so long as the clinical and economic concerns are addressed to the satisfaction of the review team.

Business Models & Prod. Methods Workgroup Proposed: 06/21/12

EMSAB Recommends: 12/11/12

District Approved: _____

EMS Strategic Plan – *EMS Integrated Access Management and Community Healthcare Program.*

Strategic Priority I – *Efficient and Effective Deployment of Resources*

EMS Integrated Access Management(IAM) provides a triage tool paramedics can use in the field to safely identify low acuity patients who would be more appropriately served by treat and release, physician consults, or clinic appointments.

EMS Community Healthcare Program (CHP) provides Advanced Practice Paramedics (APPs) to treat and arrange alternative care services for patients not requiring traditional EMS and ED response; as well as working with health care providers to provide at-home assessment and preventative care services.

One of the key requirements for implementation will require support for funding since current reimbursement is tied to transport to the hospital ED on 9-1-1 calls. Interest and support from insurers/providers should be obtainable since an application for CMS demonstration grant showed $1 for such a program saves $6 in downstream health care costs.

24. Business Model.

Background: There are six common ambulance business models that operate in the United States. They include: fire-based, local government (aka third service), private-for-profit (includes franchise contracts), private not-for-profit, public utility, and hospital-based. For the EMS system designer the first question shouldn't be, "What's the best ambulance business model?" or the Who. Rather, the first question to answer is the How, or ambulance production strategies. These ambulance production strategies include:

- Single (exclusive) verses multiple (non-exclusive) (see EMS System Design Decision 22)

- Multi-tiered ALS/BLS verses single-tiered all-ALS (see EMS System Design Decision 23)
- Dynamic deployment verses fixed staffing and stations (see EMS System Design Decision 9)

Once the ambulance production strategies are decided, it will become easier to determine what ambulance business model can best meet these strategies.

During the EMS strategic planning process (Exhibit A) the Business Model and Production Workgroup recommended the District continue with the Franchise ambulance model that encourages public/private partnerships and efficient use of all EMS resources. This decision was based on: 1) fire-based providers within the District not interested in providing exclusive, all-ALS ambulance service; 2) the challenges for fire-based providers in providing dynamic deployment; 3) the increased likelihood of costs for providing fire-based ambulance service; and 4) the support and time needed to implement an EMS levy for the initial capital outlay and ongoing operational costs to fund a public ambulance provider.

The Franchise Model uses a competitive bid to select a single ambulance provider. The ambulance provider furnishes the equipment and facilities, and handles billing and collections. Since the contracting authority does not control accounts receivable a higher performance security is needed to ensure there's enough working capital for uninterrupted ambulance service should the contractor default.

Since the contractor furnishes the equipment and facilities there also needs to be a lease/sublease arrangement between the contractor and contracting authority. This arrangement again ensures uninterrupted ambulance service, allowing the contracting authority to continue making lease payments or buyout option should the contractor default.

The key advantages of the Franchise Model include a reduced financial risk and start-up costs by the contracting authority. This is due to the fact the authority does not manage billing and collections, or own the equipment and facilities. One disadvantage with the Franchise Model is the contractor's focus is not only being placed on patient care, but also billing and collections. In addition, any profit is understandably placed back in the private-for-profit service's pocket and system, rather than the just system.

David Williams, an EMS and public safety consultant states, ". . . there is no ideal system [ambulance business] model, but rather a whole host of factors that determine the right delivery method for a community[61]."

After over four decades of real-world experience of various ambulance business models, the advantages and disadvantages inherent in the most common EMS systems are known. For the EMS system designer the question then becomes which set of advantages are the most important and what set of disadvantages are the least objectionable.

[61] Williams, D., *The Myth of the Perfect Model*, EMS Responder, Sept. 2006.

The following overview of advantages and disadvantages of the ambulance business models described in David Williams article.

- Fire Service Model

  Advantages: Adding EMS into the fire department organizational structure may provide advantages in the day-to-day management of both services. With fire suppression and prehospital emergency care operations under one roof, the need for parallel, or separate management and administration is eliminated.

  Training personnel as both EMS providers and firefighters enhances the versatility of the workforce, offers people variety in their duties and provides flexibility for management. Cross-trained personnel have the lowest attrition rate in the industry.[62]

  Disadvantages: EMS call demand acts differently than fire call demand. To adequately serve potential patients, EMS resources must be matched to meet demand. Fire departments have historically deployed ambulances using a fixed deployment model, and many continue to use 24-hour shifts. This approach results in too many resources available during non-peak hours and not enough during peak periods, limiting efficiency in managing the system status[63, 64].

  Fire service-based emergency ambulance services, as with most government-based models, historically only serve patients who request care through 9-1-1 systems thereby losing the efficiencies gained in an exclusive/flexible ambulance system. Non-emergent patient transport needs are typically delegated to local private providers.

  Finally, the fire service labor force has long been heavily organized. This has resulted in competitive compensation and retirement programs, making the fire service an attractive employer for many career EMS providers. Labor agreements, however, also add a degree of complexity for an organization's leadership, often limiting their ability to manage the system. In addition, labor costs are higher than other system models.[65]

- Private For-Profit (Franchise) Model - In this model, emergency ambulance service can be provided through franchise contracts between private providers and local government. Non-emergency services may also be included under exclusive ambulance contracts. Management and oversight of clinical care, day-to-day operations, assets and capitalization are all accomplished in the private sector, and the level of involvement and financial

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62 Williams D. *2005 JEMS salary & workplace survey: What you earn, where you work, & what it all means.* JEMS. 30(10): 36-55, Oct 2005.

63 Williams DM. 2004 JEMS 200-city survey: A snapshot of facts & trends to create benchmarks for your service. J Emerg Med Serv 30(2): 42-60, Feb 2005.

64 [See Footnote 56]

65 [See Footnote 56]

support of local government is completely negotiated when performance based contracting is used.

Advantages: For local governments, completely outsourcing emergency ambulance service has many advantages. The greatest is the ability to not have to be directly tied to the day-to-day operations of the service. Through solid contracting and established performance reporting and quality assurance, local officials can rely on the provider to manage operations and focus solely on whether expected results are realized.

In addition to managing the organization, the company also owns all the assets. This means local government does not have to invest in ambulances, buildings, equipment or staff; nor does it have to pay for maintenance or replacement.

With performance-based contracting, communities have clear scorecards with which to assess the performance of their contractors. This also facilitates benchmarking against similar communities. If a contractor doesn't meet performance expectations, local officials can hold it accountable or replace it.

Disadvantages: Sudden withdrawal of the provider from the market is also a potential concern. This can happen if the provider decides the market doesn't provide enough revenue to support its service, or it can be due to internal financial issues that force downsizing. Either way, a community needs to clearly address this in its contract and remain alert to the potential need for another contractor to provide service on short notice.

The private for-profit companies can be less attractive for field providers. Lower wages, less opportunity for advancement and higher expectations for productivity are all factors that may contribute to turnover.[66]

- Local Government (aka, Third-Service) Model - The local government model involves a stand-alone department within a city, or county government. Like the fire and police departments, Local government providers are dedicated to emergency 9-1-1 ambulance service. It's traditionally staffed with civilian employees and, like its public-safety counterparts, is completely owned, financed and operated within the local government structure.

  Advantages: A key advantage to the local government model is public ownership of the emergency ambulance component of the EMS system. Everyone in an EMS organization is charged with and working on the delivery of ambulance service, and management is directly responsible to local officials. This allows local government to have direct control over the day-to-day operations of the service.

  Another advantage of this model is that it uses a civilian workforce. This lets a department offer wages that are competitive to the market, but still reasonable. It also offers some flexibility in developing schedules that match resources to the demands of call volume.

[66] [See Footnote 56]

Disadvantages: While many providers believe, or at least hope, a separate government department would provide them the same attention, support and place at the table given to police and fire departments, in most communities that's not the case. Third services are frequently assigned less value than their public-safety peers, and their leadership shares many of the same struggles for recognition as other models.

Local government services are often targeted only at the emergency market and do not serve the non-emergency patient population, thereby losing the efficiencies gained in an exclusive/flexible ambulance system.

- Not-for-Profit Model - Not-for-profit (NFP) companies assets are owned and controlled by private board of directors. The NFPs' independent structure may result in their being lumped in with private for-profit companies, but here, all revenue generated is directed back into the service.

  Advantages: Like private for-profit contractors, NFPs can free local officials from involvement in day-to-day operations. The organization's own leadership manages operations and answers directly to a board of key stakeholders. Any questions, or issues with service can be directed to and managed at the board level.

  NFPs are often self-sufficient, or minimally subsidized. Career and mixed organizations will attempt to maximize user and membership fees to support themselves. This results in a lower cost structure. In addition, since they are nonprofit, any revenue above their direct costs is directed back into the service.

  Disadvantages: Accountability and transparency can be an issue for NFPs. Having a diverse and professional board of stakeholders and business leaders can be an effective solution. In addition, local government should consider performance-based contracting to ensure results are being attained.

- The Public-Utility Model - A Public Utility Model (PUM) is a strictly defined business structure with a public agency providing oversight, but day-to-day services and management are contracted to an ambulance provider through a competitive, performance-based bid process. In most cases, system infrastructure is owned by the public agency, which also manages the billing operations; operational management services and employees are left to the contractor.

  Advantages: Public ownership of essential assets allows the community the security of owning the system-no matter what happens with the contractor, the community can maintain seamless service. Management of the billing process ensures that the public agency can focus on maximizing its revenue from user fees and have direct control over monies generated by the service. The contractor is left alone to deal with operational performance.

  A key aspect of the PUM system is performance-based contracting. Included in the contract are provisions to ensure transparency and accountability and clear performance expectations that include frequent reporting. This process

allows an understanding between the community and the contractor as to what results are expected.

The PUM structure combines the stability and accountability often expected by citizens with the efficiencies and innovations of a private-sector company working to meet a high standard of service.

Disadvantages: It requires the creation of a separate oversight entity, which some elected officials may not embrace.

While salaries are competitive for the industry, employees are also expected to function at higher production levels and deal with changing employers every time there's a new contractor. This may contribute to the higher attrition rates seen in PUM systems.[67]

- The Hospital-Based Model - In hospital-based EMS systems, ambulance service may be provided directly by the hospital, or a provider might be a stand-alone entity owned, or controlled by the hospital.

  Advantages: Without a doubt, a key advantage of hospital-based programs relates to the continuum of care. Ideally, the clinical agendas of the ambulance service and the hospital are integrated to provide seamless care. With easy access to physicians and medical records, the opportunity for advanced quality efforts and study of outcomes is immense. Continuing-education programming can tap into the vast clinical expertise of the hospital, elevating the prehospital knowledge base.

  Being part of a hospital may also a host of choices for career development and advancement. This, coupled with a higher level of clinical practice, can be a recruiting advantage over other models.

  Disadvantages: A common challenge is placement of the EMS department within the structure of the hospital. In many cases, it is relegated to a low position in the hierarchy of priorities and finds itself under the director of nursing, or the emergency department. Frequently, it is isolated from top leadership and unable to advocate for itself, or be included in key hospital initiatives.

  Another disadvantage is in revenue recovery. Hospital billing services are often charged with processing ambulance bills along with other bills. Unless a billing-office staff member is dedicated to EMS, the intricacies of ambulance billing may not be appreciated, resulting in reduced recovery. In addition, large bills generated within the hospital are likely to overshadow the smaller bills of EMS, and EMS recovery may not be maximized.

Decision: The business structure shall be a Franchise Model. The Contractor shall furnish its own facilities, vehicles and equipment, as well as be the direct retail of services. Based on possible changes in the ambulance service industry

[67] [See Footnote 56]

due to health care reform, a provision shall be built into the contract to allow for early termination or buy out.

Business Models & Prod. Methods Workgroup Proposed: 04/12/12

EMSAB Recommends: 12/11/12

District Approved: _____

25. Financing.

Background: Each year, the District provides an annual report that includes an evaluation of the EMS system's performance in comparison to other EMS systems nationwide. Much of the comparison includes factors that impact ambulance service costs and user fees. This annual report has shown that over the past 11 years (2001 – 2011) there has been a trend of decreasing collection rates for the District's ambulance contactor. This growing financial concern is the driving force behind the EMS Administrative Board's request to work on an EMS Strategic Plan for the District which took a comprehensive approach in examining all of the current EMS system's design elements, especially those factors impacting costs and revenues (See Exhibit A).

Nationwide, public and private EMS providers are facing serious funding issues. There are a variety of causes for this, but two main reasons involve the changes in the Medicare fee schedule and the economic recession.

Based on the federal Balanced Budget Act of 1997, a new Medicare fee schedule began in 2002 for ambulance service. Because of the dramatic reduction in revenues this new fee schedule had on ambulance services, it was phased over an eight year period, with 100% of the new fees being implemented in 2010. This new fee schedule has resulted in the amount being reimbursed by Medicare being below the cost of providing ambulance service even before it was fully implemented.[68] To compound this problem, there is a growing population of patients covered by Medicare as the baby-boomers reach retirement. For example, the percentage of Medicare charges compared to the total bills charged in the District has increased from 17% in 2000 to 37% in 2011[69]. In addition, Medicaid which is the other federal insurer only paid 18 cents on the dollar and represented 20% of the total bills charged in 2011.

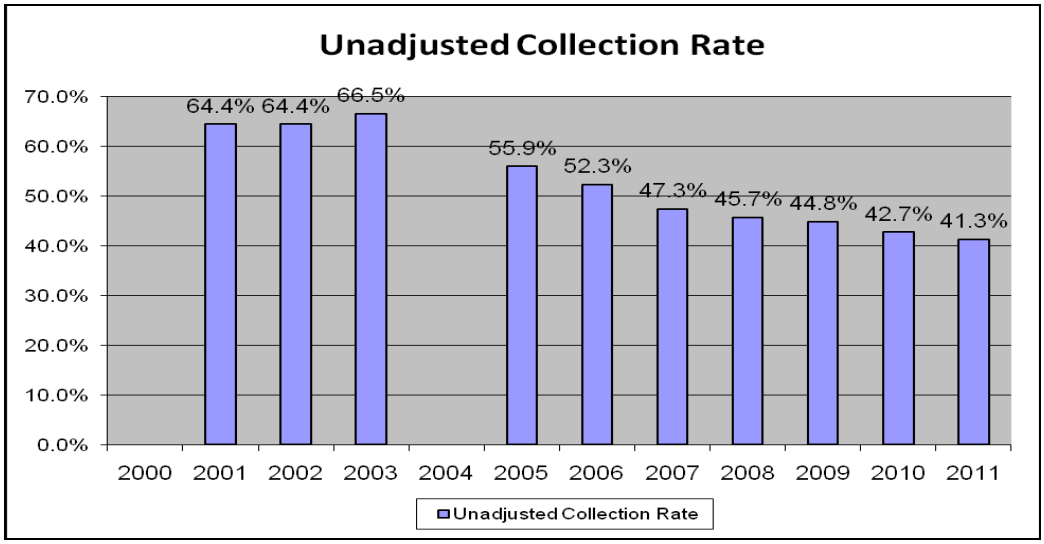
The recent economic recession has also resulted in decreased EMS funding. As the ranks of the unemployed have increased and employers have had increased difficulty in providing health benefits, so have the numbers of patients who are uninsured or under-insured. In 2011, those having to pay out-of-pocket

[68] The US Government Accountability Office (GAO) reported that Medicare reimbursement was 6% below the average cost of urban ambulance service in 2007

[69] Metro's Regional Forecast estimates the age group (65+) will have the greatest relative increase of 102% from 2000 to 2020.

represented 18% of the total bills charged and only paid 14 cents on the dollar. This combined with the Medicare/Medicaid group represents 75% of patients who don't fully pay for the cost of providing ambulance service.

As a result, the ambulance contractor's collection rate has steadily declined dropping from 64.4% in 2001 to 41.3% in 2011.



As discussed in EMS System Design Decision #20, "First Responder Business Structure and Financing, the economic recession has also had a negative financial impact on public funding for EMS. Public funds for EMS have decreased as sales and property taxes have decreased, and new development has fallen. Fire agencies within the District have had to reduce budgets; and some fire services have not filled vacant positions, or have laid off personnel. This trend could have a serious impact on the EMS system design goal of having fire first responders provide time-life critical patient care (i.e., early CPR and defibrillation on cardiac arrest patients) and technical rescue for trauma patients.

Will the trend in declining collection rates continue since the new Medicare fee schedule was fully implemented in 2010? The short answer is – Yes. This continuing decline in collection rates is based on: 1) the ranks of the Medicare population continuing to grow; 2) the slow economic recovery; and 3) the growing difficulty for employers in providing medical benefits. (For further details see 2012 – 2017 Clark County EMS District #2 Strategic Plan, Appendix B, Environmental Scan)

Finally, Patient Protection and Affordable Care Act's impact on EMS revenues is still largely unknown. Most experts predict that when fully implemented in 2014, funds that previously came from Medicare will be shifted to fund the additional persons that will be eligible for Medicaid coverage. At best these experts predict it will be revenue neutral for ambulance services.

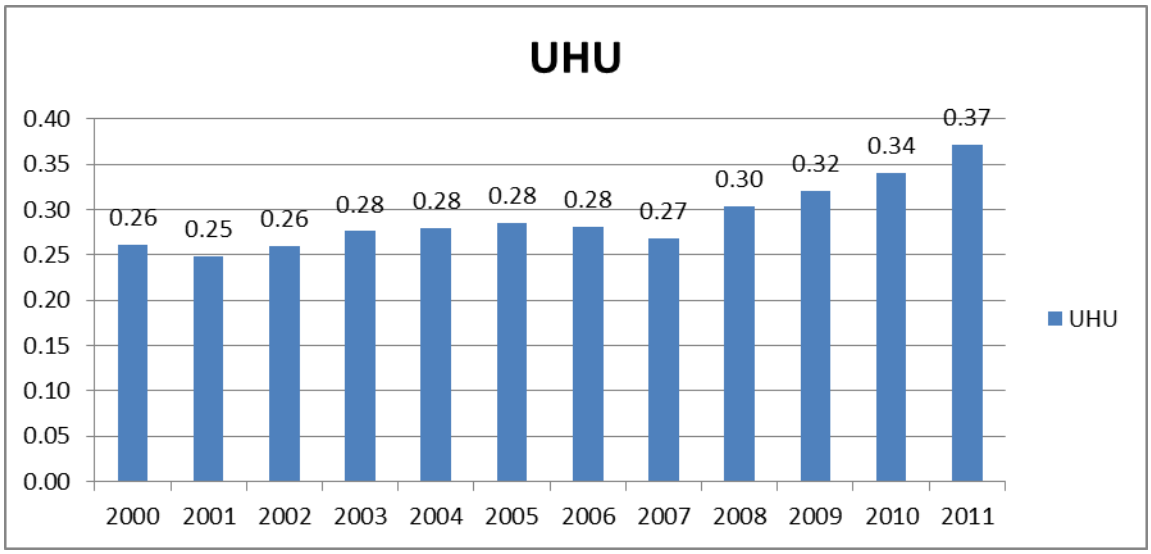
So what are the options to keep the District's EMS system from becoming financially unstable? The answer comes from either lowering the costs and/or

increasing revenues. These can include: 1) lowering costs by increasing efficiencies and/or lowering standards; and 2) increasing revenues by increasing user fees and/or subsidies.

- Limitations in Lowering Costs by Increasing Efficiency. Regarding lowering cost through increasing efficiency, the current ambulance contractor has very efficient operations as evident in the cost per transport comparison shown the in most recent benchmarking survey. This survey was conducted by the National EMS Management Association and shows a subset of 13 ambulance providers with similar demographics (i.e., metropolitan statistical area with urban, suburban and rural communities; full time ambulance service that includes 8 not-for-profit, 3 government and 2 private)

2009 District	*2009 National EMS Management Assoc.*
Cost Per Transport	*Average Cost Per Transport*
$409.52	$501.56

Another proof of the contractor running a very efficient operation comes from the trend in increasing its Unit Hour Utilization (UHU).



Unit Hour Utilization (UHU) equals the total number of transports divided by the total number of Unit Hours (UHs) an ambulance is staffed and equipped to respond.

UHU = Transports ÷ UHs

The purpose of reporting UHU is to show the service's efficiency while taking into consideration the factors that affect UHU that may or may not be within the service's control (i.e., response time standards and geographic difficulty in providing coverage).

Based on the contractor having a cost per transport which is 18% below the average, which is a direct result of having a high UHU; there are few options left on lowering costs other than lowering standards, or service levels.

- Lowering Costs by Reducing Service Levels. In choosing to lower costs by lowering service levels, policy makers need to understand potential impacts on patient care and first responder agencies. In summary, the impacts could include:

  1. *Reducing the Response Time Standards (- $220,000 / yr.)* - See EMS System Design Decision #28 c, Performance Requirements, Response Time Performance; and
  2. *Removing Reimbursement of First Responder Medical Supplies (- $98,000 / yr.)* Note – This would shifts the costs to fire first responders.

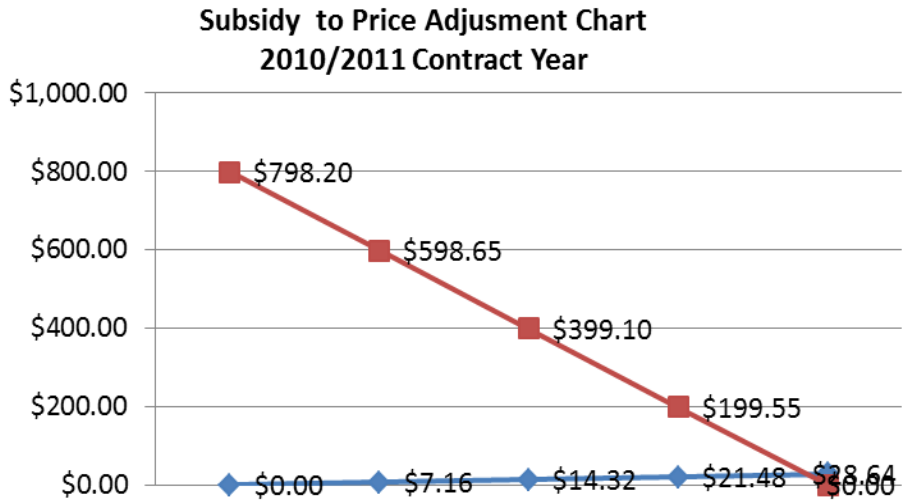
- Increasing Revenues by Increasing Fees and/or Subsidies. This only leaves increasing revenues by increasing user fees and/or subsidies. The two principle funding sources for paramedic ambulance service are user fees and local tax money. A system can be funded 100 percent from tax money, 100 percent from user fees, or from some mix of the two. Obviously, the larger the amount of tax funding, the lower the user-fees and vice-versa. Charging very low, or zero user fees amounts to a subsidy to insurance companies. On the other hand, it is appropriate to use tax funding when the full utilization of user-fees don't adequately cover operating costs. Subsidies have taken on an increased role as collection rates nationwide continue to fall.

  The difficulty in just raising the fees charged to offset the declining collection rates is due to the marginal collection rate at around 15%. In other words, for every new dollar billed only 15 cents is collected requiring an even higher rate adjustment to match the lost revenues. As the rates go higher the marginal collection goes lower and it becomes a vicious cycle.

  The other option that's available to participating jurisdictions is to provide a subsidy to offset the lost revenues and provide another funding source to support a financially stable EMS system. While participating jurisdictions have elected not to use this option to-date, a uniform schedule of subsidy/price is provided each year.

  The following chart was provided for the 2010/2011 contract year to show how such a subsidy per capita would reduce the then current *Average Patient Charge (APC)*.[70]

[70] Average Patient Charge (APC) means the total gross revenues for the transport of patients divided by the total number of patients transported (one-way) subject to the rate regulations established under the ambulance contract.



The participating jurisdictions should also explore the feasibility of ballot measure for an EMS District #2 levy for the entire contract service area that would assist in funding the provision of EMS for the District's first responders and ambulance contractor. At this time it's understood that having such levy in place for EMS District #2 is not possible prior to the 2014 ambulance procurement.

The following table shows the amount of taxable revenues generated within EMS District #2 based on the 2011 assessed property values at different levy amounts.

Taxable Values and Levy Amounts
Clark County EMS District #2

Municipality	2011	Per $1,000	Number of Tax Code Areas	Levy at .25 / $1,000	Levy at .35 / $1,000 (Camas FD)	Levy at .45 / $1,000 (CCFD6)	Levy at 1.10 / $1,000 (NCEMS)
Woodland (in Clark Co.)	6,015,191	6,015	2	$1,503.80	$2,105.32	$2,706.84	$6,616.71
Battle Ground	1,665,121,874	1,665,122	23	$416,280.47	$582,792.66	$749,304.84	$1,831,634.06
Unincorp. County	24,100,252,770	24,100,253	69	$6,025,063.19	$8,435,088.47	$10,845,113.75	$26,510,278.05
LaCenter	224,564,643	224,565	11	$56,141.16	$78,597.63	$101,054.09	$247,021.11
Ridgefield	640,633,678	640,634	16	$160,158.42	$224,221.79	$288,285.16	$704,697.05
Vancover	14,238,385,312	14,238,385	52	$3,559,596.33	$4,983,434.86	$6,407,273.39	$15,662,223.84
Total	**40,874,973,468**	**40,874,973**	173	**$10,218,743.37**	**$14,306,240.71**	**$18,393,738.06**	**$44,962,470.81**
Cost per Average Home Price @$260,600				**$65.15**	**$91.21**	**$117.27**	**$286.66**

Decision: Ambulance services provided by the contractor and administrative costs of the County and District shall be funded from user-fees, unless individual jurisdictions choose from a uniform schedule of subsidy/price options effective within its own jurisdiction.

The contractor shall also reimburse, provide, or exchange 1st responder services for Medical Program Director approved ALS medical supplies provided on patients transported within the Contract Service Area. Such reimbursement shall be at the rate the contractor pays for the same ALS medical supplies. The contractor is not obligated to reimburse 1st responders for ALS medical supplies if an EMS District #2 levy is implemented to pay for first responder EMS services, or for supplies electively carried by the 1st responder and exceed the minimum Medical Program Director approved ALS supply list.

Financial Workgroup Proposed: 11/29/12

EMSAB Recommends: 12/11/12

District Approved: _____

26. Competitive Bid Variables.

Background: In any competitive bid, two variables come into play - quality and cost. When contracting for ambulance service, a healthy balance of quality and cost must be established.

Due to a variety of unknown variables (i.e., growing uninsured and underinsured, changes in Medicare/Medicaid and the Patient Protection and Affordable Care Act), the District will accomplish the objective of setting a reasonable fee that ensures quality patient care and financial stability by requiring ambulance proposers to submit separate and sealed financial information to a CPA firm. This financial information shall propose a reasonable fee and will provide the details necessary to protect against cavalier bidding.

This financial information will include a template to be filled out by proposers that is developed by the District and the CPA firm that will be reviewing the information. The CPA firm will determine those submissions that are qualified to be scored by the review team.

Decision: The ambulance procurement process shall set the cost variable by establishing a reasonable fee based on the industries Unit Hour Costs (UHCs) for services offering similar levels of service and market conditions (collection rates based on the payor mix); and subsidy (if any). Based on a point scoring system, the contract shall be awarded to the firm offering the best quality of service within the reasonable fee.

Financial Workgroup Proposed: 11/29/12

EMSAB Recommends: 12/11/12

District Approved: _____

27. Duration of Market Rights.

Background: Ambulance contract terms and extensions depend on the two business designs used. For example, Public Utility Models can offer shorter contract periods (five years) because the buyer is responsible for a portion of the working capital (facilities, equipment and accounts receivable). On the other hand, the Franchise Model should have a longer contract period because the contractor is responsible for all of the working capital. This initial investment can be substantial for the new contractor.

The goal is to offer a contract period that offers financial stability and investment incentive for all bidders (incumbent and outside ambulance services alike). Yet at the same time, this contract period shouldn't produce a relaxed approach to earned renewals. The initial term of the agreement should be long enough to ensure that the provider has a fair opportunity to realize a return on its initial capital investment and will not be left with partially depreciated equipment at the end of a short contract period. A minimum of five years is the recommended duration of the initial contract, with additional earned extensions based on performance.[71]

Decision: The term of the contract shall be for six years, with the opportunity for three "earned" two-year contract renewals at the option of the District. "Earned" renewals shall be based on performance exceeding contract requirements and superior cost containment.

Financial Workgroup Proposed: 11/29/12

EMSAB Recommends: 02/19/13

District Approved: _____

28. Performance Requirements:

Background: EMS contracts are of two basic types: "performance contracts" which focus almost exclusively upon clinical and response time results, and "level-of-effort" contracts which focus on the resources that go into the results, such as the number of ambulances and paramedics, hours of training and other aspects of production methodology, or "process."

[71] Kupperman, K., et. al*., EMS Structured for Quality: Best Practices in Designing, Managing and Contracting for Emergency Ambulance Service*, American Ambulance Association. 2008. p. 96

Decisions: This shall be a performance-based contract, not a level-of-effort contract. Focus is on performance results with limited restrictions on production methods. The ambulance contractor shall be retained for expertise in effectively and profitably managing the delivery of paramedic ambulance services. The following list shall include, but is not limited to the following minimum performance requirements:

a. Key Personnel (scoring priority as listed, or equivalent)

1) Clark County Operations Director/Manager including description of authority and responsibilities.

2) Clark County Clinical Education and Quality Improvement Coordinator.

3) Clark County Shift Supervisors including employee ratio

b. Clinical Performance

1) All-ALS for 9-1-1; and ALS/BLS for 7-digit.

2) Certification and training that meets System Standard of Care (NAMET-P, WAEMT-P, ACLS, Driver Training, ICS 100/200, WMD Awareness, PHTLS or equivalent, PALS or equivalent.

3) Formal training and quality improvement program approved by the MPD.

4) Electronic Patient Care Report (ePCR) specifications

5) Clinical skill compliance and patient outcomes

6) Participation in the county training and quality improvement committee

7) Research

c. Response Time Performance There's a good amount of research that shows time and ALS care makes the difference for a limited group of patients sometimes referred to as the "first hour quintet" which includes: cardiac arrest, severe respiratory distress, chest pain/STEMI, CVA and severe trauma.[72, 73, 74, 75, 76, 77, 78] . For other patient categories, the

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[72] Krafft T, et al. *European Emergency Data Project: EMS Data-based Health Surveillance System*, 2002.

[73] Moyer P, Ornato JP, Brady WJ Jr, Davis LL, Ghaemmaghami CA, Gibler WB, Mears G, et al. *Development of systems of care for ST-elevation myocardial infarction patients: the emergency medical services and emergency department perspective*. Circulation 2007; 116: e43-8.

[74] Garvey JL, MacLeod BA, Sopko G, and Hand MM. *Pre-hospital 12 lead electrocardiography programs: a call for implementation by emergency medical services systems providing advanced life support*--National Heart Attack Alert Program (NHAAP) Coordinating Committee; National Heart, Lung, and Blood Institute (NHLBI); National Institutes of Health. J Am Coll Cardiol, Feb 2006; 47: 485-491.

studies are either lacking, or inconclusive when it comes to determining appropriate response times and their impacts on patient outcomes.[79] Yet despite the lack of clinical evidence, standards still need to be established for reasonable patient care and customer service. Based on these studies and to ensure an appropriate System Standard of Care, the Medical Program Director recommended that part of the EMS system design process should include establishing three levels of response time standards:

- "Time Life Priority" means those 9-1-1 calls and determinant codes where time does make a difference;
- "Emergent" means those 9-1-1 calls that don't fall within the first hour quintet, but still should have an emergent response due to patient discomfort, or reasonable standards of care (7B1 – Blast Injuries without priority symptoms, 17B1 – Fall Possibly Dangerous Body Area, 19C6 – Heart Problems rate <50 or > 130 bpm without priority symptoms, etc.); and
- "Cold" means those 9-1-1 calls where the risks of responding with lights and siren is not outweighed from the time saved and patient outcome.

Ambulance proposers will have the option to create agreements with first responder agencies that enable the ambulance contractor's Advanced Life Support (ALS) response time requirement to be stopped for up to two minutes by any first responder ALS unit arriving on the scene prior to the ALS ambulance. The purpose of this agreement is to encourage EMS resource efficiencies by including first response into the overall EMS system performance, thereby reducing costs to the patient as well as allocating these savings to the participating first responders. To ensure time to definitive treatment was not changed for time-life critical patient, scene times will also be monitored from the moment the first arriving ALS unit arrives on the scene.

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75 Millin MG, Gullett T, Daya MR. *EMS management of acute stroke—out-of-hospital treatment and stroke system development (resource document to NAEMSP position statement*). Prehosp Emerg Care 2007; 11:318-325.

76 Gladstone DJ, Rodan LH, Sahlas DJ, Lee L, Murray BJ, Ween JE, et al. *A citywide prehospital protocol increases access to stroke thrombolysis in Torondo*. Stroke 2009:40:3841-3844.

77 Stiell IG, Spaite DW, Field B, Nesbitt LP, Munkley D, Maloney J, et al. *Advanced life support of out-of-hospital respiratory distress*. N Engl J Med 2007; 356:2156-2164.

78 Plaisance P, Pirracchio R, Berton C, Vicaut E, Payen D. *A randomized study of out-of-hospital continuous positive airway pressure for acute cardiogenic pulmonary edema: physiological and clinical effects*. Europ Heart J 2007; 28:2895-2901.

79 Swor R, Cone D. *Emergency Medical Services Advanced Life Support Response Times: Lots of Heat, Little Light.* Academic Emergency Medicine. 2002, Vol. 9; 4:320-321

Response Time Standards			
Priorities 1 & 2	Time Life Priority ≥ 90%		
	Urban	Suburban	Rural
First Response			
ALS (w/Ageement & w.o Agreement for Vanc.)	7m59s	11m59s	19m59s
Ambulance (w Ageement & w.o Agreement for Vanc.)	*9m59s*	*13m59s*	*21m59*
Priorities 3 & 4	Emergent ≥ 90%		
	Urban	Suburban	Rural
First Response			
ALS (w/Ageement & w.o Agreement for Vanc.)	10m59s	13m59s	21m59s
Ambulance (w Ageement & w.o Agreement for Vanc.)	*12m59s*	*15m59s*	*23m59s*
Priorities 5 & 6	Non-Emergent ≥ 90%		
	Urban	Suburban	Rural
First Response			
ALS (w/Ageement & w.o Agreement for Vanc.)	15m59s	19m59s	29m59s
Ambulance (w Ageement & w.o Agreement for Vanc.)	*17m59s*	*21m59s*	*31m59s*

Priorities	Response Configuration		
	First Resp.		Amb.
1	Hot		Hot
2	Hot		Hot
3	Hot		Hot
4	Hot		Cold
5	Cold	No Response	Cold
6	Cold	No Response	Cold
7	No Response		No Response

Response time performance for “ALS” shall be measured from “time-call-received” to the moment an ALS crew (first responder, or ambulance) notifies the control center of “arrival-at-incident-location”. Should the ALS first responder arrive first within the applicable response time standard, an additional two minutes shall be added to the ambulance response time standard. The use of ALS first response times as described in this provision shall only apply when public private partnerships, or agreements are entered into between the Contractor and those agencies providing such ALS first responder services and approved by the District. When such agreements are in place, the response time performance for “Ambulance” shall be measured from “time-call-received” to the moment the ambulance notifies the control center of “arrival-at-incident-location”.[80]

Based on the ambulance contract awarding full exclusivity of market rights for 9-1-1 and routine transport, the following response time standards are

[80] The Vancouver Fire Department does not want to enter into a public private partnership with the Contractor and has committed to the “ALS” standard. As a result the Contractor is only obligated to meet the “Ambulance Standard” within the City of Vancouver.

established for those 7 digit calls that don't meet the Medical Program Director's 9-1-1 Transfer Guidelines:

- "Scheduled" means 7 digit medical requests that are scheduled at least 12 hours in advance of the requested time of pick up that don't meet the Medical Program Director's 9-1-1 Transfer Guidelines.
- "Unscheduled" means 7 digit medical requests that are scheduled at least 12 hours in advance of the requested time of pick up that don't meet the Medical Program Director's 9-1-1 Transfer Guidelines.

Scheduled ≥ 90%			**Unscheduled** ≥ 90%		
Urban	Suburban	Rural	Urban	Suburban	Rural
10m:59s	10m:59s	15m:59s	60m:59s	60m:59s	90m:59s

Response time performance shall be measured from the "time-call-received" to the moment the ambulance crew notifies the control center of "arrival-at-incident-location. For "Scheduled" responses, the scheduled pick up time shall be used as the "time-call-received" for the response time calculation.

d. Control Center Performance

[See Section III. D. Control Center Operations]

e. Facilities, Fleet and Equipment Operations

1) Ambulance contract operations facility.
2) Fleet and equipment maintenance practices.
3) Fleet size and description of vehicles.
4) Vehicle failure and collisions rates.
5) Medical equipment requirements including bariatric supplies.

f. Community Service, Public Education, and Customer service

1) Customer service training
2) Complaint/inquiry practices.
3) Customer service surveys.
4) Public educations in CPR, 1st aid, and illness and injury prevention.

g. First Responder Support

1) [see Section III. 25, Financing]
2) Equipment return practices
3) Allied agency communications, training and quality improvement.
4) Public Private Partnerships

h. Accounts Receivable

1) Electronic Billing
2) Assistance in recovering third party reimbursement and financial hardship.
3) Policies on billing, notice, and collections.
4) Compliance to ambulance contracts regulated rates

i. Employee Provisions

1) Management Training
2) Treatment of incumbent workers
3) Employee recruitment, screening, and orientation
4) Compensation and benefits
5) Reasonable work schedules and working conditions
6) Non-Harassment, Intimidation, Retaliation, and Discrimination.
7) Culturally diverse workforce.
8) Risk Management and Safety Program.

j. Administrative

1) Insurance Provisions
   - Workers Compensation
   - Commercial/general liability
   - Automobile liability including uninsured /underinsured motorist
   - Professional medical liability
   - Umbrella coverage
   - Proof of insurance
   - Tail insurance coverage
   - Self-insured retentions
2) Performance Security.
   [See Section III. 29, Performance Security]
3) Lease Arrangement
   [See Section III. 30, Lease Arrangement]

Business Models & Prod. Methods Workgroup Proposed: 11/19/12

EMSAB Recommends: 02/19/13

District Approved: _____

29. Performance Security:

Background: The public needs to be protected from loss of service and service deterioration as a result of performance deficiencies on the part of the contractor. In the event of a major default, a rapid, orderly and self-financed takeover of operations needs to occur. This is especially true when the nature of the default involves endangerment to public health and safety.

Conventional performance bonding is not well suited to ambulance contracting, primarily because the lack of immediate funding for emergency takeover. More liquid performance security arrangements are typically used for ambulance contracts, and have historically included: irrevocable letters of credit, written performance bonds (that requires immediate release upon takeover, with any legal dispute initiated after release) and cash deposits. The Clark County Prosecutor's Office recommends the irrevocable letter of credit as safest arrangement for ensuring immediate access. This method is being used for the current contract.

Under a franchise model the accounts receivable and operating materials are the property of the contractor. Thus, a higher level of performance security is needed as compared to a public utility model where these assets are held by the contracting authority. Typically, payments for ambulance services, under a sound billing system, tend to occur three months after the date-of-service. This means that during a takeover, the contracting authority will need to have sufficient financing to continue operations until receipt of billing revenues.

Decision: Within 30 days after award of the contract, the contractor shall furnish and maintain a performance security in the amount of $2.0 million in the form of an Irrevocable Letter of Credit, or other security acceptable to the EMS Administrative Board and approved by the District. Additional performance security shall be obtained by the District if necessary through a low interest loan (i.e., general fund, investment pool, etc.) to ensure sufficient financing to continue operations until receipt of billing revenues. This performance security shall be reviewed annually and shall be adjusted whenever the ambulance contract's annual inflation adjustment and/or provisions for extraordinary cost increases result in operational costs that are equal to or greater than like amount for the prior 12 month period. Failure of the successful bidder to meet these performance security requirements may result in forfeiture of the award.

Bidders may propose an alternative performance security arrangement in addition to this minimum requirement. Such an alternative shall be equally secure and liquid, and subject to approval by the District.

Financial Workgroup Proposed: 01/16/13

EMSAB Recommends: 02/19/13

District Approved: _____

30. Lease Arrangement:

Background: Because the accounts receivable and materials necessary for operations are the property of the contractor, first lien rights on real property is also required. Typically this is arranged through a "three-way lease agreement," or a conditional lease arrangement provided that the conditional lease contains equal assurances as the three-way lease. Under this agreement, all equipment required for operations, new or used (i.e., vehicles, medical hardware, medical supplies, communications equipment, billing and collection hardware and software) are held in a corporate entity other than the contracting corporation, leased to the ambulance authority as the primary lessee, then subleased to the contractor under identical financial terms. Thus, in the event of a takeover, the EMS authority need only continue lease payments to have ongoing access to these essential factors of production. (Because the sublease itself furnishes the sole security for all primary lease payments, the public sector is not obligated under the three-way leasing provisions, and thus related equipment purchases are not government acquisitions.)

Decision: Within 60 days after award of the contract, the contractor shall furnish and maintain a three-way leasing program, or a conditional lease arrangement provided that the conditional lease contains equal assurances as the three-way lease. All equipment required for operations, new or used (i.e., vehicles, medical hardware, medical supplies, communications equipment, billing and collection hardware and software) are held in a corporate entity other than the contracting corporation, leased to the ambulance authority as the primary lessee, then subleased to the contractor under identical financial terms. Thus, in the event of a takeover, the EMS authority need only continue lease payments to have ongoing access to these essential factors of production.

It shall be the contractor's responsibility to arrange for and develop the leasing arrangement, subject to approval of the District, provided that so long as the leasing program is consistent with three-way leasing provisions, such approval will not be unreasonably withheld. Failure of the successful bidder to meet the leasing provisions may result in forfeiture of the award.

As an alternative, the bidder may propose it retain, in the event of a major default, the limited functions of dispatch and billing services. Such an arrangement would be established by contract for no less than six months. The bidder shall also propose a fee for such services should this alternative contract go into effect.

Regulatory and Oversight Workgroup Proposed(disbanded due to COV's withdrawal)

EMSAB Recommends: 02/19/13

District Approved: _____

31. Liquidated Damages.

Decision: Financial penalties in addition to late run fines shall be established for contractual violations as well as for default.

Regulatory and Oversight Workgroup Proposed(disbanded due to COV's withdrawal)

EMSAB Recommends: 02/19/13

District Approved: _____

32. Consideration for Changes in Industry.

Decision: The contract shall have "re-opening" provisions in the event of significant health care reforms, anti-trust legislation, or other events (i.e, significant drops in reimbursement) that undermine the design of this EMS system and are beyond the contractor's control.

Regulatory and Oversight Workgroup Proposed(disbanded due to COV's withdrawal)

EMSAB Recommends: 02/19/13

District Approved: _____

IV. CONCLUSION

As a result of these EMS System Design Policy Decisions, the participating jurisdictions within EMS District #2 have established a carefully structured EMS system and ambulance contract to ensure the standards of clinical excellence, response time reliability, and economic efficiency are met. This system is designed so that it can be responsive to changes in economic conditions and advancements in clinical care. As a result, the District's EMS system has had a proven track record to be self-correcting, providing stability, and meeting the performance standards established.

V. DEFINITIONS

"Advanced Life Support" or **"ALS"** means invasive medical services requiring advanced emergency medical assessment and treatment skills as defined by Chapter 18.71 RCW.

"Ambulance Service Contractor" or **"Contractor"** means the firm or entity which is under contract with the District to respond to all medical requests originating within the Contract Service Area.

"Annual Inflation Adjustment" means the annually computed maximum upward adjustment to the Uniform Schedule of Subsidy/Price Options which, when approved by the EMS Administrative Board and implemented in whole or part by the Ambulance Service Contractor, shall serve as the basis for any upward adjustment to the Uniform Schedule of Subsidy/Price Options for the following contract year.

"Average Patient Charge" or "APC" means the average charge established in the ambulance contract; with actual Contractor performance measured by gross revenues for the transport of patients divided by the total number of patients transported (one-way) subject to rate regulations established under the Contract.

"Basic Life Support" or **"BLS"** means noninvasive medical services requiring basic medical treatment skills as defined by Chapter 18.71 R.C.W.

"**Cities"** means the cities of Battle Ground, La Center, Ridgefield, and Vancouver, Washington that have entered into the EMS Interlocal Cooperation Agreement and have adopted a uniform EMS ordinance.

"**Clark County EMS Administrative Rules"** means rules governing Emergency Medical Services (EMS) in Clark County. This authority is granted in the Clark County Emergency Medical Services Ordinance, Clark County Code, Chapter 5.48A.

"Contract Service Area" means the combined geographic area within the corporate limits of the Cities of Battle Ground, LaCenter, Ridgefield, and Vancouver; and within the portions of unincorporated Clark County defined in Exhibit C of the RFP, and within any other jurisdictions which participate in this RFP for the purpose of group purchasing of ambulance services.

"Consumer Price Index" or **"CPI"** means the I for All Urban Consumers (CPI-U) U.S. City Average (1982-84-100) as maintained by the United States Department of Labor.

"Cost Per Transport" means the Unit Hour Cost (see definition) divided by the Unit Hour Utilization (see definition). The higher the UHU the lower the cost per transport (see example on page 16).

"County" means Clark County, Washington.

"CRESA" means the Clark Regional Emergency Services Agency.

"District" means Clark County Emergency Medical Services District #2 established by ordinance pursuant to R.C.W. 36.32.480.

"Emergency Medical Services" or **"EMS"** means medical treatment and care **which** may be rendered at the scene of any medical emergency or while transporting any patient in an ambulance to an appropriate medical facility, including ambulance transportation between medical facilities.

"EMS Data Network" a data collection system that consists of a repository of clinical, response and transport data that is electronically reviewed, aggregated and presented to EMS data consumers via a series of web based applications that are grouped into "portals" based on functional areas.

"EMS Interlocal Cooperation Agreement" means the agreement entered into between the Cities, the County, and the District pursuant to Chapter 39.34 R.C.W. in part to effectuate the enforcement of this ordinance.

"EMS Program" means the CRESA program that fulfills Clark County EMS District #2's responsibilities for ambulance contract administration and Clark County's responsibility for uniform EMS regulation.

"EMS Administrative Board" or **"EMSAB"** means the board established pursuant to the Uniform EMS Ordinance and the EMS Interlocal Cooperation Agreement to provide EMS administrative oversight functions.

"Emergency Medical Technician" or **"EMT"** means a person who is authorized to render emergency medical care pursuant to R.C.W. 18.73.

"Extraordinary Adjustment" means a change in the Uniform Schedule of Subsidy/Price Options, other than a scheduled Annual Inflation Adjustment.

"First Responder" means a person who is authorized to render emergency medical care as defined by R.C.W. 18.73.

"Franchise Model" means an EMS business structure in which a contracted organization serves as the retail provider of ambulance services, and owns or controls most or all essential factors of production including operating licenses and permits, third-party reimbursement provider numbers, patient accounts receivable, and other

factors of production. Under a "franchise model," the ambulance services contractor controls the patient accounts management process and is compensated by way of such fee-for-service revenues as may be realized from the sale of ambulance services.

“Medical Call-Taker" or **"Emergency Medical Dispatcher"** means a person in the employ of or acting under the control of a private or public agency who receives calls requesting Emergency Medical Services and administers emergency medical dispatch protocols approved by the Medical Program Director.

"Patient" means any person injured, sick, incapacitated, or otherwise defined by the Medical Program Director, requiring medical treatment and care of emergency medical services.

"Medical Program Director" or "Director" means the Medical Program Director for Clark County certified by the Secretary of the Department of Health pursuant to Chapter 18.71 R.C.W.

“Participating Jurisdiction(s)” means general purpose governmental jurisdictions that have entered into the EMS Interlocal Cooperation Agreement and adopted a uniform EMS ordinance for uniform regulation of the EMS System and group purchasing of ambulance service.

"Regulated Service Area" means the combined area of the corporate limits of the cities plus the unincorporated areas of Clark County and all other general purpose jurisdictions which have adopted the Uniform EMS Ordinance and entered into the EMS Interlocal Cooperation Agreement.

"Routine Transport" means a 7-digit medical request that does not meet the Medical Program Director's 911 transfer protocols as defined in the EMS Administrative Rules.

"Subsidy Option" means the option of a participating jurisdiction to use subsidy payments to offset user fees in accordance with a formula to be negotiated by the participating jurisdiction and the District, and without negative effect on other participating jurisdictions.

"System Standard of Care" or "Standard of Care" means the combined compilation of all standards for prehospital medical care including but not limited to priority dispatching protocols; pre-arrival instruction protocols; medical protocols (i.e. first responders and ambulances); protocols for selecting destination hospitals; standards for certification of prehospital care personnel (i.e. medical call-takers, first responders, EMTs, and on-line medical control physicians); standards for permits (i.e. ambulances, first responder units, helicopter rescue units, and special use mobile intensive care services); response time standards; standards governing on-board medical equipment and supplies; and standards for licensure of ambulance services

and first responder agencies. The Standard of Care shall serve as both a regulatory and contractual standard of care and performance.

"Uniform EMS Ordinance" or "Ordinance" means the current EMS ordinance and all substantially identical ordinances adopted by general purpose governmental jurisdictions which are also parties to the EMS Interlocal Cooperation Agreement.

"Unit Hour Cost (UHC)" means the total ambulance contractor's costs divided by the total number of unit hours, or ambulance hours staffed and available to respond. UHC is used as a measure for determining marginal cost.

"Unit Hour Utilization (UHU)" means the total number of hours ambulances are staffed and available to respond divided by the total transports. UHU is used as a measure of efficiency in that the higher the UHU to lower the cost of transport (see Cost Per Transport). UHU is impacted by the response time standards and the degree of difficulty in providing coverage (i.e., the higher the response time standards and difficulty in providing coverage the lower the UHU).

EXHIBIT

A. 2012 – 2017 Clark County EMS District #2 Strategic Plan