Hamilton County Nebraska

2012 EMS Assessment & Recommendations

PrioriHealth Partners, LLP

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Report Team

PrioriHealth Partners, LLP
739 W Bel Esprit Circle
San Marcos, CA 92069
(760) 405-6869
www.priorihealth.com
Gary Wingrove, EMT-P (ret.)
Nick Nudell, BA, NRP

Introduction

PrioriHealth Partners was requested by the Hamilton County Board and the City of Aurora in cooperation with the State of Nebraska, Emergency Medical Services (EMS)/Trauma Program to conduct an assessment of the Hamilton County Ambulance Service (HCAS). Funding for this project was provided through the Federal Office of Rural Health and the Nebraska Office of Community and Rural Health. An important goal of the project is to make recommendations about how the service should be organized, where it belongs within the local government structure, and to provide a suggested method of cost sharing between Hamilton County and the City of Aurora.

PrioriHealth Partners conducted interviews of over 50 citizens of Hamilton County, including elected local public officials, public safety agency representatives, healthcare providers, the media, local business owners, and the HCAS staff.

In general, the public of Hamilton County was found to be supportive of the ambulance service, its operations and individual staff. In the course of the interviews, not one person complained of poor service, slow response times, or ineffective care. The leadership and staff of HCAS are to be commended for their dedication in serving the public.

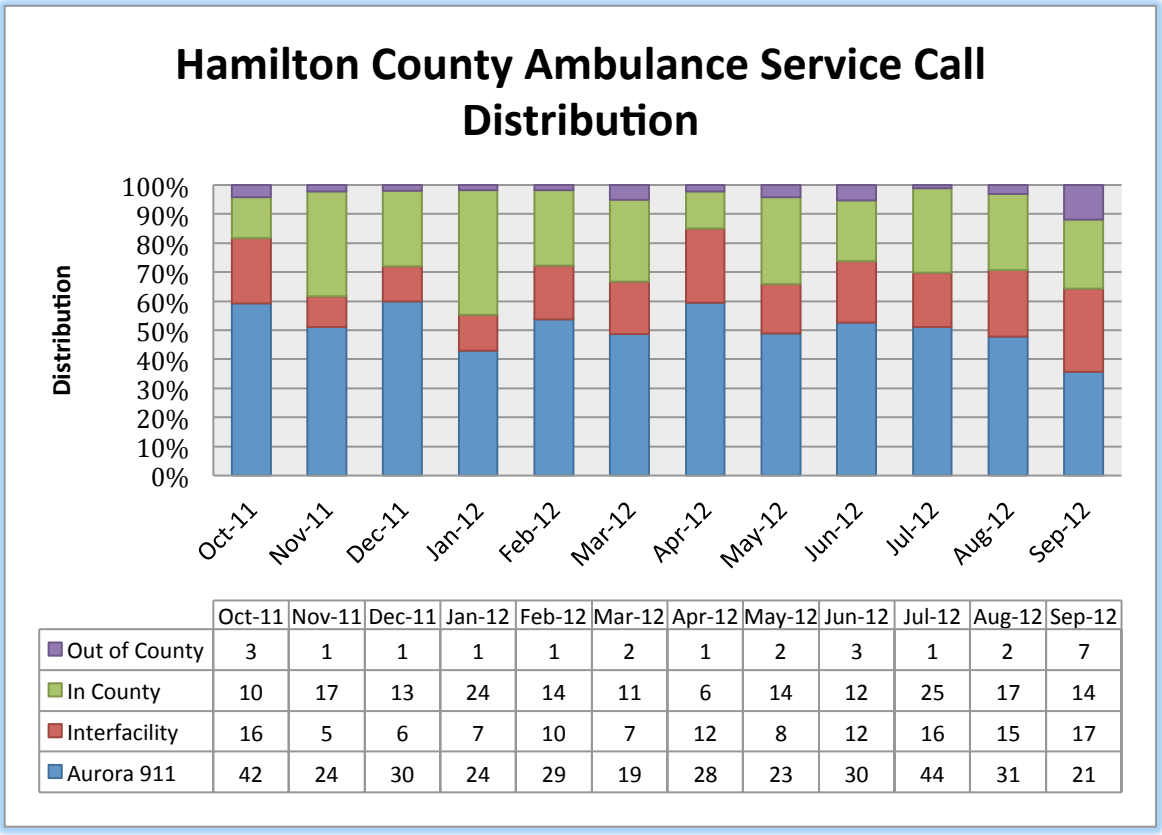
Hamilton County has approximately 9,069 residents in 2011 (US Census), a decline of 0.6% from 2010, half of which live in the City of Aurora. In the 12 months prior to our engagement, 476 of the 678 countywide EMS requests for service occurred in Aurora (see Figure 1 and Figure 2 below). Of those, 131 were for transfers and 25 requests were out of county mutual aid calls, leaving 177 requests from the town and surrounding areas of Giltner, Hampton, Hordville, Marquette, Phillips and Stockham.

Where the work occurs plays a major impact on staffing and response. An increase in calls out in the county versus in Aurora influences the total time on task and can increase the average response time for all calls.

The call pace for 2012 is such that a similar number of calls will be handled this year (there were 510 requests for service as of September 30). The service has averaged between 600 and 776 calls per year each year since 1993. The peak year of 776 was 2007. Generally speaking, the service is busier in summer months than it is in winter months, but the low average month has 45 calls while the busy average month has 63.

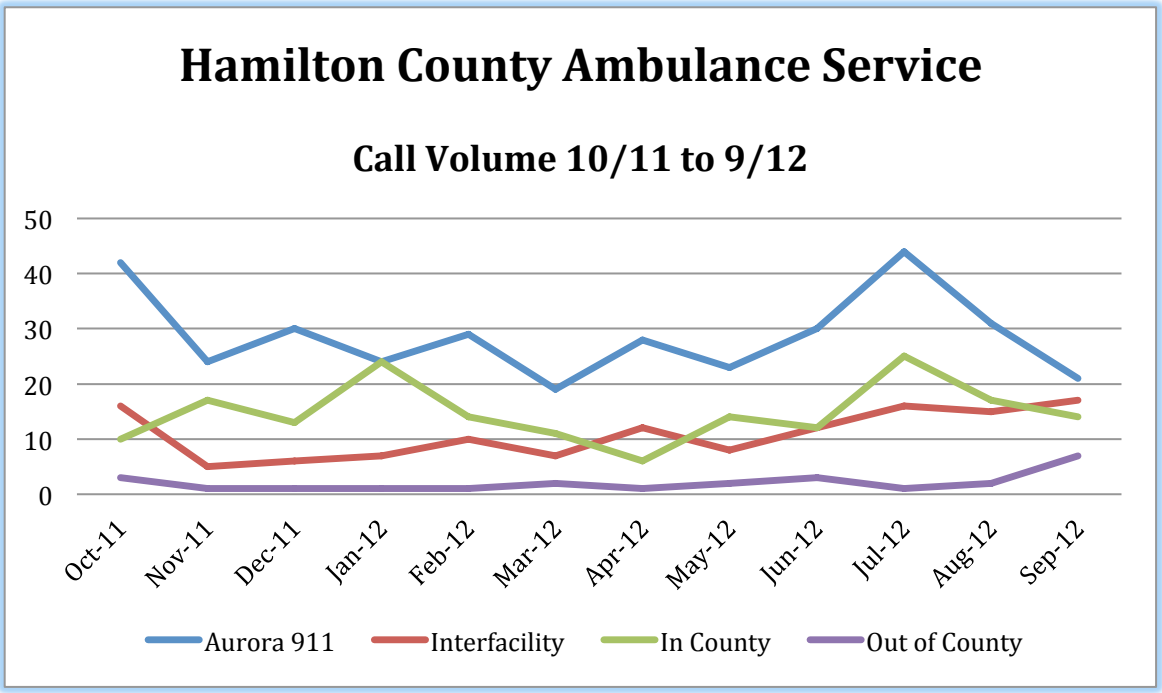
Seventy one percent of all 2011 calls originated from the 9-1-1 system, 19% for transfers, 3% for intercepts with basic level rescue squads, and 7% for standby activities, such as for fires and football games. Aurora and Giltner get free sports coverage, Hampton does not.

FIGURE 1: Hamilton County Ambulance Service Call Distribution



	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12
Out of County	3	1	1	1	1	2	1	2	3	1	2	7
In County	10	17	13	24	14	11	6	14	12	25	17	14
Interfacility	16	5	6	7	10	7	12	8	12	16	15	17
Aurora 911	42	24	30	24	29	19	28	23	30	44	31	21

FIGURE 2: Hamilton County Ambulance Service Call Volume Run Chart



Staffing

HCAS has 22 employees, comprised of 14 EMTs, one EMT-Intermediate, and seven Paramedics. Turnover is a significant issue for HCAS because the paramedics can go to Grand Island for better pay and benefits. Grand Island starts paramedics at about $13,000 more in annualized salary.

During daytime hours, from 6am to 5pm, HCAS has two paramedics and one EMT on duty. For the evening and night hours, the staff is sent home to be available on call with the expectation of responding immediately for 911 calls from wherever they might be within the community.

The paramedics are paid for 11 hours of a 24-hour shift (while they are at the station) at about $19 per hour. When they are sent home for the evening their pay rate changes to $3 per hour for 13 hours of on call time for an average effective pay rate of $10.33 per hour.

The second paramedic does not respond to an initial call unless it is reported to be a complicated rescue such as reports of CPR in progress, or will respond to and be available from the station for a second call out. While some people we interviewed saw this as a system flaw, we believe it is a strength of the HCAS system. A second EMT has to be paged in for a second call, so their response time is wholly dependent on the availability of a second EMT in town.

Community businesses, especially the coop, are to be commended for contributing to community service by allowing EMTs to respond on emergency calls during their work shift.

HCAS paramedics do the interfacility transfers out of Memorial Hospital without the aid of nurses or other hospital specialists such as respiratory therapists. This is a major benefit to Memorial Hospital that is not typical in Nebraska or many other states. When a helicopter is needed for transfer, they typically respond to Aurora from Lincoln. Trauma and cardiac patients primarily transfer to LGH Bryan Hospital in Lincoln, orthopedics transfer to Grand Island, and ear nose and throat patients are transferred to Hastings.

Facilities

Everyone we spoke to in Hamilton County, even those that have no direct reason to know, told us that there are issues with the current physical building of HCAS. It is primarily inadequate in space with some direct cause/effect issues for safety, liability, and ineffective policy. There are some issues caused by the space problem for which we have already given some direct consultation to the ambulance manager.

FIGURE 3: Hamilton County Ambulance Service Paramedic Work Area

FIGURE 4: Hamilton County Ambulance Service Crew Kitchen & Pantry

A serious example that we have already provided guidance on that reflects the space issue the building causes relates to the management and storage of narcotics. While there are protections in place to restrict narcotics access by the public, there is not enough space for multiple secure areas in the building in order to adequately manage the system to prevent abuse by employees.

We discussed building options with many stakeholders. The two options that seem most practical are to expand the fire station building to better accommodate HCAS, or move HCAS to a new site by the hospital. While locating HCAS closer to the hospital could benefit both entities, because of the way HCAS operates and because many of its staff are also members of the volunteer fire department, we believe the best option is expansion of the Aurora fire facility.

We were informed the City is already planning to expand the fire station by removing two homes on the east side of the fire station that it already has or plans to acquire. We propose the best option may be to expand the fire station to the east in a way that meets the fire department's requirements, temporarily move HCAS into that new fire structure, then demolish and replace the existing HCAS building, acquiring more space by connecting the new structure to the existing fire building.

Performance Measures

Hamilton County has not established performance measures for HCAS. The County should establish performance measures for HCAS and they should regularly be reported to the County, cities, towns, and the public.

Performance measures do not need to be complex; they should be understandable by anyone and measure the things that are important to the public. Examples could include the average time it takes to get the ambulance en route to an emergency call, the amount of time spent on the scene for critical trauma patients, the number of calls responded to by major segments (trauma, medical, cardiac), the number of training/continuing education hours, etc. They should also include targets set through the quality improvement program – the recognition of an issue and how resolution is managed.

Budget

The current HCAS budget is $536,000, of which $230,000 is offset by service fees, leaving a $300,000 deficit. This deficit is covered by re-appropriating funds from other County budgets.

One source of funding for EMS that we have seen used by other counties in Nebraska is the inheritance tax. Hamilton County currently has $1.2 million in this fund, the county uses it as reserve/emergency fund, it last funded new courthouse roof.

There are several local foundations located in Hamilton County that have a public mission but have never been asked to fund ambulance facilities. These include the (sic) Farr, Hamilton Community, Mather, Heuermann, and the Wortman Foundations. The Hamilton Community, Farr and Mather foundations have funded equipment for HCAS when it has been unable to be funded by the county budget. CF Industries has also provided some operational funding to HCAS.

Technology

The Public Safety Answering Point (PSAP or 911 call answering center) operated by the county with cost sharing by the city of Aurora has no computer system, but one is planned. A computer system will aid data collection and compliment the state's eNARSIS EMS information system. It may also be worthwhile to consider the use of a free and open source Computer Aided Dispatch system (http://www.ticketscad.org/).

We were pleased to learn the police and sheriff vehicles all have AEDs, the officers receive regular training, and one of the HCAS paramedics provides annual servicing of these devices.

The Hamilton County PSAP uses dispatch pre arrival cards and training provided by the state of Nebraska. Commercially available card sets have an ABCDEO (meaning a simple protocol based system) system for categorizing requests for service to determine the priority of dispatch, and which responders should respond.

Recommendations:

1. **HCAS should remain a unit of Hamilton County government.** When we considered the question of where HCAS was best situated within local government (at the county or at the city), we saw the fact that the county does not have an employed professional administrator a structural weakness for an enterprise overseen by popularly elected local officials, all of whom may turn over in two election cycles and for which there are no entry requirements other than place of residence.

   We considered recommending transferring the ambulance operation to the City of Aurora. There were several key informants that expressed to us that HCAS might best be operated by the Aurora Fire Department, as Grand Island is. Ultimately, we rejected that option, primarily due to the fact that HCAS is a career department and Aurora Fire is a volunteer department, which is not the case in Grand Island. It would be a more logical arrangement to make the Aurora Fire Department a sub-unit of HCAS.

Instead, we recommend the County, as HCAS, contract with the City of Aurora to place the City Administrator in a position of administrative support and oversight of HCAS, while maintaining HCAS within the county board organizationally. We believe the current HCAS administrator has an appropriate background and the skills to manage the HCAS operations, but not the business degree necessary to function at the CEO level. We recommend you keep her in her current position with support from the City Administrator. In the future, if a paramedic with an appropriate business degree (such as an MBA) succeeds the current director, this arrangement may not be necessary to continue.

2. **Pay and benefits are inadequate.** In our work, we discovered that employees of the Proctor and Gamble pet food factory on the edge of town, whose job responsibilities are mainly to keep the production line moving by pressing a series of buttons, are better paid than the paramedics at HCAS from whom the public relies on to make life and death decisions on every work assignment. While we were initially unmoved by the concept of paramedics leaving a more rural area for better pay in a lesser rural area, when we discovered this disparity in local pay for incomparable responsibility, we believe the county must address the issue of pay and benefits of the ambulance staff, and in recognition of the critical thinking skills they use on every assignment, their pay be set at some level higher than low skilled factory workers.

3. The county should consider the use of EMS taxing districts as allowed under Nebraska law. Hamilton County may establish an EMS Taxing District with a levy that, “shall be in addition to all other taxes and shall be in addition to restrictions on the levy of taxes provided by statute, except that when a fire district provides the service the county shall pay the cost for the county service by levying a tax on that property not in a fire district providing the service”.

   This discussion is not intended to be construed as legal advice and Hamilton County should consult with legal advisors regarding the specific provisions of Nebraska law (Nebraska Revised Statute 13-303) to generate adequate funding for an effective EMS System.

4. The federal Medicare program has a policy that requires “reasonable” attempts to collect co-pay and deductible from patients with Medicare coverage. Reasonable attempts to recover deductible and co-pays from insured patients should also be made. The ambulance director pursues reasonable attempts to recover co-pay and deductible when the contracted billing company is unable to collect them. When the ambulance director is unable to collect, the accounts are sent to a collection agency. This process should continue.

   The Office of the Inspector General of the federal Department of Health and Human Services has issued several advisory opinions that do allow public

ambulance providers to substitute local taxes for Medicare deductible and copays, but there is no mandate to do so. The county could consider such an option, but if it does, the county attorney should be engaged to assure compliance with the OIG opinions.

5. The rates charged for ambulance service should be reviewed, along with any policy to write-off deductible and co-pays. Often times we see public ambulance services set their rates by canvassing the surrounding providers, which may have been the case in Hamilton County. Setting rates according to a survey is not defensible to the public. Rates should be reflective of cost, and reduced or offset by a positive determination on a specific method of applying taxpayer funds.

   HCAS should have two rate schedules; one for residents of Hamilton County and another for non-residents. As a matter of good public policy, Hamilton County taxpayers should not subsidize non-residents, such as the transient population using the freeway. Creating two distinct rates, each applied to a specific class of patient (resident, non-resident) is allowable under federal regulations, as long as all members of the class are treated similarly (a resident with Blue Cross is charged the same rate as a resident with Medicare, a non-resident with Blue Cross is charged the same rate as a non-resident with Medicare).

   The average cost per call is $792 using the 2012 budget and actual number of runs from 2011 ($536,000 divided by 677 runs). The non-resident rates should be set at a base rate plus mileage that approximates that cost, plus a reasonable return for recapitalization. A somewhat lower fee could be set for residents whose taxes are subsidizing the service. Or, the same fees could be charged to both with a more liberal write off/hardship policy for residents.

   Regardless of the final approach chosen, Hamilton County should stop subsidizing ambulance service for non-residents and any subsidy for residents should be based on a well-considered affirmative plan that can be adjusted year to year. The billing company used by the county should be able to help produce an accounting defensible cohesive plan based on the last several years of actual experience.

6. The city of Aurora should consider doing one bond issue to expand the fire department and for a new ambulance facility. The foundations should be approached to offset all or part of the cost. The remaining cost should be subtracted from cost sharing formula.

7. We searched for model intergovernmental cost sharing formulas for public EMS agencies and were not successful in finding a best practice that would be appropriate for Hamilton County.

What has happened in other places is in line with what we heard about how the formula for sharing the PSAP costs was developed between Hamilton County and the city of Aurora – it was negotiated based on what was realistic and palatable at the time.

So we are suggesting our own intergovernmental cost sharing formula for the subsidy of the HCAS. We suggest the formula be based on direct cost minus direct billing income that is then be split according to the last fiscal year's portion of city 911 calls to all calls (51%). Then subtracted from the City share and added to county share is the direct cost for city administrator support, and building/capital/bonding and maintenance cost. For 2012, this would have been something like: 51% of the $300,000 deficit is $156,000 allocated to the City. Subtract 10 hours per month of administrator time (minus $6,000 if $100k salary) leaves $150,000 subsidy for the City. Facility cost for the ambulance station (fair market rent if actual depreciation and cost of capital is not available) would then be subtracted from the City share.

While we can't estimate that, for the purpose of demonstration, if fair market rent was $2,000 per month, that would drop the City's share from $150,000 to $126,000, leaving the county's subsidy share $174,000 ($300,000 minus the City's $126,000 share). How this is accounted for will be directly impacted by any changes in the charged rates, resident vs. non-resident fee schedule and an adopted write-off policy. The county or city accountants should be well qualified to assist in the process that would factor all those moving pieces. If they are not, we are available to assist with it.

8. The County PSAP should acquire updated pre-arrival dispatch instruction cards (hard copy or digital) and train the dispatchers in their use. These protocols should be reviewed and approved by a medical director before being implemented. The state of New Jersey has published a set of guidelines that may be adapted by Hamilton County available at http://www.state.nj.us/health/ems/documents/guidecard.pdf or else proprietary systems can also be purchased. The state of Nebraska EMS office should also consider modifying the card set provided for statewide training of PSAP staff to include a system of priority dispatch in order to send the right resources the first time and to limit the number of high risk lights and siren responses.

9. The HCAS Medical Director should take an EMS Medical Director training course as offered or recommended by the Department of Health and Human Services EMS Program staff. The medical director should establish a patient destination protocol.

10. We think the hospital and HCAS staff would benefit from engaging in joint skills assessments, trainings, and collaboration on critical procedures. By collaborating with HCAS, the hospital would take an active interest in the patient care provided by HCAS. The hospital should also explore utilizing paramedics working in the hospital and being on call for HCAS.

11. HCAS should develop a Public Information Education and Relations (PIER) plan to improve the public's understanding of its services. To effectively serve the public, HCAS must develop and implement an EMS PIER program. HCAS should also enlist the cooperation of other public service agencies, with local and state support, in the development and distribution of these programs, and serve as an advocate for change that result in injury/illness prevention.

12. Although HCAS already participates to a limited extent with the hospital during trauma reviews, this process should become formalized with quarterly or semi-annual (minimum) meetings between departments to discuss quality assurance concerns and findings. The goal should be to improve communications by providing opportunities for it to occur and to improve teamwork through shared problem solving.

13. The HCAS and hospital should partner on future public health campaigns such as seatbelt use, texting and driving, underage drinking, no smoking, obesity, and more.