Psychiatric Emergency Prevention in SW MO

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Certification Statement

I hereby certify that this paper constitutes my own product, that where the language of others is set forth, quotation marks so indicate, and that appropriate credit is given where I have used the language, ideas, expressions, or writings of another.

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Abstract

The problem is Citizens Memorial Hospital (CMH) has seen a 70% increase in ambulance utilization for psychiatric emergency patients in the past five years. The purpose of this ARP is to research options to reduce the community risk for psychiatric emergencies. The method applied in this study is descriptive research.

Research questions used in this study include:

1. What is the impact of psychiatric emergencies on community healthcare in the areas served by Citizens Memorial Hospital (CMH) Emergency Medical Services (EMS)?
2. What resources are currently available in the communities served by CMH EMS for reducing the incidence of psychiatric emergencies?
3. What resources do other communities use to reduce the incidence of psychiatric emergencies?
4. What resources are currently available in the communities served by CMH EMS to provide alternative transportation methods (not an ambulance) or destinations (not an emergency room) for patients experiencing a psychiatric emergency?
5. What resources do other communities use to provide alternative transportation methods or destinations for patients experiencing a psychiatric emergency?

Local call data for five years was analyzed to develop a picture of the impact of behavioral patient transports. Literature from other communities and how they addressed similar problems related to transporting psychiatric patients was reviewed. Interviews and discussions were had at the local level to identify current resources and options for CMH EMS to reduce the impact of psychiatric patient transports.

The data indicates there is a significant demand placed on emergency ambulances for the transport of psychiatric patients. Additionally, there are little community-wide prevention activities to reduce the incidence of behavioral emergencies and the effect of psychiatric transports. Finally, research into alternative transport and alternative destination options for CMH EMS found those opportunities are not present and are not possible in the current legislative environment.

Recommendations from this research are two-fold. First, further research into community-wide and public health based psychiatric resiliency training as a prevention tool for adults is needed. Second, research into an additional Basic Life Support (BLS) ambulance to support psychiatric transport is necessary. These two activities should reduce the demand on Advanced Life Support (ALS) ambulances to leave them available to serve the community by responding to emergencies and caring for the sick and injured.

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Introduction

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Background and Significance

The background of this problem is the increased use of ambulance resources to transport patients that do not require the services of a fully-equipped and staffed advanced life support ambulance. As population increases, demands for emergency services also increase, however, CMH EMS has seen a disproportionate increase in the demands caused by a single group of patients. The problem is compounded by this group of patients having the least demand for specialty training and equipment traditionally used in EMS. Psychiatric patient transfers do not require medical intervention or treatment in the acute setting and these transfers are some of the longest duration calls for service.

The significance of this problem is that ambulance resources are not available for 9-1-1 calls and true medical and trauma emergencies in the community when they are transporting a psychiatric patient 150 miles away. The implications for community health are evident, however, the effect on crew morale is hard to measure but it is noticeable. Emergency Medical Technicians (EMTs) and Paramedics go through extensive training to perform the job many of them are passionate about. Employee morale suffers when they feel their talents are not utilized efficiently on psychiatric transfers while there is a need for them when there is an emergency in the community. An ambulance crew two counties away providing what many in the industry relate to a “taxi ride” hears on the radio the urgent need for an ambulance, they want to help, and it is discouraging when they are not able. These feelings have a direct relationship with employee retention and job satisfaction which, in turn, reduces the quality of patient care.

Long distance psychiatric transfers were rarer for CMH EMS in the past. Based on current growth with this call type, future demand will be even more significant. Recruiting and

retaining paramedics is a nation-wide challenge, and this issue will only impair those efforts more.

Course goal number three for the Executive Analysis of Community Risk Reduction (EACRR) course is to "focus on reducing risks in the local community" (Federal Emergency Management Agency, 2016, p. ix). This study applies to the EACRR course goal by identifying methods to improve emergency ambulance coverage for the community. It does this by researching ways to reduce the number one time-consuming type of ambulance patient.

In the 2014-2018 strategic plan, the United States Fire Administration (USFA) identified five strategic goals. Goal number three is to "enhance the fire and emergency services' capability for response to and recovery from all hazards" (United States Fire Administration, 2014, p. 1). This study applies to USFA goal number three by identifying methods to improve emergency ambulance coverage for the community.

Literature Review

To answer research question number one (What is the impact of psychiatric emergencies on community healthcare in the areas served by Citizens Memorial Hospital (CMH) Emergency Medical Services (EMS)?) no published sources were identified. Internal documents and research will be needed to answer this question.

To answer research question number two (What resources are currently available in the communities served by CMH EMS for reducing the incidence of psychiatric emergencies?) four sources were identified. Citizens Memorial Hospital offers a variety of mental, behavioral, and psychological health services. These services are at multiple locations and include in-patient and out-patient services (Citizens Memorial Hospital, 2016). Burrell Behavioral Health offers services for chronic mental illness on their website that specify 24-hour crisis line, psycho-social rehabilitation, and inpatient psychiatry (Burrell Behavioral Health, 2016). Barceda Families offers support meetings for self-sufficiency on their website (Barceda Families, 2016). The Polk County Health Center provides mental health services on their website that specify "psycho education and relationship skills counseling" (Polk County Health Center, 2016).

To answer research question number three (What resources do other communities use to reduce the incidence of psychiatric emergencies?) five sources were identified. A resiliency education curriculum developed to prevent PTSD known as Supportive Education for Returning Veterans (SERV) "focuses on a holistic, preventative process" and is taught in a non-clinical academic setting. Graduates from this program have a greater "ability to bounce back from adverse events and cope with stressors in a healthy manner" (Zygowicz & Grill, 2011, p. 45). Components of the SERV program include proper nutrition, exercise, sleep, relaxation, positive thinking, empathy, and social support. A study conducted in 2014 of Korean adolescents shows a

direct correlation between reduced suicidal ideation and reduced exposure to violence and increased peer support (Choi, Yu, & Kim, 2015, p. 119). A study conducted in 2015 of New York adolescents shows those that attempted suicide had more reliance on others to solve their problems and experienced more depressive symptoms than those that showed active problem-solving skills. The study concludes "suicide prevention should foster active problem solving" (Quinones, Jurska, Fener, & Miranda, 2015, p. 402). In a 2013 presentation to the National Fallen Firefighters Foundation, Dr. Kimberly Van Orden stated reducing suicide risk will be best accomplished by using a public health approach to treating suicide prevention as a health promotion instead of an individual medical problem (National Fallen Firefighters Foundation, 2014, p. 5). "Providing treatment when it is needed (i.e. timing) appears to significantly reduce suicidal behavior when services occur immediately following a suicidal event or discharge from an ED" (McManama O'Brien, Singer, LeCloux, Duarte-Velez, & Spirito, 2014, p. 23).

To answer research question number four (What resources are currently available in the communities served by CMH EMS to provide alternative transportation methods (not an ambulance) or destinations (not an emergency room) for patients experiencing a psychiatric emergency?) one source was identified. Oats public transportation is a private bus service originally developed for senior citizens. It has recently expanded to include all ages and has regular routes every weekday in the area served by CMH (OATS, 2016). Only one other transportation service is known or could be found in online yellow pages, Bolivar Taxi, but this service does not have a website.

To answer research question number five (What resources do other communities use to provide alternative transportation methods or destinations for patients experiencing a psychiatric emergency?) three sources were identified. "Everyone who threatens suicide should be

transported for physical and psychological evaluation" (Zygowicz & Grill, 2011, p. 42). Referring to mental health patients, The London Ambulance Service (LAS) Mental health Clinical Advisory Service state, "the evidence suggests the ED isn't always the most appropriate place to take some of these patients" (Dimbi & Slopher, 2016). As a result, the LAS added mental health advisors to their team of call-takers to manage requests that do not have a resource dispatched to them. Patients are advised over the phone based on the results of a mental health assessment tool. A medical center in Lincoln, Nebraska attempted to reduce psychiatric emergency department revisits. Their approach was to create an individual patient care plan at ED discharge to prevent 9-1-1 use and ED revisits. They saw a revisit rate improvement from 5.7% to 4.3% (Adams & Nielson, 2012, p. 536).

To summarize the literature review, multiple sources were found discussing suicide prevention but only very few discussing psychological emergency prevention. Many of the research questions were also specific to geography where no literature was available to review. Nationally, the issue of reducing ambulance use by psychological patients has only been poorly addressed.

Procedures

Using historical research, a review of call data was used to answer research question number one (What is the impact of psychiatric emergencies on community healthcare in the areas served by Citizens Memorial Hospital (CMH) Emergency Medical Services (EMS)?). Ambulance run reports were reviewed for the past five years. This data came from CMH EMS internal Electronic Patient Care Reporting (ePCR) and National data from the National Emergency Medical Services Information Services (NEMSIS) database. CMH EMS's ePCR is a product from Sansio called HealthEMS. Primary impressions of "behavioral" or "psych*" were tabulated for commonality and call volume. Additionally, ambulance utilization was reviewed. Limitations on this procedure are data integrity. If data is incompletely or incorrectly entered, results will not be accurate. An ambulance was defined as unavailable for other calls based on the following formula:

$$L = (P - D) + (P - T)$$

- L = Length of time out of service
- P = Time at patient destination
- D = Time of dispatch
- T = Time of transporting patient

Using descriptive research, phone, email, and in-person interviews were used to answer research question number two (What resources are currently available in the communities served by CMH EMS for reducing the incidence of psychiatric emergencies?) and research question number four (What resources are currently available in the communities served by CMH EMS to provide alternative transportation methods (not an ambulance) or destinations (not an emergency room) for patients experiencing a psychiatric emergency?). Individuals contacted were mental

health professionals and legal professionals with expertise in hospital-based ambulance services. Limitations in this procedure include personal bias and opinion on the part of those being interviewed. Specific questions referenced during these conversations were:

1. What resources are in the community to prevent suicidal ideations and to reduce psychiatric emergencies from a public health perspective, not individual clinical medical services?
2. What are alternative treatment locations and options are available for persons experiencing suicidal ideations and psychiatric emergencies other than the emergency department?
3. What transportation resources are available to psychiatric patients being transferred from the emergency department to mental health facilities other than an ambulance?

Results

Research question number one (What is the impact of psychiatric emergencies on community healthcare in the areas served by Citizens Memorial Hospital (CMH) Emergency Medical Services (EMS)?) was addressed by reviewing ambulance run data. Run data was gathered from HealthEMS software from Sansio that is used by CMH EMS (Sansio). Some of the specific results:

- A psychiatric emergency is the third most common primary impression.
    - This impression represents 14% of CMH's call volume.
    - The NEMSIS data indicates this impression represents 9% of national call volume.
- Psychiatric emergency primary impression results in the highest ambulance utilization at 6.4 hours per day. This is a 70% increase over the last five years.
- The typical psychiatric emergency patient is 25-54 years old and lives in Bolivar.
- Calls for service for a psychiatric emergency are distributed across all weekdays and hours of the day, but there is a slight peak on Tuesdays and at 8 A.M.
- Ambulance utilization by the phase of the moon was also calculated. Moon phase data was obtained from the U.S. Naval Observatory website (Fraction of the moon illuminated, 2016). Reference time used was noon on each day in the Central Standard Time Zone. Since this moon data creates a bell-curve bias with more dates of the month in new moon phase and full moon phase, a calculation was used to normalize this effect. Ambulance out-of-service time was multiplied by the percent month that moon phase was present.
- The typical scene location for psychiatric emergencies is CMH ER.

- The most common diagnosis for the psychiatric emergency primary impression is "suicidal ideations."

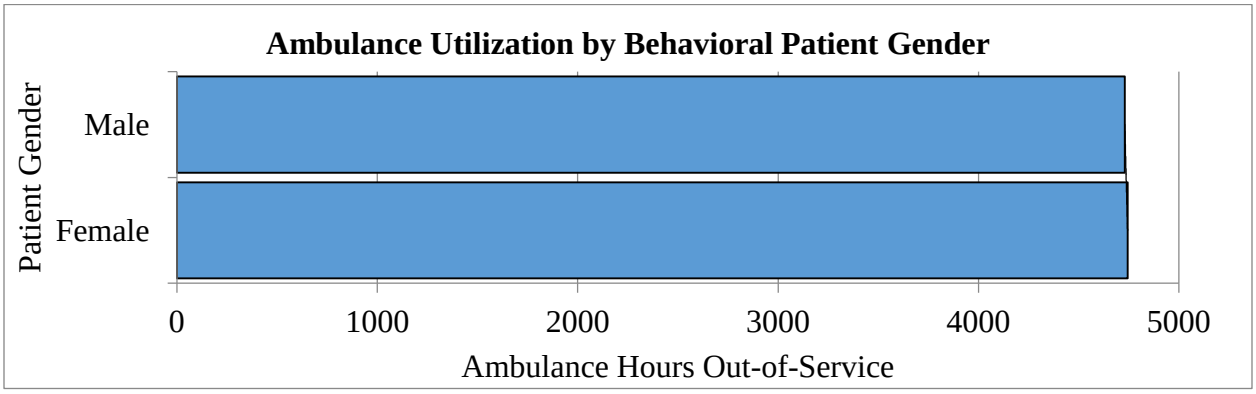

Figure 1 - Ambulance utilization by behavioral patient gender

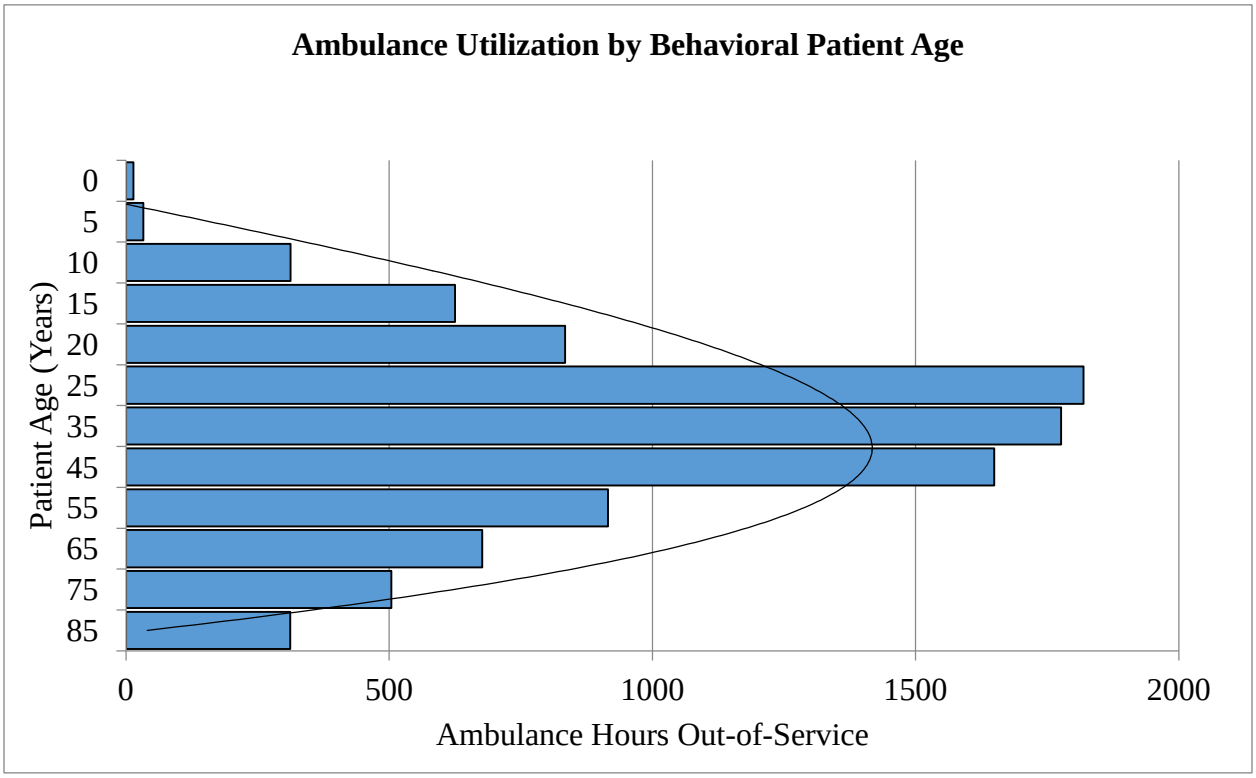

Figure 2 - Ambulance utilization by behavioral patient age

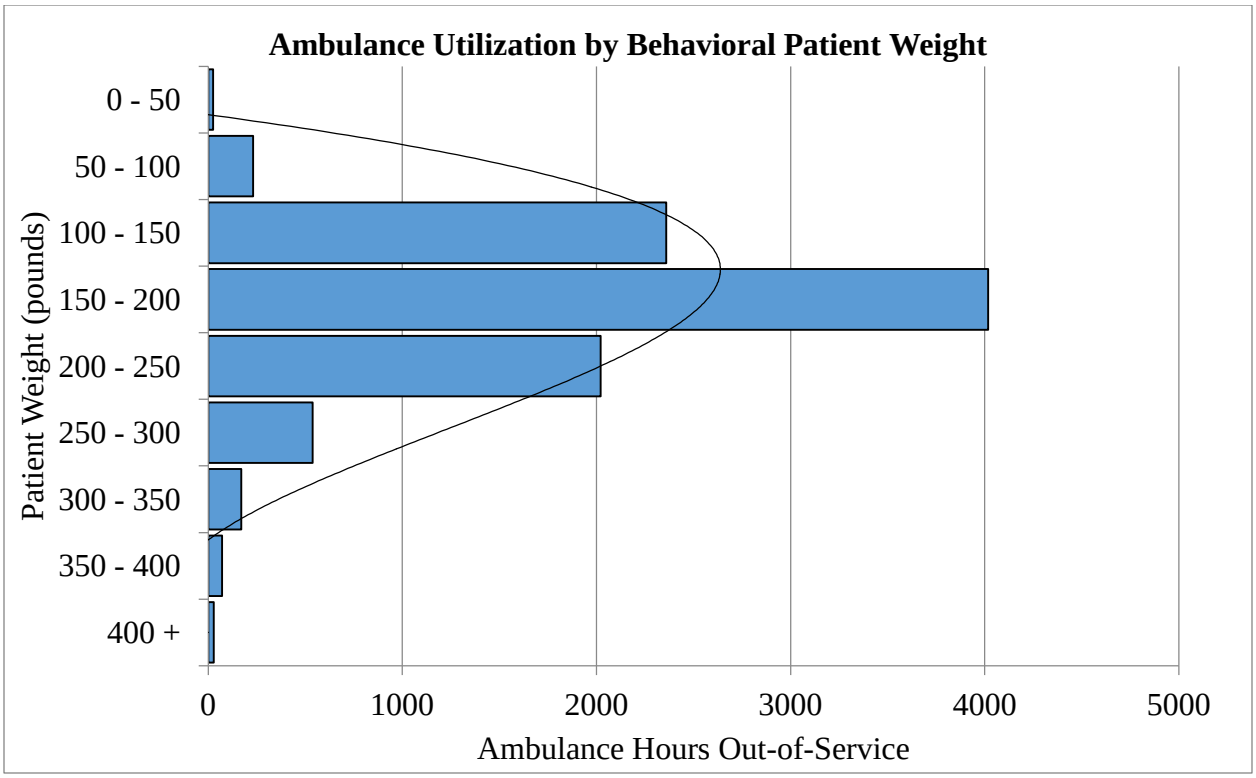

Figure 3 - Ambulance utilization by behavioral patient weight

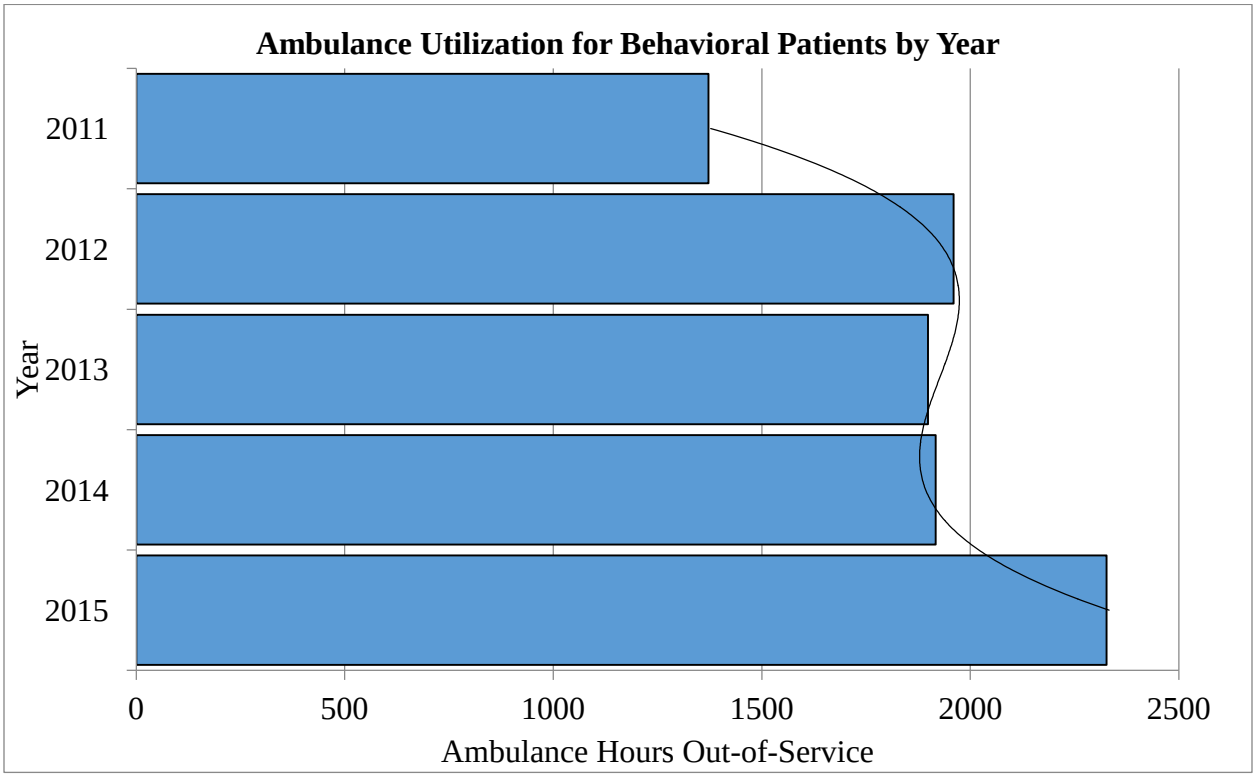

Figure 4 - Ambulance utilization for behavioral patients by year

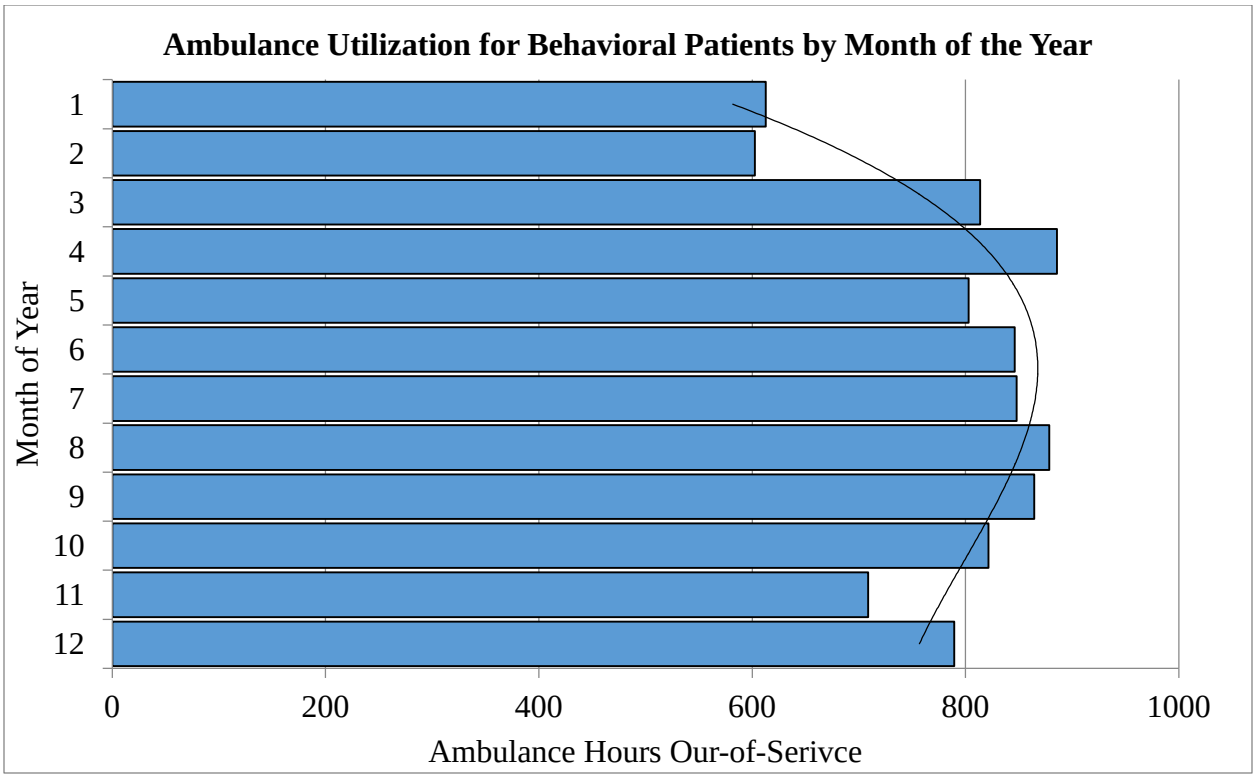

Figure 5 - Ambulance utilization for behavioral patients by month of the year

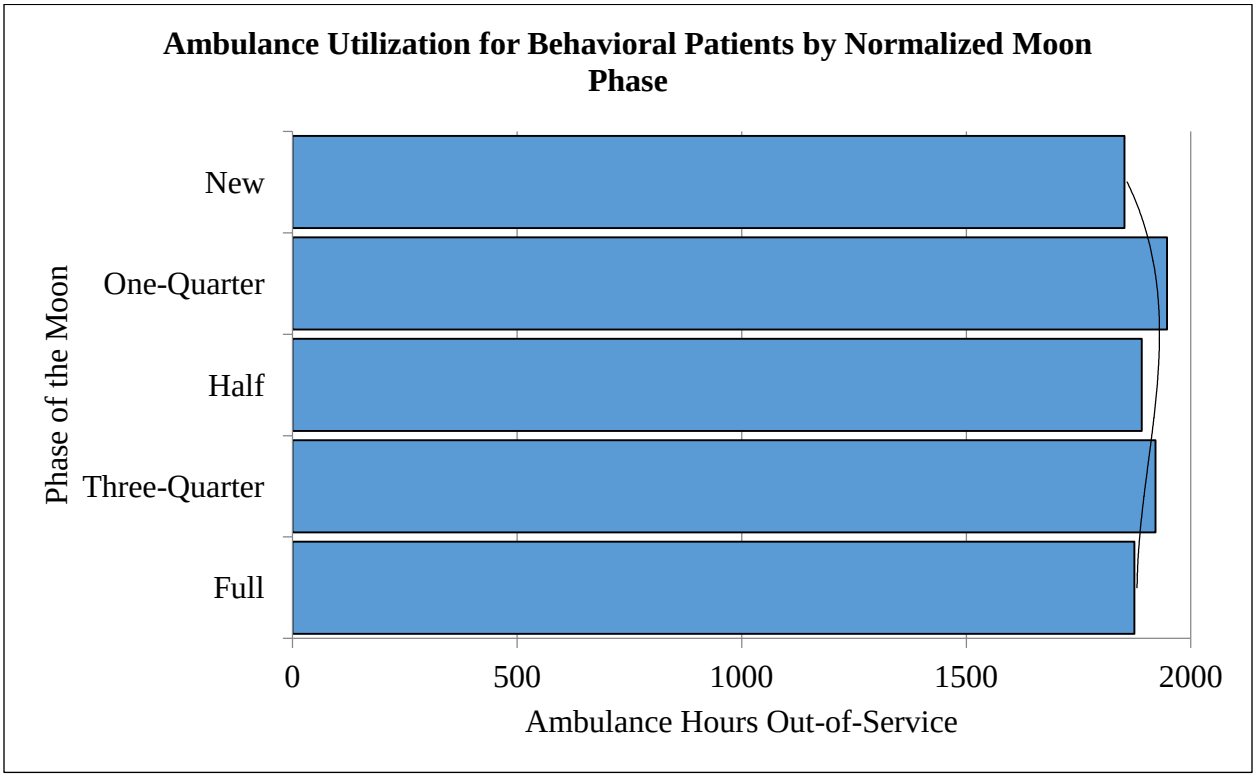

Figure 6 - Ambulance utilization for behavioral patients by normalized moon phase

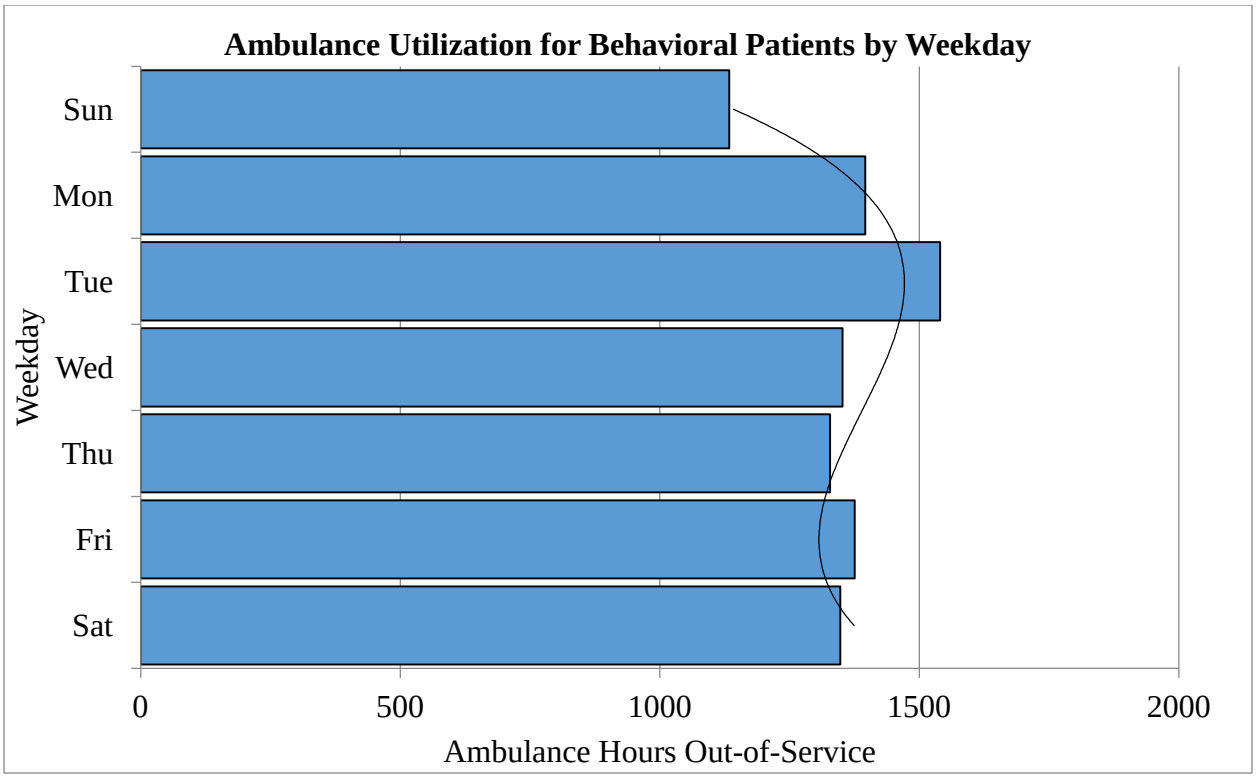

Figure 7 - Ambulance utilization for behavioral patients by weekday

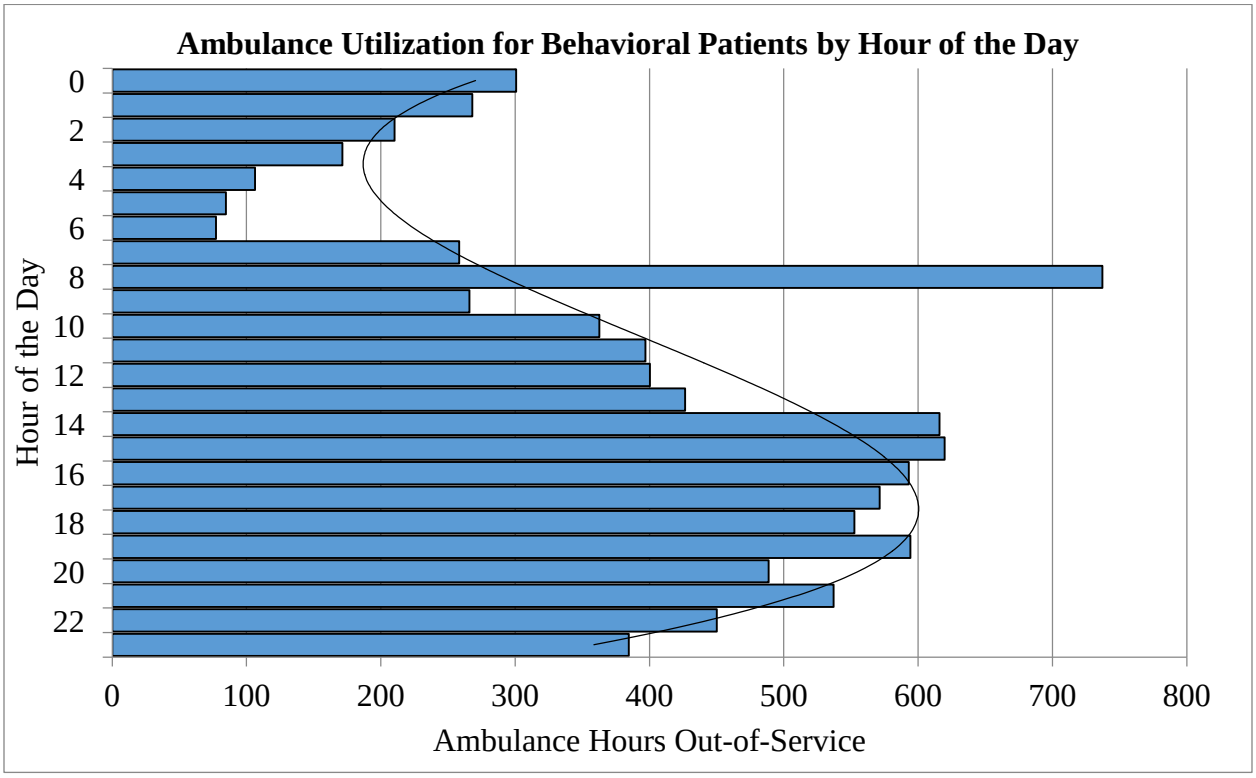

Figure 8 - Ambulance utilization for behavioral patients by hour of the day

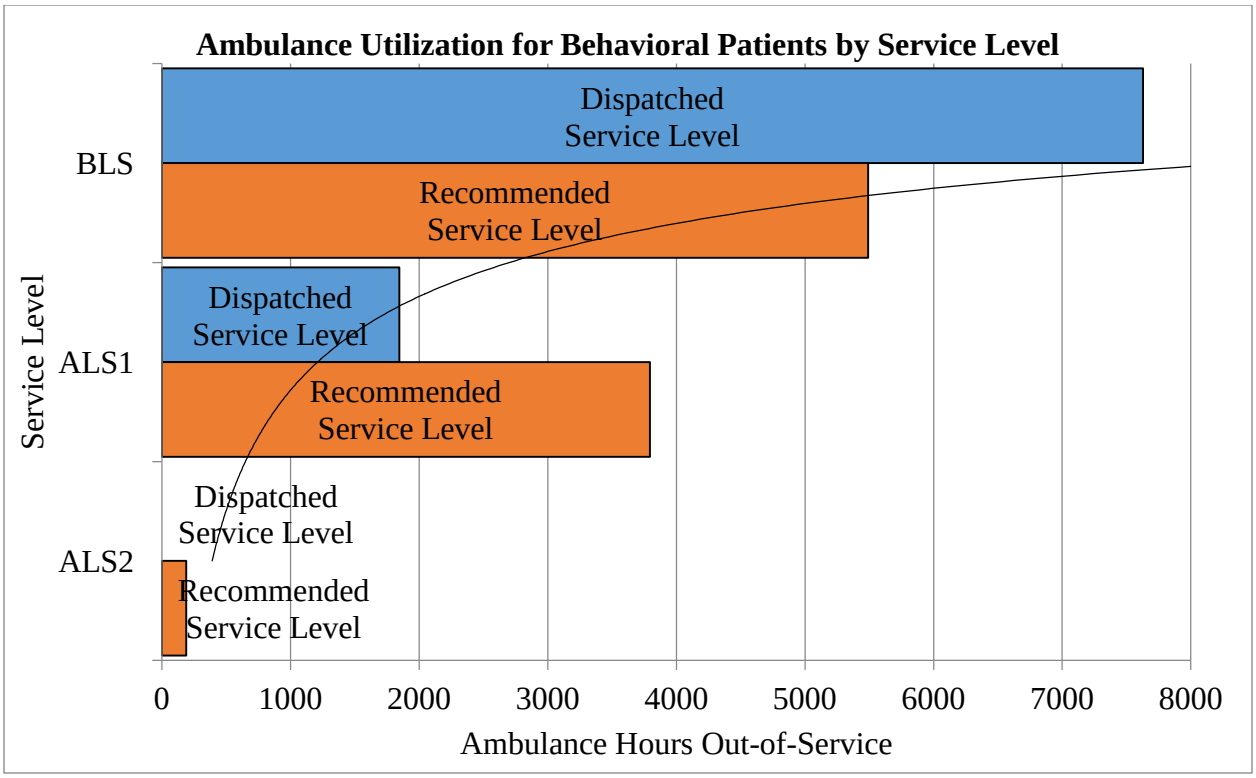

Figure 9 - Ambulance utilization for behavioral patients by service level

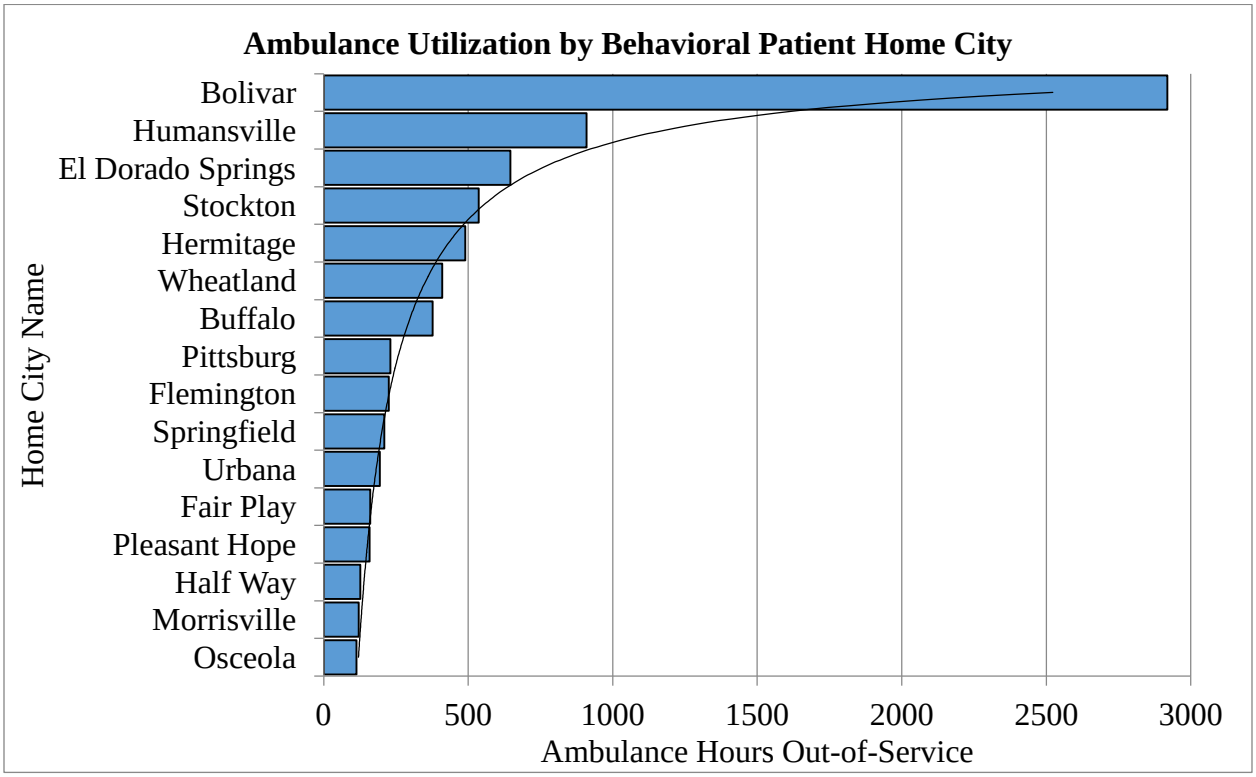

Figure 10 - Ambulance utilization by behavioral patient home city

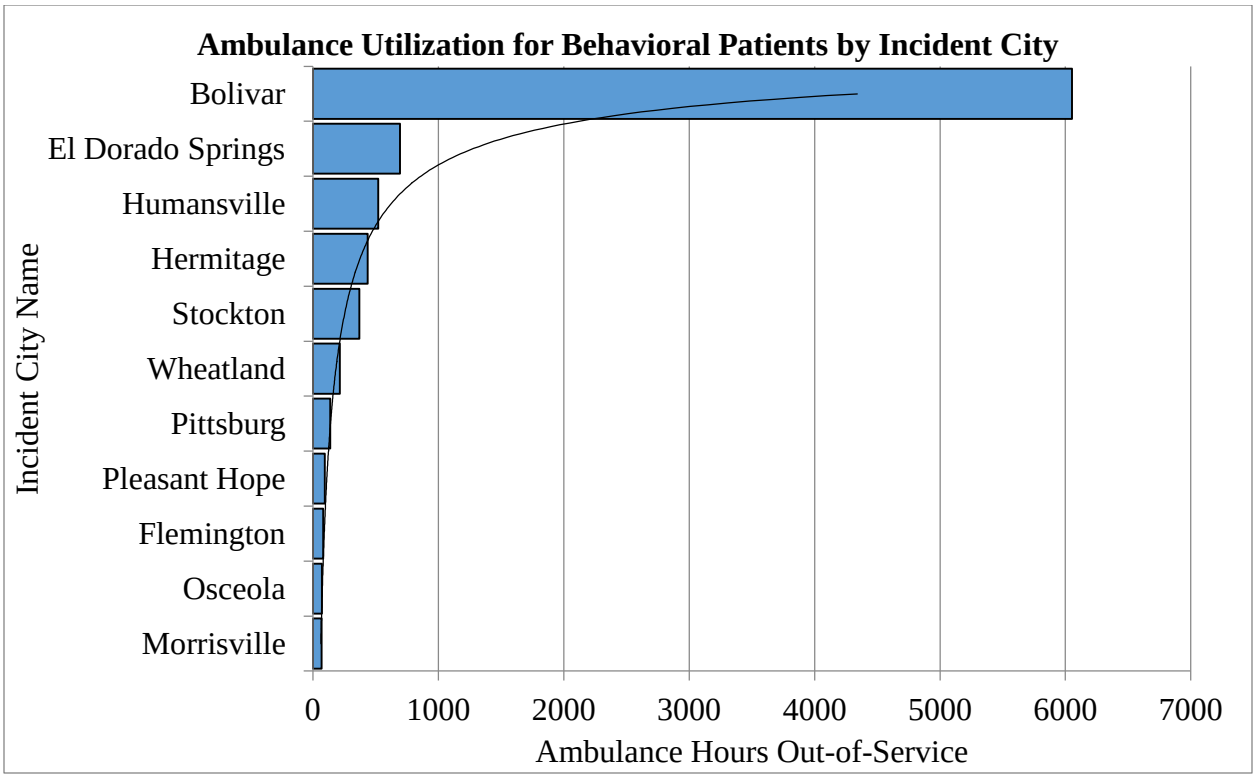

Figure 11 - Ambulance utilization for behavioral patients by incident city

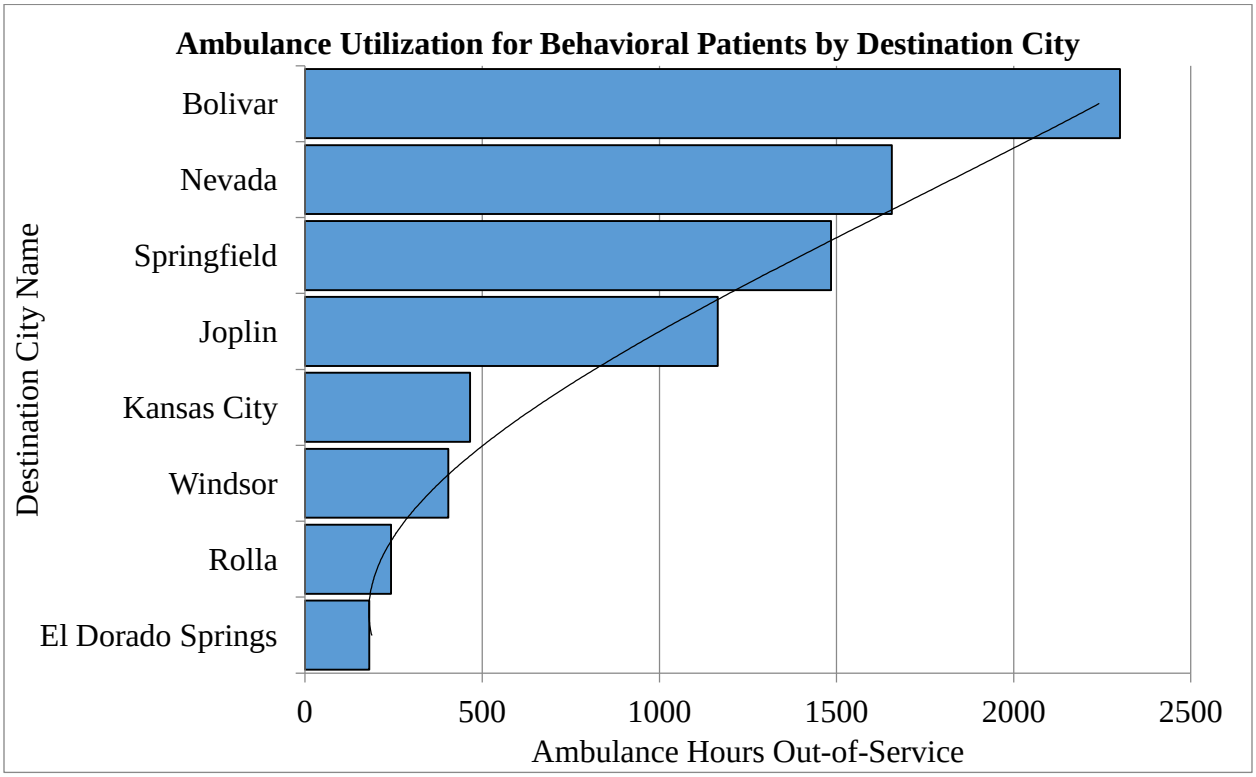

Figure 12 - Ambulance utilization for behavioral patients by destination city

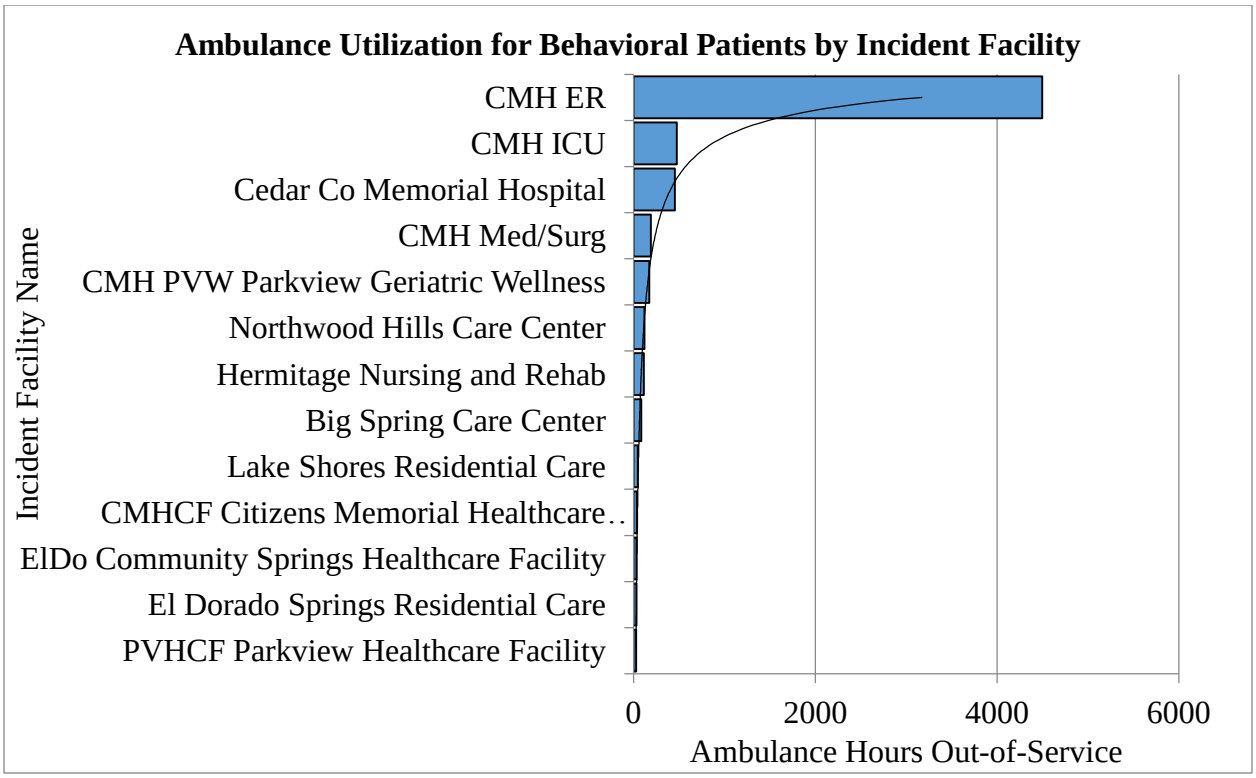

Figure 13 - Ambulance utilization for behavioral patients by incident facility

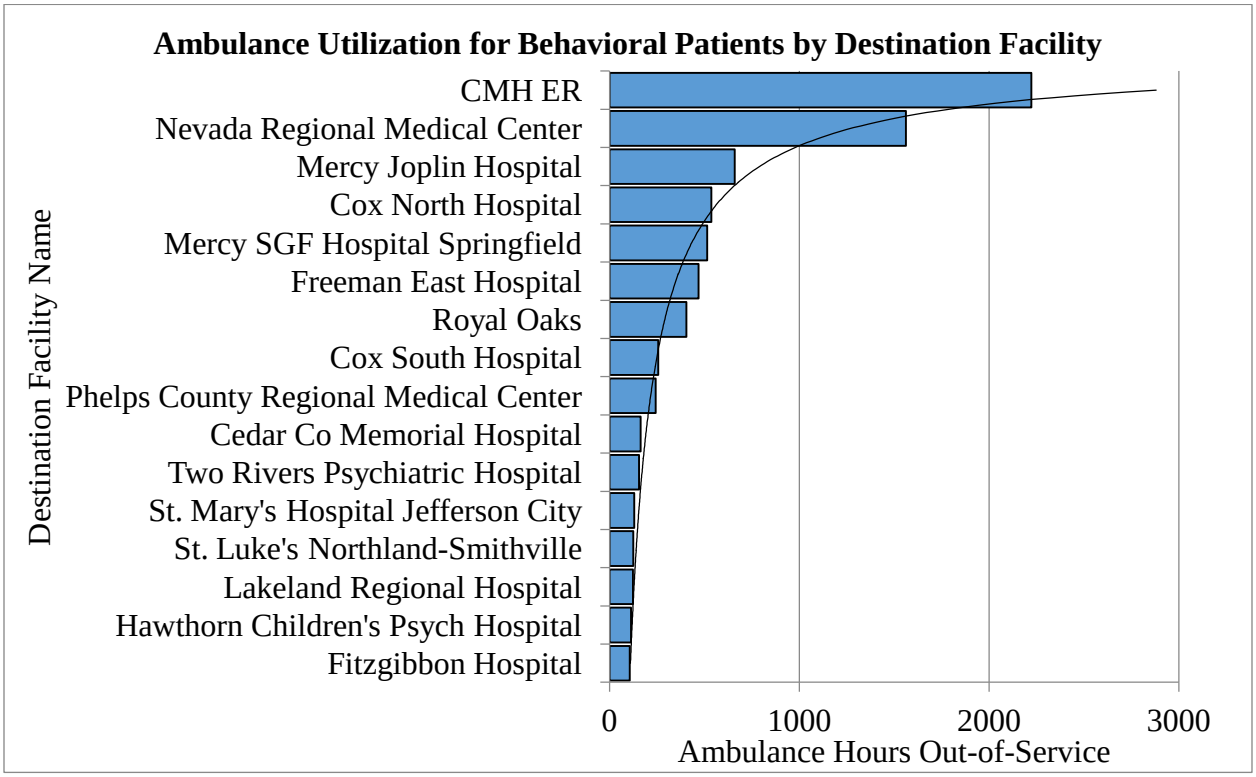

Figure 14 - Ambulance utilization for behavioral patients by destination facility

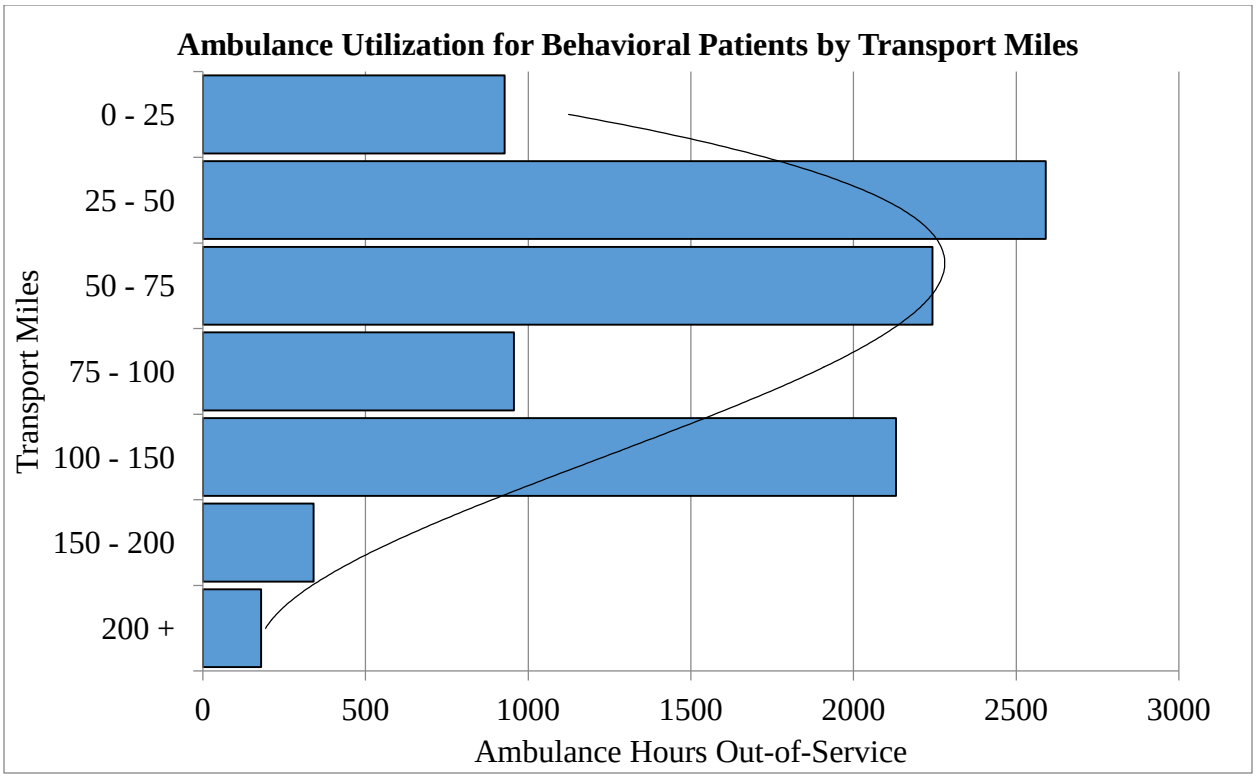

Figure 15 - Ambulance utilization for behavioral patients by transport miles

Research question number two (What resources are currently available in the communities served by CMH EMS for reducing the incidence of psychiatric emergencies?) was addressed with descriptive research through interviewing three individuals.

In July of 2016, a face-to-face discussion was had with Dawnielle Robinson. Mrs. Robinson is a child psychiatrist and a police officer with the Bolivar Police Department (BPD). When asked what resources are available in the community to prevent suicidal ideation, she responded with a conversation about a partnership between BPD and Burrell Behavioral Health. This partnership is part of a mental health grant to provide immediate counseling for persons the police department comes in contact with that are in need of mental health counseling. This service does not provide an assessment, however. Persons needing an assessment must visit the

emergency room. Police officers usually provide transport to the emergency room for these individuals (Robinson, 2016).

In July of 2016, an email conversation was started with Sandra Zanaboni. Mrs. Zanaboni is a mental health counselor for the Polk County Health Center (PCHC). When asked what resources are available in the community to prevent suicidal ideation, she followed with a lengthy conversation about "hotlines" and "warmlines" that have been set up in the area. The intention for these "hotlines" and "warmlines" "is to educate these demographics to make the call first… talk to someone who might be able to 'talk things out' with them" (Zanaboni, 2016).

When asked about alternative treatment locations other than the emergency department, Mrs. Zanaboni shared her vision of a local in-patient mental health facility. She also discussed the possibility of exploring the option of "mental health professionals will take calls [similar to] telehealth" (Zanaboni, 2016) but admitted she was not aware of any location where that was being successfully utilized.

Starting in October of 2016, multiple conversations were had with Naomi Sanders. Mrs. Sanders in the director of the Social Services Department at CMH. These specific discussions were to address the question of what alternative transportation resources are available for mental health transport out of the emergency department other than ambulances. Some of her research and experience was shared which included hospital security officer and health transit van transports. All of these examples she shared were used during dire events where an ambulance was not available, and the transport was time sensitive. These events were only approved on a case-by-case basis, and she does not believe hospital administration of department directors would support routine use (Sanders, 2016).

Research question number three (What resources do other communities use to reduce the incidence of psychiatric emergencies?) was address with descriptive research through literature review. Two main results were discerned from the literature review: 1) Community mental health and individual mental health are two separate prevention activities handled differently. 2) Individual mental health research is much more prevalent than community mental health. A successful community mental health resource found during review is the concept of psychological resiliency education when approached as a public health issue. A successful individual mental health resource found during review is timely access to follow-up, individualized care after a psychological emergency. These were both discussed in the previous section, Literature Review.

Research question number four (What resources are currently available in the communities served by CMH EMS to provide alternative transportation methods (not an ambulance) or destinations (not an emergency room) for patients experiencing a psychiatric emergency?) was addressed with descriptive research through interviewing two individuals.

In August 2016, John Hammons, Legal Counsel for CMH, gave a presentation on mental health specifically to the EMS department. There were a few topics of relevance to these research questions. “Once a 96-hour hold is started, it is difficult to go back” (Hammons, 2016). “CMH does not have mental health abilities in many cases” (Hammons, 2016). Mr. Hammons asked the audience at one point which they would rather be sued for: A) Improperly holding someone against their will or B) Not holding someone that ends up hurting themselves or others? His professional opinion is that it is much better to error on the side of improperly holding than releasing a dangerous person. Additionally, it was explicitly stated, “non-ambulance transport is

only allowed by EMTALA [(Emergency Medical Treatment and Labor Act)] if the patient is being discharged [from the hospital]" (Hammons, 2016).

An electronic conversation via text-messaging was held with Brian Lilley. Mr. Lilley is the Clinical Services Major for Taney County Ambulance District (TCAD). TCAD is a neighboring ambulance service to CMH that employs the use of a mental health transport van. Discussion centered on policies and protocols used during the utilization of that van. Mr. Lilley stated that the person being transported must be classified as a non-patient with no suspected risk of harm to self or others. This transport system is marketed as a "taxi service with direct communication with emergency personnel" (Lilley, 2016).

In a letter from Mr. Hammons regarding the TCAD transport van in November 2016, CMH's legal counsel explicitly stated that it "violates federal and state laws [and] is highly questionable, at best" (Hammons, 2016).

Research question number five (What resources do other communities use to provide alternative transportation methods or destinations for patients experiencing a psychiatric emergency?) was address with descriptive research through literature review. While several alternative transportation methods were found, none were utilized by a hospital-based EMS agency. Anecdotal research indicates transport of psychiatric patients is either seen as a law enforcement issue or a medical issue from community to community. When it is a medical issue, non-hospital-based EMS agencies are usually not involved or find partnerships to provide services. Hospital-based EMS agencies are utilizing ambulances to transport these patients.

Discussion

The following is a discussion of each research question and results found through literature review and survey tools. Implications of these results are also discussed.

Research question number one (What is the impact of psychiatric emergencies on community healthcare in the areas served by Citizens Memorial Hospital (CMH) Emergency Medical Services (EMS)?), highlighted the significant impact of psychiatric emergencies. The need for ambulances has risen significantly (70% in the last five years) and is the most demanding on ambulance time (6.4 hours per day) (Sansio). Typical suicide prevention activities target teenagers or young adults where the average ambulance patient for CMH is between 25 and 55 years old. (Sansio) Traditionally, holiday times are thought to be high demands for psychological services. However, March through October seem to be highest for CMH with a significant drop in January and February (Sansio). Popular opinion states that moon phase, particularly full-moon, has an effect on psychiatric emergencies. However, CMH data indicates there is no effect from moon phase (Sansio) (U.S. Naval Observatory, 2016). Tuesday is a high-utilization day and Sunday is a low-utilization day for ambulances for behavioral patients (Sansio). Anecdotal evidence seems to indicate this has a direct relationship to tertiary psychiatric facilities not admitting patients on Sundays, which creates a greater demand on the first of the weekday. Similarly, psychiatric facilities typically only admit during business hours which is represented by a drop overnight and a significant spike in ambulance utilization at 8 am (Sansio).

The vast majority of behavioral transports are basic life support (BLS) level both in dispatch priority and treatments provided (Sansio). The city of Bolivar and the facility of CMH ER (located in Bolivar) is the originating location and destination location that generates the

highest ambulance demand (Sansio). Transport to CMH ER is between 25 and 75 miles and from CMH ER to tertiary psychiatric facilities is between 100 and 150 miles, typically (Sansio).

The implications of this data demonstrate a significant effect on the availability of ambulances for community emergencies is substantially impaired due to behavioral patient transport demands.

Research question number two (What resources are currently available in the communities served by CMH EMS for reducing the incidence of psychiatric emergencies?) and research question number three (What resources do other communities use to reduce the incidence of psychiatric emergencies?) illustrate the focus of local community resources on *suicide* prevention, not *psychiatric emergency* prevention. Psychiatric emergency prevention is listed in literature as a public health focus (National Fallen Firefighters Foundation, 2014) where local prevention activities focus on individuals (Robinson, 2016) (Sanders, 2016) (Zanaboni, 2016). Local resources are focused on reaction to persons with suicide attempts or suicidal ideations (Robinson, 2016) (Sanders, 2016) (Zanaboni, 2016). Literature review indicates resources should focus on training and education on resiliency training and life skills education (Quinones, Jurska, Fener, & Miranda, 2015) (Zygowicz & Grill, 2011).

The implications of these differences in prevention activities create a higher demand on ambulances. There is a greater number of identified psychiatric patients and these patients do not have a local facility able to care for them. Community prevention of suicide, especially of juveniles and teenagers, is probably successful, but community prevention of psychiatric emergencies is not successful.

Research question number four (What resources are currently available in the communities served by CMH EMS to provide alternative transportation methods (not an

ambulance) or destinations (not an emergency room) for patients experiencing a psychiatric emergency?) and research question number five (What resources do other communities use to provide alternative transportation methods or destinations for patients experiencing a psychiatric emergency?) illustrate the legal limitations placed on CMH as a hospital-based ambulance service as opposed to other EMS models. CMH legal council promotes civil involuntary commitment instead of patient discharge of behavioral patients to limit liability (Hammons, 2016). This legal council also advises against any other mode of transport for patients other than ambulance due to EMTALA regulations (Hammons, 2016).

The implications of these findings place CMH EMS at an impasse to find alternative transportation methods or to reduce the number of psychiatric transports.

Recommendations

The problem is Citizens Memorial Hospital (CMH) has seen a 70% increase in ambulance utilization for psychiatric emergency patients in the past five years. The purpose of this ARP was to research options to reduce the community risk for psychiatric emergencies. All the possibilities discussed and identified in this study appear to be already exhausted and have been found to be impractical, ineffective, or illegal. Based on the findings of this study, future research is recommended along different paths.

More can be done in the community to reduce the incidence of psychiatric emergencies. More public health focused prevention activities to improve life skills and resiliency are suggested in research and are not found in this community. Research into funding mechanisms for this public health focus is required.

Alternative transportation and destinations have been found to be impossible. Research into a justification for an additional ambulance is required to support this greater need. Current research indicates a daytime BLS ambulance for psychiatric transfers will make a large benefit to help keep ALS ambulances in the community available for emergencies.

References

Adams, P., & Nielson, H. (2012). Evidence based practice: Decreasing psychiatric revisits to the emergency department. *Issues in mental health nursing, 33*, 536-543.

Barceda Families. (2016, November). *Programs*. Retrieved from Barceda families: http://www.barceda.org/programs.html

Burrell Behavioral Health. (2016, November). *Specialized services for chronic mental illnesses*. Retrieved from Burrell Behavioral Health: http://www.burrellcenter.com/services-2/specialized-services-for-chronic-mental-illnesses/

Choi, J.-h., Yu, M., & Kim, K.-e. (2015). Suicidal ideation in adolescents: A structural equation modeling approach. *Nursing and health sciences, 17*, 119-125. doi:10.1111/nhs.12142

Citizens Memorial Hospital. (2016, November). *Behavioral and psychological health locations*. Retrieved from Citizens Memorial Hospital: https://www.citizensmemorial.com/specialties/behavioral-psychological-health/locations.html

Dimbi, K., & Slopher, B. (2016, November). London's innovative response for patients presenting with mental health problems. *JEMS*.

Federal Emergency Management Agency. (2016, April). Executive analysis of community risk reduction student manual. (4th).

Hammons, J. (2016, August 3). Mental health transfers. (T. Becker, Interviewer)

Lilley, B. (2016, November 21). Mental health transfers. (T. Becker, Interviewer)

McManama O'Brien, K. H., Singer, J. B., LeCloux, M., Duarte-Velez, Y., & Spirito, A. (2014). Acute behavioral interventions and outpatient treatment strategies with suicidal adolescents. *International journal of behavioral consultation and therapy*, *9*(3), 19-25.

National Fallen Firefighters Foundation. (2014). *Confronting suicide in the fire service - Strategies for intervention and prevention.*

OATS. (2016, November). *Polk County routes*. Retrieved from OATS: http://www.oatstransit.org/polk

Polk County Health Center. (2016, November). *Mental health services*. Retrieved from Polk County Health Center: http://www.polkcountyhealth.net/family-health.php?id=9

Quinones, V., Jurska, J., Fener, E., & Miranda, R. (2015). Active and passive problem solving: Moderating role in the relation between depressive symptoms and future suicidal ideation varies by suicide attempt history. *Journal of clinical psychology, 71*(4), 402-412.

Robinson, D. (2016, July 1). Mental health resources. (T. Becker, Interviewer)

Sanders, N. (2016, October 25). CMH mental health options. (T. Becker, Interviewer)

Sansio. (n.d.). *HealthEMS*. Retrieved from http://healthems.com

U.S. Naval Observatory. (2016, November 10). *Fraction of the moon illuminated*. Retrieved from http://aa.usno.navy.mil/data/docs/MoonFraction.php

United States Fire Administration. (2014). *Stetegic plan fiscal years 2014-2018.* Emmitsburg, MD: National Fire Academy.

Zanaboni, S. (2016, July 20). Suicidal ideation prevention. (T. Becker, Interviewer)

Zygowicz, W., & Grill, M. (2011, April). A quiet epidemic - How suicides affect patients and providers. *JEMS*, 40-46.