

Office of the City Manager

March 12, 2019

To: Honorable Mayor and Members of the City Council

From: *Dee* Dee Williams-Ridley, City Manager

Re: Berkeley Fire Department Emergency Medical Response

The Berkeley Fire Department operates four, 24-hour, Advanced Life Support (ALS) ambulances. Whenever an ambulance is deployed it is staffed with two sworn firefighter paramedics. Additionally, the department has nine fire engines and trucks, staffed with a minimum of one firefighter paramedic. When responding to emergency medical incidents, a fire engine or truck is always dispatched along with an ambulance. In most cases the fire engine/truck arrives at the call faster than the ambulance and begins to provide life-saving emergency medical care at an ALS level.

A subset of emergency medical treatment and transport is for people experiencing psychiatric emergencies. These patients are always contacted by a Berkeley Police Officer and sometimes a member of Berkeley Mental Health's Mobile Crisis Team. Once they have made a determination that the patient requires further treatment and transport, the County's private ambulance provider, Paramedics Plus, is requested and responds. The Alameda County Emergency Medical Services Agency (LEMSA) reimburses Paramedics Plus for the costs related to the treatment and transport of these patients that they are unable to collect from the patient.

According to the California Code of Regulations (CCR), 5150(a) "When a person, as a result of a mental health disorder, is a danger to others, or to himself or herself, or gravely disabled, a peace officer, ...designated members of a mobile crisis team, ...may, upon probable cause, take, or cause to be taken, the person into custody for a period of up to 72 hours for assessment, evaluation, and crisis intervention, or placement for evaluation and treatment in a facility designated by the county for evaluation and treatment..."

New City of Berkeley Transport Responsibilities

In 2017, the Alameda County LEMSAs conducted a Request for Proposal (No. EMS-901017 Emergency Ambulance Service, 911 Response, ALS Transport) to select a private ambulance transport provider that would provide emergency medical transport services to Alameda County except Berkeley, Alameda City, Albany and Piedmont. Berkeley is one of four exclusive operating areas (EOA) in Alameda County. The four EOAs correspond with the fire departments that started providing emergency ALS ambulance response and transport prior to 1980. When

the new contract for Alameda County, per their RFP, goes into effect on July 1, 2019, the City will have to assume responsibility for the transport and cost of transport for psychiatric patients in Berkeley.

Berkeley Psychiatric Emergency Transport Data

In 2018 the County’s private transport provider transported 1090 psychiatric patients in Berkeley. As of July 1, 2019, these transports will become the responsibility of the City. In addition, during the same time, the Berkeley Fire Department (Department) transported 253 additional psychiatric patients. In total, there are nearly 1400 psychiatric transports that occur annually in the City.

Psychiatric patients that have no other medical symptoms or medical complaints are required to be transported to the specialized psychiatric facility, John George Psychiatric Pavilion, in San Leandro. Based on response records, the time an ambulance will be committed and unavailable for other calls will be approximately 185 minutes per psychiatric call. Approximately 50% of the psychiatric calls (based on current data) may be transported to a local emergency room to obtain medical clearance for another medical symptom before the patient can be transported to John George Psychiatric Pavilion Hospital. In these situations, the time a Department ambulance will be committed and unavailable for other calls is projected to be between 106 - 148 minutes, depending on the destination (Alta Bates, Kaiser, Summit Oakland, Children’s Oakland or Highland). In these situations a Department ambulance would become available more quickly because the hospitals are closer to Berkeley and the time it takes to transfer care is shorter than at John George.

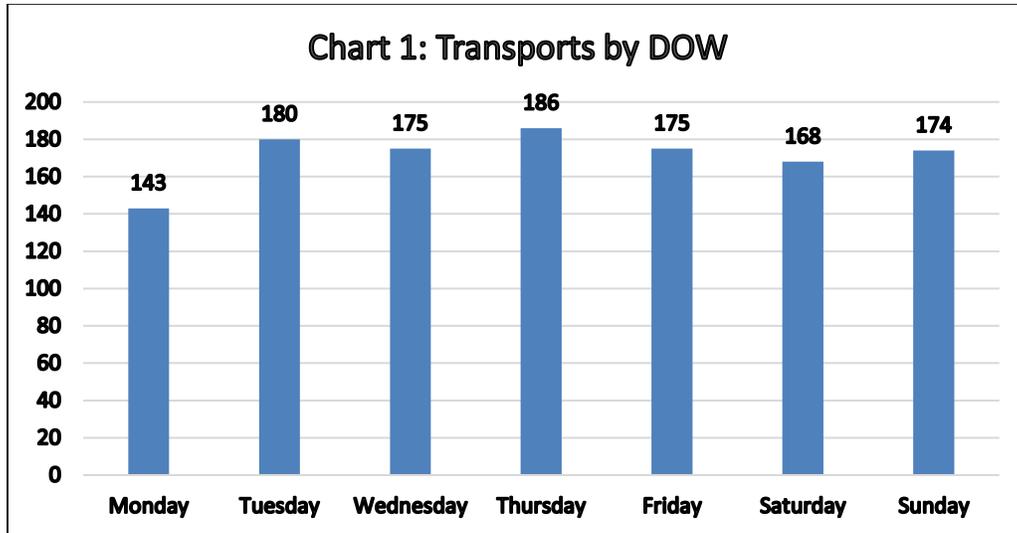
The Fire Department estimates the City of Berkeley will be required to transport 1,090 additional psychiatric patients per year, beginning July 1, 2019. Table 1 shows these estimates and the receiving facility to which patients will be transported.

Table 1

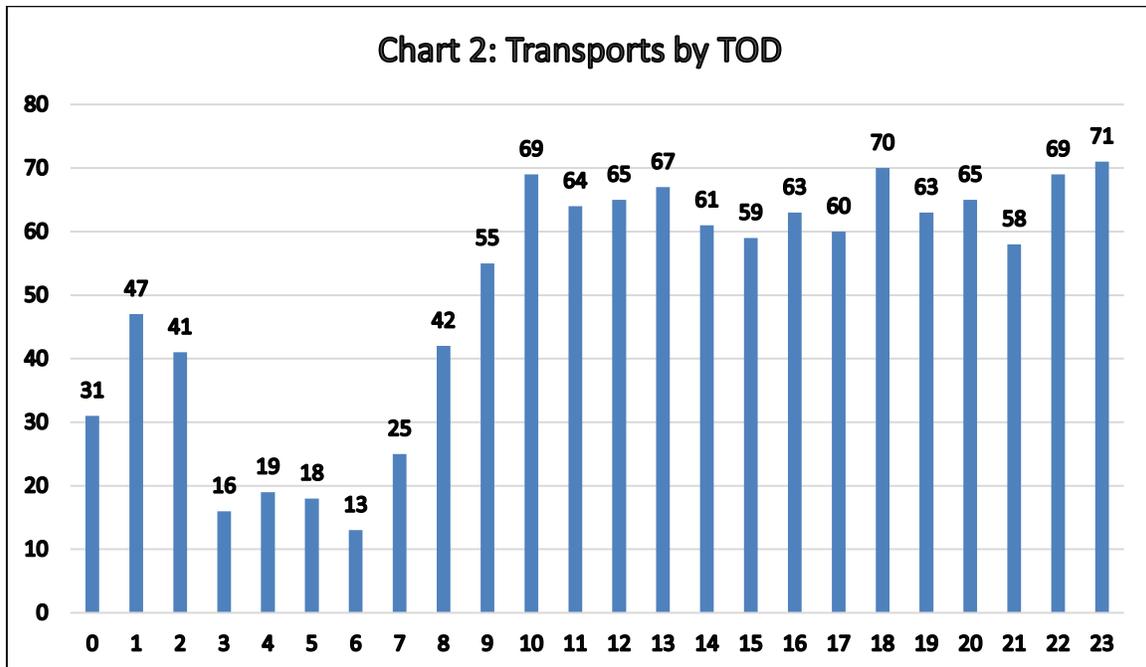
Type of Call	Receiving Facility	Total Calls 2017
Psychiatric	John George Psychiatric Pavilion	605
Psychiatric	Alta Bates	335
Psychiatric	Other	150
Total/Year:	Receiving Facility	1,090

Distribution of Calls

The distribution of psychiatric calls in the City by day of week (DOW) is shown in Chart 1.



The distribution of psychiatric calls in the City by time of day (TOD) is shown in Chart 2.



Transport Vehicle Use Time Calculation -- Unit Hour Utilization (UHU)

Unit Hour Utilization (UHU) is a calculation that measures the amount of time a transport unit is staffed, on duty, and assigned to providing response, triage, treatment and transport of patients in a given period of time. It also includes cleaning the ambulance and completing the required paperwork. During this time, the ambulance is unable to respond to other calls for service. UHU provides a standardized, shorthand way to measure workload levels in the system and to allow comparison to other systems.

The UHU calculation does not account for time necessary for employees to perform other duties that must occur each shift, including but not limited to: placing the unit in service at the beginning of the shift, taking it out of service at the end of shift, performing vehicle and equipment inspections and maintenance, training and continuing education, meal periods, public education, attending meetings, cleaning, rest and other functions including firefighting related responsibilities as assigned.

UHU is calculated by dividing the average time per call by the number of "unit hours." One-unit hour is defined as a fully equipped and staffed vehicle that is in-service and available for calls in the EMS system.

Accurately measuring UHU helps the Department demonstrate that its system is providing the community exceptional value and helps leaders determine when and what type of resources need to be added.

Table 2 shows the general scale used in the ambulance industry according to a paper written by Daniel R. Smiley who at the time was the Acting Director of the State of California Emergency Medical Services Authority, (Smiley, 2011).

Table 2

Unit Hour Utilization Range
.55 - .45 – High Utilization
.45 - .35 – Above Average Utilization
.35 - .25 – Average Utilization
.25 - .15 – Below Average Utilization
.15 - .01 – Low Utilization

Table 3 shows the total current UHU for the Department's four ambulances:

Table 3

Type	Calls/Yr	Hr/Call	Total Hours	Total Unit Hrs.	UHU
Medical calls	11,000	1.13	12,430	35,040	0.35

Table 4 shows the projected UHU for the current fleet of four ALS ambulances if they were to absorb the additional psychiatric patient transports:

Table 4

Type	Calls/Yr	Hr/Call	Total Hours	Total Unit Hrs.	UHU
Medical calls	11,000	1.13	12,430	35,040	
Psychiatric calls	1,400	3.08	4,312	35,040	
Total	12,400	1.35 (weighted)	16,742	35,040	0.48

Per ambulance industry standards, absorbing psychiatric transports by existing Fire Department ambulance resources would put Berkeley Fire into the highest category of utilization.

Managing New 5150 Transport Responsibilities

The most expeditious and reasonable way to assume the new transport responsibilities is to establish a one-year contract with an external Basic Life Support (BLS) private ambulance transport provider to temporarily handle the transport of Psychiatric patients beginning July 1, 2019. This will allow the service to continue, and give the Department time to collect and analyze response and transport data and prepare a recommendation for continuing the contract, absorbing the work internally or finding a creative alternative.

The payment structure for the selected private ambulance provider will mirror the current contract between Alameda County and Paramedics Plus, which currently provides emergency psychiatric transport for Berkeley. In this system, the selected vendor will bill the patient and/or their insurance company at a rate agreed upon with the City of Berkeley. After six months, the vendor will provide the City with evidence of the amount they collected and the City will reimburse the vendor the difference. This is necessary due to the variations in payment by private insurance, Medicare and Medi-Cal. The estimate for the potential cost to the City is based on the current 9-1-1 ambulance provider billing rate and assumes the City would have to reimburse the full cost of this rate. The actual cost to the City will likely be lower, but without knowing the agreed-upon rate or the ratio of collected revenue, the worst case scenario must be assumed.

The rate that the City could pay per transport is approximately \$2300, which is the rate Alameda County EMS Agency currently pays Paramedics Plus. It is possible that a qualified lower cost vendor will respond to the RFP, in which case the costs to the City would be lower. Using the \$2,300 figure and a collection estimate of 12% on the projected additional 1,090 transports, we estimate the likely scenario for City is that there would be a liability of \$2.2 million.

Type	Calls/Yr	Cost/Call	Sub-Total	Est. Recovery (12%)	Est. Total
Psychiatric	1,090	\$2300	\$2.5 Mil	\$300,840	\$2.2 Mil

Alternatives Considered

1. Creation of Basic Life Support (BLS) Ambulance Division: This option appears to be the best solution for the long-term reorganization of the Fire Department, it would be impossible to implement by July 1, 2019. The milestones that would need to be implemented prior to upstaffing a BLS transport division are; creation of a new job classification, recruitment and hiring of at least 12 FTE, ambulance specification/design and purchase, and modifications to fire stations to accommodate additional personnel.
2. Assumption of Psychiatric Calls by Current Deployment/Staffing: This option would result in a UHU for the current ambulances categorized as "High Utilization" according to the industry standards defined by Dr. Smiley. Between emergency calls, firefighter training, EMS training, meetings and other related duties, our current fleet of ambulances and firefighter/paramedics are extremely busy.

The real impacts to continuing with our current UHU or increasing it by absorbing Psychiatric transports would be less time for responding to other emergencies, and less training and development. Additionally, there would likely be increased employee fatigue (both chronic and acute), greater attrition of employees to other fire departments that do not transport and increased "burnout" and other associated mental health conditions (depression, PTSD, suicide, anger management, etc.).

3. Transport by EMT and Berkeley Mental Health: The legal authority to place a person on an involuntary psychiatric hold lies with the police, mental health professionals, and physicians. Berkeley Mental Health and Berkeley Police are the primary contacts with the patient population in question. An alternative to EMT ambulance transport is a hybrid where an EMT and a Mental Health Provider could team up and transport to John George. This adds significant cost due to the higher salaries of licensed mental health providers.
4. Transport by Berkeley Police: At times, police officers transport patients on a 5150 hold to John George Pavilion. This option would remove police officers from Berkeley for extended periods. This option also puts care and transport of psychiatric patients with law enforcement and not health care professionals.

Conclusion

The City has conducted research and explored numerous options to take over transporting mental and behavioral health patients beginning July 1, 2019. Considering the operational impacts, cost, and tight timeline, the most prudent option is to move forward with supplementing Berkeley Fire's existing transport capacity with a contracted ambulance service.

cc: Paul Buddenhagen, Deputy City Manager
David Brannigan, Fire Chief
Mark Numainville, City Clerk
Jenny Wong, City Auditor
Matthai Chakko, Assistant to the City Manager / Public Information Officer