

Variable	N Size	Mean Or %	Std. Dev
Other Vehicle (Golf Cart + Utility Vehicle + Bike + Other)	200	1.56	2.44
Total Number of Vehicles	131	3.82	4.08
Hours of operation [Day Time = 0, 24/7 School Year = 1, 24/7 Round = 2, Evenings = 3, Weekend = 4, Variable = 5, Events Only = 6]	200		
Day Time	11	6.51%	
24/7 School Year	41	24.26%	
24/7 Year Round	63	37.28%	
Evenings	31	18.34%	
Weekends	3	1.78%	
Variables	9	5.33%	
Events	11	6.51%	
Annual Call Volume	148	516.06	1174.05
Average Response Time (Mins)	153	3.09	2.56
Annual Budget (Dollars)	101	39333.38	106217.2

Table 1. (continued). Descriptive Results of Survey Data.

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Prehospital Double Sequential Defibrillation: A Matched Case-Control Study

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Study/Objective: The goal of our study is to determine if Prehospital Double Sequential Defibrillation (DSD) is associated with improved “survival to hospital” admission, in the setting of refractory ventricular fibrillation/pulseless ventricular tachycardia (VF/pVT).

Background: The optimal management strategy of prehospital refractory ventricular fibrillation/pulseless ventricular tachycardia (VF/pVT) is controversial. One proposed management strategy is the prehospital use of Double Sequential Defibrillation (DSD). However, in the setting of Out-of-Hospital cardiac arrest (OHCA), prehospital DSD is a novel and unproven therapy.

Methods: This project is a matched case-control study, derived from prospectively collected Quality Assurance/Quality Improvement (QA/QI) data, obtained from the San Antonio

Fire Department’s Out-of-Hospital Cardiac Arrest (OHCA) database, between January 2013 and December 2015. The cases were defined as OHCA patients, with refractory VF/pVT, that survived to hospital admission. The control group was defined as OHCA patients, with refractory VF/pVT, that did not survive to hospital admission. The primary variable in our study was survival to hospital admission.

Results: Of the 3,469 consecutive OHCA patients during the study period, 205 patients met the inclusion criterion of refractory VF/pVT. Using a predefined algorithm, two blinded researchers identified 64 unique cases and matched them with 64 unique controls. Survival to hospital admission occurred in 48.0% of DSD patients, and 50.5% of the conventional therapy patients ($P > .99$; OR = 0.91; 95% CI, 0.40–2.1).

Conclusion: Our matched case-control study on the pre-hospital use of double sequential defibrillation for refractory VF/pVT found no evidence of associated improvement in survival to hospital admission. Our current protocol of considering prehospital double sequential defibrillation, after the third conventional defibrillation, in “out-of-hospital” cardiac arrest is ineffective and cannot be recommended at this time.

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Frequent Users of Emergency Medical Services

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Study/Objective: We examined the proportion and characteristics of frequent EMS (Emergency Medical Services) users (\geq four annual calls), reasons for calls, and needs for transportation.

Background: There seems to be a trend that the number of patients who are frequently using EMS is rapidly increasing. The reasons are multifactorial and include aging of the population, social problems, changes in health care services, and in home care. If this trend continues, EMS may be faced with major operational and financial burdens.

Methods: We conducted a retrospective cohort study. All emergency ambulance calls in Helsinki from January 1, 2015 to December 31, 2015 were included. We analyzed the ones in which the same patient had used the EMS service at least four times per year. Patients were divided into three groups based on the annual call volume; 4–9, 10–19, and \geq 20. Appropriate institutional approval for the study was sought.

Results: Altogether, 62,400 ambulance calls were handled by EMS during the study period. The calls related to frequent users ($n = 15596$) comprised 25% of all calls. The number of frequent users was 2,490 (6.3 % of all patients), out of which 1,360 (55.0 %) were female. The median age was 72 (IQR 54–84) years. The number of frequent users with an annual call volume of 4–9, 10–19, and \geq 20 was 2, 222, 210, and 58, respectively. The most common reasons for EMS activation was a deteriorated health condition, falls, back pain, mental