

56. Managed Care Organization Enrollee Utilization of 911 Emergency Medical Services

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Purpose: The accessibility of emergency medical services (EMS) for enrollees of managed care organizations (MCOs) is currently a topic of national debate. The mechanisms by which enrollees currently enter the EMS system have not been well described. The purpose of this study was to determine how these patients enter our EMS system.

Methods: All enrollees who belong to the region's largest MCO and who were transported to hospital EDs by the paramedic level municipal EMS department were identified from billing records. Members of the MCO are mandated to call the MCO prior to seeking any emergency care. Dispatch logs were then examined to determine the time and origin of the call to the 911 communications center. Patient care records were used to obtain patient age, the level of care (ALS vs. BLS), and whether the ALS patient received medications (ALS Meds).

Results: Over a six month period 195 enrollees were transported to EDs. Three modes of system entry were identified: Group I—enrollees who called 911 directly; Group II—enrollees who called the MCO triage center who then called 911 for the patient; and Group III—enrollees who were sent to the MCO center for evaluation and subsequently the MCO called 911 to transport the patient to the hospital. Results are summarized below:

	Mean Age	Total Yrs.	ALS %	ALS Meds %	BLS %	11PM-7AM	7AM-3PM	3PM-11PM
Group I	40.9	36.7	13.5	63.3	23 (21%)	32 (29%)	54 (50%)	
	(n = 109)		(n = 40)	(n = 14)	(n = 69)			
Group II	55.0	48.9	19.4	54.8	11 (36%)	12 (39%)	9 (26%)	
	(n = 32)		(n = 15)	(n = 6)	(n = 17)			
Group III	40.6	74.1	18.5	25.9	15 (28%)	23 (43%)	16 (30%)	
	(n = 54)	(n = 40)	(n = 10)	(n = 14)				

Conclusion: The majority of enrollees called 911 directly and were most likely to call 911 directly during evening hours. Those enrollees who most frequently required ALS were those who received initial treatment at the MCO center prior to transport to the ED. Although system specific, this type of descriptive study is helpful in assisting both EMS systems and MCOs to better assess the utilization of 911 EMS resources by MCO enrollees.

61. Can Melatonin Improve Adaptation To Night Shift? A Pilot Study Using an Urban EMS System

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Purpose: To determine whether melatonin (N-acetyl-5-methoxytryptamine) is effective in helping prehospital personnel working consecutive night shifts reset their biological clock and minimize circadian rhythm disruption.

Methods: A double-blinded, randomized, cross-over study was performed using 12 paramedic volunteers. Paramedics were working a span of consecutive night (2300-0700) shifts and received either a melatonin capsule (6 mg) or placebo to be taken prior to each of the consecutive day sleeps. Each participants completed a total of four spans of consecutive night shifts (2-melatonin, 2-placebo). Collected data included daily sleep diaries, quantification of alcohol/caffeine consumed, and possible drug side-effects. Assessment of job performance, mood and alertness were measured every day using 10-cm visual analog scales (VAS).

Results: Analysis of sleep diaries demonstrated no significant difference ($p > 0.05$) between the two treatments in respect to mean sleep latency (melatonin = 15.4 min. vs. placebo = 14.6 min), mean sleep duration (melatonin = 6.7 hrs. vs. placebo = 6.9 hrs), or subjectively rated sleep quality (melatonin = 5.8 VAS vs placebo = 5.6 VAS). Similarly, no significant benefits were noted between the mean VAS scores for daily job performance, mood and alertness. Adverse effects were rare, one patient taking melatonin reported a prolonged sedative effect.

Conclusion: Despite widespread belief in the benefits of melatonin as a hypnotic agent, no clinical benefits were noted in terms of daytime sleep or job performance in paramedics working consecutive night shifts.