The next step is to evaluate the logistical transparency of mental health resources as residents not only need to know the existence of mental health resources but also understand and trust the process in order to utilize them effectively.

27 Patients with Vital Sign Abnormalities Discharged by EM Residents: Is it a Problem and Who is at Risk?

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Background: Medical error is the third leading cause of death in the United States. Abnormal discharge vital signs (VS) are known to be associated with increased risk of 30-day mortality and re-admission. Medical errors committed by residents have been extensively studied in the context of duty-hours and fatigue, but have focused primarily on specialties with 24-hour call. Little is known about medical error rates among residents in the emergency department (ED).

Objectives: Among patients cared for by residents and discharged from the ED, our objectives were to:

- Measure the proportion with abnormal discharge VS
- Compare the proportion with abnormal discharge VS who were and were not cared for by residents
- Determine which VS were most commonly abnormal
- Identify predictors of abnormal VS upon discharge

Methods: We performed a cross-sectional, secondary analysis of the National Hospital Ambulatory Medical Care Survey for the years 2014-2015. The population included patients cared for and discharged by ED residents. The primary outcome was abnormal VS on discharge, defined as pulse>100, systolic blood pressure<90, or respiratory rate>20. Descriptive statistics were used to characterize the population. Chi square was used to compare the proportion of discharged patients with abnormal VS between resident and non-resident cases. Logistic regression was performed to identify predictors of discharge with abnormal VS.

Results: An estimated 14,643,483 patients cared for by residents were discharged from the ED, of which 4.76% (95%CI 2.44, 9.07) had abnormal VS. Among discharged patients in whose care residents were not involved, an estimated 4.88% (95%CI 4.35, 5.48) had abnormal VS, with no significant difference between groups (p=0.94). Pulse was the most commonly abnormal VS, with 3.31% (95%CI 1.46, 7.32) of discharge heart rates>100. There were no significant associations between any of the predictors and the primary outcome in our multivariable model.

Conclusions: Only a small number of ED patients cared for by ED residents are discharged with abnormal VS, with no significant difference compared with non-resident cases. Pulse is the most commonly abnormal VS, and there are no clear predictors for this relatively uncommon error.

Table 1. Demographic characteristics of patients who were discharged from the ED by EM residents.

Variable	Number of Unweighted Visits	Number of Weighted Visits	Weighted Proportion of Visits (95% CI)		Weighted Proportion Discharged with Abnormal VS (95% CI)	
TOTAL VISITS	2,445	15,000,000	5.26%	(3.44, 7.96)	4.76%	(2.44, 9.07)
MONTH						
Jan	114	530,000	§3.59%	(1.58, 7.92)	§7.04%	(1.38,29.07)
Feb	137	640,000	§4.35%	(1.76, 10.32)	§0%	
Mar	185	2,100,000	§14.46%	(4.49, 37.80)	§10.46%	(6.40,16.62)
Apr	184	2,200,000	§15.05%	(5.63, 34.49)	§8.58%	(6.43,11.38)
May	143	900,000	§6.17%	(2.39, 15.02)	§1.77%	(0.50,6.11)
Jun	200	1,200,000	§8.33%	(3.96, 16.70)	§3.81%	(1.44,9.70)
Jul	199	1,100,000	§7.37%	(3.52, 14.77)	§3.46%	(1.51,7.74)
Aug	344	1,100,000	§7.32%	(3.07, 16.46)	§3.7%	(0.98,13.01)
Sep	100	990,000	§6.79%	(2.14, 19.56)	§0.3%	(0.03,2.81)
Oct	114	1,200,000	§8.03%	(3.31, 18.21)	§3.22%	(0.74,12.91)
Nov	415	1,700,000	§11.58%	(5.35, 23.28)	§1.62%	(0.57,4.55)
Dec	310	1,000,000	§6.96%	(3.25, 14.31)	§4.12%	(1.89,8.76)
SEASON						
Winter	561	2,200,000	§14.9%	(7.73, 26.78)	§3.62%	(1.88-6.89)
Spring	512	5,200,000	§35.68%	(14.28, 64.88)	§8.17%	(4.62-14.04)
Summer	743	3,400,000	23.02%	(12.99, 37.45)	§3.66%	(1.95-6.77)
Fall	629	3,900,000	26.40%	(14.52, 43.11)	§1.77%	(0.67-4.60)
AGE GROUP						
15-24	506	2,800,000	18.92%	(16.22, 21.95)	§6.65%	(4.11,10.60)
25-44	882	5,400,000	36.77%	(34.52, 39.07)	§2.66%	(1.37,5.10)
45-64	694	4,100,000	28.22%	(26.11, 30.42)	§6.15%	(2.67,13.55)
65-74	184	1,000,000	7.05%	(5.15, 9.59)	§2.63%	(0.84,7.89)
>=75	179	1,300,000	9.04%	(6.55, 12.36)	§6.69%	(2.33,17.71)
GENDER						
Male	1,111	6,400,000	43.85%	(40.66, 47.10)	5.26%	(2.82,9.59)
Female	1,334	8,200,000	56.15%	(52.90, 59.34)	§4.13%	(1.86,8.93)
RACE/ETHNICITY						
White	1326	7,500,000	51.49%	(43.34, 59.57)	5.33%	(2.36,11.60)
Black	657	4,700,000	31.79%	(23.88, 40.90)	§3.46%	(2.27,5.25)
Hispanic	364	1,800,000	12.50%	(7.72, 19.63)	§2.85%	(1.12,7.06)
Other	98	620,000	4.21%	(2.83, 6.24)	§13.29%	(4.17,35.05)
PAYMENT						
Non-Private	1,604	9,300,000	63.70%	(56.67, 70.27)	3.75%	(2.20,6.32)
Private	841	5,300,000	36.30%	(29.73, 43.33)	§6.54%	(2.75,14.78)
HR						
<=100	2399	14,000,000	96.69%	(92.68, 98.54)		
>100	46	480,000	§3.31%	(1.46, 7.32)		
RR						
<=20	2404	14,000,000	97.70%	96.11% 98.65%		
>20	41	340,000	2.30%	1.35% 3.89%		
SBP						
<90	0	0	0			
>=90	2445	15,000,000	100.00%			

CI, confidence interval; *HR*, heart rate; *SBP*, systolic blood pressure; *VS*, vital signs.
§ = <30 observations or relative standard error >30%

Table 2. Factors associated with abnormal discharge vs in multivariable model.

VARIABLE	ABNORMAL VITAL SIGNS ON DISCHARGE			
	ODDS RATIO	95% CI		P-VALUE
SEASON				
Winter	Ref	-	-	-
Spring	2.32	0.95	5.67	0.06
Summer	0.99	0.37	2.61	0.98
Fall	0.50	0.14	1.70	0.26
AGE CATEGORY				
15-24	Ref	-	-	-
25-44*	0.36	0.23	0.59	0.00
45-64	0.94	0.44	1.99	0.88
65-74	0.39	0.10	1.48	0.17
>=75	0.87	0.36	2.12	0.76
SEX				
Female		-	-	-
Male	0.83	0.48	1.42	0.49
RACE/ETHNICITY				
White	Ref	-	-	-
Black	0.67	0.44	1.03	0.07
Hispanic	0.84	0.33	2.12	0.70
Other	2.93	1.06	8.08	0.04
PAYMENT				
Non-Private	Ref	-	-	-
Private	1.80	0.87	3.73	0.11

Ref, reference.
* = p< 0.05.

28 Priapism Education in Emergency Medicine Residency Programs

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Background: In the community, priapism is often managed primarily by Emergency Medicine (EM) providers. However, EM trainees may have limited experience with priapism due to involvement of Urology providers at training institutions.

Objectives: To characterize the current state of formalized education on priapism for EM trainees at Accreditation Council for Graduate Medical Education (ACGME)-accredited programs.

Methods: From October 2016 to February 2017, EM residents and residency program directors or assistant program directors were surveyed regarding their experiences with and attitudes towards priapism education. Surveys were distributed via the Council of Emergency Medicine Residency Directors (CORD).

Results: 227 EM residents from 34 programs, and 91 residency program directors and assistant program directors from 73 programs responded. All national geographic divisions were represented. 90% of residents and 92% of residency leadership believe that EM physicians should be able to independently manage priapism in practice.

Only 51% of residents and 75% of senior residents had primarily managed a case of priapism in training. 67% request urology consultation "most of the time" or "every time." Among senior residents, 17% felt "not at all confident" in their ability to independently manage priapism. 78% of residents deemed education in priapism management "very important" or "essential," but 36% deemed their current educational curricula "insufficient" to prepare them for independent priapism management.

Among program directors, 81% reported a formalized curriculum for priapism education. A combination of lecture and bedside teaching was most common (32%). Curricula included formal lecture in 97% of programs and simulation in 19%. 43% of residency leadership deemed simulation the most effective singular method to teach residents about priapism management. 55% of residents also preferred educational curricula that incorporated simulation.

Conclusions: Though most EM trainees and residency leadership believe EM physicians should be able to independently manage priapism, at least 25% of senior trainees have no experience with this entity and lack confidence in their ability to do so. Despite curricula at most programs, a need for more simulation-based education remains.

29 Scholarly Track Training in Emergency Medicine Residencies in 2017

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Background: An increasing number of emergency medicine (EM) residency training programs provide formal training in a variety of subspecialty topics related to EM. These 'scholarly tracks' (ST) take many forms involving an increasing number of subjects. It is unclear how many such programs exist, and how many adhere to published recommendations for optimal provision of such a curriculum.

Objectives: To determine how many EM programs have implemented ST, and describe the frequency and breadth of subspecialty topics that are offered.

Methods: EM program leadership were invited to participate in an anonymous survey via direct email. Reminders were sent 14 and 21 days after the first invitation to programs without prior response. The survey queried the presence of scholarly track programs, topics covered, program age and adherence to best practice, with basic demographics. Results were analyzed with