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Letter to the Editor

Cardiopulmonary resuscitation survival rates depicted in emergency department-associated medical television shows



Sir,

Cardiopulmonary resuscitation (CPR) remains one of healthcare's principal defenses against cardiac arrest. Reported survival rates for in-hospital CPR vary, ranging from 37–61% for short-term survival (return of spontaneous circulation following CPR event) and 13–32% for long-term survival (survival to hospital discharge).^{1–3} Survival rates following CPR initiated in the emergency department (ED) have been shown to be slightly more favorable compared to other units in the hospital.³

The impression patients and their families have regarding their medical care and outcomes secondary to treatment may be influenced by the content depicted in medical television shows. There have been no recent studies examining the survival rates following CPR events depicted in medical television shows based in the ED. The objective of this study is to determine the CPR survival rates (short and long term survival) depicted on two ED-associated medical television shows.

We conducted a content analysis study and examined CPR events depicted during Season One for two recently aired ED-associated medical television shows (*Chicago Med* and *Code Black*). Abstracted data for each CPR event included patient demographics (stated or estimated age and race, sex), etiology of CPR event, and patient survival subsequent to the CPR event (short and long term survival, death during hospitalization). Short-term survival was defined as return of spontaneous circulation subsequent to the CPR, and long-term survival was defined as survival to hospital discharge.

Data analysis was performed on a total of 53 CPR events occurring in 49 patients. The majority of patients were 18–65 years of age (78%), male (63%), and Caucasian (78%). The most common etiologies for CPR events were traumatic injury (58%) and cardiac (15%). The survival rates for all CPR events depicted, and then stratified by medical television show and etiology of CPR, is demonstrated on the [Table 1](#).

Table 1 – Short term and long term survival of all patients receiving CPR, stratified by medical show and etiology of CPR.

	# Of episodes	# Of CPR events	Short term survival	Immediate death following CPR event	Short-term survival + death during hospitalization	Long term survival
Medical show						
<i>Chicago Med</i>	18	22	16/22 ^a (73%)	6/22 (27%)	2/12 ^b (17%)	10/12 ^b (83%)
<i>Code Black</i>	18	31	19/31 (61%)	12/31 (39%)	2/19 (11%)	17/19 (89%)
Total from both shows	36	53	35/53 (66%)	18/53 (34%)	4/31 (13%)	27/31 (87%)
Etiology of CPR						
Traumatic		31	20/31 (65%)	11/31 (35%)	4/19 ^c (21%)	15/19 ^c (79%)
Non traumatic		22	15/22 (68%)	7/22 (32%)	0/12 ^d	12/12 ^d (100%)

^a For *Chicago Med*, there were 22 CPR events in 18 patients (Patient "A" and "B" had 2 separate CPR events each and Patient "C" had 3 separate CPR events).

^b Represents total patients (n = 12) that survived their initial CRP event (short term survival). For *Chicago Med*, there were 16 CPR events leading to short term survival in 12 patients (Patient "A" survived short term twice but died prior to discharge, Patient "B" survived short term twice and survived long term to hospital discharge, and Patient "C" survived short term three times and survived long term to hospital discharge).

^c For traumatic etiology of CPR, there were 20 short term survival events representing 19 patients.

^d For non-traumatic etiology of CPR, there were 15 short term survival events representing 12 patients.

Based on our sample of ED-associated medical television shows, CPR survival rates (66% short-term and 87% long-term) were more favorable than those reported for in-hospital CPR,^{1–3} and similar to those reporting CPR rates in other medical television shows, specifically Diem et al. (examining episodes of *ER*, *Chicago Hope*, and *Rescue 911*; 75% short-term and 67% long-term survival)⁴ and Portanova et al. (examining episodes of *Grey's Anatomy* and *House*; 69.6% short-term and 71.9% long-term survival).⁵

In conclusion, the impression patients and their families have regarding their medical care and outcomes secondary to treatment may be influenced by the content depicted in medical television shows. It is important for healthcare professionals to provide both their patients and their families realistic expectations regarding their disease processes, especially when it comes to outcomes following cardiac arrest and CPR, as well as end-of-life care. Furthermore, survival following out-of-hospital cardiac arrest remains low; however, out-of-hospital CPR survival significantly increases when a bystander is present to administer. Therefore, it is important to not only promote CPR education to patients and their families, but also to the community in order to give cardiac arrest patients higher chances of survival.

Conflict of interest

None.

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