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Frequency of survival to hospital discharge after cardiopulmonary resuscitation on FOX TV's *The Resident*

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Since the mid-1990s, rates of successful cardiopulmonary resuscitation (CPR) on television have been consistently higher than observed rates in the real world. Two of the multiple examples of this include a 1996 study of *ER*, *Chicago Hope*, and *Rescue 911* that found 67% of patients on television undergoing CPR survived until hospital discharge [1] and a 2015 study of *Grey's Anatomy* and *House* that found 69.6% of patients survived to hospital discharge [2]. Conversely, the American Heart Association reports out-of-hospital cardiac arrest survival rates at 12% and in-hospital at 24.8% [3].

A new television show on FOX, *The Resident*, has taken an unsympathetic view of medical practice, and as such, has been criticized for a pejorative portrayal of the medical profession [4,5]. We sought to determine if this critical view of medicine was reflected in depicted rates of CPR.

Two or more viewers (D.H., T.C., A.H., J.G., and Q.K.) viewed all three seasons of *The Resident* from 21 January 2019 to 7 April 2020. We identified all resuscitation events portrayed on the show. Resuscitation was defined as occurring if chest compressions were performed on a patient, a precordial thump was administered, or a patient was defibrillated/cardioverted due to arrhythmia. CPR was defined as chest compressions with or without breathing.

For all resuscitation events recorded, the following data were collected: patient's location or estimated age (judged by consensus), sex, location of event (out-of-hospital or in-hospital), suspected cause of event, resuscitation technique(s) deployed, and survival to hospital discharge. Data are presented as frequencies. This study did not involve the use of patient subjects or private health information and institutional review board approval was not sought.

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We found 34 resuscitation events in the first three seasons of *The Resident*. Twenty out of 34 (59%) patients had successful defibrillation, and 29 patients (85%) were below the age of 65 years. Twenty-one (62%) patients were male and 13 (38%) were female. Five of the 34 events (15%) occurred out of the hospital. Twenty-six (76%) events included CPR and/or chest compressions, 16 (47%) included cardioversion, and 1 (3%) consisted of precordial thump. We also noted one instance of inappropriate cardioversion, where the patient had flatlined prior to cardioversion. Suspected causes of arrest varied and are listed in Table 1.

The Resident's portrayal of the frequency of survival after CPR is comparable to the portrayal of prior television shows at 59%, pointedly higher than real-world rates. *The Resident* aimed to stand apart from earlier medical drama television by revealing grim truths about healthcare in the USA today, drawing attention to corruption, medical errors, and poor health outcomes, yet the success rate of CPR events did not reflect real-world statistics.

Certain characteristics of patients undergoing CPR on *The Resident* do not reflect real-world patient qualities. Most patients were younger and experienced cardiac arrest due to causes other than previous cardiac disease. The most common cardiac arrest events in the real world occur in adults over the age of 35 years and with a history of cardiac disease [6].

While *The Resident* has offered a critical perspective of the US health care system, it has failed to accurately represent current rates of CPR success in its episodes, instead depicting younger, rarer cases of cardiac events.

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V.P. designed the study. D.H.P., J.G., A.H., T.C., and V.P. developed methods for data collection. D.H.P., J.G., A.H., T.C., and Q.K. collected and analyzed data. J.G. wrote the draft paper. D.H.P., J.G., A.H., T.C., Q.K., and V.P. revised draft article.

Conflicts of interest

V.P. reports (research funding) Arnold Ventures, Johns Hopkins Press, Medscape (royalties), Grand Rounds/lectures from universities, medical centers, nonprofits, and professional societies (honorary), UnitedHealthcare, New Century Health (consulting), Evicore (Speaking fees), Plenary Session podcast has Patreon backers (other support). For the remaining authors, there are no conflicts of interest.

Table 1 Cardiac arrest events in *The Resident*

Season, episode	Age or age range	Sex	Location	Suspected cause	Resuscitation technique	Successful defibrillation
1.1	25-45	Male	In hospital	Medical error, appendectomy	Chest compressions	No
1.14	21	Female	In hospital	Oxycodone overdose, endocarditis	CPR	No
1.2	28	Male	Out of hospital	Friction rub/pericarditis/effusion	Precordial thump	Yes
1.4	25-45	Male	In hospital	Car accident	Cardioversion after flatlining	Yes
	18-25	Male	In hospital	Subdural hematoma, skateboarding accident	CPR	No
1.9	26	Female	In hospital	Cancer, potassium overdose	Cardioversion, CPR, mechanical ventilation	No
1.13	>65	Female	In hospital	Critical aortic stenosis, abnormal rhythm	Cardioversion	Yes
1.14	28	Male	In hospital	Open heart surgery	Cardioversion	Yes
2.3	>65	Male	In hospital	Pacemaker failed	Cardioversion	Yes
2.4	32	Male	Out of hospital	Arrhythmia	CPR	Yes
2.6	46	Male	In hospital	Car accident	CPR, cardioversion	Yes
2.7	30	Male	In hospital	Immunotherapy drug	CPR	No
2.8	<18	Male	In hospital	Unknown	CPR	No
2.10	25-45	Female	In hospital	Chemotherapy	Cardioversion	Yes
2.11	32	Male	Out of hospital	Implanted heart valve failed	CPR	No
2.14	70	Female	Out of hospital	Found without pulse	CPR	No
2.16	<18	Male	In hospital	Faulty VNS device	CPR	Yes
2.17	>65	Male	In hospital	Open heart surgery	Cardioversion	No
2.19	>65	Female	In hospital	Surgery	CPR	No
2.23	25-45	Female	In hospital	Kidney transplant surgery	Cardioversion	No
3.3	45-65	Male	In hospital	Chest impaled	CPR	Yes
3.3	45-65	Male	In hospital	Pulmonary embolism	CPR	No
3.4	18-25	Male	In hospital	Hemochromatosis	CPR, cardioversion	Yes
3.7	25-45	Female	In hospital	Car accident	CPR	Yes
3.8	5	Male	In hospital	Hypoplastic left heart syndrome	Cardioversion	Yes
3.10	25-45	Female	In hospital	Failing heart valve	CPR, cardioversion	Yes
3.10	<1	Female	In hospital	Premature birth	CPR	Yes
3.11	25-45	Male	In hospital	Allergic reaction	Chest compressions and epinephrine	Yes
3.11	25-45	Male	Out of hospital	Coronary artery disease	CPR, cardioversion	Yes
3.13	19	Male	In hospital	Genetic mitochondrial disorder	CPR	Yes
3.14	54	Female	In hospital	Jet ski accident	CPR, cardioversion	Yes
3.15	25-45	Male	In hospital	Organophosphate poisoning	CPR, cardioversion	Yes
3.18	45-65	Female	In hospital	Seizure	CPR, cardioversion	No
3.20	25-45	Female	In hospital	Neurosurgery complication	CPR, cardioversion	No

CPR was chest compressions with or without breathing. CPR, cardiopulmonary resuscitation.

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