MEDIA STUDIES

Televised medical talk shows—what they recommend and the evidence to support their recommendations: a prospective observational study

Christina Korownyk, ¹ Michael R Kolber, ¹ James McCormack, ³ Vanessa Lam, ² Kate Overbo, ² Candra Cotton, ¹ Caitlin Finley, ¹ Ricky D Turgeon, ³ Scott Garrison, ¹ Adrienne J Lindblad, ¹ Hoan Linh Banh, ¹ Denise Campbell-Scherer, ¹ Ben Vandermeer, ⁴ G Michael Allan¹

¹Department of Family Medicine, University of Alberta, 6-10 University Terrace, Edmonton, Alberta, Canada T6G 2T4

²Faculty of Medicine and Dentistry, University of Alberta, 2J2.00 WC Mackenzie Health Sciences Centre, Edmonton, Alberta, Canada T6G 2R7

³Faculty of Pharmaceutical Sciences, University of British Columbia, 2405 Wesbrook Mall, Vancouver, BC, Canada V6T 1Z3

⁴Alberta Research Centre for Health Evidence, University of Alberta, Edmonton Clinic Health Academy, 11405-87 Avenue, Edmonton, Alberta, Canada T6G 1C9 Correspondence to: C Korownyk tina.korownyk@ualberta.ca

Cite this as: *BMJ* **2014;349:g7346** doi: 10.1136/bmj.g7346

This is an abridged version of the paper that appears on thebmj. com as *BMJ* 2014;349:g7346. A data supplement also appears on thebmj.com

OBJECTIVE To determine the quality of health recommendations and claims made on medical talk shows.

DESIGN Prospective observational study.

SOURCES Internationally syndicated medical television talk shows that air daily (*The Dr Oz Show* and *The Doctors*).

INTERVENTIONS Investigators randomly selected 40 episodes of each of *The Dr Oz Show* and *The Doctors* from early 2013 and identified and evaluated all recommendations made on each program. A group of experienced evidence reviewers independently searched for, and evaluated as a team, evidence to support 80 randomly selected recommendations from each show.

MAIN OUTCOMES MEASURES Percentage of recommendations that are supported by evidence as determined by a team of experienced evidence reviewers. Secondary outcomes included topics discussed, the number of recommendations made on the shows, and the types and details of recommendations that were made.

RESULTS We could find at least a case study or better evidence to support 54% (95% confidence interval 47% to 62%) of the 160 recommendations. For recommendations in *The Dr Oz Show*, evidence supported 46%, contradicted 15%, and was not found for 39%. For recommendations in *The Doctors*, evidence supported 63%, contradicted 14%, and was not found for 24%. Believable or somewhat believable evidence supported 33% of the recommendations on *The Dr Oz Show* and 53% on *The Doctors*. Disclosure of potential conflicts of interest accompanied 0.4% of recommendations.

CONCLUSIONS Recommendations made on medical talk shows often lack adequate information on specific benefits or the size of these benefits. Approximately half of the recommendations have either no evidence or are contradicted by the best available evidence. Potential conflicts of interest are rarely addressed. The public should be skeptical about recommendations made on medical talk shows.

Table 1 | Details of benefits, harms, and costs associated with each recommendation made in samples of medical television talk shows *The Dr Oz Show* and *The Doctors*

The Doctors (n=445) 402 (90.3)
402 (90.3)
184 (41.3)
49 (11.0)
34 (7.6)
14 (3.1)
3 times

Introduction

According to Nielsen's report, American citizens spend an average of over five hours a day watching television.

International health information programs, such as *The Dr Oz Show* and *The Doctors* have become a regular part of television broadcasting. In the 2012-13 season, *The Dr Oz Show* was consistently ranked in the top five talk shows in America with an average of 2.9 million viewers per day, while *The Doctors* had a high of 2.3 million viewers.^{2 3} In the 2012 Greatist report, Dr Mehmet Oz and Dr Travis Stork (one of the hosts of *The Doctors*) were both included in the top 100 health and fitness influencers.⁴

Popular television talk shows such as *The Dr Oz Show* often engender skepticism and criticism from medical professionals. ⁵⁻⁷ However, no research has systematically examined the content of the medical information provided on these talk shows. Our objective was to review the most popular medical talk shows on television, to (1) determine the type of recommendations and claims given and the details provided, and (2) search for and evaluate the evidence behind these recommendations.

Methods Full details on thebmj.com.

Results

The most common recommendation in *The Dr Oz Show* was dietary advice (39.2%, 188/479), while in *The Doctors* it was to consult a health care provider (17.8%, 79/445).

The details of benefits, harms, and costs around the recommendations are shown in table 1. The benefit of the recommendation was not specific 57.4-58.7% of the time. For example, a recommendation from *The Dr Oz Show* that vitamin E improves brainpower

would be considered a benefit but not considered specific or measurable, and the

24 20-27 December 2014 | the **bmj**



Anyone who followed the advice would be doing so on the basis of a trust in the host or guest rather than through a balanced explanation of benefits, harms, and costs

magnitude of the increase in brainpower was not discussed. Magnitude of the potential benefit was mentioned in 11.0-16.5% of the recommendations, often in relative rather than absolute terms (for example, vitamin E in foods cuts risk of Alzheimer's disease by 25-70%). Recommendations were made by the host(s) 26% (125/479) of the time on *The Dr Oz Show* and 65% (10/479) of the time on *The Doctors*. Guests made 10/4790 of the recommendations on *The Dr Oz Show* and 10/4790 of the recommendations on *The Dr Oz Show* and 10/4790 of *The Doctors*.

Acknowledgment of a potential conflict of interest was identified four times over the 924 recommendations.

Evidence base for the stronger recommendations

Evidence assessment for 160 randomly selected recommendations is presented in table 2. Overall, we found that 87 of the 160 recommendations (54%, 95% confidence interval 47% to 62%) had some level of published evidence to support them. Believable or somewhat believable evidence supported 33% of the recommendations on *The Dr Oz Show* and 53% on *The Doctors*. We found believable or somewhat believable evidence against 11% and 13% of the recommendations on the *The Dr Oz Show* and *The Doctors*, respectively.

Discussion

For both shows, a specific benefit was mentioned for only about 40% of the recommendations. The magnitude of benefit (<20%), potential harms (<10%), and costs (<15%) were less commonly mentioned. Thus, anyone who followed the advice provided would be doing so on the basis of a trust in the host or guest rather than through a balanced explanation of benefits, harms, and costs. The near absence of potential conflict of interest reporting (<1%) further challenges viewers' ability to balance the information provided.

Roughly a third of the recommendations on *The Dr Oz Show* and half of the recommendations on *The Doctors* were based on believable or somewhat believable evidence. Evidence was believable or somewhat believable

Table 2 | Evidence for 80 randomly selected recommendations from each of the medical television talk shows *The Dr Oz Show* and *The Doctors*

Evidence	(n=80)	commendations
believable	By believability	Overall
Yes	17 (21.3)	47 (46.3)
Intermediate	9 (11.3)	_
No	11 (13.8)	
Yes	4 (5.0)	12 (15.0)
Intermediate	5 (6.3)	
No	3 (3.8)	
_	_	31 (38.8)
Yes	26 (32.5)	50 (62.5)
Intermediate	16 (20.0)	
No	8 (10.0)	
Yes	3 (3.8)	11 (13.8)
Intermediate	7 (8.8)	
No	1 (1.3)	_
_	_	19 (23.8)
	Yes Intermediate No Yes Intermediate	Evidence believable (n=80) By believability Yes 17 (21.3) Intermediate 9 (11.3) No 11 (13.8) Yes 4 (5.0) Intermediate 5 (6.3) No 3 (3.8) — — Yes 26 (32.5) Intermediate 16 (20.0) No 8 (10.0) Yes 3 (3.8) Intermediate 7 (8.8)

against a recommendation for 1 in 8-10 recommendations. For slightly over 1 in 3 and 1 in 4 of the recommendations for *The Dr Oz Show* and *The Doctors* respectively, no evidence could be found. This is despite us being quite liberal in the type and amount of evidence we required.

Conclusions

Consumers should be skeptical about any recommendations provided on television medical talk shows. Decisions around healthcare issues are often challenging and require much more than non-specific recommendations based on little or no evidence. Patients would do well to ask healthcare providers specific questions about the benefits and harms, along with the magnitude of the effect (in absolute numbers), and the costs and inconveniences of any recommendation.

Competing interests and references are on thebmj.com.

the **bmj** | 20-27 December 2014 **25**

CARTOONS KILL: casualties in animated recreational theater in an objective observational new study of kids' introduction to loss of life

Ian Colman, Mila Kingsbury, Murray Weeks, Anushka Ataullahjan, Marc-André Bélair, Jennifer Dykxhoorn, Katie Hynes, Alexandra Loro, Michael S Martin, Kiyuri Naicker, Nathaniel Pollock, Corneliu Rusu, James B Kirkbride

¹Department of Epidemiology and Community Medicine, University of Ottawa, Ottawa, ON, Canada

²School of Public Health, University of Alberta, Edmonton, AB, Canada

³Division of Community Health and

³Division of Community Health and Humanities, Memorial University, St John's, NFLD, Canada

⁴Division of Psychiatry, University College London, London, UK Correspondence to: I Colman icolman@uottawa.ca

Cite this as: *BMJ* 2014;349:g7184 doi: 10.1136/bmj.g7184 OBJECTIVES To
assess the risk
of on-screen
death of important
characters in children's
animated films versus dramatic
films for adults.

DESIGN Kaplan-Meier survival analysis with Cox regression comparing time to first on-screen death.

SETTING Authors' television screens, with and without popcorn.

PARTICIPANTS Important characters in 45 top grossing children's animated films and a comparison group of 90 top grossing dramatic films for adults.

MAIN OUTCOME MEASURES Time to first on-screen death.

RESULTS Important characters in children's animated films were at an increased risk of death compared with characters in dramatic films for adults (hazard ratio 2.52, 95% confidence interval 1.30 to 4.90). Risk of on-screen murder of important characters was higher in children's animated films than in comparison films (2.78, 1.02 to 7.58).

CONCLUSIONS Rather than being the innocuous form of entertainment they are assumed to be, children's animated films are rife with on-screen death and murder.

Introduction

Exposure to on-screen death and violence may frighten young children and have intense and longlasting effects.
This might be particularly problematic when children have not been prepared, through candid discussion with parents or caring adults, to face these themes.

On-screen deaths can be particularly traumatic for children as they directly expose them to loss of life. ⁶ Death, often gruesome and sensationalized, is featured prominently in North American films. ⁹ Most parents take care to protect their children from the endemic

gore and carnage present in movies aimed at adult audiences. Indeed, the current system of movie ratings was intended to allow parents to protect their children from content deemed inappropriate for young

viewers.⁹ 10 Consequently, it would be expected that these films would provide children a viewing experience devoid of the rampant horrors often present in popular films with stricter ratings.

We used survival analysis techniques to examine time to on-screen death of important characters in animated children's films versus those in films targeted at adult audiences. We hypothesized that, in contrast to containing no offensive content, children's animated films are in fact rife with death and destruction.

Methods

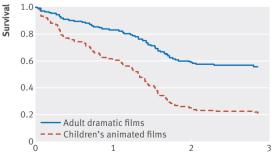
The primary exposure group for this study consisted of the 45 children's animated films with the highest all-time box office gross revenue, indexed for inflation. ¹¹ We excluded films in which the main characters were neither humans nor animals.

The comparison films consisted of the two highest box office grossing films in the same year of release as each animated film, excluding sequels, that received a genre tag of "drama" by the Internet Movie Database. 12

Our primary outcome was the elapsed time of the film at which the first on-screen death of an important character occurred. An important character was defined as a main character, a friend or family member of a main character, or the main villain or nemesis in the film. As secondary outcomes, observers also noted two contextual factors as these could be particularly traumatic for children: instances in which the first on-screen death was a murder (excluding death in wartime combat); and, instances when the first on-screen death was of a parent of a main character. Trained research assistants collected data collection using a standardized coding protocol. A panel of experienced (amateur) film critics (IC, MK, MW) resolved ambiguous or unclear events by consensus.

Results

Two thirds of children's animated films contained an onscreen death of an important character compared with half of comparison films (table 1). Common causes of death in



Time elapsed at on-screen death (hours)

Survival curves for important characters in animated versus comparison films

On-screen deaths can be particularly traumatic for children as they directly expose them to loss of life

adult audiei movie i ents te

 ${\it Table \, 1 \, | \, Characteristics \, of \, animated \, and \, comparison \, films \, and \, details \, of \, deaths \, of \, important \, characters}$

	Children's animated films (n=45)	Comparison films (n=90)
Mean runtime	1:29:29	2:05:08
Median survival time (95% CI)	1:19:15 (1:13:08 to 1:25:22)	2:04:05 (1:44:39 to 2:23:31)
No of films with death by cause:		
Gunshot	3 (6.7)	13 (14.4)
Drowning	3 (6.7)	1 (1.1)
Animal attack	5 (11.1)	0
Killed in combat	0	3 (3.3)
Motor vehicle crash (includes aircraft)	1 (2.2)	8 (8.9)
Mystical causes	3 (6.7)	0
Defenestration or other fall	5 (11.1)	3 (33)
Stabbing/impalement	2 (4.4)	2 (2.2)
Illness/medical complications	2 (4.4)	8 (8.9)
Suicide	0	1 (1.1)
Other injury	2 (4.4)	2 (2.2)
Other murder	4 (8.9)	4 (4.4)
No on screen death	15 (33.3)	45 (50)

Iahla 7 Numharci	narcantaga) of casualties in sample	a filme hv	ralationchin	to protagonist
Table 2 Nullibers	percentage	, oi casaatties iii saiiipti	C IIIIII D DV	retationsinp	to protagomst

Casualties	Children's animated films (n=45)	Comparison films (n=90)
Main protagonist*	1 (2.2)	14 (15.6)
Parent of protagonist*	8 (17.8)	6 (6.7)
Mother	4 (8.9)	3 (3.3)
Father	1 (2.2)	3 (3.3)
Both	3 (6.7)	0
Spouse/romantic interest	3 (6.7)	6 (6.7)
Child*	2 (4.4)	0
Other family	1 (2.2)	3 (3.3)
Close friend	2 (4.4)	9 (10)
Antagonist/nemesis*	13 (28.9)	7 (7.8)
No on-screen death	15 (33.3)	45 (50)

^{*}Starred categories indicate significant difference between animated and comparison films (Z test of column proportions; Pc0.05).

There was no evidence to suggest changes since 1937, when Snow White's stepmother was struck by lightning, forced off a cliff, and crushed by a boulder while being chased by seven vengeful dwarves

children's animated films included animal attacks and falls (intentional or not), while in comparison films common causes of death were gunshots, motor vehicle crashes, and illnesses. Notable early on-screen deaths included Nemo's mother being eaten by a barracuda 4 minutes and 3 seconds into *Finding Nemo* and Tarzan's parents being killed by a leopard 4 minutes and 8 seconds into *Tarzan*.

The figure shows survival curves for important characters in animated and comparison films. After adjustment for total runtime and years since release, the risk of on-screen death of important characters was higher in children's animated films than in comparison films (hazard ratio 2.52, 95% confidence interval 1.30 to 4.90).

Table 2 presents details of casualties in children's animated films versus comparison films. Our data suggested that parents, nemeses, and children were more often victims of the first on-screen death in children's animated films, whereas the first casualty in adult dramatic films was more often the main protagonist themselves.

Discussion

In our study of 135 top grossing North American films the risk of death of important characters was higher in children's animated films than dramatic films from the same



Finding, and eating, Nemo's mother

year. Notably, the risk of murder was higher in children's animated films than in dramatic films for adults. There was no evidence to suggest these results had changed over time since 1937, when Snow White's stepmother, the evil queen, was struck by lightning, forced off a cliff, and crushed by a boulder while being chased by seven vengeful dwarves.

Our results suggest that parents of main characters are a primary target of on-screen death in children's animated films. In the present sample, risk of parental death was five times higher in children's animated films compared with dramatic films for adults. The death of a parent can be a particularly difficult theme for children to face. Separation from a parent is a common source of worry among children, and separation anxiety disorder is the most commonly diagnosed childhood anxiety disorder. As a primary target of main characters are a primary target of parents and parents of parents of main characters are a primary target of parents of parents of parents of parents of main characters are a primary target of parents of par

As has been recently noted in the media, parental absence, because of death or other factors, is a common theme in children's animated films.²⁷ ²⁸ Of course, such absence often serves a dramatic purpose, providing child protagonists with adversity to overcome and allowing the adventure story to unfold unhindered. Indeed, parental death has long been a common theme in children's literature.²⁹ For example, the collected works of the brothers Grimm (on which many children's animated movies are based) are rife with gruesome deaths, parental and otherwise.³⁰

We considered only the presence or absence of on-screen death and did not rate the realism or violence of those deaths. More gruesome on-screen deaths might be more traumatic for children. Nevertheless, our sample of animated films included three gunshot deaths (Bambi, Peter Pan, Pocahontas), two stabbings (Sleeping Beauty, The Little Mermaid), and five animal attacks (A Bug's Life, The Croods, How to Train Your Dragon, Finding Nemo, Tarzan), suggesting grisly deaths are common in films for children.

Conclusions

This is the first study to use survival analysis techniques to examine death in animated films. We conclude that children's animated films, rather than being innocuous alternatives to the gore and carnage typical of American films, are in fact hotbeds of murder and mayhem. Parents might consider watching such movies alongside their children, in the event that the children need emotional support after witnessing the inevitable horrors that will unfold. That's all, folks!

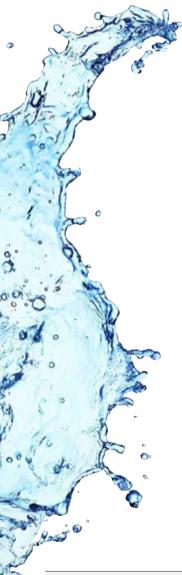
Competing interests and references are on thebmj.com.

Transmissibility of the Ice Bucket Challenge among globally influential celebrities: retrospective cohort study

Michael Y Ni, Brandford H Y Chan, Gabriel M Leung, Eric H Y Lau, Herbert Pang

School of Public Health, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong Special Administrative Region, China Correspondence to: M Y Ni nimy@hku.hk

Cite this as: *BMJ* 2014;349:g7185 doi: 10.1136/bmj.g7185



OBJECTIVES To estimate the transmissibility of the Ice Bucket Challenge among globally influential celebrities and to identify associated risk factors.

DESIGN Retrospective cohort study.

SETTING Social media (YouTube, Facebook, Twitter, Instagram).

PARTICIPANTS David Beckham, Cristiano Ronaldo, Benedict Cumberbatch, Stephen Hawking, Mark Zuckerberg, Oprah Winfrey, Homer Simpson, and Kermit the Frog were defined as index cases. We included contacts up to the fifth generation seeded from each index case and enrolled a total of 99 participants into the cohort.

MAIN OUTCOME MEASURES Basic reproduction number R_0 , serial interval of accepting the challenge, and odds ratios of risk factors based on fully observed nomination chains.

RESULTS Based on the empirical data and assuming a branching process we estimated a mean R_0 of 1.43 (95% confidence interval 1.23 to 1.65) and a mean serial interval for accepting the challenge of 2.1 days (median 1 day). Higher log (base 10) net worth of the participants was positively associated with transmission.

CONCLUSIONS The Ice Bucket Challenge was moderately transmissible among a group of globally influential celebrities, in the range of the pandemic A/H1N1 2009 influenza. The challenge was more likely to be spread by richer celebrities, perhaps in part reflecting greater social influence.

Introduction

The Ice Bucket Challenge, a campaign to raise awareness and support for people with amyotrophic lateral sclerosis, ¹ is widely recognised to have gone socially viral. Although there are variations to the trial, participants typically complete the challenge (they are doused in ice water or make a donation) and nominate three others to undertake it.² As of 1 September 2014, more than 17 million videos related to the Ice Bucket Challenge were shared on Facebook alone, and these were viewed more than 10 billion times by more than 440 million people.³ Socially viral phenomena include videos that are made popular by sharing on the internet, and a video is said to have gone viral if it spreads rapidly as a result of frequent sharing. 4 5 However, the infectious disease modelling framework has seldom been used to quantify the transmissibility of such socially viral phenomena.6

R_o (major determinant of size of epidemic) of Ice Bucket Challenge and other contagions Mean serial interval (days) Contagion Period of event/outbreak Ice Bucket Challenge* 2014 1.43 21+ Pandemic influenza 2009 1.2-2.3²¹ 2.8^{21} MERS-CoV 0.5-1.322-24 9.6‡²⁵ 2012-14 14-18²⁶ 11.7^{2} Measles Recurring 17.721 Before 1980, eradicated

MERS-CoV=Middle East respiratory syndrome coronavirus. R_o values >1 represent a self sustaining epidemic. *Based on data in current study only. †Median serial interval was 1 day. ‡Derived mean from fitted log normal distribution.

The most commonly used metric of transmissibility is the basic reproduction number (R_0), defined as the number of secondary cases generated by a single index in a fully susceptible population.⁷ The value of R_0 is a major determinant of the size of an epidemic, and an infection can only be self sustaining if R_0 is greater than 1. The R_0 also provides a measure of the effort required to control the epidemic.⁷ ⁸ We estimated the transmissibility of the Ice Bucket Challenge among globally influential celebrities and identified the associated risk factors.

Methods

Participants

We considered globally influential celebrities who had undertaken the Ice Bucket Challenge to be eligible for inclusion. Global influence was defined by the criteria: listed in *TIME 100: The Most Influential People in the World*⁹ or *TIME: Great People of the 20th Century*, ¹⁰ or having at least five million view counts for the Ice Bucket Challenge on YouTube. Among the small pool of potentially eligible participants we arbitrarily chose David Beckham, Cristiano Ronaldo, Benedict Cumberbatch, Stephen Hawking, Mark Zuckerberg, Oprah Winfrey, Homer Simpson, and Kermit the Frog as index cases. We also included successful nominations up to the fifth generation seeded from each index case.

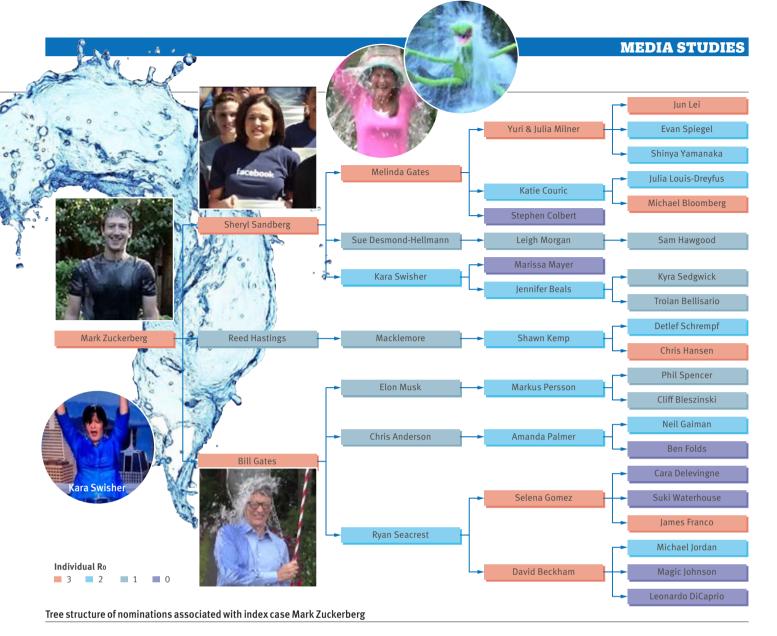
Data collection

We completed a marathon viewing of 145 Ice Bucket Challenges up to 13 September 2014. For each case we recorded the age, sex, occupation, net worth, popularity (proxied by number of likes on Facebook and number of Twitter followers), number of successful nominations, and total number of nominations. We obtained personal details of the celebrities from Wikipedia and specialised websites, although the validity of such information cannot be reliably ascertained. Wikipedia has been used in previous studies 12 13 and its comparative accuracy has been reported. 14 From verified accounts we obtained the number of Facebook likes and Twitter followers. Where these were not available, we used the unofficial accounts with the most likes or followers. We excluded unofficial accounts with fewer than 1000 likes or followers.

We traced contacts through Google, YouTube, Facebook, Twitter, and Instagram. Online written or video responses by the nominated contacts were used to determine completion of the challenge. For details of statistical analysis see thebmj.com.

Results

Eight index cases complied with the inclusion criteria. In total we included 91 nominees up to the fifth generation seeded from each index case, and a total of 99 participants were enrolled into the cohort. Overall, 24.2% of participants had zero successful nominations, 32.3% had one, 26.3% had two, and 17.2% had three. Among the index



Despite a lower Ro than for measles or smallpox, the Ice

Bucket Challenge spread quickly across the world as nominees became **immediately** "infectious" once

nominated

cases, Mark Zuckerberg's nomination chain produced the most successful number of contacts (total of 41) up to the fifth generation (figure). No serious adverse events arising from the Ice Bucket Challenge act were observed in this series, but adverse events have been reported elsewhere, 16 including falls, head injuries, a temporomandibular joint dislocation, cuts, and at least one fatality. We estimated the measure of transmissibility, R_{0} , to be 1.43 (95% confidence interval 1.23 to 1.65) and a mean serial interval of accepting the challenge of 2.1 days (median 1 day). We excluded Homer Simpson and Kermit the Frog in the regression models because of difficulty in ascertaining their personal characteristics. Participants with a higher log (base 10) net worth were more likely to spread the Ice Bucket challenge (odds ratio 1.63, 95% confidence interval 1.06 to 2.50), adjusted for age and sex.

Discussion

The Ice Bucket Challenge—a campaign to raise awareness and support for people with amyotrophic lateral sclerosis by dousing oneself with a bucket of iced water or giving a donation—was moderately transmissible among a group of globally influential celebrities. Our finding of an R₀ value greater than unity (1.43), indicating sustained spread, in a celebrities based cohort is consistent with observations

reported in the press. Indeed this social viral pandemic shares a similar R₀ with pandemic A/H1N1 2009 influenza, or the high end of the Middle East respiratory coronavirus since 2012 (table). Nine out of the 99 participants (9.1%) completed the challenge but did not nominate anyone, analogous to self isolation. We included these participants in our analyses and assumed all losses to follow-up to have declined the challenge.

Possible factors accounting for the speed and extent of the Ice Bucket Challenge pandemic may include the online social media mode of transmission and the short serial interval for taking up the challenge (table). Despite a lower R₀ than for measles or smallpox, the Ice Bucket Challenge spread quickly across the world as nominees became immediately "infectious" once nominated. A previous social network experiment found that individual uptake improved with reinforcing signals from clustered social ties. 18 Therefore, specified nominations within a social network, such as celebrities, may be more successful in spreading promotional messages for public health interventions than are generic nominations. However, whether such social networks should be leveraged for health communication depends on the nature of the intervention. 19

Competing interests and references are on thebmj.com.

Accepted: 17 November 2014

the**bmj** | 20-27 December 2014 29

Healer, dealer, heart stealer: portrayals of the doctor in popular music

Doctors are often subjects in songs. **Rob Stepney** and **Nick Surawy Stepney** look at how they are portrayed

yping "doctor + lyrics" into a well known search engine retrieved 8.4 million results—far more than the 1.3 million hits generated by a similar search involving "lawyer," for example. Doctors are intimately involved in our lives from birth until death, so it is perhaps not surprising that musicians are interested in them.

The portrayal of doctors in popular music is revealing and varied. In *Goodness Gracious Me*, Sophia Loren and Peter Sellers sing of a doctor who has innocently stolen his patient's heart. By contrast, in *One of Us Cannot be Wrong*, Leonard Cohen's doctor has a lustful obsession with the love life of his patient. A New York physician noted for supplying amphetamines is the subject of *Dr Robert* by the Beatles, ¹ and The Rolling Stones' *Dear Doctor* concerns a request—made less than

a year after the first such transplant—for a surgeon to replace the singer's heart.

In 2012 the *Guardian*'s music blog asked readers to recommend songs about doctors. Although contributors were not necessarily representative of the wider population, the list was probably compiled by people unconnected with the medical profession. The blog provided a degree of objectivity and a more manageable volume of material than that generated by an internet search.

A preliminary assessment of the songs in the blog, supplemented by our own knowledge, suggested three themes: the doctor as provider of illicit drugs; other forms of unprofessional conduct, typically sexual involvement with patients; and doctors in their caring role—either literally, or metaphorically as healers of love sickness and broken hearts. The first 75 songs on the list were

Dr Feelgood in Harley Street	

categorised by NSS into one of the above themes according to their lyrics, and a random sample of 25 songs was categorised by RS. Songs that did not fit into any of these three themes were classed as "other." Lyrics could not be found for 11 songs, and the meaning of some lyrics was open to a variety of interpretations. A further complication was occasional inconsistencies in the lyrics transcribed on different websites. Even so, our assignment of songs to categories agreed in 80% of cases. Disagreements were resolved by discussion.

Inappropriate behaviour

We expected the theme of doctor as dealer to feature strongly, but this was found in only three of the 64 songs reviewed (5%). This role is implicit in the Beatles' *Dr Robert* and in the Dirty Pretty Things' *Doctors and Dealers* (which describes "crackpot quacks with cracked up egos"), but is perhaps most graphically portrayed in Dr Feelgood's *Down at the Doctors* (table).

Suggestions of other forms of professional misconduct are more common (19 songs, 30%), including romantic or overtly sexual relationships. In *I'm your man*, Leonard Cohen makes several suggestions including "If you want a doctor, I'll examine every inch of you." In the context of the song, this is not an innocent suggestion. The *Doctor of Physick* sung about by Fairport Convention is a clear abuser: "Take care, daughter

Classification of songs mentioning doctors, with examples and sample content (our interpretation)				
Role	Artist	Song	Sample content	
Dealers in illicit drugs	Dr Feelgood	Down at the Doctors	Down to the doctors, make you feel good all night, everybody needs a shot of r'n'b, so come on down to my surgery I just want to shoot some rock'n'roll in your arm	
Unprofessional relationships	Graham Parker and the Rumour	Lady Doctor	I went to the surgery. To my surprise, two pretty eyes was running up and down me. Said now be a patient patient, stretch out on that couch. Help yourself to the pills. Then we're going to sweat it out Well I've got a lady doctor, she cure da pain for free	
	Leonard Cohen	One of us Cannot be Wrong	I showed my heart to the doctorhe wrote himself a prescription, and your name was mentioned in it. Then he locked himself in a library shelf with the details of our honeymoon. And I hear from the nurse that he's gotten much worse and his practice is all in a ruin	
	First Choice	Doctor Love	Just one kiss from his lips is like taking vitamin C. You can't imagine what a doctor does to me He ain't got no competition. Only he writes my prescription	
Doctors in caring role (literal)	John Mayall and the Bluesbreakers	Medicine Man	Lovin' is a gamble, never knowing who to choose, I'm out of circulation, got a little trouble, take me to your medicine man	
	Tunng	Hands	He stands with his head in his hands he couldn't resuscitate her he crawls into her aorta and mentally puts her back together, with sticks and glue until she breathes	
	Richard Thompson	Grey Walls	I took my darling down to that big grey house the doctor said "It's in her head, she's never going to be right again" cigarette burns down her arm said she tried to do herself harm pills to keep her calm somewhere there's a soul crying out for help	
Healer (metaphorical) of heart and/ or soul	Little Feat	Rock and Roll Doctor	A doctor of the heart and a doctor of the mind with two degrees in be-bop and a PhD in swing, he's the master of rhythma rock and roll king	

30 20-27 December 2014 | the **bmj**



dear, for the doctor comes to steal your goods in the dead of night... He'll find young ladies pure as fallen snow; he'll have you all. Doctor Monk unpacks his trunk tonight."

Despite the examples above, it should be noted that most of these relationships are initiated by the patient. In *The Physician*, Cole Porter laments that "Of all his sweeties, I had the sweetest diabetes, but he never said he loved me." The doctor "went through wild ecstatics when I showed him my lymphatics" and "did a double hurdle when I shook my pelvic girdle." And yet he refused "to cure that ache in my heart."

Sophia Loren begins with a similar problem in *Goodness Gracious Me*. Although the doctor recounts his expertise in dealing with conditions ranging from beriberi to dysentery, influenza, whooping cough, and night starvation, it is only after extensive examination, during which he notes his "stethoscope is bobbing to the throbbing" of her heart, that he realises he is the cause of her racing pulse. At this point he becomes quite keen to reciprocate the affection.

The physician in popular song has almost always been male. But this is not so in Graham Parker and the Rumour's *Lady Doctor* (table), nor in Robert Palmer's *Bad Case of Loving You*: "Doctor, doctor, give me the news, I've got a bad case of lovin' you... A pretty face don't make no pretty heart; I learned that... from the start."

Avarice falls short of professional misconduct (and so is included in the 33% of songs we classified as "other") but is found in several lyrics. In *Like a Surgeon*, Weird Al Yankovic considers himself a failure and "the disgrace of the AMA"—but only because his "patients die before they can pay." In *The Doctor*, Loudon Wainwright III is also cynical: "I went to the doctor and the doctor said... Shucks... you owe me 300 bucks. And you can call me in the morning, that is if you're not dead."

Doctors as carers or in need of care

A third of the songs reviewed portrayed the doctor in some form of caring or healing role, either literally in the case of bodily illness or, more often, metaphorically in the case of lovesickness or a broken heart. Several songs portray doctors in their workaday role. John Mayall almost certainly had a sexually transmitted infection in mind when he wrote Medicine Man (table), while Harry Nilsson's Coconut is about curing a stomach ache. Health promotion, though, does not get an easy ride, as in Willie Nelson's I Gotta Get Drunk: "My doctor's telling me I gotta slow down. But there's more old drunks than old doctors. So let's have another round." In Alibi, Slash is also inclined to ignore medical advice: "I feel alright, doin' what I do, I ain't gonna toe the line, not til I turn blue... I ain't gonna waste a second, doin' what you say."

Emotional complexities arising from the intimacy of the doctor-patient relationship are reflected in songs portraying romantic attraction, and even the perception of sexual prowess

Bright Eyes' *Bowl of Oranges* is a rare example of the doctor being the one who needs help: "I came upon a doctor who appeared in quite poor health. I said 'There is nothing I can do for you that you can't do for yourself.' He said 'Oh yes you can, just hold my hand. I think that that would help." In the light of high suicide rates among the profession, increased understanding of this kind might be welcome. "Tunng's *Hands* also portrays potential vulnerability—a doctor who has failed to save a patient stands despairingly in a corridor with his head in his hands (table).

Antipathy is more often portrayed than empathy. Richard Thompson's *Grey Walls* is a bitter critique of the incarceration and drug treatment of people with mental illness (table). The way psychoanalysis is portrayed is no more sympathetic, particularly its cost. *The Ballad of Sigmund Freud* by the Chad Mitchell Trio portrays a cynical view of how "a starving young physician trying to better his position" encouraged followers to see "there's gold in them there ills." In *Psychotherapy*, Melanie sings to the tune of the gospel hymn *When the Saints*: "Your analyst will cure you, long as you can pay the cheques... As the id goes marching on."

Discussion

Doctors are a common subject in popular songs of all genres. If love is seen as an illness then we can expect doctors to be closely involved, especially given their expertise in matters of the heart. The examples discussed above cover several themes.

Songs featuring doctors as suppliers of illicit drugs are less common than expected. Emotional complexities arising from the intimacy of the doctor-patient relationship are reflected in songs portraying romantic attraction, and even the perception of sexual prowess. Empathy for doctors is rare and they are at times presented as avaricious, although they are occasionally portrayed in caring and healing roles. But we can perhaps leave the last word to Bob Dylan, who clearly has respect for the profession. In *Motorpsycho Nightmare* the singer is accused of being a travelling salesman. "No," he says, "I'm a doctor, and it's true. I'm a clean cut kid, and I been to college too."

Rob Stepney freelance medical writer, Charlbury OX7 3HJ, UK

walcot2@freenetname.co.uk Nick Surawy Stepney third year medical student, University of Manchester M13 9PL, UK

Competing interests and references are on thebmj.com.

Cite this as: BMJ 2014;349:g7179

Doctors: caring extroverts or self deluded chocoholics?

Nigel Hawkes reveals what we have learnt about doctors from the first 50 BMJ Confidential columns

hose who rise to the top in medicine see themselves as hardworking extroverts with a caring nature, suggests an unscientific analysis of the answers given by contributors to BMI Confidential. But then, don't we all?

Asked for three words to define their personality, the first 50 respondents to *The BMJ*'s weekly quiz came up with a wide choice of adjectives. The English language is rich in synonyms, so the same words rarely recurred—but different words can mean much the same thing. How many ways are there of saying that you work hard? Plenty, it would seem: competitive, committed, conscientious, determined, driven, exacting, hardworking, obsessional, perfectionist, persevering, persistent, relentless, and tenacious all made appearances.

Nearly half (22 of 50) chose one of those. Throw in "passionate" (chosen by six), and the total comes to over half. Equally popular were words that suggested a sunny personality: extrovert, outgoing, optimistic, warm, positive, adventurous, cheerful, enthusiastic, energetic, and lively accounted for 23 responses. The third most common group was the "caring" adjectives: although only one contributor actually used that word, the total was nine when its near synonyms—compassionate, considerate, kind, generous, sensitive, and charming—were included.

People invited to contribute to BMJ Confidential have all made a name for themselves in some branch of medicine or medical management, so it is no surprise that only one claimed to be shy. But four others used the words introspective, diffident, and cautious, which are not very different. Four thought that they were difficult, bossy, impatient, or impossible, and five feared that their tongues might sometimes run away with them (feisty, outspoken, opinionated, loquacious).

Earliest ambitions

Just one claimed to be a visionary. It was a man, of course, and he works in public health (as it's no secret, it was John Ashton). He also claimed to be outspoken, which certainly held true later, when some trenchant responses on Twitter led to his suspension as president of the Faculty of Public Health.

Twelve of the 50 said that their earliest ambition was to be a doctor, and five had

At age 5 Terence Stephenson wanted to be a bin man but had to settle for chairing the Academy of Medical Royal Colleges

wanted to be scientists of various sorts. Two had wanted to be

nuns—Theresa Marteau, to atone for her sins as a 9 year old, and Maureen Baker, who was influenced by *The Sound of Music* and rather fancied running through the alpine meadows singing. Marteau now atones for the sins of others by

trying to persuade them to look after their health better, while Baker chivvies the Royal College of General Practitioners towards the sunlit uplands.

Three came out as would-be pilots, and three had artistic ambitions as film directors, actors, writers, or poets. At age 5 Terence Stephenson wanted to be a bin man but had to settle instead for chairing the Academy of Medical Royal Colleges. Jennifer Dixon had wanted to play Cleopatra; John Burn, to drive a car like his dad's; and Alistair Burns, to be served in a pub while under age. One of these ambitions, at least, was achieved.

John Wennberg, founder of the *Dartmouth Atlas of Healthcare*, said that he had wanted to be a mountaineer, ski bum, forester, pastor, philosopher, linguist of the German languages, or sociologist. However, "None of these worked out, so I went to medical school." Max Pemberton, writer and journalist, had wanted to be a marine biologist; "God knows why. I have no real interest in marine life, except for the stuff which comes with chips on a plate."

Asked whether they favoured doctor assisted suicide, the panel was split by 24 in favour to 15 against, the remainder either not answering or offering equivocal answers. "Probably" was Jennifer Dixon's brief, if gnomic, response. Ilora Finlay, well known for opposing the passage of permissive legislation through parliament, said that it would be far too dangerous. "The so called safeguards are flawed—we get prognosis wrong and cannot detect coercive families," she added.

But Raymond Tallis, a former professor of geriatric medicine, took the opposite view, arguing that the present law is "a moral disgrace." He would support a change in the law to permit doctor assisted suicide for people who are terminally ill and have expressed a wish for assistance to die.

The temptation is strong, when asked what book every doctor should read, to nominate one you have written yourself, but only three respondents had the nerve—John Wennberg, Parveen Kumar, and Angela Coulter. The book most often cited, with three nominations, was John Berger's sociological study *A Fortunate Man*, published in 1967. It tells the story of









a country doctor and was championed by Michael Dixon, John Ashton, and Iona Heath. The only other authors to score more than one mention were Anton Chekhov and Primo Levi, each with two.

The best suggested title—unfortunately for a book as yet unwritten—was Klim McPherson's *How to be Humble, Without Being Obsequious*. Phil Hammond nominated the Health and Social Care Bill (14th edition), saying that nothing else had made him laugh and cry so much.

Best and worst health secretaries

Nye Bevan remains a hero for a large number of contributors: 20 of them named him as best health secretary. Frank Dobson came a strong second, with nine nominations, and Alan Milburn was third with five. The highest ranking Conservative in this category was Stephen Dorrell, also with five, followed by Kenneth Clarke with three. Barbara Castle and Alan Johnson both scored two.

Andrew Lansley comfortably headed the list as the worst health secretary, with 15 naming him. Nobody else scored more than one, but the list included Clarke ("arrogant," said Clare Gerada), Enoch Powell (for ignoring thalidomide, said Michael Rawlins), and John Moore ("the worst, most useless health secretary," said Angela Coulter).

Several appeared on both lists: Milburn and Powell, for example. Simon Wessely rated Powell highly for his speech that criticised psychiatric hospitals. Jeremy Hunt also appeared in both categories—highly rated by Michael Dixon and Alistair Burns, but dismissed by Trish Greenhalgh as "the worst ever."



Inspired by *The Sound of Music*Maureen Baker wanted to be a nun and run through the hills

Many respondents didn't vote for a best or worst. Some, such as Des Spence and Jennifer Dixon, thought that the individual in the role made little difference. At the other extreme, Klim McPherson described Lansley as almost criminal, and John Ashton called him wicked.

Worst mistakes

Respondents' worst mistakes fell into two groups: medical errors (wrong prescriptions, bad diagnoses, inept treatments) and what might be called career errors (failing to apply for jobs, taking a wrong turn, or, in Simon Wessely's case, failing to turn over an exam paper and missing the questions on the back). All doctors make mistakes, but it's striking how many remember the mistakes they made in failing to stand up to advice they suspected was wrong.

These "persuasion errors" included Alison Murdoch performing a lumbar puncture under the instructions of a consultant even though she knew it was contraindicated (the patient survived), and Muir Gray sewing up an episiotomy to instructions given over the phone, when he had never done one before. Ilora Finlay regrets accepting advice, as a pre-registration house officer, that a patient had a dissecting aneurysm; at the postmortem examination it turned out to be a leaking aneurysm, and she thought that his life could have been saved.

Policy can also generate persuasion errors: Michael Dixon regrets being "outnumbered and bamboozled" by senior managers drawing up guidelines for primary care trusts that effectively made clinicians peripheral, while Louis Appleby regrets not being able to persuade the



Surgeon David Nott's guiltiest pleasure is listening to hard rock while riding his bike

National Institute for Health and Care Excellence of the value of Alzheimer's drugs when it first assessed them.

Of other notable errors, a place in the pantheon goes to Alan Maryon-Davis, who, in the interests of gripping television once crawled up a giant nostril on *Bodymatters* in the mid-1980s. "But hey, that's showbiz," he remarked.

Top pet hates were arrogance and pomposity (in others, naturally). Self regard, shallow knowingness, worthiness, people who take themselves too seriously, management speak, experts, bullies, and liars all got a mention. Rawlins hates the *Daily Mail* (it would seem to be mutual, Sir Michael), Klim McPherson hates private schools, and Iona Heath hates government by posh boys for posh boys.

Chocolate easily headed the list of guilty pleasures, while two respondents mentioned Wagner, two chose whisky, and two opted for cycling while listening to music on headphones (heavy rock for David Nott; baroque music for Theresa Marteau). Alistair Burns chose gently pressing the accelerator of his Bentley to 120 mph (on a private road, of course.) Jennifer Dixon likes kitsch but despises tinned tomatoes.

So, that's the upper reaches of the NHS pigeonholed: a predominantly PC bunch who dislike pomposity in others but don't always perceive it in themselves, whose rebellions have to be accommodated within quite a narrow shared ideology, and who, almost to a man and a woman, regard the private sector as the enemy. BMJ Confidential is a light hearted feature, but it is also quite revealing.

Nigel Hawkes, London

Cite this as: BMJ 2014;349:g7623