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Research Article
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"Am I Dying Doctor?": How End-Of-Life Care is Portrayed in Television Medical Dramas

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Abstract

Background: Patient-clinician communication about end-of-life care is important for patients with chronic life-limiting diseases and their loved ones but requires engagement from patients and loved ones. Television is a powerful medium in influencing people's behaviour. However, it is unknown which image is sketched on television about end-of-life care communication.

Objective: To explore communication about end-of-life care between healthcare professionals and patients or loved ones in popular medical dramas on television.

Methods: 68 episodes of television medical drama were reviewed (22 episodes of House, 22 episodes of ER, and 24 episodes of Grey's Anatomy). Three types of events were identified: communication between healthcare professionals and patients or loved ones about end-of-life care, cardiopulmonary resuscitation (CPR), and death.

Results: In total, 99 events of end-of-life care communication, 47 events of CPR, and 27 events of death were observed. Discussions about end-of-life care were mostly initiated by physicians in the presence of patients and loved ones. The most frequently addressed topics were: talking about the possibility of dying, treatment options, and life-sustaining treatments. The immediate success rate of CPR was 51.1%. Of the patients who deceased, the majority died unexpected, usually a life-prolonging treatment was performed before death, and advance directives were uncommon.

Conclusion: Healthcare professionals in television medical dramas talked with patients or loved ones about end-of-life. However, topics important for patients in real life were often not discussed.

Keywords: End-of-life care; Communication; Television; Media

Introduction

Advance Care Planning (ACP) is defined as an ongoing process whereby patients, in consultation with healthcare professionals and loved ones, make individual decisions about their future healthcare, to prepare for future medical treatment decisions, which often take place at the end-of-life [1]. A systematic review and meta-analysis showed that ACP interventions increase the completion of advance directives, occurrence of discussions about ACP, and the concordance between preferences for care and delivered care [2]. However, despite these benefits, discussions between physicians, patients and loved ones about end-of-life care are still uncommon [3,4].

Most patients will not initiate these discussions and will wait for their physician to initiate end-of-life discussions, especially when patients were unaware about the life-threatening nature of their disease [5] or had little knowledge of ACP [6]. Indeed, lack of patient knowledge and understanding of medical information are physician-reported barriers for ACP [7]. In addition, patients reported that they had "never thought about it" [8] and often did not know that they can be involved in discussions about end-of-life care [7,8].

Previous research showed that the behaviour change theory is important in motivating individuals to engage in ACP [9]. According to this theory, willingness to engage in ACP behaviour is determined by knowledge and beliefs about ACP and expectations about treatment outcomes [9-11]. Increased public awareness of the importance of timely end-of-life discussions may facilitate patients' and loved ones' willingness to be engaged in end-of-life care discussions and may improve patient empowerment [12,13]. Patient empowerment is defined as an educational process to help patients develop the knowledge to effectively make their own health-related decisions [14]. Traditionally, doctors were the primary source of information for patients. However, patients can also empower themselves through self-education facilitated by for example internet or television [15]. In fact, previous studies showed that television is a powerful medium in influencing people's behavior [16-18] and that the majority of elderly patients obtain information about cardiopulmonary resuscitation (CPR) from television [19]. However, a previous study showed that in movies dealing with life-threatening illness and death the level of

reality is limited [20]. Furthermore, a recent study demonstrated that discussions about ACP rarely occur in television medical dramas [21].

To the present authors' knowledge, detailed data concerning communication about end-of-life care on television are currently lacking. It seems reasonable that television can play an important role in patient perceptions about end-of-life care. The aim of this study is to explore communication about end-of-life care between healthcare professionals and patients or loved ones in popular medical dramas on television.

Methods

We viewed all episodes of the last season available on DVD of the television medical dramas *ER* (season 15), *House* (season 8), and *Grey's Anatomy* (season 9). All three programs are American medical drama series in the hospital setting. A predesigned data sheet was used to identify and score three types of events: 1) communication between healthcare professionals and patients or loved ones (defined as persons who are close to the patient, regardless of whether they are spouse, significant others, relatives, grown-up children, or friends [22]) about end-of-life care; 2) CPR; and 3) death of a patient. For all events the patient's sex and life stage (unborn, baby, child, adolescent, or adult) were recorded.

For every occurrence of end-of-life care communication between a healthcare professional and patient or loved one the following information was recorded: who initiated communication about end-of-life care (patient, physician, nurse, loved one, or other); who were present during the conversation (patient, physician, nurse, loved one, or other); which words were used when talking about the end of life (death, dying, or other), and which topics were discussed. Discussed topics recorded were based on expert suggestions and partly derived from the end-of-life subscale of the Quality of Communication (QOC) questionnaire [23], a validated instrument to measure quality of communication between patients and healthcare professionals.

In addition, for every occurrence of CPR the following information was recorded: the location where CPR was performed (Intensive Care Unit (ICU), Operating Room (OR), Emergency Room (ER), hospital department, other location in hospital, or out-of-hospital), and whether patients survived CPR. CPR was defined as each observed situation in which chest compressions and/or defibrillation was performed on a patient.

Finally, for all deaths the following information was recorded: whether death of the patient was (un)expected; who were present at time of death (physician, nurse, loved one, or not shown); location of death (ICU, OR, ER, hospital department, other, or not shown); whether the patient had an advance directive; whether life-sustaining treatments were performed and if so, whether these were discontinued before death, and whether there was distress during the dying phase.

All episodes were independently watched and events were scored by two authors (C.H. and D.J.), blinded to each other findings. In case of disagreement, the event was watched again by both authors and disagreements were solved by consensus.

Frequencies and percentages were used to present the results. The frequencies of the use of the words "death" and "dying" were compared between patients, loved ones and healthcare professionals using a Chi square test.

Results

A total of 68 episodes (in total 48 hours) of television medical dramas were reviewed. We viewed 22 episodes of *ER* (15 hours), 22 episodes of *House* (16 hours), and 24 episodes of *Grey's Anatomy* (17 hours).

End-of-life communication

We observed 99 events of end-of-life communication between a healthcare professional and patient or loved one (27.3% in *ER*, 41.4% in *Grey's Anatomy* and 31.3% in *House*) shown in Table 1. Most patients were male adults. In 45.5% of the events a physician initiated a discussion about end-of-life care. The words "death" and "dying" were used in 16.2% and 47.5% of the events, respectively. Chi square tests revealed no significant differences in the use of the words "death" and "dying" between patients, loved ones and healthcare professionals ($p>0.05$). Other words used when talking about end-of-life care were for example "fatal", "the heart will stop", and "nothing we can do". The most frequently addressed topics were: talking about the possibility of dying, treatment options, and life-sustaining treatments. Patients' feelings about getting sicker were not discussed at all. In 12.1 % other topics were discussed such as talking about sedation, talking about the fact that the patient has already died, talking about the death of a loved one, talking about a death wish or preferred place of death.

Total events of end-of-life communication	**99**
ER	27 (27.3)
Grey's Anatomy	41 (41.4)
House	31 (31.3)
Gender of the patient*	
Male	63 (63.6)
Female	34 (34.3)
Unborn	3 (3.1)
Life stage of the patient	
Unborn	4 (4.1)

Baby	3 (3.0)
Child	8 (8.1)
Adolescent	11 (11.1)
Adult	73 (73.7)
Initiator of end-of-life communication	
Patient	23 (23.2)
Physician	45 (45.5)
Nurse	2 (2.0)
Loved one	27 (27.3)
Not shown	2 (2.0)
Present during end-of-life communication	
Patient#	62 (62.6)
Physician	90 (90.9)
Nurse	12 (12.1)
Loved one	69 (69.7)
Words used during end-of-life communication	
Death	16 (16.2)
by patient	6 (37.5)
by physician	3 (18.8)
by loved one	7 (43.7)
Dying	47 (47.5)
by patient	18 (38.3)
by physician	13 (27.7)
by nurse	1 (2.1)
by loved one	15 (31.9)
Content	
Talking about patients' feelings about getting sicker†	0 (0.0)
Talking about possibility of getting sicker†	10 (10.1)
Talking about life expectancy†	3 (3.0)
Talking about what dying might be like†	4 (4.0)
Talking about the possibility of dying†	56 (56.6)
Talking about life-sustaining treatments or withdrawing life-sustaining treatments†	12 (12.1)
Asking about important things in life†	7 (7.1)
Asking about spiritual, religious beliefs†	1 (1.0)
Talking about treatment options	32 (32.3)
Talking about advance directives	6 (6.1)

Talking about surrogate decision making	3 (3.0)
Talking about palliative care	6 (6.1)
Talking about closure	5 (5.1)
Talking about organ donation	8 (8.1)
Brain death	5 (5.1)
Other	12 (12.1)
Data are presented as number of patients or events (%). *In one event the patients were a couple, which is scored as one event, but under the heading “gender” separated into male and female. #8 patients were unconscious and 2 patients were unborn. †Items derived from Quality of Communication (QOC) questionnaire.	

Table 1: End-of-life communication in television medical dramas.

CPR

A total of 47 CPR attempts were shown (63.8% in *ER*, 25.5% in *Grey's Anatomy* and 10.7% in *House*) (Table 2). The immediate success rate of CPR was 51.1%.

Total CPR events	**47**
ER	30 (63.8)
Grey's Anatomy	12 (25.5)
House	5 (10.7)
Gender	
Male	32 (68.1)
Female	14 (29.8)
Unknown	1 (2.1)
Life stage	
Unborn	0 (0.0)
Baby	2 (4.3)
Child	5 (10.6)
Adolescent	5 (10.6)
Adult	34 (72.4)
Unknown	1 (2.1)
Location of CPR	
ICU	9 (19.1)
OR	4 (8.5)
ER	25 (53.2)
Hospital department	2 (4.3)
Out-of-hospital	3 (6.4)
Other location in hospital*	4 (8.5)
CPR successful	

Yes	24 (51.1)
No	18 (38.3)
Not shown	5 (10.6)
Data are presented as number of patients or events (%). Abbreviations: ICU=Intensive Care Unit; OR=Operating Room; ER=Emergency Room. *Other=in front of the hospital (n=1) or in the elevator of the hospital (n=1).	

Table 2: Cardiopulmonary resuscitation (CPR) in television medical dramas.

Death

During the 68 episodes, 27 patients died (59.3% in *ER*, 33.3% in *Grey's Anatomy* and 7.4% in *House*) (Table 3). In general, death was unexpected and patients were surrounded by a physician, loved one and/or nurse. Life-sustaining treatments were shown for 81.5% of the patients who eventually died and mechanical ventilation was discontinued in a minority before death. In only 11.1% of the situations in which patients died there was a reference to an advance directive.

Total events of dying	**27**
ER	16 (59.3)
Grey's Anatomy	9 (33.3)
House	2 (7.4)
Gender	
Male	15 (55.6)
Female	12 (44.4)
Life stage	
Unborn	0 (0.0)
Baby	0 (0.0)
Child	3 (11.1)
Adolescent	2 (7.4)
Adult	22 (81.5)
Unexpected death	
Unexpected	20 (74.1)
Expected	5 (18.5)
Unknown	2 (7.4)
Present at the time of death	
Physician	19 (70.4)
Nurse	8 (29.6)
Loved one	10 (37.0)
Not shown	6 (22.2)
Location of death	
ICU	6 (22.2)
Hospital department	1 (3.7)
OR	4 (14.9)

ER	12 (44.4)
Other*	2 (7.4)
Not shown	2 (7.4)
Advance directive known	
Yes	3 (11.1)
Not shown	24 (88.9)
Life-sustaining treatment(s) performed before death	
CPR	18 (66.7)
NIV	0 (0.0)
Mechanical ventilation	16 (59.3)
Cardiopulmonary bypass	1 (3.7)
No life-sustaining treatments performed	2 (7.4)
Not shown	3 (11.1)
Life-sustaining treatment(s) discontinued before death	
Yes	3 (13.6)
No	18 (81.8)
Not shown	1 (4.6)
Distress	
Yes	1 (3.7)
No	20 (74.1)
Not shown	6 (22.2)

Data are presented as number of patients or events (%). Abbreviations: ICU=Intensive Care Unit; OR=Operation Room; ER=Emergency Room; CPR=Cardiopulmonary Resuscitation; NIV=Non-Invasive Ventilation. *Other=in front of the hospital (n=1) or in the elevator of the hospital (n=1).

Table 3: Dying in television medical dramas.

Discussion

Key findings

The present study shows that in television medical dramas healthcare professionals and patients or loved ones talked regularly about end-of-life care. Also CPR and death were frequently portrayed. Discussions about end-of-life care in television medical dramas were mostly initiated by physicians in the presence of patients and loved ones. The most frequently addressed topics were: talking about the possibility of dying, treatment options, and life-sustaining treatments. The immediate success rate of CPR was 51.1%. Death was often unexpected. Usually, a life-prolonging treatment was performed before death. Finally, advance directives were uncommon.

Communication

The physician was mostly the initiator of the discussion about end-of-life care and the discussion was rarely initiated by a patient. Therefore, watching television medical dramas will not activate people to engage in ACP and initiate a discussion about end-of-life care by themselves. Indeed, studies performed in real life showed that patients believe it is the healthcare professional's responsibility to initiate discussions and that patients will rarely initiate these discussions [8,24]. However, physicians perceive initiation of a discussion about end-of-life care by a patient as a facilitator for communication about end-of-life care [24]. In addition, preferences for end-of-life care in the observed television medical dramas were mostly discussed because of an acute life-threatening trauma or injury, while in real life healthcare professionals need to have these conversations with chronically ill patients or elderly living in long term care settings [2]. Therefore, television medical dramas do not contribute to the public awareness of the fact that ACP is of major importance for patients with a chronic disease.

The possibility of dying was discussed in more than half of the events, but topics as life expectancy, what dying might be like, feelings about getting sicker and things that are important in life were rarely discussed. However, research performed in real life showed that a majority of the patients want more information regarding prognosis than is provided in current care [25]. Patients and caregivers also desired more detailed information about what dying might be like

[26], whereby in general caregivers require more detailed information about the dying process, allowing them to prepare for what to expect [27]. Moreover, patients emphasized the importance of talking about things that are important for them during the end-of-life, such as maintaining dignity, getting support from healthcare professionals and family, and pain management [27]. Finally, it is important for patients to talk about their feelings about getting sicker and probably dying, because they are often afraid of the dying process and also want to talk about the meaning of death in order to prepare for a "good death" [28].

Although treatment options were frequently discussed, there was little attention for documenting preferences for life-sustaining treatments in the form of an advance directive or appointing a surrogate decision maker. Therefore television medical dramas did not contribute to the public awareness about the possibility to document preferences for end-of-life and will not stimulate viewers to change behaviour regarding completion of an advance directive.

Further, in the television medical dramas palliative care was rarely discussed. A previous study aimed to analyse how issues of illness and death were presented in movies also showed that the term "palliative care" was not mentioned once in any films [20]. This could be explained by the fact that palliative care is still not known well enough by the general public [20] and includes too little action and sensation to be shown on television [29]. When physicians in television medical dramas do discuss palliative care this may raise public awareness by providing education about for example preferences regarding end-of-life care and the possibility of shared-decision making. Video-based tools are found to be effective in improving patient knowledge about ACP and palliative care [30] and were even used in large-scale national campaigns, such as Dying Matters [31] to increase public awareness about end-of-life care [32]. In the television medical dramas words as "death" and "dying" were regularly used and in this respect the television medical dramas contribute to normalizing the use of these words. Previous studies have shown that using clear words as "death" and "dying" instead of vague euphemisms is important for good end-of-life communication [33]. After all, there are many things that could be done in the end-of-life concerning pain and symptom management or hospice referral for example [34]. The use of clear words when talking about end-of-life may contribute to enhanced acceptance of the reality of impending death and it possibly can help patients prepare for death [35].

CPR

The immediate success rate of CPR in the reviewed television medical dramas was 51.1%. Comparing success rates of CPR in television medical dramas with those in the medical literature is difficult. First, television medical dramas only show the results immediately after CPR and did not portray longterm outcomes, while success rates in the medical literature are mainly focused on survival rates to discharge. In fact, in real life the survival rate of in-hospital CPR to hospital discharge in patients without a chronic disease is only 17.3% [36]. Second, in the television medical dramas CPR was mainly performed in the ER or operation room (OR), while studies usually exclude patients whose cardiac arrest happened when they were in the ER or OR, because of the distinct circumstances of cardiac arrest in these settings [37]. Third, cardiac arrests in the television medical dramas were often caused by acute injury, while in real life most of arrests results from underlying cardiac disease [37]. Since previous research assumed that television medical dramas have an effect on the perceptions and attitudes regarding the outcome of CPR [38], the current authors recommend physicians to discuss differences between CPR in television medical dramas and real life in daily clinical practice.

Death

Nearly half of all deaths portrayed in the studied television medical dramas occurred in the ER and were associated with trauma, resulting in mainly unexpected deaths. Although trauma was a common cause of death in the 1900s, nowadays people often die from chronic diseases and cancer [39]. Therefore, the image portrayed in television medical dramas does not reflect reality regarding causes of death. This can be largely explained by the fact that series were mostly set in the ER and add drama and action to make the series attractive for the general public [29].

In almost all events a physician or nurse was present at the time of death and in addition often a loved one. This is in line with what seriously ill patients and their family caregivers rated as important at the end-of-life in real life, namely "presence of family" and "not die alone" [40].

In only three of the deceased patients in the television medical dramas an explicit reference was made to an advance directive. In the meantime, life-sustaining treatment preferences were performed before death in almost all patients and were discontinued in only three patients. Research performed in real life showed that many people in the general public are unwilling to undergo life-sustaining treatments in the case of cancer, cardiac failure, dementia, or persistent vegetative state following a road traffic accident. In fact, regardless of the presented scenario, about 70% do not want CPR or mechanical ventilation in these situations [41]. However, the documentation rate of preferences for end-of-life care in the general population is still low [6]. Perhaps videos which have been developed for more educational purposes will affect the completion of advance directives rather than television medical dramas. Indeed, recent research has shown that video educations enhances the completion of advance directives and are therefore useful tools in helping patients and clinicians to discuss and document preferences for end-of-life care [42].

Limitations

The present study has some limitations. First, we reviewed only one season of three television medical dramas. However, since the structure of the television medical dramas seems to remain the same during the seasons it is not to be expected that reviewing more seasons would have led to different results. Second, discussions about end-of-life care were not completely shown and consequently we could only analyse the broadcasted part of the discussion. Despite this limitation, we were able to review almost hundred events of communication about end-of-life care. Third, the reviewed medical dramas were all from American origin and therefore maybe not comparable with the depiction of end-of-life care in television series from other countries. Indeed, previous studies regarding depiction of CPR in medical series showed that CPR survival rates in British and Flemish medical series seem to be more realistic than in American television medical dramas [43,44]. Whether this is also true for end-of-life care communication remains currently unknown.

Conclusions

The present study shows that healthcare professionals in television medical dramas talked with patients or loved ones about end-of-life.

However, these discussions are often limited to discussions about the possibility of dying and treatment options. Topics such as preferences for life-sustaining treatments, advance directives, and palliative care were rarely discussed. Therefore television medical dramas don't seem to contribute in empowerment of patients and loved ones in the process of ACP and don't facilitate behaviour change resulting in increased willingness to be engaged in end-of-life communication. However they could influence patients' and loved ones' attitudes regarding ACP, CPR, and dying. Therefore, healthcare professionals need to take into account this influence when having discussions about end-of-life.

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References

1. International Society of Advance Care Planning and End of Life Care (ACPEL) (2011) Definition of Advance Care Planning.
2. Houben CH, Spruit MA, Groenen MT, Wouters EF, Janssen DJ (2014) Efficacy of advance care planning: a systematic review and meta-analysis. J Am Med Dir Assoc 15: 477-489.
3. Janssen DJ, Curtis JR, Au DH, Spruit MA, Downey L (2011) Patient-clinician communication about end-of-life care for Dutch and US patients with COPD. Eur Respir J 38: 268-276.
4. Janssen DJ, Spruit MA, Schols JM, Wouters EF (2011) A call for high-quality advance care planning in outpatients with severe COPD or chronic heart failure. Chest 139: 1081-1088.
5. De Vleminck A, Pardon K, Beernaert K, Deschepper R, Houttekier D (2014) Barriers to advance care planning in cancer, heart failure and dementia patients: a focus group study on general practitioners' views and experiences. PloS One 9: e84905.
6. Teixeira AA, Hanvey L, Tayler C, Barwich D, Baxter S, et al. (2015) What do Canadians think of advanced care planning? Findings from an online opinion poll. BMJ Support Palliat Care 5: 40-47.
7. Hajizadeh N, Uhler LM, Pérez Figueroa RE (2015) Understanding patients' and doctors' attitudes about shared decision making for advance care planning. Health Expect 18: 2054-2065.
8. Simon J, Porterfield P, Bouchal SR, Heyland D (2015) 'Not yet' and 'Just ask': barriers and facilitators to advance care planning--a qualitative descriptive study of the perspectives of seriously ill, older patients and their families. BMJ Support Palliat Care 5: 54-62.
9. Sudore RL, Stewart AL, Knight SJ, McMahan RD, Feuz M, et al. (2013) Development and validation of a questionnaire to detect behavior change in multiple advance care planning behaviors. PLoS One 8: e72465.
10. Sudore RL, Knight SJ, McMahan RD, Feuz M, Farrell D, et al. (2014) A novel website to prepare diverse older adults for decision making and advance care planning: a pilot study. J Pain Symptom Manage 47(4): 674-686.
11. Schickedanz AD, Schillinger D, Landefeld CS, Knight SJ, Williams BA, et al. (2009) A clinical framework for improving the advance care planning process: start with patients' self-identified barriers. J Am Geriatr Soc 57: 31-39.
12. Nelson JM, Nelson TC (2014) Advance directives: empowering patients at the end of life. Nurse Pract 39: 34-40.
13. Browning AM (2009) Empowering family members in end-of-life care decision making in the intensive care unit. Dimens Crit Care Nurs 28: 18-23.
14. Feste C, Anderson RM (1995) Empowerment: from philosophy to practice. Patient Educ Couns 26: 139-144.
15. McAllister M, Dunn G, Payne K, Davies L, Todd C (2012) Patient empowerment: the need to consider it as a measurable patient-reported outcome for chronic conditions. BMC Health Serv Res 12: 157.
16. Morgenstern M, Sargent JD, Engels RC, Scholte RH, Florek E, et al. (2013) Smoking in movies and adolescent smoking initiation: longitudinal study in six European countries. Am J Prev Med 44: 339-344.
17. Hanewinkel R, Sargent JD, Hunt K, Sweeting H, Engels RC, et al. (2014) Portrayal of alcohol consumption in movies and drinking initiation in low-risk adolescents. Pediatrics 133: 973-982.
18. Hanewinkel R, Sargent JD, Poelen EA (2012) Alcohol consumption in movies and adolescent binge drinking in 6 European countries. Pediatrics 129(4): 709-720.
19. Schonwetter RS, Walker RM, Kramer DR, Robinson BE (1993) Resuscitation decision making in the elderly: the value of outcome data. J Gen Intern Med 8(6): 295-300.
20. Drukarczyk L, Klein C, Ostgathe C, Stiel S (2014) Life threatening illness in popular movies-a first descriptive analysis. SpringerPlus 3: 411.
21. Portanova J, Irvine K, Yi JY, Enguidanos S (2015) It isn't like this on TV: Revisiting CPR survival rates depicted on popular TV shows. Resuscitation 96: 148-150.
22. Benkel I, Wijk H, Molander U (2014) How to estimate understanding: professionals' assessment of loved ones' insight into a patient's fatal disease. J Palliat Med 17(4): 448-452.
23. Curtis JR, Engelberg RA, Nielsen EL, Au DH, Patrick DL (2004) Patient-physician communication about end-of-life care for patients with severe COPD. Eur Respir J 24: 200-205.
24. De Vleminck A, Houttekier D, Pardon K, Deschepper R, Van Audenhove C, et al. (2013) Barriers and facilitators for general practitioners to engage in advance care planning: a systematic review. Scand J Prim Health Care 31: 215-226.
25. Kirk P, Kirk I, Kristjanson LJ (2004) What do patients receiving palliative care for cancer and their families want to be told? A Canadian and Australian qualitative study. BMJ 328: 1343.
26. Curtis JR, Wenrich MD, Carline JD, Shannon SE, Ambrozy DM (2002) Patients' perspectives on physician skill in end-of-life care: differences between patients with COPD, cancer, and AIDS. Chest 122: 356-362.
27. Clayton JM, Butow PN, Arnold RM, Tattersall MH (2005) Discussing end-of-life issues with terminally ill cancer patients and their carers: a qualitative study. Support Care Cancer 13: 589-599.
28. Steinhauser KE, Christakis NA, Clipp EC, McNeilly M, Grambow S, et al. (2001) Preparing for the end of life: preferences of patients, families, physicians, and other care providers. J Pain Symptom Manage 22: 727-737.
29. Harris D, Willoughby H (2009) Resuscitation on television: realistic or ridiculous? A quantitative observational analysis of the portrayal of cardiopulmonary resuscitation in television medical drama. Resuscitation 80: 1275-1279.
30. Austin CA, Mohottige D, Sudore RL, Smith AK, Hanson LC (2015) Tools to Promote Shared Decision Making in Serious Illness: A Systematic Review. JAMA Intern Med 175: 1213-1221.
31. http://www.dyingmatters.org/.
32. McIlfatrick S, Hasson F, McLaughlin D, Johnston G, Roulston A, et al. (2013) Public awareness and attitudes toward palliative care in Northern Ireland. BMC Palliat Care 12: 34.
33. Wenrich MD, Curtis JR, Shannon SE, Carline JD, Ambrozy DM, et al. (2001) Communicating with dying patients within the spectrum of medical care from terminal diagnosis to death. Arch Intern Med 161(6): 868-874.
34. Norton SA, Talerico KA (2000) Facilitating end-of-life decision-making: strategies for communicating and assessing. J Gerontol Nurs 26: 6-13.
35. Workman SR (2011) Never say die?--as treatments fail doctors' words must not. Int J Clin Pract 65: 117-119.

36. Stapleton RD, Ehlenbach WJ, Deyo RA, Curtis JR (2014) Long-term outcomes after in-hospital CPR in older adults with chronic illness. Chest 146: 1214-1225.

37. Goldberger ZD, Chan PS, Berg RA, Cooke CR, Lu M, et al. (2012) Duration of resuscitation efforts and survival after in-hospital cardiac arrest: an observational study. Lancet 380: 1473-1481.

38. Diem SJ, Lantos JD, Tulsky JA (1996) Cardiopulmonary resuscitation on television. Miracles and misinformation. N Engl J Med 334: 1578-1582.

39. Seale C (2000) Changing patterns of death and dying. Soc Sci Med 51: 917-930.

40. Steinhauser KE, Christakis NA, Clipp EC, McNeilly M, McIntyre L, et al. (2000) Factors considered important at the end of life by patients, family, physicians, and other care providers. JAMA 284: 2476-2482.

41. Kissane LA, Ikeda B, Akizuki R, Nozaki S, Yoshimura K, et al. (2015) End-of-life preferences of the general public: Results from a Japanese national survey. Health Policy 119: 1472-1481.

42. Hickman RL, Lipson AR, Pinto MD, Pignatiello G (2014) Multimedia decision support intervention: a promising approach to enhance the intention to complete an advance directive among hospitalized adults. J Am Assoc Nurse Pract 26: 187-193.

43. Van den Bulck J, Damiaans K (2004) Cardiopulmonary resuscitation on Flemish television: challenges to the television effects hypothesis. Emerg Med J 21: 565-567.

44. Gordon PN, Williamson S, Lawler PG (1998) As seen on TV: observational study of cardiopulmonary resuscitation in British television medical dramas. BMJ 317: 780-783.