

Patient-provider care goal concordance: implications for palliative care decisions

Erin M. Ellis, Edward Orehek & Rebecca A. Ferrer

To cite this article: Erin M. Ellis, Edward Orehek & Rebecca A. Ferrer (2019): Patient-provider care goal concordance: implications for palliative care decisions, *Psychology & Health*, DOI: [10.1080/08870446.2019.1584672](https://doi.org/10.1080/08870446.2019.1584672)

To link to this article: <https://doi.org/10.1080/08870446.2019.1584672>



Published online: 23 Mar 2019.



Submit your article to this journal [↗](#)



View Crossmark data [↗](#)



Patient-provider care goal concordance: implications for palliative care decisions

Erin M. Ellis^a, Edward Orehek^b and Rebecca A. Ferrer^a

^aBasic Biobehavioral and Psychological Sciences Branch, Behavioral Research Program, National Cancer Institute, Rockville, MD, USA; ^bDepartment of Psychology, University of Pittsburgh, Pittsburgh, PA, USA

ABSTRACT

Objective: Goal-concordant care is an important feature of high quality medical treatment. Patients' care goals may focus on curative and/or palliative outcomes. Patients rarely communicate their care goals, and providers' predictions of patient goals are often inaccurate, corresponding most closely to their own treatment goals. This projection of own goals onto patients introduces the potential for bias, leading to goal-discordant care.

Design and Main Outcomes: We examined goal discordance using data from a U.S. sample of healthcare providers ($N = 492$) recruited online in 2017 using GfK Knowledge Panel. Providers reported their perceptions of their patients' care goals (curative relative to palliative), their own care goals if they were to become ill, and their willingness to deliver palliative care.

Results: For 28% of providers, their own care goals differed from their patients'. Providers were more likely to prioritise palliative care (relative to curative) in their own goals than in their predictions about patients' goals. Providers were more willing to deliver palliative care when their own goals prioritised more palliative relative to curative care, but their perceptions of patient goals were unassociated with willingness to provide it.

Conclusions: Efforts to improve goal communication and reduce projection biases among providers may facilitate goal-concordant care.

ARTICLE HISTORY

Received 26 July 2018



Accepted 12 February 2019

KEYWORDS

goal-concordant care;
palliative care; projection
bias; goal communication

Introduction

Goal-concordant care, or care that aligns with patients' goals and values, is an important feature of high quality medical treatment (Dy et al., 2015; Dzau et al., 2017; Lorenz Karl, Rosenfeld, & Wenger, 2007; Sanders, Curtis, & Tulsky, 2017). It can improve clinical outcomes, reduce patient and surrogate distress, and minimise healthcare costs and resource expenditures (Teno et al., 1995). Goals of care vary across patients and may include therapeutic or curative goals, as well as quality of life (QOL) goals, such as living at home, maintaining relationships with loved ones, and symptom management (Nahm & Resnick, 2001; Steinhauer et al., 2000; Teno et al., 2000; Turnbull & Hartog,

CONTACT Erin M. Ellis  Erin.ellis@nih.gov  Basic Biobehavioral and Psychological Sciences Branch, Behavioral Research Program, National Cancer Institute, 9609 Medical Center Dr., Rockville, MD 20850, USA

© 2019 Informa UK Limited, trading as Taylor & Francis Group

2017). These QOL care goals are often addressed through palliative care, which is any care that focuses on the well-being of patients and their caregivers through pain and symptom management, social support and a broad range of related services. Although palliative care can be delivered irrespective of curative goals, the two forms of care are often perceived as incompatible, conflicting and involving trade-offs. When choices do not adequately permit concurrent and equivalent pursuit of both goals, such as when aggressive treatments are accompanied by side effects that compromise QOL, the relative value of these goals becomes important (Emmons & King, 1988). Thus, for patients to receive goal-concordant care, providers must understand both the palliative and curative care goals individual patients wish to pursue, and the value of these goals relative to each other (Fitzsimons, Finkel, & Vandellen, 2015). Because providers ultimately control care delivery, their perceptions or beliefs about patients' care goals and their role in executing them is critical (Laurin et al., 2016).

Healthcare providers generally believe they can accurately predict their patients' care goals (e.g. Downey, Au, Curtis, & Engelberg, 2013), but few patients explicitly discuss care goals with their providers (Wright, Hatfield, Earle, & Keating, 2014), and providers are often no more accurate in predicting them than what would be expected due to chance alone (Druley et al., 1993; Figueroa et al., 2016; Gramelspacher, Zhou, Hanna, & Tierney, 1997; Schneiderman, Kaplan, Pearlman, & Teetzel, 1993; Schneiderman, Kaplan, Rosenberg, & Teetzel, 1997; Seckler, Meier, Mulvihill, & Paris, 1991; Uhlmann, Pearlman, & Cain, 1989). Instead, providers' predictions of their patients' care goals tend to correspond more closely with their own predicted treatment preferences (if they themselves were to become ill) than with the expressed preferences of the patient, especially for goals related to life-sustaining treatments when prognosis is uncertain (Norris, Nielsen, Engelberg, & Curtis, 2005; O'Donnell et al., 2003; Schneiderman et al., 1993, 1997).

Providers' reliance on their own treatment preferences rather than their patients' may contribute to goal-discordant care because providers' predictions about their own future preferences are susceptible to inaccuracies. Specifically, projection biases involve the tendency to attribute or ascribe one's current situation, preferences, and goals onto the future without accounting for how changes in one's situation may influence these preferences and goals (Loewenstein, O'Donoghue, & Rabin, 2003). Providers in states of good health and without pain or emotional distress may be unable to accurately predict the care that they would want if facing a serious illness (Loewenstein, 2005b; Van Boven & Loewenstein, 2003). Consequently, providers' predictions about their own future care goals may be inaccurate themselves. Providers may then attribute their own care goals to their patients without accounting for how patients' unique experiences may lead them to have different goals, reflecting interpersonal projection biases (see related work on false consensus effect (Ross, Greene, & House, 1977), social projection theory (Cronbach, 1955; Lemay, Clark, & Feeney, 2007) and empathy gaps (Loewenstein, 2005a)). Thus, providers' practice of using their own care goals instead of their patients' to inform care-related decisions may contribute to goal-discordant care via projection biases that reduce the accuracy of their own care goal predictions, as well as their predictions about their patients' care goals.

Although the ubiquity of projection biases is well-demonstrated, this work rarely accounts for the potentially conflicting nature of curative and palliative goals; instead, it often centers on preferences for life-sustaining treatment at end-of-life. Such an approach may contribute to the equivocal nature of the evidence regarding the direction of providers' biases, with some evidence suggesting providers underestimate the relative importance of curative care in their own predicted care goals, and other work suggesting they overestimate their curative care goals. For example, providers predict that if they became ill, they themselves would desire less life-sustaining or aggressive treatment than their ill patients desire (Carmel, 1999; Gramelspacher et al., 1997; O'Donnell et al., 2003; Schneiderman et al., 1997; Slevin et al., 1990; Tomlinson et al., 2011). There is also evidence that individuals who are older or nearer to EOL value length of life over QOL to a greater degree than healthy and younger individuals (Bryce et al., 2004; Stephens, Neal, & Overman, 2014).

On the other hand, projection biases, in combination with clinical defaults and societal demands, may lead providers to underestimate their own and their patients' desire for palliative care. For example, providers strive to protect life at all costs (Carmel, 1999; Downey et al., 2013; Schenker et al., 2014), which may lead them to overestimate patients' desires for life-sustaining or curative treatments (Barnato et al., 2011; Carmel, 1999; Downey et al., 2013; Teno et al., 2000). Providers also consistently overestimate survival in their prognoses (Glare et al., 2003; Stiel et al., 2010). These biased prognostic estimates may affect the relative balance of curative and palliative care providers perceive their patient need, and when these prognoses are communicated to patients, it may also lead patients to prefer an inappropriate emphasis on curative goals. In addition, it is difficult to imagine how pain might affect decision making when one is not currently experiencing pain (Christensen-Szalanski, 1984; Read & Loewenstein, 1999). Providers who are not in pain may underestimate patients' symptom burden and make inaccurate predictions about how pain – and achieving freedom from it – influences patients' treatment goals (Bergman, Matthias, Coffing, & Krebs, 2013; Kenny, 2004; Maguire, Walsh, Jeacock, & Kingston, 1999; Steinhauer et al., 2000; Upshur, Bacigalupe, & Luckmann, 2010; Werner & Malterud, 2003). Providers and patients may also have different conceptualizations of hope, with patients' notions of hope centring more on their individualised vision for their the future, given their illness, and providers' centring on fixing the problem (Davison & Simpson, 2006; Richardson, Macleod, & Kent, 2012). This evidence suggests providers may underestimate the importance of palliative care and symptom management in their own predicted care goals, as well as their predictions of patients' goals.

The current study

To elucidate the nature of the biases in providers' predictions about patients' care goals, we examined providers' predictions about both their own care goals, and their patients' goals. We then examined concordance between these predictions and whether either prediction was associated with willingness to deliver palliative care. Given that palliative care services remain either underutilised or implemented in sub-optimal ways (e.g. delivered too late or with an inappropriate focus) (Cherny & Catane,

2003; Follwell et al., 2009; Jordhøy, Fayers, Loge, Ahlner-Elmqvist, & Kaasa, 2001; Narang, Wright, & Nicholas, 2015; Smith et al., 2011; Tulskey, 2015; Wentlandt et al., 2012), despite their many benefits (Brinkman-Stoppelenburg, Rietjens, & van der Heide, 2014; Casarett, Johnson, Smith, & Richardson, 2011; Ferrell et al., 2015; Singer et al., 2016; Taylor, Bull, Zhong, Samsa, & Abernethy, 2013; Temel et al., 2010; Wright et al., 2008; Zhang et al., 2009), it is important to examine how care goals influence providers' willingness to provide such services.

It is not known whether providers whose own care goals differ from their perceptions of their patients' goals are more or less willing to deliver palliative care. Goal pursuit is facilitated by agreement between partners on what goals to pursue (Fitzsimons & Finkel, 2015; Fitzsimons et al., 2015), so discordance between providers' own care goals and their perceptions of their patients' care goals may influence their willingness to provide palliative care. In addition, curative and palliative care goals are often perceived as conflicting or posing a trade-off, creating a barrier to palliative care uptake (Bakitas, Lyons, Hegel, & Ahles, 2013; Bernacki & Block, 2014; Cooper et al., 2016; Gawande, 2014; Schenker et al., 2014). Indeed, they sometimes cannot be pursued concurrently or with equal success. For example, some patients may wish to pursue curative treatment regardless of side effects, whereas others may prefer to alleviate symptoms and optimise QOL even if it means forgoing curative options. Little is known about projection biases in predicted care goals or the relative prioritisation of palliative and curative goals when they cannot be pursued concurrently (i.e. are perceived to be in conflict). To address this gap in the literature, we drew on the goal conflict literature and assessed palliative and curative care goals in relative fashion, thereby providing information about goals of care in real-world conditions where pursuit of one form of treatment may compromise pursuit of the other.

In summary, the current study had two aims: 1) to compare providers' own care goals (i.e. preferences for palliative relative to curative care) with their perception of their patients' care goals; and 2) to examine these care goals, as well as goal concordance, as predictors of providers' willingness to deliver palliative care. We hypothesised providers' willingness to deliver palliative care would be predicted by their own care goals, but not their predictions about their patients' goals. Given the conflicting literature regarding whether providers predict desiring more or less curative care than their patients, we did not have a priori hypotheses about the direction of the discordance in patients' and providers' care goals.

Methods

Participants

Participants were recruited as part of a larger study (for which the data are publicly available; referenced blinded) using GfK Knowledge Panel (www.gfk.com), a standing internet panel of non-institutionalized U.S. adults. Given that palliative and curative care can be delivered according to a range of models and by several types of healthcare providers (Morrison, 2013), a broad national (U.S.) sample of healthcare providers were recruited and categorised as: medical doctors ($n = 47$; e.g. physicians, surgeons); other healthcare practitioners ($n = 255$; e.g. nurses, pharmacists); healthcare support

($n = 116$; e.g. nursing aids, nursing assistants); and technologists/technicians ($n = 85$; e.g. paramedics, lab technicians). Nine participants with less than a high school education were excluded from analyses as not representative of the healthcare providers most likely to be involved in curative and palliative care treatment decisions.

Participants ($N = 494$) were aged 45.22 ($SD = 13.06$) on average and 73.7% were female, which is representative of the healthcare worker population (Association of American Medical Colleges, 2008). Most self-identified as white (70.5%); 10.1% as black; 10.5% as Hispanic; and 8.9% as another or multiple races. Half (51.0%) had a bachelor's degree or higher, with the remaining completing high school (11.7%) or some college (37.3%).

Measures

Prior to completing study measures, participants received the following operational definition of palliative care that contextualised the subsequent scales and reduced the likelihood that providers would equate palliative care with end-of-life or Hospice care: 'Palliative care is defined as an approach designed to treat pain, manage physical symptoms/treatment side effects and provide psychosocial support that improves the quality of life of patients and their families.'

Perceived patient care goals

Providers' perceptions of the relative care goals (curative relative to palliative) of their patients were assessed with one item, '*The patients I see who are dealing with disease or illness feel it is important to seek ...*' with a response scale ranging from (1) *curative* to (7) *palliative* and the midpoint reflecting *both* types of care. This item was developed based on a validated measure of conflict that exists between goals (Emmons & King, 1988), in which two goals are pitted against each other to examine the extent to which striving toward them both results in goal conflict. The scale was adapted to be a single item to accommodate survey length restrictions. A categorical variable was created to represent goals that favoured (1) both palliative and curative care equally (scale midpoint), (2) palliative over curative care (>4 on scale), or (3) curative over palliative care (<4 on scale).¹

Physician care goals

Providers also anticipated their own relative care goals if they were to become sick using the item, '*If you were a patient dealing with disease or illness, you would feel it is important to seek ...*' and a response scale ranging from (1) *curative* to (7) *palliative*, and the midpoint reflecting *both* types of care (Emmons & King, 1988). As with the patient care goals item, a categorical variable was created to represent goals that favoured (1) both palliative and curative care equally, (2) palliative over curative care, or (3) curative over palliative care.

Willingness to provide palliative care

One item assessed providers' willingness to provide or facilitate palliative care services: '*If a patient requested a palliative procedure or treatment instead of a curative treatment,*

I would be willing to fulfill that request (if possible) or support them in making the request of other medical personnel' using response options ranging from (1) *strongly disagree* to (7) *strongly agree*.

Analysis strategy

All analyses were conducted in Stata, version 15 (Stata Corp, College Station, TX). Multinomial logistic regression specifying 'both types of care' as the reference category was used to examine whether participant characteristics (age, education, sex, race/ethnicity and profession) were associated with providers' perceptions of their patients' care goals and with their own care goals (3-level categorical outcome variables). Linear regression was used to assess relations of these participant characteristics with willingness to deliver palliative care. Sex and race/ethnicity were all dichotomous dummy variables (e.g. white vs. nonwhite). Profession was a 4-category variable with medical doctor serving as the reference group.

Linear regression was used to examine patient and provider care goals as predictors of willingness to deliver palliative care. Providers' and patients' care goals were examined in separate models, and together in the same model. Provider age, education level, profession and race were included as covariates based on their significant associations with the outcomes of interest. Because the data originated from an experimental study, study condition (a dichotomous variable) was also included as a covariate, although it did not influence any of the reported results.

Goal discordance was operationalised as a 3-level variable reflecting whether the difference between provider and patient care goals reflected: 1) goal discordance, such that providers desired more palliative (relative to curative) care than patients ($n=88$), 2) goal concordance (i.e. providers and patients had same care goals; $n=353$), or 3) goal discordance, such that patients desired more palliative (relative to curative) care than providers ($n=51$). Linear regression tested whether this three-level variable was associated with willingness to provide palliative care, with goal concordance serving as the reference category.

Results

Predictors of care goals

Patients' care goals

Specifying a preference for both types of care as the reference category, education was associated with greater relative likelihood of providers predicting patients had goals centred more on curative care, *RRR* (*relative risk ratio*) = 1.31, $p < .001$, 95% CI (1.15, 1.50), as was being white (vs. nonwhite), *RRR* = 1.79, $p = .013$, 95% CI (1.13, 2.83). Providers who were female, black (vs. nonblack) and technologists/technicians or healthcare support professionals (vs. medical doctors) were all less likely to predict their patients had curative goals (vs. desired both types of care), $ps < .05$. Black providers were more likely to predict patients had primarily palliative goals, *RRR* = 3.54, $p = .001$, 95% CI (1.64, 7.63), whereas white providers were less likely to do so, *RRR* = -0.71, $p = .033$, 95% CI (-1.38, -0.057) (see [Table 1](#)).

Table 1. Participant characteristics as predictors of providers' perceptions of their patients' care goals and their own care goals. Results from multinomial logistic regression models specifying preference for both types of care as the reference category.

	Patients' care goals		Providers' care goals	
	Curative: Both (ref) RRR (95% CI)	Palliative: Both (ref) RRR (95% CI)	Curative: Both (ref) RRR (95% CI)	Palliative: Both (ref) RRR (95% CI)
Age	1.01 (0.99, 1.02)	1.01 (0.98, 1.03)	1.01 (0.99, 1.02)	1.01 (0.99, 1.04)
Education	1.31*** (1.15, 1.50)	0.85 (0.68, 1.06)	1.12 (0.98, 1.29)	0.78* (0.62, 0.99)
Sex				
Male	ref	ref	ref	ref
Female	0.65* (0.42, 0.99)	0.72 (0.35, 1.49)	0.44*** (0.28, 0.70)	0.63 (0.30, 1.34)
Race/ethnicity				
White (vs. not white)	1.79* (1.13, 2.83)	0.49* (0.25, 0.94)	0.97 (0.61, 1.55)	0.34** (0.17, 0.68)
Black (vs. not black)	0.40* (0.17, 0.94)	3.54*** (1.64, 7.63)	0.73 (0.33, 1.65)	4.40*** (1.98, 9.79)
Hispanic (vs. not Hispanic)	0.53 (0.26, 1.08)	0.76 (0.26, 2.25)	0.79 (0.38, 1.65)	1.69 (0.66, 4.35)
Other (vs. not other)	1.03 (0.52, 2.04)	1.12 (0.37, 3.40)	1.71 (0.88, 3.34)	0.68 (0.16, 3.00)
Profession				
Medical doctor	ref	ref	ref	ref
Other healthcare practitioners	0.69 (0.36, 1.31)	1.38 (0.30, 6.36)	0.74 (0.37, 1.46)	1.38 (0.30, 6.31)
Healthcare support Technologists/technicians	0.43 (0.20, 0.92) 0.23 (0.11, 0.51)	1.28 (0.24, 6.81) 2.39 (0.51, 11.17)	0.74 (0.33, 1.63) 0.43* (0.19, 0.96)	1.32 (0.24, 7.19) 2.44 (0.52, 11.45)

* $p < .05$;

** $p < .01$;

*** $p < .001$

ref: reference category; RRR: relative risk ratios.

Providers' care goals

Providers' own care goals were predicted by education, race and gender (Table 1). White providers and those with more education were less likely to prioritise palliative goals, $ps < .05$, whereas black providers were more likely to prioritise palliative goals, $RRR = 4.40$, $p < .001$, 95% CI (1.98, 9.79). Women were less likely to prioritise curative goals than men, $RRR = 0.44$, $p < .001$, 95% CI (0.28, 0.70).

Goal discordance

Overall, providers' own predicted care goals differed from their predictions about their patients' goals, $\chi^2(4) = 222.68$, $p < .001$. One-quarter (28.25%) of providers reported their own care goals differed from their perceptions of their patients' goals. Most of this discordance (63.3%) reflected providers' perceptions that they would want more palliative care than their patients. Specifically, compared to their predictions about their patients' goals, providers were less likely to want curative care themselves, and more likely to want both types of care (curative and palliative) (see Figure 1). When medical doctors were examined separately, 34.0% expressed discordant goals, with two-thirds (68.8%) of this group predicting they would desire more palliative care for themselves than their patients would.

Using providers who reported concordant goals as the reference category, provider education was positively associated with likelihood of perceiving patients had more curative goals than oneself, $RRR = 1.28$, $p = .002$, 95% CI (1.10, 1.49). Nurses and other healthcare practitioners were less likely than physicians to perceive patients' goals

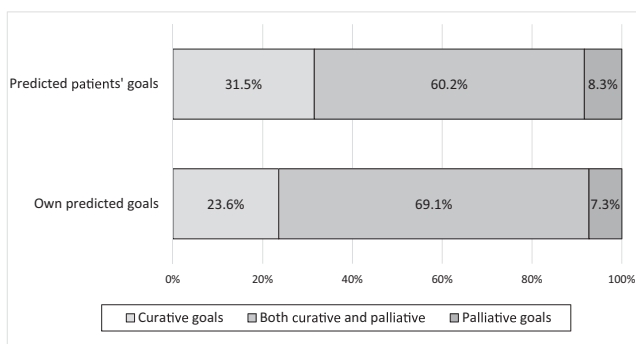


Figure 1. Providers' predictions about their own care goals and their patients' care goals as reflecting either a curative focus, palliative focus, or both types of care.

Table 2. Predictors of willingness to provide palliative care (PC): Results from linear regression models.

	Willingness to provide palliative care		
	<i>b</i>	<i>p</i> -value	95% CI
Age	0.010	.034	0.00080, 0.020
Education	0.12	.003	0.041, 0.20
Female (vs. male)	0.12	.39	-0.16, 0.41
Race/ethnicity			
White (vs. not white)	0.22	.11	-0.054, 0.50
Black (vs. not black)	-0.45	.033	-0.87, -0.036
Hispanic (vs. not Hispanic)	-0.23	.27	-0.64, 0.18
Other (vs. not other)	0.20	.38	-0.24, 0.64
Profession			
Medical doctor	ref	ref	ref
Other healthcare practitioners	0.23	.30	-0.21, 0.66
Healthcare support	-0.32	.21	-0.82, 0.18
Technologists/ technicians	-0.35	.15	-0.83, 0.13
Patients' care goals			
Both palliative and curative	ref	ref	ref
Curative focus	0.072	.61	-0.21, 0.35
Palliative focus	0.10	.67	-0.36, 0.57
Providers' care goals			
Both palliative and curative	ref	ref	ref
Curative focus	-0.30	.045	-0.60, -0.01
Palliative focus	-0.019	.94	-0.51, 0.47
Goal discordance			
Self-patient concordant	ref	ref	ref
Self prefers more PC than provider	0.34	.040	0.015, 0.67
Patient prefers more PC than self	-0.034	0.87	-0.44, 0.37

Notes: "Self prefers more PC than provider" includes providers who rated their own preference for PC as higher than their patients' preferences for PC. "Patient prefers more PC than self" includes providers who rated their patients' preferences for PC as higher than their own.

centred more on curative care than one's own, $RRR = 0.35$, $p = .028$, 95% CI (0.14, 0.89). No other participant characteristics were associated with the likelihood of having discordant goals, $ps > .12$.

Predictors of willingness to provide palliative care

Providers' perceptions of their patients' care goals were not associated with providers' willingness to provide or facilitate palliative care services, $ps > .61$ (Table 2). Providers'

own care goals were associated with willingness, such that providers who predicted they would prefer both types of care were more willing to provide palliative care than those who preferred a focus on curative care, $b = 0.33$, $p = .029$, 95% CI (0.034, 0.62). Providers' own care preferences remained associated with willingness to provide palliative care services, even after controlling for their predictions about patients' preferences, $b = 0.45$, $p = .007$, 95% CI (0.12, 0.77).

Goal concordance was also examined as a predictor of willingness to provide palliative care services. Using providers with concordant goals as the reference category, providers whose discordance reflected stronger preference for palliative care themselves were more willing to provide palliative care, $b = 0.34$, $p = .040$, 95% CI (0.015, 0.067). Providers were no more willing to provide palliative care when discordance reflected the perception that patients desired more palliative care than they did, $b = -0.034$, $p = .87$, 95% CI (-0.44, 0.37) (Table 2).

Discussion

This study examined whether providers' own predicted care goals (palliative relative to curative care) differed from their perceptions of their patients' care goals, and the extent to which these predictions were associated with willingness to deliver palliative care. Consistent with some, but not all, prior evidence (Carmel, 1999; Gramelspacher et al., 1997; O'Donnell et al., 2003; Schneiderman et al., 1997), providers predicted their own care goals would more strongly prioritise palliative relative to curative care than they perceived their patients' goals would. One quarter of providers (and one-third of medical doctors) predicted their care goals would differ from their patients'. This is a potentially problematic discordance, given that providers' willingness to deliver palliative care was predicted *only* by their own care goals, even when they themselves reported that their patients have different goals. A similar pattern was observed when goal discordance was examined as a predictor of willingness to provide palliative care. Compared to providers with concordant goals, those who predicted they would want more palliative care than their patients were more willing to provide palliative care, whereas providers who predicted their patients would want more palliative care were no more willing to provide or facilitate it.

Consistent with prior research (Carmel, 1999; Gramelspacher et al., 1997; O'Donnell et al., 2003; Schneiderman et al., 1997), providers predicted that their own care goals would reflect a stronger prioritisation of palliative relative to curative care than their patients' goals. Patients' actual care goals were not assessed as part of this study, so it is not possible to determine the accuracy of the providers' predictions. However, the discordance between their own goals and their predictions about their patients' is consistent with projection biases at both the intrapersonal and interpersonal level. Specifically, our observation that providers predicted they themselves would desire greater emphasis on palliative care than their patients would may reflect the tendency of young and healthy individuals to underestimate the importance of curative care when predicting one's care preferences if they were to become ill (Carmel, 1999; Gramelspacher et al., 1997; Schneiderman et al., 1997). This is consistent with evidence that older adults who are sick or nearer to EOL place higher value on length of life

(Bryce et al., 2004; Stephens et al., 2014), and are more likely to opt for aggressive curative treatments (O'Donnell et al., 2003; Slevin et al., 1990; Tomlinson et al., 2011).

Interpersonally, providers' predictions that they wanted more palliative care than their patients may reflect providers' tendency to underestimate how much patients value and desire palliative care (Barnato et al., 2011; Carmel, 1999; Downey et al., 2013; Schenker et al., 2014; Teno et al., 2000). In the absence of patient-provider communication about goals of care, providers may underestimate how freedom from pain, different conceptualizations of hope, and relationship-centred goals (e.g. not burdening loved ones; spending time with loved ones) influence patients' treatment goals. These interpersonal projection biases may have led providers to underestimate patients' preferences for palliative over curative care in the current study. Indeed, such underestimates are common and particularly likely to lead to goal-discordant care (Carmel, 1999; Teno et al., 2000).

Our findings suggest some providers' own care goals differ from what they perceive their patients' goals to be. Because of these differences, the two perceptions are not interchangeable, and our finding that willingness to deliver palliative care was predicted by providers' own goals and not their predictions of their patients' goals may be one source of goal-discordant care. To the extent that these findings reflect an underestimation of patients' palliative care goals, improved patient-provider communication about goals of care is essential (Gramling et al., 2015; Wright et al., 2014). Evidence suggests providers who have more experience discussing advance directives and related care goals are more accurate in predicting their patients' care preferences (Druley et al., 1993). Importantly, goal communication ought to be appropriately timed (particularly when palliative care is a focus), elicit patients' goals in ways that minimise the influence of providers' own projected goals, and consider how patients' health- and non-health goals will be managed or weighed when they conflict with each other (Bernacki & Block, 2014). For example, the goal to sustain life using invasive procedures may conflict with the goal to spend time at home and maintain optimal quality of life (Bernacki & Block, 2014). This is particularly important when considering palliative care goals, given that they are often perceived as conflicting with curative care goals (Bakitas et al., 2013; Gawande, 2014; Schenker et al., 2014).

These findings may have important implications for ways in which providers should be trained to elicit patient goals. They suggest empathy training may help providers make predictions about their patients' goals that account for the range of factors that may be important to patients, and for how pain, illness and other intense emotions influence these factors. This may reduce both intra- and interpersonal projection biases, thereby making providers better predictors of patients' care goals (Omar Sultan & Adam, 2012). However, given that providers in the current study based their willingness to provide palliative care on their own goals for care, and not on their understanding or predictions of patients' goals, empathy training may reduce projection biases without actually influencing palliative care delivery. Our findings suggest that training providers to use patient goals in their care decisions may be just as or more necessary than empathy training in efforts to improve patient care.

This study included a broad range of providers, reflecting the many professions potentially involved in palliative care service delivery (e.g. nurses and pharmacists who

either formally or informally serve as pain medication gatekeepers; paramedics and other hospital staff responsible for acute and chronic symptom management). Across these professions and participant characteristics, the only factors associated with goal-discordance between providers and patients were education and profession, although the profession category that was associated with less discordance encompassed a variety of professions (nurses, pharmacists and others), so this association should be interpreted with caution. These findings suggest the observed differences in care goals between patients and providers are consistent across a range of healthcare workers interacting day-to-day with patients, particularly among physicians and other highly-educated professionals. As a result, they may influence care outcomes regardless of the specific palliative care delivery model used (Casarett et al., 2011; Morrison, 2013; Singer et al., 2016).

Limitations

Some limitations should be considered when interpreting these findings, including the cross-sectional nature of the survey, which limits our ability to draw causal conclusions between predicted goals and willingness to deliver palliative care. Additionally, patients were not interviewed as a component of this study, so future work is needed to examine the role of physician accuracy in the observed associations between predicted goals and willingness. Lastly, the study utilised single item measures to accommodate space constraints. Single- and multi-item scales often have similar test-retest reliability (Ferrer et al., 2018); when single items are less reliable, the associations observed are attenuated (Luttrell, Petty, & Xu, 2017), meaning the observed associations may actually be underestimates. Future work is needed to examine the relative nature of curative and palliative care goals in a more nuanced fashion (e.g. with multi-dimensional scales), as well as providers' predictions about them, and how these goals influence palliative care delivery.

Conclusions

In a national sample representing a range of healthcare provider professions, providers predicted their own goals of care would reflect greater emphasis on palliative relative to curative care compared to what they perceived their patients' goals to be. Moreover, providers' willingness to deliver palliative care was predicted by their own care goals, but not by their predictions about their patients' goals. This reflects a potentially problematic discordance, given that one-third of providers – and half of medical doctors – predicted their care goals would differ from their patients'. These findings underscore the importance of effective goal communication and efforts to reduce projection biases among providers as a means of facilitating goal-concordant care.

Disclosure statement

No potential conflict of interest was reported by the authors.

Note

1. All analyses were replicated using the continuous version of the goal conflict items. The main findings were robust to this alternative analytic strategy, with the only differences arising in the relations between some participant characteristics (e.g. sex, education) and the goal prediction items.

References

- Association of American Medical Colleges (2008). Physician Specialty Data. Retrieved from <https://www.aamc.org/download/47352/data>
- Bakitas, M., Lyons, K. D., Hegel, M. T., & Ahles, T. (2013). Oncologists' perspectives on concurrent palliative care in a National Cancer Institute-designated comprehensive cancer center. *Palliative and Supportive Care, 11*(5), 415–423. doi:10.1017/S1478951512000673
- Barnato, A. E., Mohan, D., Downs, J., Bryce, C. L., Angus, D. C., & Arnold, R. M. (2011). A randomized trial of the effect of patient race on physician ICU and life-sustaining treatment decisions for an acutely unstable elder with end-stage cancer. *Critical Care Medicine, 39*(7), 1663. doi:10.1097/CCM.0b013e3182186e98
- Bergman, A. A., Matthias, M. S., Coffing, J. M., & Krebs, E. E. (2013). Contrasting tensions between patients and PCPs in chronic pain management: A qualitative study. *Pain Medicine, 14*(11), 1689–1697. doi:10.1111/pme.12172
- Bernacki, R. E., & Block, S. D. (2014). Communication about serious illness care goals: A review and synthesis of best practices. *JAMA Internal Medicine, 174*(12), 1994–2003. doi:10.1001/jamainternmed.2014.5271
- Brinkman-Stoppelenburg, A., Rietjens, J. A., & van der Heide, A. (2014). The effects of advance care planning on end-of-life care: A systematic review. *Palliative Medicine, 28*(8), 1000–1025. doi:10.1177/0269216314526272
- Bryce, C. L., Loewenstein, G., Arnold, R. M., Schooler, J., Wax, R. S., & Angus, D. C. (2004). Quality of death: Assessing the importance placed on end-of-life treatment in the intensive-care unit. *Medical Care, 42*(5), 423–431.
- Carmel, S. (1999). Life-sustaining treatments: What doctors do, what they want for themselves and what elderly persons want. *Social Science & Medicine, 49*(10), 1401–1408. doi:10.1016/S0277-9536(99)00221-X
- Casarett, D., Johnson, M., Smith, D., & Richardson, D. (2011). The optimal delivery of palliative care: A national comparison of the outcomes of consultation teams vs inpatient units. *Archives of Internal Medicine, 171*(7), 649–655. doi:10.1001/archinternmed.2011.87
- Cherny, N. I., & Catane, R. (2003). Attitudes of medical oncologists toward palliative care for patients with advanced and incurable cancer. *Cancer, 98*(11), 2502–2510. doi:10.1002/cncr.11815
- Christensen-Szalanski, J. J. (1984). Discount functions and the measurement of patients' values: Women's decisions during childbirth. *Medical Decision Making, 4*(1), 47–58. doi:10.1177/0272989X8400400108
- Cooper, Z., Koritsanszky, L. A., Cauley, C. E., Frydman, J. L., Bernacki, R. E., Mosenthal, A. C., ... Block, S. D. (2016). Recommendations for best communication practices to facilitate goal-concordant care for seriously ill older patients with emergency surgical conditions. *Annals of Surgery, 263*(1), 1–6. doi:10.1097/SLA.0000000000001491
- Cronbach, L. J. (1955). Processes affecting scores on "understanding of others" and "assumed similarity". *Psychological Bulletin, 52*(3), 177. doi:10.1037/h0044919
- Davison, S. N., & Simpson, C. (2006). Hope and advance care planning in patients with end stage renal disease: Qualitative interview study. *BMJ, 333*(7574), 886. doi:10.1136/bmj.38965.626250.55
- Downey, L., Au, D. H., Curtis, J. R., & Engelberg, R. A. (2013). Life-sustaining treatment preferences: Matches and mismatches between patients' preferences and clinicians' perceptions. *Journal of Pain and Symptom Management, 46*(1), 9–19. doi:10.1016/j.jpainsymman.2012.07.002

- Druley, J. A., Ditto, P. H., Moore, K. A., Danks, J. H., Townsend, A., & Smucker, W. D. (1993). Physicians' predictions of elderly outpatients' preferences for life-sustaining treatment. *Journal of Family Practice*, 37(5), 469–475.
- Dy, S. M., Kiley, K. B., Ast, K., Lupu, D., Norton, S. A., McMillan, S. C., ... Casarett, D. J. (2015). Measuring what matters: Top-ranked quality indicators for hospice and palliative care from the American Academy of Hospice and Palliative Medicine and Hospice and Palliative Nurses Association. *Journal of Pain and Symptom Management*, 49(4), 773–781. doi:10.1016/j.jpainsymman.2015.01.012
- Dzau, V. J., McClellan, M. B., McGinnis, J. M., Burke, S. P., Coye, M. J., Diaz, A., ... Hamburg, M. A. (2017). Vital directions for health and health care: Priorities from a National Academy of Medicine initiative. *JAMA*, 317(14), 1461–1470. doi:10.1001/jama.2017.1964
- Emmons, R. A., & King, L. A. (1988). Conflict among personal strivings: Immediate and long-term implications for psychological and physical well-being. *Journal of Personality and Social Psychology*, 54(6), 1040–1048. doi:10.1037/0022-3514.54.6.1040
- Ferrell, B., Sun, V., Hurria, A., Cristea, M., Raz, D. J., Kim, J. Y., ... Koczywas, M. (2015). Interdisciplinary palliative care for patients with lung cancer. *Journal of Pain and Symptom Management*, 50(6), 758–767. doi:10.1016/j.jpainsymman.2015.07.005
- Ferrer, R. A., Klein, W. M. P., Avishai, A., Jones, K., Villegas, M., & Sheeran, P. (2018). When does risk perception predict protection motivation for health threats? A person-by-situation analysis. *PLoS One*, 13(3), e0191994. doi:10.1371/journal.pone.0191994
- Figueroa, J. F., Schnipper, J. L., McNally, K., Stadel, D., Lipsitz Stuart, R., & Dalal Anuj, K. (2016). How often are hospitalized patients and providers on the same page with regard to the patient's primary recovery goal for hospitalization? *Journal of Hospital Medicine*, 11(9), 615–619. doi:10.1002/jhm.2569
- Fitzsimons, G. M., & Finkel, E. J. (2015). Goal interdependence. *Current Opinion in Psychology*, 1, 10–13. doi:10.1016/j.copsyc.2014.11.015
- Fitzsimons, G. M., Finkel, E. J., & Vandellen, M. R. (2015). Transactive goal dynamics. *Psychological Review*, 122(4), 648. doi:10.1037/a0039654
- Follwell, M., Burman, D., Le, L. W., Wakimoto, K., Seccareccia, D., Bryson, J., ... Zimmermann, C. (2009). Phase II study of an outpatient palliative care intervention in patients with metastatic cancer. *Journal of Clinical Oncology*, 27(2), 206–213. doi:10.1200/JCO.2008.17.7568
- Gawande, A. (2014). *Being mortal: Medicine and what matters in the end*. New York, NY: Metropolitan Books.
- Glare, P., Virik, K., Jones, M., Hudson, M., Eychmuller, S., Simes, J., & Christakis, N. (2003). A systematic review of physicians' survival predictions in terminally ill cancer patients. *BMJ*, 327(7408), 195. doi:10.1136/bmj.327.7408.195
- Gramelspacher, G. P., Zhou, X. H., Hanna, M. P., & Tierney, W. M. (1997). Preferences of physicians and their patients for end-of-life care. *Journal of General Internal Medicine*, 12(6), 346–351.
- Gramling, R., Sanders, M., Ladwig, S., Norton, S. A., Epstein, R., & Alexander, S. C. (2015). Goal communication in palliative care decision-making consultations. *J Pain Symptom Manage*, 50(5), 701–706. doi:10.1016/j.jpainsymman.2015.05.007
- Jordhøy, M. S., Fayers, P., Loge, J. H., Ahlner-Elmqvist, M., & Kaasa, S. (2001). Quality of life in palliative cancer care: Results from a cluster randomized trial. *Journal of Clinical Oncology*, 19(18), 3884–3894. doi:10.1200/JCO.2001.19.18.3884
- Kenny, D. T. (2004). Constructions of chronic pain in doctor–patient relationships: Bridging the communication chasm. *Patient Education and Counseling*, 52(3), 297–305. doi:10.1016/S0738-3991(03)00105-8
- Laurin, K., Fitzsimons, G. M., Finkel, E. J., Carswell, K. L., vanDellen, M. R., Hofmann, W., ... Brown, P. C. (2016). Power and the pursuit of a partner's goals. *Journal of Personality and Social Psychology*, 110(6), 840–868. doi:10.1037/pspi0000048
- Lemay Jr, E. P., Clark, M. S., & Feeney, B. C. (2007). Projection of responsiveness to needs and the construction of satisfying communal relationships. *Journal of Personality and Social Psychology*, 92(5), 834–853. doi:10.1037/0022-3514.92.5.834

- Loewenstein, G. (2005a). Hot-cold empathy gaps and medical decision making. *Health Psychology, 24*(45), 549. doi:[10.1037/0278-6133.24.4.549](https://doi.org/10.1037/0278-6133.24.4.549)
- Loewenstein, G. (2005b). Projection bias in medical decision making. *Medical Decision Making, 25*(1), 96–105. doi:[10.1177/0272989X04273799](https://doi.org/10.1177/0272989X04273799)
- Loewenstein, G., O'Donoghue, T., & Rabin, M. (2003). Projection bias in predicting future utility. *The Quarterly Journal of Economics, 118*(4), 1209–1248. doi:[10.1162/003355303322552784](https://doi.org/10.1162/003355303322552784)
- Lorenz Karl, A., Rosenfeld, K., & Wenger, N. (2007). Quality indicators for palliative and end-of-life care in vulnerable elders. *Journal of the American Geriatrics Society, 55*(s2), S318–S326. doi:[10.1111/j.1532-5415.2007.01338.x](https://doi.org/10.1111/j.1532-5415.2007.01338.x)
- Luttrell, A., Petty, R. E., & Xu, M. (2017). Replicating and fixing failed replications: The case of need for cognition and argument quality. *Journal of Experimental Social Psychology, 69*, 178–183. doi:[10.1016/j.jesp.2016.09.006](https://doi.org/10.1016/j.jesp.2016.09.006)
- Maguire, P., Walsh, S., Jeacock, J., & Kingston, R. (1999). Physical and psychological needs of patients dying from colo-rectal cancer. *Palliative Medicine, 13*(1), 45–50. doi:[10.1177/026921639901300106](https://doi.org/10.1177/026921639901300106)
- Morrison, R. S. (2013). Models of palliative care delivery in the United States. *Current Opinion in Supportive and Palliative Care, 7*(2), 201–206. doi:[10.1097/SPC.0b013e32836103e5](https://doi.org/10.1097/SPC.0b013e32836103e5)
- Nahm, E.-S., & Resnick, B. (2001). End-of-life treatment preferences among older adults. *Nursing Ethics, 8*(6), 533–543. doi:[10.1177/096973300100800607](https://doi.org/10.1177/096973300100800607)
- Narang, A. K., Wright, A. A., & Nicholas, L. H. (2015). Trends in advance care planning in patients with cancer: Results from a national longitudinal survey. *JAMA Oncology, 1*, 601–608. doi:[10.1001/jamaoncol.2015.1976](https://doi.org/10.1001/jamaoncol.2015.1976)
- Norris, W. M., Nielsen, E. L., Engelberg, R. A., & Curtis, J. R. (2005). Treatment preferences for resuscitation and critical care among homeless persons. *Chest, 127*(6), 2180–2187. doi:[10.1378/chest.127.6.2180](https://doi.org/10.1378/chest.127.6.2180)
- O'Donnell, H., Phillips, R. S., Wenger, N., Teno, J., Davis, R. B., & Hamel, M. B. (2003). Preferences for cardiopulmonary resuscitation among patients 80 years or older: The views of patients and their physicians. *Journal of the American Medical Directors Association, 4*(3), 139–144. doi:[10.1016/S1525-8610\(04\)70323-0](https://doi.org/10.1016/S1525-8610(04)70323-0)
- Omar Sultan, H., & Adam, W. (2012). Dehumanization in medicine: Causes, solutions, and functions. *Perspectives on Psychological Science, 7*(2), 176–186. doi:[10.1177/1745691611429706](https://doi.org/10.1177/1745691611429706)
- Read, D., & Loewenstein, G. (1999). Enduring pain for money: Decisions based on the perception and memory of pain. *Journal of Behavioral Decision Making, 12*(1), 1. doi:[10.1002/\(SICI\)1099-0771\(199903\)12:1<1::AID-BDM310>3.3.CO;2-M](https://doi.org/10.1002/(SICI)1099-0771(199903)12:1<1::AID-BDM310>3.3.CO;2-M)
- Richardson, K., Macleod, R., & Kent, B. (2012). A Steinian approach to an empathic understanding of hope among patients and clinicians in the culture of palliative care. *Journal of Advanced Nursing, 68*(3), 686–694. doi:[10.1111/j.1365-2648.2011.05793.x](https://doi.org/10.1111/j.1365-2648.2011.05793.x)
- Ross, L., Greene, D., & House, P. (1977). The “false consensus effect”: An egocentric bias in social perception and attribution processes. *Journal of Experimental Social Psychology, 13*(3), 279–301. doi:[https://doi.org/10.1016/0022-1031\(77\)90049-X](https://doi.org/10.1016/0022-1031(77)90049-X) doi:[10.1016/0022-1031\(77\)90049-X](https://doi.org/10.1016/0022-1031(77)90049-X)
- Sanders, J. J., Curtis, J. R., & Tulsky, J. A. (2017). Achieving goal-concordant care: A conceptual model and approach to measuring serious illness communication and its impact. *Journal of Palliative Medicine, 21*(S2), S-17–S-27. doi:[10.1089/jpm.2017.0459](https://doi.org/10.1089/jpm.2017.0459)
- Schenker, Y., Crowley-Matoka, M., Dohan, D., Rabow, M. W., Smith, C. B., White, D. B., ... Arnold, R. M. (2014). Oncologist factors that influence referrals to subspecialty palliative care clinics. *Journal of Oncology Practice, 10*(2), e37–e44. doi:[10.1200/JOP.2013.001130](https://doi.org/10.1200/JOP.2013.001130)
- Schneiderman, L. J., Kaplan, R. M., Pearlman, R. A., & Teetzel, H. (1993). Do physicians' preferences for life-sustaining treatment predict their patients' preferences for life-sustaining treatment. *Journal of Clinical Ethics, 4*(1), 28–32.
- Schneiderman, L. J., Kaplan, R. M., Rosenberg, E., & Teetzel, H. (1997). Do physicians' own preferences for life-sustaining treatment influence their perceptions of patients' preferences? A second look. *Cambridge Quarterly of Healthcare Ethics, 6*(2), 131–137. doi:[10.1017/S0963180100007751](https://doi.org/10.1017/S0963180100007751)

- Seckler, A. B., Meier, D. E., Mulvihill, M., & Paris, B. E. C. (1991). Substituted judgment: How accurate are proxy predictions? *Annals of Internal Medicine*, *115*(2), 92–98. doi:[10.7326/0003-4819-115-2-92](https://doi.org/10.7326/0003-4819-115-2-92)
- Singer, A. E., Goebel, J. R., Kim, Y. S., Dy, S. M., Ahluwalia, S. C., Clifford, M., ... Lorenz, K. A. (2016). Populations and interventions for palliative and end-of-life care: A systematic review. *Journal of Palliative Medicine*, *19*(9), 995–1008. doi:[10.1089/jpm.2015.0367](https://doi.org/10.1089/jpm.2015.0367)
- Slevin, M. L., Stubbs, L., Plant, H. J., Wilson, P., Gregory, W. M., Armes, P. J., & Downer, S. M. (1990). Attitudes to chemotherapy: Comparing views of patients with cancer with those of doctors, nurses, and general public. *British Medical Journal*, *300*(6737), 1458. doi:[10.1136/bmj.300.6737.1458](https://doi.org/10.1136/bmj.300.6737.1458)
- Smith, C., Nelson, J., Berman, A., Powell, C., Fleischman, J., Salazar-Schicchi, J., & Wisnivesky, J. (2011). Lung cancer physicians' referral practices for palliative care consultation. *Annals of Oncology*, *23*(2), 382–387. doi:[10.1093/annonc/mdr345](https://doi.org/10.1093/annonc/mdr345)
- Steinhauser, K. E., Christakis, N. A., Clipp, E. C., McNeilly, M., McIntyre, L., & Tulsky, J. A. (2000). Factors considered important at the end of life by patients, family, physicians, and other care providers. *JAMA*, *284*(19), 2476–2482. doi:[10.1001/jama.284.19.2476](https://doi.org/10.1001/jama.284.19.2476)
- Stephens, J. D. W., Neal, D. S., & Overman, A. A. (2014). Closing the empathy gap in college students' judgments of end-of-life tradeoffs. *International Journal of Psychology*, *49*(4), 313–317. doi:[10.1002/ijop.12025](https://doi.org/10.1002/ijop.12025)
- Stiel, S., Bertram, L., Neuhaus, S., Nauck, F., Ostgathe, C., Elsner, F., & Radbruch, L. (2010). Evaluation and comparison of two prognostic scores and the physicians' estimate of survival in terminally ill patients. *Supportive Care in Cancer*, *18*(1), 43–49. doi:[10.1007/s00520-009-0628-0](https://doi.org/10.1007/s00520-009-0628-0)
- Taylor, D. H., Bull, J., Zhong, X., Samsa, G., & Abernethy, A. P. (2013). The effect of palliative care on patient functioning. *Journal of Palliative Medicine*, *16*(10), 1227–1231. doi:[10.1089/jpm.2013.0040](https://doi.org/10.1089/jpm.2013.0040)
- Temel, J. S., Greer, J. A., Muzikansky, A., Gallagher, E. R., Admane, S., Jackson, V. A., ... Lynch, T. J. (2010). Early palliative care for patients with metastatic non-small-cell lung cancer. *New England Journal of Medicine*, *363*(8), 733–742. doi:[10.1056/NEJMoa1000678](https://doi.org/10.1056/NEJMoa1000678)
- Teno, J. M., Fisher, E., Hamel, M. B., Wu, A. W., Murphy, D. J., Wenger, N. S., ... Harrell, F. E. (2000). Decision-making and outcomes of prolonged ICU stays in seriously ill patients. *Journal of the American Geriatrics Society*, *48*(S1), S70–S74.
- Teno, J. M., Hakim, R. B., Knaus, W. A., Wenger, N. S., Phillips, R. S., Wu, A. W., ... Lynn, J. (1995). Preferences for cardiopulmonary resuscitation. *Journal of General Internal Medicine*, *10*(4), 179–186. doi:[10.1007/BF02600252](https://doi.org/10.1007/BF02600252)
- Tomlinson, D., Bartels, U., Gammon, J., Hinds, P. S., Volpe, J., Bouffet, E., ... Sung, L. (2011). Chemotherapy versus supportive care alone in pediatric palliative care for cancer: Comparing the preferences of parents and health care professionals. *CMAJ*, *183*(17), E1252–E1258. doi:[10.1503/cmaj.110392](https://doi.org/10.1503/cmaj.110392)
- Tulsky, J. A. (2015). Improving quality of care for serious illness: Findings and recommendations of the institute of medicine report on dying in America. *JAMA Internal Medicine*, *175*(5), 840–841. doi:[10.1001/jamainternmed.2014.8425](https://doi.org/10.1001/jamainternmed.2014.8425)
- Turnbull, A. E., & Hartog, C. S. (2017). Goal-concordant care in the ICU: A conceptual framework for future research. *Intensive Care Medicine*, *43*(12), 1847–1849. doi:[10.1007/s00134-017-4873-2](https://doi.org/10.1007/s00134-017-4873-2)
- Uhlmann, R. F., Pearlman, R. A., & Cain, K. C. (1989). Understanding of elderly patients' resuscitation preferences by physicians and nurses. *Western Journal of Medicine*, *150*(6), 705.
- Upshur, C. C., Bacigalupe, G., & Luckmann, R. (2010). "They don't want anything to do with you": Patient views of primary care management of chronic pain". *Pain Medicine*, *11*(12), 1791–1798. doi:[10.1111/j.1526-4637.2010.00960.x](https://doi.org/10.1111/j.1526-4637.2010.00960.x)
- Van Boven, L., & Loewenstein, G. (2003). Social projection of transient drive states. *Personality and Social Psychology Bulletin*, *29*(9), 1159–1168. doi:[10.1177/0146167203254597](https://doi.org/10.1177/0146167203254597)
- Wentlandt, K., Krzyzanowska, M. K., Swami, N., Rodin, G. M., Le, L. W., & Zimmermann, C. (2012). Referral practices of oncologists to specialized palliative care. *Journal of Clinical Oncology*, *30*(35), 4380–4386. doi:[10.1200/JCO.2012.44.0248](https://doi.org/10.1200/JCO.2012.44.0248)

- Werner, A., & Malterud, K. (2003). It is hard work behaving as a credible patient: Encounters between women with chronic pain and their doctors. *Social Science & Medicine*, 57(8), 1409–1419. doi:[10.1016/S0277-9536\(02\)00520-8](https://doi.org/10.1016/S0277-9536(02)00520-8)
- Wright, A. A., Hatfield, L. A., Earle, C. C., & Keating, N. L. (2014). End-of-life care for older patients with ovarian cancer is intensive despite high rates of hospice use. *Journal of Clinical Oncology*, 32(31), 3534–3539. doi:[10.1200/JCO.2014.55.5383](https://doi.org/10.1200/JCO.2014.55.5383)
- Wright, A. A., Zhang, B., Ray, A., Mack, J. W., Trice, E., Balboni, T., ... Mitchell, S. L. (2008). Associations between end-of-life discussions, patient mental health, medical care near death, and caregiver bereavement adjustment. *JAMA*, 300(14), 1665–1673. doi:[10.1001/jama.300.14.1665](https://doi.org/10.1001/jama.300.14.1665)
- Zhang, B., Wright, A. A., Huskamp, H. A., Nilsson, M. E., Maciejewski, M. L., Earle, C. C., ... Block, S. D. (2009). Health care costs in the last week of life: Associations with end-of-life conversations. *Archives of Internal Medicine*, 169(5), 480–488. doi:[10.1001/archinternmed.2008.587](https://doi.org/10.1001/archinternmed.2008.587)