



Published in final edited form as:

SSM Qual Res Health. 2022 December ; 2: . doi:10.1016/j.ssmqr.2022.100182.

Prudence in end-of-life decision making: A virtue-based analysis of physician communication with patients and surrogates

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Abstract

Despite significant improvements in end-of-life care over several decades, belated hospice referrals and hospital staffing patterns make challenging end-of-life conversations between strangers unsurprising, especially when the interaction is time-sensitive. Understanding how physicians perform under these circumstances is relevant to patient quality and medical education. This study is a secondary analysis of transcripts from a simulation that placed 88 intensivists, hospitalists, and ED physicians in the setting of responding to a nurse's call to evaluate a floor patient for impending respiratory collapse. A philosophical account of prudence guided the analytical approach and was operationalized through behavior-based and exemplar-based qualitative coding strategies. Exemplary performances and specific behaviors were then compared with preferred outcomes. Results indicate that exemplary performance correlated with a cluster of 3 behaviors that predicted the desired outcomes, but did not determine them: (1) directly affirming the likelihood that the patient will die in the near term; (2) explicitly soliciting the patient's preferences for care; and (3) asking what other family and friends should be involved.

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Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

The current study implies that educational initiatives aimed at improving end-of-life conversations should expose clinicians both to technical competencies and to the virtues required to employ these competencies well.

1. Introduction

Conversations about end-of-life care between a physician, a patient, and the patient's surrogate are potentially challenging for a physician who knows their patient well: the physician must communicate unwelcome medical information and turn to questions that many patients and their surrogates are reluctant to consider even when death is a remote possibility, to say nothing of an imminent reality. The difficulty is only amplified when the physician is meeting the patient and the patient's surrogate for the first time during an acute crisis near the end of a terminal illness.

Despite significant improvements in end-of-life care over the last thirty years, delayed hospice referrals and hospital staffing patterns make end-of-life conversations between "strangers" unsurprising (Baggs et al., 2012; Chaitin et al., 2003; Grudzen et al., 2012). Nonetheless, these extemporaneous conversations retain their fundamental importance, both because they must communicate an adequate understanding of the medical situation and because they are the means of developing a practical plan of action that is compatible with the patient's preferences.

The results of a 1999 survey about end-of-life medical care, which included 340 patients and 332 bereaved family members, reveal the cohort cared a great deal about the attributes of the physician in addition to "knowing what to expect about one's physical condition":

1. "hav[ing] someone who will listen,"
2. being able to "trust one's physician,"
3. "hav[ing] a physician with whom one can discuss fears," and
4. "know[ing] that one's physician is comfortable talking about death and dying"

were all rated "very important at end of life" by more than 80 per cent of surveyed patients and bereaved family members (Steinhauser et al., 2000). Although they can be described succinctly, the qualities of good end-of-life conversations are manifest only in the physician's completion of a complex series of actions, and the physician is only successful to the extent that the patient and family evaluate the physician to be so. Characteristics of successful end-of-life interactions between physicians, patients, and patient family, such as attentiveness, trustworthiness, empathy, and candor, can be set out in list form, but cannot be realized by ticking off checkboxes. Accordingly, end-of-life conversations between physicians and their patients demand analysis that reflects this complex and value-laden nature.

Physicians are well aware that knowing the right outcome for a patient is not enough to secure it. Physicians are also well aware that because each patient is different and (what is more important) each patient is a person, no routinized list of actions will take patients

(even those with similar clinical presentations) automatically from their present condition to the right end. It is insufficient for a physician to know what needs to be accomplished, nor enough additionally to know the range of options for accomplishing it. The physician must be proficient at selecting the *means* that comport, practically and morally, with the ends to be achieved. Prudence is the virtue traditionally ascribed to those who are good in precisely this way, in choosing means that are practically and morally suited to the intended goal.

Because prudence is the virtue at the heart of ethical action, this study of physician prudence is relevant both to physician practice and to theorizing about virtue's role in medical ethics. Those interested in improving physician practice at the end of patients' lives will be interested in actions and habits that help conversations and shared decision-making go well, rather than poorly. Those interested in physician virtue will be concerned with the extent to which physicians exhibit prudence in their conversations with patients and patient surrogates at the end of life. While the language of virtue maintains a steady presence in medical ethics, many of these references subsume virtue wholly under other paradigms that are not substantially informed by virtue ethics and theories of virtue. Moral philosophers such as Philippa Foot, Alisdair MacIntyre, and Bernard Williams have proposed that virtue ethics can serve as a valuable corrective to prevailing modes of philosophical moral analysis (Foot, 2001; MacIntyre, 2007; Williams, 1986). Medical ethicists including Edmund Pellegrino and David Thomasma similarly have urged that medical ethics is deficient in the absence of a robust notion of virtue (Pellegrino & Thomasma, 1993). Prudence as we define and analyze it here is independent of casuist or principlist frames and illuminates aspects of the patient—physician encounter that are less prominent within those dominant framings of medical ethics.

Because the virtue of prudence is made known by the actions that flow from it, but is finally a characteristic of persons rather than actions, we combined a quantitative analytic approach with a more holistic qualitative one. The quantitative approach allows us to isolate specific actions associated with prudence in end-of-life conversations. Because prudence unsurprisingly does not yield completely to such reduction, the qualitative approach consists in evaluation of end-of-life conversations as a whole.¹ Evaluation of the conversations as integrated wholes, which as wholes are characteristic of prudence (or not), distinguishes this study from others using the same base dataset (Barnato et al., 2008; Barnato et al. 2011; Barnato et al. 2014; Morales, Murphy, et al., 2021; Morales, Schultz, et al., 2021).

2. Methods

The study uses a philosophically-derived standard of prudence (see section 3 “Theory” below) to analyze simulated physician–patient clinical interviews, triangulating the application of prudence with coded behaviors and the preferred outcomes of the simulation. Simulated encounters between physicians and patients accompanied by a surrogate were the basis of this investigation. The simulations took place at three medical centers in two

¹Although Kotzee, Paton, and Conroy's approach to developing their own observation-based account of Aristotelian prudence focuses on physician opinion and introspection, rather than physician–patient interactions, we share their concern that prudence not be reduced to mere rule-following, even if particular actions are credibly associated with prudence, as we argue here (Kotzee et al., 2016; Conroy et al., 2021).

states; researchers subsequently transcribed these simulated conversations verbatim. These verbatim transcripts constitute the materials analyzed in this study. Researchers originally designed these simulations to address investigators' hypotheses on different predictors of physicians' recommendations of intensive care at the end of life (Barnato et al., 2011; Barnato et al., 2014). In the context of the present study, a secondary analysis of the original materials, the simulations represent interviews in which simulated patients remained essentially consistent from simulation to simulation, so that the form of the physicians' participation was the major variable, and in which the correct or intended clinical outcome was predetermined. First, we evaluated these simulations against a definition of the virtue of prudence. Second, we reviewed the simulations that exemplified prudence in order to identify common features. Third, we compared these findings from the first two steps against a codebook that identified content-specific behaviors. Independent coders established inter-rater reliability with coding occurring at the level of individual units of speech.²

2.1. Physician participants

As described previously (Barnato et al., 2008; Barnato et al., 2011; Barnato et al., 2014), participants were recruited at three academic medical centers in two different states. Eligible participants included attending physicians board-certified in emergency medicine, critical care, and internal medicine (hospitalists), except at one institution where critical care nurse practitioners able to admit patients to the intensive care unit were included. All participants had at least three years' employment at the institution and two or more months per year of clinical service. Asian, Black, Hispanic, and non-Hispanic White physicians were represented in the sample. Interviews involving eighty-eight physicians are included in the current study's data.

2.2. Simulation

This summary emphasizes those details of the simulation directly relevant to the present study; the simulation is described in greater detail elsewhere (Barnato et al., 2008; Barnato et al., 2011). The eighty-eight physician-patient interviews involved two clinically-similar patients. The first patient was a seventy-eight-year-old male with terminal, metastatic gastric cancer who presented with a chief complaint of dyspnea. The second patient was a seventy-six-year-old male with terminal, metastatic pancreatic cancer who presented with a chief complaint of abdominal pain. The scenarios were designed around comparable differential diagnoses: probable cancer progression with possible infection (pneumonia or ascending cholangitis) as an alternative or coincidental explanation of the patient's symptoms indicative of septic shock leading to hypotension, tachycardia, and hypoxia. Both patients were accompanied by their primary family caregiver: the seventy-eight-year-old male was accompanied by his wife; the seventy-six-year-old male was accompanied by his sister. Both patients had a child in a geographically-distant location who remained involved in the patient's life. Both patients were Christians connected with a local pastor or priest.

²Because this is a secondary analysis of the original study, neither the participants, nor the initial researchers, nor the independent coders were aware of the line of analysis adopted here when conducting the initial study.

The setting of the interview varied between an emergency department and an inpatient unit, depending on physician specialty. The physician participants were called to the simulated patient's bed approximately eight to twelve hours after the patient's arrival to evaluate his deteriorating clinical status: the patient was suffering tachypnea, tachycardia, hypotension, and hypoxia. Both pairs of simulated patients and caregivers were scripted with the patient's firm and considered preference against both intubation and cardio-pulmonary resuscitation and would offer this in response to the physician participant's questioning, though neither the patient nor surrogate would volunteer this preference unprompted. If asked, the patient or surrogate would reveal that the patient's oncologist had told him that his cancer was widely metastatic, that the patient was not a candidate for further chemotherapy, and that he was likely to die within six months.³ As designed, the simulation's predetermined correct outcome was to honor the patient's firm and considered preferences by not intubating the patient and organizing a plan of care emphasizing the patient's comfort. The clinical outcome least consistent with the patient's preferences was intubation and escalation of therapy.

2.3. Data analysis

We employed a four-step process to identify prudent physician conversations. First, we developed a codebook focused on breaking down and analyzing the transcripts in terms of speakers, actions, and action types related to effective and ineffective behaviors with regard to end-of-life decision-making by physicians. The codebook consisted of actor codes (e.g., patient, physician, nurse); action codes (e.g., asking a question, challenging, telling information, recommending); and content codes (e.g., prognostic information, diagnostic information, code status, goals of care). Qualitative analysts then used ATLAS.ti⁴ to apply the codebook to de-identified transcripts at the level of the sentence. To each sentence, analysts assigned one actor code, one action code, and as many content codes as applicable to the content of the sentence. Coding was done in pairs with adjudication by the lead coder.

Second, we again reviewed each of the transcripts, this time focusing on the conversation as a whole, in order to identify the simulated conversations that satisfied the three philosophically-derived characteristics of prudence detailed in section 3 "Theory" below. The reviewers in this second step were independent of the coders in the first step. The reviewers directly verified the first characteristic of prudence, achieving the correct end (emphasis on comfort and no intubation). We used the qualitative method of continuous comparison to identify transcripts that possessed the second and third characteristics, whose initial definitions were more formal than substantive. When a conversation already known to achieve the correct end also seemed to do so purposefully and by means ethically consistent with the end result, we compared that conversation with previously-reviewed conversations that we did not find to exhibit prudence. We collected the conversations that were demonstrably more purposeful in achieving the correct outcome and more conscientious in considering the patient's broader personal life while doing so than were

³The patient's ability to make his own decisions, his informed and consistent preferences for his care, and his clearly-established prognosis prior to the encounter eliminated several features that frequently complicate real end-of-life conversations in the acute care environment. For a recent review of several of these issues and others, see (Gao et al., 2021).

⁴ATLAS.ti Scientific Software Development GmbH, ATLAS.ti version 7 [Computer software].

non-prudent conversations. As this preliminary set grew, we evaluated further transcripts against the positive standards set by potentially prudent conversations as well as against the negative standards set by non-prudent conversations. After we had reviewed all the transcripts, we compared the members of the set of potentially prudent conversations against each other for purposefulness and for use of means consistent with the correct ends. We removed from the set of potentially prudent conversations those transcripts that fell short of the other members of the set, leaving a final set of prudent conversations.

Third, we reviewed the members of the final set of prudent conversations in order to identify concrete actions that exhibited purposefulness and ethical consistency of the means with the correct ends, the second and third requirements of prudence as we defined it.

Fourth, we examined the codebook created in step one for codes analogous to the concrete actions we identified in the third step. We then searched all eighty-eight transcripts for the occurrence of these codes to ensure that we were fairly attributing the concrete characteristics of prudent conversations in the third step. Cross-referencing the actions from the third step with the codes from the first one diminished both the likelihood that desiderata for prudence would go unidentified in those conversations not initially identified as prudent and the likelihood that defects would go unnoticed in conversations initially identified as prudent.

Once we had identified the concrete characteristics in the final set of prudent conversations and the associated codes from the codebook, we exported a table from ATLAS.ti that listed the codes that most closely resembled the desired and undesired characteristics for each interview. We then manually compared the results from this table to our categorization of the conversation in the second step.

2.4. Ethics

The studies were funded by the National Institutes of Health and reviewed and approved by the University of Pittsburgh IRB and the IRBs governing the other two other academic medical center sites. De-identified data were made available for the purpose of this analysis pursuant to a Data Use Agreement between the University of Pittsburgh (data steward) and Vanderbilt University. All secondary analyses were reviewed and approved by the University of Pittsburgh IRB. Data sharing for this secondary study was approved and overseen by arrangement between the University of Pittsburgh and Vanderbilt University.

3. Theory

Ascriptions of prudence in clinical medicine and medical education inevitably depend in part on how prudence is defined. This study endorses a constrained definition of prudence drawn primarily from Aristotle. The concept of prudence predates Aristotle, but we adopt the broad strokes of his description here. In his *Nicomachean Ethics*, Aristotle describes the individual virtues as habitual excellences of a person's choices in some particular domain of application (Aristotle, 2002: 1106b-1107a). For example, Aristotle characterizes courage as excellence in choosing how to confront things that are legitimately fearful, an excellence consistent across time and context (Aristotle, 2002: 1115a-1115b). Aristotle's account of

phronesis — commonly rendered in English as prudence, practical reason, or practical wisdom — makes *phronesis* dependent upon the other specific virtues and at the same time fundamental to the excellent exercise of those other virtues. Aristotle distinguishes prudence from *deinotes* (“cleverness”), the ability to reason effectively from ends to the means that can achieve those ends. A clever person is adept at choosing what ought to be done in order to achieve a particular end that they have, either one they have for themselves or set to them by someone else. Prudence is similar to cleverness, but surpasses cleverness by adding the further requirement that the only means and ends acceptable to prudence are the means and ends approved by the other particular virtues. According to Aristotle, a person who is adept at choosing means well-suited to particular ends, but who is not otherwise virtuous, is merely clever, while someone who is both adept at choosing means well-suited to ends and also otherwise virtuous possesses the virtue of prudence. Cleverness is, on Aristotle’s account, merely a capacity, but prudence is a virtue, in part because its means and ends are always virtuous by definition. Aristotelian prudence, then, is the virtue by which virtuous people operationalize praiseworthy goals by devising or realizing the praiseworthy means that will achieve said goals (Aristotle, 2002: 1144a). In most theories of virtue that trace their roots to Aristotle, prudence is the virtue that organizes virtuous agents’ practical activities, and as such is indispensable to moral life.

There are difficulties attendant upon any attribution of prudence to a particular situation, but we have been able to bracket two major points of debate in the context of the simulated clinical interviews. First, virtue ethicists dispute which means and ends are approved by the virtues, and consequently virtue ethicists dispute the ends for which prudence should apportion means. But the specific medical facts and patient preferences underlying the simulated conversations in the present study clarify which ends are appropriate. The advanced state of the patient’s terminal disease and the patient’s preference not to be intubated together strongly suggest a plan of care that emphasizes comfort over a probably futile application of invasive mechanical ventilation. Thus there is little room for debate in this scenario about the ethically-appropriate end for the simulated patient’s care so long as the capacitated patient’s preferences for his care (within the limits of medical appropriateness) are regarded as ethically dispositive. Some in the field of medical ethics would debate this in actual clinical medicine, but within the simulation, comfort-oriented care is the uncontroversial right end for the simulation, and as such excellence in reasoning to this end is more likely prudence than mere cleverness.

The second major point of contention with regard to prudence stems from Aristotle’s argument that prudence is the site of the unity of the virtues. On Aristotle’s account, in order to genuinely possess any one virtue, one must possess all the other virtues as well, and prudence is supposed to be the keystone of this comprehensive virtuousness and, in fact, the virtue that helps operationalize all the others (Aristotle, 2002: 1145a; Wood, 2014; Conroy et al., 2021). The particularity of these conversations oblige us to at least partially set aside some questions about whether clinicians must possess all virtues in order to truly have any of them. It would be hasty to ascribe possession of one or more virtues to a physician participant who is unknown outside of the snapshot provided in the transcribed simulation: virtues are expected to be comparatively reliable over time and across situations (Hursthouse, 1999; Doris, 2002; Adams, 2006), and not all virtues will necessarily be

equally apparent during the circumstances played out on the simulation. It is nevertheless possible to identify conversations that exhibit characteristics of prudence and other relevant virtues that physicians might strive to emulate.

A third theoretical question about prudence that we cannot settle in the context of this study is whether prudence is the sort of habit which consists in a mean between deficiency and excess. Many Aristotelian virtues are just this way: courage is a mean between cowardice and rashness; temperance is a mean between crude insensitivity to pleasure and licentiousness (Aristotle, 2002). Conroy and colleagues suggest that prudence lies between a deficiency in which the imprudent person “applies purely theory or just follows guidelines” and an excess in which the imprudent person has “seen it all/know[s] it all/can deal with anything” (Conroy et al., 2021: 5). But other accounts of prudence in the broadly Aristotelian tradition do not think it possible to be excessively prudent, locating all the vices opposed to prudence (such as foolishness and negligence) on the side of deficiency while defining apparently excessive “prudence” as counterfeit or otherwise specious (Wood, 2014). Our analysis is compatible with either view: at the outset, we neither discounted the possibility of finding, nor necessarily expected to find, instances of excessively prudent (or at least seemingly prudent) physician engagement.

4. Results

4.1. Step one: qualitative coding

As described elsewhere, the final codebook included six actor codes, thirteen action codes, and sixty-one content codes applied to transcripts from all eighty-eight simulations.

4.2. Step two: Identifying exemplars of prudence

Sorting the transcripts on the basis of clinical outcome yielded sixty-five simulations in which the pre-determined correct outcomes, a plan of care emphasizing the patient’s comfort and no intubation, were achieved. Of these sixty-five, we collected only ten in the preliminary set of potentially prudent conversations. Of these ten, we excluded five following comparison within the set. We based all of these exclusions on the third criterion of prudence enumerated above: a perceived lack of purposefulness on the part of the clinician when compared to the better examples of prudent conversations in the set. This left five simulated conversations that were good examples of prudent end-of-life physician–patient interactions. Although separate analysis of the same dataset identified variations in practice among the physician specialties included in the simulation (Morales, Schultz, et al., 2021), the set of five prudent conversations included physician participants from all three medical specialties and all three academic medical centers sampled. The average age of these five participants was thirty-five point eight years (range thirty to forty years); they had been out of medical school for an average of nine point eight years (range four to fourteen years). All five identified as female.⁵ These prudent conversations’ length ranged from under one thousand words to over twenty-six hundred; the average was approximately

⁵Our sample size is too small to draw any rigorous conclusions from the fact that all five physicians identified as female. Reviewers were blinded to the physicians’ sex during our review of the transcripts. Some analysis suggests that women physicians’ communication styles are different from those of male physicians (Roter et al., 2002; Tsugawa et al., 2016).

fifteen hundred words. The prudent conversations' length was neither exceptionally short nor exceptionally long in comparison to the conversations considered as a whole, which ranged from fewer than seven hundred words to over three thousand words and averaged approximately eighteen hundred words.

4.3. Step three: Identifying concrete characteristics of prudent conversations from step two

Review of the set of five prudent conversations identified three concrete characteristics held in common in addition to achieving the correct outcome and doing so purposefully. Table 1 summarizes these features with examples.

The first common feature was that the physician clearly communicated the terminal nature of the prognosis to the patient in a direct way, rather than obliquely. For example, one physician told the patient and his surrogate, "We cannot change the overall outcome. You understand that eventually it will be [the] situation where you will die of your cancer." In other instances physicians affirmed the patient's surrogate when the surrogate asked if the patient was going to die. In all cases the physician directly acknowledged that the patient was likely to die.

The second feature consistent across the five prudent conversations was that the physician explicitly elicited the patient's preferences for intubation and end-of-life care. All the physician participants whose conversations were included in the final set of prudent conversations asked about patient preferences in fairly specific terms. One physician asked the simulated patient and his surrogate, "Did you have any specific ideas about how things would proceed or did anyone talk to you about treatments, for example putting you on a respirator, on a ventilator, doing treatments that will not treat the underlying process." Another physician prefaced the central question about life support with over two hundred words of explanation, but asked the central question itself in straightforward terms: "If he had an irreversible medical condition and it looked like the doctors wouldn't be able to save him. Would he still want to be put on life support? Or would he simply want to be made comfortable?"

The third feature was that the physician enquired about other social support for the patient beyond the surrogate present in the exam room; this led to information about the patient's geographically-remote child, the local minister, or both. In some cases this was as simple as asking, "Are there any other family members?" and offering to contact them. In other cases, it extended to revisiting the question later in the conversation to make sure that clinicians had phone numbers to reach those others. Apart from interventions on the physical symptoms of pain (e.g., administering morphine), this was the means the five prudent conversations had in common to try to address the patient's need to be treated as a person, not merely a patient, at the end of life.

4.4. Step four: comparison of concrete actions from step three to codes from codebook in step one

To determine whether a conversation had unequivocally satisfied the first requirement for prudence, we tracked the codes for the speech-acts associated with a physician's order that

the patient be intubated and with a physician's order that the patient not be intubated. We measured satisfaction of the second requirement, purposefulness, by consulting multiple codes associated with goals of care in the codebook. The codebook included a code that was assigned to physicians' recommendation of interventions intended to restore the patient to his pre-crisis state of health. Other codes identified physician speech-acts that instead recommended limited interventions or strictly palliative interventions. Homogeneity among these codes was used as a proxy for purposefulness. For purposes of comparison with the codebook, a physician participant was understood to have made purposeful progress toward the correct end when the physician participant consistently recommended limited or strictly palliative interventions. For purposes of comparison with the codebook, a physician participant was not credited with purposeful progress toward the correct end when the goals-of-care codes were heterogeneous, reflecting conversations in which physicians' recommendations included both higher-intensity interventions and limited or purely palliative interventions.

As discussed above, three different observable types of speech-acts were associated with the third requirement of prudence, choosing means that were ethically consistent with the correct end. Three different codes from the codebook were identified as analogues of these three acts. The codebook included a code for "Healing/Compassionate Care," by which the coders meant an acknowledgment on the part of the clinician that other support, such as family or clergy presence, could contribute to the patient's well-being, even if it could not reverse the patient's impending respiratory collapse. This "Healing/Compassionate Care" was the best available analogue in the codebook for the practice of offering to involve family or spiritual support. The codebook included a code for patient or surrogate discussion of the patient's own preferences for his care. By the scenario's design, neither the patient nor the surrogate would volunteer the patient's preferences uninvited. If such discussion arose and was coded in the interview, it would be in part a result of the clinician's soliciting it, so this code was used as a proxy for physician enquiry into patient preferences, the second act common across all five prudent conversations. The coders had a direct analogue to the finding that the prudent physician would explicitly advise the patient and his surrogate that the patient was likely dying. The coding flagged speech acts in which the physician said, using some variation of "death" or "to die," that the patient was likely dying. A separate code existed for more oblique references to death, and these circumlocutions were not used as a marker for prudence. Fig. 1 below summarizes the method and results of its implementation. Fig. 2⁶ below depicts the distribution of the eighty-eight conversations across the five necessary conditions as interpreted through the codes in the codebook.

The code table generated in ATLAS.ti and manually analyzed revealed that the five interviews previously identified as prudent were the only five interviews in which the coders had identified all the desired analogous codes and none of the undesired codes. This confirmed that we had fairly attributed desirable and undesirable characteristics in the second step: the independent coders had identified these same desirable characteristics and the absence of the undesired characteristics in the five interviews. The table also

⁶The layout of Fig. 2 is attributable to (Grünbaum, 1975).

identified and enabled further review of interviews that had most, but not all, of the desired characteristics. Of note, eleven conversations had all the relevant code analogues to the requirements set out for prudence apart from achieving the correct end unequivocally: they had the code analogues for purposefulness, direct acknowledgment of the patient's terminal diagnosis, the physician's explicit request for the patient's preferences, and the physician's offer to connect the patient to the patient's wider social support, but did not ensure the patient's preferences would be honored. These eleven conversations are discussed under "Near Misses" below.

5. Discussion

5.1. Prudent end-of-life conversations

Prudent actions are those that are well-apportioned to the morally-excellent ends set by the other virtues relevant to the situation in which a virtuous person finds herself (Aristotle, 2002: 1144b). Prudent action is thus contextually specific and impossible to define "in general". Yet because the parameters of the simulation were predetermined, we are able to specify with some precision what prudence entails in this context. For the purposes of this study, prudent clinical interviews had three core characteristics. First, the physician participant who acted prudently arrived at what the simulation had predetermined to be the correct end (i.e., no intubation or escalation of care). Second, the physician participant who acted prudently achieved the correct end deliberately and purposefully, rather than accidentally or haphazardly. Third, the physician participant who acted prudently utilized means that were ethically consistent with the ends to be achieved, which were ultimately respect for the patient's preferences and treating the patient as a person with a life and values beyond the medical context.⁷

The five prudent interviews all satisfied these necessary conditions specified for prudence. The first requirement, achieving the right end, is inseparable from prudence, but it is far from identical with it. Physicians may stumble into plans of care that respect patient preferences, but this subjects the outcome to undesirable randomness that imperils patient preferences. Physicians are trained to solicit patient preferences, but these interviews reflect the fact that even experienced clinicians (even in the comparatively low-stress environment of a simulation) may form their recommendations prior to consulting a patient's preferences. In some cases this is uncontroversial, as with a patient admitted with massive traumatic hemorrhage. However, the present analysis underscores the importance of soliciting patient preferences before forming (or at least before stating) a plan of care. This would come as no surprise to theorists of shared decision making in the healthcare context, a framework of physician-patient communication that is distinguished from other frameworks in part by its emphasis on soliciting patients' broader preferences and values in order to conform healthcare decision making to those preferences and values (Charles et al., 1997; Makoul & Clayman, 2006). To take one prominent, specific example, the Calgary-Cambridge model of physician-patient communication advises physicians to elicit the patient's perspective on

⁷Though the circumstances of the simulation are too specific to admit broad claims about the unity of *all* the virtues in prudence (see Section 3 "Theory"), it is worth noting that the two elements of the third core characteristic, utilizing means ethically consistent with the end, could be described in terms of other virtues: respect and humanity.

their illness ahead even of provision of the physician's detailed exposition of the medical facts of the case and well before the physician and patient develop a plan consistent with the patient's preferences and understanding (Kurtz et al., 2003).

Within the domain of healthcare ethics, we are not the first to suggest that learning patient's preferences for their care should be regarded as integral to prudence in clinical medicine (Kaldjian, 2010). In the present study, soliciting patient preferences before articulating the plan of care resulted in clinical interviews that were conspicuously more coherent and orderly, another commonly-accepted characteristic of prudence. Some studies have suggested that the course of specific patients' end-of-life care may be influenced in statistically-significant ways by numerous factors with no relationship to the patient's own preferences for their care, including the particular identities of the physicians involved (Garland & Connors, 2007) and bed availability (Garrouste-Orgias et al., 2013). Although our results echo these other studies in suggesting that a patient's stated preference is not in itself dispositive, it was an important common feature to the prudent conversations we identified; a consistent policy of soliciting patient preferences seems likely to improve the patient's chances of seeing those preferences honored (Garrouste-Orgias et al., 2013).

The conversations that were included in the final set of five prudent conversations solicited patient preferences in different ways, suggesting that the process need not be formulaic, merely consistent. Some physicians, after confirming that the patient was able to follow along, spoke primarily with the patient's surrogate (seeking confirmation from the patient's surrogate when appropriate), while others spoke primarily with the patient himself. It is the part of prudence to ensure that these preferences are elicited, but there are multiple ways of accomplishing this.

The five prudent interviews differed in other respects as well. The conversations varied considerably in length. The means by which these physicians gathered and verified clinical information also varied. Physician A reviewed the information provided to simulation participants and sought confirmation from the patient and surrogate. Physician B reviewed this information with more open-ended questions. To the extent that it can be assessed from transcripts, the general tenor of the prudent interviews differed from conversation to conversation. Physician C did not linger over the patient's surrogate's emotional well-being, while physician D made explicit efforts to comfort the surrogate. The extent to which the physicians dealt with the particulars of the patient's medical situation varied. Physicians A and E explained their reasoning in comparative detail, even down to explaining the rationale for administering morphine to abate air hunger. The other three conversations tended to not cover medical reasoning in as great of detail.

Reasonable people might differ over whether it is better to rely on the patient and surrogate to volunteer the relevant history or to lead them through it based on the physician's own chart review. But these differences did not affect the physicians' ability to arrive, with the patient and surrogate, at the correct result for the shared decision-making process, and to do so in a way that respected the patient and acknowledged his personhood beyond his patient status at the end of his life.

These prudent interviews were, indeed, good examples of prudence as defined, but they were not perfect. None of the prudent conversations – and none of the other conversations – would fit a textbook account of ideal shared decision making; none were in danger of seeming excessively prudent. Physician A stumbled over the first attempt to elicit the patient’s preferences concerning intubation for mechanical ventilation, to the point that the patient’s surrogate bluntly replied, “What are you asking?” But rather than growing flustered or changing the topic, physician A reframed the question about intubation and was able to elicit the patient’s preference against intubation. Physician D, though she never recommended or ordered transfer to the intensive care unit, did indicate that this would typically be the response for persons short of breath prior to exploring the patient’s cancer diagnosis with the patient and surrogate.

The differences and imperfections in these interviews are consistent with what one would expect of good physicians reasoning around end-of-life discussions if that reasoning is well-characterized by the virtue of prudence, as opposed to securing the desired outcome by questionable means (e.g., paternalistic assertion of the physician’s own values) or fulfilling a set of obligations without contextualizing them (e.g., through crass application of a best practice algorithm or checklist). The same virtue may be exercised in different ways depending on agent and context, and a virtuous actor is still a human being, and thus not perfect. Despite this, consistent emulation of the characteristics these five prudent interviews had in common would undoubtedly contribute to realizing the right outcome and fulfilling physicians’ ethical duties to respect the preferences of their patients. And because the features in common across the prudent conversations were concrete characteristics, they are to that extent teachable.

5.2. Near misses

While only five conversations were identified as prudent, five others seemed during the initial review to be nearly prudent, but were excluded after continuous comparison with the five conversations reviewers finally identified as prudent. Review of the Code–Primary Document table generated by ATLAS.ti revealed eleven conversations that had the relevant code analogues to the requirements set out for prudence apart from achieving the correct end unequivocally, but in which the result was not clearly a comfort-oriented plan of care. Relying on transcripts as this study does, it is impossible to assess the physicians’ affect and non-verbal cues. Nevertheless, analysis of the transcribed conversational content affords some insight into how these “near misses” differed from the five prudent conversations. One physician in the “near miss” set of conversations stressed time and again the importance of ensuring that the patient was comfortable and seemed to be taking consistent steps in that direction: the physician elicited the patient’s preferences around intubation, and acknowledged that the patient’s cancer was likely to result in his death. But the physician still made plans to move the patient to the ICU and did not take clear steps to ensure that the patient would not be intubated there. This conversation included more expressions of physician empathy and concern than some of the conversations identified as prudent. And although this physician performed all the actions that the prudent physicians did, they did not utilize those actions as coherent means to the end that this physician had in sight: the physician moved the patient to the ICU (in itself a reasonable course of action) but took no

recorded steps to ensure the patient would not be intubated once there (a real possibility for a patient without contrary orders in the setting of an ICU). In this scenario, clearly excellent reasoning was not simply a matter of doing certain things: it also required doing them in a way that was structured to effect the intended goal.

However, this does not diminish the importance of the observable actions associated with prudence after the initial review. Other conversations secured the desired outcome but did so in ways that seemed less than comforting or respectful. The ATLAS.ti code table showed twenty-six more conversations in which the physician's recommendations were consistently against intubation for respiratory failure, but in which the physician did not satisfy one of the conditions identified as common across the prudent conversations. Here, this failure to satisfy one of the conditions for prudence seems to be a symptom of more general shortcomings in the conversation, rather than the cause of the shortcomings itself. For example, one physician in this group had what seemed to be a fairly good conversation that secured the desired outcome, but the physician seemed distracted throughout, which would likely not be very comforting: the physician mistakenly called the patient's sister his wife after establishing that relationship early on, and the conversation omitted any direct mention of the patient's impending death. Distraction could be troubling to a patient and surrogate at a very difficult time, especially if they are depending on the physician's (hopefully considered and focused) guidance for the patient's end-of-life care.

6. Conclusion

This study applied the virtue of prudence to simulated physician–patient end-of-life conversations. It found that this virtue, once specified, could be coherently and consistently ascribed to conversations: the conversations identified as prudent prior to quantitative analysis proved with quantitative analysis to have exactly the qualities that led to the initial ascription of prudence. Prudence was rare, as some commentators and cynics might expect. But the concrete actions associated with prudence — (1) directly affirming the probability that the patient will die in the near term, (2) explicitly soliciting the patient's preferences for care, and (3) asking the patient and surrogate what other family and friends should be involved in the patient's care — all could be implemented more consistently and deliberately. There is evidence that physicians can learn and improve skills such as these in relatively short periods (Back et al., 2007). Even if not done especially well, these actions would likely lead to better outcomes. And if practiced consistently over time, and with increasing deliberateness, these actions could help develop the habits that facilitate better end-of-life conversations by respecting dying patients and treating them as a whole person.

Acknowledgements

Dr. Barnato's effort was supported in part by the National Cancer Institute (R21 CA 141093, R21 CA 139264) and The Greenwall Foundation and the Kornfeld Program in Bioethics and Patient Care. Dr. Hall's effort was supported in part by the Veterans Affairs Office of Research and Development (CDA 08-281).

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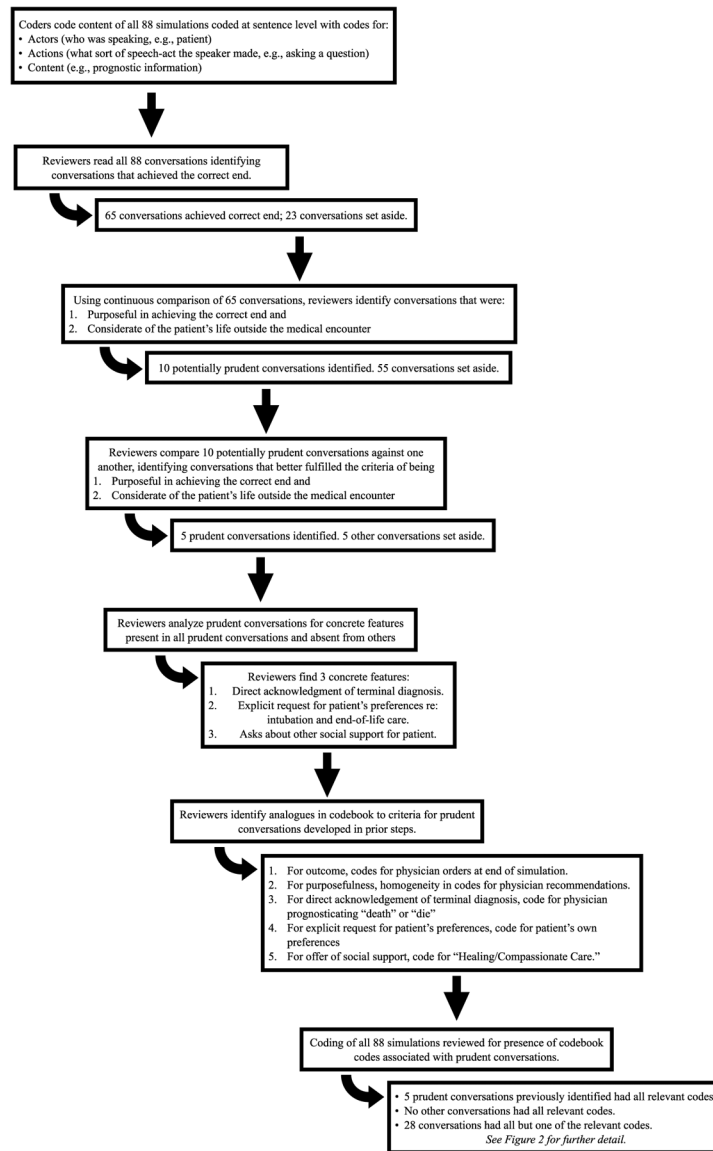


Fig. 1.
Methods and results flow diagram.

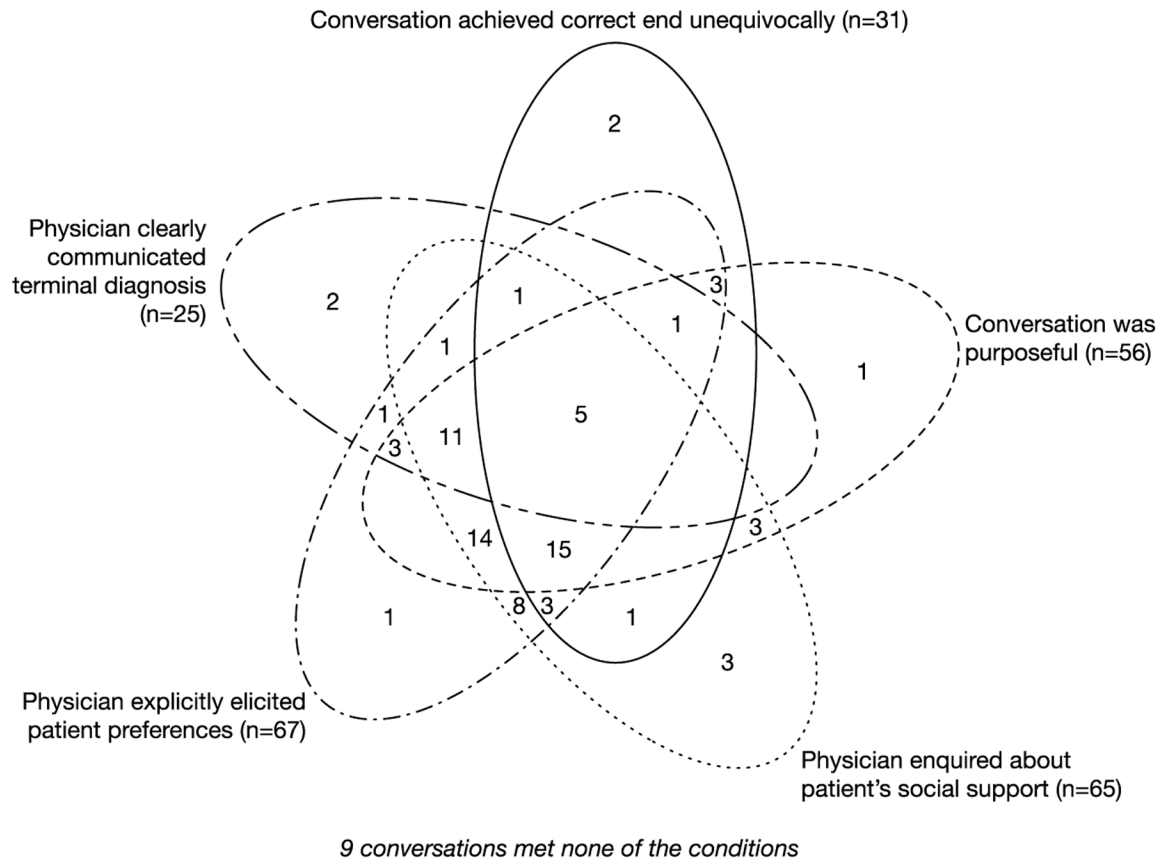


Fig. 2.
Distribution of all conversations across five codebook codes.

Table 1

Concrete characteristics of prudent conversations.

Concrete Characteristic	Example(s)
Physician directly communicates terminal prognosis	<ul style="list-style-type: none"> • “We cannot change the overall outcome. You understand that eventually it will be [the] situation where you will die of your cancer.”
Physician explicitly elicits patient’s preferences related to intubation and end-of-life care	<ul style="list-style-type: none"> • “Did you have any specific ideas about how things would proceed or did anyone talk to you about treatments, for example putting you on a respirator, on a ventilator, doing treatments that will not treat the underlying process.” • “If he had an irreversible medical condition and it looked like the doctors wouldn’t be able to save him. Would he still want to be put on life support? Or would he simply want to be made comfortable?”
Physician enquires about social support for patient beyond surrogate present in room.	<ul style="list-style-type: none"> • “Are there other family members” who should be contacted?

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