ORIGINAL RESEARCH

Conceptualizations of "good death" and their relationship to technology: A scoping review and discourse analysis

Michal Coret¹ Maria Athina (Tina) Martimianakis²

¹Department of Medicine, Temerty Faculty of Medicine, University of Toronto, Toronto, Ontario, Canada

²Wilson Centre and Department of Paediatrics, Temerty Faculty of Medicine, University of Toronto, Toronto, Ontario, Canada

Correspondence

Michal Coret, University of Toronto, Medical Sciences Building, 1 King's College Cir, Toronto, ON M5S 1A8, Canada. Email: michal.coret@mail.utoronto.ca

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Abstract

Background and Aims: By the 1960s, medicine experienced technological revolutions that enabled it to control and medicalize death in many circumstances. The modern conceptualization of "good death" emerged in the late 1960s with the beginning of the hospice movement, and palliative care became an official medical specialty in 1987. This project aims to elucidate how the idea of "good death" has been discussed and perceived since then, as well as the impact of medical technologies on death.

Methods: The terms "good death," "technology," and "palliative care" were searched. One hundred ninety English sources that discussed "good death" explicitly or implicitly, published between 1987 and 2020, were included in the final analysis. Texts were analyzed for discursive themes related to "good death" and technology and demographic data related to authors, geographies, types of text, and date of publication.

Results: The discourse of a "good death" with the patient being in control dominated the archive. Other discourses include a good death being peaceful and comfortable, one where the patient is not alone, and one that is not prolonged. Medical technology discourses are largely negative in the setting of death.

Conclusion: Findings indicate a strong critique of the medicalization of death in the literature. This also complements the dominance of discourses on patient autonomy. Medical discourses of "good death" and technology permeate discussion outside of the healthcare context, and there is an absence of spirituality and neutrality in "good death" discourses. The results of this study are relevant for ethics and communication in geriatric and palliative care.

KEYWORDS

discourse analysis, geriatrics, good death, palliative, technology

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1 | INTRODUCTION

"In the past few decades, medical science has rendered obsolete centuries of experience, tradition, and language about our mortality, and created a new difficulty for mankind: how to die."—Atul Gawande, *Being Mortal*¹

Until the first half of the twentieth century, most people in North America died at home, surrounded by family and community.² By the 1950s, the hospital became the primary location of death. By the 1960s, medicine experienced technological revolutions like resuscitation, parenteral nutrition, and antibiotics that enabled us to often control and prevent death.³ Death was medicalized, reduced to a physiological problem to be solved with medical technology.^{4,5} A technological imperative developed: "what we *should* do is everything we *can* do."⁶ However, these advances carried unintended effects, such as dying characterized by isolation and loss of control, with patient autonomy often disregarded in favor of efficiency.² Death was defined as a failure of medical technology and intervention, rather than a part of life.^{3,7}

In 1967, British nurse Cecily Saunders opened the first modern hospice in the United Kingdom. Saunders critiqued the lack of social, psychological, and spiritual support for dying patients in hospital.⁸ The modern conceptualization of "good death" emerged out of this context in response to the "bad deaths" observed in the United Kingdom and many other Western countries.³ The goals of the hospice movement were to normalize death as a part of life and to recognize dying patients as whole persons.³ Although not yet officially called "palliative care," this was in essence what was practiced. The term "palliative care" was coined in 1974, and shortly thereafter the first palliative care ward was created in a Montreal hospital.^{8,9} In 1987, the United Kingdom was the first to recognize palliative medicine as a subspecialty of general medicine. 10 With palliative care aiming to achieve a "good death," metrics were developed to define "good death" academically. 11,12 By recognizing the inevitability of death and focusing on how to improve it, palliative care strayed from the traditions of curative medicine which strove to avoid death. A tension between the aims of palliative and curative medicine emerged and has become exacerbated by developments in medical technology and intervention.5

This tension, fueled by implicit acceptance of the technological imperative, affected the experience of dying in hospital. The SUPPORT Trial of 1995, for example, documented the poor quality of care of dying patients in American hospitals, sparking research to empirically define "good" and "bad" deaths. The study showed how hospital deaths often followed aggressive treatments with prolonged and painful deterioration. This trial legitimized new approaches within academic medicine to transform end-of-life care, including research to understand "good death" from a variety of perspectives. A landmark study in 2000 by Steinhauser et al. identified six components of "good death"—pain and symptom management, clear decision-making, preparation for death, completion, contributing to others, and affirmation of the whole person—factors notably emphasizing social and psychological, rather than medical aspects of death.

Some critics argue that "good death" creates a paradox of both control *over* and illusory choice *for* dying patients, ¹⁵ potentially acting as

a form of social control,² or representing "an agenda" of the medical world and its values.¹⁶ Others argue that the idea of "good death" should be abandoned because it is subjective and raises unrealistic expectations, given the limited access to hospice.¹⁷ However, despite critiques, continued technological advancements have kept the notion of "good death" relevant. There is always the promise that technology will allow us to prevent death further, and with each development that fuels this hope, new complexities in care emerge.

Contemporary literature related to end-of-life care often considers technology. Medical technology is so prevalent that integrating it into the care of elderly and dying patients certainly requires clinical, ethical, socio-cultural, and financial decision-making. With the rise of chronic disease and medicalization of death, the question of "good death" becomes more pertinent as it continues to transcend palliative care to include geriatric medicine. Indeed, death itself has become prolonged, often experienced over many years of decline rather than as a singular event. It is thus crucial for geriatricians to be comfortable discussing death with their patients to provide them with better support, including advice on how to integrate technology into their care.

We studied how the idea of "good death" has changed since 1987, drawing out implications for integrating technology into patient care. Here, we use the term "technology" to analyze both the use of interventional medical technology and digital communications. To appreciate the relational dimensions of the issue, we intentionally looked at how different stakeholders (patients, family members, physicians, nurses, researchers, journalists, and governments) define "good death" in public and academic texts, and how they describe the role of technology in the context of aging and death. This research is unique in its focus on how the use of the term "good death" in the literature rationalizes practices and activities associated with caring for the dying. To this end, we examined how different discourses of "good death" compare or complement the discourses of technology in the context of death. Furthermore, this project is unique in that it explores the evolution of "good death" and technology discourses over three decades to provide a historical perspective on how social and professional priorities have changed.

2 | METHODS

We drew on tenets of critical discourse analysis (CDA) to identify discourses, namely institutionalized ideas about how to care for dying patients. Since the providing a legitimized rationale for acting and doing. Identifying the prevailing discourses related to "good death" provides new insights for patient care, particularly in settings where multiple discourses governing the care of patients coexist. We use a scoping review methodology to ascertain how the topic of the "good death" is discussed across different types of literatures. The scoping review approach is well suited for forming impressions of a very large repository of texts "as it provides a rigorous and transparent method for mapping areas of research." The combination of scoping review and discourse analysis provides a strong empirical picture of conceptual shifts that take place over time in relation to a specific subject. Since the discourse analysis provides as the provides a specific subject.



We compiled an archive of texts using the search terms "good death" and "technology" in Google, Google News, WordPress, Twitter, the University of Toronto Libraries, and relevant medical journals. Any English source that discussed "good death" explicitly or implicitly, published between 1987 and 2020, was included. The year 1987 was chosen as the start date because that is when palliative medicine was first recognized as a subspecialty of general medicine. 10 However, the earliest text in the archive was published in 1991. We kept the search broad to see where the conversations around "good death" were happening in the literature. Notably, the search mostly generated articles specific to geriatric populations. Texts were collected between May and August 2020. As this was not intended to be a systematic review, we focused more on capturing the breadth of different conceptualizations of "good death" as representative of trends in the literature, rather than doing an exhaustive review of all literature ever nublished

Millions of results came up in the searches. We started assessing the results from most to least relevant as per the search engine filter. We also read seminal review papers and hand-searched individual papers cited in those reviews. Texts were coded iteratively while the archive was being built. We stopped collecting texts at around 200 articles, when we could not identify any new ways of conceptualizing "good death." 18 We kept track of statements about death that appeared with regularity, studying how these statements were used in the texts, particularly in relation to the roles, behaviors, practices, and moral positions they made possible. We also documented how different discourses integrated the use of technology in their narrative of what makes a "good death." In addition, we kept track of the identities of the first authors of the text, the perspectives they represented, the date and location of publication, and the type of publication. Below we present findings from the analysis, citing excerpts from our archive. Only the portion of the archive that is cited directly is listed in the references.

3 | RESULTS

3.1 | Archive demographics

Most of the articles in our archive are academic papers written by physicians or researchers working in North America between 2010 and 2020 (see Table 1). Thus, the archive reflects a largely Western appreciation of "good death" and the role of technology.

3.2 | "Good death" discourses

While most of the articles reference geriatric or palliative care, there is no single overarching narrative representing what "good death" means in these fields. Indeed, we identify several discourses. These institutionalized ways of relating to end-of-life care coexist at the

TABLE 1 Archive demographics.

	Subgroups	# of texts (Total: 190)
First author identity	Physician	59
	Researcher	48
	Family member of the dying or deceased	5
	Journalist and Writer	42
	Nurse	25
	Other healthcare provider	5
	Patient	1
	Government	4
	Unknown	1
Decade	1987-2000	11
	2001-2010	33
	2010-2020	139
	Unknown	7
Geography	United States	71
	Canada	29
	Europe	56
	Other	23
	Unknown	11
Publication type	Academic paper	108
	News article	29
	Blog post	33
	Creative writing	7
	Government website	3
	Other	10

same time even though they have competing priorities. Table 2 shows the "good death" discourses found in the archive.

While we might expect overlap in "good death" discourses and associated care practices in regulated professions, such as medicine, our analysis demonstrates that there are important differences. For example, when looking at "Not Medicalized" and "Not Prolonged," or "Peaceful & Comfortable" and "Painless," we note distinct nuances in the way the statements are applied. To illustrate this distinction: there are texts in the archive that mention the idea of dying quickly from cancer (thus "Not Prolonged") but do not mention anything about not receiving medical intervention as being essential to "good death" (thus not fitting into "Not Medicalized"). Recognizing these distinctions is important for a deeper understanding of how provider worldviews and organizational values and practices influence the care received by patients at the end of life. It is for this reason that we also kept track of role perspectives, a finding we discuss below.

TABLE 2 "Good death" discourses.

Discourse			No. of texts
"A good death is"	Discursive narrative	Example quotation from the archive	(Total: 190)
having control over the event	The person should be able to choose where, when, or how they wish to die (moment of death).	"[A good death includes having] choice and control over where death occurs (at home or elsewhere)."33	124
having control over the time leading up to death (process)	The person should be able to choose where and how they wish to spend their time leading up to death.	"Advance care planning has been advocated extensively as the best way to enable patients with advanced life-limiting illnesses to express their wishes and preferences for future care, hospitalization and escalation to intensive care."	115
facilitated by healthcare	Healthcare providers play a key role in facilitating a "good death" for their patients.	"[Good death involves] being assisted by a staff to make the process of dying more comfortable (both physical and psychological)." 35	108
peaceful and comfortable	A "good death" is one that is peaceful and comfortable.	"[The death] was really peaceful, really good."36	100
painless	A "good death" is one that is free from pain.	"[Patients] would like to be asleep and pain-free [when they die]." ³⁷	98
not dying alone	A "good death" is one where the dying person is not alone.	"Dying is something that should not happen alone." 38	92
not medicalized	A "good death" is one that is free from medical intervention during the process and/or moment of dying.	"Most would prefer to see patients die unencumbered by tubes or lines" ³⁹	86
		"Most people today die in hospital, even though they say they would prefer to die at home, and a soulless death in intensive care is the most modern of deaths."	
not prolonged	A "good death" is one without futile prolongation.	"To be able to leave when it is time to go, and not to have life prolonged pointlessly." $^{\rm 40}$	81
dignified	A "good death" is one where the dying person feels respected and maintains their sense of self.	"A good death is always described in terms of dignity" $^{\rm 441}$	73
clinically managed	Symptoms like nausea, shortness of breath, dehydration, swelling, constipation, and other common symptoms near the end of life should be managed.	"Health professionals perceived a "good death" as "controlling the patients' physical symptoms"22	70
control over the end-of- life affairs	The person should have control over putting their personal affairs in order, making financial arrangements, saying goodbye, resolving conflicts, and so on.	"Many patients with advanced serious illness wanted an opportunity to make financial arrangements and finish personal business." ³	68
accepted	The person and those around them should accept that their death is inevitable or imminent.	"[A] 'lack of acceptance' was identified as one of the characteristics of a bad death." ²²	56
planning for after death	The person should prepare their families for the time after they have passed, plan or pre-pay for their own funeral, decide to donate their body, and so on.	"[Patients wish to prepare] for what follows death, like obituaries, wills and funeral invitations." 42	30

Note: Complete reference details for the citations 33 to 42 are available in Supplementary information.

3.3 | Technology discourses

To further articulate the nuances of end-of-life discourses, we coded how they related to technology use (see Table 3). Most of the texts referencing technology frame its use as negatively prolonging death or causing more suffering. The data suggest that the main points of support of technology are in the time *leading*

up to death, and the main points of critique of technology are at the moment of death. It is important to note that the term "technology" means different things at different times. Most of the texts supporting technology discuss digital communications (e.g., the dying patient connecting with others over social media), whereas most of the texts critiquing technology discuss medical intervention (e.g., mechanical ventilators).

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TABLE 3 Technology discourses.

Discourse			No. of texts (total
"Technology during death results in"	Definition	Example quotation from the archive	no. mentioning technology: 120)
prolongation	The use of medical intervention technology in the setting of dying and death prolongs the dying process.	"The management of death and dying falls primarily on the institution of medicine. Life prolonging technologies are rampant." 43	75
		"Advances in modern medicine have succeeded in not only postponing death but also in slowing down the dying process." 17	
suffering	The use of medical intervention technology in the setting of dying and death causes suffering for the dying person.	"The technological imperative—if we have it, we should use it—is assumed by doctors and patients alike The human suffering brought about by this default use of technology is clear."	60
less autonomy	The use of medical intervention technology in the setting of dying and death reduces the autonomy of the dying person.	"Conventional medical care settings often played host to 'bad' deaths, typified by excessive use of technology, with patient and family wishes ignored, lack of patient knowledge and autonomy in decision-making, the patient reduced to a physiological system versus whole person, and quality of life devalued." 3	29
less dignity	The use of medical intervention technology in the setting of dying and death reduces the dignity of the dying person.	"The clarity of the abstract concept of 'death with dignity' largely disappears in the very real and compelling world of hospital technology and regulations and in the process of caring for and tending to both critically ill and declining patients."	26
more autonomy	The use of biotechnology and digital communications increases the autonomy of the dying person.	"It's crucial for patients to feel like they still have a sense of control over their lives and decision-making. Advances around smart homes and wearable devices can make the biggest difference in this area." 45	13
more distance	The use of digital communications in the setting of dying and death increases the distance between the dying person and their healthcare provider.	"One of the worst feelings a patient or family can experience in the throes of critical illness is a sense of abandonment — and few things can transmit that feeling more than a poorly designed machine and protocol that provides the least amount of human connection possible technology can have disastrous consequences."	9
better care	The use of biotechnology and digital communications improves the care of the dying person.	"Technology is under-utilized and has great potential to improve the quality of palliative care and patient and family outcomes." 47	9
less isolation	Digital communications technology connects dying people to their families, friends, and healthcare providers.	"During this time of COVID-19, death can be even more lonely than it already is. Technology is opening new ways to connect us, digitally" 48	8

Note: Complete reference details for the citations 36 and 43 to 48 are available in Supplementary information.

The most dominant discourse of technology is "Prolongation." Within this discourse, technology is more often discussed as "prolonging death" rather than "extending life" (phrases like "postponing death" or "prolonging the inevitable"). When "Prolongation" is discussed with regard to extending life, it remains critical (phrases like "a prolonged life without quality" and "inhumane life-prolonging treatments"). This may be due to a sampling bias. In building the archive we delimited the selection of texts to writing about death. One important avenue for exploration includes an explicit study of concerns related to prolongation of death through an appreciation of how prolongation of life is operationalized in healthcare.

3.4 | Active and passive discourses of "good death"

The archive discourses frame "good death" in active terms, that is, what can be done to promote it. These include *all* of the "good death" discourses, with the arguable exception of "Accepted" (some authors posit that even an acceptance of death can be facilitated by those caring for the dying person).²² The absence of discourses of passivity, that is, factors that are beyond our control (e.g., dying from old age, or not dying from cancer or dementia) notably delimits what ideas and practices fall under a "good death."

3.5 | Role-justifying discourses of "good death"

We identify relationships between demographic subgroups (types of authors, perspectives, publications, and temporal and geographical differences) in the archive. Unique findings emerge when the "good death" discourses are analyzed by type of author. The physician authors and perspectives are more likely than others to endorse "good death" discourses of "Not Medicalized," "Facilitated by Healthcare," and "Not Prolonged." The nurse authors are most likely to write about "good death" as "Facilitated." The family members being quoted are most likely to endorse the "Not Alone" and "Dignified" discourses. These perspectives support role-justifying ideas; they are all related to what the author's own identity can *do* for the dying patient.

3.6 Who is in control?

The dominant discourses show a tension between resistance of the medicalization of death and acceptance of it. Discourses around patient autonomy and control ("Event" and "Process"), "Not Prolonged," and "Not Medicalized," are deployed in support of patients regaining control over their death. However, there are also discourses encouraging the involvement of medical care in death, albeit not necessarily endorsing medicalization or control. These include the "Facilitated," "Painless," and "Clinically Managed" discourses. This tension of control demonstrates the complexity of end-of-life care, where patients often have less autonomy than in other types of medical care due to issues of capacity.

3.7 | The patient's voice

Only one article in the archive is written by a patient.²³ The absence of patient authors may be due to their medical state (being terminally ill) affecting their ability or desire to write. It may also be due to the medium which was searched (texts rather than, e.g., video interviews). Despite the lack of patient authors, there is a strong presence of the patient's voice in the archive channeled through other authors (mainly physicians, researchers, and journalists) who are positioning their writing as representing the patient's voice. The most common discourses of "good death" amongst patient identities are ideas of patient autonomy over the dying process and event, as well as being peaceful and comfortable.

3.8 | Evolution of "good death"

We analyzed how "good death" changed from 1987 to 2020. Notably, we see an increase in the "Facilitated" and "Dignified" discourses during 2001–2010, a decade significant for research on "good death" after the results of the 1995 SUPPORT trial were published (see Section 1). Additionally, from 2011 to 2020, there is an increase in the "Control Over Event" discourse, correlating with the surge in discussions about

medical assistance in dying (MAID) in North America. The "Not Alone" discourse is also much more dominant in 2011–2020. This is attributed to COVID-19, as most of the texts promoting "Not Alone" were written during the pandemic (March–August 2020) rather than earlier in the decade (2011 to February 2020), showing the uniqueness of COVID-19 within its time.

4 | DISCUSSION

Medicine emphasizes control of diseases and bodily processes, which inevitably includes prevention and management of dying. The medicalization of death—seen through medical interventions in the final year of life²⁴ and the frequency of patients dying in hospitals²⁵— also involves control over death. This can manifest as control over the timing or location of death, the choice of treatments or interventions at the end of life, and the experience of death itself.

Byock⁷ discusses the importance of role in the perception of "good death," revealing that physicians are more likely to use a biomedical framework, and less likely than family and patients to value spirituality and completion.³ We are unable to analyze differences in discourses between physician authors of different medical specialties due to lack of published identifying information. However, previous research reveals that differences exist. For example, Morita et al. show that surgeons and oncologists are less likely than internists to value religious elements of "good death." They also show that surgeons and anesthesiologists are less likely than internists to emphasize "not being a burden to others" as an important element of "good death."²⁶ Cauley et al. show that surgery's "rescue culture" has led to many surgeries being conducted at the end of a patient's life despite the surgeon knowing the surgery would be of no benefit.²⁷ Discrepancies between specialists' ideas of "good death" can impact patients and families by providing contradictory medical advice.

As the term "good death" evolved in response to the medical "bad deaths" of the 1960s hospitals, it is unsurprising that the technology discourses in our archive are critical of medical intervention. This critique also fits with the dominant discourses of "good death" which emphasize patient autonomy and comfort, leaving little room for medical intervention. The discourses of "good death" and technology are complementary: a "good death" is not medical, and a medical death is a "bad death." The focus on patient autonomy in the archive reflects Western values of independence, which may be less apparent in a sample of texts from Eastern cultures. ²⁸

The emphasis on active discourses of "good death" shows that the medical discourse circulates outside of the healthcare context. This emphasis on action and *management* of death may be a manifestation of the medicalization of death.² While this finding may be a product of our sampling strategy, we must also question why healthcare providers are reticent to reproduce spiritual ideas about "good death." Had we specifically searched religious, military, or ancient texts, for example, we may have found more discourses of passivity (e.g., "good death" is in God's hands), consistent with our finding of role-justifying discourses. The dominance of the active "good death" may be revealing a desire to feel that we are in control of our own suffering or that of others. If one

defines "good death" in terms of what can be done to achieve it, then if those actions are done, then by definition, a "good death" may be achieved. The active discourses are more empowering than the passive ones and contribute to the professionalization of roles for healthcare providers in death events.

The discourses of "good death" and technology have important implications to geriatric and palliative medicine. The first issue that arises from this work is that the discourses morally define a "right way to die" and a way for a "good death" to be achieved. Within each discourse, if one knows what "good death" is, how can they justify not striving for it, for themselves, their family members, or their patients? If one accepts that medical intervention will prolong death and suffering, how can they agree to provide it if their patient requests it? The pervasiveness and influence of a specific discourse can make any death straying from the dominant discourse seen and experienced as "bad" or "wrong." This can cause moral tension in the clinical relationship if a physician and their patient disagree. Indeed, there is a risk of medical paternalism if a physician's views on "good death" are strong enough to make them intolerant of variation. Moreover, there is an absence of spirituality in the "good death" discourses. This is important because although the fields of geriatric and palliative care reinforce patient-centered attitudes, the lack of recognition of spirituality in the medically dominated spaces that shape "good death" indicates that only certain types of "patientcentredness" receive attention in the literature, and thus perhaps in practice as well.

Most texts discuss death in binary terms of "good" or "bad" and few texts diverge from this dichotomy. This language is simplistic, polarizing, and potentially troubling for patients and their families, especially given death's inevitability. This binary leaves little room for the nuances of what makes death "better" or "worse."

An essential part of CDA is the analysis of the legitimization of practices associated with discourse. Certain rituals, conversations, policies, industries, and research are legitimized within the discourses that dominate. For example, there is legitimization of the funeral industry where the dying can prearrange and pre-pay for their funeral ceremony and burial plot. This is an embodiment of the "Planning for After Death" discourse. Another example is the discourse of "dying patients not being alone," seen in the creation of "No one should die alone" programs in hospices.²⁹

This study has several limitations. Only English digital sources were included, reducing the diversity of thought and culture. This was mitigated by not restricting the sources geographically, so English sources from any location were included, and the archive was kept large for breadth and diversity. Another limitation is the recency bias due to search engines preferentially showing newer results. There were also fewer articles published online between 1987 and 2000 compared to later. Although this limitation makes the temporal analysis more difficult, it does not hinder the overall goal of CDA which is to see which discourses are popular and available in a certain space at a certain time.

Our research underscores the diversity of "good death" and technology discourses. Geriatric and palliative physicians have a responsibility to understand which discourses their patients favor, their tolerance for integrating technology, and how that might impact their care. More research is needed to understand patients' views on "good death" to aid in addressing their fears and questions.4

Given that palliative care originally developed in relation to terminal cancer care, it is unsurprising that many concepts of "good death" are most relevant for cancer deaths (pain-free, time to plan, and patient autonomy). 3,8 Our results reflect that these discourses are still the most common, indicating a gap in the language about "good death" for common noncancerous deaths, such as deaths from dementia, or from renal, heart, or lung diseases. Dementia eventually leads to reduced capacity, making patient autonomy less achievable. Heart disease could cause death to be more sudden than a cancer death, making it difficult to prepare or say goodbye. Given that geriatricians are exposed to a wide variety of diseases, it is important for them to be able to speak about "good death" in terms that are relevant and achievable for their individual patient, or abandon the term "good death" altogether and discuss goals of life and care instead.3

There is little training in medical school about end-of-life care, impacting physicians' comfort with talking about death, and affecting how likely they are to refer their patient to hospice. 30-32 It is estimated that only half of those eligible for hospice receive a referral.³⁰ Integrating conversations in medical training about discourses of "good death" may allow physicians to reflect on their own views and how these shape their practice and communication.

This study reveals the variety of "good death" discourses and their implications for patient care. It also explores the differences in the tolerance and use of technology in the setting of death. As geriatric medicine evolves to include more medical technologies, this research sheds light on the impact such technologies can have on the elderly and the dying.

AUTHOR CONTRIBUTIONS

Michal Coret: Conceptualization; data curation; formal analysis; funding acquisition; investigation; methodology; project administration; validation; visualization; writing-original draft; writing-review and editing. Maria Athina (Tina) Martimianakis: Conceptualization; funding acquisition; methodology; project administration; resources; supervision; validation; writing-original draft; writing-review and editing.

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CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author.

TRANSPARENCY STATEMENT

The lead author Michal Coret affirms that this manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted; and that any discrepancies from the study as planned (and, if relevant, registered) have been explained.

ORCID

Michal Coret http://orcid.org/0000-0002-9240-420X

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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