

Common Items on a Bucket List

Vijeyanthi S. Periyakoil, MD,^{1,2} Eric Neri, MS,¹ and Helena Kraemer, PhD¹

Abstract

Background: To provide preference-sensitive care, we propose that clinicians might routinely inquire about their patients' bucket-lists and discuss the impact (if any) of their medical treatments on their life goals.

Methods: This cross-sectional, mixed methods online study explores the concept of the bucket list and seeks to identify common bucket list themes. Data were collected in 2015–2016 through an online survey, which was completed by a total of 3056 participants across the United States. Forty participants who had a bucket list were identified randomly and used as the development cohort: their responses were analyzed qualitatively using grounded theory methods to identify the six key bucket list themes. The responses of the remaining 3016 participants were used for the validation study. The codes identified from the development cohort were validated by analyses of responses from 50 randomly drawn subjects from the validation cohort. All the 3016 validation cohort transcripts were coded for presence or absence of each of the six bucket list themes.

Results: Around 91.2% participants had a bucket list. Age and spirituality influence the patient's bucket-list. Participants who reported that faith/religion/spirituality was important to them were most likely (95%) to have a bucket list compared with those who reported it to be unimportant (68.2%), $\chi^2=37.67$. Six primary themes identified were the desire to travel (78.5%), desire to accomplish a personal goal (78.3%), desire to achieve specific life milestones (51%), desire to spend quality time with friends and family (16.7%), desire to achieve financial stability (24.3%), and desire to do a daring activity (15%).

Conclusions: The bucket list is a simple framework that can be used to engage patients about their healthcare decision making. Knowing a patient's bucket list can aid clinicians in relating each treatment option to its potential impact (if any) on the patient's life and life goals to promote informed decision making.

Keywords: advance care planning; bucket list; cross cultural; goals of care; multi ethnic; personalized medicine

Introduction

KICKED THE BUCKET," an idiom denoting death, has spawned the term, "bucket list." The bucket list is defined¹ as "a list of things that one has not done before but wants to do before dying" or more broadly² "a number of experiences or achievements that a person hopes to have or accomplish during their lifetime." For some, the items on their bucket list may be a wish list of fantasies, such as winning the lottery. For others, the bucket list can serve several concrete purposes. It is a tangible recognition of our mortality and the transience of our lifespans. It allows us to reflect on our personal values and identify important life milestones and experiences that we want to have before we die. Finally, it is a sign of hope and future orientation. Melges^{3,4} has shown that promoting a future orientation can be effective in helping patients identify personal goals.

Recent research has endorsed the importance of conducting goals-of-care conversations^{5–10} in patients with chronic and serious illnesses as a vital part of the advance care planning process. However, patients may not have the requisite medical knowledge to understand the potential impact that their treatment choices may have on their life and life goals. Clinicians, on the other hand, are trained to focus on disease management within a purely medical context and do not often ask about the patient's short-term and long-term life goals, let alone elaborate on the impact of the treatment(s) on such goals. This communication gap can result in patients unknowingly embarking upon treatment pathways that undermine or subvert their life goals. If a patient wants to attend a beloved grandchild's wedding or travel to a favored destination, treatments that could potentially prevent her from doing so should not be instituted without ensuring her understanding of the life impact of such treatments. One of the authors (V.S.P.) had a patient with

¹Division of Primary Care and Population Health, Center of Population Health Sciences, Stanford University School of Medicine, Stanford, California.

²VA Palo Alto Health Care System, Palo Alto, California.

Accepted December 20, 2017.

advanced cholangiocarcinoma whose cherished life goal was to take his family to Hawaii before he died. After an informed discussion of his options and the side effects of the proposed cancer treatments, he decided to postpone the treatment in favor of taking his family to the favored destination.

To best provide preference-sensitive care, we propose that clinicians should routinely inquire about their patients' bucket lists and discuss the impact of their lifestyles and the treatments they choose on their short-term and long-term life goals. If used appropriately, knowledge of the patient's bucket list can serve as a roadmap to guide clinicians in providing personalized care and helping them make treatment decisions that enhance their life goals. This approach may also foster a better therapeutic bond by helping clinicians see the human aspects of their patients (the person behind the disease); it will demonstrate tangibly to patients that their doctors care about their life goals and potentially make the patients more adherent to the treatment plan.

This mixed-methods study was undertaken to determine whether our study participants recognized the concept of a bucket list, and whether they were able to list specific items on their bucket list. The data were analyzed to examine for common bucket list themes.

Materials and Methods

Survey design

In April 2015, we deployed a survey to better understand diverse Americans' attitudes toward end-of-life issues. It was developed by one of the authors (V.S.P.) based on prior studies.^{11,12} The survey was beta-tested with a small group of patients and families and their suggestions were used to refine and finalize the questions. The project was reviewed and approved by the Institutional Review Board at Stanford University School of Medicine.

Data collection

The survey was housed online on a secure Stanford server and a link to it was posted on a dedicated online portal. Information about the project was disseminated through the Stanford web portals^{13–15} and through articles in mainstream media^{15–21} publicizing the project. The survey was administered once and no personal health identifiers were collected in an effort to promote participant confidentiality and honest responses without concerns about individual scrutiny. The secure online system was programmed to prevent ballot box stuffing. All questions in the survey were set at “force response”; participants who did not respond to all the questions would be unable to submit the survey. Sociodemographic characteristics including, age, gender, ethnicity/race, and self reported importance ascribed to faith/religion/spirituality spiritual affiliation are shown in Table 1. The participants' state of residence was determined using their zip codes. The data presented here were collected from July 2015 through December 2016. The investigators had no direct contact with the participants.

Question prompt used for data collection

“The term ‘bucket list’ refers to a list of things that one has not done before but wants to do before dying. Do you have a bucket list? If yes, please list the items on your bucket list if any in the order of importance.” Participants could enter up to five bucket list items in text boxes provided.

Data analysis

Qualitative data analyses. A total of 3056 participants completed the survey. To identify the base set of codes, 40 participants who listed bucket list items were identified randomly and designated as the “development cohort” and the remaining 3016 as the “validation cohort.” The development cohort responses about their bucket list items were coded and analyzed using grounded theory techniques^{22,23} as follows: first, using an open coding approach, one of the authors (V.S.P.) and a trained research assistant independently coded the transcripts of the development cohort. During open coding, recurrent themes and sub-themes were identified and characterized. During axial coding, the categories were further refined, and the relationships between them were characterized. Next, the coders compared their assignment of codes and one of the authors (H.C.K.) mediated any discrepancies between codes assigned until agreement was reached. Efforts to maintain the validity of the qualitative data included the following: to evaluate inter-coder reliability, the exact assignment of codes was assessed for 100% of the development cohort transcripts; agreement was found to be greater than 90%, which was deemed to be comparable with previous work. After 35 transcripts had been coded, no new codes emerged from the next five transcripts data indicating that saturation had been reached. At the end of this process, the primary themes were identified, and the development cohort was discarded and not used in subsequent analyses. Actual words and phrases that participants used were used to name the themes as feasible (Table 2 for exemplars).

The responses of the validation cohort were first reviewed for the presence or absence of bucket list items. The bucket list codes identified from the development cohort were validated by analyses of responses from 50 randomly drawn subjects from the validation cohort. For those participants in the validation cohort who submitted a bucket list, their responses were coded independently by the two coders for the presence or absence of the individual primary themes identified by qualitative analyses of the development cohort. Coders compared codes for inter-rater reliability. All discrepancies in codes were reviewed by both coders with one of the authors (H.C.K.) and discussed until consensus was reached. The data were imported into SAS SAS 9.4, SAS Institute (Cary, NC) for quantitative analyses.

Quantitative analyses

Participants with a bucket list were compared to those who did not have one using a chi-square test for categorical variables (e.g., race and gender) and the Mann-Whitney-Wilcoxon test for continuous variables (e.g., age) and ordinal variables (e.g., level of education and relative importance ascribed to faith/religion/spirituality). For participants who had a bucket list, recursive partitioning using Quality Receiver Operating Curve (QROC) analysis^{24,25} helped explore differences between groups of participants and identify subgroups with common patterns.

Results

Based on their self-reported place of residence, we had participants from all the fifty states in the United States. Of the 3016 validation cohort participants, a vast majority (91.2% i.e., 2752 out of 3016) reported having a bucket list. In comparing the group with a bucket list with those who did not have one, analyses identified that age (Mann-Whitney-Wilcoxon χ^2 of

TABLE 1. PARTICIPANTS DEMOGRAPHICS COMPARING THE GROUP WITH A BUCKET LIST WITH THOSE WITHOUT ONE

Description	Does not have a bucket list		Has a bucket list		Comparison of those without and with a bucket list	
	N	Mean (SD)	N	Mean (SD)	MWW Chi-Square	MWW p-value
Age in years	264	56.5 (14.3)	2752	50.0 (16.0)	39.01	<0.0001
Gender	N	Percentage	N	Percentage	Chi-Square	p value
Female	98	37.1%	1580	57.4%	40.19	<0.0001
Male	166	62.9%	1172	42.6%		
Race/Ethnicity					Chi-Square	p value
Asian	71	26.9%	707	25.7%	8.83	0.07
Black or African American	19	7.2%	259	9.4%		
Hispanic/Latino	46	17.4%	651	23.7%		
Native Hawaiian/Pacific Islander	9	3.4%	96	3.5%		
Non-Hispanic White	119	45.1%	1039	37.8%		
Marital Status					Chi-Square	p value
Single	67	25.4%	811	29.5%	13.8	0.003
Married	139	52.7%	1480	53.8%		
Divorced	34	12.9%	345	12.5%		
Widowed	24	9.1%	116	4.2%		
English is the language spoken at home					MWW Chi-Square	MWW p-value
No	35	13.3%	341	12.4%	0.50	0.48
Yes	229	86.7%	2411	87.6%		

MWW stand for Mann-Whitney-Wilcoxon test.

39.01, $p < 0.0001$), and gender (χ^2 of 40.19, $p < 0.0001$) and marital status (χ^2 of 13.8, $p = 0.0032$) were influential factors. Participants who reported that faith/religion/spirituality was important to them were most likely (95%) to have a bucket list compared with those who reported it to be unimportant (68.2%), $\chi^2 = 37.67$ (Fig. 1). Women younger than 70 years of age, for whom faith/religion/spirituality was at least somewhat important, were most likely to have a bucket list at 94.9%. Participants ≥ 61 years of age, who were not married and for whom faith/religion/spirituality was not important were least likely (31.8%) to have a bucket list.

Six primary themes were identified by analyzes of the respondents' bucket list:

- (1) Desire to travel, within the nation or internationally, was the most prevalent item on the bucket list (78.5%). People most likely to list travel were college-educated women (84.3%), followed by men <65 years of age for whom faith was unimportant (80.6%). Unmarried men ≥ 65 years were least likely to list travel (52.3%) on their bucket list.
- (2) Desire to accomplish a personal goal 78.3% of the participants identified this desire on their bucket list, and there were no discriminating subgroups.
- (3) Desire to achieve specific life milestones was the third prevalent (51%) theme. This category was most

- prevalent in women <33 years of age (69.3%) and least in unmarried persons ≥ 59 years of age (22.3%).
- (4) Desire to spend quality time with friends and family was the fourth prevalent (16.7%) theme. Participants who were ≥ 63 years of age were most likely to list this desire.
- (5) Desire to achieve financial stability was the fifth prevalent theme with an overall prevalence of 16.1% across all ethnic groups and significantly higher in African Americans (24.3%).
- (6) Desire to do a daring activity was the last theme with a prevalence of 15%. Younger participants (<26 years of age) were exponentially more likely (28.9%) to report this desire on their bucket list compared to older participants (≥ 61 years of age) at only 7.6%.

Discussion

To the best of our knowledge, our study is the first to systematically investigate the concept of the bucket-list, an idea of growing interest to the general public. This concept, if harnessed thoughtfully, has great potential in engaging patients about their health behaviors and health-related decision making by using a framework that they can understand easily. Through our study we have shown that adults and older adults from diverse backgrounds are able to articulate their bucket list. Our study shows that those who ascribe more importance to spirituality are more likely to

TABLE 2. COMMON BUCKET LIST THEMES AND VERBATIM EXEMPLARS

<i>Bucket list themes</i>	<i>Exemplars</i>
Desire to travel	<ul style="list-style-type: none"> “Go to Japan” “Backpack through Europe” “Go to Hawaii” “Visit Australia” “Visit Cuba” “Cycle in Italy and France” “See Niagara Falls” “Visit presidential libraries” “See Anne Frank House & Corrie ten Boom Museum” “Go back to Hong Kong” “Travel to see the pyramids” “Go on another short-term mission trip to distribute Bibles” “Drive across the country” “See Auschwitz & Bergen-Belsen”
Desire to accomplish a personal goal	<ul style="list-style-type: none"> “Acquire my masters to become a Pathology Assistant” “Fly on a private plane” “Become a tycoon” “Be a backup singer for the Indigo Girls” “Get my license” “Meet fathers side of the family” “I like to be able to swim in spite of age but first I need to know how to swim” “I want to drive a Porsche car” “Finish writing my book” “Pass my 1964 Sting Ray to my daughter” “Visit my country of birth” “Run a marathon”
Desire to achieve specific life milestones	<ul style="list-style-type: none"> “Marry my boyfriend” “Take entire family on a trip overseas” “Have a daughter” “Grandkids graduate” “Reach our 60th wedding anniversary” “Get back together with my kids” “See kids get married and have kids” “Reconnect with some old friends” “See my grandchild in Iowa” “See my oldest son have children” “Watch my neices grow up” “Open a gallery” “Stay with my husband through everything” “Become a grandmother” “Take in a foster child”
Desire to spend quality time with friends and family	<ul style="list-style-type: none"> “Spend time with family” “Spend more time with family not in my area” “Spend time with kids” “Spend time with grandchildren” “Spend time with beloved pets” “Spend time with old friends” “Spend time with all of my children together at the same time” “Bring my seven siblings together and spend time”
Desire to achieve financial stability	<ul style="list-style-type: none"> “Be financially stable” “Have enough money where it is not stressful” “Debt free by 45 years of age” “Earn enough money so as not to have to worry in my golden years” Have “all debts paid off” “Be debt free” “Pay off bills” “Retire comfortably” “Be Financially At Peace” “Pay off all my debt” “Give all my savings to my ex-wife and kids” “Save enough money for kids college” “Pay the mortgage off”
Desire to do a daring activity	<ul style="list-style-type: none"> “Run with the bulls” “Swim with the sharks” “Tackle a grizzly.” “Go on a zipline” “Fly a P51 Mustang” “Surf 20 foot wave” “Skydive and survive” “Do bungee jumping” “Dive off a bridge” “Go deep sea fishing” “Swim with humpback whales” “Do hang gliding” “Fish for sharks”

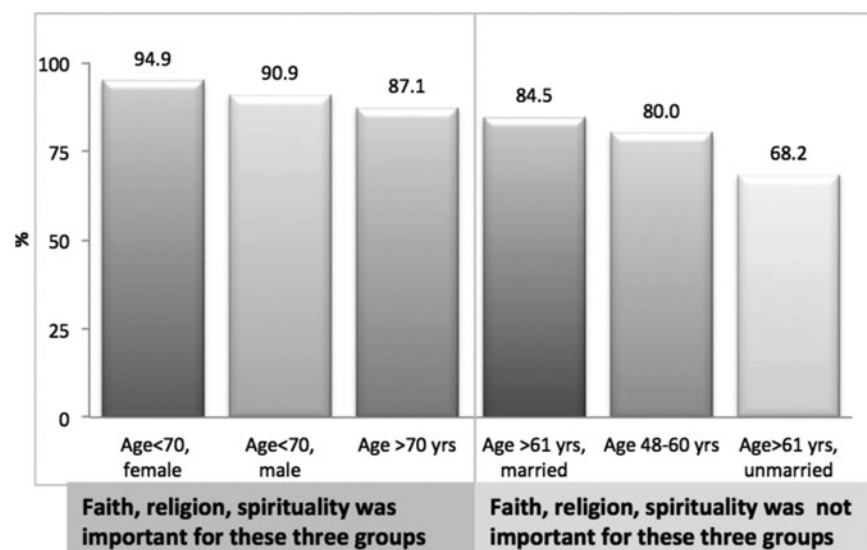


FIG. 1. Subgroups within patients who have a bucket list. Patients who reported faith, religion, or spirituality to be important were more likely to have a bucket list compared to those who did not. For those who reported that faith was unimportant, older (≥ 61 years) married people were more likely to have a bucket list ($\chi^2 = 8.83$ and $p = 0.07$)

have a bucket-list. As having a bucket list is an expression of hope and future orientation, this may be the underlying reason. We also found that age influences the bucket list with younger patients expressing the desire to complete more daring and risky activities compared to older adults.

Experts have long recognized the importance of conducting goals-of-care²⁶⁻³² discussions with patients. However, current concepts of goals of care remain largely provider-centered that is, driven by clinicians' (and the healthcare system's) needs to have clarity in their patient's treatment preferences. In a narrow sense, goals of care discussions are limited to elicitation of resuscitation preferences. Described more broadly, goals of care discussions constitute a series of conversations about healthcare decisions, specific treatments, the intensity level of care desired and advance care planning. Conceived this way, goals of care discussions focus exclusively on end-of-life treatments choices and fail to capture what matters most to patients, their desired milestones and accomplishments in their lifetime, and how they wish to live. This clinical tendency to approach healthcare-related decisions in isolation without connecting them with the patients' life goals is likely a key reason why patients may not see the relevance of advance care planning or remain reluctant³³⁻³⁶ to complete the related documentation. Many patients, who do not have the health literacy to truly comprehend the impact of their medical decisions on their lives and their family may prematurely choose certain treatment options only to change their mind later when they start feeling the real impact of these choices on their life. We propose the use of the bucket list to help patients identify what matters most to them. In contrast to concepts like advance care planning and advance directives, which are not common knowledge to the general public, the concept of the bucket list is well known to many. For example, a Google search on 11/29/2017 yielded almost 84 million results in 0.86 seconds for the term "bucket list" compared to 4.5 million results for the term "advance directives" in 0.81 seconds and only 533,000 results for the term "advance care planning" in 0.57 seconds.

The national attention to precision medicine has recently been broadened into a focus on precision health³⁷⁻⁴¹ and personalized care. True personalized care requires that clinicians have a clear understanding of what matters most to patients and what they wish to accomplish in their lives both short term and long term. Asking patients to list their bucket list is a simple way to elicit their future plans and allows their doctors to help them craft a care-plan that will most optimize the chances of fruition of the desires listed. Knowing the desires listed on their patients' bucket list will enable clinicians to go from merely eliciting patient's preferences about specific treatments in a clinical vacuum to anticipating the impact of such treatments (if any) on the patient's desired life goals and plans. As patients progress through their life course, their bucket list items will likely change as will their goals of care. Knowing what matters most to patients and their bucket lists, clinicians will be able to relate each treatment option to its potential impact on the patient's life using a personalized approach. This assistance could range from (a) diet and exercise counseling for a healthy patient whose life goal is to run a marathon, (b) discussing the strategic timing of an elective knee replacement for an older adult who wishes to dance at his granddaughter's wedding, to (c) counseling a seriously ill patient about treatment benefits (potential life prolongation) and burdens (distressing side effects like nausea, hair loss) who may then wish to postpone/forego such therapy, choosing instead to fulfill a bucket list item by traveling to a final family reunion while still able to do so.

There are limitations to this study. It is a cross-sectional study of a convenience sample, which limits the generalizability of our findings. As a web-based study conducted in English, it limits participation of people with limited English proficiency, poor technical literacy, and those who do not have access to a computer. Also, people's bucket list can and should change over time, as they get older and also based on their health status. Tracing changes in the bucket list over the course of time was beyond the scope of our study. Furthermore, the utility of a bucket list in clinical practice should

be studied—for example, will a clinician’s knowledge of the patient’s bucket list lead to any changes in the care plan and result in more, earlier and richer conversations about the patient’s values and life goals?

Conclusion

Our study shows that diverse patients recognize the concept of a bucket list and are able to articulate a number of experiences or achievements that they hope to accomplish during their lifetime. Clinicians can elicit the patient’s bucket list and use it as a starting point to initiate goals of care discussions and as a strategy to craft personalized care plans based on a patient’s own life goals.

Acknowledgments

Dr. Periyakoil’s work is funded by R25 MD006857, NIMHD NIH, U54 MD010724/MD/NIMHD NIH, and AG047366, NIA NIH, Department of Veterans Affairs and Stanford University School of Medicine.

Author Disclosure Statement

No competing financial interests exist.

References

- Merriam Webster Dictionary: www.merriam-webster.com/dictionary/bucket%20list; https://en.oxforddictionaries.com/definition/bucket_list (Last accessed September 18, 2017).
- https://en.oxforddictionaries.com/definition/bucket_list (Last accessed September 18, 2017).
- Melges FT: “Future-oriented psychotherapy”. *Am J Psychother* 1972;26:22–33.
- Melges FT: *Time and the Inner Future: A Temporal Approach to Psychiatric Disorders*. New York: John Wiley and Sons, 1982. ISBN 0-471-86075-1
- Childers JW, Back AL, Tulsy JA, Arnold RM: REMAP: A Framework for Goals of Care Conversations. *J Oncol Pract* 2017;13:e844–e850.
- Szekendi MK, Vaughn J, McLaughlin B, et al.: Integrating palliative care to promote earlier conversations and to increase the skill and comfort of nonpalliative care clinicians: Lessons learned from an interventional field trial. *Am J Hosp Palliat Care* 2018;35:132–137.
- Roze des Ordon A, Kassam A, Simon J: Goals of care conversation teaching in residency - a cross-sectional survey of postgraduate program directors. *BMC Med Educ* 2017; 17:6.
- Sales AE, Ersek M, Intrator OK, et al.: Implementing goals of care conversations with veterans in VA long-term care setting: A mixed methods protocol. *Implement Sci* 2016; 11:132.
- Doorenbos AZ, Levy WC, Curtis JR, Dougherty CM: An intervention to enhance goals-of-care communication between heart failure patients and heart failure providers. *J Pain Symptom Manage* 2016;523:353–360.
- Roze des Ordon AL, Lockyer J, Hartwick M, et al.: An exploration of contextual dimensions impacting goals of care conversations in postgraduate medical education. *BMC Palliat Care* 2016;15:34.
- Duffy SA, Jackson FC, Schim SM, et al.: Racial/ethnic preferences, sex preferences, and perceived discrimination related to end-of-life care. *J Am Geriatr Soc* 2006;54: 150–157.
- Seidlitz L, Duberstein PR, Cox C, Conwell Y: Attitudes of older people toward suicide and assisted suicide: An analysis of Gallup Poll findings. *J Am Geriatr Soc* 1995;43: 993–998.
- <https://palliative.stanford.edu> (Last accessed September 18, 2017).
- <https://geriatrics.stanford.edu> (Last accessed September 18, 2017).
- <http://scopeblog.stanford.edu> (Last accessed September 18, 2017).
- <https://opinionator.blogs.nytimes.com/2015/04/22/we-need-a-role-reversal-in-the-conversation-on-dying/?mcubz=0> (Last accessed September 18, 2017).
- <https://opinionator.blogs.nytimes.com/2015/11/18/pitfalls-for-proxies/?mcubz=0> (Last accessed September 18, 2017).
- www.nytimes.com/2016/09/07/well/family/writing-a-last-letter-before-you-get-sick.html?mcubz=0 (Last accessed September 18, 2017).
- www.washingtonpost.com/news/local/wp/2015/04/22/ethnicity-complicates-patient-doctor-discussion-of-death/?utm_term=.2c2ff57f92f1 (Last accessed September 18, 2017).
- www.washingtonpost.com/news/in-theory/wp/2015/10/28/the-silver-tsunami-is-actually-silver-brown-how-does-end-of-life-care-differ-for-minorities/?utm_term=.96573cf262e0 (Last accessed September 18, 2017).
- <https://med.stanford.edu/letter/news.html> (Last accessed September 18, 2017).
- Strauss A, Corbin J: *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*, 2nd ed. Thousand Oaks, CA: Sage, 1990.
- Creswell JW: *Qualitative Inquiry and Research Design: Choosing Among Five Traditions*. Thousand Oaks, CA: Sage, 1998.
- Kraemer HC: *Evaluating Medical Tests: Objective and Quantitative Guidelines*. Newbury Park, GA: Sage, 1992.
- Kiernan M, Kraemer HC, Winkleby MA, et al.: Do logistic regression and signal detection identify different subgroups at risk? Implications for the design of tailored interventions. *Psychol Methods* 2001;6:35–48.
- You JJ, Fowler RA, Heyland DK: Just ask: Discussing goals of care with patients in hospital with serious illness. *CMAJ* 2014;186:425–432.
- Bernacki RE, Block SD; American College of Physicians High Value Care Task Force: Communication about serious illness care goals: A review and synthesis of best practices. *JAMA Intern Med* 2014;174:1994–2003.
- You JJ, Downar J, Fowler RA, et al.: Barriers to goals of care discussions with seriously ill hospitalized patients and their families: A multicenter survey of clinicians. *JAMA Intern Med* 2015;175:549–556.
- Homas RL, Zubair MY, Hayes B, Ashby MA: Goals of care: A clinical framework for limitation of medical treatment. *Med J Aust* 2014;201:452–455.
- Roze des Ordon AL, Sharma N, Heyland DK, You JJ: Strategies for effective goals of care discussions and decision-making: Perspectives from a multi-centre survey of Canadian hospital-based healthcare providers. *BMC Palliat Care* 2015; 14:38.
- Apostol CC, Waldfogel JM, Pfoh ER, et al.: Association of goals of care meetings for hospitalized cancer patients at risk for critical care with patient outcomes. *Palliat Med* 2015;29:386–390.
- Brimblecombe C, Crosbie D, Lim WK, Hayes B: The Goals of Patient Care project: Implementing a proactive

- approach to patient-centred decision-making. *Intern Med J* 2014;44:961–966.
33. Periyakoil VS, Neri E, Kraemer H: Patient-reported barriers to high-quality, end-of-life care: A multiethnic, multilingual, mixed-methods study. *J Palliat Med* 2016;19:373–379.
 34. Schickedanz AD, Schillinger D, Landefeld CS, et al.: A clinical framework for improving the advance care planning process: Start with patients' self-identified barriers. *J Am Geriatr Soc* 2009;57:31–39.
 35. Morrison RS, Zayas LH, Mulvihill M, et al.: Barriers to completion of health care proxies: An examination of ethnic differences. *Arch Intern Med* 1998;158:2493–2497.
 36. Knauff E, Nielsen EL, Engelberg RA, et al.: Barriers and facilitators to end-of-life care communication for patients with COPD. *Chest* 2005;127:2188–2196.
 37. Milstein A: Precision health care efficiency via accountable care organizations. *JAMA Intern Med* 2015;175:1825–1827.
 38. Galli SJ: Toward precision medicine and health: Opportunities and challenges in allergic diseases. *J Allergy Clin Immunol* 2016;137:1289–1300.
 39. Chen Y, Guzauskas GF, Gu C, et al.: Precision health economics and outcomes research to support precision medicine: Big data meets patient heterogeneity on the road to value. *J Pers Med* 2016;6: pii: E20.
 40. Reischlag JA, Silva MM: Precision health outcomes require precise patient identification. *JAMA Surg* 2016;151:1030–1031.
 41. Cornetta K, Brown CG: Balancing personalized medicine and personalized care. *Acad Med* 2013;88:309–313.

Address correspondence to:
Vyjeyanthi S. Periyakoil, MD
Division of Primary Care and Population Health
Center for Population Health Services
Stanford University School of Medicine
1265 Welch Road
Stanford, CA 94305
E-mail: periyakoil@stanford.edu