A Duty to Plan: Proactive Goals of Care Conversations with Seriously Ill Veterans Who Test Positive for COVID-19

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INTRODUCTION

The COVID-19 pandemic is highlighting the importance of proactively planning for, having, and documenting goals of care conversations (GoCC) and developing life-sustaining treatment (LST) plans for seriously ill patients, including high-risk patients diagnosed with COVID-19.^{1,2} Proactive GoCC promote a process where patients' values, goals, and preferences are honored and unwanted treatment is reduced. Veterans Health Administration (VHA) is the largest integrated health care network in the USA that requires the documentation of goals of care and LST plans of high-risk patients. Practitioners conduct GoCC with high-risk patients, in both outpatient and inpatient settings, and document LST decisions using a standardized LST progress note template and order set in the electronic health record (details about GoCC process and documentation are reported elsewhere).² Since 2017, VHA clinicians have conducted 425,013 GoCC with unique high-risk patients or their surrogates. We characterized the extent to which patients had GoCC after COVID-19 diagnosis, their LST decisions, and patient characteristics associated with having a GoCC.

METHODS

We obtained data from VHA's Corporate Data Warehouse (CDW) as of November 1, 2020, on all COVID-19-positive Veteran patients ($n=88,562$), their demographics, health conditions³, and documentation of GoCC prior to and following COVID-19 diagnosis. Because VHA promotes GoCC among patients with a high risk of hospitalization or death within the year (as defined by VHA's Care Assessment Need (CAN) Score of 95 or higher), we restricted our analyses to these patients ($n=8982$). Detailed information about CAN scores and prioritizing patients with CAN scores of 95+ for GoCC is reported elsewhere.^{2,4} We conducted descriptive analyses to

characterize patient characteristics in our sample and logistic regression to identify factors associated with the probability of receiving a GoCC following diagnosis. For both descriptive analyses and logistic regression, we used R: A language and environment for statistical computing.⁵ This work was not subject to IRB approval because it was deemed a quality improvement analysis for VHA's Life-Sustaining Treatment Decisions Initiative.

RESULTS

We identified 8982 COVID-19 positive Veteran patients with a CAN score of 95 or higher. Ninety-five percent were male; median age 73 years; 30% Black or African American; 7% Hispanic or Latino; 64% White; and 41% married. Sixty percent of these patients had cardiovascular disease; 61% frailty; 31% cancer; 24% dementia; 9% end-stage lung disease; and 9% end-stage renal disease. Twenty-one percent ($n=1886$) had a GoCC subsequent to COVID-19 diagnosis within a median of one day (IQR 0–6) (data not shown). Fifty-one percent ($n=968$) indicated do-not-resuscitate (DNR/DNAR) for cardiopulmonary arrest and 21% ($n=397$) indicated limits to mechanical ventilation for respiratory failure (Table 1). Thirty percent of patients who had a GoCC subsequent to COVID-19 diagnosis also had a previous GoCC. Of the 7096 patients that did not have a GoCC subsequent to COVID-19 diagnosis, 37% had a prior documented GoCC. Factors statistically significantly associated ($\alpha = 0.1$) with having a GoCC after COVID-19 diagnosis were prior GoCC, higher CAN score, older age, end-stage renal disease, frailty, and Black race. Female patients and those with dementia were less likely to have had a GoCC subsequent to COVID-19 diagnosis (Table 2). Of the 39% ($n=3502$) Veterans with a GoCC prior to COVID-19 diagnosis, 7.8% changed preference for LSTs: 5.5% changed from full code to DNR/DNAR and 2.3% from DNR/DNAR to full code (data not shown).

DISCUSSION

Proactive GoCC for rising numbers of COVID-19 cases may help promote goal-concordant care by identifying patient-centered preferences for LSTs, including preferences to limit

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Table 1 Life-Sustaining Treatment (LST) Decisions and Clinical Setting of Goals of Care Conversations (GoCC) Following COVID-19 Diagnosis among Patients with CAN Score 95+ (n=1886)

Code status (in the event of cardiopulmonary arrest)	CPR-full code	918 (48.7)
	DNAR/DNR	968 (51.4)
Mechanical ventilation (in the event of respiratory distress or failure when the patient has a pulse)	Limit mechanical ventilation as specified (e.g., short-term trial)	39 (2.1)
	No invasive mechanical ventilation	346(18.3)
	No non-invasive mechanical ventilation	12(0.60)
Clinical setting of GoCC	Outpatient	138 (7.3)
	Emergency department	48 (2.5)
	Inpatient	1689 (89.6)
	Telephone	18 (1.0)

cardiopulmonary resuscitation and mechanical ventilation and thus avoid providing potentially limited resources to those who do not want them. Although this study did not examine the extent to which Veterans' preferences for care were honored, previous research has demonstrated associations between GoCC and care received in VHA.⁶ For patients with a documented GoCC prior to COVID-19 diagnosis, such a diagnosis may be an inflection point—suggesting the need to revisit these patients' goals and decisions due to changing or worsening clinical conditions. Our analysis reflects the pandemic up until the beginning of November 2020. Future work should assess GoCC rates across the pandemic, the extent to which Veterans receive goal-concordant care, and effective strategies to increase GoCCs during COVID-19 (e.g.,

telehealth), especially amongst patient groups that were less likely to have had a GoCC.

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Table 2 Predictors of Goals of Care Conversations (GoCC) Subsequent to COVID-19 Diagnosis among Patients with CAN Score 95+ (n= 1886)

Variable	Odds ratio (95% confidence interval)	p value
Intercept	0.18 (0.15,0.21)	<.0001
Male (Reference)		
Female	0.72 (0.53,0.96)	0.03
Age	1.03 (1.02,1.03)	<.0001
Race White (reference)	—	—
Race Black	1.20 (1.07,1.35)	<.0003
Race other	1.27 (0.87,1.82)	0.20
Not Hispanic (reference)	—	—
Hispanic	1.18 (0.96,1.45)	0.10
Married (reference)	—	—
Divorced/separated	0.98 (0.87,1.11)	0.77
Single	1.08 (0.91,1.29)	0.38
Widowed	0.99 (0.84,1.16)	0.86
CAN 95-97 (reference)	—	—
CAN 98-99	1.26 (1.13,1.41)	<.0001
Prior GoCC	1.19 (1.08,1.33)	<.002
End-stage renal disease	1.27 (1.06,1.52)	0.01
Cardiovascular disease	0.96 (0.86,1.07)	0.48
Frailty	1.28 (1.15,1.43)	<.0001
End-stage lung disease	1.08 (0.90,1.30)	0.42
Dementia	0.86 (0.76,0.98)	0.02
Cancer	0.97(0.87,1.08)	0.57

REFERENCES

1. **Curtis JR, Kross EK, Stapleton RD.** The Importance of Addressing Advance Care Planning and Decisions About Do-Not-Resuscitate Orders During Novel Coronavirus 2019 (COVID-19). *JAMA*. 2020;10.1001/jama.2020.4894.
2. **Foglia MB, Lowery J, Sharpe VA, Tompkins P, Fox E.** A Comprehensive Approach to Eliciting, Documenting, and Honoring Patient Wishes for Care Near the End of Life: The Veterans Health Administration's Life-Sustaining Treatment Decisions Initiative. *Jt Comm J Qual Patient Saf*. 2019;45(1):47-56.
3. **Wachterman MW, Pilver C, Smith D, Ersek M, Lipsitz SR, Keating NL.** Quality of end-of-life care provided to patients with different serious illnesses. *JAMA Intern Med* 2016;176(8):1095-1102.
4. **Wang L, Porter B, Maynard C, et al.** Predicting Risk of Hospitalization or Death Among Patients Receiving Primary Care in the Veterans Health Administration. 2013;51(4):368-373.
5. R Core Team. R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. 2014. Available at: <http://www.R-project.org/>. Accessed April 30, 2020.
6. **Miller, Susan C., et al.** "Honoring Veterans' Preferences: The Association Between Comfort Care Goals and Care Received at the End of Life." *Journal of Pain and Symptom Management* (2020).

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