No less than 5 centuries ago, hospitals across the developed world served a singular purpose: to quarantine the ill. Soon after, a more modern world demanded the aggressive evolution of hospital systems to transform this purpose to a higher, more noble calling: to heal the sick. Termed volunteer hospitals, these institutions sprouted throughout Europe and the American colonies and ultimately provided a platform to readdress the evolving ideals of death and dying.1

Central to these ideals are the social expectations to provide expeditious, compassionate, and efficacious care. Achieving these noble objectives in the modern healthcare system has grown more complicated as greater emphasis is placed on additional goals: parsimony and profitability. Therefore, as the expectations of these complicated systems grow, transparency in hospital performance markers has become an expected mandate.2–4 The metrics by which hospitals are measured—risk-standardized mortality rates within 30 days of admission and risk-standardized unplanned readmission rates within 30 days of discharge—became commonplace and therefore considered attention has been diverted to the development of strategies addressing these metrics.5,6

Unfortunately, goals of care designations are not included in current Centers for Medicare and Medicaid Services (CMS) endorsed heart failure risk adjustment models.7,8 In fact, the do not resuscitate (DNR) order has become a critical component of the care for the patient with end stage heart failure: exalting patient’s wishes and perhaps, focusing on comfort.

In this issue of Circulation: Heart Failure, the retrospective analysis by McAlister et al9 evaluated the hitherto unaccounted patient’s wishes and perhaps, focusing on comfort. Of the patients designated as full code, 99% (657 of 664) of patients receiving some form of a goals of care designation at the time of discharge was the variable most strongly associated with outcomes in the first 30 days after discharge. Agreeably, the exclusion of later DNR patients was important—lest crossing over bias—as this population may have warranted a revision to the goals of care vis-à-vis a decline in status during the index hospitalization. In addition, performance measures were deeply affected depending on the inclusion or exclusion of goals of care designations; chiefly, exclusion of DNR designation lowered the risk-adjusted 30-day mortality rate.

Agreeably, the exclusion of later DNR patients was important—lest crossing over bias—as this population may have warranted a revision to the goals of care vis-à-vis a decline in status during the index hospitalization. In addition, performance measures were deeply affected depending on the inclusion or exclusion of goals of care designations; chiefly, exclusion of DNR designation lowered the risk-adjusted 30-day mortality rate.

Interestingly, although each patient in the study had a goals of care designation recorded on admission, only 14% of the study patients had formal documentation of a goals of care discussion. Of the patients designated as full code, 99% (657 of 664) of patients receiving some form of a goals of care discussion switched to DNR status. The infrequency in seizing these watershed moments as opportunities to address goals of care through proper documentation needs to be further evaluated. Moreover, patients with admission DNR orders were less likely to be treated by cardiologists and less likely to receive relevant imaging (echocardiography), whereas those designated as DNR at discharge were less likely to receive goal-directed medical therapy (neurohormonal blockade and anticoagulation) or discharge counseling. This is unfortunate because the latter 2 resources are included in the CMS benchmark for heart failure discharges.6 Furthermore, as some of these therapies may provide symptom relief, withholding them in DNR populations may be inappropriate.10

The authors elaborated on the dramatic discrepancy in distribution of DNR designation between hospitals; notably, 9

Kirsh ND, ef al.10

1. The opinions expressed in this article are not necessarily those of the editors or of the American Heart Association.

From the Department of Medicine, Division of Cardiovascular Medicine, Sulpizio Cardiovascular Center, The University of California, San Diego, La Jolla, California.

Correspondence to Eric D. Adler, MD, University of California, San Diego, 9300 Campus Point Dr #7411, La Jolla, CA 92037. E-mail eradler@ucsd.edu (Circ Heart Fail. 2015;8:415-416. DOI: 10.1161/CIRCHEARTFAILURE.115.002103.) © 2015 American Heart Association, Inc.

Circ Heart Fail is available at http://cirdheartfailure.ahajournals.org DOI: 10.1161/CIRCHEARTFAILURE.115.002103
admission DNR orders ranged between 0% and 36%. Indeed, more than half of hospitals at extreme quintiles would have been reclassified on the exclusion of admission DNR orders. This demonstration is a huge achievement in illustrating the diversity in goals of care discussions among hospital systems. Unfortunately, a standardization of DNR designation may prove elusive because goals of care discussions have become less of a science, but more of an art. Furthermore, DNR patients represent a heterogeneous cohort, including a spectrum of health varying from those patients harboring philosophical and spiritual wishes against cardiopulmonary resuscitation to those patients electing palliation and hospice care.

In an earlier study, Dunlay et al evaluated the association of resuscitation preferences and its relation to survival. Interestingly, close to 40% of patients in this study had changed preferences over time; notably, 6% of patients initially DNR changed to full code at one point during the study period. Crossing over from DNR to full code was not observed reported in the McAlister et al study. Furthermore, the Dunlay et al study reported decreased mobility provided the strongest association to DNR designations. Mobility and frailty were not addressed in the McAlister study, or reflected on the EFFECT risk score.9

Importantly—as observed in the Dunlay et al study—a significant number of DNR patients were noted in this heart failure population (which is a higher representation than just 2 decades ago).10 This may be because of an increased recognition of the importance of palliative strategies among care providers treating patients with heart failure.

In the field of computer science, the term GIGO refers to the input of nonsensical data (Garbage IN) may lead to the production of nonsensical decisions (garbage OUT). More recently, this acronym has also been referred to as Garbage In, Gospel Out, a reference to the fact that many put excessive trust in this acronym has also been referred to as Garbage In, Gospel Out). More recently, input of nonsensical data (Garbage IN) may lead to the production of nonsensical decisions (garbage OUT). More recently, input of nonsensical data (Garbage IN) may lead to the production of nonsensical decisions (garbage OUT). More recently, input of nonsensical data (Garbage IN) may lead to the production of nonsensical decisions (garbage OUT). More recently, input of nonsensical data (Garbage IN) may lead to the production of nonsensical decisions (garbage OUT). More recently, input of nonsensical data (Garbage IN) may lead to the production of nonsensical decisions (garbage OUT). More recently, input of nonsensical data (Garbage IN) may lead to the production of nonsensical decisions (garbage OUT). More recently, input of nonsensical data (Garbage IN) may lead to the production of nonsensical decisions (garbage OUT).

Disclosures

None.

References


Key Words: Editorials ■ guideline adherence ■ heart failure
Garbage In, Gospel Out: Ignoring Goals of Care When Assessing Heart Failure Quality Metrics
Hao A. Tran and Eric D. Adler

Circ Heart Fail. 2015;8:415-416
doi: 10.1161/CIRCHEARTFAILURE.115.002103
Circulation: Heart Failure is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 2015 American Heart Association, Inc. All rights reserved.
Print ISSN: 1941-3289. Online ISSN: 1941-3297

The online version of this article, along with updated information and services, is located on the World Wide Web at:
http://circheartfailure.ahajournals.org/content/8/3/415

Permissions: Requests for permissions to reproduce figures, tables, or portions of articles originally published in Circulation: Heart Failure can be obtained via RightsLink, a service of the Copyright Clearance Center, not the Editorial Office. Once the online version of the published article for which permission is being requested is located, click Request Permissions in the middle column of the Web page under Services. Further information about this process is available in the Permissions and Rights Question and Answer document.

Reprints: Information about reprints can be found online at:
http://www.lww.com/reprints

Subscriptions: Information about subscribing to Circulation: Heart Failure is online at:
http://circheartfailure.ahajournals.org/subscriptions/