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DOES A LIVING WILL EQUAL A DNR? ARE LIVING WILLS COMPROMISING PATIENT SAFETY?

Ferdinando L. Mirarchi, DO, FAAEM

Department of Emergency Medicine, Hamot Medical Center, Erie, Pennsylvania
Reprint Address: Ferdinando L. Mirarchi, DO, FAAEM, Department of Emergency Medicine, Hamot Medical Center, 201 State Street, Erie, PA 16550

☐ **Abstract—Living wills are thought to protect the medical decision-making capacity of patients. Presented are three case scenarios of patients with living wills presenting to health care facilities for treatment, and their hospital courses. Living wills have never been thought to compromise patient care or safety, but their use has not been adequately studied with respect to risks, benefits, or consequences. This case series will define a scenario as well as how that scenario was affected by the presence of a living will. In addition, existing data regarding the care provided to patients with a code status designation of DNR (do not resuscitate) are reviewed.** © **2007 Elsevier Inc.**

☐ **Keywords—living will; DNR; patient safety; code status**

INTRODUCTION

According to recent census estimates, the US population is approximately 290 million (1). A recent study estimates that approximately 20% of the populace has a living will (2). This accounts for approximately 59 million living wills in existence. Advanced directives, in the form of a living will, are commonly utilized to protect the rights of patients. They are often created by an attorney and are thought to empower the patient with the ability to retain their medical decision-making capacity and preserve their autonomy. Living will laws vary from state to state as do the structures of how they are created. Regardless of the law and the structure in which they are created, their use has never been thought to compromise patient care and safety. In addition, they have often been promoted to the public as an option to ensure their right to accept or refuse medical care.

Presented are three case scenarios of patients presenting for treatment with living wills and their hospital course. Also presented is a review of data affecting patients designated a code status DNR (do not resuscitate).

CASE REPORTS

The cases presented have been altered to protect the identity, location, and confidentiality of the patients and the hospitals involved. They are actual patient interactions and outcomes. The living wills contained in this article have been recreated to maintain patient confidentiality and maintain compliance with HIPAA (Health Insurance Portability and Accountability Act) regulations.

Case 1

Mr. A is an 82-year-old man with a history of cardiac disease, hypertension, and automated implanted cardiac defibrillator placement for sudden cardiac arrest. Despite

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his medical history, Mr. A still enjoys a very active retirement and quality of life. Mr. A presented to an Emergency Department (ED) with a chief complaint of chest pain. The Emergency Physician (EP) reviewed his history, electrocardiogram, chest X-ray, and laboratory studies. The EP felt the patient was suffering from unstable angina and treated him accordingly. The EP then contacted the patient's Primary Care Physician (PCP) for admission. The PCP advised the EP that the patient did not need to be admitted as he had a living will and his interpretation of the living will designated a code status of DNR (do not resuscitate) (Figure 1). The EP reviewed the living will and insisted that the patient be admitted as he felt the living will, although present, was not activated and therefore the patient was a Full Code. Furthermore, the EP discussed with the patient whether, if a surgical intervention were needed to evaluate his condition, he would be willing to do so, and his answer was yes. The patient was admitted and underwent an evaluation of his chest pain and was discharged within 24 h. His treatment as an inpatient consisted of laboratory studies and a chest X-ray. Mr. A was then discharged with an outpatient appointment 10 days later.

Mr. A then presented to the ED 3 days later with an acute myocardial infarction. The Emergency Physician at that time treated him accordingly, reviewed the previous patient record, and notified the cardiologist of the patient's condition. The patient was then taken for primary coronary angioplasty. His hospital course thereafter was uncomplicated and he was discharged home.

LIVING WILL

I, _____, being of sound mind, willfully and voluntarily make this declaration to be followed if I become incompetent. This declaration reflects my firm and settled commitment to refuse life-sustaining treatment under the circumstances indicated below.

I direct my attending physician to withhold or withdraw life-sustaining treatment that serves only to prolong the process of my dying, if I should be in a terminal condition or in a state of permanent unconsciousness.

I direct that treatment be limited to measures to keep me comfortable and to relieve pain, including any pain that might occur by withholding or withdrawing life-sustaining treatment.

In addition, if I am in the condition described above, I feel especially strong about the following forms of treatment.

I ( ) do (✓) do not want cardiac resuscitation.

I ( ) do (✓) do not want mechanical respiration.

I ( ) do (✓) do not want tube feeding or any other artificial or invasive form of nutrition (food) or hydration (water).

I ( ) do (✓) do not want blood or blood products.

I ( ) do (✓) do not want any form of surgery or invasive diagnostic tests.

I ( ) do (✓) do not want kidney dialysis.

I ( ) do (✓) do not want antibiotics.

I realize that if I do not specifically indicate my preference regarding any of the forms of treatment listed above, I may receive that form of treatment.

Figure 1. A living will portraying resuscitation choices. Note that the patient has declined all interventions.

Case 2

Mrs. B is a 64-year-old woman with a past history of hypertension. She recently retired and enjoys a very active life style. She suffered a fall as the result of slipping on the ice. She injured her right lower extremity. She required admission to the hospital for operative fixation. At the time of her admission, she was asked if she had a living will, which she did and she provided a copy for the chart (Figure 2). Mrs. B then underwent fixation of the right lower extremity. On the second postoperative day she developed upper gastrointestinal bleeding. The nurse at the time looked at her chart, saw her living will and felt the code status of the patient was a DNR. Mrs. B developed coffee ground emesis, which quickly became frank hematemesis; 1 h and 40 min later, the nurse attempted to call the orthopedic surgeon who had admitted her to the hospital and performed the surgery. The on-call physician returned the call. The nurse advised him of her condition and that she was a DNR. The physician asked if she needed to go to the Intensive Care Unit. The nurse stated she was a DNR and the patient was not transferred. A routine consult was placed for Internal Medicine and General Surgery to co-manage the patient's gastrointestinal bleeding. Those evaluations were completed 1 h later. The PCP and the surgeon then quickly acted and resuscitated the patient, transferred her to the intensive care unit, and she underwent emergency surgery. She was discharged to home 1 week later.

Case 3

Mr. C is a 72-year-old man with diabetes, hypertension, and renal failure, for which he has been dialyzed for 10 years. He developed chest pain, presented to the ED for treatment, and was later found to be suffering from a non-Q-wave myocardial infarction. He was treated with aspirin and nitroglycerine. The Emergency Physician reviewed the patient's living will (Figure 3). After reviewing the living will he felt the patient's code status was a DNR and called the PCP. The patient was admitted to the hospital and a consult was placed for the cardiologist to see him in the morning. The next morning, the patient developed ventricular fibrillation. A cardiologist saw what was happening and ran to Mr. C's room to help defibrillate the patient. The nurse stated he was a DNR and stopped him. He then proceeded to attempt to defibrillate the patient again. He again was stopped, this time by the PCP. Mr. C was never defibrillated and was pronounced deceased.

DISCUSSION

Advanced directives in the form of a living will have, by sheer numbers, become commonplace. They are documents that explain a patient's choice to receive or decline life-saving interventions. Although the document is effective when it is completed, it is not operative. It becomes activated or operative when a patient enters a terminal condition, state of permanent unconsciousness, or persistent vegetative state (3). The term *terminal condition* in the law and what is practiced in medicine are entirely different. The law states that a terminal condition is one in which the patient's condition will result in death regardless of treatment. In medicine, a urinary tract infection can be terminal if not treated. In the three cases presented, not one of the situations depicted provided the ability to enact the living will or advanced directive. It was their presence that led to the confusion and a DNR code status being designated.

Regardless of a patient's location in a health care facility, the question "what's the patient's code status?" is commonly asked. The answer affects how aggressively we treat a patient's condition. Commonly utilized code status designations are as follows: DNR (do not resuscitate), DNI (do not intubate), Chemical Code (medications only), and Full Code (all supportive measures). DNR is defined in the literature and represents a designation not to intervene if a patient is found pulseless or apneic (dead) (4–10). The code status DNR is often assigned to terminal patients, which may be precipitating confusion in health care facilities. Patients themselves are often unaware of the code status designation as it is a clinical term that is utilized in health care. As can be seen in the individual cases presented, patients present with an acute life-threatening condition and their living will. The living will is then interpreted and a code status is designated. In Case 1, disagreement over the code status designation occurred between the Emergency Physician and the PCP. Had they agreed, the patient's initial care may have been more aggressive and possibly prevented his acute myocardial infarction. In Case 2, the nurse delayed notifying the attending physician of a change in the patient's clinical status. Furthermore, both the orthopedic surgeon and the nurse misinterpreted the living will document and believed it to be operative. This compromised the health and safety of the patient, who initially presented with a non-life-threatening condition. In Case 3, both the Emergency Physician and the PCP misinterpreted the document and also believed it to be operative. As such, it resulted in less than aggressive care for a non-ST segment elevation myocardial infarction. As can be seen from the presentation, the cardiologist's actions questioned and prevented treatment that could have been life saving. One could contend that the pa-

PART II - ADVANCED DIRECTIVE FOR HEALTH CARE
(LIVING WILL)

DECLARATION

The following health care treatment instructions exercise my right to make decisions concerning my health care. These instructions are intended to provide clear and convincing evidence of my wishes to be followed when I lack the capacity to make or communicate my treatment decisions:

TERMINAL ILLNESS OR PERMANENT UNCONSCIOUSNESS

If I suffer from a terminal condition or a state of permanent unconsciousness such as a permanent coma or persistent vegetative state or irreversible brain damage or brain disease and there is no realistic hope of significant recovery, all of the following apply:

1. I direct that I be given health care treatment to relieve pain or provide comfort even if such treatment might shorten my life, suppress my appetite or my breathing, or be habit forming;
2. I direct that all life prolonging procedures be withheld or withdrawn;
3. I specifically do not want any of the following as life prolonging procedures: heart-lung resuscitation (CPR), mechanical ventilator (breathing machine), dialysis (kidney machine), surgery, chemotherapy, radiation treatment, antibiotics;
4. I do not want nutrition (food) or hydration (water) medically supplied by tube.

SURROGATE'S USE OF INSTRUCTIONS

_____ My Surrogate must follow these instructions.

OR

_____ These instructions are only guidance. My Surrogate's instructions shall control and said Surrogate may modify or reject any of my instructions.

LEGAL PROTECTION

On behalf of myself, my executors and heirs, I hold my Surrogates and my health care providers harmless, and release and indemnify them against any claim for recognizing my Surrogates' authority or for following my treatment instructions in good faith.

Having carefully read this document, I have signed it this _____ day of _____, 20___, revoking all previous health care powers of attorney and advanced directives for health care (Living Will).

_____
, principal/declarant

WITNESS: _____ WITNESS: _____

On this _____ day of _____, 20___, before me, personally appeared the aforesaid declarant, to me known to be the person described in and who executed the foregoing instrument and acknowledged that he/she executed the same as his/her free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal in the County of _____, State of _____, the day and year first above written.

_____
Notary Public

Figure 2. A living will portraying resuscitation choices. Note that all interventions are declined.

LIVING WILL

I, _____, being of sound mind, willfully and voluntarily make this declaration to be followed if I become incompetent. This declaration reflects my firm and settled commitment to refuse life-sustaining treatment under the circumstances indicated below.

I direct my attending physician to withhold or withdraw life-sustaining treatment that serves only to prolong the process of my dying, if I should be in a terminal condition or in a state of permanent unconsciousness.

I direct that treatment be limited to measures to keep me comfortable and to relieve pain, including any pain that might occur by withholding or withdrawing life-sustaining treatment.

In addition, if I am in the condition described above, I feel especially strong about the following forms of treatment.

I ( ) do (✓) do not want cardiac resuscitation.

I ( ) do (✓) do not want mechanical respiration.

I ( ) do (✓) do not want tube feeding or any other artificial or invasive form of nutrition (food) or hydration (water).

I ( ) do (✓) do not want blood or blood products.

I ( ) do (✓) do not want any form of surgery or invasive diagnostic tests.

I ( ) do (✓) do not want kidney dialysis.

I (✓) do ( ) do not want antibiotics.

I realize that if I do not specifically indicate my preference regarding any of the forms of treatment listed above, I may receive that form of treatment.

Figure 3. Living will portraying resuscitation choices. Note that the patient has declined all interventions except antibiotics.

tient's living will declined defibrillation, however, at that time the patient's living will, although present, was not operative.

In 1983 a Presidential Directive was created based upon the outcome of a commission on deciding to forgo life-sustaining treatment. It states: "any DNR Policy should ensure that the order not to resuscitate has no implications on any other treatment decision." Despite this directive, published data describe less aggressive care and treatment with respect to a DNR patient (10). This is evidenced by studies that span almost two decades of time and is further supported by the cases presented (11–14). As physicians, a patient's care and safety is our ultimate goal. However, after reviewing the cases presented, our actions as physicians may be fueling a misinterpretation of a DNR to equal Do Not Treat or, even more concerning, a living will to equal a DNR or Do Not Treat. There are significant data to suggest that the care provided to DNR patients is not compromised (15,16). However, the cases detailed in this series add support to published data that suggest otherwise. Beach and Morrison described the effect of DNR orders on physician decision-making (17). The results of their study confirmed that physicians are less aggressive with DNR patients. Specifically, physicians were less likely to transfuse or transfer a DNR patient to an Intensive Care Unit. In addition, they were less likely to order diagnostic studies or utilize aggressive critical care procedures

(17). Physicians have also assigned the code status designation DNR without discussions with the patient or health care surrogate even when the patient or surrogate was competent to partake in such discussions (18). In all three cases reported in this series, not one of the physicians asked the patient if the patient was a DNR or a Full Code.

There is no question that nursing staff is critical to patient care. Nurses, as portrayed in Case 2, may be the initial health care individual to recognize a clinical change in a patient's condition or complication of surgery. Investigators have reported that intensity of care given to DNR patients is similar or exceeds care given to a non-DNR patient (19). Case 2 adds controversy and supports published data that exist to debate this point and reveal that nursing care may be compromised (9,10,20,21). Thibault-Prevost et al. assessed the perceptions of a DNR status on critical care nurses (20,21). In a survey study, 47% of nurses failed to distinguish a DNR from other end-of-life decisions. Seventy-two percent felt a DNR patient should not receive aggressive interventions and 65% felt that a patient with a DNR designation should not be admitted to an Intensive Care Unit (20,21). Henneman et al. studied the effect of DNR orders on the nursing care of critically ill patients (9). Their study confirmed that nurses were significantly less likely to perform physiologic monitoring, modalities and interventions on DNR patients. Furthermore, they found that a DNR might be misinterpreted to mean more than no cardiopulmonary resuscitation (9,21). Case scenarios have also shown that increasing age as well as a DNR order significantly decreased the aggressiveness of nursing care (22). Lastly, as depicted in Case 2, nurses may delay notifying a physician of significant change of the clinical status of a patient who is deemed a DNR (9,21).

Hospitals have created policies that limit DNR patients from being admitted to Intensive Care Units (21). In addition, various states have enacted DNR acts where patients are not to be resuscitated if found pulseless or apneic. There are no studies to comment as to how hospitals created these policies or if patient care is affected. There are also no studies to assess patient safety with respect to paramedics interpreting living wills.

Health care employees and administrators are very impressionable to the actions of physicians. Physicians all too often do not address advanced directives, living wills, or end-of-life discussions. Tulsky et al. reveal that physicians spend very little time on this topic, which raises the issue of adequate informed consent on the part of the patient. In their study, physicians spent less than 5.6 min on the topic of advanced directives and living wills and spoke for two-thirds of the conversation (23,24). Larson and Tobin reveal that physicians do not address the issue of end-of-life discussions as they feel they are not compensated for their effort (24). Reasons theorized as to why physicians do not address this subject are speculative but Morrison reveals that physicians avoid this issue for a fear of causing pain, being the bearer of bad news, or they lack the knowledge of advanced directive laws and training in delivering bad news. Furthermore, physicians view death as the enemy to be defeated, anticipate disagreement with the patient or family, and finally, have medical–legal concerns and feel threatened by such discussions (25).

The issue of a living will being misinterpreted to define DNR and a DNR to define no care or treatment must be investigated as it has great ramifications with respect to patient safety.

CONCLUSION

In medicine, patient care and safety is an ultimate goal. There is a lack of data evaluating the use of living wills and patient safety. Studies must ensue to define their use, structure, interpretation, and impact on patient safety. There is compelling evidence that should raise concern on how living will documents are accepted and utilized in a health care facility. In addition, we continue to see patient safety concerns with respect to the code status DNR despite a Presidential Directive and many scientific publications. To protect patient safety, investigations must commence and be directed toward living will acceptance and interpretation in the clinical setting. In addition, hospitals as well as health care facilities should direct efforts toward physicians, health care personnel, and administrators that just because a living will exists, its existence does not cause it to become activated. Also, it must be reiterated that a DNR does not equal "do not treat."

Should the question "what's the patient's code status?" be incorporated into living wills and advanced directives? Does the answer to this question imply understanding, informed consent, and protect patient safety? What must health care facilities do to ensure the safety of the DNR patient or the patient who has a living will? Research in these areas must begin to ensure patient safety.

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