Withdrawal of Life Supporting Treatment Case Studies

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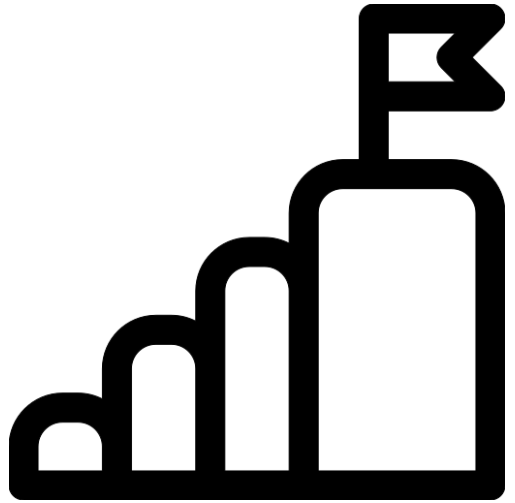
11:30

Objectives

- **Review the definition**
- **Clues**
- **Example of the withdrawal process**
- **Cases**



Definition

WITHDRAWAL OF LIFE SUPPORTING TREATMENT

Treatment was withdrawn based on a decision to either remove or withhold further life sustaining intervention. This decision must be documented in the medical record and is often, but not always associated with a discussion with the legal next of kin.

- DNR not a requirement.
- A note to limit escalation of treatment qualifies as a withdrawal of life supporting treatment. These interventions are limited to: ventilator support
  (with or without extubation), dialysis or other forms of renal support, institution of medications to support blood pressure or cardiac function, or a specific surgical, interventional or radiological procedure (e.g. decompressive craniectomy, operation for hemorrhage control, angiography). Note that this definition provides equal weight to the withdrawal of an intervention already in place (e.g. extubation) and a decision not to proceed with a life-saving intervention (e.g. intubation).
- Excludes the discontinuation of CPR and typically involves prior planning.
- DNR order is not the same as withdrawal of care.
- The field value 'No' should be reported for patients whose time of death, according to your hospital's definition, was prio to the removal of any interventions or escalation of care.
- Includes brain dead patients where care is withdrawn in coordination with Gift of Life
- Includes patients changed to comfort care status, which may be documented in notes or orders

Clues

- **Death – All, brain, extubation > death**
- **Comfort care status**
- **Gift of Life**
- **Palliative care consult**

What clues does the literature offer?

Am J Hosp Palliat Care. 2018 Aug;35(8):1063-1068. doi: 10.1177/1049909117752670. Epub 2018 Jan 24.

End-of-Life Decision-Making for Patients With Geriatric Trauma Cared for in a Trauma Intensive Care Unit.

Wooster M[1], Stassi A[2], Hill J[3], Kurtz J[4], Bonta M[5], Spalding MC[3,4].

Author information

Abstract

BACKGROUND: The geriatric trauma population is growing and fraught with poor physiological response to injury and high mortality rates. Our primary hypothesis analyzed how prehospital and in-hospital characteristics affect decision-making regarding continued life support (CLS) versus withdrawal of care (WOC). Our secondary hypothesis analyzed adherence to end-of-life decisions regarding code status, living wills, and advanced directives.

MATERIALS AND METHODS: We performed a retrospective review of patients with geriatric trauma at a level I and level II trauma center from January 1, 2007, to December 31, 2014. Two hundred seventy-four patients met inclusion criteria with 144 patients undergoing CLS and 130 WOC.

RESULTS: A total of 13 269 patients with geriatric trauma were analyzed. Insurance type and injury severity score (ISS) were found to be significant predictors of WOC (P = .013/.045). Withdrawal of care patients had shorter time to palliative consultation and those with geriatrics consultation were 16.1 times more likely to undergo CLS (P = .026). Twenty-seven (33%) patients who underwent CLS and 31 (24%) patients who underwent WOC had a living will, advanced directive, or DNR order (P = .93).

CONCLUSIONS: Of the many hypothesized predictors of WOC, ISS was the only tangible independent predictor of WOC. We observed an apparent disconnect between the patient's wishes via living wills or advanced directives "in a terminal condition" and fulfillment during EOL decision-making that speaks to the complex nature of EOL decisions and further supports the need for a multidisciplinary approach.

KEYWORDS: advanced directives; critical care; end of life; geriatric; palliative care; trauma

PMID: 29366336 DOI: 10.1177/1049909117752670

- **High ISS is a predictor of withdrawal of care**
- **DNR options in Ohio: 1) DNR: comfort care arrest 2) DNR: comfort care**
- **Palliative care consult were 12.4 times more likely to undergo withdrawal of care**
- **Geriatric consult 16.1 times more likely to undergo continued care**

J Trauma Acute Care Surg. 2019 May;86(5):864-870. doi: 10.1097/TA.0000000000002205.

The why and how our trauma patients die: A prospective Multicenter Western Trauma Association study.

Callcut RA[1], Kornblith LZ, Conroy AS, Robles AJ, Meizoso JP, Namias N, Meyer DE, Haymaker A, Truitt MS, Agrawal V, Haan JM, Lightwine KL, Porter JM, San Roman JL, Biffl WL, Hayashi MS, Sise MJ, Badiee J, Recinos G, Inaba K, Schroeppel TJ, Callaghan E, Dunn JA, Godin S, McIntyre RC Jr, Peltz ED, O'Neill PJ, Diven CF, Scifres AM, Switzer EE, West MA, Storrs S, Cullinane DC, Cordova JF, Moore EE, Moore HB, Privette AR, Eriksson EA, Cohen MJ; Western Trauma Association Multicenter Study Group.

⊕ Author information

Abstract

BACKGROUND: Historically, hemorrhage has been attributed as the leading cause (40%) of early death. However, a rigorous, real-time classification of the cause of death (COD) has not been performed. This study sought to prospectively adjudicate and classify COD to determine the epidemiology of trauma mortality.

METHODS: Eighteen trauma centers prospectively enrolled all adult trauma patients at the time of death during December 2015 to August 2017. Immediately following death, attending providers adjudicated the primary and contributing secondary COD using standardized definitions. Data were confirmed by autopsies, if performed.

RESULTS: One thousand five hundred thirty-six patients were enrolled with a median age of 55 years (interquartile range, 32-75 years), 74.5% were male. Penetrating mechanism (n = 412) patients were younger (32 vs. 64, $p < 0.0001$) and more likely to be male (86.7% vs. 69.9%, $p < 0.0001$). Falls were the most common mechanism of injury (26.6%), with gunshot wounds second (24.3%). The most common overall primary COD was traumatic brain injury (TBI) (45%), followed by exsanguination (23%). Traumatic brain injury was nonsurvivable in 82.2% of cases. Blunt patients were more likely to have TBI (47.8% vs. 37.4%, $p < 0.0001$) and penetrating patients exsanguination (51.7% vs. 12.5%, $p < 0.0001$) as the primary COD. Exsanguination was the predominant prehospital (44.7%) and early COD (39.1%) with TBI as the most common later. Penetrating mechanism patients died earlier with 80.1% on day 0 (vs. 38.5%, $p < 0.0001$). Most deaths were deemed disease-related (69.3%), rather than by limitation of further aggressive care (30.7%). Hemorrhage was a contributing cause to 38.8% of deaths that occurred due to withdrawal of care.

CONCLUSION: Exsanguination remains the predominant early primary COD with TBI accounting for most deaths at later time points. Timing and primary COD vary significantly by mechanism. Contemporaneous adjudication of COD is essential to elucidate the true understanding of patient outcome, center performance, and future research.

LEVEL OF EVIDENCE: Epidemiologic, level II.

- **Hemorrhage was a contributing cause to 38.8% of deaths that occurred due to withdrawal of care**

How does DNR differ from withdrawal of life supporting treatment?

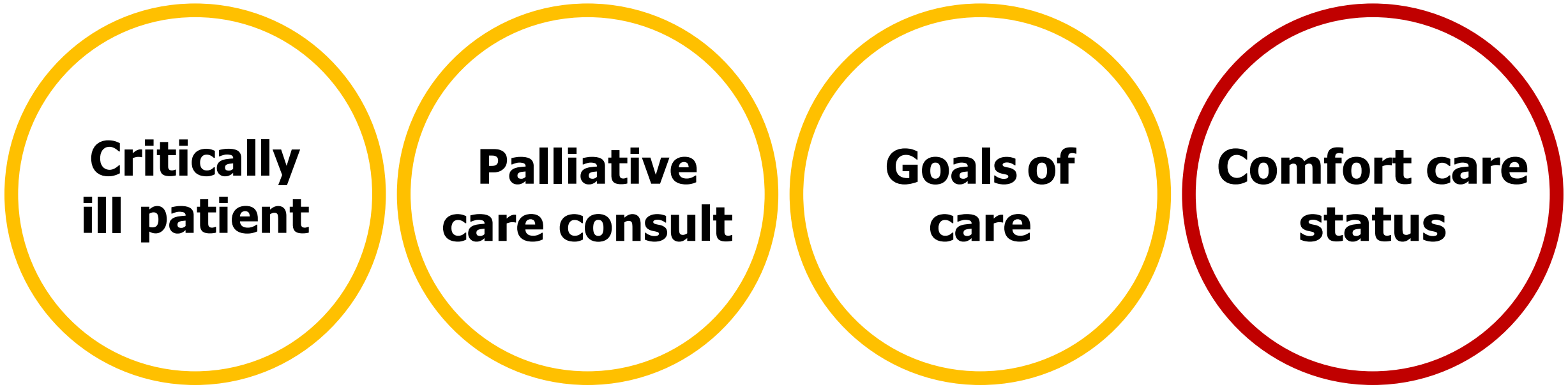
DNR

- Code status
- Provides instruction on how to react if the patient stops breathing or heart stops beating
- Communicated as an order
- Often present regardless of disease acuity

Withdrawal of Life Supporting Treatment

- Care status
- Reflects actual care or lack of care being provided to the patient
- Communicated in orders, notes, or treatment
- Often present when care is futile

Example Process



Comfort Care Status

Comfort Management

- Anxiety
- Bowel obstruction
- Gastroparesis
- Increased ICP
- Pain

Pre-Medicated

- Anti-anxiety
- Antisialogogue
- Opioids

Withdrawal

- Pressors
- Extubation
- Chaplain


Insights from personal or professional experience?

Case 1

Elderly female status post fall from bed. Presented with low GCS. Found to have sustained a SAH and myocardial infarction. On HD 1, patient arrests without ROSC. Patient expires.

Withdrawal of life supporting treatment? Y/N

Case 2

Elderly male status post hanging. Required pre-hospital CPR by EMS with ROSC. Found to have sustained anoxic brain injury. On HD 3, patient's code status is changed to DNR and part 1 of brain death exam completed. On HD 4, patient arrests no CPR is performed. Patient expires. Part 2 of brain death exam is unable to be completed.

Withdrawal of life supporting treatment? Y/N

Case 3

Elderly female status post fall. Found to have sustained PTX, rib fractures, T-spine fracture. On HD 3, patient develops altered mental status, ileus, and worsened respiratory status. Code status changed to DNR. On HD 6, patient arrests no CPR is performed. Patient expires.

Withdrawal of life supporting treatment? Y/N

Case 4

Elderly male status post fall. Found to have sustained IVH, PTX, rib fractures, scapula fracture. On HD 2, patient develops delirium. Code status changed to DNR. Discussion with family held. Decision was made not to pursue aggressive care and patient was made comfortable. Pressors are stopped. On HD 3, patient arrests no CPR is performed. Patient expires.

Withdrawal of life supporting treatment? Y/N

Case 5

Elderly male status post fall. Found to have sustained PTX, rib fractures. Patient develops worsening PTX. Chest tube placed and later removed. Patient develops altered mental status. Stat head CT is done and transferred to ICU. Patient improves and is transferred to the floor. All recommended care provided. For disposition, family elects to pursue home hospice.

Withdrawal of life supporting treatment? Y/N

Case 6

Elderly male status post fall. Found to have sustained c-spine fractures and forehead hematoma. EP turned ICD off for MRI. Injury managed non-operatively. Aspirating due to collar. NPO/TF started. Worsened delirium. Code status changed to DNR. EP called to turn ICD off. EP on evaluation notes already off. Patient arrests. No CPR is performed. Patient expires.

Withdrawal of life supporting treatment? Y/N

Case 7

Elderly female status post choking on food and fall. Pre-hospital arrest requiring CPR. Found to have sustained SAH, SDH, and skull fractures. Artic sun cooling performed. HD 2 exam reveals blown pupil. Progress note indicates extended family elected to withdraw from ventilator following decreased neurologic status. ETT removed following change in medications to comply with end of life goals. Patient arrests and expires.

Withdrawal of life supporting treatment? Y/N

Case 8

Elderly female status post fall. Found to have sustained SDH, facial fractures, and rib fractures. ICP monitor placed. Injury worsens. Neurosurgery discusses with family that this will not be a recoverable injury. Family plans to move to comfort measures in the next 24 hours. The next day extubate order placed. ETT removed. Patient arrests and expires.

Withdrawal of life supporting treatment? Y/N

Case 9

Elderly female status post motorcycle crash. Found to ICH, hemopneumothorax, liver laceration. Craniectomy performed and ventriculostomy placed. Develops CVA secondary to progression TBI. Findings discussed with family. Family decided to change her to comfort care. Palliative extubation performed. Patient arrests and expires.

Withdrawal of life supporting treatment? Y/N

Summary

- **Withdrawal of life supporting treatment is a decision to either remove or not escalate care of a life supporting treatment**
- **Clues can include: comfort care, death, or palliative care involvement**