AMA Journal of Ethics®
August 2018, Volume 20, Number 8: E732-737

IN THE LITERATURE

Clinical Momentum as One Reason Dying Patients Are Underserved in Acute Care Settings

Helen Stanton Chapple, PhD, RN, MA, MSN, CT

Abstract
"Clinical momentum" refers to the curious expansion of interventions applied to patients in the intensive care unit (ICU) without pause or design, leading to extensions of care that can violate patient wishes and distress clinicians. In this article, clinical momentum is placed in a wider context that includes ritual, reimbursement patterns, and actor network theory. These contextual features help motivate understanding of one way in which dying patients are underserved in intensive care settings. Suggestions are made for clinician interaction with families under these circumstances.

Clinical Momentum

In "Clinical Momentum in the Intensive Care Unit,"[1] Kruser, Cox, and Schwarze point to occurrences already well described in medical social science.[2,3] They notice that, despite evidence of patients' preferences for emphasis on quality of life, patient care interventions for older adults mount up in the intensive care unit (ICU) and that a perplexing, almost unstoppable energy expands and multiplies them.

Kruser, Cox, and Schwarze offer an example of clinical momentum for discussion.[1] They describe a patient with chronic obstructive pulmonary disease in the ICU who initially requires intubation and mechanical ventilation but experiences complications over an 11-day period, at which point, an endotracheal tube needs to be replaced by a tracheostomy tube. The authors imply that this procedure transforms her—and other patients like her—from acutely ill to chronically critically ill, signified by the clinicians' decision to pursue tracheostomy tube placement. The clinicians know that placing a trach is the gateway to long-term ventilation. The patient had previously indicated her unwillingness to be on the vent "for a long time."[1] Enacting this option would confirm the troubling fact that she has traveled into the territory of unwanted care. The clinicians are complicit in this turn of events because they have been unable to explain the significance of this particular decision in a way that the husband understands. The trach, then, becomes key not only to the unwelcome treatment plan but also to the clinicians' moral unease.

The authors offer 4 concepts to support their argument that the trajectory of clinical momentum illustrated by this example exists and is potent. I contend that clinical momentum does not exist in isolation. Its power derives from forces much broader and more elaborated than the article's authors imply. In fact, "clinical momentum" operates within social forces that include both ritual and the reimbursement patterns in acute care. Actor network theory also provides explanatory benefit.

The 4 Concepts

Kruser, Cox, and Schwarze buttress their argument for clinical momentum by relating it to 4 disparate patterns of behavior: the *cascade effect*,[1,4] such that a triggering event brings about a procession of interventions; the *fix-it model*[1,5] that addresses each discrete complication in isolation, without considering the big picture; *recognition-primed decision making*[1,5] that clinicians use to match symptoms with a familiar pattern of action; and *sunk cost effects*[1,5] that discourage departure from a course of treatment that required major investment. The first 3 patterns address clinician practice especially in intensive care, and the fourth adds to the mix the patient and family, who, in this case, voice reluctance "to give up" on the time and energy already expended on the patient's survival.[1]

It is not clear exactly how these patterns relate to each other or to clinical momentum itself. They seem descriptive rather than explanatory. They belong within the larger contexts of ritual, reimbursement patterns, and actor network theory, each described below, but my few comments here cannot fully trace these connections. Yet with them I wish to show that clinical momentum is housed within sets of powerful cultural forces at work in the US health care system. It is not an independent development. Rich context conveys its own urgency to clinical momentum. Without appreciating these energies, we cannot explain why this momentum is so inexorable.

Ritual. Rituals are repeated social or communal actions that can acquire meaning and transformative power. The first 3 clinical practice patterns—the cascade effect, the fix-it model, and recognition-primed decision making—can be seen as manifestations of the ritual of intensification.[2] US society feels a cultural obligation to demonstrate its commitment to equitable treatment in extremis, and "rescue" is a central feature of the health care system. The ritual of intensification serves to transform patients from "rescuable" to "unrescuable," even "dying," if they do not respond in a positive way to interventions. If initial interventions fail, the patient is stabilized and treated aggressively over a period of time, with careful attention to every untoward change in lab values or fluid balance (demonstrating recognition-primed decision making and the fix-it model). As the patient's outcome remains unclear, patterned responses and interventions pile up in a cascade effect.

But clock time is also a significant factor. A critical mass of technology must accrue over

an unspecified amount of time, providing clear evidence of insufficient or declining patient response. Eventually the team may be ready to call the patient "dying." At this point the transformation enacted by the ritual is complete. The arrival of the decision point about the trach in the case example indicates the team's growing consensus that the patient cannot be delivered from unwanted long-term ventilation unless she is acknowledged to be dying.

Reimbursement patterns. The amassing of discrete interventions relates to the fourth phenomenon, sunk cost effects. Health care in the US is delivered and paid for by means of what Gawande calls "piecework."[6] Discrete devices, procedures, drugs, and levels of care are categorized and tagged as they attach themselves to the patient. Less boxable interventions such as nursing care, family meetings, and preventive instruction are not specifically charged for, so they carry much less weight in the capitalistic health care system. The tangible stuff of intervention such as lines, machines, and monitors also validates the worth of the patient attached to them. Being readily reimbursable, this "stuff" stands in for and signifies patient care in the US. It is both pricey and priceless. Daniel Callahan refers to technology-driven health care in the US as "the beloved beast."[4] It both drives and is fed by clinical momentum, forming a perfect positive feedback loop.

Actor network theory. Sunk cost effects point to yet another frame for the network of forces fueling clinical momentum: actor network theory. A story helps explain this theoretical construct. When I attended my first critical care conference as a new ICU nurse, I was astonished at the enormity of the exhibit hall and what filled it. I roamed the aisles taking in the panorama of competing technologies, watching industry reps energetically demonstrating their latest designs to endless clusters of conference attendees. The scales dropped from my eyes. For the first time I realized that every single item I touched at work, from the alcohol wipes in my pocket to the monitors on the wall, the poles holding the IV pumps, the devices strapped around my patient's calves preventing blood clots, and the bed itself had been made by someone. Someone else had sold the product to my hospital, and a third someone had delivered it. The power, the capitalistic urgency, and the unfathomable size of the supply chains fueling the ICU project that I enacted were laid bare to me for the first time in that convention hall.

I was viewing the bounty produced by a complex network of forces including ingenuity, compassion, avarice, and competition that routinely converge and transform themselves into tangible pieces of equipment, required as a part of my patient's critical care. Once there, the drivers that produced them are obscured but still present and active. They enable the fabulous rescue modalities, populating the ICU with tools clinicians must manage and payers must reimburse. The material products appear inert. But, once on site, they seem to compel their own deployment. The new and exciting interventions quickly become part of routine care.[5]

This interaction between humans and objects in networks is an example of actor network theory. John Law explains: "the social and the technical are embedded in each other. This means that it simply isn't possible to explore the social without at the same time studying the hows of relational materiality."[7] In order for us to unpack the meaning behind human patterns of behavior such as clinical momentum, it is necessary to include the roles of physical objects. Those roles intertwine with human actors and their actions. Certainly clinical momentum in the ICU is partly defined by the layering of technological interventions, sunk costs, and the management of all this "stuff."

Viewed through the lens of actor network theory, the momentum comes not just from the clinicians' habits of practice but also from the forces embodied by the technology they have at their fingertips. Using it to snatch patients back from the brink of death is expected. Keeping patients suspended between life and death until they can rally is technology's purpose. Turning it off is not. Its very existence, along with the supply chain behind it, provides impetus for its use. In some way the machines themselves seem to resist being taken out of service. New cars are made to be driven. The momentum is built in.

In the case example, clinicians see the trach decision as a key turning point for the patient's plan of care, and they try to impress this fact on the patient's husband. But by now, 11 days in, it is no wonder that the husband sees this decision as no different from the other consents for this or that intervention that he's been asked to give. The sunk cost effects make him reluctant to change course. The machines, validating both their own presence and value of the patient herself through her association with them, seem also to drive things forward.

But there is yet another force at work: the desire for a tangible "something" versus the alternative, which resembles "nothing." The husband sees forgoing the trach as giving up—as nothing.[1] Left unstated is his fear of abandonment, his imagining of his wife's room unpopulated by machines or staff, as just emptiness. Placing the trach guarantees ongoing relationship for him. To make its case for avoiding unwanted care, the team must fill that imaginary void with positive significance and meaning rather than absence. Honoring his wife's wishes not to be on the vent for a long time is a start. Reassurance of the team's continued involvement, descriptions of specific interventions to manage her symptoms, possibilities for visitors, and life review activities all can be helpful. Palliative care can provide additional suggestions. To embrace the critical present is an act of courage, and the husband should not be expected to do it alone. Dying appears to be a "personal trouble,"[8] but it requires communal solidarity as palpable as the technology it replaces.

The 4 concepts used to buttress clinical momentum are fairly linear and devoid of

context. Neither they nor the phenomenon of clinical momentum exist in two dimensions—at least not in the ways the authors of this article imply. The passage of time brings mounting pressure to make a definitive decision on behalf of the chronically, critically ill. Its urgency combines with the ritual of intensification, health care reimbursement patterns, and the actor networks of influence created by humans interacting with technology. All these forces surround clinical momentum, and it rides on their combined power. When we meet with families, we need to remember that tangible interventions usually require little elaboration and carry great cogency. The alternatives to technology have their own promise and meaning, but we have to work harder to bring them to life so that they can compete.

References

1. Kruser JM, Cox CE, Schwarze ML. Clinical momentum in the intensive care unit. A latent contributor to unwanted care. *Ann Am Thorac Soc*. 2017;14(3):426-431.
2. Chapple, HS. *No Place for Dying: Hospitals and the Ideology of Rescue*. Walnut Creek, CA: Left Coast Press; 2010.
3. Kaufman S. –*And a Time to Die: How American Hospitals Shape the End of Life*. New York, NY: Scribner; 2005.
4. Callahan D. *Taming the Beloved Beast: How Medical Technology Costs Are Destroying Our Health Care System*. Princeton, NJ: Princeton University Press; 2009.
5. Koenig B. The technological imperative in medical practice: the social creation of a "routine" treatment. In: Lock M, Gordon D, eds. *Biomedicine Examined*. Dordrecht, The Netherlands: Kluwer Academic Press; 1988:465-495.
6. Gawande A. Piecework. *New Yorker*. April 4, 2005. https://www.newyorker.com/magazine/2005/04/04/piecework. Accessed March 9, 2018.
7. Law J. Actor network theory and material semiotics. In: Turner BS, ed. *The New Blackwell Companion to Social Theory*. Madden, MA: Wiley-Blackwell; 2007.
8. Jennings B. Solidarity, mortality: the tolling bell of civic palliative care. In: Staudt C, Ellens JH, eds. *New Venues in the Search for Dignity and Grace*. Santa Barbara, CA: Praeger; 2014:271-288. *Our Changing Journey to the End: Reshaping Death, Dying, and Grief in America*; vol 2.

Helen Stanton Chapple, PhD, RN, MA, MSN, CT is an associate professor at Creighton University in Omaha, Nebraska, where she teaches ethics both online and in the classroom to nursing and graduate students in the Masters in Health Care Ethics program. Her book, *No Place for Dying: Hospitals and the Ideology of Rescue* (Left Coast Press, 2010), features research on how dying happens in hospitals. Her research interests include dying persons as an underserved population, the social implications of rescue and transplantation, hospital culture, and state policies regarding end-of-life care.

Citation
AMA J Ethics. 2018;20(8):E732-737.

DOI
10.1001/amajethics.2018.732.

Conflict of Interest Disclosure
The author(s) had no conflicts of interest to disclose.

The viewpoints expressed in this article are those of the author(s) and do not necessarily reflect the views and policies of the AMA.

Copyright 2018 American Medical Association. All rights reserved.
ISSN 2376-6980