Exploring Providers' Perspectives on Early Decisions to Withdraw Life-Sustaining Therapy after Cardiac Arrest One Side of the Story

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Unfortunately, many individuals do not recover neurological function after resuscitation from a cardiac arrest. Family members and providers are often charged with difficult decisions regarding goals of care for patients who do not regain consciousness. Resuscitation scientists have examined trends in withdrawal of life support after cardiac arrest (1) and predictors of poor neurological recovery (2). However, comparatively little work has been done to investigate the decisionmaking process or the communications that occur between providers and family members during this time of uncertainty.

New questions regarding the decisionmaking process were generated by the release in 2015 of guidelines for postarrest care by the American Heart Association and the International Liaison Committee on Resuscitation. Particularly important questions derive from a strong recommendation to delay prognostication of neurological outcome until 72 hours after successful resuscitation (class I, Level of Evidence B-Nonrandomized) (3). Evidence supports delaying decisions regarding neurological recovery until this time to allow for more accurate use of neuroprognostic examinations and multimodal testing (4, 5). Nevertheless, in current practice, prognosis is often issued and withdrawal of life support is often initiated before 72 hours.

In this month's issue of *AnnalsATS*, Dale and colleagues (pp. 1115–1122)

explore decision processes and the factors that lead to "early" withdrawal of lifesustaining therapy after cardiac arrest, using semistructured interviews of clinician providers (6). Qualitative research of this type allows investigators to observe phenomena of interest and associated complex processes. In this study, the investigators explored provider impressions as to why decision-making processes may not be guideline concordant in current practice.

Applying grounded theory, a qualitative methodology used to explore patterns via constant comparison, the authors continued interviewing study subjects until thematic saturation was met. Thematic saturation is defined as the point at which additional interviews are not expected to yield novel information. Using this approach, qualitative researchers can obtain robust information with fewer interviewees, based on achievement of thematic saturation, while still adhering to a formalized evidence-based methodology (7).

Dale and colleagues completed telephone interviews with clinicians who care for post-cardiac arrest patients in the Strategies for Post-Arrest Care (SPARC) Network in Ontario, Canada, until thematic saturation was achieved after 21 interviews. In total, nine critical care physicians (89% male) and 12 critical care nurses (17% male) were interviewed, using a standardized interview guide soon after participating in the care of a patient with cardiac arrest who underwent withdrawal of life support.

The overarching themes identified in the interviews relate to intrateam and family-team communication strain. Intrateam communications were conflicted, as providers within the care team were often not in agreement regarding therapies used and had varying overall impressions regarding prospects for recovery. It was recognized that this discordance within the medical team might transmit to surrogate decision makers, thereby making complex decisions burdened with uncertainty even more confusing.

In addition, the following four subthemes were identified regarding provider-surrogate interactions: surrogate decision makers requested early outcome predictions, surrogates demonstrated incomplete comprehension of critical care, surrogates requested early withdrawal of life support based on their understanding of the patient's preferences and values, and gaps were apparent in communications between providers and surrogates related to prognostic uncertainty. The authors suggest that better communications training for providers and attention to relaying a uniform message to surrogates that is evidence-based might reduce the incidence of early withdrawal of life-sustaining therapy in patients with cardiac arrest.

Multiple factors contribute to how providers communicate in a clinical setting, including years of experience,

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self-confidence, and the sex of the participants. Previous study has shown that sex dyads (provider/patient or surrogate) affect communication style and effectiveness; for example, by altering perceptions of power via nonverbal cues and by revealing potentially competing agendas (8). Dale and coauthors surveyed nine physicians who were predominantly male (89%), and 12 nurses who were predominately female (83%). Given the sex predominance noted for physicians and nurses, it is unclear how perceptions might have differed if more female physicians and male nurses had participated, or whether different themes might have emerged from the interviews if the sexes had been balanced more equally.

Communication skills are rarely taught in medical school or graduate medical training. Clinicians enter into practice with little direction on how to communicate effectively with patients and surrogate decision makers. A recently published study showed that training in relationshipcentered communication skills considerably improved patient satisfaction scores when compared with no training (9). To provide guideline-concordant care for comatose survivors of a cardiac arrest, clinicians will need to become better versed in more effective communication skills that focus on the ability to transmit uncertainty. The current work by Dale and colleagues supports this educational objective.

Exploring provider perspectives on early decisions to withdraw life-sustaining therapy from comatose survivors of cardiac arrest is a novel and fascinating endeavor. However, it is critical to recognize that providers account for only one half of the decision-making dyad. Surrogate decision makers are the family members and loved ones charged with determining end-of-life goals for a comatose individual who has suffered a devastating acute event. Like major trauma, cardiac arrest occurs without warning, often to individuals who have not made their end-of-life preferences well known to others. How the subsequent decision-making process is perceived by surrogate decision makers after cardiac arrest is an area of unchartered investigation, especially when the prognosis remains uncertain.

To improve communication between providers and surrogate decision makers, it is critical to understand what information is needed by surrogates and how best to present to them uncertainty regarding prognosis and evidence-based decision making. Thus, qualitative research based on interviews of surrogates is needed to complement the observations derived by Dale and colleagues from interviews with providers. In particular, more information is needed on how best to relay to surrogates medically nuanced recommendations in practice guidelines, such as the need to delay prognostication until 72 hours after cardiac arrest. More guidance is also needed on how to prepare surrogates to make decisions when there is considerable prognostic uncertainty. These are just two of the many questions that remain in the arena of shared decision-making and end-of-life decisions for comatose survivors of cardiac arrest.

Dale and colleagues have presented important qualitative data regarding perceptions of clinicians as to why early withdrawal of life support occurs after resuscitation from cardiac arrest. They have also identified areas for improvement in how to approach these discussions. Specifically needed is a unified message from caregivers to surrogates regarding guidelineconcordant prognosis. There is also need to relay prognostic uncertainty without amplifying perceptions of pessimism. Future exploration of communication styles and perceptions of surrogate decision makers may yield information relevant to formulating a structured approach to endof-life discussions with the goals of ensuring guideline-concordant care and limiting premature withdrawal of life support.

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References

- 1 Elmer J, Torres C, Aufderheide TP, Austin MA, Callaway CW, Golan E, Herren H, Jasti J, Kudenchuk PJ, Scales DC, et al.; Resuscitation Outcomes Consortium. Association of early withdrawal of lifesustaining therapy for perceived neurological prognosis with mortality after cardiac arrest. *Resuscitation* 2016;102:127–135.
- 2 Neumar RW, Nolan JP, Adrie C, Aibiki M, Berg RA, Böttiger BW, Callaway C, Clark RS, Geocadin RG, Jauch EC, et al. Post-cardiac arrest syndrome: epidemiology, pathophysiology, treatment, and prognostication. A consensus statement from the International Liaison Committee on Resuscitation (American Heart Association, Australian and New Zealand Council on Resuscitation, European Resuscitation Council, Heart and Stroke Foundation of Canada, InterAmerican Heart Foundation, Resuscitation Council of Asia, and the Resuscitation Council of Southern Africa); the American Heart Association Emergency Cardiovascular Care Committee; the Council on Cardiovascular Surgery and Anesthesia; the Council on Cardiopulmonary, Perioperative, and Critical Care; the Council on Clinical Cardiology; and the Stroke Council. *Circulation* 2008;118:2452–2483.
- 3 Callaway CW, Donnino MW, Fink EL, Geocadin RG, Golan E, Kern KB, Leary M, Meurer WJ, Peberdy MA, Thompson TM, *et al.* Part 8: postcardiac arrest care: 2015 American Heart Association Guidelines update for cardiopulmonary resuscitation and emergency cardiovascular care. *Circulation* 2015;132:S465–S482.

- 4 Sandroni C, Cavallaro F, Callaway CW, Sanna T, D'Arrigo S, Kuiper M, Della Marca G, Nolan JP. Predictors of poor neurological outcome in adult comatose survivors of cardiac arrest: a systematic review and meta-analysis: part 1: patients not treated with therapeutic hypothermia. *Resuscitation* 2013;84:1310–1323.
- 5 Sandroni C, Cavallaro F, Callaway CW, D'Arrigo S, Sanna T, Kuiper MA, Biancone M, Della Marca G, Farcomeni A, Nolan JP. Predictors of poor neurological outcome in adult comatose survivors of cardiac arrest: a systematic review and meta-analysis: part 2: patients treated with therapeutic hypothermia. *Resuscitation* 2013; 84:1324–1338.
- 6 Dale CM, Sinuff T, Morrison LJ, Golan E, Scales DC. Understanding early decisions to withdraw life-sustaining therapy in cardiac arrest survivors: a qualitative investigation. Ann Am Thorac Soc 2016;13: 1115–1122.
- 7 Sandelowski M. Using qualitative research. *Qual Health Res* 2004;14: 1366–1386.
- 8 Sandhu H, Adams A, Singleton L, Clark-Carter D, Kidd J. The impact of gender dyads on doctor-patient communication: a systematic review. *Patient Educ Couns* 2009;76:348–355.
- 9 Boissy A, Windover AK, Bokar D, Karafa M, Neuendorf K, Frankel RM, Merlino J, Rothberg MB. Communication skills training for physicians improves patient satisfaction. *J Gen Intern Med* [online ahead of print] 26 Feb 2016; DOI: 10.1007/s11606–016– 3597–2.