

## CPR for OHCA Is Rarely Successful, and What Is "Success" Anyway?

The analysis by Pun *et al.*<sup>1</sup> on outcomes of patients who suffered a cardiac arrest at a dialysis unit is certain to generate attention and possibly concern among medical and lay communities. The authors' discussion of the complex logistic, procedural, and cultural factors that may delay dialysis staff from initiating cardiopulmonary resuscitation (CPR) is insightful. Additionally, the finding that CPR is initiated at lower rates in women than in men uncovers an important disparity. However, as these nuances are explored, studies like these need to be careful about how data are presented, as the implications may have serious consequences regarding the perceived effectiveness of CPR in general.

Presenting data purely in terms of relative odds minimizes the fact that most people die after out-of-hospital cardiac arrest (OHCA).<sup>2</sup> In absolute terms, the death rate among people who had CPR initiated by dialysis unit staff was 71% (230 out of 324), compared with 86% (64 out of 74) among those who had CPR initiated by emergency medical services, an absolute risk reduction of 15%. This makes for a much more modest headline compared with the "three-fold increase in the odds of survival" quoted in the significance statement and highlighted in the visual abstract, which obscures the high mortality regardless of who performs CPR.

Additionally, although survival to hospital discharge is considered a "success," we question the impact on quality of life from the patient's perspective. We have come to understand that living longer is often less important to patients with serious illness compared with how well they are living.<sup>3</sup> Of the 104 patients who survived to discharge, 86 had a favorable neurologic status, but this is defined as mild to moderate disability. Their own perception of their quality of life is unknown. Furthermore, details about the 18 patients who survived with a presumably unfavorable neurologic status were not included in the paper, but it is highly likely that meaningful patient-reported outcomes were dire.

Although delaying death and surviving cardiac arrest will always be seductive goals, we need to prioritize future studies that identify barriers to regular reassessments of code status preferences in the hemodialysis population, as well as patient and caregiver understanding of the best, worst, and most likely

outcomes of attempted resuscitation. It is our hope that this study will lead to increased focus on advanced care planning and communication about prognosis as the best means of ensuring goal-concordant and patient-centered care among patients on hemodialysis.

### DISCLOSURES

None.

### REFERENCES

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JASN 30: 1137, 2019.  
doi: <https://doi.org/10.1681/ASN.2019020149>

## Authors' Reply

We appreciate the comments of the authors regarding the fact that sudden cardiac arrest is a highly lethal condition. Per previous reports, only half of patients who suffer a cardiac arrest in dialysis clinics survive to hospital admission and only one quarter survive to hospital discharge, a point that is highlighted in our significance statement and article introduction. In our

Published online ahead of print. Publication date available at [www.jasn.org](http://www.jasn.org).

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Published online ahead of print. Publication date available at [www.jasn.org](http://www.jasn.org).

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