Mobile extracorporeal membrane oxygenation and the urgency to reanimate: Reconsidering the boundaries

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Disclosures: Dr R.C.A. has received an unrestricted educational grant from Pfizer Canada Inc and honoraria from Mallinckrodt Pharmaceuticals for work unrelated to this article. All other authors have nothing to disclose with regard to commercial support.

Received for publication Dec 2, 2016; accepted for publication Dec 6, 2016; available ahead of print Jan 17, 2017.

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J Thorac Cardiovasc Surg 2017;153:1371-2

0022-5223/\$36.00

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<http://dx.doi.org/10.1016/j.jtcvs.2016.12.010>

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In his provocative article, Shah¹ provides an excellent framework for the cardiothoracic surgery community on relevant considerations with respect to the ownership of extracorporeal membrane oxygenation (ECMO) for out-of-hospital cardiac arrest. The subject matter of the editorial is proactive in its focus on the role of the cardiothoracic surgery community as an integral part of this movement, but in so doing implies that the development of such programs are a foregone conclusion and either we are with them or against them. This leaves the impression that there is little room for the close examination of the appropriateness of this concept and the significant boundaries it challenges.

As reasoned by Shah,¹ out-of-hospital reanimation significantly disrupts normal field resuscitation practice and pre-existing termination of resuscitation protocols.²⁻⁴ Although he acknowledges that “this may be our most difficult question to answer,” this is an understatement of the implications such practice has on the accepted meaning of life and death. Whereas “the reanimators are not so intimidated,” allowing advanced technical practice to creep outside the institutional venue violates a longstanding boundary that not only acts as a natural filter, but also protects society from the detriments of unintended and radical treatments.

Cardiothoracic surgery teams have longstanding experience in mechanical circulatory support and know the consequences of these interventions.⁵ Furthermore, these teams are often the recipients of mechanically resuscitated patients for ultimate management decisions. For those of us who bear these consequences with our patients and their families it is natural that we consider appropriateness before diving headlong into ECMO in the street. Less so because of excuses around suction

and lighting. Technical questions around proper selection are important; however, a macroscopic inquiry around the ethics and medicolegal implications of poorly applied or unwanted treatment; complications; graphic scenes in public spaces; and the right to demand or maintain therapy, cost, and inequity not only between jurisdictions but also from the standpoint of underdeveloped regions of the world must be carefully undertaken to characterize the suitability and priority of this therapy.

Is this to say that there is no role for out-of-hospital resuscitation with ECMO? The answer is no. Shah's¹ timely and important editorial inspires us to consider the possibilities and our role in shaping them. He cautions the cardiothoracic surgery community to take ownership of mobile ECMO and rightly implies that burying our collective head in the sand will permit this therapy, which is in its infancy, to mature into something over which we have no control. Our profession has a long history in both the technical and philosophical aspects of life-supporting therapies and now more than ever we need to be engaged not only in the could-do physiology, but also the should-do science. The application of this vast experience to the brilliant enthusiasm of innovators

Central Message

With the increasing use of mobile ECMO, the cardiothoracic surgery community should function as an advocate and steward to ensure the appropriate use of this powerful and costly therapy.

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is essential to preventing us from crossing a boundary beyond which there is no return.

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