

chart may have major implications, because AFE is the second leading cause of maternal death in developed countries and near-miss morbidity is often a modifiable precursor.<sup>7</sup>

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### In Reply:

We thank Holck *et al.* for their interest in our publication and comments regarding our flow diagram guiding the management of amniotic fluid embolism.<sup>1</sup> The format of our case scenario was intended to be an overview of the presentation and management of amniotic fluid embolism, and the purpose of the flow chart was to serve as a very general educational guide toward management options. It was not meant to be a completely exhaustive algorithm of clinical analysis and treatment course.

However, we appreciate the authors suggesting the possibility of using fibrinogen concentrate as a newer alternative blood product therapy. We acknowledge that there may be a benefit of rapid low-volume bolus administration when compared with the delay encountered to thaw fresh frozen plasma or cryoprecipitate. However, use of fibrinogen concentrate also relies on its availability. Neither our community-based obstetric unit nor our level I trauma university hospital has fibrinogen concentrate readily available, and we suspect the same may be true of many institutions. It is also important to recognize that the dose and timing of administration of alternative blood products remains controversial.<sup>2,3</sup> As was discussed both in our case scenario and emphasized by Holck *et al.*, the use of factor VII should only be considered in

cases of hemorrhage refractory to other therapies due to the risk of embolic consequences. Caution should also likely be exercised for fibrinogen concentrate because larger prospective studies are needed to determine its clinical efficacy and safety.<sup>3</sup>

Holck *et al.* are correct in stating that there is probably no flow chart that would direct every possible available therapy in managing the coagulopathy and the hemodynamic presentation of cases of amniotic fluid embolism. We would like to reemphasize the importance of having a transfusion protocol for massive obstetric hemorrhage, regardless of etiology. A multidisciplinary approach with specific guidelines outlining rapid, early, and aggressive intervention and resuscitation is likely to optimize maternal outcomes.<sup>4,5</sup>

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## The Devil in the Details

"First we shape our buildings; thereafter, they shape us."

—Winston Churchill

### To the Editor:

In the recent article by Wijeyesundera *et al.*, the authors demonstrated a significant level of variability in the preoperative testing patterns at different hospitals in Ontario, Canada.<sup>1</sup> Their statistical analyses show that the testing patterns were not explained by the type of surgery, hospital, or patient. However, the authors did not characterize the types of preoperative evaluation processes (*e.g.*, physician-based, nurse-telephone, web-based intake, on-site clinic, etc.). This is important because multiple preoperative assessment systems have been developed; it would not be surprising to find a myriad of systems in one Canadian province. Historically, these clinics were developed because of financial pressures