It's a matter of style

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“Fashion changes, but style endures”

— Coco Chanel

Even to the troglodyte cardiac surgeon, it would seem self-evident that initiatives targeting “early” extubation in the neonate would reap tremendous benefits in the reduction of postoperative morbidity and overall lengths of stay. Indeed, it is increasingly in vogue to embrace immediate extubation in the operating room, or on arrival in the intensive care unit, despite patient factors previously considered contraindications (eg, newborns, long bypass times, circulatory arrest).¹ In this issue of the *Journal*, investigators from the Pediatric Cardiac Critical Care Consortium (PC4) examined the flip side of this phenomenon: the incidence of extubation failure and its impact on outcomes.² A total of 899 neonates were demonstrated to have an 11% rate of extubation failure, with a wide variation in range (5%-22%) among 14 PC4 centers. Only congenital airway anomaly was independently associated with extubation failure.

As with any large database analysis, the study is limited in its granularity: the definition of diaphragm paralysis and vocal cord dysfunction is only as good as the data input, and STAT categories were grouped for analysis. No variable was used to assess residual lesions, or renal insufficiency, and no standardized protocols were followed to help reduce practice variation. Most important, those patients extubated in the operating room were excluded, potentially biasing the cohort of eligible patients for analysis.

Although Bennyworth and colleagues² sought to study a phenomenon, in fact what their investigation more accurately depicts is a decision (to reintubate). The variability in practice (demonstrated to be fourfold), or “high O/E ratio” cannot be assumed to be an inadequacy of a specific center, as it may in fact reflect a more aggressive initial extubation policy, or perhaps a choice motivated by other factors not examined in this database. In this sense, the pejorative term “failure” perhaps itself assigns a performance value to what may be a *subjective* decision of the bedside provider; it is, in fact, a matter of style. Like other technical performance metrics recently proposed for

The choice of timing of extubation remains subjective as to risk/reward.

Central Message

The decision to extubate is one of risk/reward. Extubation “failure” is likely a marker of disease, and may or may not be causative of worse outcomes.

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congenital heart surgery, the extrapolation of “quality” based on an endpoint (reintubation) that itself is rooted in subjective assessment is thorny: is a center an “underperformer” if it aggressively attempts extubation in a marginal patient, understanding that there is a risk of reintubation? Conversely, is a center that nurses a patient along on nasal intermittent mandatory ventilation, or accepts a different level of ongoing tachypnea, “better” than one that simply reintubates?³

The decision to extubate is one of risk/reward, not unlike so many others in our field. This study suggests that congenital airway anomaly is worthy of consideration as it impacts that ratio, but to suggest that there is an “acceptable rate” of reintubation given the lack of specificity of the data would be a mistake. Extubation “failure” no doubt is a marker of disease, and may or may not be causative of worse outcomes. Fashion comes and fashion goes. What we need to take care to distinguish is whether these are truly *best* practices, or simply different ones.

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