

Help is here for RTs: Automating De-escalation of Care Decisions in the ICU

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“Is this patient ready to be extubated?” If you’re a respiratory therapist (RT) in the ICU, you are, without a doubt, familiar with this question. You scan the central station monitor and can quickly see which patients are flagged for eligibility, meaning they meet all of the data-driven elements for an extubation readiness trial (ERT)/spontaneous breathing trial (SBT).

Whether the patient was ready isn’t the primary point here. To reduce mechanical ventilation time, respiratory therapy departments are striving for frequent ERT/SBTs, which is a challenge in any situation, but especially when RTs are too thinly spread. Enter Etiometry’s clinical intelligence platform, which can be accessed via EHR and anywhere there’s a hospital VPN. It collects all available patient data, visualizes it on one screen, provides estimation of risk that a patient could deteriorate, automates clinical pathways, and then automates reports to efficiently inform quality improvement initiatives and verify your site’s protocol effectiveness.

In this case, the decision for an ERT/SBT can be made quickly and with confidence, as you have a holistic view of the patient condition: SpO₂, Tidal Volume, Respiratory Rate, Heart Rate, Blood Pressure, EtCO₂, Ph, PaCO₂, PaO₂, etc. on one screen. Etiometry software augments clinical intuitiveness with real and trended data that’s being continuously collected.

In a recent study, a clinical pathway was automated within Etiometry to provide a foundational framework to transform an ERT/SBT workflow to help deliver standardized care, reduce variation and improve quality. The platform was customized to each unit’s protocols. The care teams were able to track all their patients within one portal and see when a patient might be for an ERT and/or extubation without additional bedside assessments. When the patient was eligible, the RT was alerted. The platform then automatically tracked performance when the vent settings were changed.

Kathryn Clark, RRT-NPS, is the Director of Clinical Development at Etiometry and has a decade of experience in critical care procedures, training clinicians, and award-winning clinical research. She is responsible for developing, coordinating, and implementing Etiometry’s FDA cleared analytics and automated pathways functionality into clinical workflows worldwide. Prior to Etiometry, she worked with hospital leadership to establish clinical practices, policies, and protocols for the opening of Sidra Medicine in Qatar. Ms. Clark’s experience spans across pediatric, adult, and cardiac patients at Boston Children’s Hospital, Tampa General, and beyond.

The outcomes of this study are eye-opening: a 19% reduction in hospital length of stay and a 22% decrease in mechanical ventilation time.¹ This new workflow streamlined patient tracking — eliminating the need for bedside assessments solely to gauge readiness for an ERT. The automation alleviated the workload, allowing more time for personalized patient care, which can go a long way for reducing clinician burnout — especially with so many sites being short-staffed.

The Etiometry platform’s ability to help care teams adhere to ERT/SBT guidance is important because these protocols are complex and the data available in most cases are sparse, as mechanical ventilation parameters are typically only documented at certain points throughout the day. We’ve seen how helpful the platform is in building confidence in newer clinicians, as they are using aggregated data and site-specific protocols to support their escalation and de-escalation of care decisions.

But the platform goes beyond mere flagging eligible patients. Think how you can utilize these insights during rounds, pre-rounding, shift changes and calibrating care team communication.

And let’s not overlook the significance of 19% less time spent in the hospital.¹ This reduction not only signifies improved patient outcomes but also potentially frees up beds, optimizing hospital operations and bolstering financial health.

A clinician’s testimonial perfectly encapsulates the system’s simplicity and effectiveness: “Getting the information for an ERT takes only one click. You get all the data you need on one screen so you can look at everything — easy.”

Automating the ERT workflow is all about enhancing patient care and promoting safe and efficient ICU liberation. It’s also about simplifying processes, and ultimately, reducing the stress on clinical staff, which is more important than ever in this labor market. It’s no secret that there aren’t enough RTs to go around, yet the demand is increasing while many are set to retire in the next few years.² Expected to do more with less is everywhere, but if you’re an RT in critical care and your patient load is higher due to being short-staffed, there’s more at stake when lives are concerned.

The ERT pathway is only one use case for clinical pathway automation. Picture a similar scenario for using Etiometry for vasoactive medication weaning, tracking acute kidney injury

Bed	Name	MRN	Sex	Age	Recent Activity	Pathways	ID02
CICU12	Dean, Jimmy	63272501	M	59 yrs	Entered cicu (15 hrs ago)	GDT 15 hr, 34 min 96% SBT 2 hr, 0 min 96%	5
CICU13	Bullock, Joe	63275304	M	60 yrs	Entered cicu (14 hrs ago)	GDT 14 hr, 3 min 0% SBT 14 hr, 3 min	3

Showing 1 to 57 of 57 entries

The Etiometry Clinical Intelligence Platform flags patients eligible for a spontaneous breathing trial (SBT) and informs the care team status of goal directed therapies (GDT).

(AKI) and managing acute respiratory distress syndrome (ARDS) patients. Get your personalized view at [Etiometry.com/getyourview](https://etiometry.com/getyourview).

References

- 1 Borasino, S. et al. (2023) Automated Extubation Readiness Tool is Associated with Improved Outcomes Following Pediatric Cardiac Surgery. WCPCCS.
- 2 Why We Need More RTs—and How to Help, <https://www.moreerts.com/growing-need/>

“Is this patient ready to be extubated?”

On one screen, get a holistic view of patient data from all systems to inform efficient escalation and safe de-escalation decisions - from the bedside, remotely, or via a central command center.

AUTOMATING EXTUBATION READINESS WORKFLOW PROMOTES ICU LIBERATION¹

Study Overview:

- 747 patients
- The automated clinical pathway for an ERT was utilized with 193 patients
- 554 patients in the control group

19%
Reduction in Hospital Length of Stay

22%
Reduction in Ventilation Time

THE ETIOMETRY PLATFORM
Clinical Intelligence for High-Acuity Care Teams

Unlock the potential to revolutionize your care team's workflow.

The Etiometry Platform is not an active patient monitoring system. It is intended to supplement and not replace any part of the hospital's device monitoring. Do not rely on the Etiometry Platform as the sole source of patient status information. For prescription use only.

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REFERENCES 1. Borasino et al. Automated Extubation Readiness Tool is Associated with Improved Outcomes Following Pediatric Cardiac Surgery. WCPCCS