

Improving Care in Calgary ICUs Through a Co-Designed Physician Practice Metrics Dashboard and Facilitated QI Rounds

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Themes: Individual and team improvement, Partnered system improvement activities, Application of research to practice, Audit and feedback, Data access and data harms, Implementation science, Knowledge translation, Quality improvement

What you need to know

This project provides a roadmap for how physicians and their teams can elevate the practice metrics that matter to them in a living lab quality improvement (QI) program.

What is this project about?

The Calgary Department of Critical Care Medicine (DCCM) has demonstrated strong engagement in utilizing audit and feedback of practice data to optimize patient care and adopt evidence-based practices. With this experience, we sought to design an educational QI paradigm that would encourage regular, meaningful data-review without project limits. The ICU DASH project supported intensivists in identifying and co-developing strategically chosen practice metrics for review at facilitated QI rounds in the Calgary Zone.

What did the team do?

- Through a scoping review, a working group of 11 DCCM members identified 101 practices perceived as clinically significant, data-supported and actionable at the provider level
- Using a department-wide survey and modified Delphi method, key topics were prioritized for development into a dashboard: ICU readmissions, extubation practice and post-cardiac arrest temperature management
- These metrics were shared at bi-monthly QI rounds for feedback and further refinement

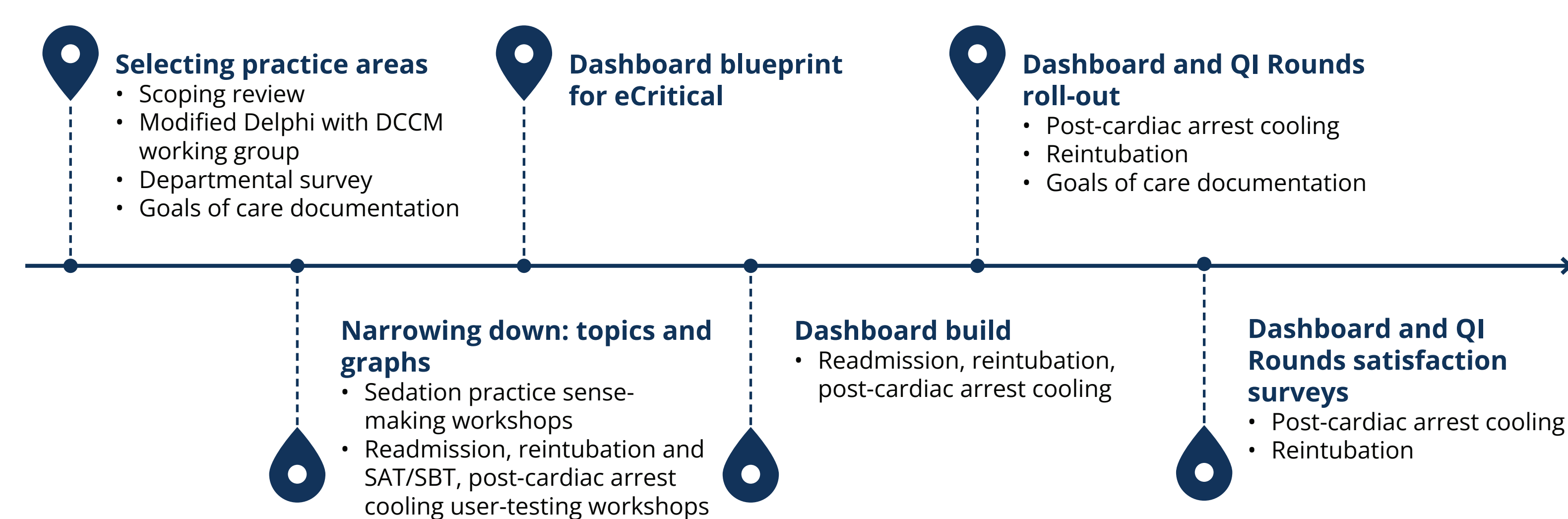


Figure 1 Project Milestones

What did the team find?

Six QI rounds were held since January 2023; each session engaged 30 to 40 physicians, nurses, allied health and management professionals.

Reported Outcomes

Participant Reported Outcomes	
80%	Dashboards enabled them to compare their practices against evidence and standards, visualize practice gaps and benchmark against peers
78%	Likelihood of changing their practice
80%	QI rounds enabled continuous quality improvement
90%	Supported the format of individually tailored dashboards integrated into team-based discussions during QI rounds

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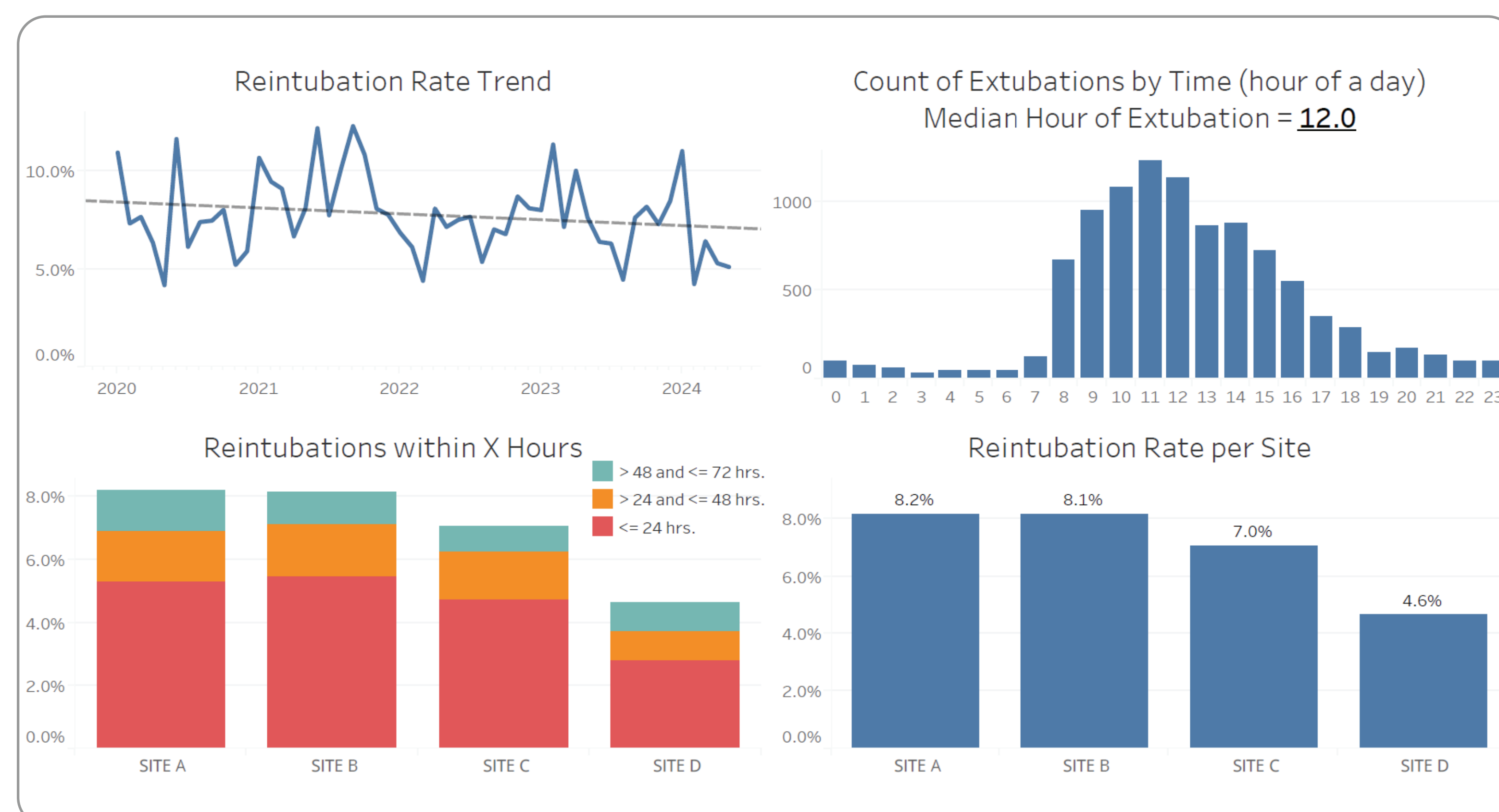
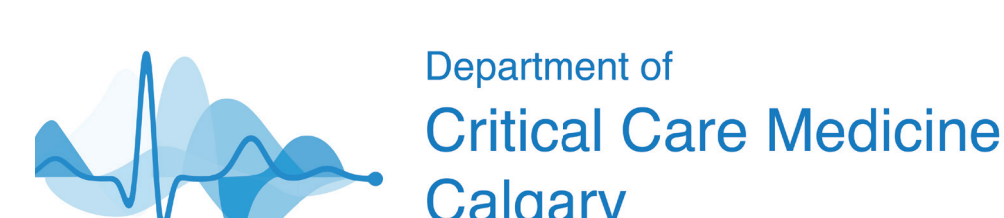


Figure 2 Extubation/reintubation team dashboard snapshot

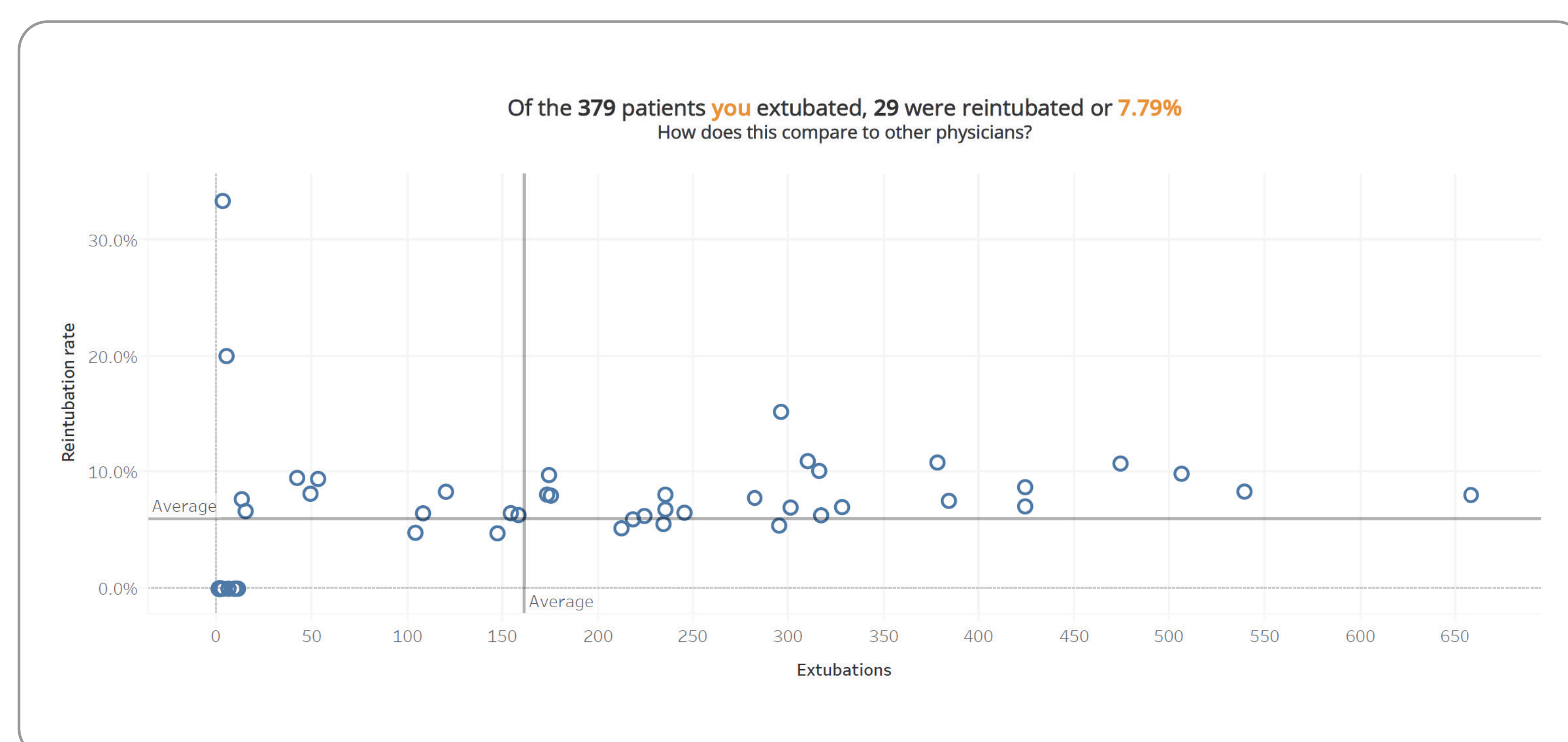


Figure 3 Extubation/reintubation personalized physician-level dashboard snapshot

What can be learned from this project?

- Both the QI rounds and dashboard development workshops were multidisciplinary – metrics validated were at the individual physician-level and team-based, demonstrating a successful approach to supporting team-based QI
- Co-created metrics builds buy-in, engagement and participation in self-reflection and practice improvement
- Having a forum to review data, clarify, shape metrics and discuss practice is an effective way to approach practice areas that may be lacking research, gold standards or are influenced by varying clinical details. Workshops can be used for goal-setting
- Having time for data development and iterations is key in co-creation with a large cohort
- “ICU is a team sport” for many of the selected practice metrics. The ability for physicians to review their individual data via dashboard, while reviewing unit-based data in a group setting, generated rich discussion and has great potential for launching larger scale practice change to advance patient care

Conclusion

Dashboards containing team and individual practitioner metrics, coupled with QI rounds as a forum for discussion, effectively enhanced provider experience and confidence for data-driven practice change. This strategy is promising as a medical education and QI tool. Ongoing research is essential to determine if these interventions result in sustained practice changes over time.

Acknowledgments

The Physician Learning Program is supported by a financial contribution from the Government of Alberta. The project team would also like to thank Simon Fukada, eCritical RData Analyst and Monica Lee, eCritical Senior Business Analyst for their contributions.