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Title: Alberta collaborative quality improvement strategies to improve outcomes of preterm infants 32–36 weeks' gestation: a protocol for the multi-centre, stepped-wedge cluster randomized trial (the ABC-QI trial)

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Reviewer 1: Dr. Thiviya Selvanathan

General comments (author response in bold)

1. Is there a plan to evaluate whether units continue to implement these EPIC interventions long term? Is there a plan to collect more long-term outcomes data?

Thank you for this important point that address sustainability of the intervention. Unfortunately, this will not be feasible with the current funding, but the investigators will seek additional funding for future

2. It can be difficult to obtain responses to surveys from staff members. Can you elaborate on strategies that will be used to survey staff perception of QI interventions? What strategies will be used to ensure adequate representation from different members of the NICU care team in survey responses and semi-structured interviews (i.e. physicians, nurses, RT, trainees, etc)?

Thank you for pointing this out!

The survey will be distributed to various disciplines including physicians, nurse practitioners, nurses, respiratory therapists, and other allied health providers.

Reviewer 2: Dr. Russell Kirby

General comments (author response in bold)

1. The study design seems well laid out, with a well-designed governance structure, including three committees for steering committee, management committee, and data management committee. More details might be provided regarding implementation within each NICU site. The analysis plan could also be fleshed out with more detail, but the general approach seems sound.

Thank you! We added further details on implementation of the care bundles in the NICUs after transition to the intervention arm (pages 4-5).

We tried to address all reviewers' comment and hence, we could not add further details to the analysis plan.

2. It might be a good idea to identify existing QI projects ongoing in each facility, along with any clinical trials involving NICU patients. There's some potential for artificial crossover effects, especially if a facility is randomized to the intervention group in year 3 or 4, but has a tradition of QI internally already in place.

Great comment, thank you! The researchers developed a mechanism to track other QI and operational activities in each unit as these factors may impact implementation timelines and the results (Page 7)