

## Appendix 6: Details and Definitions of the Primary and Secondary Outcomes for the ABC-QI Trial.

Outcome	Definition
Length of hospital stay (LOS)	From birth until discharge home or death, whichever came first, assessed until the participant reaches a corrected age of 6 months (6 months after their birth due date).
Cost to the healthcare system	Per participant from birth until discharge home or death, whichever came first, assessed until the participant reaches a corrected age of 6 months (6 months after their birth due date). The Canadian Institute for Health Information Patient Cost Estimator will be used to calculate the daily cost based on the Case Mix Groups for gestational age and birth weight.
Hypothermia	The number of patients with hypothermia within 1 hour of birth, defined as axillary temperature <36.5°C.
Hypoglycemia	The number of patients with hypoglycemia in the first 24 hours of age, defined as blood glucose <2.6 mmol/L.
Surfactant Administration	Date, type, and method of administration in the first 168 hours of age.
Duration of respiratory support	Defined as the total number of days administered. From birth until discharge home or death, whichever came first, assessed until the participant reaches a corrected age of 6 months (6 months after their birth due date).
Age at achieving enteral feeding of 120 ml/kg/day.	From birth until discharge home or death, whichever came first, assessed until the participant reaches a corrected age of 6 months (6 months after their birth due date).
Postmenstrual age at achieving oral demand feeding for 3 consecutive days without tube feeding.	From birth until discharge home or death, whichever came first, assessed until the participant reaches a corrected age of 6 months (6 months after their birth due date).
Time to regain birth weight.	Defined as the difference in days between birth date and date when the infant regains or exceeds birth weight after initial weight loss. From birth until discharge home or death, whichever came first, assessed until the participant reaches a corrected age of 6 months (6 months after their birth due date).
Weight in grams	At discharge home in survivors, assessed until the participant reaches a corrected age of 6 months (6 months after their birth due date).
Length in centimeters	At discharge home in survivors, assessed until the participant reaches a corrected age of 6 months (6 months after their birth due date).
Head circumference in centimeters	At discharge home in survivors, assessed until the participant reaches a corrected age of 6 months (6 months after their birth due date).
Breastmilk use	Proportion of breastmilk use at discharge home in survivors, assessed until the participant reaches a corrected age of 6 months (6 months after their birth due date). Defined as the number of feeds where the infant received breastfeeding or maternal expressed breastmilk.
Rehospitalizations	The number of unplanned rehospitalizations per participant within 30 days after discharge. Defined as unplanned readmission to any hospital in Alberta following discharge.
Emergency room visits	The number of emergency room visits per participant within 30 days after discharge. Defined as any emergency room visits to any hospital in Alberta following discharge.
Hospital mortality	Until first discharge home, assessed until the participant reaches a corrected age of 6 months (6 months after their birth due date). Defined as the proportion of infants who die before first discharge home.

Infant mortality before 1 year of corrected age.	Corrected age = chronological age – days required for an infant to complete postmenstrual age of 40 weeks.
Transfer from Level II to Level III NICU	Until first discharge home, assessed until the participant reaches a corrected age of 6 months (6 months after their birth due date). Defined as the proportion of infants who require escalation of care and transfer to Level III NICU.
Staff perception of collaborative QI (EPIQ) implementation	Semi-structured interviews with selected sample of Staff from each NICU