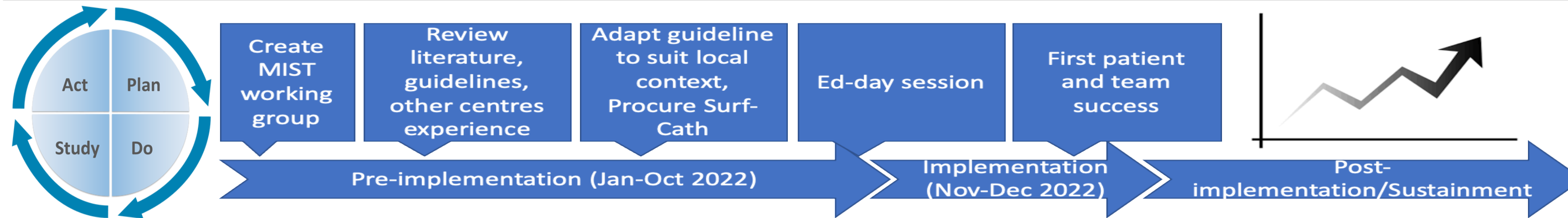


Aim

- In <32 weeks infants admitted to BC Women's Hospital NICU, increase the use of surfactant administration by MIST technique from 0% to 70% by December 2023

PDSA cycle / Change plan



Problem & Opportunity Gap

- At BCWH in <32 week infants, the incidence of BPD is 2.5x higher than the best outcome centres in Canada
- A growing body of literature supports the use of minimally invasive surfactant therapy (MIST) as it may provide several benefits to a spontaneously breathing infant by avoiding intubation and mechanical ventilation
- MIST has been endorsed by the Canadian Pediatric Society guidelines for surfactant replacement therapy in neonates

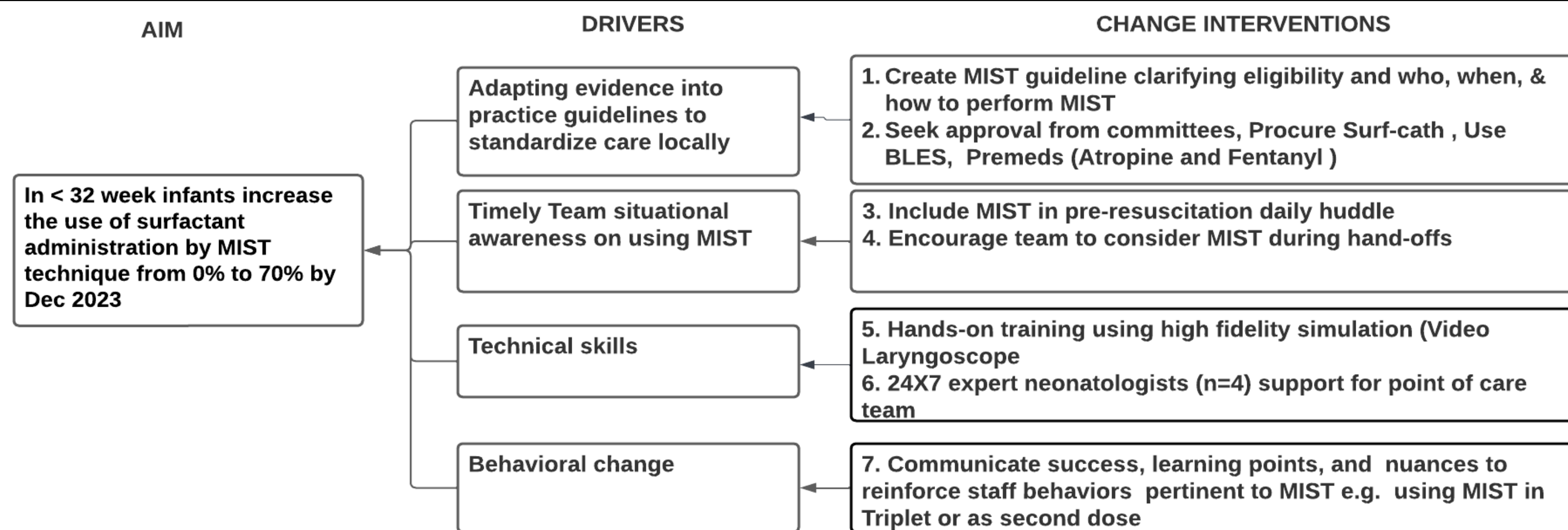
Data / Results

Following implementation of the MIST policy:

- 6 neonates have received MIST, a total of 8 times
- Mean GA - 27+5/7 (26+3 – 29+1)
- Mean Birthweight 1027g (852 – 1192g)
- None required subsequent intubation
- No significant (Grade 3/4) IVH or Pneumothorax



Key Drivers



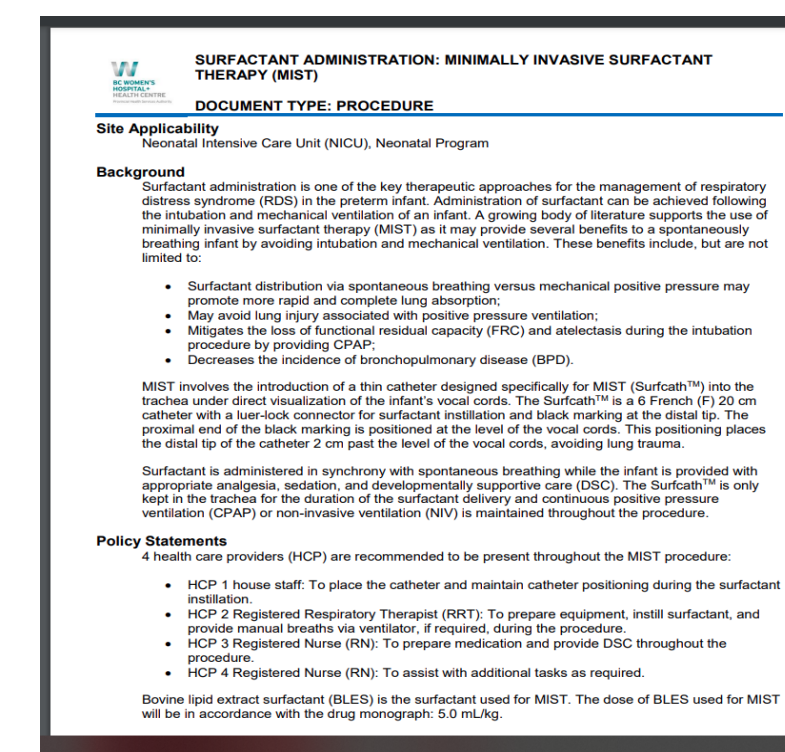
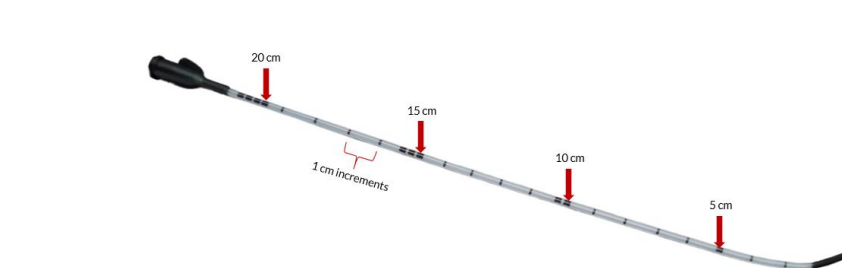
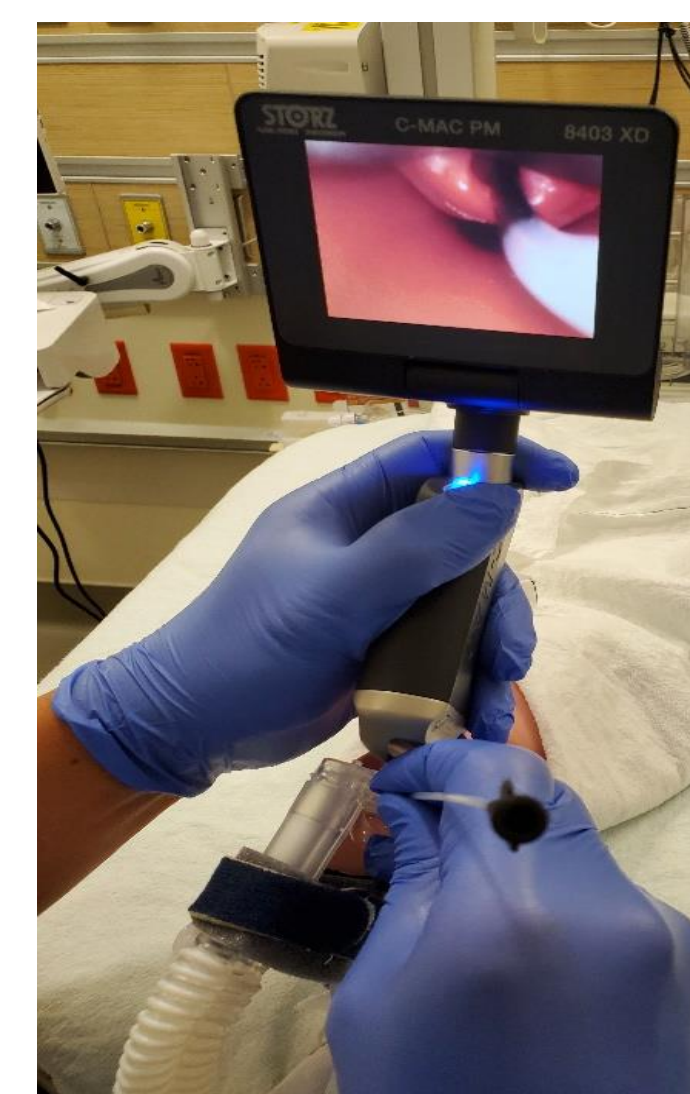
MEASURES

PROCESS: % infants receiving MIST/month, % needing subsequent endotracheal intubation

OUTCOMES: % incidence of BPD (Mild, Mod. Severe)

BALANCING: Adverse events related to MIST (PnTx, CPR, Grade 3/4 IVH)

IMPLEMENTATION: Number of educational sessions, staff participation rate and satisfaction, actions to improve sustainability



Lessons Learned / next stage/plan

- Refining policy to clarify professional roles, duration of BLES administration, indications for PPV
- Expanding inclusion criteria of MIST policy to lower GA (<26 weeks GA)
- Incorporating MIST into Golden Hour/Delivery Room stabilization period