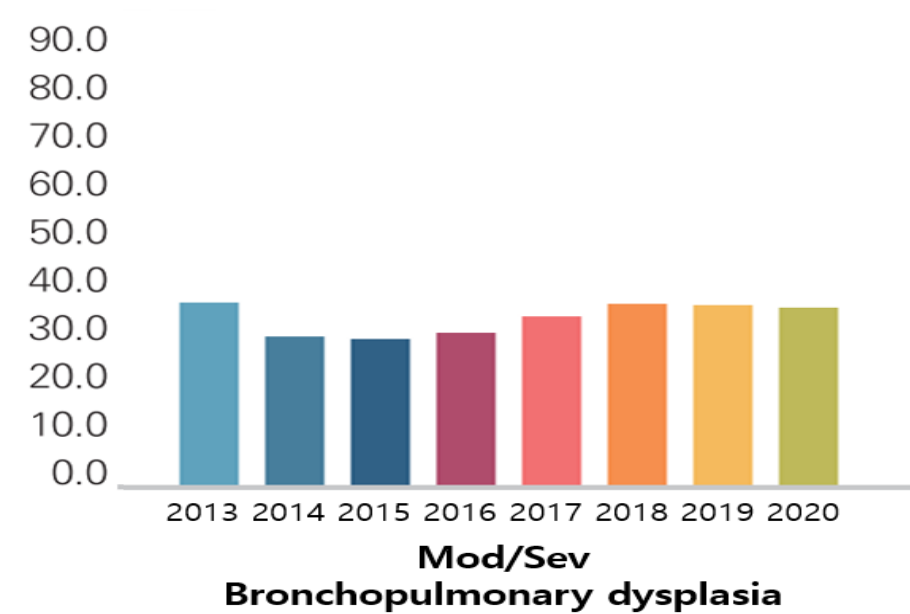
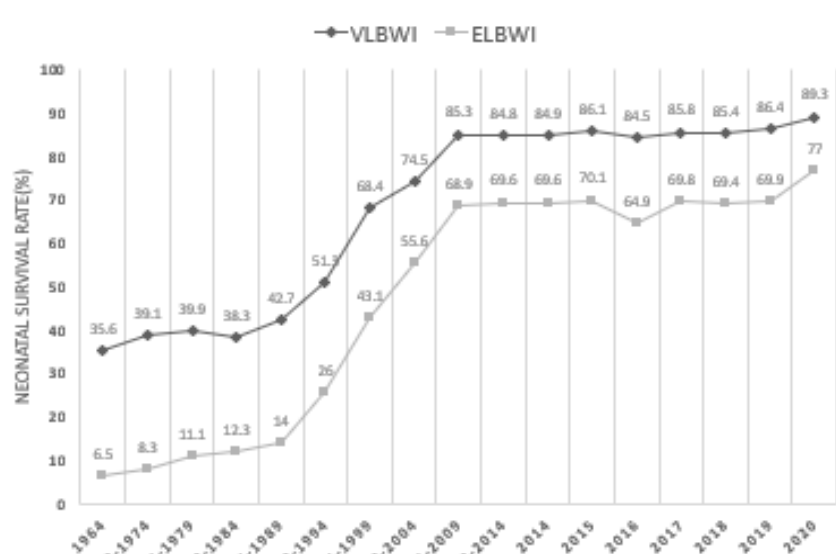


Aim

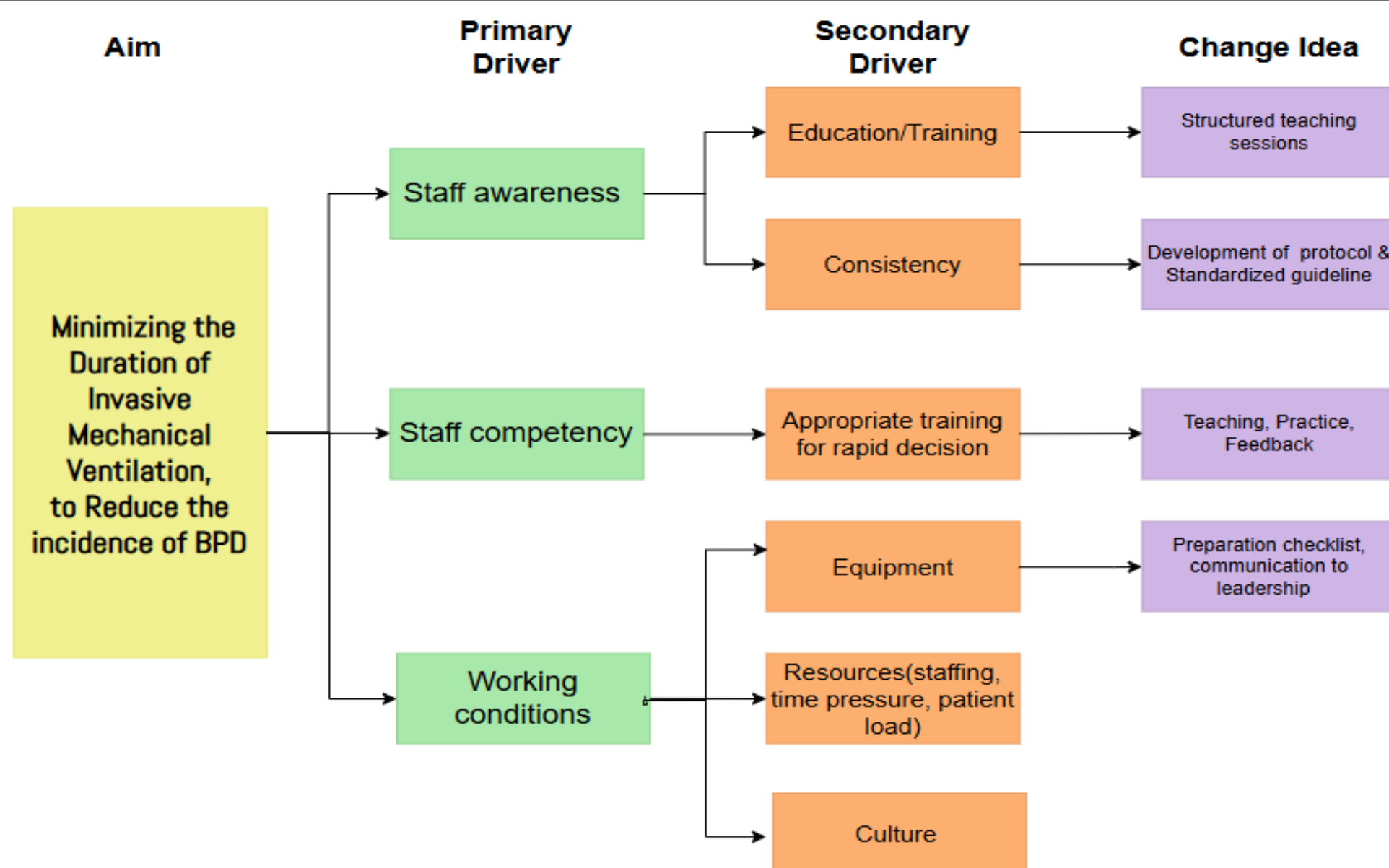
To reduce the incidence of BPD, we have implemented a quality improvement bundle designed to minimize exposure to mechanical ventilation in preterm infants born at less than 32 weeks gestation or with a birth weight of less than 1500g.

Importance

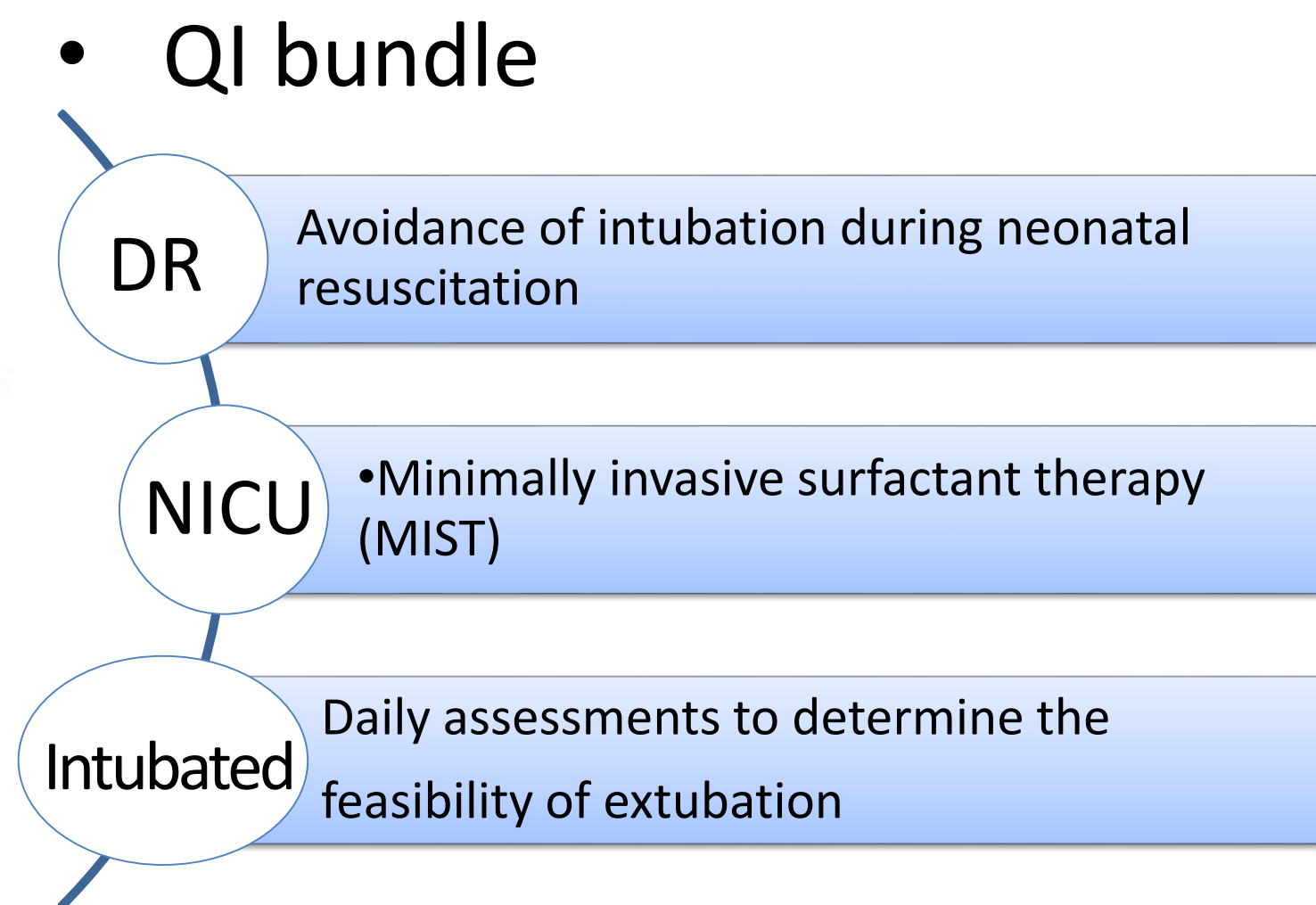
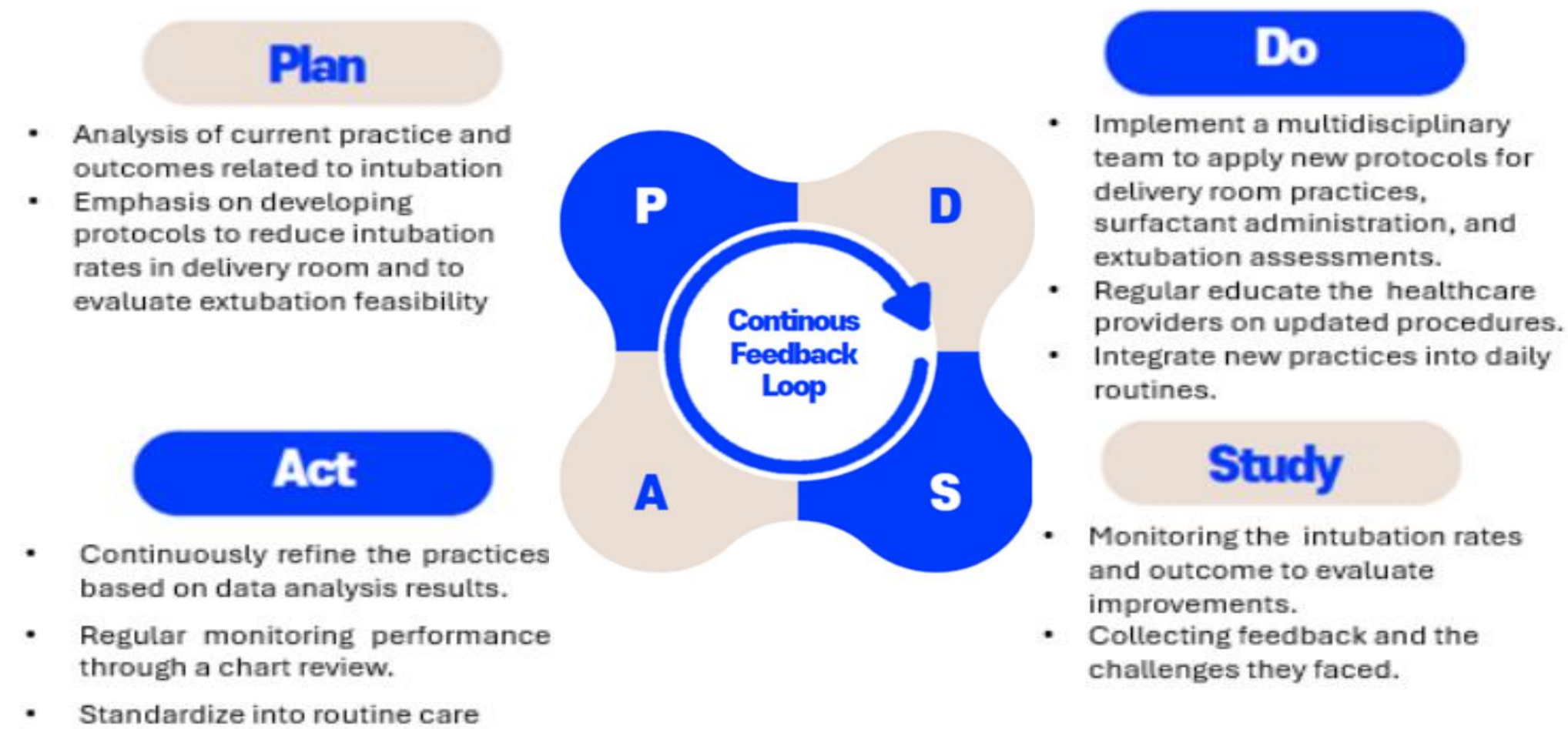
- Improved survival → Still remaining BPD



Driver Diagram



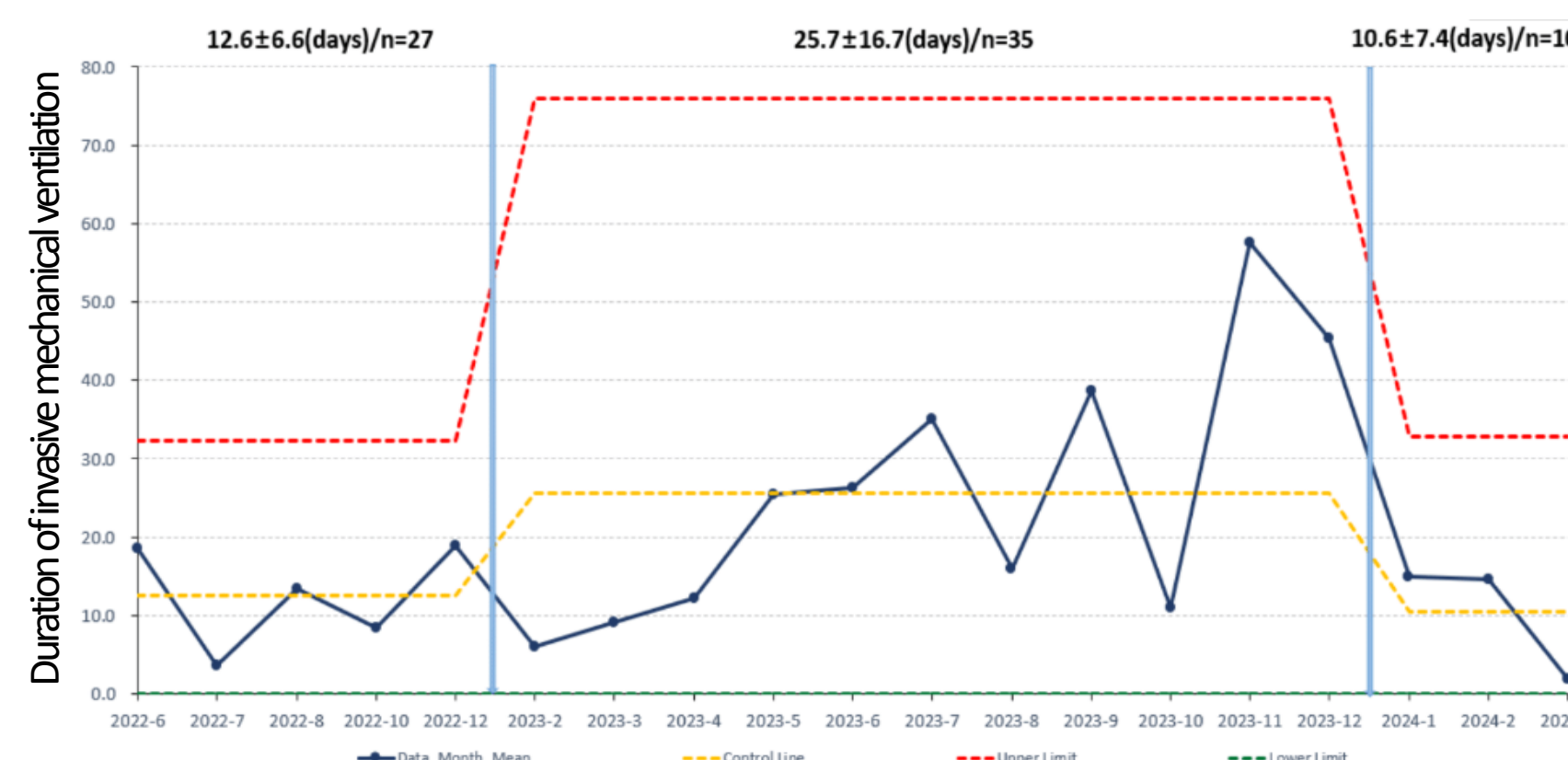
PDSA Cycle / Change plan



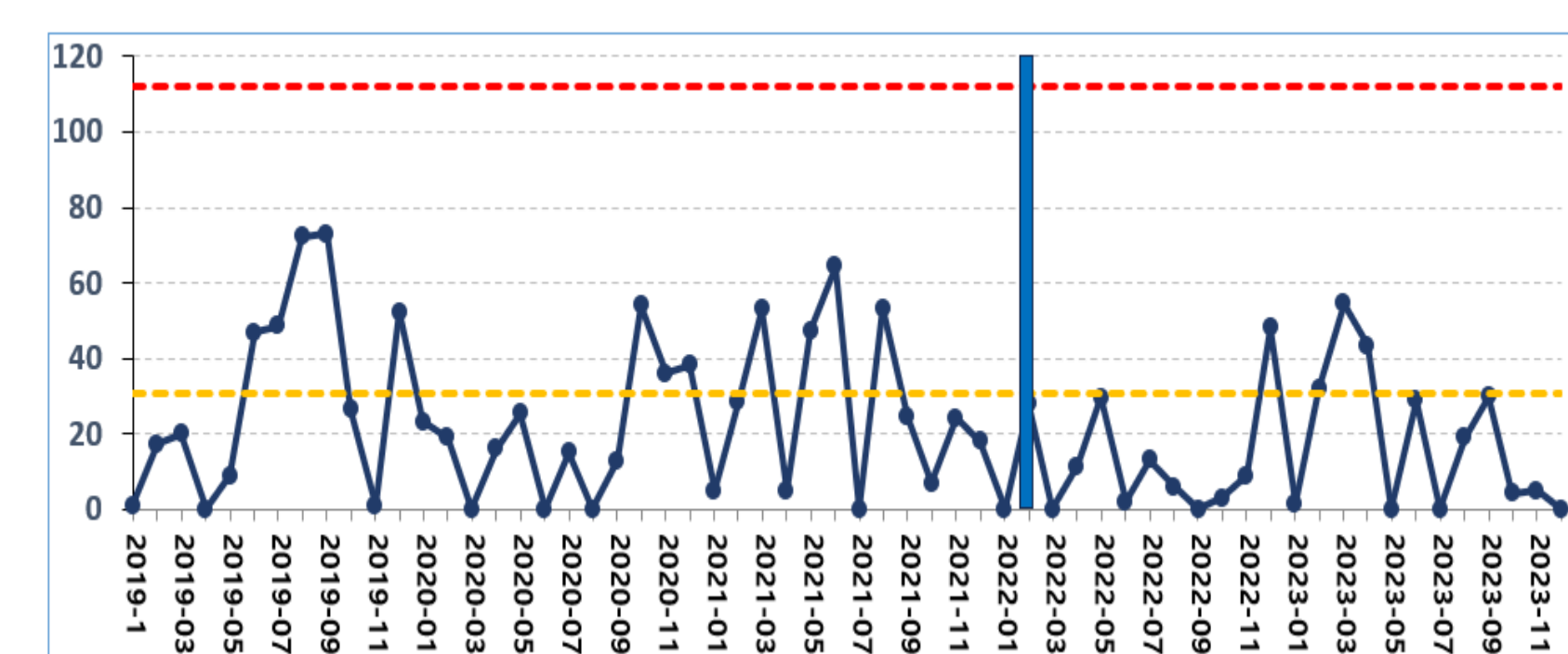
Data / Results

	Pre-QI period (2019.01-2021.12) n=194	Post-QI period (2022.02-2024.06) n=197	P-value	Pre-QI period (2019.01-2021.12) n=76	Post-QI period (2022.02-2024.06) n=52	P-value
Gestational age, days	29.6 ± 2.8	29.9 ± 2.7	0.374	26.2 ± 1.3	26.1 ± 1.4	0.697
Birth weight, g	1072.6 ± 286.6	1197.1 ± 325.7	<0.001	792.5 ± 223.7	826.6 ± 191.8	0.408
Intubation in DR, n(%)	58 (29.9)	25 (12.7)	<0.001	37 (67.3)	19 (38.8)	0.006
Surfactant instillation, n(%)	105 (54.1)	98 (49.7)	0.386	52 (68.4)	43 (82.7)	0.174
MIST/LISA or INSURE, n(%)	45 (34.9)	69 (70.4)	<0.001	16 (30.8)	24 (55.8)	0.021
Duration of Intubation, days	30.2 ± 47.0	17.1 ± 17.7	0.007	48.5 ± 54.0	28.6 ± 19.9	0.017
BPD, n(%)	112 (57.7)	90 (45.6)	0.020	59 (77.6)	35 (67.3)	0.022

- SPC chart during QI



- Pre-QI vs Post QI : Duration of invasive mechanical ventilation



Lessons Learned / Next Stage/ Plan

The implementation of a QI bundle involving the avoidance of intubation in the DR, utilization of MIST, and daily checklist for assessing extubation feasibility in preterm infants was associated with a reduction in the duration of MV during NICU admission. Further expansion to the hospitals registered in KNN should be needed to reduce the incidence of BPD and improve the outcome in Korea