



# Still Missing the Bulls eye: DART Protocol Did Not Change Practitioner Behavior in Prescribing Dexamethasone to Facilitate Extubation in Extremely Preterm Infants

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## Smart Aim

To increase the appropriate use of dexamethasone at postnatal age of 21-35 days for eligible infants from January 2022 to December 2024.

## Inclusion Criteria

- Gestational age  $\leq$  29 weeks born between Jan 2020 and December 2023
- First Intubation within first 7 days of life

## Exclusion Criteria

- Never intubated in first 7 days
- Extubated before 8 days of age and never reintubated.
- Death before 7 days of age.
- Major congenital airway malformation or congenital abnormalities

## Driver Diagram

### AIM

Optimize the approach to use PNS in infants < 29 weeks who are remain intubated beyond first week of age

### KEY DRIVERS

- Increase use of clear evidence-based consensus guidelines for PNS treatment
- Assessment of extubation readiness on daily basis
- Accurate and timely use of dexamethasone

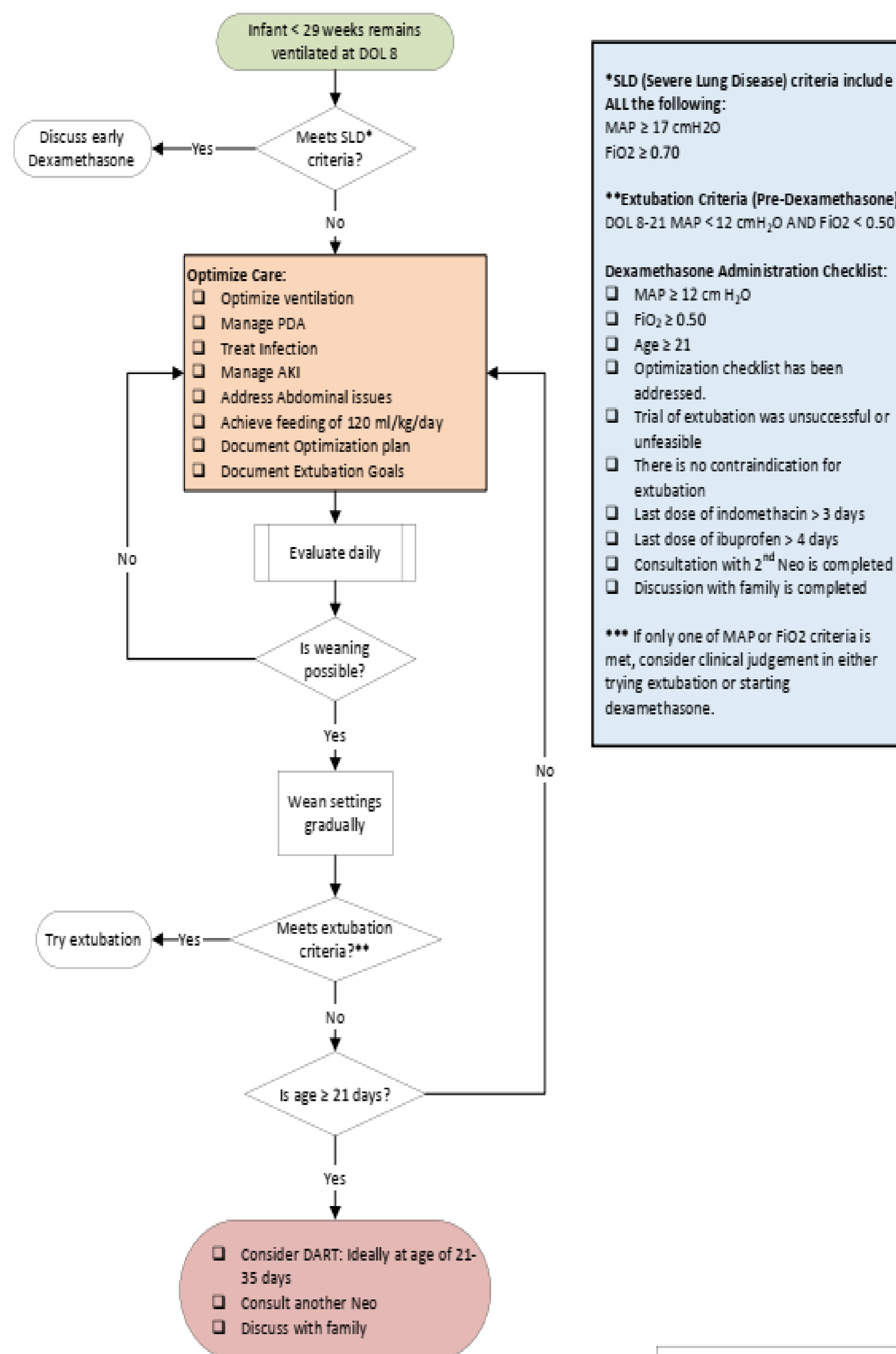
### PRIMARY INTERVENTIONS

- Availability of local guidelines on the online platform
- Easy access to the guidelines
- Education of neonatologist, NP, Fellows, RT, Residents, Nurse clinicians, Charge nurse and bedside nurses
- Discussion of high risk preterm on respiratory rounds for the use of PNS
- Incorporation of the guidelines in the newborn care bundle

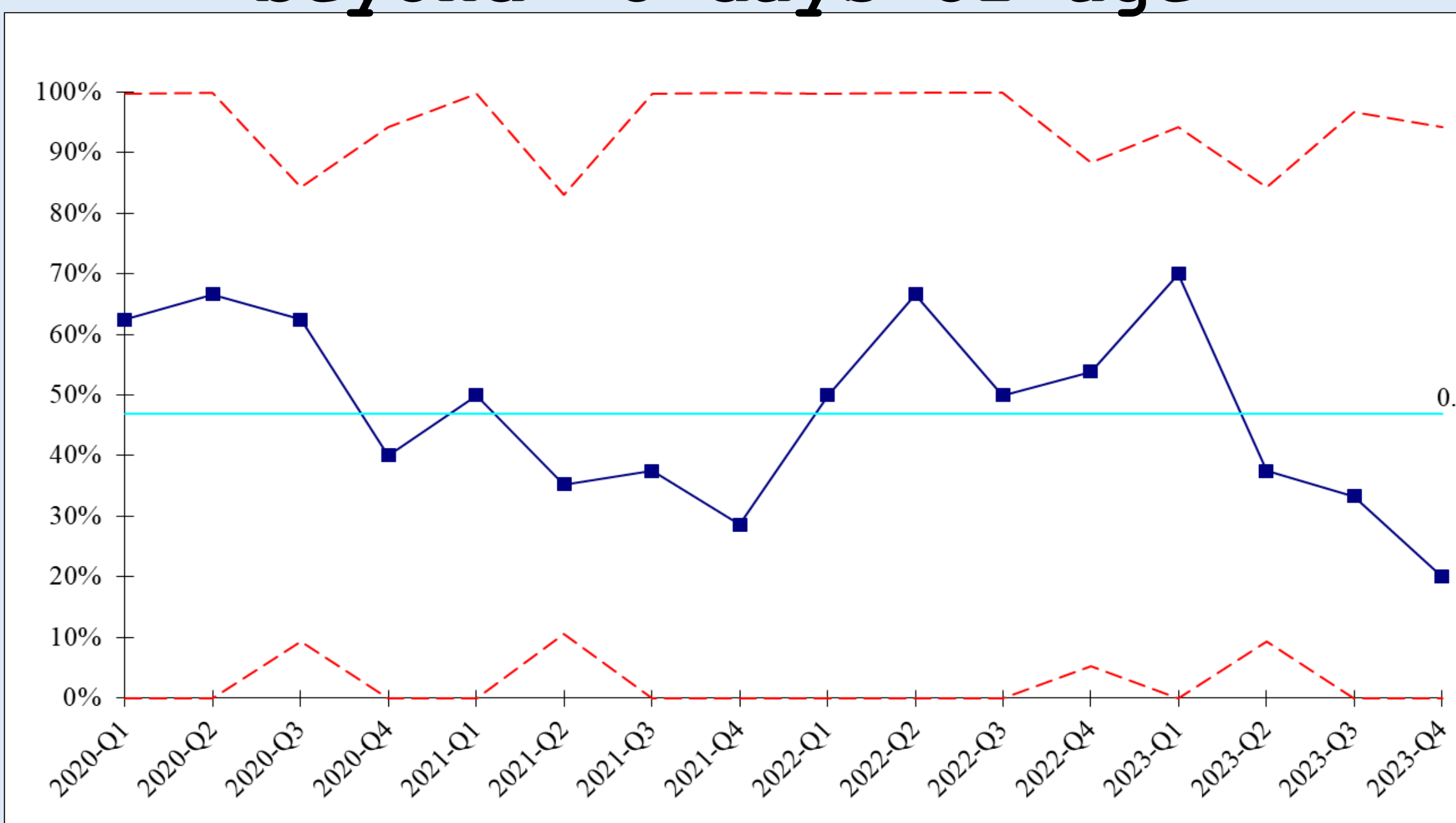
## Demographics

- Total of 159 infants met inclusion criteria
- Mean (SD) of GA:  $25.1 \pm 1.3$  weeks
- Mean (SD) birth weight:  $725 \pm 180$  grams
- Outborn infants: 18 (11%)

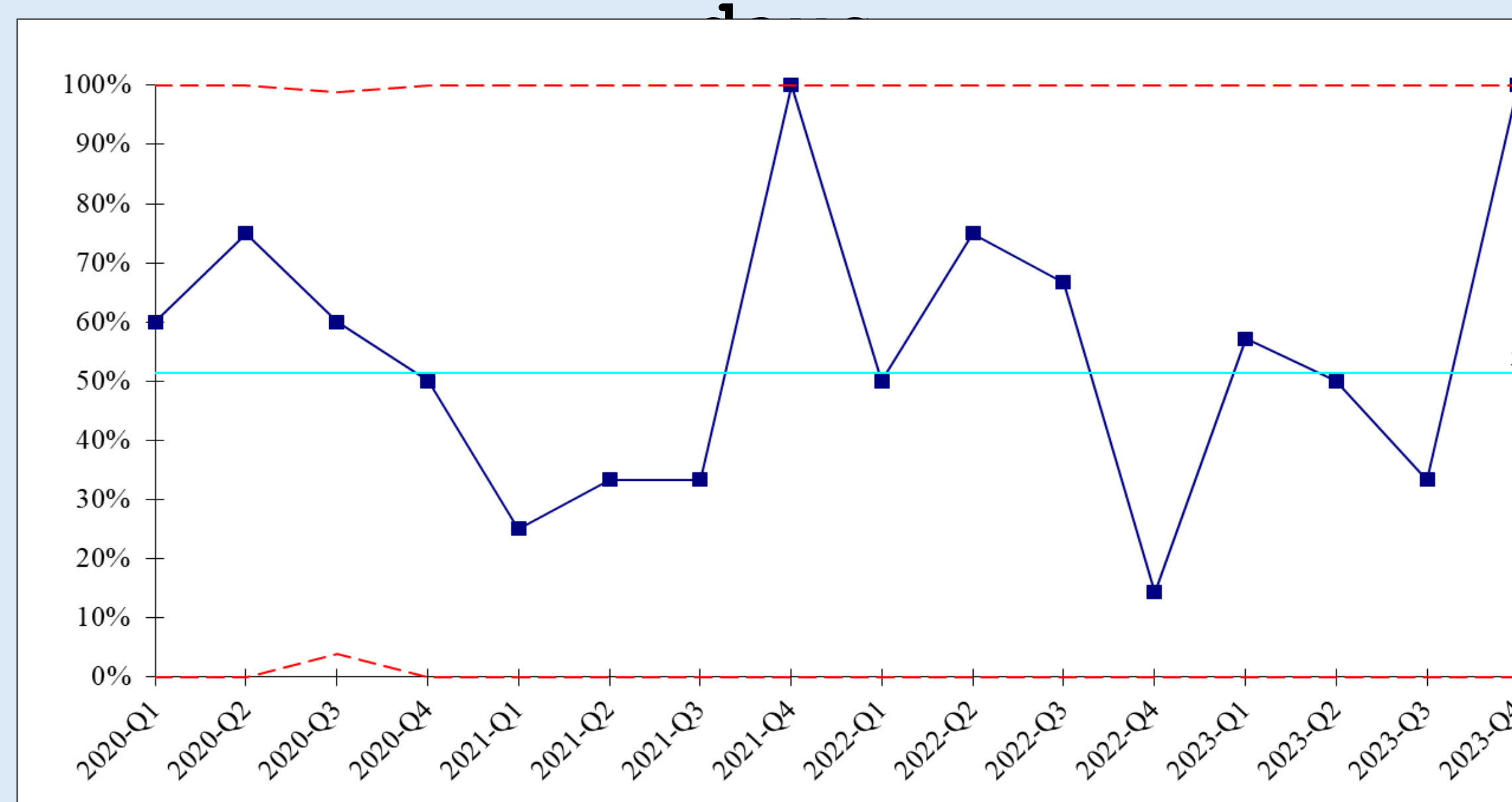
### Postnatal Dexamethasone to Facilitate Extubation of Infants Born at < 29 Weeks Gestation: A Quality Improvement Project Part 2: Decision Support Tool



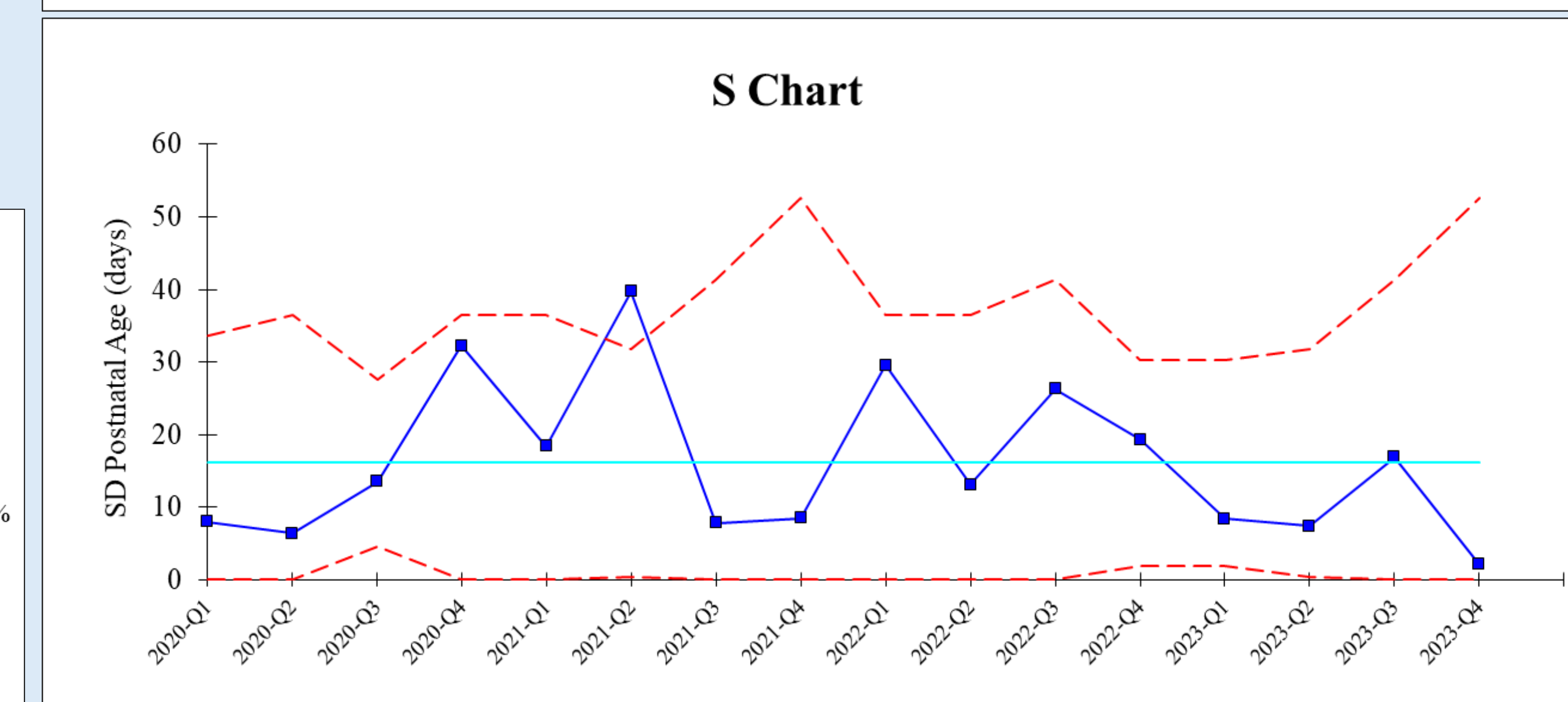
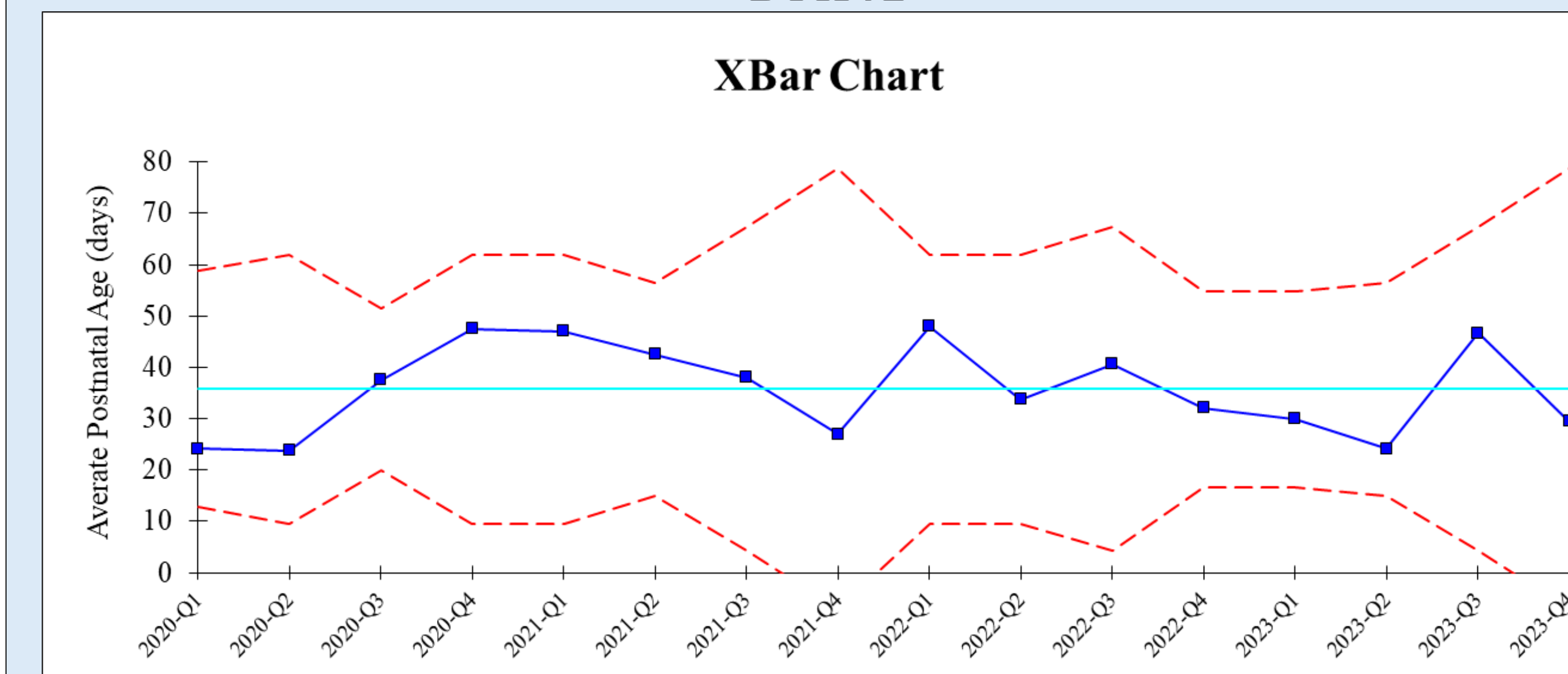
## Proportion of infant received DART among those ventilated beyond 8 days of age



## Proportion of infant received DART at postnatal age of 21-35



## Average age (days) at starting DART



## Conclusion

In our institution, introducing DART Protocol did not change the physicians' behavior in prescribing dexamethasone to facilitate extubation in extremely preterm infants.

## Future steps

Revising the DART Protocol to allow for earlier administration and consider using BPD prediction tools to support patient selection.