PASSIVE HYPOTHERMIA GUIDELINE

Recommendation for the initiation of passive cooling pending Transport Team arrival:

1. Turn off radiant warmer or decrease isolette temperature to 24-26°C

2. Clearly document time of initiation

3. Aim for target temperature of 33-34°C

4. Rectal temperature monitoring recommended *
   *Centers not accustomed to caring for critically ill newborns or do not frequently use rectal temperature measurements may consider maintaining the axillary temperature between 33.5-35°C

5. Check rectal (or axillary) temperature every 15 minutes

6. If infant temperature decreases below 33°C (33.5°C axillary) turn on radiant warmer or isolette with the temperature set 0.5°C above the infant’s temperature

7. Do not use/add ice packs or cold packs

*Sussman et al. Adv Neonatal Care. 2013
Cooling Guidelines for Neonatal Transport

1. Monitor core temperature
   Insert rectal temperature probe 5 cm

   - Infant temperature < 33°C
     Set servocontrol to 33.5°C – 34.0°C on isolette/overbed
     If infant temperature not increasing after 15 minutes, increase isolette/overbed temp 0.5°C q 15 minutes until infant temperature is 33°C - 34°C
   - Infant temperature 33°C - 34°C
     Monitor infant’s temperature q15 mins
     If infant temperature remains >35.5°C or is not decreasing after 15 minutes, consider use of 1 cool pack
     Continue to monitor infant’s core temperature q 15 minutes
     If infant temperature remains greater than 34°C consider adding a second cool pack
   - Infant temperature > 34°C
     Turn overbed warmer or isolette heater off**

**If patient not ventilated, require open isolette port hole for air flow

GOAL Infant temperature of 33.5°C within 2 hrs of initiating cooling

Data from Jacobs et al ^2^, Kendall et al ^9^
Table 3: TH on Transport variables - Out-of-town patients (N=52), pre versus post-intervention

Out-of-town patients - defined as referrals from >20km from the tertiary TH center

| Transport TH variables (hrs.) | Pre (n=18) | Post (n=34) | Wilcoxon Test |
|------------------------------|-----------|-------------|---------------|
|                              | Median (Q1,Q3) | Median (Q1, Q3) | p-value |
| Birth to initiation of cooling | 4.1 (3.1, 5.5) | 2.0 (1.3, 3.8) | 0.017* |
| Birth to target temperature  | 8.2 (5.3, 9.2) | 5.4 (3.4, 7.3) | 0.026* |
| Birth to referral            | 1.0 (0.7, 1.5) | 1.1 (0.6, 1.6) | 0.825 |
| Referral to initiation of cooling | 3.1 (2.2, 4.4) | 0.5 (0.2, 2.2) | 0.03* |
| Referral to arrival of NNTT   | 2.7 (1.9, 5.3) | 2.5 (1.7, 4.1) | 0.387 |
| Referral to target temperature | 6.7 (4.0, 7.5) | 3.7 (2.5, 5.4) | 0.018* |
| Initiation of cooling to target temperature | 2.6 (1.8, 4.2) | 2.0 (1.1, 3.4) | 0.163 |
### Table 4: TH on Transport - SCD used vs not used, 2017 to 2020, Land transport only (N=76)
values < 0.05, marked with asterisks, are considered statistically significant.

| Transport TH variables (hrs.) | SCD No | SCD Yes | Wilcoxon Test |
|-------------------------------|--------|---------|--------------|
|                               | N (missing) | Median (Q1, Q3) | N (missing) | Median (Q1,Q3) | p-value |
| Birth to initiation of cooling | 31 (0) | 2.4 (0.9, 5.5) | 45 (3) | 1.4 (0.9, 2.5) | 0.059 |
| Birth to target temperature   | 31 (2) | 5.9 (4.5, 8.4) | 45 (0) | 3.6 (2.7, 4.6) | <.001* |
| Birth to referral             | 31 (0) | 1.2 (0.8, 2) | 45 (0) | 1.2 (0.6, 2.1) | 0.788 |
| Referral to initiation of cooling | 45 (3) | 0.3 (-0.3, 0.8) | 31 (0) | 0.4 (0.0, 4.2) | 0.062 |
| Referral to arrival of NNTT   | 31 (0) | 1 (0.8, 1.6) | 45 (0) | 1 (0.9, 1.8) | 0.529 |
| Referral to target temperature | 31 (2) | 5.4 (3.3, 6.9) | 45 (0) | 2.5 (1.5, 3.1) | <.001* |
| Initiation of cooling to target temperature | 31 (2) | 3.1 (1.3, 4.2) | 45 (3) | 2 (1.3, 2.5) | 0.057 |