

Hypothermia in Infants ≤ 60 days old

Care Guideline



Inclusion Criteria: Hypothermic infants ≤ 60 days old with rectal temperature $\leq 36.4^{\circ}\text{C}$

Exclusion Criteria:

- Infants > 60 days old
- Infants ≤ 60 days old who present with fever or have a history of fever – see *CHOC Evaluation and Management of Well-Appearing Febrile Infants 8 to 60 Days Old*

Considerations

*Clinical Risk Factors

- Prematurity
- Maternal Infections (< 28 days gestational age)
- Repeated temperature instability
- Comorbidities

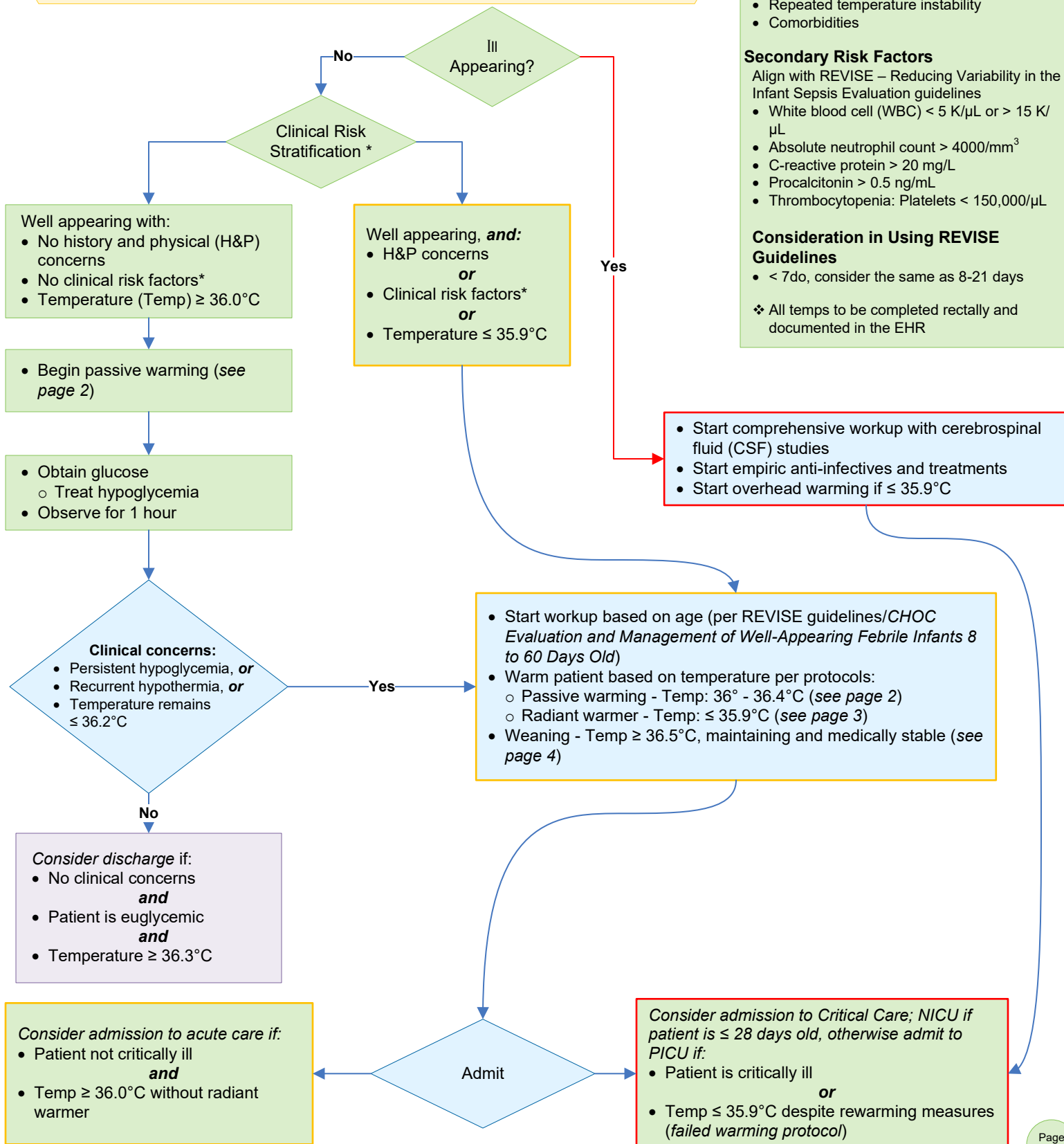
Secondary Risk Factors

Align with REVISE – Reducing Variability in the Infant Sepsis Evaluation guidelines

- White blood cell (WBC) $< 5 \text{ K}/\mu\text{L}$ or $> 15 \text{ K}/\mu\text{L}$
- Absolute neutrophil count $> 4000/\text{mm}^3$
- C-reactive protein $> 20 \text{ mg/L}$
- Procalcitonin $> 0.5 \text{ ng/mL}$
- Thrombocytopenia: Platelets $< 150,000/\mu\text{L}$

Consideration in Using REVISE Guidelines

- < 7 do, consider the same as 8-21 days
- ❖ All temps to be completed rectally and documented in the EHR



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Passive Warming for Infants with Mild Hypothermia (Rectal Temp: 36.0° - 36.4°C)

Infant arrives to ED with mild hypothermia (36° - 36.4°C)

Apply passive warming by:

- Gowning patient
 - Swaddling with a blanket
 - Placing cap on head
- Consider parent holding patient as clinically appropriate.*

Patient Disposition:

- Rectal temperature of 36.3°C is cut off determining patient disposition once medical management is complete.

Assess rectal temperature in 30 minutes

If rectal temperature $\leq 35.9^{\circ}\text{C}$:

- Notify provider
- Transition to *Radiant Warming for Moderate to Severe Hypothermia* (see page 3)

If rectal temperature $36.0 - 36.2^{\circ}\text{C}$:

- Notify provider
- Swaddle patient with additional blanket
- Recheck temperature in 30 minutes

If rectal temperature remains $\leq 36.2^{\circ}\text{C}$:

- Go to page 1 and start workup based on age per REVISE guidelines/CHOC *Evaluation and Management of Well-Appearing Febrile Infants 8 to 60 Days*

If rectal temperature $\geq 36.3^{\circ}\text{C}$:

- Maintain passive warming
- Recheck temperature in 30 minutes

If rectal temperature $\geq 36.3^{\circ}\text{C}$ for 1 hour: Temperature stable

- Maintain passive warming measures.
- Document temperature per standard of care.

Patient/Family Education

- Skin to Skin Parent Education
- Swaddling Your Baby – kidshealth.org <https://kidshealth.org/CHOC/en/parents/swaddling.html?ref=search>
- How to Take a Rectal Temperature – kidshealth.org <https://kidshealth.org/CHOC/en/parents/rectal-temperature.html?ref=search>

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Radiant Warmer for Infants with Moderate to Severe Hypothermia or Recurrent (Rectal Temp: $\leq 35.9^{\circ}\text{C}$)

Infant with rectal temperature $\leq 35.9^{\circ}\text{C}$

- Place patient in pre-warmed radiant warmer (*see Nursing Considerations*)
- Set warmer to skin (servo) control mode $1^{\circ} - 1.5^{\circ}\text{C}$ higher than rectal temperature (max 36.5°C)

- Assess rectal temp *every 15 minutes*
- Increase radiant warmer temperature 1°C above rectal temperature until rectal temperature of 36.5°C is reached

Once normothermia (36.5°C) is maintained for four consecutive 15-minute measurements, notify provider to discuss weaning from the radiant warmer

Nursing Considerations:

- Place probe in axillary area or on RUQ of abdomen
- Document control setting and skin temperature
- Patient should only wear a diaper while under heat source

If patient does not reach rectal temp within 2 hours consider admission to PICU/NICU

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Infant Weaning Off Radiant Warmer

Infant in radiant warmer and maintaining normothermia ($\geq 36.5^{\circ}\text{C}$) and medically stable

- Turn radiant warmer OFF
 - Apply passive warming by:
 - Gowning patient
 - Swaddling with a blanket
 - Placing cap on head
- Consider parent holding patient as clinically appropriate.

Patient Disposition:

- Rectal temperature of 36.3°C is cut off determining patient disposition once medical management is complete.

Check rectal temperature in 30 minutes

If rectal temperature $\leq 35.9^{\circ}\text{C}$:

- Return patient to radiant warming (see page 3)
- Notify provider

If rectal temperature $36.0^{\circ} - 36.3^{\circ}\text{C}$:

- Swaddle infant with additional blanket
- Check core temperature in 30 minutes

Rectal temperature $< 36.3^{\circ}\text{C}$:

- Notify provider
- Return infant to radiant warmer, diaper only (see page 3)

If rectal temperature $\geq 36.3^{\circ}\text{C}$:

- Maintain patient in swaddle
- Check core temperature in 30 minutes

Rectal temperature $\geq 36.3^{\circ}\text{C}$:

- Maintain passive warming (gown, swaddle & cap)
- Recheck core temperature per standard of care

References

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