

# Management of Neonatal Abstinence Syndrome involving Opioids (MAJOR GOAL: to promote normal patterns of sleeping, feeding, and weight gain)

Neonatal Withdrawal Inventory Score  
(normally scored every 3-4 hours based on feeding intervals)

If scores  $\leq 7$

If 2 consecutive scores  $\geq 8$ , or *persistent* vomiting or watery stools (defined as no solid substance or  $>3$  every 3 hours) with any score

Reinforce non-pharmacologic maneuvers (reduce stimulation with quiet and low-lighted room, nesting/swaddling with soft blankets, side-lying position, C-shaped hold, sucking on pacifier, skin-to-skin contact, gentle rocking).

Start at Level 5 dosing if scores  $\leq 7$  but have persistent vomiting/watery stools.

Start oral morphine sulfate at Level 1 dosing (Use the NAS order set in Epic to order morphine. Use BIRTH WEIGHT for dosing every time. Do NOT modify pre-set dosages. Just choose dose at level 1, or level 2, or level 3, etc.).  
If infant cannot take oral formulation, consult NICU for I.V. morphine. Start I.V. dose at the level you would for oral dose but use I.V. dosing schedule.

Infant scores  $\leq 7$  on 2 consecutive scoring. [Note: If *persistent* vomiting/watery stools after Rx, morphine should NOT be weaned regardless of score.]

Infant scores  $\geq 8$  on Level 1 dosing. [Note: *May need to score/treat hourly* to get symptoms controlled at onset, then score/treat based on feeding intervals after stabilization.]

Wean morphine dose to Level 2 (give lower dose on the 9<sup>th</sup> hour if Q3h feeding).

Give an additional Level 1 dose. Consider adjunctive therapy if morphine is insufficient. Consult NICU if at a level II (A or B) nursery.

Infant scores  $\leq 7$  on 2 consecutive scoring. Assess vomiting/watery stools.

Infant scores  $\geq 8$  on 2 consecutive scoring.

Consider adjunctive therapy at any level when you are unable to progress through levels.

Wean morphine dose to next level. Keep weaning as long as 2 consecutive scores  $\leq 7$  without persistent vomiting/watery stools.

Return to the previous level of dosing.  
Infant scores  $\geq 8$  on 2 consecutive scoring.

If infant was started on I.V. morphine due to N.P.O. status, to convert to oral morphine when ready, use the weight appropriate level of dosing to convert. For example, a 3kg infant is on I.V. morphine at Level 4, oral morphine should be converted to level 4 dose for a 3kg infant. IV dose  $\neq$  po dose

From Level 10 to 13, morphine interval is progressively increased (coordinate Rx with feeding schedule)<sup>9</sup>.

Scoring and dosing must be done for a minimum of 24 hours at Levels 11 and 12, and a minimum of 48 hours at Level 13.

Keep track of infant's weight gain and sleep pattern to determine optimal time of discharge. Earliest discharge is the next day after finishing level 13 dosing, i.e. on the 3<sup>rd</sup> day after starting level 13. May keep infant longer if there are