

WITHDRAWAL ASSESSMENT TOOL – 1 (WAT – 1)

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|---|--|--|--|--|--|--|--|--|--|--|--|
| Patient Identifier | | | | | | | | | | | |
| Date: | | | | | | | | | | | |
| Time: | | | | | | | | | | | |
| Information from patient record, previous 12 hours | | | | | | | | | | | |
| Any loose /watery stools | No = 0 Yes = 1 | | | | | | | | | | |
| Any vomiting/wretching/gagging | No = 0 Yes = 1 | | | | | | | | | | |
| Temperature > 37.8°C | No = 0 Yes = 1 | | | | | | | | | | |
| 2 minute pre-stimulus observation | | | | | | | | | | | |
| State | SBS ¹ ≤ 0 or asleep/awake/calm = 0 SBS ¹ ≥ +1 or awake/distressed = 1 | | | | | | | | | | |
| Tremor | None/mild = 0 Moderate/severe = 1 | | | | | | | | | | |
| Any sweating | No = 0 Yes = 1 | | | | | | | | | | |
| Uncoordinated/repetitive movement | None/mild = 0 Moderate/severe = 1 | | | | | | | | | | |
| Yawning or sneezing | None or 1 = 0 ≥ 2 = 1 | | | | | | | | | | |
| 1 minute stimulus observation | | | | | | | | | | | |
| Startle to touch | None/mild = 0 Moderate/severe = 1 | | | | | | | | | | |
| Muscle tone | Normal = 0 Increased = 1 | | | | | | | | | | |
| Post-stimulus recovery | | | | | | | | | | | |
| Time to gain calm state (SBS ¹ ≤ 0) | < 2 min = 0 2 - 5 min = 1 > 5 min = 2 | | | | | | | | | | |
| Total Score (0-12) | | | | | | | | | | | |

WITHDRAWAL ASSESSMENT TOOL (WAT – 1) INSTRUCTIONS

- Start WAT-1 scoring from the first day of weaning in patients who have received opioids +/- benzodiazepines by infusion or regular dosing for prolonged periods (e.g., > 5 days). Continue twice daily scoring until 72 hours after the last dose.
- The Withdrawal Assessment Tool (WAT-1) should be completed along with the SBS¹ at least once per 12 hour shift (e.g., at 08:00 and 20:00 ± 2 hours). The progressive stimulus used in the SBS¹ assessment provides a standard stimulus for observing signs of withdrawal.

Obtain information from patient record (this can be done before or after the stimulus):

- ✓ **Loose/watery stools:** Score 1 if any loose or watery stools were documented in the past 12 hours; score 0 if none were noted.
- ✓ **Vomiting/wretching/gagging:** Score 1 if any vomiting or spontaneous wretching or gagging were documented in the past 12 hours; score 0 if none were noted.
- ✓ **Temperature > 37.8°C:** Score 1 if the modal (most frequently occurring) temperature documented was greater than 37.8°C in the past 12 hours; score 0 if this was not the case.

2 minute pre-stimulus observation:

- ✓ **State:** Score 1 if awake and distress (SBS¹: ≥ +1) observed during the 2 minutes prior to the stimulus; score 0 if asleep or awake and calm/cooperative (SBS¹ ≤ 0).
- ✓ **Tremor:** Score 1 if moderate to severe tremor observed during the 2 minutes prior to the stimulus; score 0 if no tremor (or only minor, intermittent tremor).
- ✓ **Sweating:** Score 1 if any sweating during the 2 minutes prior to the stimulus; score 0 if no sweating noted.
- ✓ **Uncoordinated/repetitive movements:** Score 1 if moderate to severe uncoordinated or repetitive movements such as head turning, leg or arm flailing or torso arching observed during the 2 minutes prior to the stimulus; score 0 if no (or only mild) uncoordinated or repetitive movements.
- ✓ **Yawning or sneezing > 1:** Score 1 if more than 1 yawn or sneeze observed during the 2 minutes prior to the stimulus; score 0 if 0 to 1 yawn or sneeze.

1 minute stimulus observation:

- ✓ **Startle to touch:** Score 1 if moderate to severe startle occurs when touched during the stimulus; score 0 if none (or mild).
- ✓ **Muscle tone:** Score 1 if tone increased during the stimulus; score 0 if normal.

Post-stimulus recovery:

- ✓ **Time to gain calm state (SBS¹ ≤ 0):** Score 2 if it takes greater than 5 minutes following stimulus; score 1 if achieved within 2 to 5 minutes; score 0 if achieved in less than 2 minutes.

Sum the 11 numbers in the column for the total WAT-1 score (0-12).

B

FIG 5-9 A, Weaning flowsheet to monitor opioid weaning in neonates. B, Withdrawal assessment tool for infants and children. SBS, State behavioral scale. (A, Modified from Franck L, Vilardi J: Assessment and management of opioid withdrawal in ill neonates, *Neonatal Netw* 14[2]:39–48, 1995; B, ©2007 LS Franck and MAQ Curley. All rights reserved. Reprinted in Franck LS, Harris SK, Soetenga DJ, et al: The Withdrawal Assessment Tool–1 [WAT–1]: an assessment instrument for monitoring opioid and benzodiazepine withdrawal symptoms in pediatric patients, *Pediatr Crit Care Med* 9[6]:577, 2008. *From Curley MQ, Harris SK, Fraser KA, et al: State behavioral scale: a sedation assessment instrument for infants and young children supported on mechanical ventilation, *Pediatr Crit Care Med* 7(2):107–114, 2008.