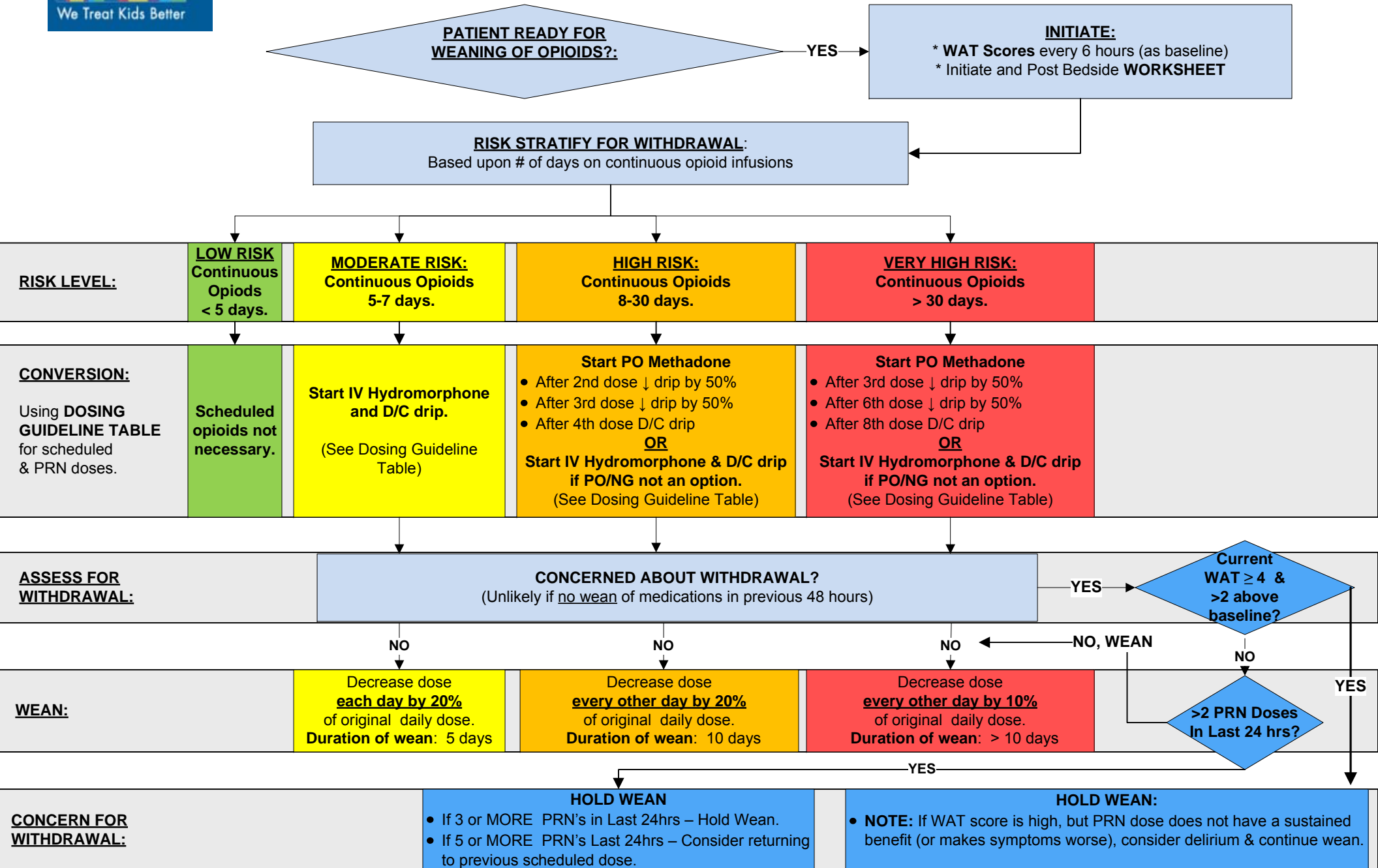




PICU/CTICU OPIOID WITHDRAWAL PREVENTION GUIDELINES

GOAL: Shorten patients' duration of opiate utilization while minimizing symptoms of withdrawal and over-sedation.



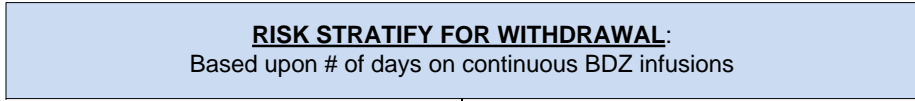
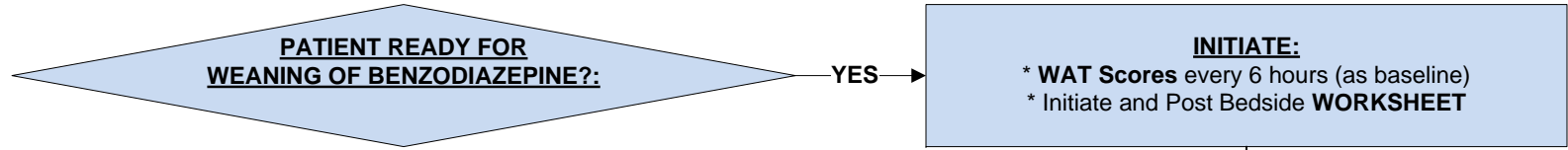
NOTE: As with all guidelines, individual patients may require deviation from this guideline and clinical judgment is advised.



PICU/CTICU BENZODIAZEPINE WITHDRAWAL PREVENTION GUIDELINES

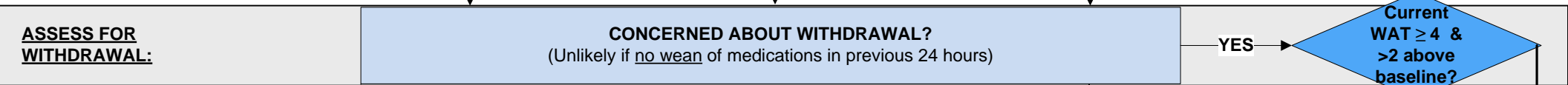
GOAL: Shorten patients' duration of benzodiazepine utilization while minimizing symptoms of withdrawal and over-sedation.

KEY:
BZD=benzodiazepine,
ATC=around the clock,
PRN=as needed dose



RISK LEVEL:	LOW RISK: ATC / Continuous BZD < 5 days.	MODERATE RISK: ATC/ Continuous BZD 5-7 days.	HIGH RISK: ATC/ Continuous BZD 8-30 days.	VERY HIGH RISK: ATC/ Continuous BZD > 30 days.
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CONVERSION: Using DOSING GUIDELINE TABLE for scheduled & PRN doses.	Scheduled BZD not necessary.	Start IV Lorazepam and D/C infusion. (See Dosing Guideline Table)	Start IV Lorazepam and D/C infusion. (See Dosing Guideline Table)	Start IV Lorazepam and D/C infusion. (See Dosing Guideline Table)
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WEAN:	Decrease dose each day by 20% of original daily dose. Duration of wean: 5 days	Decrease dose every other day by 20% of original daily dose. Duration of wean: 10 days	Decrease dose every other day by 10% of original daily dose. Duration of wean: > 10 days
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CONCERN FOR WITHDRAWAL:	HOLD WEAN <ul style="list-style-type: none">If 3 or MORE PRN's in Last 24hrs – Hold Wean.If 5 or MORE PRN's Last 24hrs – Consider returning to previous scheduled dose.	HOLD WEAN: <ul style="list-style-type: none">NOTE: If WAT score is high, but PRN dose does not have a sustained benefit (or makes symptoms worse), consider delirium & continue wean.
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NOTE: As with all guidelines, individual patients may require deviation from this guideline and clinical judgment is advised.

Withdrawal Prevention Dosing Guideline Table

Opioids:

Current Infusion Dose	Recommended Scheduled Dosing		PRN Dosing
Fentanyl Drip	PO Methadone (preferred) (Max Dose: 10 mg)	IV Hydromorphone (if PO/NG not an option) (Max Dose 2 mg)	PRN IV Hydromorphone (Max Dose: 2 mg)
1 mcg/kg/hr	0.05 mg/kg/dose PO Q8H	0.01 mg/kg/dose IV Q4H	0.01 mg/kg/dose IV Q2-4H PRN
2 mcg/kg/hr	0.1 mg/kg/dose PO Q8H	0.02 mg/kg/dose IV Q4H	0.02 mg/kg/dose IV Q2-4H PRN
3 mcg/kg/hr	0.1 mg/kg/dose PO Q8H	0.02 mg/kg/dose IV Q4H	0.02 mg/kg/dose IV Q2-4H PRN
4 mcg/kg/hr	0.15 mg/kg/dose PO Q8H	0.03 mg/kg/dose IV Q4H	0.03 mg/kg/dose IV Q2-4H PRN
Hydromorphone Drip	PO Methadone (preferred) (Max Dose: 10 mg)	IV Hydromorphone (if PO/NG not an option) (Max dose 2 mg)	PRN IV Hydromorphone (Max dose 2 mg)
0.005 mg/kg/hr	0.1 mg/kg/dose PO Q8H	0.02 mg/kg/dose IV Q4H	0.02 mg/kg/dose IV Q2-4H PRN
0.01 mg/kg/hr	0.1 mg/kg/dose PO Q8H	0.04 mg/kg/dose IV Q4H	0.04 mg/kg/dose IV Q2-4H PRN
0.015 mg/kg/hr	0.1 mg/kg/dose PO Q8H	0.06 mg/kg/dose IV Q4H	0.06 mg/kg/dose IV Q2-4H PRN
0.02 mg/kg/hr	0.15 mg/kg/dose PO Q8H	N/A	0.08 mg/kg/dose IV Q2-4H PRN
0.025 mg/kg/hr	0.15 mg/kg/dose PO Q8H	N/A	0.08 mg/kg/dose IV Q2-4H PRN
0.03 mg/kg/hr	0.15 mg/kg/dose PO Q8H	N/A	0.08 mg/kg/dose IV Q2-4H PRN

Benzodiazepines:

Current Infusion Dose	Recommended Scheduled Dosing	PRN Dosing
Midazolam Drip	IV Lorazepam (Max Dose: 4 mg)	PRN IV Lorazepam (Max Dose: 4 mg)
0.06 mg/kg/hour	0.05 mg/kg/dose IV/PO Q4H	0.025-0.05 mg/kg/dose IV Q2-4H PRN
0.12 mg/kg/hour	0.1 mg/kg/dose IV/PO Q4H	0.05-0.1 mg/kg/dose IV Q2-4H PRN
0.18 mg/kg/hour	0.15 mg/kg/dose IV/PO Q4H	0.1-0.15 mg/kg/dose IV Q2-4H PRN
0.24 mg/kg/hour	0.25 mg/kg/dose IV/PO Q4H	0.15-0.25 mg/kg/dose IV Q2-4H PRN

IV to PO Conversion: Hydromorphone IV : PO = 1 : 5; Lorazepam IV : PO = 1 : 1