

## **Explain these Additional Risk Indicators** (Guidance on Page 2)

### **Bullets**

- There are currently three PMP based additional risk indicators (ARIs):
  - More than 5 providers in any year (365 days)
  - More than 4 pharmacies in any 90 day period
  - More than 40 morphine milligram equivalent per day ( 40 MED) average and more than 100 MME total
  
- In some locations a history of previous overdose may be also be available.
  
- These indicators chosen are based on the following literature:
  - Hx of Previous Overdose
    - [Ann Intern Med.](#) 2016 Jan 5;164(1):1-9. doi: 10.7326/M15-0038. Epub 2015 Dec 29
  - Provider Indicator:
    - Hall AJ, Logan JE, Toblin RL, et al. Patterns of Abuse Among Unintentional Pharmaceutical Overdose Fatalities. *JAMA*.2008;300(22):2613-2620. doi:10.1001/jama.2008.802.  
<http://jama.jamanetwork.com/article.aspx?articleid=183046>
  - Pharmacy Indicator:
    - Zhou Yang, Barth Wilsey, Michele Bohm, et al. Defining Risk of Prescription Opioid Overdose: Pharmacy Shopping and Overlapping Prescriptions Among Long-Term Opioid Users in Medicaid. *The Journal of Pain* , Volume 16 , Issue 5 , 445 – 453.  
<http://www.ncbi.nlm.nih.gov/pubmed/25681095>
  - 40 MED Indicator:
    - Leonard Paulozzi, Edwin Kilbourne, Nina Shah, et. al. A History of Being Prescribed Controlled Substances and Risk of Drug Overdose Death. *Pain Medicine* Jan 2012, 13 (1) 87-95; DOI: 10.1111/j.1526-4637.2011.01260.x.  
<http://painmedicine.oxfordjournals.org/content/13/1/87.long>

### **Brief Narrative**

ARIs within PMP data have been shown to be predictors of adverse outcome, specifically unintentional overdose death. The PDMP based ARIs used by CS Insights were studied alongside the CS Insights Narcotic score as a predictor of unintentional overdose death and were found to have statistically equivalent OR when all 3 variables are present simultaneously (functionally equivalent to a Narcotic Score of 650).

**A history of previous overdose is associated with a high rate of repeat overdose (8% - 17% depending on continued opioid usage ranging from zero to high). When present this indicator will be displayed at the top of the additional risk indicator section, along with the number of previous overdoses recorded in parentheses.**

## Clinical Guidance

### Indicator

### Guidance\*

Hx of Previous Overdose

Consider naloxone prescription. If patient has evidence of a substance use disorder, consider inpatient admit or referral for outpatient evaluation and treatment.

NOTE: THERE IS ALWAYS THE CHANCE THAT AN OVERDOSE HAS OCCURRED AND NOT BEEN REPORTED. IN THE CASE OF AN UNREPORTED OVERDOSE, THE OVERDOSE RISK SCORE MAY *UNDER REPRESENT* THE TRUE OVERDOSE RISK OF THE PATIENT.

More than 5 providers in any year (365 days)

Review use patterns for unsafe conditions. If multiple providers involved in unsafe prescribing discuss concern with patient and consider contacting other providers directly.

More than 4 pharmacies in any 90 day period

Review use patterns for unsafe conditions. If multiple pharmacies involved in unsafe prescribing discuss concern with patient and consider pharmacy lock-in program.

More than 40 MED per day average and more than 100 MME total

Review use patterns for unsafe conditions. Consider taper to lower dose and/or discontinuation of potentiating medications.

\*Explanations and guidance within this document are not intended to be all inclusive of the options available to the clinician or pharmacist. CS Insights scores and reports are based on search criteria supplied and the data entered by the dispensing pharmacy. For more information about any prescription, please contact the dispensing pharmacy or the prescriber. CS Insights scores and reports are intended to aid, not replace, medical decision making. None of the information presented in CS Insights should be used as sole justification for providing or refusing to provide medications.