HAP PA-HEN ADE Measures Worksheet

Monitoring the safe use of high-alert medications

Measuring the level of safety is fundamental to improvement. Historically, measurement efforts have focused on practitioner reporting of medication errors, which, at best, uncovers just a fraction of the errors, most of them harmless.[1] In order to more successfully monitor medication safety with the use of high-alert medications, other measures should be considered. Specifically, process and outcome measures can be used to determine the existence of a problem, the extent of problem, and the effectiveness of efforts to improve the problem.[2]

- **Process measures**—designed to assess how well the organization is performing core processes associated with medication use.
- **Outcome measures**—can be used to identify adverse drug events and measure the overall level of patient harm. Used as a measure of medication safety, harm is a reliable, clear, and direct measure, and the focus is on all unintended results.

This worksheet provides a selection of both outcome and process measures associated with high-alert medications and may be used for documenting facility-specific measures. Consider using a mix of both outcome and process measures. This worksheet may be adapted, and measures may be added as needed per facility policy and procedure.

These measures can be used to track performance over time. To do that, it is important to consistently use the same methods in defining, detecting, and documenting these measures. Consider the following:

- **Data source.** Determine the data source for the measures that the organization will use. For example, when measuring the "incidence of blood sugars," use serum blood sugars levels from the laboratory and/or blood sugar readings from the point of care. Whichever value the organization initially chooses, it must be consistently used for accurate comparison over time.
- **Data collection period.** Select a manageable time period for gathering data and measures. Enter that period into the corresponding location on the worksheet. For example, organizations may choose to obtain the number of times treatment (e.g., administering intravenous dextrose or glucagon) for symptoms of hypoglycemia was provided for a week, month, or quarter. This may depend on the number of patients receiving insulin in the organization and should be manageable for the person gathering the information.
- **Results.** Enter the numerator and denominator value next to the corresponding measures column on page 3. When the numerator and denominator values are entered (i.e., keyed into the electronic PDF), the percentage will automatically calculate.

Once obtained, these measures can be useful for trending, benchmarking, and tracking core processes and outcomes associated with high-alert medication use. Additionally, after collecting enough data to see a trend, consider setting goals for these measures and using them to evaluate the effectiveness of system changes and interventions.

Notes

1. Institute for Safe Medication Practices. Measuring up to medication safety. *ISMP Med Sat Alert* 2005 Mar 10;10(5):1.
2. Institute for Healthcare Improvement (IHI). IHI trigger tool for measuring adverse drug events [online]. [cited 2016 Jan 21]. http://www.ihi.org/resources/pages/tools/triggertoolformeasuringadversedrugevents.aspx

Measures

Insulin		Time Period:		Time Period:		Time Period:	
		Ratio	Rate	Ratio	Rate	Ratio	Rate
Outcome Measures	Episodes of blood sugars (point of care and/or serum) less than 50/ Number of patients prescribed insulin	_____		_____		_____	
	Incidence of providing treatment (e.g., intravenous [IV] dextrose or glucagon) for symptoms of hypoglycemia/ Number of patients prescribed insulin	_____		_____		_____	
Process Measures	Patients discharged on insulin provided education/ Patients discharged on insulin	_____		_____		_____	
		_____		_____		_____	

Opioids		Ratio	Rate	Ratio	Rate	Ratio	Rate
Outcome Measures	Naloxone use in patients prescribed opioids/ Number of patients prescribed opioids	_____		_____		_____	
	Rapid response team (RRT) calls for patients on opioids/ Total number of RRT calls	_____		_____		_____	
Process Measures	Documentation of assessment of opioid status/ Number of patients prescribed long-acting opioids (e.g., fentanyl patches, high-dose MS Contin)	_____		_____		_____	
	Documentation of reassessment of respiratory rate, quality of respirations, level of sedation, and blood pressure/ Patients on a med-surg unit with PRN orders for and administered intramuscular or IV opioids	_____		_____		_____	
		_____		_____		_____	

Anticoagulants		Ratio	Rate	Ratio	Rate	Ratio	Rate
Outcome Measures	Episodes of International normalized ratio (INR) >5/ Total number of patients prescribed warfarin	_____		_____		_____	
	Incidence of providing treatment (e.g., vitamin K)/ Total number of patients prescribed warfarin	_____		_____		_____	
Process Measures	Patients discharged on warfarin provided education/ Patients discharged on warfarin	_____		_____		_____	
		_____		_____		_____	

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