Medication Safety Dashboard

Step of Medication Management	Metric	Metric Definition	Recommended owner of goal (who should own tracking and moving this goal?)	Who should be consulted or informed?	Recommended Frequency of Reporting (Example: Monthly, Quarterly, Biannual)	Numerator	Denominator or Inclusion Criteria (if applicable)	Data Sources (where would you get data from your organization?)	Goal (Include reference for Goal) if available Goals noted with * have been set by review and consensus of Medication Safety SAG	Possible Barriers (with countermeasures if available)	External Sources or References (Are there any references to help with this metric? Toolkits? A focus on a specific organization? Example: Barcode Scanning- LEAPFROG)	Comment
Storage	Expired in Automated Dispensing Cabinet (ADC)	Items within ADC that remained stocked past the entered expiration date. Can be reported as a raw number or as a percentage.	Department of Pharmacy - Pharmacy technician leadership (e.g., Pharmacy tech manager/supervisor)	Pharmacy Leadership, Regulatory	Monthly	Reported as raw number: Number of loaded medications in ADC that remain past the input "expiration date"		ADC (may need to be a custom script)	No expired medication should remain stocked beyond the entered expiration date: Goal of Zero. If current amount is non-zero: consider goal of decreasing annually by 50% to goal of zero.*	Requires accurate manual expiration date entry, regular checks of outdate by pharmacy technicians, resource allocation, policy differences (remove expired meds 7 days prior vs. 14 days prior)	Nanni, Alexis N et al. "Screening for expired medications in automated dispensing cabinets." American journal of health-system pharmacy : AJHP : official journal of the American Society of Health-System Pharmacists vol. 77,24 (2020): 2107-2111. doi:10.1093/ajhp/zxaa318 The Joint Commission (TJC)MM.03.01.01. EP 8 DNV: MM.1.SR.6	Highly dependent on human input accuracy when loading. Consider education of staff about the possibility of returning medications back to their wholesalers to obtain reimbursement as this may encourage staff to remove expiring medications out of patient care area sooner.
						number of expired doses	the total number of doses loaded	ADC (may need to be a custom script)				
Storage	Unit Inspections Completed on Time	Percentage of unit inspections that are documented as completed prior to due date/time	Department of Pharmacy:Example: Pharmacist, Pharmacy Technician, Leadership)	Unit/ Area Leadership and Pharmacy	Same frequency as Unit Inspections - Goal of Monthly	Number of unit inspections that are documented prior to due date/time	Total Number of Unit Inspections	Activity Tracking SoftwarePaper forms/ tracking	100%If current amount is not 100%-: consider goal of increasing every 6 months by 50% to goal of 100%*	**Time for staff to complete**: Add time in schedule to complete unit inspections**Availability of Area**: Ensure assignments match areas that will be accessible. Concern with procedural and off site areas.	TJC/ CMS requirement for periodic inspectionsDNVMM.1.SR5.b Interpretive guidelinesRequirements for each state may vary, but many require monthly inspections	

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Distribution	Percentage Barcode Scanning within Pharmacy	Percentage of Doses Dispensed that require barcode scanning within Pharmacy prior to distribution as a function of all Dispenses	Pharmacy	Patient Safety/ Quality Department Medication Safety Committee Purchasing	Monthly (although would recommend looking at data in more real time, to identify issues quickly)	Doses that require a barcode scan as part of the distribution process originating from Central Pharmacy	All doses dispensed from Central Pharmacy **separate out based on equipment (i.e. Carousel data separate from IV room, etc.)	- Carousel - IV Workflow System - Barcode Scanning Workflow -Manual packaging of oral solid and liquid meds	Goal of >95% based on BCMA scanning goal, where scanning is implemented Implement and expand scanning of medications in the pharmacy where scanning does not already occur	Lack of buy-in to purchase technology (cost) Lack of time/ resources	*ISMP Guidelines for Safe Preparation of Compounded Sterile Preparations (*recommend technology such as barcode scanning to verify all base solutions and ingredients during preparation and verification of compounded sterile preparations (CSPs)). *ISMP Targeted Medication Safety Best Practices for Hospitals* (# 11). *ASHP statement on barcode verification during inventory, preparation and dispensing of medications (https://www.ashp.org/-/media/assets/policy-guidelines/docs/statements/bar-code-verification-inventory-preparation-dispensing-medications.ashx)*	
Distribution	Percentage wrong product	Percentage of items that qualify for "Number Wrong Product" as a function of total doses that are scanned prior to distribution	Pharmacy Pharmacy inventory manager and/or pharmacy operations manager	Patient Safety/ Quality Department Medication Safety Committee Purchasing	Monthly	Number of wrong product mismatches caught by barcode scanning in distribution process from Central Pharmacy	Doses that require a barcode scan as part of the distribution process originating from Central Pharmacy	- Carousel - IV Workflow System - Barcode Scanning Workflow	<1%*	Lack of buy-in to purchase technology (cost)Lack of time/ resources- could come from multiple sources and will take time to compile	1) ISMP Guidelines for the Safe Use of Automated Dispensing Cabinets 2) Bar-code-assisted medication administration: a method for predicting repackaging resource needs. Am J Health Syst Pharm. 2013 Jan 15;70(2):154-62. doi: 10.2146/ajhp120200ISMP Guidelines for Safe Preparation of Compounded Sterile Preparations	Depends on multiple systems (not all locations require scanning in Pharmacy)

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Administration	Bar Code Medication Administration (BCMA)	Number of administrations documented where both the item and the patient were scanned	Nursing leadership	Nursing staff; Pharmacy operations; Informatics	Monthly	Number of doses that have both the patient and medication scanned	Number of documented doses	Electronic Health Record (EHR)	95% (Leapfrog)	Staff administered doses prior to scanning -> Nursing Education, emergency situation, Leapfrog requires audits to identify and address workarounds Barcodes that don't scan; develop process for scanning medications upon receipt to ensure barcode scans within electronic medical record Specific areas such as Emergency Departments and perioperative areas can be challenging for compliance; engage area leadership, set step goals	LeapFrog (Includes specific units only)	
Administration	Percentage Overrides from Automated Dispensing Cabinets (ADC)	Hospital Wide- percentage of "Number Overrides from ADC" as a function of total number of items removed	Nursing leadership	Inpatient pharmacy staff	Monthly	Doses dispensed from ADC as an override	All dispenses from ADC throughout entire hospital	ADC	<5%*	Outliers/Variability per ward (ER for example), non-profile configuration, emergency use	ISMP Automated Dispensing GuidelinesISMP 2020-21 Best PracticeTJC 08.01.01 EP 16DNV: QM.7.SR.2CMS Conditions of Participation	If looking at specific areas, metric may be adjusted to patient care area, cabinet, or level of care to review data. ASHP: " Due to differing facility sizes and patient/location demographics, there is not a best practice goal or standard acceptable override rate per facility, user, or unit type. Hospitals should consider a baseline evaluation of their overalloverride rate, unit override rate, individual user override rate, and override rate bymedication."

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Administration	Percentage Overrides from Automated Dispensing Cabinets (ADC)	Hospital Wide- Inpatient areas only- percentage of "Number Overrides from ADC" as a function of total number of items removed	Nursing leadership	Inpatient pharmacy staff	Monthly	Doses dispensed from ADC as an override	All dispenses from ADC in inpatient areas (Excludes Emergency departments, perioperative areas, etc)	ADC	<3%*		ISMP Automated Dispensing Guidelines ISMP 2020-21 Best Practice TJC 08.01.01 EP 16 DNV: QM.7.SR.2 CMS Conditions of Participation	If looking at specific areas, metric may be adjusted to patient care area, cabinet, or level of care to review data. ASHP: " Due to differing facility sizes and patient/location demographics, there is not a best practice goal or standard acceptable override rate per facility, user, or unit type. Hospitals should consider a baseline evaluation of their overall override rate, unit override rate, individual user override rate, and override rate by medication."
Administration	Dose Error Reduction Software (DERS) Compliance - Drug Library Limits	Percentage of medications administered using DERS through the Smart Pump	Nursing leadership	Nursing staff; Drug library owner, pharmacy	Monthly	Medications administered utilizing Drug Library through the Smart Pump	All medications administered via the Smart Pump	Smart Pump	>95% (ISMP)	Human error (forgetting/not use library) -> Nursing EducationDrug not available in Drug Library/ New medications not being in library prior to infusion/ update to pumps may lag for new medications; work with Drug Library Owner to build medicationsUnable to build medication-investigational medicationsAccess to compliance data with all pumps; work with IT/ library software to obtain data on regular basisLack of standardized build for medications leading to nomenclature that is not intuitive; seek feedback from frontline staff on build	ISMP (https://www.ismp.org/system/files/resources/2022-02/2022-2023%20TMSBP%20final.pdf)	Interoperability can help to increase and hardwire compliance. Recommend developing Library Governance team to create pathway for standardized build and updates.