وقاية
هيئة الصحة العامة
PUBLIC HEALTH AUTHORITY

MDRO Surveillance Data Validation Tool

PART I : MDRO Surveillance Process
(Multidrug Resistant Organisms)

#	Items	A: Staff Knowledge	Score	Comments
WHAT? *(ICPs responsible for MDRO Surveillance must be well trained about MDRO Surveillance Protocols*	CDC - NHSN MDRO Criteria (Numerator) MDRO Lab ID Event	Assess if ICPs assigned for MDRO surveillance are well familarized with MDRO Lab ID criteria as per CDC-NHSN criertia & fullly understand MDRO surveilance process. Numerator: MDRO - Laboratory-Identified (LabID) Event Multidrug-Resistant Organism (MDROs): MDROs are defined as microorganisms, predominantly bacteria, that are resistant to one or more classes of antimicrobial agents. Q1: What are targetd organism for MDRO Surveillance? ESCKAPE - C Acronym for the group of organisms that includes: 1: Enterococcus faecium /fecalis (VRE) 2: Staphylococcus aureus (MRSA) 3: Escherichia coli, Klebsiella oxytoca Klebpneumoniae, Klebsiella aerogenes, Enterobacter species (CRE) 4: Klebsiella pneumoniae/oxytoca (CephR-Klebsiella) 5: Acinetobacter species (MDR Acinetobacter) 6: Pseudomonas spp (MDR Pseudomonas) 7: Klebsiella spp (MDR Klebsiella) 8: Candida Auris.		
	What to report?	LabID Event reporting is ONLY for collecting and tracking positive laboratory results (for example, positive cultures) that are collected for "clinical" purposes (specifically for diagnosis and treatment). This means the results of laboratory specimens collected for active surveillance testing (AST) purposes only should NOT be reported as LabID Events.		
	MDRO Definitions	Gram Positive MDROs 1: MRSA : Includes S. aureus cultured from any specimen that tests oxacillin-resistant, cefoxitin resistant, or methicillin-resistant by standard susceptibility testing methods, or any laboratory finding of MRSA 2:VRE: Vancomycin-resistant Enterococcus (Enterococcus faecalis, Enterococcus faecium) that is resistant to vancomycin.		
	MDRO Definitions	Gram Negative MDROs: 1: CephR Klebsiella: Klebsiella oxytoca or Klebsiella pneumoniae testing non-susceptible (specifically, either resistant or intermediate) to ceftazidime, cefotaxime, ceftriaxone, cefepime, ceftazidime/avibactam, or ceftolozane/tazobactam. (Cephalosporins) 2: CRE: Carbapenem resistant Enterobacteriaceae: Any Escherichia coli, Klebsiella spp. or Enterobacterspp that are resistant to at least one carbapenem agent testing resistant to imipenem, meropenem, doripenem, ertapenem, meropenem/vaborbactam, or imipenem/relebactam by standard susceptibility testing methods. 3: MDR Acinetobacter: Any Acinetobacter spp. testing non-susceptible (specifically, either resistant or intermediate) to at least one agent in at least 3 antimicrobial classes of the following 6 antimicrobial classes: 1: Aminoglycosides 2:Cephalosporins 3: Carbapenems 4: Fluoroquinolones 5:ß-lactam/ ß-lactamase inhibitor combination 6:Sulbactam		

WHAT? *(ICPs responsible for MDRO Surveillance must be well trained about MDRO Surveillance Protocols*	**MDRO Definitions**	4: MDR Klebsiella: MDR Klebsiella • Any Klebsiella spp. non-susceptible(resistant or intermediate) to at least 1agent in 3 of following 5 antimicrobialclasses: 1: Aminoglycosides 2:Cephalosporins 3: Carbapenems 4: Fluoroquinolones 5:ß-lactam/ ß-lactamase inhibitor combination 5: MDR Pseudomonas • Any Pseudomonas spp. non-susceptible(resistant or intermediate) to at least 1agent in 3 of following 5 antimicrobial classes: 1: Aminoglycosides 2:Cephalosporins 3: Carbapenems 4: Fluoroquinolones 5:ß-lactam/ ß-lactamase inhibitor combination		
		1: Fungus (Candida Auris) : MDR Candida Auris		
	Key Definitions	Q1: What is MDRO Isolate??? Any specimen, obtained for clinical decision making, testing positive for an MDRO (as defined above). Note: Excludes tests related to active surveillance testing. Q2: What is Duplicate MDRO Isolate ?? Any subsequent MDRO isolate from the same patient and location after the first isolate of the specific MDRO during a calendar month, regardless of specimen source except unique blood source. Q3: How will you differentiate between Community onset & hospital onset MDROs ?? MDRO by Presentation: ✓Community-Onset (CO): Positive MDRO from inpatient in the first 3 days of admission to the facility. ✓Healthcare Facility-Onset (HO): Positive MDRO from inpatient location 4 days or more after admission to the facility.		
WHO?	**Inclusion Criteria**	Q: Ask about the inclusion criteria of MDRO Lab ID Event: ✓Clinical specimen: Any specimen, obtained for clinical decision making, testing positive for an MDRO. ✓Unique specimen: 1: For Blood sample: Positive MDRO isolated from blood culture. The patient must not have had a positive blood culture for the same MDRO in the last 14 days, even if they were in different facilities or admitted in different months. 2: Non-Blood sample: An MDRO isolated from Non-blood culture : The patient must not have had a positive culture for the same MDRO from any non-blood sample in the last 30 days, regardless of whether they were in diffeerent facilities or admitted during different months.		
WHO?	**Exclusion Criteria**	Q: Ask about the exclusion criteria of MDRO Lab ID Event: Following should Not to be reported as MDRO Lab ID Event: x Surveillance (screening) specimen - Active Surveillance testing x Duplicate MDRO specimen		
WHAT?	**Denominator Data Collection**	Ask about denomintaor data colllection methodology?? Denominator/s: Patinet Days: Number of patients housed in a facility inpatient location during the designated counting time each day and summed for a monthly denominator report.		
WHERE?	**MDRO Surveillance Location**	*Ask where MDRO surveillance should be conducted ??* *MDRO Surveillance is conducted in all Adult Critical Care Units where denominator data can be collected - Patient days* *1: Adult Critical Care Units* *2: Pediatric ICU (PICU)* *3: Neonatal ICU (NICU)* *NOTE : CAUTI Surveillance is NOT applicable for Neonatal loctaions (NICU)* *Currently only critcal care units are included in HAI surveillance data reporting via electronic platforms)*		

WHO?	Targeted Patients	1: Ask about targeted patients for MDRO surveillance?? Any patient admitted in Adult ICU, PICU & NICU with a positive LabID Event for targeted MDROs are incldued in MDRO Surveillance.		
HOW?	MDRO Data Collection	1: Microbiology Lab results for targeted MDROs as mentioned above.		

B: Positive Culture Linelist & Internal Validation				
WHAT?	Line list Review	Is there any effective notification system between the IPC department, laboratory, and all departments in the hospital for any critical values (i.e MDROs, positive cultures & high-alert microorganisms).		
		Is there any updated linelist/logbook of all positive microbiological cultures that includes Patient information,Date of admission to hospital & unit, date of device insertion date of device removal , date of specimen collection, type of organism, sings & symptoms etc		
		Internal validation done to review data for candidate CAUTI in Adult ICUs & pediatric ICUs (PICU).		
		Internal validation done to review denominator data.		
		Possiblity of Outbreak ruled out - No epidemiological link between cases reported from same location in same time frame.		
C: MDRO Events Idetification & Reporting				
WHAT?	Data Analysis & Event reporting	Number of MDRO Lab ID Events correctly identified as per CDC-NHSN Criteria		
		Number of MDRO Lab ID Events matching CDC criteria that were missied by ICP and were detected during visit.		
		Number of correctly idetified MDRO Lab ID Events reported Via seha platform in a timely mannner.		
		Number of MDRO Lab ID Events as per manual sheet are 100% matching with Seha Platform & Power BI dashboard		
D: MDRO Surveillance Data Entry Via Seha Platform				
WHAT?	Electronic Platforms	All patients admitted in critical care units are registered in Seha Platform with or without devices.		
		MDRO event information is entered accurately for all patients having a positive Lab ID Event for targeted organism for MDRO Surveillance (ESKAPE-C)		
		Number of patients currently admitted in Adult ICUs & PICUs is 100% matching with Seha platform on day of visit.		
E: HAI Outbreak Detection & Reporting (ESKAPE-C)				
WHAT?	Outbreak Detetction Reporting	Outbreak was detected correctly as per latest GDIPC updates (version 7.2 Jan 2025)		
		Outbreak was reported in a timely manner via electronic Platform		
		An outbreak was missed which was detetced during visit as per linelist *(Device associated (Central Line) or non device associated)*		

PART II : On Site Visit - Validation Rounds (Adult ICU, PICU, NICU)				
WHAT?	IC Rounds	Conduct rounds in adult ICU, PICU,NICU & ensure care bundles & prevention tools are applied.		
		Assess staff knowledge about Urinary Catheter insertion & maintenance bundles & CAUTIoN prevention tools.		

PART III (Education & Training Session)				
WHAT?	MDRO Surveillance Education & Training	External Validator conducted short concluding training & education session ????		
		MDRO Surveillance Protocols based on CDC-NHSN Criteria MDRO Bundle		
WHO?		Targeted Audience: Infection Control Team Nursing representatives from Adult ICUs, PICUs,NICUs)		