Line List

Antimicrobial-Resistant Organisms

This document provides instructions for the antimicrobial-resistant organism line list that is available in the NHSN analytic reports located in the following analysis folder: HAI Detailed Reports > HAI Antimicrobial Resistance (DA + PA Modules) > Antimicrobial Resistant HAIs.

Overview

There are several analysis reports available in NHSN that will allow you to analyze HAI events from your facility (or group) in which a specific antimicrobial-resistant organism (or "phenotype") was identified. CDC has defined 13 phenotypes of epidemiologic importance; the analysis reports will display data from these 13 phenotypes by default. Criteria and definitions for the pre-defined phenotypes can be found here: https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/phenotype definitions.pdf

Note: If you are interested in reviewing events and organisms beyond the 13 phenotypes, you can export the Antimicrobial Resistant Organism Line List analysis dataset to view event records and antibiogram data for other reported pathogens. You can also run the Antibiogram Line List option, found in HAI Detailed Reports > HAI Antimicrobial Resistance (DA + PA Modules) > Antimicrobial Resistant HAIs > Line Listing-Antibiogram which will include all events/pathogens regardless of their susceptibility results.

Example

The line list will allow for a record-level review of each event in which an associated pathogen meets the criteria for at least one of the pre-defined phenotypes. In this example, we are interested in reviewing all HAI events that occurred in our facility in 2020 that had an associated organism meeting one of the antimicrobial resistant phenotype definitions.

 On the Reports screen, navigate through the following folders: HAI Detailed Reports > HAI Antimicrobial Resistance (DA + PA Modules) > Antimicrobial Resistant HAIs > Line Listing- Antimicrobial Resistant Organisms. Click on the report title to view options for running or modifying the report. On the pop-up menu, click "Run" to view all events and pathogens from each of the 13 phenotypes, or click "Modify" to specify a time period and/or phenotype of interest.



Centers for Disease Control and Prevention National Center for Emerging and Zoonotic Infectious Diseases

🗼 Analysis Reports									
Expand All	Collapse All	Search							
HAI Ri 	sk Adjusted Meas 15 Baseline (Base iginal Baseline (B etailed Reports (L evice-Associated (sure Reports (eline Set 2) aseline Set 1) ine Lists, Rate DA) Module	SIRs, SURs) : Tables, etc.)						
¢ ≌ Pro ۲ ≌ HA ۱۵ ≌	ocedure-Associat Al Antimicrobial R Unusual Suscep Antimicrobial Re	ed (PA) Modu esistance (DA tibility Profile esistant HAIs	le +PA Modules) Alerts						
p ≧ MI p ≧ MI p ≧ CMS R	Run Rep Modify R Export D	ort eport ata Set	bbial Resistant Organisms bial Resistant Organisms esistance Percentages ts rveillance						

2. In this example, we will use the modify screen to edit the time period. To modify the time period, open the tab called "Time Period" shown at the top of the Modify screen. Set "EvntDateYr" to 2020.

odify "Line Listin	g- Antimicrobial R	Resistant Or	ganisms"			
Show descriptive	e variable names <u>(Prin</u>	nt List)		Analysis I	Data Set: Antibiogram_H/	41
Title/Format	Time Period	Filters	Display Variables	Sort Variables	Display Options	
Time Period: Date Variab	le Beginnir	ng	Ending	loor Time Deried		
evntDateYr	variable/Time per	riod at the ti	me you click the Run bu	itton		

- 3. You can make additional modifications to the line list, such as limiting the report to a single phenotype, by using the tab called "Filters". By default, several specifications are already made in the "Filters" tab, and for this example, no further modifications are needed. However, if you wish to modify the phenotypes displayed in the line list, you could edit the Filters screen to only display certain phenotypes.
- 4. After all necessary changes have been made, click "Run" at the bottom of the Modify screen. You may also choose "Export" if you wish to obtain this output in another format (e.g., xls).

Report

The report will contain one line list for each phenotype that your facility has reported. Not all phenotypes are shown in this example. Fictitious data are presented below.

Natio	nal F	lealthca	re Safe	ty Netwo	ork					
Line	Listir	ng- Antir	nicrob	ial Resist	tant Or	ganisms				
CRE	all_H/	Al - Carb	apene	m-resista	ant Ent	erobacte	rales			
As of: D	cember	28, 2021 at 11:	50 AM							
Date Rar if (((pher	ige: ANTI iotype IN	BIOGRAM_HA ("MRSA HAI"	l evntDate	Al", "ESCecoli	HAI", "ESCK	debsiella HAI",	"carbNS Acine	HAI", "carbl	NS PA HAI", "MDR Acir	e HAI", "MDR F
"VREfae	calis_HAI	"))))								
orgID	patiD	dob	gender	admitDate	eventID	eventDate	event lype	location	pathogenDesc	phenoty
10401	1234	12/12/2007	М	12/15/2019	90658	01/01/2020	BSI	MED	Klebsiella aerogenes	- EA CREall_H
10401	123456	02/02/1960	М	02/14/2020	104255	02/21/2020	BSI	2WEST	Klebsiella aerogenes	- EA CREall_H
10401	0629	12/03/1959	М	01/31/2020	104270	02/29/2020	UTI	MED	Escherichia coli - EC	CREall_H
10401	4326	05/16/1995	М	01/20/2020	104273	01/27/2020	SSI	MED	Klebsiella aerogenes	EA CREall_H
10401	4327	01/01/2001	М	01/24/2020	104274	02/01/2020	UTI	MED	Escherichia coli - EC	CREall_H
Natio	onal F Listir coli_ cember 3 ge: ANTI otype IN	lealthca Ig- Antir HAI - Ex 28, 2021 at 11: BIOGRAM_HA ("MRSA HAI"	re Safe nicrob (tende 50 AM J evntDate) , "CREall H	ety Netwo ial Resist d-spectru /r 2020 to 2020 Al", "ESCecoli	ork tant Org <mark>Im cep</mark> HAI". "ESCK	ganisms <mark>halospor</mark>	in-resista "carbNS Acine	ant E.cc	D II NS PA HAI". "MDR Acir	e HAI", "MDR F
"VREfae	calis_HAI	"))))								
orgID	patID	dob	gender	admitDate	eventID	eventDate	eventType	location	pathogenDesc	phenotype
10401	4327	01/01/2001	м	01/24/2020	104274	02/01/2020	UTI	MED	Escherichia coli - EC	ESCecoli_HAI
JID 401	patID 4327	dob 01/01/2001	<mark>gender</mark> M	admitDate 01/24/2020	eventID 104274	eventDate 02/01/2020	eventType UTI	location MED	pathogenDesc Escherichia coli - EC	phenotype ESCecoli_HAI
Criteri analys The da	a used is-reso ata in t	to define urces/phe his table ir	each ph notype_ nclude al	enotype car definitions	n be four .pdf :pathoge	nd on the Pa	atient Safety for an HAI.	y Analysis and are i	Resources webpa	age at: https first pathog
Criteri analys The da Sorter	a used is-reso ata in t I by org	to define urces/phe his table ir	each ph notype_ nclude al Date	enotype car definitions I applicable	n be four .pdf e pathoge	nd on the Pa ens entered	atient Safety for an HAI,	y Analysis and are r	Resources webpa not limited to the	age at: https first pathog

In 2020, this facility reported bloodstream infections, urinary tract infections, and a surgical site infection with carbapenem-resistant Enterobacterales (CRE) pathogens identified; the two BSI CRE pathogens identified were *Klebsiella aerogenes*, the two UTI pathogens were *Escherichia coli*, and the SSI was *Klebsiella aerogenes*. This facility also reported a UTI with an extended-spectrum cephalosporin-resistant *E. coli* pathogen.

Additional Resources

Antimicrobial Resistance Definitions: <u>https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/phenotype_definitions.pdf</u>

How to run and modify a Line List in NHSN: http://www.cdc.gov/nhsn/PS-Analysis-resources/PDF/LineLists.pdf



Centers for Disease Control and Prevention National Center for Emerging and Zoonotic Infectious Diseases