

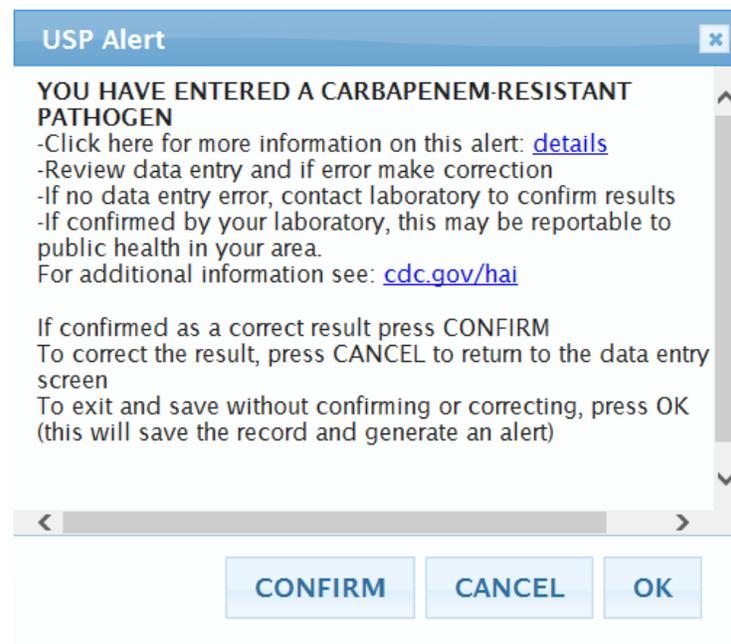
## Unusual Susceptibility Profiles Alert

National Healthcare Safety Network (NHSN) is a surveillance system for healthcare-associated infections (HAIs) that includes data collection on antimicrobial susceptibility testing results for certain reported pathogens. Microorganisms with specific resistance patterns are of epidemiological significance and can have substantial infection control implications. The importance of early detection and implementation of intervention measures to prevent transmission and propagation cannot be understated. Redundancy across many systems to ensure identification of these important unusual susceptibility profiles is beneficial. NHSN notifies users when any of the twelve unusual susceptibility profiles listed below and further described in the Unusual Susceptibility Profiles Alert Table (found at the end of document) are reported to NHSN. This applies to in-plan events only.

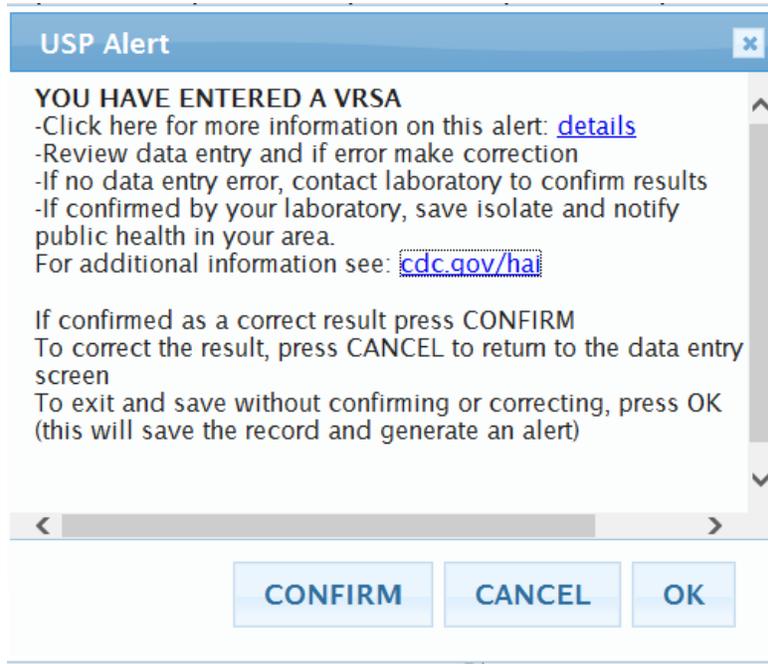
1. Carbapenem-resistant Enterobacteriaceae
2. Carbapenem-intermediate or -resistant *Acinetobacter baumannii*
3. Carbapenem-intermediate or -resistant *Pseudomonas aeruginosa*
4. Highly Drug-Resistant Enterobacteriaceae
5. Highly Drug-Resistant *Pseudomonas aeruginosa*
6. Highly Drug-Resistant *Acinetobacter baumannii*
7. Colistin/Polymyxin B-resistant *Acinetobacter baumannii*
8. Colistin/Polymyxin B-resistant *Pseudomonas aeruginosa*
9. Daptomycin non-susceptible and Linezolid-resistant *Enterococcus* spp.
10. Vancomycin-resistant *Staphylococcus aureus* (VRSA)
11. Daptomycin non-susceptible and Linezolid-resistant and Vancomycin-intermediate *Staphylococcus aureus*
12. Vancomycin-resistant *Staphylococcus*, coagulase negative (VRSE)

When a user enters a pathogen's susceptibility testing result into the NHSN application that aligns with one of the unusual susceptibility profiles, upon saving the event, a "pop-up" message will appear on the screen. The message text will be tailored to the specific profile identified. There are three message types.

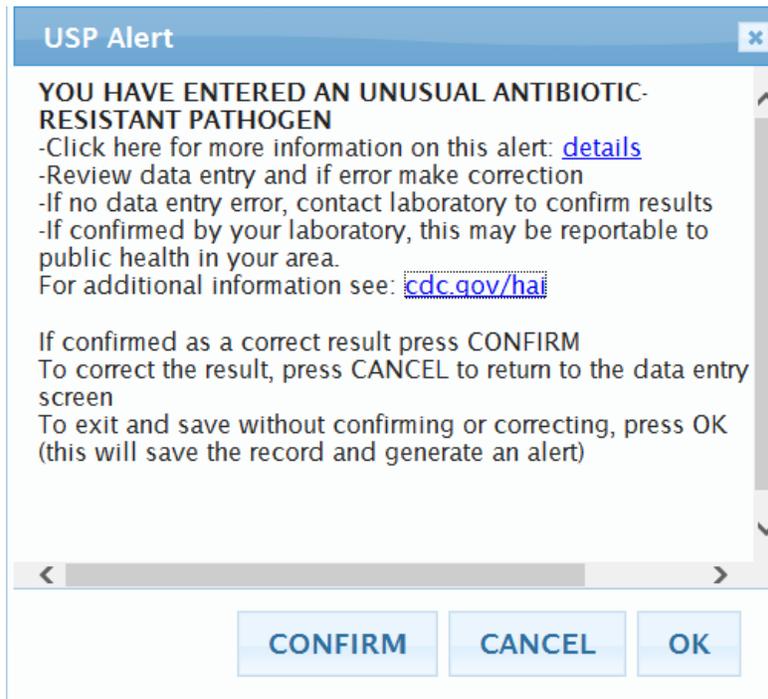
1. **CR** (Carbapenem-Resistant)



2. **VRSA** (Vancomycin-Resistant *Staphylococcus aureus*)



3. **Other**



When a message appears the user will have the ability to do one of the following:

- Verify the data entry as accurate by selecting **CONFIRM**. This will complete the “Save” process.
- Return to the event susceptibility data entry screen by choosing **CANCEL**. The user can review and amend incorrect data entry if necessary.
- Acknowledge the notification by selecting **OK**. This selection will enable the user to complete the “Save” process without verifying or editing the data entry. This will generate an Alert on the Alerts screen. The Alert will appear under the Alert tab labeled “Unusual Susceptibility Profile” and will display the type of Alert message, as well as, the profile identified. The user will have the ability to return to the event susceptibility data entry screen at a later point in time, directly from the Alert tab. The Alert will remain until the unusual susceptibility profile is verified to be accurate by selecting **CONFIRM** or amending the data entry such that an unusual susceptibility profile is no longer identified.

**Events with unusual pathogen susceptibility results**

 What are Unusual Susceptibility Profiles?

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Patient ID	Last Name	First Name	Event #	Event Type	Date Admitted to Facility	Pathogen	Result Causing Alert	Alert Message Type	Unusual Susceptibility Profile Code
C061707G			<a href="#">44206</a> 	UTI	05/19/2014	KP		OTHER	HDR_E
CG061703			<a href="#">44182</a> 	BSI	05/05/2014	KP		OTHER	CRE
CG061708			<a href="#">44207</a> 	UTI	05/12/2014	ACBA		OTHER	HDR_E
CG06171			<a href="#">44180</a> 	BSI	05/01/2014	EA		CR	CRE
CG061710			<a href="#">44220</a> 	BSI	05/19/2014	SA		VRSA	VR_SA
CG061710			<a href="#">44209</a> 	UTI	05/12/2014	PA		OTHER	HDR_PA
CG061710			<a href="#">44209</a> 	UTI	05/12/2014	PA		OTHER	PR_PA
CG061711			<a href="#">44211</a> 	UTI	05/30/2014	SA		OTHER	HDR_SA
CG061713			<a href="#">44219</a> 	BSI	05/15/2014	PA		OTHER	HDR_PA
CG061713			<a href="#">44219</a> 	BSI	05/15/2014	PA		OTHER	PR_PA

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When an Unusual Susceptibility Profile Alert “pop-up” message appears the user can select the [details](#) link to gather additional information.

**USP Alert**

**YOU HAVE ENTERED A CARBAPENEM-RESISTANT PATHOGEN**

-Click here for more information on this alert: [details](#)

-Review data entry and if error make correction

-If no data entry error, contact laboratory to confirm results

-If confirmed by your laboratory, this may be reportable to public health in your area.

For additional information see: [cdc.gov/hai](http://cdc.gov/hai)

If confirmed as a correct result To correct the result, press CANCEL To exit and save without confirming or correcting, press OK (this will save the record and return to the data entry screen)

**Unusual Susceptibility Profile Alert Details**

The following results are generating this alert:

Pathogen: Pseudomonas aeruginosa

IMI=R

CONFIRM OK

**USP Alert**

**YOU HAVE ENTERED AN UNUSUAL ANTIBIOTIC RESISTANT PATHOGEN**

-Click here for more information on this alert: [details](#)

-Review data entry and if error make correction

-If no data entry error, contact laboratory to confirm results

-If confirmed by your laboratory, this may be reportable to public health in your area.

For additional information see: [cdc.gov/hai](http://cdc.gov/hai)

If confirmed as a correct result To correct the result, press CANCEL To exit and save without confirming or correcting, press OK (this will save the record and return to the data entry screen)

**Unusual Susceptibility Profile Alert Details**

The following results are generating this alert:

Pathogen: Acinetobacter baumannii

CEFEP=R, LEVO=R, AMK=R, MERO=R, PIP=R, AMPSUL=R

CONFIRM OK

**Pathogens** [HELP](#)

Pathogen 1: *Staphylococcus aureus - SA* Search 13 drugs required

**USP Alert**

**YOU HAVE ENTERED A VRSA**

-Click here for more information on this alert: [details](#)

-Review data entry and if error make correction

-If no data entry error, contact laboratory to confirm results

-If confirmed by your laboratory, save isolate and notify public health in your area.

For additional information see: [cdc.gov/hai](http://cdc.gov/hai)

If confirmed as a correct result press CONFIRM To correct the result, press CANCEL to return to the data entry screen To exit and save without confirming or correcting, press OK (this will save the record and return to the data entry screen)

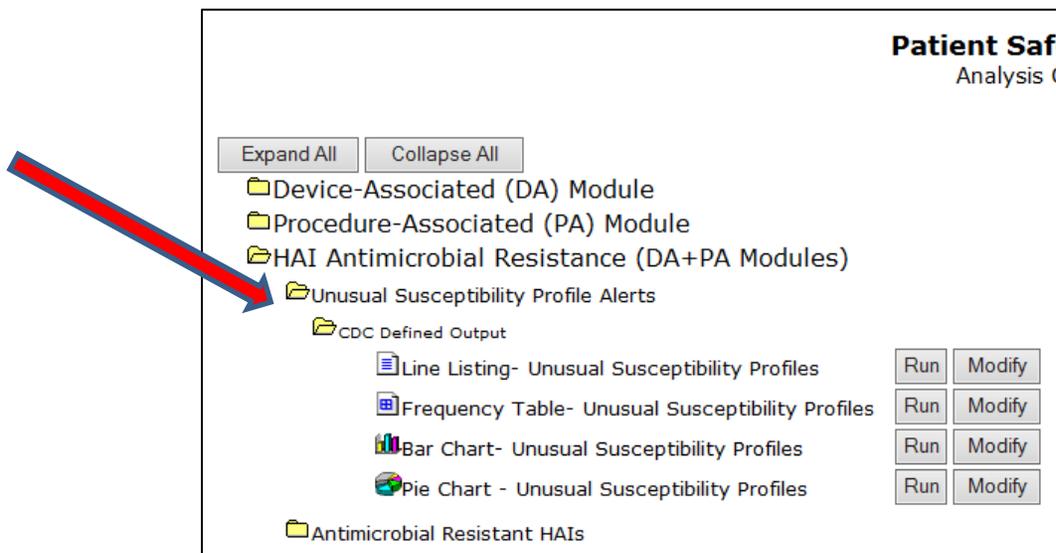
**Unusual Susceptibility Profile Alert Details**

The following results are generating this alert:

Pathogen: Staphylococcus aureus

VANC=R

In analysis, the user will be able to generate line list, frequency table, bar and pie chart outputs. The output options can be found in the HAI Antimicrobial Resistance folder within the Unusual Susceptibility Profile Alerts sub-folder. The outputs will identify the type of profiles (variable: suscCode), number and location of each profile and in addition, whether the profile has been confirmed to be accurate (variable: suscConfirm) or if the profile is pending verification (variable: suscPend). Please visit <http://www.cdc.gov/nhsn/PS-Analysis-resources/reference-guides.html> for additional instructions on how to run NHSN analysis reports.



### National Healthcare Safety Network Line Listing of All Unusual Susceptibility Profiles

As of: November 4, 2014 at 9:50 AM  
Date Range: All SUSCEPTIBILITY

suscCode=HDR\_ACBA

orgID	patID	dob	admitDate	eventDate	eventID	eventType	location	pathogen	suscCode	suscConfirm	suscPend
10401	CG06181401	06/06/1980	06/02/2014	06/09/2014	44133	VAE	TELE	ACBA	HDR_ACBA	Y	

Unusual Susceptibility Profile has been confirmed

suscCode=HDR\_ENTSP

orgID	patID	dob	admitDate	eventDate	eventID	eventType	location	pathogen	suscCode	suscConfirm	suscPend
10401	CG071808	07/13/1950	05/01/2014	05/12/2014	44141	VAE	LEUK	ENTFS	HDR_ENTSP		Y

Unusual Susceptibility Profile is pending

Sorted by eventDate

Data contained in this report were last generated on October 29, 2014 at 1:34 PM.

### National Healthcare Safety Network Frequency Table of All Unusual Susceptibility Profiles

As of: November 4, 2014 at 9:47 AM  
Date Range: All SUSCEPTIBILITY

Frequency Percent Row Pct Col Pct	Table of eventType by suscCode			
	suscCode			
	eventType	HDR_SA	VR_SA	Total
BSI		0	3	3
		0.00	50.00	50.00
		0.00	100.00	
		0.00	75.00	
UTI		2	1	3
		33.33	16.67	50.00
		66.67	33.33	
		100.00	25.00	
Total		2	4	6
		33.33	66.67	100.00

## Unusual Susceptibility Profiles Alert Table

Unusual Susceptibility Profiles	Profile Codes	Definition of Unusual Susceptibility Profiles	Alert Message Type
Carbapenem-resistant Enterobacteriaceae	CRE	Carbapenem (imipenem, meropenem, doripenem, ertapenem) is Resistant(R)	CR
Highly Drug-Resistant Enterobacteriaceae	HDR_E	Defined as highly drug-resistant if all <b>five</b> drug classes have at least one drug within the class reported as either Intermediate(I) or Resistant(R): <ul style="list-style-type: none"> <li>Extended spectrum cephalosporin (cefepime, cefotaxime, ceftriaxone, ceftazidime)</li> <li>Fluoroquinolones (ciprofloxacin, levofloxacin, moxifloxacin)</li> <li>Aminoglycosides (amikacin, gentamicin, tobramycin)</li> <li>Carbapenems (imipenem, meropenem, doripenem, ertapenem)</li> <li>Piperacillin/tazobactam</li> </ul>	Other
Colistin/Polymyxin B-resistant <i>Pseudomonas aeruginosa</i>	PR_PA	Colistin/polymyxin B is Intermediate(I) or Resistant(R)	Other
Carbapenem-intermediate or -resistant <i>Pseudomonas aeruginosa</i>	CR_PA	Carbapenem (imipenem, meropenem, doripenem) is Intermediate(I) or Resistant(R)	CR
Highly Drug-Resistant <i>Pseudomonas aeruginosa</i>	HDR_PA	Defined as highly drug-resistant if all <b>five</b> drug classes have at least one drug within the class reported as either Intermediate(I) or Resistant(R): <ul style="list-style-type: none"> <li>Extended spectrum cephalosporin (cefepime, ceftazidime),</li> <li>Fluoroquinolones (ciprofloxacin, levofloxacin)</li> <li>Aminoglycosides (amikacin, gentamicin, tobramycin)</li> <li>Carbapenems (imipenem, meropenem, doripenem)</li> <li>Piperacillin or piperacillin/tazobactam</li> </ul>	Other
Colistin/Polymyxin B-resistant <i>Acinetobacter baumannii</i>	PR_ACBA	Colistin/polymyxin B is Resistant(R)	Other
Carbapenem-intermediate or -resistant <i>Acinetobacter baumannii</i>	CR_ACBA	Carbapenem (imipenem, meropenem, doripenem) is Intermediate(I) or Resistant(R)	CR
Highly Drug-Resistant <i>Acinetobacter baumannii</i>	HDR_ACBA	Defined as highly drug-resistant if all <b>six</b> drug classes have at least one drug within the class reported as either Intermediate(I) or Resistant(R): <ul style="list-style-type: none"> <li>Extended spectrum cephalosporin (cefepime, ceftazidime),</li> <li>Fluoroquinolones (ciprofloxacin, levofloxacin)</li> <li>Aminoglycosides (amikacin, gentamicin, tobramycin)</li> <li>Carbapenems (imipenem, meropenem, doripenem)</li> <li>Piperacillin or piperacillin/tazobactam</li> <li>Ampicillin/sulbactam</li> </ul>	Other
Daptomycin non-susceptible and Linezolid-resistant <i>Enterococcus</i> spp.	HDR_ENTSP	Daptomycin is Non Susceptible(NS) AND Linezolid is Resistant(R)	Other
Vancomycin-resistant <i>Staphylococcus aureus</i> (VRSA)	VR_SA	Vancomycin is Resistant(R)	VRSA
Daptomycin non-susceptible and Linezolid-resistant and Vancomycin-intermediate <i>Staphylococcus aureus</i>	HDR_SA	Daptomycin is Non Susceptible(NS) AND Linezolid is Resistant(R) AND Vancomycin is Intermediate(I)	Other
Vancomycin-resistant <i>Staphylococcus</i> , coagulase negative (VRSE)	VR_CSN	Vancomycin is Resistant(R)	Other