



Technically Speaking

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Western Connecticut Health Network 2012 Cumulative Antibiograms

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Danbury Hospital Laboratory is pleased to announce the completion of the cumulative antibiograms for the year 2012. The cumulative antibiograms are annually generated reports that reflect the percentage of bacterial isolates that are susceptible to antimicrobial agents routinely tested in the Clinical Microbiology section of the Laboratory. Antibiograms provide clinicians and public health officials with trends of antimicrobial susceptibility at the local, regional, and national levels. One of the primary aims of the antibiograms is to guide clinicians in the selection of empiric antimicrobial therapy for infections. They should be used as a general guide to empiric antimicrobial therapy only until specific antimicrobial susceptibility test results on a given patient's isolate become available.

The 2012 New Milford Hospital Inpatient Antibiogram includes data from New Milford Hospital inpatients and New Milford Hospital Emergency Department patients.

Increasing bacterial antibiotic resistance is a current and worrisome problem throughout the world. Clinicians and local Infection Control personnel use antibiogram data to monitor resistance trends and design measures to control outbreaks of resistant species. Antibiograms help in developing quality improvement initiatives and forming infection control policies and procedures.

Additionally, the data can be used by the Pharmacy to identify the need for new antimicrobials for the formulary, determine when some antibiotics are no longer effective, and monitor prescribing patterns. This also encourages physicians to use less expensive but still effective agents and thus decreases pharmaceutical costs.

Data Presentation

- The culture susceptibility test reports on the bacterial isolates are stored in the primary data system (e.g. LIS or susceptibility testing instrument).
- The data is generated annually and then interpreted.
- The data reports only the percent susceptible and does not include percent intermediate in the statistics.
- The data is presented in separate subgroups in the report (e.g. gram positive vs. gram negative, inpatient vs. outpatient, and antibiotics tested on urine).
- A multidisciplinary approach, including review by infectious disease physicians, pharmacists and infection control and prevention personnel was done prior to publication.

The following is an example of cumulative susceptibility data for methicillin resistant *Staphylococcus aureus* (MRSA) and interpretation of the data:

Danbury Hospital Inpatient Gram Positive Cumulative Antibiogram 2012

	Staphylococcus MRSA
No. of isolates	160
	% Susceptible
Amox/clavulanate	0
Amp/sulbactam	0
Ampicillin	—
Azithromycin	—
Cefaclor	—
Cefazolin	0
Cefepime	—
Cefotaxime	—
Ceftriaxone	—
Cefuroxime	—
Chloramphenicol	—
Ciprofloxacin	15
Clindamycin	36
Daptomycin	100
Erythromycin	8
Gentamicin	96
Levofloxacin	16
Linezolid	100
Meropenem	—
Moxifloxacin	36
Nitrofurantoin(urine)	100
Oxacillin	0
Penicillin	0
Rifampin	99
Synercid	99
Tetracycline	94
Trimethoprim/sulfa	93
Vancomycin	100

- Total number of isolates of methicillin resistant *Staphylococcus aureus* in Danbury Hospital in year 2012 was 160. Only one isolate per patient was counted.
- 100% susceptibility was seen with daptomycin, linezolid and vancomycin.
- In urine specimens 100% susceptibility was seen with nitrofurantoin.
- (—) Indicates that these drugs are not tested or indicated for methicillin resistant *Staphylococcus aureus* infection.

Comparison Between 2011 and 2012 Antibiograms:

For the 2012 Outpatient Gram Positive Antibiogram, the following bacterial isolates showed more than a 15% decrease in susceptibility to the following antibiotics compared to 2011 isolates:

<u>Enterococcus faecium</u>	<u>% decrease in susceptibility</u>
Nitrofurantoin (urine)	21
Ciprofloxacin	20
<u>Staphylococcus, coag neg</u>	<u>% decrease in susceptibility</u>
Amox/clavulanate	17
Amp/sulbactam	17
Cefazolin	17
Ciprofloxacin	16
<u>Staphylococcus aureus</u>	<u>% decrease in susceptibility</u>
Clindamycin	16

For the 2012 Inpatient Gram Positive Antibigram, the following bacterial isolates showed more than a 15% decrease in susceptibility to the following antibiotics compared to 2011 isolates:

<u>Staphylococcus, MRSA</u>	<u>% decrease in susceptibility</u>
Clindamycin	20

For the 2012 Outpatient Gram Negative Antibigram, the following bacterial isolates showed more than a 15% decrease in susceptibility to the following antibiotics compared to 2011 isolates:

<u>Proteus vulgaris</u>	<u>% decrease in susceptibility</u>
Cefuroxime	27

<u>Enterobacter cloacae</u>	<u>% decrease in susceptibility</u>
Amp/sulbactam	21

For the 2012 Inpatient Gram Negative Antibigram, the following bacterial isolates showed more than a 15% decrease in susceptibility to the following antibiotics compared to 2011 isolates:

<u>Acinetobacter baumannii</u>	<u>% decrease in susceptibility</u>
Cefepime	23
Levofloxacin	20

Access to the Antibigram:

The 2012 cumulative antibiograms are available on Danbury Hospital's main intranet webpage <http://dhsintra/> in the Clinical Assistance section under Blood/Body Fluid Exposure, Isolation / IC Information. To obtain hard copies of the antibiograms, please call Client Service Representative, Sandra Smith at 203-739-7800.

Patient Service Center Phone & Address Pads are available for office use for distribution to their patients. Please contact, Sandi Smith at 203-739-7800 or E-mail: Sandra.smith@wchn.org