

About The LAC Multifacility Antibigram

Changes to the LAC Multifacility Antibigram (2022 data)

1. Presented in dashboard format only
2. Highlights of select antimicrobial agent/organism %S data are provided

Facility-Level versus Multifacility Antibigram

Facility-level antibigrams provide a summary of the percentage of isolates susceptible to a variety of antimicrobial agents tested within an individual healthcare facility. The facility antibigram is an important tool for the development of antimicrobial stewardship policies and protocols for empiric antimicrobial therapy of initial infections. Facility antibigrams may be limited by relatively few isolates tested and restricted geographic sampling.

A multifacility antibigram is obtained by aggregating data from multiple facilities. The multifacility antibigram addresses some of the limitations encountered in a facility-level antibigram and can provide insight into rates of susceptibility to various antimicrobial agents among large numbers of isolates encountered in a defined geographic area. The Los Angeles County Department of Public Health (LAC DPH) produces multifacility antibigram data annually from antibigrams submitted by acute care hospitals in the County.

A LAC DPH Health Officer Order issued in January 2017 mandated that all acute care hospitals in the county submit their antibigram data to DPH, beginning with data from 2016¹ The LAC multifacility antibigram provides an overview of the extent of antimicrobial resistance (AR) in LAC and may reveal significant changes in susceptibility that have occurred.

Approximately 80 acute care hospitals from LAC contribute data to generate the LAC multifacility antibigram.

Use of Multifacility Antibigram Data

LAC DPH

The LAC multifacility antibigram allows LAC DPH to better understand the extent of AR, and to better target interventions and prevention activities.

LAC Healthcare Facilities

Individual facilities may compare their antibigram to the LAC multifacility antibigram to identify any significant outliers that may suggest unusual resistance in their facility and/or technical issues that might have occurred during data compilation. The LAC multifacility antibigram may also be used to support empiric therapy protocols at a facility. The report may be particularly useful to smaller hospitals and skilled nursing facilities that do not encounter a wide variety of organisms.

1 <http://publichealth.lacounty.gov/acd/docs/CREorder.pdf>

2 Halstead DC, Gomez N, McCarter YS. Reality of Developing a Community-Wide Antibigram. *Journal of Clinical Microbiology*. 2004;42(1):1-6. doi:10.1128/JCM.42.1.1-6.2004.

3 Clinical and Laboratory Standards Institute (CLSI). 2022. *Analysis and Presentation of Cumulative Antimicrobial Susceptibility Test Data; M39-A5*. CLSI, Wayne, PA.

Methodology Notes

- Data included in the multi-facility Los Angeles County antibiogram were obtained through receipt of Health Officer Order-mandated facility-level antibiograms.
- Facilities are encouraged to generate antibiogram data as recommended in CLSI M39 for guiding empiric therapy of initial infections. This includes the use of data from the first isolate/patient /analysis period and should not include data from subsequent isolates which may be more resistant than the first isolate. Therefore, % S values are likely overestimated in some cases as they do not reflect results from all isolates encountered.
- Some multifacility organizations elected to combine data from multiple facilities/locations for their antibiogram submission.
- Facility-level antibiograms are compiled for the calendar year January 1 to December 31.
- Not all facilities reported results for all organism/drug combinations. Refer to the “# of hospitals reporting” value for each combination.
- Susceptibility was defined by local labs in all circumstances. Results are reported as presented by microbiology labs.

%S rates for each organism/antimicrobial agent combination were obtained by aggregating antibiogram data submitted annually by LAC acute care hospitals.

- The interquartile ranges (IQR) are presented for each percent susceptibility (%S) value. The IQR is the difference between the third and first quartiles of data. Because %S is calculated by dividing the sum of all isolates susceptible by the sum of all isolates tested, some values do not fall within the inter-quartile range (IQR).
- Organism/drug combinations reported by only one facility are not included.
- Susceptibility results were rounded down to 99% if between 99-100%.