Massachusetts Department of Public Health

**2018 Statewide Antibiogram Report**

Bureau of Infectious Disease and Laboratory Sciences

Massachusetts Department of Public Health

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In 2018, hospital antibiotic susceptibility data, in the form of antibiograms, were submitted representing the testing performed in 75 (100%) acute care hospital clinical microbiology laboratories. These data are included in this statewide report. Data are shown by species, with each page displaying the average percent susceptibility of bacterial isolates to relevant antibiotics (red dots, with standard deviation as red bars). These data are representative of the antibiotic susceptibility patterns of 226,541 bacterial isolates from cultures performed on inpatients and outpatients at the reporting acute care hospitals and practices they serve. These data do not represent the full extent of antibiotic resistance in Massachusetts.

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### *Acinetobacter baumannii* Percent Susceptibility

Overall State Mean (with 1 SD)



### *Enterobacter cloacae* Percent Susceptibility

Overall State Mean (with 1 SD)



### *Escherichia coli* Percent Susceptibility

Overall State Mean (with 1 SD)



### *Klebsiella aerogenes* Percent Susceptibility

Overall State Mean (with 1 SD)



### *Klebsiella oxytoca* Percent Susceptibility

Overall State Mean (with 1 SD)



### *Klebsiella pneumoniae* Percent Susceptibility

Overall State Mean (with 1 SD)



### *Pseudomonas aeruginosa* Percent Susceptibility

Overall State Mean (with 1 SD)



### *Serratia marcescens* Percent Susceptibility

Overall State Mean (with 1 SD)



### *Stenotrophomonas maltophilia* Percent Susceptibility

Overall State Mean (with 1 SD)



### *Staphylococcus aureus* Percent Susceptibility

Overall State Mean (with 1 SD)



### *Streptococcus pneumoniae* Percent Susceptibility

Overall State Mean (with 1 SD)



### 2018 Antibiogram Collection Form



### Hospitals that reported 2018 antibiogram data in accordance with regulations (105 CMR 300.000) by reporting deadline

|  |  |  |
| --- | --- | --- |
| Anna Jaques Hospital | Hallmark Health System - Lawrence Memorial Hospital of Medford | North Shore Medical Center - Union Hospital |
| Athol Memorial Hospital | Hallmark Health System - Melrose-Wakefield Hospital | Saint Vincent Hospital |
| Baystate Franklin Medical Center | Harrington Memorial Hospital | Shriners Hospital for Children - Boston |
| Baystate Medical Center | Heywood Hospital | Signature Healthcare - Brockton Hospital |
| Baystate Noble Hospital | Holyoke Medical Center | South Shore Hospital |
| Baystate Wing Hospital | Lahey Health - Addison Gilbert Hospital | Southcoast Health - Charlton Memorial Hospital |
| Berkshire Health Systems - Berkshire Medical Center | Lahey Health – Beverly Hospital | Southcoast Health - St. Luke's Hospital |
| Berkshire Health Systems - Fairview Hospital | Lahey Health - Lahey Hospital & Medical Center (Burlington) | Southcoast Health - Tobey Hospital |
| Beth Israel Deaconess Hospital - Milton | Lahey Health – Lahey Medical Center, Peabody | Steward Health Care - Carney Hospital |
| Beth Israel Deaconess Hospital - Needham | Lahey Health – Winchester Hospital | Steward Health Care - Good Samaritan Medical Center |
| Beth Israel Deaconess Hospital - Plymouth | Lawrence General Hospital | Steward Health Care - Holy Family Hospital (Methuen) |
| Beth Israel Deaconess Medical Center | Lowell General Hospital - Main Campus | Steward Health Care - Holy Family Hospital at Merrimack Valley (Haverhill) |
| Boston Children's Hospital | Lowell General Hospital - Saints Campus | Steward Health Care - Morton Hospital |
| Boston Medical Center | Martha's Vineyard Hospital | Steward Health Care - Nashoba Valley Medical Center |
| Boston Medical Center - East Newton campus | Massachusetts Eye and Ear Infirmary | Steward Health Care - Norwood Hospital |
| Brigham and Women’s Faulkner Hospital | Massachusetts General Hospital | Steward Health Care - Saint Anne's Hospital |
| Brigham and Women's Hospital | Mercy Medical Center | Steward Health Care - St. Elizabeth's Medical Center |
| Cambridge Health Alliance - Cambridge Hospital | MetroWest Medical Center - Framingham Union Hospital | Sturdy Memorial Hospital |
| Cambridge Health Alliance - Everett Hospital | MetroWest Medical Center - Leonard Morse Hospital | The Veteran’s Administration Boston Healthcare System |
| Cambridge Health Alliance - Somerville Hospital | Milford Regional Medical Center | Tufts Medical Center |
| Cape Cod Healthcare - Cape Cod Hospital | Mount Auburn Hospital | UMass Memorial Health Care – Clinton Hospital |
| Cape Cod Healthcare - Falmouth Hospital | Nantucket Cottage Hospital | UMass Memorial Health Care – HealthAlliance Hospital Leominster |
| Cooley Dickinson Hospital | New England Baptist Hospital | UMass Memorial Health Care – Marlborough Hospital |
| Dana-Farber Cancer Institute | Newton-Wellesley Hospital | UMass Memorial Health Care – UMass Memorial Campus |
| Emerson Hospital | North Shore Medical Center - Salem Hospital | UMass Memorial Health Care – UMass University Campus |

### Antibiotic Susceptibility Testing Guidelines

Antibiotic susceptibility testing is conducted in microbiology laboratories. Microbiologists utilize standardized guidelines, such as those distributed by the Clinical and Laboratory Standards Institute (CLSI)\* to determine whether a bacterial isolate is susceptible, intermediate, or resistant to an antibiotic. These guidelines are updated periodically. The extent to which clinical microbiology laboratories across Massachusetts are able to implement the most recently updated guidelines within a particular time period varies.

\* Clinical and Laboratory Standards Institute (CLSI). *Performance Standards for Antimicrobial Susceptibility Testing*, 29th Edition. CLSI Supplement M100. Published July 2019.