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TO: Infection Preventionists, Hospital Epidemiologists, and Laboratory Directors

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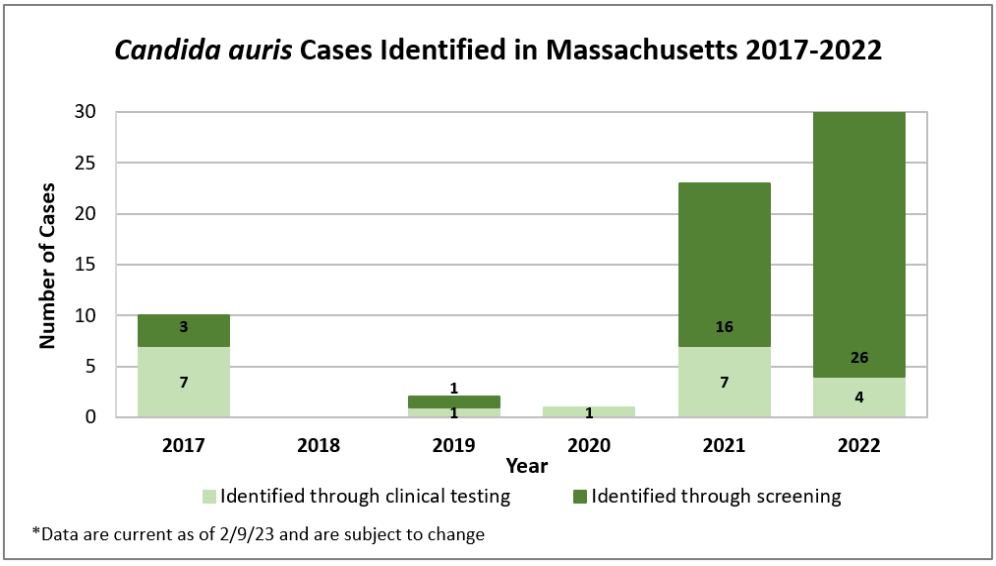
RE: *Candida auris* and Carbapenemase-producing Organism Activity in Massachusetts

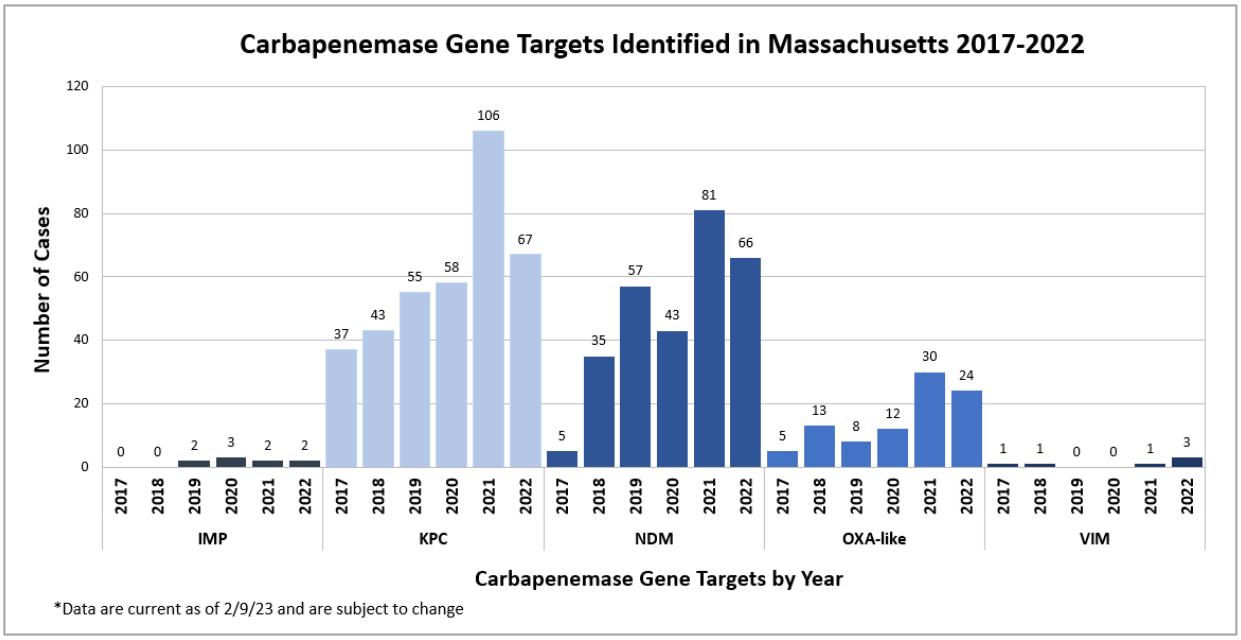
DATE: April 6, 2023

The Massachusetts Department of Public Health (MDPH) continues to work with the CDC and healthcare facilities to monitor *Candida auris* and carbapenemase-producing organism (CPO) activity. While the identification of individuals colonized or infected with *C. auris* in Massachusetts has continued to increase, there was a slight decrease in the identification of individuals infected or colonized with a CPO from 2021 to 2022. The most frequently identified CPOs continue to be *Klebsiella pneumoniae* carbapenemase (KPC)-producing organisms, *K. pneumoniae* and *E. cloacae*, as well as New Delhi metallo-beta-lactamase (NDM)-producing organisms, *E. coli* and *K. pneumoniae*.

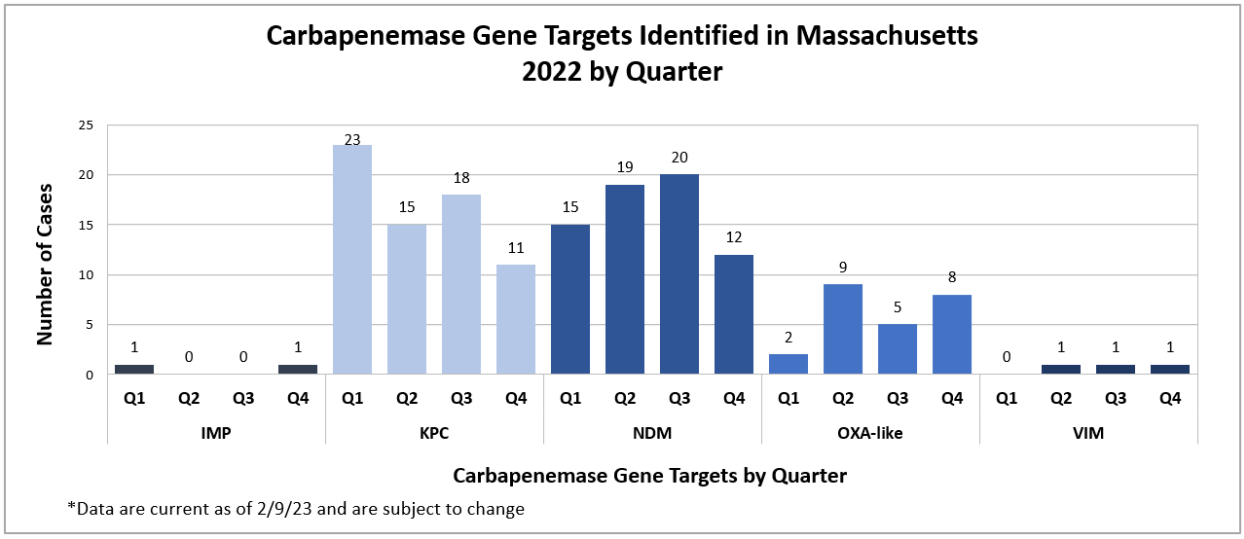
Similar to recent trends seen elsewhere in the U.S., there was an increase in identification of individuals infected or colonized with *Candida auris* in Massachusetts in 2022. Of the total *C. auris* cases identified in 2022, 87% were identified through the screening process, with transmission occurring in two acute care facilities and two long term care facilities.



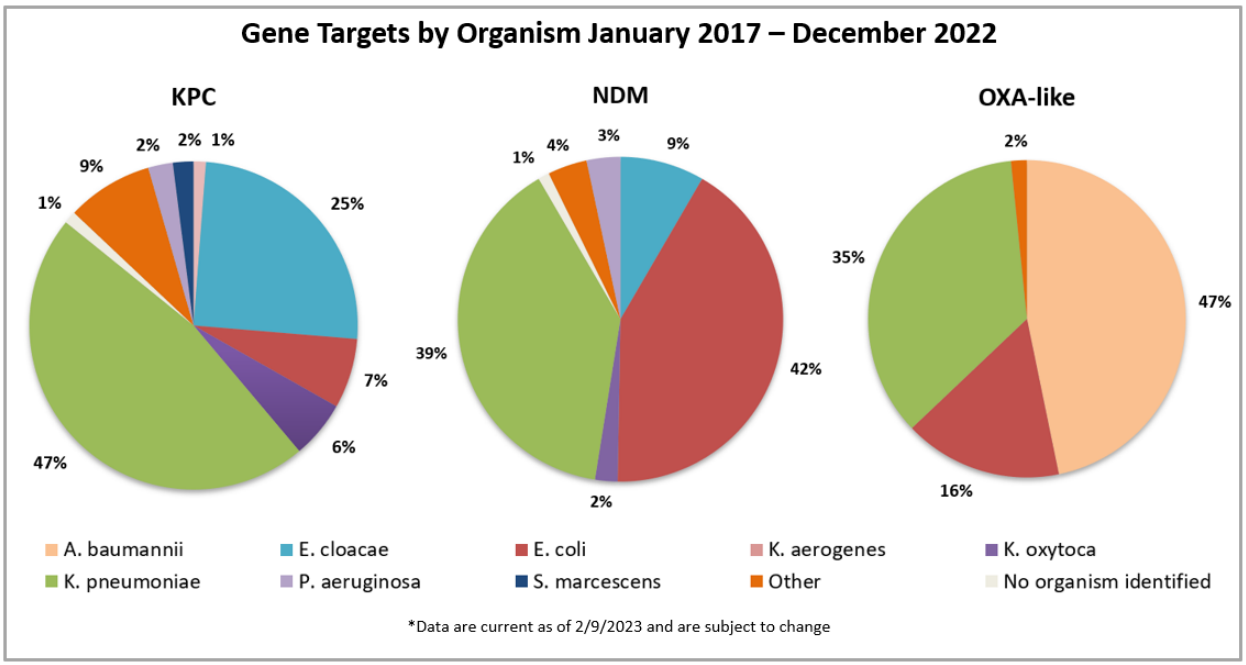
In 2022, CPO transmission was identified in five different healthcare facilities including acute care (4) and long-term care (1). As part of containment efforts which included contact screening, KPC-, NDM-, and OXA-colonized individuals were identified. Of the individuals identified as newly colonized or infected with a CPO in 2022, 16.9% reported healthcare obtained outside of the U.S. in the twelve months prior to diagnosis. Of the total CPOs identified in 2022, 18% were among colonized individuals identified through the screening process.



Recent expansion of requested isolate types to include carbapenem-resistant *Acinetobacter baumannii* (CRAB) to the Massachusetts State Public Health Laboratory (MA SPHL) has resulted in an increase in detection of OXA-like carbapenemase gene targets, several of which appear intrinsic to CRAB.



Of the total cases identified in 2022, four were identified as having multiple carbapenemase-producing genes in a single organism. The NDM gene target was identified in all four cases, in combination with either the OXA-48-like gene target (75%) or the VIM gene target (25%). Of all the CPOs identified from January 2017 – December 2022, 3.6% had more than one carbapenemase-producing gene detected. Of these, 48.1% reported having healthcare outside of the United States in the previous 12 months.



Newly admitted patients with healthcare exposure outside of the U.S. in the last 12 months, should be placed on contact precautions, and admission screening for both *C. auris* and CPOs should be conducted.

Given the increase in multi-drug resistant organisms identified in Massachusetts in recent years, MDPH continues to emphasize the importance of maintaining a strong Infection Prevention and Control (IPC) and Antibiotic Stewardship Program (ASP). IPC resources for all facility types can be found here: MDPH Infection Prevention and Control Resource Hub. ASP resources specific to long-term care facilities can be found here: Long-term Care Facility Antibiotic Stewardship - Infection Prevention and Control Resource Hub and links to ASP resources for acute care facilities can be found here: Antibiotic Stewardship | Mass.gov.

MDPH would like to emphasize the importance of performing contact screening when indicated. Epidemiology staff will facilitate no-cost PCR testing through our Antibiotic Resistance Laboratory Network partner, the Wadsworth Laboratory in New York State. Additionally, expanded antimicrobial susceptibility testing (ExAST) for hard-to-treat infections is also offered at no cost, through the Wadsworth Laboratory. ExAST tests for resistance to aztreonam/avibactam in Metallo-β-Lactamase producing Enterobacterales. The MA SPHL also performs whole-genome sequencing (WGS) of CPOs to assist with the investigation of outbreaks and suspected facility-based transmission. We encourage you to download the MDPH MDRO toolkit which can be found here: https://www.mass.gov/doc/mdph-mdro-toolkit/download