

# Drug resistant bacteria common for nursing home residents with dementia

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A new study found one in five nursing home residents with advanced dementia harbor strains of drug-resistant bacteria and more than 10 percent of the drug-resistant bacteria are resistant to four or more antibiotic classes. The research was published online today in *Infection Control & Hospital Epidemiology*, the journal of the Society for Healthcare Epidemiology of America.

"Nursing home [residents](#) with [advanced dementia](#) usually have an increased need for healthcare worker assistance, as well as frequent exposure to antibiotics. This combination may be leading to a subset of vulnerable long-term care residents at high risk of both acquiring and spreading these dangerous bugs," said Erika D'Agata, M.D., an infectious disease physician at Rhode Island Hospital and lead author of the study. "Frequent hospitalization among these residents also provides a constant influx of [drug-resistant bacteria](#) into the hospital setting, further fostering the spread throughout the healthcare delivery system."

Researchers from Rhode Island Hospital followed 152 nursing [home residents](#) with advanced dementia in 22 facilities in the greater Boston area for a year. The prospective cohort study found nearly 20 percent of the residents (28 residents) were colonized with more than one multi-drug resistant gram-negative bacteria, such as carbapenem-resistant Enterobacteriaceae (CRE) and *Klebsiella pneumoniae* carbapenemase (KPC).

Genetically related bacteria were detected in 18 of the 22 [nursing homes](#)

(82 percent). Possible routes include overlapping hospital stays among residents with advanced dementia from different nursing homes and healthcare professionals cross-covering multiple nursing homes.

Drug-resistant *Escherichia coli* (*E. coli*) and *Proteus mirabilis* (*P. mirabilis*) were the most common bacteria found among the study subjects. Nearly 90 percent of the bacteria found were resistant to three types of antibiotics, most notably ciprofloxacin, gentamicin and extended-spectrum penicillins.

"Ongoing efforts to curb the acquisition and spread of this bacteria among nursing homes residents is crucial since this is an issue that goes beyond just one realm of care," said D'Agata. "Healthcare institutions must work together to help curb the transmission of these emerging, dangerous pathogens."

**More information:** Erika D'Agata, Daniel Habtemariam, Susan Mitchell. "Multidrug-Resistant Gram-Negative Bacteria: Inter- and Intradissemiation Among Nursing Homes of Residents with Advanced Dementia." *Infection Control & Hospital Epidemiology*. Web. (April 29, 2015).

Provided by Society for Healthcare Epidemiology of America

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