

Characterizing Antibiotic Prescribing for Nursing Home Residents with SARS-CoV-2 Infection, April 2020-November 2021

Katryna A. Gouin, MPH¹, Ronald Clouse, PhD², Cameron Mandley², Olakunle Lawal, MS², Sarah H. Yi, PhD³, Qunna Li, MSPH, M.Ms, MB³, Tegan Boehmer, PhD, MPH⁴, Lauri A. Hicks, DO³, Sarah Kabbani, MD, MSc³

1. Chenega Corporation, contractor on assignment to the National Center for Emerging and Zoonotic Infectious Diseases, U.S. Centers for Disease Control and Prevention, Atlanta, GA, U.S.A, 2. Booz Allen Hamilton Inc., McLean, VA, 3. Division of Healthcare Quality Promotion, National Center for Emerging and Zoonotic Infectious Diseases, U.S. Centers for Disease Control and Prevention, Atlanta, GA, U.S.A, 4. CDC COVID-19 Response, U.S. Centers for Disease Control and Prevention, Atlanta, GA, U.S.A

Background

- Antibiotic prescribing has been observed among patients receiving care for COVID-19 in inpatient and outpatient settings.^{1,2}
- Prescribing in nursing homes (NH) has been described during the first year of the pandemic.³
 - However, less is known about antibiotic prescribing for NH residents diagnosed with COVID-19.³

Objective: Characterize antibiotic prescribing in residents with COVID-19 diagnosis in US NHs.

Methods

Study Design: Retrospective cohort study.

Data Source: PointClickCare (PCC) Lighthouse data containing longitudinal NH electronic health records.

Inclusion: Included 4,891 facilities reporting ≥ 1 medication order/month from April 2020-November 2021.

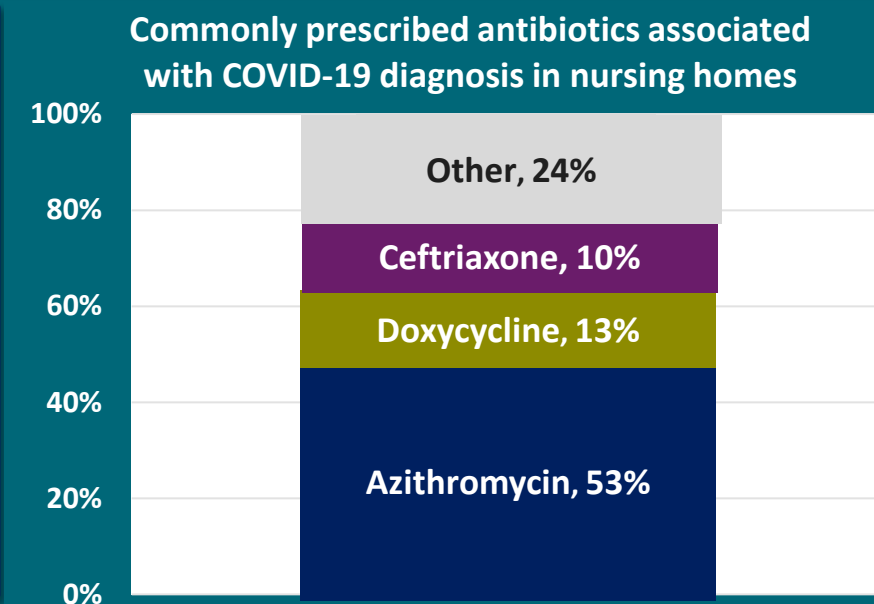
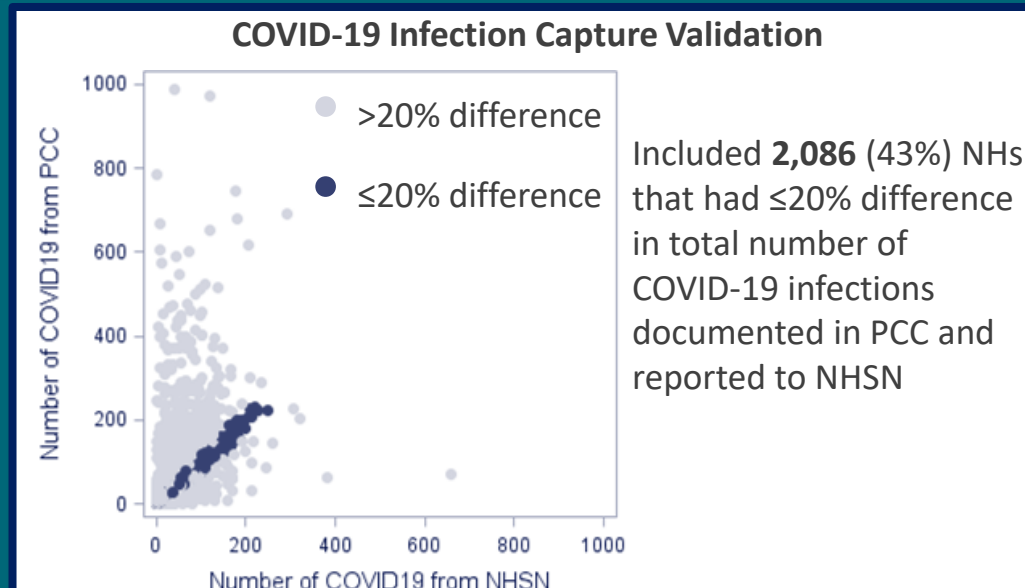
COVID-19 Infection Capture Validation: Compared the total number of COVID-19 diagnoses documented in PCC to those reported to the National Healthcare Safety Network (NHSN).

COVID-19 definition: Identified the first onset of infection using ICD-10-CM diagnosis code U07.1.

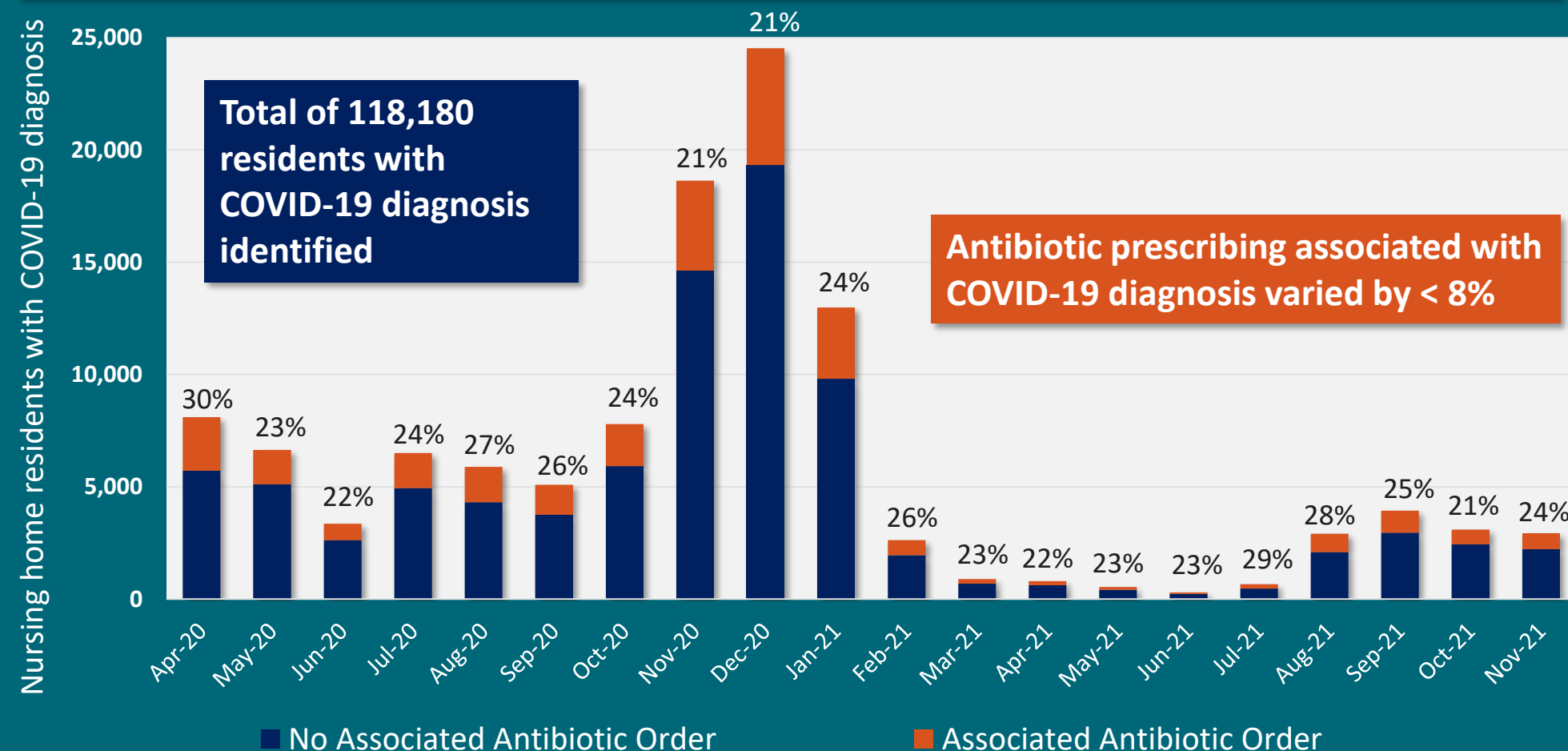
Antibiotic Orders Associated with COVID-19 Diagnosis: Antibiotics³ were determined to be associated with a COVID-19 diagnosis if ordered 3 days before or ≤ 7 days after diagnosis.

Analysis: Calculated the proportion of residents with COVID-19 associated antibiotic order by month.

Results



From April 2020-November 2021, **24%** of nursing home residents with COVID-19 received an antibiotic.



Limitations

- Indication is not available in the medication order data, thus could not account for bacterial infections in residents with COVID-19 diagnosis.
- Severity of illness and subsequent hospitalization not assessed.

Conclusions

Antibiotics commonly prescribed for respiratory infections were linked to nearly a quarter of NH residents with a COVID-19 diagnosis.

- Antibiotic prescribing for viral infections in NHs should be avoided to reduce potential harm associated with unnecessary antibiotic use.
- Identifying facility-level characteristics associated with variability in antibiotic prescribing is a next step to inform antibiotic stewardship activities.

References

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- Gouin KA et al., *Clin Infect Dis*. 2022;74(1):74-82.



Contact Info

Katryna A. Gouin, MPH
oex5@cdc.gov

