

Point Prevalence and Epidemiology of Antimicrobial Use in U.S. Nursing Homes, 2017

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BACKGROUND

- Increasing recognition of nursing home (NH) role in transmission of antimicrobial resistant (AR) organisms
- AR control requires evidence-based stewardship interventions, but limited data exist on NH use of antimicrobials¹
- Point prevalence surveys (PPS) can efficiently generate essential data on antimicrobial use (AU)
 - Drug type/class, rationale, indication
- CDC's Emerging Infections Program (EIP)² conducted PPS to measure AU prevalence and determine AU epidemiology in U.S. NH residents

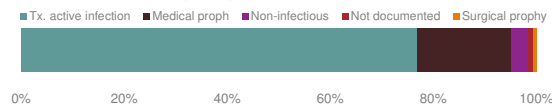
METHODS

- From April-Oct 2017, NH in CA, CO, CT, GA, MD, MN, NM, NY, OR, & TN were randomly selected to participate in 1-day antimicrobial use PPS
- EIP staff contacted NH for enrollment, participation was voluntary
 - 161 NH enrolled
 - 137 declined or dropped out
- EIP surveillance staff identified & reviewed
 - NH residents receiving systemic antimicrobial drugs (AD)
 - Documents, medical records to collect AD type, route, rationale, infection site(s)
- AD categorized using WHO Anatomical³ Therapeutic Chemical (ATC) classification system
- Data analyzed in SAS 9.4

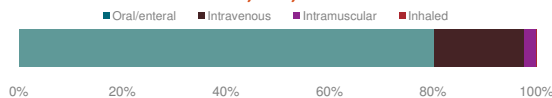
1. Prevalence systemic antimicrobial use in NH residents

# NH	# NH residents	# AD received	# residents ≥1 AD	AU prevalence (95% CI), 100 residents
161	15,295	1,452	1,261	8.2% (7.8-8.7)

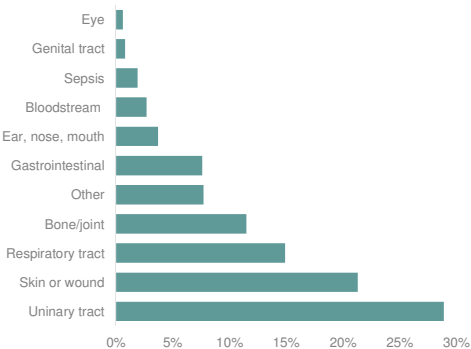
2. Rationale for use, n=1,452 AD



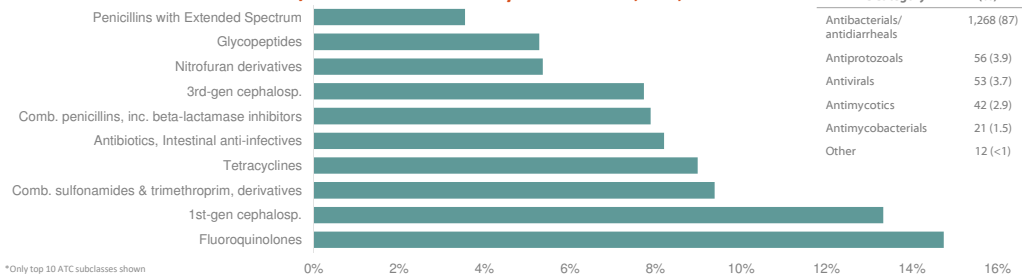
3. Route of administration, n=1,452 AD



4. Treatment site(s), n=1,452 AD



5. Most common* antibacterials/antidiarrheals used by ATC subclass, n=1,268 AD



CONCLUSIONS

- New insight on AU in U.S. NH gained from this large-scale PPS, on given day
 - 1 in 12 NH residents receiving ≥1 AD
 - 2 x AU prevalence in European LTCF⁴
 - ~30% of all AD administered for UTI
- Use of AD in classes recommended for stewardship intervention were common
 - Fluoroquinolones – ranked 1
 - Combination penicillins – ranked 5
 - 3rd gen cephalosporins – ranked 8
 - Glycopeptides – ranked 9
- Findings highlight areas for evaluation to identify unnecessary use in NH
- PPS data are important to inform and track the impact of NH stewardship interventions

CONTACT INFO & REFERENCES

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1: Antibiotic Prescribing and Use in Hospitals and Long-Term care
www.cdc.gov/antibiotic-use/healthcare/index.html

2: CDC Emerging Infection Program (EIP) Healthcare-Associated Infections-Community Interface (HAICI) www.cdc.gov/hai/eip/index.html

3: WHO Anatomical Therapeutic Chemical (ATC) classification system
www.who.int/classifications/atcddd/en/

4: ECDC. Point prevalence survey of HAI and AU in European LTCF. April-May 2013. doi: 10.2900/24172



National Center for Emerging and Zoonotic Infectious Diseases
 Division of Healthcare Quality Promotion

