(77.3%) isolates with reported susceptibility data (Fig. 1). Of these, data were analyzed for 187 (87.0%) (Fig. 2). All isolates tested for carbapenems were susceptible. Fluoroquinolone non-susceptibility was most prevalent among *E. coli* (42.9%) and *P. mirabilis* (55.9%). Among *Klebsiella* spp, the highest percentages of non-susceptibility were observed for extended-spectrum cephalosporins and folate pathway inhibitors (25.0% each). Glycopeptide non-susceptibility was 10.0% for *Enterococcus* spp. The percentage of isolates classified as MDR ranged from 10.1% for *E. coli* to 14.7% for *P. mirabilis*. **Conclusions:** Substantial levels of non-susceptibility were observed for nursing home residents' urine isolates, with 10% to 56% reported as non-susceptible to the antibiotics assessed. Non-susceptibility was highest for fluoroquinolones, an antibiotic class commonly used in nursing homes, and ≥ 10% of selected isolates were MDR. Our findings reinforce the importance of nursing homes using susceptibility data from laboratory service providers to guide antibiotic prescribing and to monitor levels of resistance.

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Poster Presentation

Antibiotic Use at the End-of-Life in Patients with Advanced Dementia: A Systematic Literature Review

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Background: Improving the use of antibiotics across the care continuum will be necessary as we strive to protect our patients from antimicrobial resistance. One potential target for antimicrobial stewardship is during end-of-life care of patients with advanced dementia. We aimed to perform a systematic literature review measuring the burden of antibiotic use during end-of-life care in patients with dementia. **Methods:** We searched PubMed, CINAHL, and Embase through July 2019 for studies with the following inclusion criteria in the initial analysis: (1) end-of-life patients (ie, dementia, cancer, organ failure, frailty or multi-morbidity); (2) antibiotic use in the end-of-life care; with the final analysis restricted to (3) patients with advanced dementia. Only randomized controlled trials (RCTs) and cohort studies were included. **Results:** Of the 93 full-text articles, 17 studies (18.3%) met the selection criteria for further analysis. Most of the included studies were retrospective (n = 8) or prospective (n = 8) cohort studies. These studies in combination included 2,501 patients with advanced dementia. Also, 5 studies (698 patients, [27.9%]) were restricted to patients with Alzheimer's disease. In 5 studies in which data were available, fewer than one-quarter of patients (19.9%, 498) with advanced dementia were referred to palliative care. In 12 studies >50% of patients received antibiotics during the end-of-life period. Also, 15 studies did not report the duration of antimicrobial therapy. Only 2 studies reported the antimicrobial consumption in days of therapy per 1,000 resident days. Only 6 studies studied whether the use of antibiotics was associated with beneficial outcomes (survival or comfort), and none of them evaluated potential adverse effects associated with antibiotic use. **Conclusions:** There are significant gaps in the literature surrounding antimicrobial use at the end of life in patients with advanced dementia. Future studies are needed to evaluate the benefits and harms of using antibiotics for patients during end-of-life care in this patient population.

Table 1.

Subgroups	No. of Studies	No. of Advanced Dementia Patients (%)
All studies	17	2,501
Alzheimer's disease	5	698 (27.9)
Any type of dementia	12	1,803 (72.1)
RCTs	1	99 (3.9)
Prospective cohort study	8	937 (37.5)
Retrospective cohort study	8	1,465 (58.6)
Palliative care	5	498 (19.9)
Not reported the duration of antimicrobial therapy	15	…
Not reported the outcome measured after antibiotic use (survival or comfort)	11	1,437 (57.5)

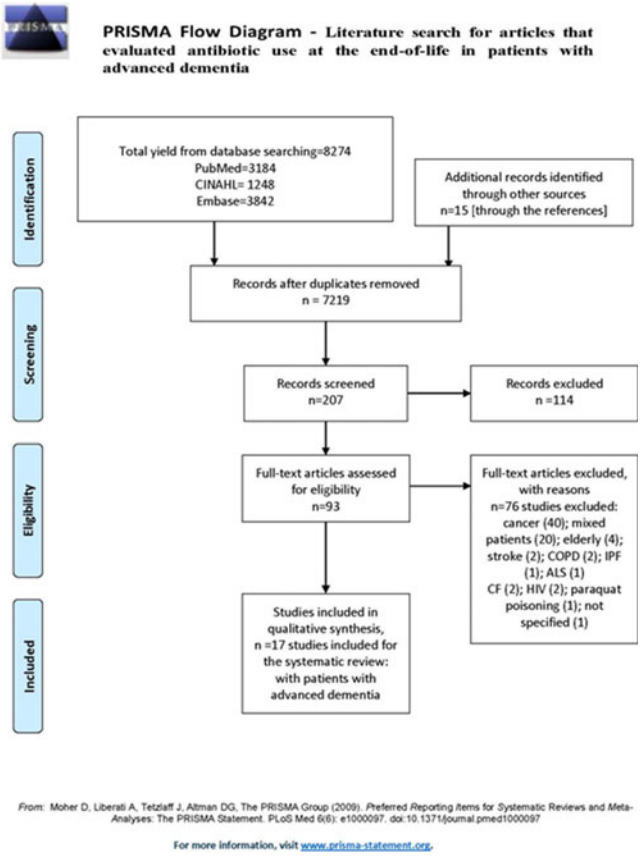

Fig. 1.

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Antimicrobial Nonsusceptibility Among Invasive MRSA USA300 Strains by Healthcare Exposure, Three Sites, 2005–2016

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