

**Table 1.**

On Survey Day	2016			2017			2018		
	13,398 Residents			12,307 Residents			20,030 Residents		
	287 Facilities			292 Facilities			407 Facilities		
	No.	%	95% CI	No.	%	95% CI	No.	%	95% CI
Residents with signs and/or symptoms of at least 1 suspected infection	417	3.1	2.8–3.4	349	2.8	2.5–3.1	581	2.9	2.7–3.1
Residents prescribed at least 1 antimicrobial	1,321	9.9	9.4–10.4	1,087	8.8	8.3–9.3	1,988	9.9	9.5–10.4

topical application. In addition, 19.0% of antimicrobials were prescribed for PRN (as needed) administration; most (94.4%) of these were for topical antimicrobials, most commonly clotrimazole (65.4%). **Conclusions:** The AC NAPS has identified infections and consistent patterns of antimicrobial use that may adversely affect the safety of care for Australian aged-care residents. Interventions are now being developed, implemented, and evaluated to address identified 'priority areas for improvement.'

**Funding:** None

**Disclosures:** None

Doi:10.1017/ice.2020.597

#### Presentation Type:

Poster Presentation

#### A National Intervention to Reduce Undesirable Urinary Tract Events in Internal Medicine Wards

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**Background:** Catheter-associated urinary tract infection (CAUTI) is considered a preventable healthcare-associated infection. Many local and national interventions using multimodal prevention measures have targeted CAUTI incidence as the primary outcome. Other undesirable events related to urinary catheters and infections such as overuse of urine culturing and antimicrobial prescribing for asymptomatic bacteriuria, are not captured by CAUTI surveillance, and may not be the targets of such interventions. The aim of this study was to assess the impact of expanded national surveillance targeting various aspects of urinary tract infections, culturing and treatment practices, and catheter use in internal medicine wards. **Methods:** The Israeli National Center for Infection Control (NCIC) issued CAUTI prevention guidelines and initiated in 2016 a urinary tract event surveillance system that targets the incidence of CAUTI, urinary catheter utilization ratio, and the proportion of urine cultures sent and patients treated in the absence of symptoms. The surveillance is conducted for 1 month 3 times per year. Hospitals are required to report all positive urine

**Table 1.**

Table: Summary of results

	2016	2017	2018	2019	p value for comparison of 2016 to 2019
CAUTI rate per 1000 catheter-days	4.7	3.6	3.5	2.9	<0.001
Hospital-acquired SUTI (non-CAUTI) per 1000 patient-days	1.0	0.9	0.8	1.0	0.79
Catheter utilization ratio	0.25	0.25	0.24	0.23	<0.001
% positive cultures sent for patients without symptoms	44%	44%	43%	42%	0.56
% ASB treated with antibiotics	31%	25%	20%	20%	0.02
Positive cultures sent for asymptomatic patients per 1000 patient-days	1.5	1.2	1.1	1.1	<0.01

ASB asymptomatic bacteriuria; CAUTI- catheter-associated urinary tract infection; SUTI- symptomatic urinary tract infection

cultures (>100,000 CFU) collected in internal medicine wards, along with the following data: admission date, symptoms of infection, dates of urinary catheter use, and antibiotic treatment. These data enable the NCIC to validate hospital classifications of each event. In addition, during each surveillance month, hospitals conduct point-prevalence surveys of compliance with CAUTI prevention measures. An electronic data collection form with built-in algorithms supports the local teams during the surveillance process. **Results:** Between 2016 and 2019, a total of 3,028 positive urine cultures not present on admission were reported by internal medicine wards in 30 hospitals. A significant decrease was observed in the incidence of CAUTI (from 4.7 to 2.9;  $P < .001$ ) and in the proportion of asymptomatic bacteriuria treated with antibiotics (from 31% to 20%;  $P = .02$ ) (Table 1). The catheter utilization ratio decreased from 0.25 to 0.23 ( $P < .001$ ). The rate of cultures sent from asymptomatic patients decreased from 1.5 to 1.1 ( $P < .01$ ). Point-prevalence surveys in internal medicine wards detected a significant increase in the use of closed urinary drainage systems (from 79% to 97% in 2018,  $P < .001$ ) and documentation of a daily nurse assessment of the need for a catheter (from 74% to 81%,  $P < .001$ ). **Conclusions:** National surveillance of undesirable urinary tract events resulted in a significant reduction in CAUTI, antibiotic treatment for ASB, and the rate of cultures sent from asymptomatic patients. A small decrease was observed in catheter utilization ratio. CAUTI surveillance programs should include other undesirable urinary tract events.

**Funding:** None

**Disclosures:** None

Doi:10.1017/ice.2020.598

#### Presentation Type:

Poster Presentation

#### A Nosocomial Cluster of *Roseomonas mucosa* Bacteremia Possibly Linked to Contaminated Hospital Environment

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**Background:** The genus *Roseomonas*, containing pink-pigmented glucose nonfermentative bacteria, has been associated with various primary and nosocomial human infections; however, to our knowledge, its nosocomial transmission has never been reported in the literature. Here, we report a nosocomial cluster of *Roseomonas mucosa* bacteremia. **Methods:** Two cases of *R. mucosa* bacteremia in 2018 are described. Clinical and epidemiological investigations were undertaken. Environmental surfaces prone to water contamination in the patient wards were sampled and cultured. The sampled surfaces included sinks, faucets, toilets, sewage, showerheads, refrigerators, exhaust vents, and washing machines. The 2 clinical isolates and

all environmental isolates that showed growth of pink colonies were identified using matrix-assisted laser desorption/ionization time of flight mass spectrometry and 16S rRNA gene sequencing. Pulse-field gel electrophoresis (PFGE) was performed and fingerprinting software was used to analyze the DNA restriction patterns and determine their similarity. **Results:** Two patients who developed *R. mucosa* bacteremia had received care from the same treatment team. The patients were on different wards but had overlapping hospital stays. In addition to the treatment team, no other shared exposure was identified. Moreover, 126 environmental surfaces were sampled, of which 7 samples grew pink colonies. The 9 isolates from the patients and the environmental samples were examined using 16S rRNA gene sequencing. Overall, 7 isolates, including isolates from both patients, were identified as *R. mucosa*, and the other 2 isolates were identified as *Roseomonas gilardii* subsp. *rosea* (Fig. 1). With 80% similarity as a cutoff, PFGE analysis revealed that the *R. mucosa* isolates from 2 patients' blood cultures and 3 environmental isolates (a washing

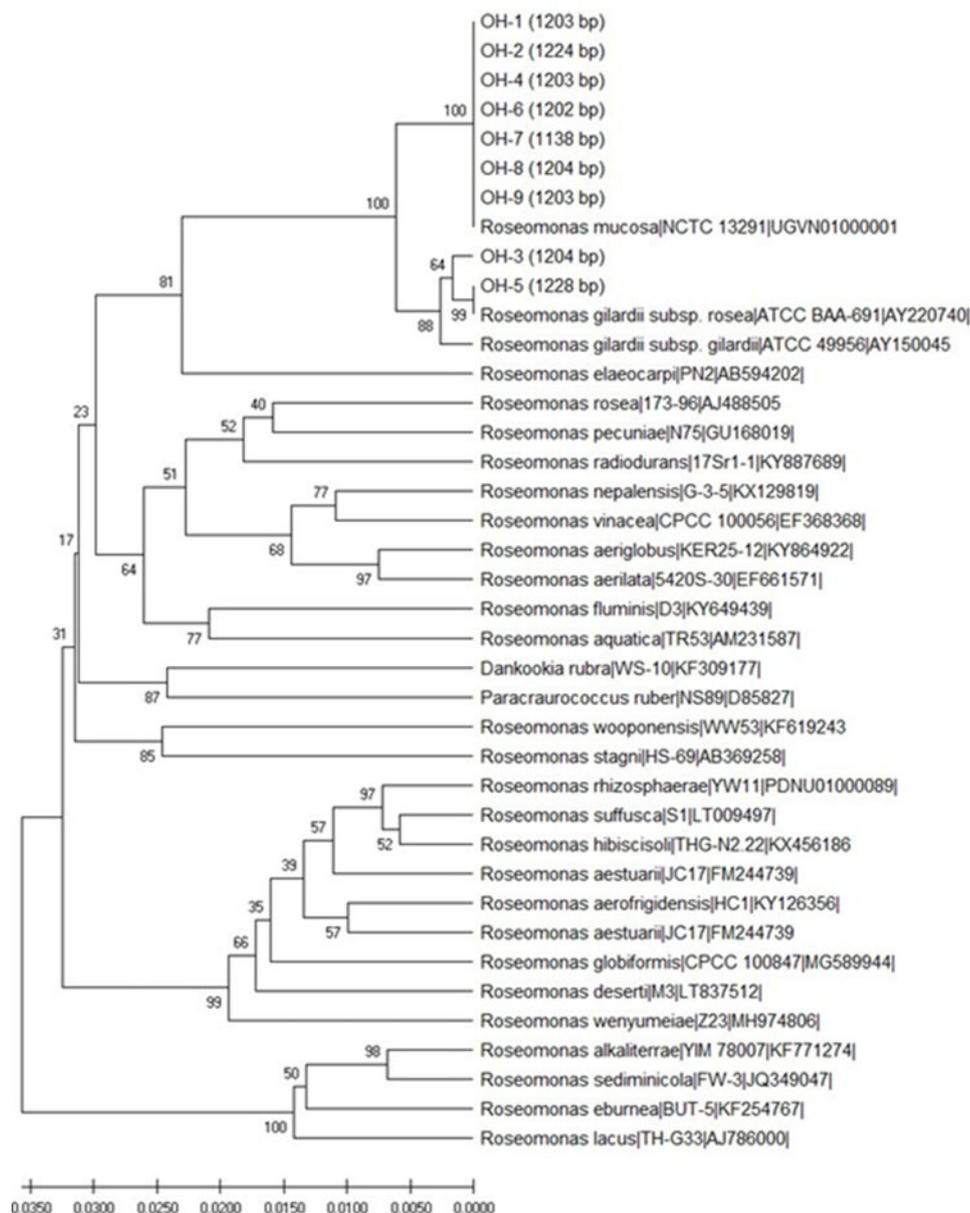


Fig. 1.

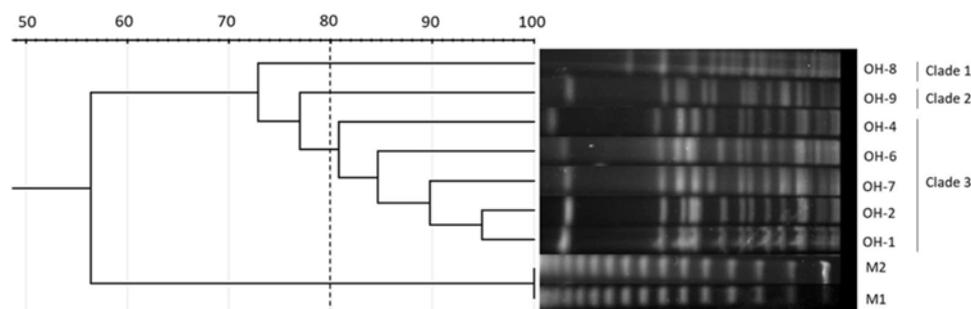


Fig. 2.

machine in the ward, a sink in the shared washroom, and a sink in the patient room) belonged to the same clone (Fig. 2). **Conclusions:** The hospital water environment was contaminated with *R. mucosa*, and the same clone caused bacteremia in 2 separate patients, suggesting nosocomial transmission of *R. mucosa* possibly linked to contaminated water, environment, and/or patient care.

**Funding:** None

**Disclosures:** None

Doi:10.1017/ice.2020.599

#### Presentation Type:

Poster Presentation

#### A Novel On-Site Volunteer Community Infection Prevention Team Prevented Outbreaks at a Hurricane Harvey Mega-Shelter

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**Background:** In the setting of global warming, natural disasters are increasing in pace and scope. Although natural disasters themselves do not cause outbreaks, the breakdowns in sanitary infrastructure and the displacement of populations, often to crowded shelters, have caused outbreaks. On August 26, 2017, category 4 hurricane Harvey made landfall near Corpus Christi, Texas, causing catastrophic flooding and displacing >30,000 residents from the Southern Gulf Coast region. Dallas accepted >3,800 evacuees at the Kay Bailey Hutchison Convention Center mega-shelter for 23 days, where a medical clinic was erected in the convention center parking garage. The medical clinic uniquely included a dedicated infection prevention team composed of local volunteer infection preventionists, healthcare epidemiologists, infectious diseases providers, and health department personnel. **Methods:** Evacuees were housed at the Dallas mega-shelter from August 29 through September 20. The infection prevention team maintained a presence of 3–4 members during clinical operations in shifts. The team conducted an initial needs assessment upon opening of the shelter medical clinic, facilitated acquisition of adequate numbers of hand sanitizer stations, sinks with running water, portable hand-washing stations, portable toilets and showers, and cleaning products. The infection prevention team coordinated and oversaw environmental cleaning services (EVS) carried out by local hospital EVS staff. Protocols for cleaning, disinfection, communicable disease testing, isolation, and treatment were created. In addition, education and training materials for the

implementation of these protocols were distributed to volunteer staff. The infection preventionists created and provided oversight of the designated isolation units for respiratory, gastrointestinal and dermatologic infections of outbreak potential. Infection prevention rounding tools were developed and executed daily in the clinic, at the on-site daycare center, dining area, and the general shelter dormitory. Vaccination for influenza was formalized under a protocol and administered at the clinic and via mobile vaccination teams in the chronic illness section of the dormitory. **Results:** In total, 3,829 residents were housed at the mega-shelter for 23 days. Moreover, 1,560 patients were seen in 2,654 clinic visits at the shelter medical clinic. In total, 48 (19%) clinic visits were for respiratory symptoms, 228 (9%) were for dermatologic problems, and 215 (8%) were for gastrointestinal symptoms. Also, 32 patients were referred to the isolation unit within the clinic. Overall, 98 influenza vaccines were administered. There was 1 confirmed case of influenza and 1 confirmed case of norovirus. **Conclusions:** No known transmission of communicable diseases occurred in this long-term, natural disaster-related mega-shelter, likely attributed to having a comprehensive infection prevention team of on-site volunteers available throughout the shelter operation. This model should be considered in future large-scale shelter settings to prevent disease transmission.

**Disclosures:** None

**Funding:** None

Doi:10.1017/ice.2020.600

#### Presentation Type:

Poster Presentation

#### A Pilot Study of Valley Fever Tweets

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**Background:** Twitter is used by officials to distribute public health messages and by the public to post information about ongoing afflictions. Because tweets originate from geographically and socially diverse sources, scholars have used this social media data to analyze the spread of diseases like flu [Alessio Signorini 2011], asthma [Philip Harber 2019] and mental health disorders [Chandler McClellan, 2017]. To our knowledge, no Twitter analysis has been performed for Valley fever. Valley fever is a fungal infection caused by the *Coccidioides* organism, mostly found in Arizona and California. **Objective:** We analyzed tweets concerning Valley fever to evaluate content, location, and timing. **Methods:** We collected tweets using the Twitter search application programming interface using the terms "Valley fever," "valleyfever," "cocci"