### Background

Public health authorities often use Infection Control Assessment and Response (ICAR) visits during *Candida auris* (C. auris) outbreak investigation to identify facility-level infection prevention and control (IPC) practice gaps and make recommendations to address those gaps. As an adjunct to ICAR visit, point prevalence surveys (PPS) provide an objective measure to determine if IPC recommendations are implemented. Because they require significant public health resources to perform, we evaluated the impact of ICAR visits on *C. auris* colonization rates.

### Methods

PPS were conducted at seven long-term acute-care hospitals (LTACH) in Los Angeles County with *C. auris* outbreaks in July 2020 to May 2021. Skin swabs collected at PPS were tested for *C. auris* colonization by PCR technique. Pre-ICAR PPS results were compared with the average of two serial post-ICAR PPS results using repeated measures ANOVA test. Linear regression was used to estimate associations between ICAR visits and decrease in colonization rates. There was a moderate negative correlation ($R^2=0.26, \beta=-0.33$) between environmental disinfection adherence and the magnitude of decrease in the colonization rates across all LTACHs (Figure 2).

### Results

90. Impact of Infection Control Assessment and Response (ICAR) Visit on *Candida auris* Colonization Rates at Seven Long Term Acute Care Hospitals (LTACH) in Los Angeles County

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**Conclusion.** While an increase in AE pathogen+ rates and decrease in commensal rates could indicate improved culture ordering and collection practices, significant seasonal, regional, and facility-level variability calls for further investigation.

**Disclosures.** John A. Jernigan, MD, MS. Nothing to disclose

### Background

Most studies on hospital antimicrobial stewardship (AMS) status and practices are conducted in the west, and there is a lack of such data from Asian countries. The objective of this survey was to determine existing AMS practices and gaps, and challenges in implementing AMS programs in secondary and tertiary acute-care hospitals in 10 Asian countries.

### Methods

A 70-item questionnaire was disseminated to hospitals fulfilling inclusion criteria and responses were collected from 10 April 2020 to 9 April 2021. The survey, specific to the Asian hospital setting, enquired about hospital leadership support for AMS; AMS team membership and training; AMS interventions; AMS monitoring and reporting; hospital infrastructure; and education. These were subdivided into core and supplementary components, adapted from the Transatlantic Taskforce on Antimicrobial Resistance set of core and supplementary indicators for hospital AMS programs, and the US Centers for Disease Control and Prevention checklist for core elements of hospital AMS programs.

### Results

91. Gaps and Opportunities in Antimicrobial Stewardship Programs in Asia: A Survey of 10 Countries

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**Session:** O-19. Infection Control and Stewardship Challenges in Diverse Settings

### Conclusion

ICAR visits were found to be significantly associated with a decrease in the average PPS positive rate on serial PPS. Parts of the ICAR tool that assessed environmental disinfection at the facility seemed most correlated with decrease in *C. auris* colonization rate. Streamlining the ICAR process to focus on the most impactful parts of ICAR tool may be a more efficient intervention to control *C. auris* outbreaks.

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**Figure 1**

**Figure 2**

**Table 1**

| Pathogen Positive Rate (%) | Odds Rate and 95% CI | Adjusted Odds Ratios and 95% Confidence Intervals of Blood Culture Episode Positive (Non-Commensal) and Commensal Rates and Associated Characteristics |
|----------------------------|----------------------|-----------------------------------------------------------------------------------------------------------------|
| 0.5                       | 1                    | 2                                                                                                               |

![Graph showing Hospital Level Variation in Blood Culture Episode Pathogen Positive and Commensal Rates](image-url)
differences in terms of performance. The hospitals generally did well in terms of the AMS team (i.e., comprising at least a physician leader responsible for AMS activities, a pharmacist, and infection control and microbiology personnel), and access to a timely and reliable microbiology service, with mean positive response rates (PRR) of ≥ 80% for these indicators (Figure 1). In the core components of AMS program interventions, and AMS monitoring and reporting, the lower mean PRR (> 60%) revealed that Asia has wider gaps in these areas versus gold standards. Although many hospitals had formal hospital leadership statements to support AMS (mean PPR 85.6%), this was not always matched by allocated financial support for AMS activities (mean PPR 57.1%).

Figure 1

Conclusion. For all core components of an AMS program, most Asian hospitals participating in this survey fell short of international gold standards. Inter-country differences in gaps highlight that country-specific solutions are needed to improve current standards in AMS.

Disclosures. Tetsuya Matsumoto, MD; PhD, MSD (Speaker’s Bureau) Pfizer (Speaker’s Bureau)

92. Characteristics and Outcomes of Deep Brain Stimulation Device Related Infections: Experience from Quaternary Centers
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Session: O-20. Infection Risks from Invasive Procedures

Background. Increasing use of deep brain stimulation (DBS) over the past 20 years is paralleled by a rise in DBS infections. There is a paucity of data on the diagnosis, management, and outcomes in such infections. We describe our center's experience with DBS infections.

Methods. Adults (>18 years) diagnosed with DBS associated infection between January 1, 2000 and May 1, 2020 were retrospectively reviewed. Data on patient demographics, clinical presentation, microbiology, and management was collected.

Results. Seventy cases were identified (Table 1). The mean age at diagnosis was 58.9 ± 16.5 years. The bulk were free of comorbidities. Parkinson’s disease and essential tremors were the most common indications for DBS placement. The median time from implantation to infection was 4 months [IQR 1, 24]. The neurotransmitter and extension wires were the most frequently infected parts. A microbiological diagnosis was made in 89% of cases, 47% of which were polymicrobial. The most commonly identified organisms were Staphylococcus aureus, Cutibacterium acnes, and coagulase-negative staphylococci. For patients with deep infection, 71% had complete device extraction, 20% partial extraction, and 9% device retention; clinical cure at 3 months occurred in 97%, 64% and 100%, respectively (Figure 1). On the other hand, 93% of patients with superficial infection had device retention; cure at 3 months was seen in 64% (Figure 2). Suppressive oral antibiotics were rarely used, 45% of patients with partial extraction and 26% with device retention. DBS was reimplanted in 71% of patients after complete extraction and led to reinfection in 30% at 1 year follow up. Median time to reimplantation was 2.7 months. All patients who failed at 3 months in the partial extraction and device retention cohorts subsequently underwent complete device removal leading to clinical cure sustained at 1 year follow up.

Table 1: Clinical Presentation and Treatment of 70 Patients with 104 Device Infections

| Device extraction | Complete device extraction | Partial device extraction |
|-------------------|---------------------------|--------------------------|
| Cure              | 5                         | 39                       | 11                       |
| Failure           | 5                         | 38                       | 7                        |
| Loss to follow up | 0                         | 1                        | 3                        |
| Device removal    | 0                         | -                        | -                        |
| Re-implantation   | -                         | 27                       | 4                        |

Figure 1: Management and outcomes of Deep device infections (n=58)

- Subsequently underwent complete device removal
- All had failure after re-implantation

Figure 2: Outlines the management and outcomes of 55 patients with deep DBS associated device infection. Patients with device exposure or evidence of prominent material surrounding device, seen by imaging or by incision and drainage, were considered to have deep infection. Cure was defined as clinical resolution of signs and symptoms without evidence for recurrence from date of infection onset until the specified time of follow up. Failure was defined as persistence of signs and symptoms of infection or recurrence of symptoms after transient resolution from date of infection onset until the specified time of follow up.