How many consults/total patients until we feel burnt out?

**Disclosures.** All Authors: No reported Disclosures.

**1950. Intentional Interprofessional Experiential Education in an HIV/Infectious Diseases Clinic**

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**Session:** 226. Advances/in/ID/Med/Ed

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**Background.** Experiential education opportunities, such as interprofessional practice, are currently limited in HIV care. This intentional interprofessional experiential education (IPEE) offering aimed to improve healthcare student attitudes, perceptions, and skills regarding interprofessional practice and HIV care.

**Methods.** An interprofessional team of faculty and clinicians designed a 2-week rotation, with each offering consisting of 6–9 students from 4 professions (medicine, nursing, pharmacy, social work). This intentional IPEE was delivered at a single ambulatory care infectious diseases clinic in Columbia, SC. It included time in clinic with providers from varying professions, didactic lectures, a peer health advocate session, and a team capstone project (i.e., simulated, then actual student team visit with an HIV-infected patient, plus note documentation/team presentation). Twelve offerings occurred from October 2016 to February 2019. anonymous pre- and post-IPEE surveys were provided to each student at baseline and directly after to assess attitudes, perceptions, and skills regarding interprofessional practice and HIV care. Wilcoxon signed-rank tests were used to compare pre- vs. post-survey items. Multivariable logistic regression was used to evaluate predictors for interest in HIV as a specialty.

**Results.** Of 87 students, 84 (97%) completed both surveys (21 medicine, 25 nursing, 19 pharmacy, 19 social work). Attitudes toward healthcare teams significantly improved in 7/11 items (all P < 0.019), teamwork perceptions improved in 5/8 items (P ≤ 0.017), and self-perceived team skills improved in all 6 items (P < 0.001). Students rated provider time in clinic as most valuable (mean 4.6, median 5 on 5-point Likert scale). Following the IPEE, the proportion of students interested in HIV care increased from 53% to 67% (P = 0.07). After adjusting for program year and profession, interest in HIV at baseline was a significant predictor of interest in HIV post-IPEE (aOR 8.2, 95% CI 2.6–25.5).

**Conclusion.** Short-term, intentional IPEE can positively impact student attitudes, perceptions, and skills regarding interprofessional practice and HIV care. Clinical educators should incorporate intentional HIV IPEE in healthcare curricula.

**Disclosures.** All Authors: No reported Disclosures.
1952. Bacteriophage Treatment Improves Survival of Mice Infected with Carbapenem-Resistant Klebsiella pneumoniae.

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Session: 227. Novel Antimicrobials and Approaches Against MDR Organisms
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Background. Bacteriophage (phage) therapy is being considered as a treatment option for patients with multi-drug-resistant bacterial infections. However, there is a dearth of controlled clinical data to support therapeutic phage efficacy. As a first step toward addressing this deficiency, we tested the ability of two well-characterized phages, alone and in combination, to kill carbapenem-resistant Klebsiella pneumoniae (ST258) in blood and rescue mice from lethal ST258 infection.

Methods. Wild-type C57BL/6J mice were infected with a lethal inoculum of ST258 by intra-peritoneal (IP) injection followed 1 hour later by IP administration of lytic phage P1, P2, or P1+P2 at a multiplicity of infection (MOI) estimated at 1. Survival of each group of mice was tracked for 10 days. In separate experiments, mice were sacrificed at 1 hour, 24 hours, and 48 hours post-phage treatment. Mouse blood and tissues were collected at each time point for enumeration of bacteria and phage, screening for phage resistance, and histopathology.

Results. ST258 survive in mouse blood in vitro was significantly less than 1 hour after 1 hour of incubation with P1 or P1+P2 (MOI 1) compared with the control group (no phage). Consistent with the in vitro data, none of the mice (0/15) in the control group (no phage) survived to 10 days post-infection, whereas 12/15, 14/15, and 15/15 mice survived in the P2, P1, and P1+P2-treated groups, respectively (P < 0.0001).

Conclusion. Promising systemic administration of lytic bacteriophages rescued mice from lethal ST258 infection. These data support the potential of phage therapy to effectively treat infections caused by ST258. It will be important to assess whether, for other phage-bacteria combinations, in vitro lysis in blood correlates with in vivo treatment efficacy and therefore may have predictive utility.

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1953. VE303, a Rationally Designed Bacterial Consortium for Prevention of Recurrent Clostridioides difficile (C. Difficile) infection (rCDI), Stably Restores the Gut Microbiota After Vancomycin (vanco)-Induced Dysbiosis in Adult Healthy Volunteers (HV)

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Background. Gut microbiota alterations and resulting changes in metabolites involved in colonization resistance and host responses, including bile acids (BA) and short-chain fatty acids (SCFA), are hallmarks of C. difficile infection. Reduction in rCDI was shown with fecal microbiota transplants (FMT), but FMT has limitations for prevention of rCDI consisting of a rationally defined bacterial consortium maintaining the gut microbiota.

Methods. Healthy Volunteers (HV) (n=23) received oral vancomycin (500 mg QID for 5 days) followed by oral vancomycin (125 mg QID for 5 days) for 21 days. Each HV received one of four oral capsule formulations (VE303 capsules at escalating single then multiple doses (total dose range 1.6 x 10^9 CFU). VE303-related AEs, mostly gastrointestinal, all Grade 1 and transient, were observed in 35% of HV. Colonization with VE303 strains was abundant, durable (detected at 24 weeks), and dose-dependent. VE303 rapidly expanded 10-100-fold and each strain was detectable within 2 days after dosing. VE303 enhanced subjects’ microbiota and metabolic recovery after vanco treatment. When compared with the vanco-only cohort (N = 5), VE303 led to earlier and more complete recovery of beneficial taxa (eg, Bacteroidetes, Firmicutes), reduction in inflammatory taxa (eg, Proteobacteria) (Figure 1.), and recovery of the secondary BA and SCFA pools.

Conclusion. VE303, a rationally designed microbial consortium, was safe, well tolerated, and efficiently restored microbiome composition after antibiotic-induced dysbiosis in a dose-dependent manner. VE303 was associated with early recovery of key PD markers of response, including microbiota composition, bile acid, and SCFA pools. A Phase 2 study of VE303 for prevention of rCDI is underway (NCT03784434).

1954. In vivo Efficacy of Delayed Therapy with the Novel Inositol Acyltransferase Inhibitor Fosmanogepix (APX001) in a Murine Model of Candida auris Invasive Candidiasis

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Background. Candida auris is an emerging pathogen associated with antifungal resistance and high mortality. The novel antifungal manogepix (APX001A) prevents glycosylphosphatidylinositol-anchored protein maturation through inhibition of the inositol acyltransferase Gwt1 enzyme, and has demonstrated in vitro and in vivo activity against numerous pathogenic fungi, including C. auris. We evaluated the efficacy of the prodrug fosmanogepix (APX001) following delayed initiation of therapy in a murine model of C. auris invasive candidiasis.

Methods. Neutropenic outbred mice (10 per cohort) were inoculated intravenously with C. auris (minimum inhibitory concentrations [MICs]: manogepix 0.03 mg/mL, fluconazole 64 mg/mL, caspofungin 0.25 mg/mL). Treatment with placebo, fosmanogepix 104 mg/kg or 130 mg/kg by intraperitoneal injection [IP] (three times daily, or 260 mg/ kg IP twice daily), fluconazole (20 mg/kg/day orally), or caspofungin (10 mg/kg/day IP) began 1 day later and continued for 7 days. Mice were followed post therapy until day 21 to assess survival. Kidneys and brains were collected on day 8, on the days that mice succumbed to infection, or on day 21. Fungal burden was assessed by colony-forming units (CFU).

Results. Survival was significantly improved at each dose level of fosmanogepix (median >21 days; 90–100%) and high dose caspofungin (>21 days; 90%) compared with placebo (5 days; 10%; P < 0.0001). On day 8 post-inoculation, kidney and brain fungal burdens were significantly reduced in mice treated with fosmanogepix 260 mg/kg compared with placebo and in kidneys of mice treated with caspofungin (Table 1). In the survival arm, fungal burden in kidneys and brains was significantly lower at each dose level of fosmanogepix and with high dose caspofungin compared with placebo. In contrast, no improvements in survival or reductions in fungal burden were observed with fluconazole.

Conclusion. Fosmanogepix demonstrated potent in vivo activity against invasive candidiasis caused by C. auris even with delayed initiation of treatment. Improvements in both survival and reductions in fungal burden within the kidneys and brains were observed. These data demonstrate the potential utility of fosmanogepix against C. auris infections.

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