Antimicrobial resistance (AMR) to carbapenems in Enterobacteriaceae such as Klebsiella pneumoniae (KPN) is a major global public health concern. Infections caused by these pathogens are associated with high morbidity and mortality and perpetuated by limited safe alternative treatment options. This study aims to describe the antimicrobial susceptibility patterns amongst KPN to the carbapenems Latin America.

Methods. Surveillance laboratory data from 2000 to 2014 were obtained through the ReAVRA network from 19 countries in Latin America. Longitudinal trends of mean percentage non-susceptibility for the region were conducted and evaluated with a significance level of P < 0.05.

Results. A total of 209,972 and 181,128 KPN isolates were reported from 2000 to 2014 for antibiotic susceptibility to imipenem and meropenem, respectively. From 2000 to 2014 an increasing trend was observed in the reported % KPN NS to imipenem (P < 0.0001) from 0% in 2000 to 12.3% in 2014 with an AAPI of 49.5% [95% CI: 34%–44%] (Figure 2). For both antibiotics, the last 5 years of the timeframe (2010 to 2014) showed the highest rate of increase in NS. NS to carbapenems varied significantly between reporting countries, with the highest % KPN NS to imipenem and meropenem reported by Brazil, Guatemala, Nicaragua, and Peru.

Conclusion. The increase in KPN NS to carbapenems observed in Latin America threatens effective treatment of infections caused by this pathogen. The extremely limited treatment options could lead to further increases in morbidity and mortality. Strengthening health systems and core country capacity to identify and deal with these emerging high-risk pathogens and resistance mechanisms, through surveillance is vital to inform public health actions, control measures, mitigate outbreaks and support further development of Public health actions against AMR at country and regional level.
Disclosures. All authors: No reported disclosures.

1657. Notes From the Field: A Survey of Mobile Device Usage Among Individuals in KwaZulu-Natal, South Africa
Breanna R. Campbell, MD; Koeun Choi, BS; Megan Gray, MD; Chelsea Canan, PhD, MPH; Anthony Moll, MBChB; Rebecca Dillingham, MD, MPH; Sheila Shenot, MD, MPH; 1 University of Virginia, Charlottesville, Virginia; 2 Stony Brook School of Medicine, New York City, New York; 3 Church of Scotland Hospital, Tugela Ferry, KwaZulu-Natal, South Africa; 4 Yale School of Medicine, New Haven, Connecticut
Session: 164. Stepping off your Doorstep - Global Health
Friday, October 4, 2019: 12:15 PM

Background. mHealth (mobile health) is a promising tool to deliver healthcare interventions to underserved populations. Across low- and middle-income countries (LMIC), the prevalence of smartphones has risen to 42%. Effective mHealth deployment in LMIC requires an understanding of how LMIC populations use mobile technology. We characterized the use of mobile devices in rural KwaZulu-Natal, South Africa to tailor mHealth interventions for people living with HIV and at risk for acquiring HIV.

Methods. We surveyed participants in community settings and offered free HIV counseling and testing. Participants self-reported their gender, age, relationship status, living distance from preferred clinic, receipt of monthly grant, condomless sex frequency, and circumcision status (if male). Outcomes included cell phone and smartphone ownership, private data access, health information seeking, and willingness to receive healthcare messages. We performed multivariable logistic regression to assess the relationship between demographic factors and outcomes.

Results. Among 788 individuals surveyed, the median age was 28 (IQR 22–40) years, 75% were male, and 86% owned personal cell phones, of which 43% were smartphones. The majority (59%) reported having condomless sex and most (59%) males reported being circumcised. Although only 10% used the phone to seek health information, 93% of cell phone owners were willing to receive healthcare messages. Being young, female, and in a relationship were associated with cell phone ownership. Smartphone owners were more likely to be young and female—less likely to receive a monthly grant, and less likely to receive a mobile healthcare message. Those reporting condomless sex or lack of circumcision were significantly less likely to have private data access.

Conclusion. Most participants were willing to receive healthcare messages via phone, indicating that mHealth interventions may be feasible in rural KwaZulu-Natal. Smartphone-based mHealth interventions specifically geared to prevent or support the care of HIV in young women in KwaZulu-Natal may be feasible. mHealth interventions encouraging condom use and male circumcision should consider the use of non-smartphone SMS and be attuned to mobile data limitations.

Disclosures. All authors: No reported disclosures.

1658. Lipase and Factor V (but not Viral Load) Are Prognostic Factors for the Evolution of Severe Yellow Fever Cases
Luciana Vilas Beos Casado, MD; Ana Paula Sales, MiSc; Fernanda Malta, PhD; Gabriel Fialkovitz, MD; Yeh-Li Ho, MD, PhD; Michele Giomes-Gouveia, MD; Luiz Marcelo Malbouisson, MD, PhD; Anna S. Levin, MD, PhD; Raymond Azevedo, MD, PhD; Flair Carrilho, MD, PhD; Ana Catharina Nasti, MD, PhD; João Renato Rebello Pinho, MD, PhD; 1 Instituto de Medicina Tropical, Faculdade de Medicina da Universidade de São Paulo, São Paulo, Brazil; 2 Hospital das Clinicas da Faculdade de Medicina da Universidade de São Paulo, São Paulo, Brazil
Session: 164. Stepping off your Doorstep - Global Health
Friday, October 4, 2019: 12:15 PM

Background. Yellow Fever (YF) is still a major threat in developing countries and a cause of outbreaks in Africa and Latin America, despite a highly efficacious vaccine. In 2018, the Brazilian state of São Paulo witnessed a new YF outbreak in areas where the virus has not been detected before. In our study, we included all patients who were admitted to Intensive Care Units of Hospital das Clinicas, University of São Paulo Medical School during the 2018 YF outbreak. The aim is to describe the clinical and laboratory characteristics of severe cases of YF, evaluate viral parameters such as viral load and genetic among these cases, and determine markers associated with fatal outcome.

Methods. Acute severe YF cases (n = 62) were admitted to the Intensive Care Unit of a reference hospital and submitted to routine laboratorial evaluation on admission. YFV-RNA was detected in serum and urine by RT–qPCR and then sequenced. Unit of a reference hospital and submitted to routine laboratorial evaluation on admission.

Results. In the univariate analysis the following variables were associated with outcome: ALT, AST, AST/ALT ratio, total bilirubin, CKD-EPI, ammonia, lipase, factor V, INR, lactate, and bicarbonate. Logistic regression model showed two independent variables associated with death: lipase (OR 1.018, 95% CI 1.007 to 1.030, P = 0.002) and factor V (OR -0.955, 95% CI -0.929 to 0.982, P = 0.001). The estimated lipase and factor V cut-off values that maximized sensitivity and specificity for death prediction were 147.5 U/L (AUC = 0.879), and 56.5% (AUC = 0.913). Patients who were discharged from the hospital continued to be followed-up in the outpatient clinic. Seven patients had their urine and blood screened weekly for YFV until the test was negative. After the onset of symptoms, viremia and viruria were present for a maximum period of 28 days and 47 days, respectively.

Conclusion. YF acute severe cases show a generalized involvement of different organs (liver, spleen, heart, kidneys, intestines, and pancreas), and different parameters were related to outcome. Factor V and lipase are independent variables associated with death, reinforcing the importance of hemorrhagic events due to fulminant liver failure and pointing to pancreatitis as a relevant event in the outcome of the disease.