

**Conclusion:** higher MICs were demonstrated against most of the antibiotics, including C/T and CZA. However, CL retained efficacy at low MICs against most of the isolates tested.

<https://doi.org/10.1016/j.jiph.2018.10.023>

### Positive Perspectives Partners of people living with HIV (PLHIV): findings from the Positive Perspectives Survey



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**Background and Purpose:** While the psychosocial effect of treatment and support available for people living with HIV (PLHIV) have been evaluated, gaps remain in understanding their influence on partners. We conducted an international survey of partners of PLHIV exploring the support offered to them and their partner's perception of their HIV management.

**Methods:** Qualitative, in-depth interviews were performed with PLHIV and their partners to identify key hypotheses. A steering group developed survey questions fielded online from November 2016 to April 2017 in 9 countries across North America, Europe, and Australia. A broad cross-section of PLHIV and partners of PLHIV was obtained using a mixed-sampling/recruitment approach.

**Results:** 250 partners of PLHIV completed the survey from Europe (55%), North America (43%), and Australia (2%). 91% were male, 26% were aged  $\geq 50$  years, 30% were HIV+, and 77% lived with their partner. Results differed between HIV+ and HIV- partners: Emotional support available to partners of PLHIV was rated "quite" or "very" good in 78% of HIV+ partners and 53% in HIV- partners. Partners of PLHIV stated they provided emotional support (87%) and encouraged their partners to raise concerns with their HIV healthcare provider (HCP) (80%), yet >50% of partners wanted more involvement in these areas; 20% felt they sometimes lacked the information needed for this role. Of those whose partners were on antiretroviral therapy (ART) (98%), 63% helped their partner prepare for an appointment with their HIV HCP and raised concerns about side effects (82%), strategies to reduce the long-term impact of ART (62%), and the possibility of switching regimen (59%).

**Conclusions:** Most partners were involved in treatment discussions and were concerned about side effects and the long-term impact of ART. Partners represent an important support system for PLHIV. Dedicated resources to inform partners could enable more involvement in their support of PLHIV.

<https://doi.org/10.1016/j.jiph.2018.10.024>

### Molecular detection of Metallo- $\beta$ -lactamase acquired genes, blaIMP, and blaVIM in Carbapenems susceptible and resistant Gram-negative clinical isolates using multiplex PCR



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**Keywords:** Metallo  $\beta$ -lactamase; VIM; IMP; Carbapenem; PCR; Gram-negative bacteria; Khartoum-Sudan

**Background and objectives:** Emergence of Metallo- $\beta$ -lactamase (MBL) is of great concern in the clinical settings worldwide. The death rate associated with MBL producers is ranging from 18% to 67%.

The main purpose of this study is to determine the prevalence of metallo- $\beta$  lactamase genes among different Gram-negative clinical isolates.

**Methodology:** This was a prospective descriptive cross-sectional study, which carried out to detect genes responsible for MBL enzymes such as bla-VIM and bla-IMP by conventional and multiplex PCR, among 200 Gram-negative clinical isolates (*Citrobacter* spp, *E.coli*, *Enterobacter* spp, *K.pneumoniae*, *P.aeruginosa*, *P.mirabilis*, *P.valgaris*) at Khartoum hospitals during 2015 to 2016. Ethical approval was obtained from Al Neelain University Ethical Review Board.

**Results:** The general prevalence of MBL genes by multiplex PCR assays among 200 Gram-negative clinical isolates was 69(34.5%). 27(27%) and 42 (42%) were positive for both blaIMP and blaV-IMMBLs genes among carbapenems sensitive and resistant isolates respectively. There was statistically significant association between the antimicrobial susceptibility and the presence of MBLs genes, (p.value = 0.026).

Verona integron metallo beta lactamase (VIM) was the most frequent genes (53.6%) out of 69 MBLs detected genes, while it was (36.2%) for imipenemase (IMP).

Statistically significant association was found between antimicrobials susceptibility and blaIMP and blaVIMMBLs genes (p.value = 0.021).

**Conclusion:** In this study, the presence of blaIMP and blaV-IMMBLs genes was one of the major mechanisms mediating carbapenems resistance, while their presence among carbapenems sensitive isolates suggesting the occurrence of silent genes.

<https://doi.org/10.1016/j.jiph.2018.10.025>

### Occupational Study of the Prevalence of Intestinal Parasitic Infections amongst Labors in Al Ain and Abu Dhabi



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**Background:** United Arab Emirates is a multicultural country and approximately 65% of the population are expatriates from low- and middle-income developing countries that have a high burden of intestinal parasitic infections (IPI).

**Aim:** The primary aim is to estimate the prevalence of, and factors associated with IPI in an occupational sample of expatriates in Al-Ain and Abu Dhabi.

**Methodology:** This study utilized an observational analytical cross-sectional study and recruited a sample of expatriate employees. Participants completed a questionnaire; and provided a stool sample. Fecal specimens were analyzed for a range of IPI species using microscopy, Ziehl–Neelsen stain, and polymerase chain reaction (PCR) techniques.

**Results:** 25% of participants harbored intestinal parasites; 15% with protozoa, while 10% had helminths infection according to microscopy diagnosis. Higher incidents of protozoa and helminths infection were identified using PCR.

**Conclusion:** IPI can be found in more than quarter of the survey population and this conclusion shed a light on the importance of this study in understanding the pattern of IPI infection and transmission in the UAE.

<https://doi.org/10.1016/j.jiph.2018.10.026>

### Prevalence and associated risk factors of intestinal parasites (Helminths and Protozoa) amongst Labors in Al Ain and Abu Dhabi



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<https://doi.org/10.1016/j.jiph.2018.10.027>

### Susceptibility Pattern among Carbapenem-Resistant Enterobacteriaceae isolated from Food Handlers working in Kuwait



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**Keywords:** Enterobacteriaceae; carbapenem resistance; community; colonization

**Background:** Multidrug-resistant Enterobacteriaceae is a common cause of healthcare- and community-associated infections. Resistance to the carbapenems has attracted worldwide notoriety. Carbapenem-resistant Enterobacteriaceae (CRE) are particularly problematic given the frequency with which they cause infections, high mortality and the potential for wide spread transmission of resistant strains via mobile genetic elements.

**Purpose:** To determine CRE prevalence and their susceptibility pattern among food handlers.

**Methodology:** Rectal swabs were collected from 405 Food handlers. Enterobacteriaceae isolates were identified and tested against 21 antimicrobial agents using E-test. Interpretation was done according to the CLSI (2017).

**Results:** Microbiological cultures yielded 679 Enterobacteriaceae species that were isolated, 36 (5.3%) of which were CRE. A breakdown of the CRE isolates were: *Escherichia coli* 15 (41.7%), *Klebsiella pneumoniae* 8 (22.2%) and *Enterobacter cloacae* 3 (8.3%) and others 10 (27.8%). Resistance to Ampicillin and Cefotaxime was 89% and 36%, respectively. Around 60% of the CRE were resistant to Tetracycline, Cephalothin, Amoxicillin/clavulanic acid. However, resistance to Colistin was 39%, these isolates included *E. coli*, 7 (46.7%); *K. pneumoniae*, 1 (12.5%); *E. cloacae*, 1 (33.3%); and 5 (35.7%) other species. All isolates were susceptible to Aminoglycosides and Piperacillin/tazobactam except *Serratia marcescens* (n=1) and *Klebsiella pneumoniae* (n=1), respectively. Resistance to Ciprofloxacin and Tigecycline was 5.6% and 8.3%, respectively. All the CRE isolates were MDR and 30.6% were positive for the production of extended-spectrum beta-lactamases. **Conclusion:** Unexpectedly Ciprofloxacin resistant is very low in comparison to other studies. CRE isolates were highly resistant to Cephalosporins and Tetracyclin. Resistant to Colistin is emerging explosively in our community necessitating continuous surveillance studies.

Kuwait University, College of Graduate Studies and Research Administration, Grant No. YM07/15, are fully acknowledged.

<https://doi.org/10.1016/j.jiph.2018.10.028>

### Rubella virus seroprevalence and associated factors among non-vaccinated pregnant women in Northwest Ethiopia



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**Background and Purpose:** Rubella virus infection during pregnancy is associated with adverse fetal outcomes and reproductive failures. In Ethiopia, little is known about the extent of the diseases and there is no rubella vaccination and antibody. The main aim of this study was to assess the sero-prevalence of the rubella virus infection and its associated risk factors among pregnant women.

**Methods:** Institution based cross-sectional study was conducted in the antenatal clinics of Debre Markos and Debre Tabor hospitals of Amhara Region, Northwest Ethiopia from March to June 2015. About 5 ml of blood sample was also collected from all study