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Clostridium difficile incidence, risk factors and intervention attempts in a 617-bed hospital over a three-year period

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Background: Facing outbreaks of Clostridium difficile infection (CDI) the Infection Control Team (ICT) registered all action taken, risk factors and initiated a continuous audit to enhance healthworkers (HW)vigilance and compliance to issued instructions

Material/methods: On seeing the first cases of CDI, in spring 2013, the ICT proceeded to prospectively record all patients who had Cd isolated, with ICT nurse checking daily relevant Microbiology data. All risk factors were noted, as well as Defined Daily Doses (DDDs) prescribed in hospital in the respective months. Precaution measures were provided and explained to HWs of the respective department. Four emergency gatherings were performed and on April 2015 an audit to assess HW to instructions was designed and followed prospectively by ICT members for every patient with CDI. Time: 01/06/2013 to 01/06/2016. Data entry in simple Excel book form.

Results: Over the above period a total of 231 CDI, 72 in first year, 83 in second year and 76 in third year, thus yielding an incidence of 0.56/1000 pt.days. Patients (M: 109 F: 122 , m.age 71.6yrs) had prior antibiotic and hospitalization history, nursing home origin, PPI use and comorbidity in 79.6, 62, 4, 78.4 and 92.9%. respectively Up to three months prior to admission, 63.25% of the patients had received antibiotics, of which 35.3% were quinolones, 19.6%penicillins with lactamase inhibitor, 7.13% second generation cephalosporins, 11.8%macrolides and 5.8% aminoglycosides. No correlation with hospital antibiotic six monthly DDDs and CDIs at the same time.

Conclusions: The increasing rate of CDI, despite ICT efforts, poses a worrying alarm and continuous monitoring plus more strenuous medical as well as administrative interventions seem mandatory. Some improvement is seen after educational efforts, albeit short lived There is also considerable room

for improvement in HW compliance to precautions, because infrastructure inadequacy does not justify poor adherence to basic hygiene rules, if not making them even more necessary than ever.