Background and importance Cardiac implantable electronic devices (CIED) are used for patients with heart block and severe dysrhythmia to improve patient quality of life and survival. However, the implanted devices have been associated with an increased rate of infections and subsequently cause significant morbidity and mortality. Recent guidelines recommend the use of intravenous cefazolin as standard preoperative antibiotic prophylaxis. However, there is no consensus about postoperative antibiotic prescribing to treat infection. The routine practice in our clinical setting is to prescribe antibiotics pre and post insertion according to physician experience and preference. Hypothetically, if such practice continues, it may lead to an increased risk of antibiotic resistance, suboptimal clinical outcomes and higher healthcare costs.

Aim and objectives To investigate the rate of postoperative infection associated with the CIED insertion, to find an association between prescribing antibiotics post insertion and postoperative infections and to develop recommendations that may help to optimise antimicrobial prescribing and minimise the consequences of infection and subsequently improve the practice.

Material and methods In this retrospective observational study, patient records (aged ≥18 years old) with complete heart block who were admitted for permanent pacemaker (PPM) insertion were reviewed during the period January 2012 to December 2017. Patient demographic, comorbidities and microbiological reports through screening of blood culture within 90 days of post pacemaker insertion were collected. To find an association between antibiotic post insertion and postoperative infections, the χ² or Fisher’s exact test was applied. A p value ≤0.05 was considered statistically significant.

Results Of 130 implanted device cases, 95 were reported as pacemaker (PPM) insertion cases during the study period; 67 (70%) PPM cases were given post insertion antibiotics. No postoperative case of pocket infection or infective endocarditis was reported. Of 5 bacteremia infections, only 1 case (3%) was reported among the group who were not given antibiotics post insertion (p=0.63).

Conclusion and relevance Antibiotic administration post pacemaker insertion has no added value in terms of infection prevention, and no evidence to support the use of antibiotics post pacemaker insertion. Therefore, this practice is not justified.

REFERENCES AND/OR ACKNOWLEDGEMENTS
No conflict of interest.