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| **Hospital Acquired Pneumonia in the Central Coast Local Health District** |
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| **Introduction/Aim:**  Hospital acquired pneumonia (HAP) is the most common nosocomial infection in Australian hospitals and causes significant morbidity and mortality. The Australian therapeutic guidelines (ATG) suggest a diagnosis of HAP in patients hospitalised for longer than 48hrs if there is ‘new, progressive or persistent’ chest X-ray infiltrate with at least one of the following: fever >/= 38C, leucocytosis or leukopenia, presence of purulent sputum or respiratory secretions or worsening gas exchange. In clinical practice HAP is frequently a differential diagnosis for which early and aggressive empiric treatment is both common and appropriate given the clinical status of many of the patients in whom the diagnosis is suspected. However, without appropriate diagnostic re-evaluation, this can lead to over treatment resulting in adverse events and extended hospital admission. This retrospective case series looks to assess the accuracy of HAP diagnosis within the Central Coast Local Health District (CCLHD) and the resultant management of HAP cases, in turn considering methods for improving HAP management via improved documentation, diagnosis, treatment re-evaluation and preventive measures.  **Methods:**  A retrospective audit was performed on records of patients from the CCLHD, who received treatment for HAP, from December 2021 to February 2022. The patient records, along with radiology, documentation and relevant investigations were jointly evaluated by a respiratory team (two local respiratory physicians and one respiratory advanced trainee). Using the diagnostic criteria for HAP from the ATG, cases were categorised as ‘definite HAP’, ‘possible HAP’ or ‘not HAP’. Further record was made of additional metrics for each case, including length of stay, antibiotic selection, and duration, admitting specialty and co-morbidities.  **Results:**  37 records were audited. 16/37 (43%) as ‘definite HAP’, 4/37 (11%) as ‘possible HAP’ and 17/37 (46%) were classified as ‘not HAP’. To allow comparison, ‘definite HAP’ and ‘possible HAP’ were treated as a single group (group A) and ‘not HAP’ as a single group (group B). Age (mean age group A 73.7 years +/- 13.30, group B 77.7 years +/- 12.23) and gender (group A: 65% male, 35% female; group B: 59% male, 41% female) showed no significant difference between groups. Given small sample sizes there appeared to be no notable difference in the duration of antibiotics (median ABx duration: group A 8.5 days, group B 7 days) or length of stay (median LOS: group A 21.5 days, group B 24 days). The data also suggested that antibiotic selection was closely adherent to guidelines, patients had a high degree of co-morbidity, and that oral hygiene was rarely performed.  **Conclusion:**  There was early empiric treatment of HAP in the CCLHD, with adherence to therapeutic antibiotic guidelines, which appeared clinically appropriate given the frailty and co-morbidities of the population. Review of the initial diagnosis and changes to treatment duration and de-escalation with clear documentation was lacking. Issues with documentation and current coding methods resulted in patients being coded as having HAP when audit suggests this was unlikely. A review of the initial diagnosis of a HAP, with clear documentation and appropriate de-escalation of therapy would be encouraged.        **Grant Support:** |