Chronic Obstructive Pulmonary Disease Exacerbations: A Hospital – Based Study

INTRODUCTION
The role of long-acting muscarinic antagonists (LAMAs) in chronic obstructive pulmonary disease (COPD) hospitalisation reduction has been established. The lack of availability of LAMAs on closed formularies hinders their use. Poor accessibility to LAMAs may have negative implications on healthcare expenditure and patients’ quality-of-life.

AIMS
To identify the hospitalisations due to COPD exacerbation and to estimate the resulting costs.

STUDY SETTING
Mater Dei Hospital, Malta
The closed formulary implemented in the National Health Service (NHS) for both in-patients and out-patients does not cover LAMA use.

METHOD
A 3-month observational cohort study was carried out at Malta’s acute general hospital (Mater Dei Hospital). A data collection proforma was designed and validated. The activity-based costings approach was used to compute hospitalisation cost.

Exclusion criteria:
- Consolidations on Chest X-ray
- Diagnosis on discharge letter different from initial diagnosis of COPD exacerbation

Data acquisition:
- Clinical data—obtained from patients’ files
- Economic data—obtained from hospital administration

Data analysis:
- Data was inputted into IBM SPSS® v24 statistical package

RESULTS
A total of 148 COPD admissions met the study’s inclusion criteria. Out of these patients, only 16.9% (n=25) were on LAMA therapy, indicating a low number of patients on optimum therapy. The length of hospital stay ranged between 1-44 days, with the median being 4 days. Nine patients required HDU admission and 3 patients were admitted to ITU. The total estimated hospitalisation cost amounted to €225,000. The BAP-65 scores and the number of comorbidities were identified as surrogate markers for hospitalisation cost. The length of hospital stay showed significantly positive correlation with the number of comorbidities and BAP-65 scores respectively (Pearson correlation 0.198, 0.199; p-value < 0.05).

CONCLUSION
The impact of COPD hospitalisations on healthcare resource use has been presented as a business case to health authorities in Malta. This study provides preliminary cost data which can be exploited by health policy-makers to highlight the cost-effectiveness projections for LAMA therapy.

REFERENCE