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| **Unlocking the potential of longitudinal pharmacy dispensing records: a focus on adherence and determinants** |
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| **Introduction/Aim:** People with asthma are poorly adherent to their medication however no framework has been developed to maximise the was in which pharmacy dispensing records can explore patient adherence. This exploratory study aimed to use the pharmacy dispensing records to identify the scope with which data associated with patient adherence pattens can be elicited from longitudnal dispensing records. **Methods:** This study explored de-identified pharmacy dispensing records from 2011-2019 in Nostradata (i.e., a database of pharmacy dispensing records across different pharmacies; covering 80% of pharmacies nationally). Records were included if an asthma/COPD medication were dispensed across a minimum of 5 years for an individual’s dispensing record. The data analysed includes demographics, number of doses, puffs per day, brands and dates of medication dispensing. Adherence rate = $\frac{number of days covered based on inhalers were dispensed}{number of days from start to end date of inhalers dispensed}$ for each individual’s record. The data were analysed descriptively and compared using Chi-square test.**Results:** Ten percent of the 26 milion patients’ (median age 47.5 years) in the Nostradata dispensing records (n=3,837,950) were dispensed at least one asthma/COPD medication; 66% (n=2,526,249) were dispensed at least one preventer/controller inhaler over the study time period. Of the patients with a valid dispensing quantity (96%, n=2,415,047), 7% had at least 60% adherence rate to their preventer inhaler. Adherence patterns of at least 60% were more likely for those individuals who visited fewer than 3 pharmacies and were prescribed their preventer inhaler by a GP and a specialist (either respiratory or orther), compared with just their GP (12 % versus 6%, p<0.001).**Conclusion:** Pharmacy dispensing records have the potential to add further insights into identifying high risk patients through the longitudinal review of dispensing data and prescribing practices. Further work needs to explore ways in which pharmacy dispensing records can be better used to drive identification of high risk medication dispensing behaviours. **Grant Support:** Investigator Sponsored Study, AstraZeneca Australia Pty Ltd. |