Background Drug allergies are a common problem in patient care which often result in use of less effective and/or more toxic alternative. An allergy history is commonly provided by VA healthcare providers. Understanding the commonly documented drug allergies can help inform subsequent research. Our primary objective was to determine the frequency and trends of allergy reactions observed with drug treatment among admissions to the VA system from 2000–2014 extracted from the VA Corporate Data Warehouse. Allergy histories were linked to VA inpatient admissions. All drug allergies documented, regardless of reaction type or severity, were aggregated and reported as percent of admissions in a given year (i.e., sample may contain non-unique adverse drug reactions). To understand secular trends among commonly allergies, drug treatment-related diagnoses were identified from ICD-9 codes present during admission.

Methods This study is a retrospective cohort of all inpatients in the VA health system from 2000–2014 extracted from the VA Corporate Data Warehouse. Allergy histories were linked to VA inpatient admissions. All drug allergies documented, regardless of reaction type or severity, were aggregated and reported as percent of admissions in a given year (i.e., sample may contain non-unique adverse drug reactions). To understand secular trends among commonly allergies, drug treatment-related diagnoses were identified from ICD-9 codes present during admission.

Results The cohort included 2,948,548 patients with 10,858,433 admissions in 127 VA facilities across 48 states, D.C. and Puerto Rico. Overall patients were 95% male, with a mean age of 63 ± 14 years. The most common documented allergies on admission were penicillin (11.7%, n=1,265,799), and 85,687 (5.9%) patients were allergic to aspirin. Patients with allergies often receive additional medications, with 451,216 (5.1%) patients on 10 or more medications. Each allergy class was documented at least once. The most common reactions reported. A total of 231,819 (4.1%) patients reported an antibiotic allergy, the most common reaction being penicillin (11.7%, n=1,265,799), followed by 75,202 (6.4%) patients reporting an NSAID allergy. Inclusion of all drug allergies can help inform subsequent research.

CONCLUSIONS

• One in five patients has a history of drug allergy with penicillin being the most commonly reported.1

• Patients with allergies often receive additional treatments with decreased safety, efficacy or increased cost.

• No research has described drug allergies among U.S. Veterans.

• An allergy history is commonly completed for VA healthcare inpatient admissions.

• Our primary objective was to determine the most commonly documented medication allergies among hospitalized U.S. Veterans.

METHODS

• Design A retrospective cohort utilizing extracted data from the Veterans Health Administration (VHA) Corporate Data Warehouse (CDW).

• Inclusion Veterans with an inpatient stay in any VA medical center from 1/1/2000 – 12/31/2014.

• Allergy histories and demographics were aggregated and reported as % of admissions in a given year and by facility.

• Each Veteran admission was linked with the allergy history on or before admission.

• Allergy histories correspond to the general allergy section of the electronic medical record and could be documented from a variety of previous health encounters (e.g. previous admission, outpatient clinic visit or pharmacy).

• For reporting allergies were combined by drug class.

• Congestive heart-failure, hypertension and Diabetes Mellitus related diagnoses were identified from ICD-9 codes present during admission.

• A penicillin allergy class is the most common, present on 13% of admissions.

• Documented allergies to ACEI, statins and opiates are increasing over time.

• Further research on drug utilization and disease prevalence trends could explain these trends.

References


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