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Human veterinary pharmaceutical exposures reported to the New South Wales Poisons Information Centre, Australia: 2014-2016.

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Objective: This study describes the epidemiology of human veterinary pharmaceutical-related exposures reported to Australia's largest poison information centre (PIC).

Methods: Data regarding all telephone calls pertaining to human initial contact exposures between 2014 and 2016 that were coded as a veterinary product were extracted from the New South Wales PIC database. A free-text search strategy, combining animal and veterinary terminology, was also conducted. Descriptive statistics were generated from case narratives coded for exposure-related circumstances and target treatment species. Products were classified according to the level 1 WHO ATCvet codes. Severity of exposure was estimated based on the proportion of individuals that reported being symptomatic following exposure or for which hospitalization occurred/was recommended by the call handler.

Results: On average, 885 human exposures to veterinary pharmaceuticals occurred per year (2655 eligible calls pertaining to 2742 product exposures): 11.72 (CI 10.95 to 12.49) per 1000 PIC initial contact exposure calls (n=75,513) per year. Most calls were made by family members (n=1288/2631, 49.0%), with females (1441/2627 gender specified, 54.3%), and adults/the elderly (n=1514/2652 age category specified, 57.1%) representing the main demographic. The majority of calls were considered unintentional exposures (n=2558, 96.4%), with 60 (2.3%) deliberate self-poisonings, and 37 (1.4%) other intentional/recreational exposures. Most exposures were to single substances (2582/2655 calls, 97.3%), with product ingestion most frequent (n=1754, 67.9%). The most common target treatment species was the dog (n=1347/2585, 52.1%), with companion animal targets (cat/dog) accounting for 70.0% of all exposures (n=1810/2585 identifiable). A total of 421 different active ingredient combinations, and 491 different product brands were identified. Antiparasitics, insecticides and repellents (n=897, 32.7% of all exposures), (ii) nervous system (n=255, 9.3%) and (iii) immunologicals (n=252, 9.2%) were the most common drug classes. Pimobendan, a phosphodiesterase inhibitor used as a canine cardiac inotrope and vasodilator (n=105, 3.8% of all exposures), phenobarbitone (n=83, 3.0%) and prednisolone (n=83, 3.0%) were the top three most commonly reported sole substance exposures. In adults and the elderly, unintentional exposure during administration to the animal was considered the most common exposure-related circumstance (n=770/1552, 49.6%). Immunologicals, particularly those for livestock, caused the highest perceived severity, with 83.9% of exposures symptomatic and 52.7% resulting in hospitalization.

Conclusion: Pet-owners and personnel administering immunologicals to livestock represent a substantial cohort of individuals at risk of harm during, and immediately following veterinary pharmaceutical product administration. Risk management plans for veterinary pharmaceutical products should be reviewed to ensure safety considerations are as stringent as human equivalents.