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Burden of biologic medicines in the Australian population

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Abstract

Background: Biologic medicines are used to treat chronic illness and disorders including, rheumatoid arthritis, multiple sclerosis, and cancer. As the number of biologic medicines expand, the proportion of Australians exposed to multiple biologics is expected to increase.

Aims: This study aims to quantify the population prevalence and change over time in biologics used for any indication, specific indications, and multiple biologics by indication.

Methods: We conducted a population-based medicine utilisation study using the PBS 10% dataset. Yearly prevalence rates of biologic medicine use were calculated overall and by PBS indication. We also calculated the number of indications where a person was dispensed at least one biologic, overall, and each year (2012-2021). Number of biologics dispensed overall, per patient, and per year was also calculated by indication.

Results: Overall prevalence of at least one biologic medicine dispensing increased from 4.7/1,000 persons to 30.2/1,000 persons between 2012 and 2021. The proportion of people dispensed a biologic for more than one indication was 7.7%; 1.6% in 2012 and 5.3% in 2021. Overall, 10.1% of people were dispensed two biologic medicines and 3% dispensed three or more individual biologics. Number of people receiving two or more biologics per year has remained stable; 6.2% in 2012 and 5.8% in 2021.

Conclusions: The number of indications with biologic use has expanded with an increasing proportion of people dispensed biologics for multiple indications. As further biologic medicines are developed for more chronic conditions, these numbers are expected to rise. It is critical that studies address the impact of increasing use of biologics on patient safety.

Impact: The effect of lifetime exposure to multiple biologic medicines and for multiple different conditions is unknown and could potentially place patients at increased risk of harm. Targeted post-market surveillance for biologics is required to monitor this developing area of medicine use.