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Value-driven healthcare in action: biosimilar uptake in Singapore

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Biosimilars are biological products with proven similarities in characteristics, activity, safety and efficacy to their reference biological product (RBP). One important difference, however, is that compared to RBPs, biosimilars are typically 15% to 35%[1,2] lower in price, offering better value for patients and the healthcare system.

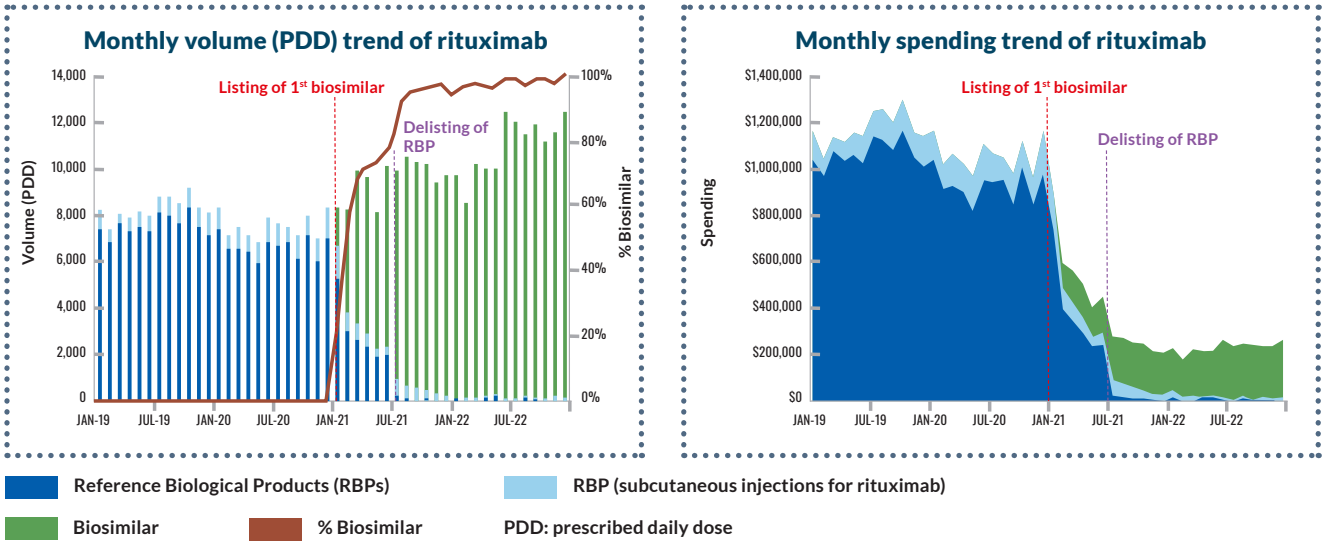
To optimise limited healthcare resources, ACE conducts horizon scanning and timely evaluations of health technologies, including biosimilars. This information supports funding consideration by the Ministry of Health (MOH)'s Drug Advisory Committee (DAC), and helps drive the use of lower-cost alternatives through stakeholder partnerships.

In 2016, the Health Sciences Authority approved infliximab, the first monoclonal antibody biosimilar, for use in immunology-related conditions.[3] An ACE evaluation of infliximab informed the MOH DAC's recommendation to subsidise the biosimilar in March 2018. Infliximab RBP was subsequently delisted in December 2018. Since then, other monoclonal antibody biosimilars in the immunology and oncology fields, such as adalimumab, rituximab, trastuzumab and bevacizumab, have also been added to the subsidy list.

MORE USE OF BIOSIMILARS AT LOWER COST POST-SUBSIDY

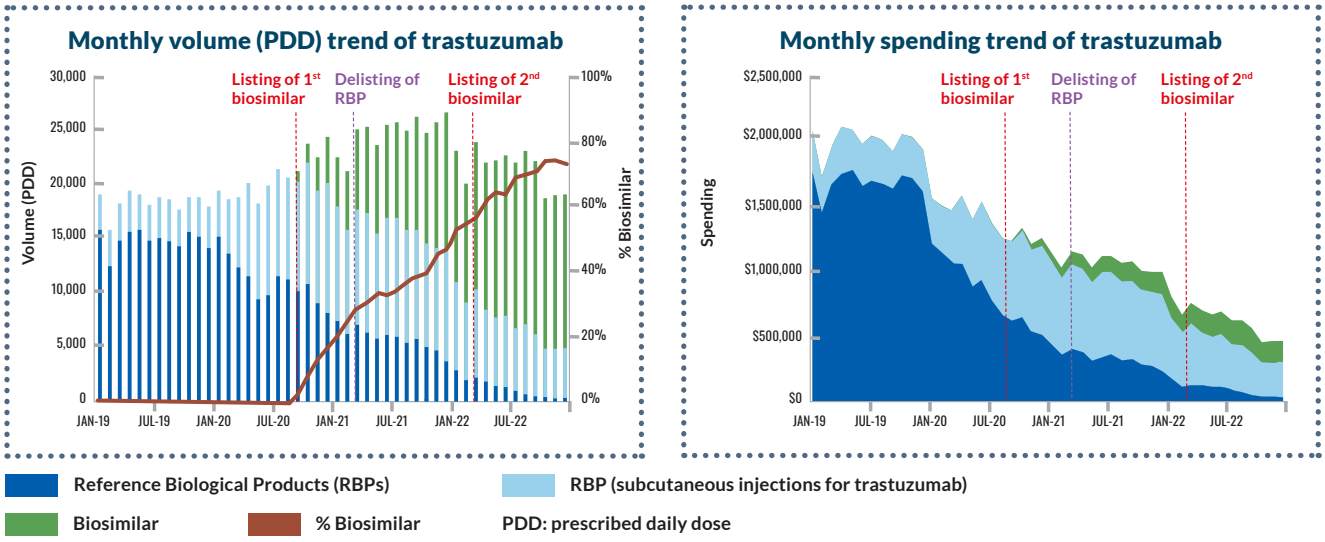
For most biosimilars, adoption rates exceeded 95% within a year of their subsidy listing. Importantly, increased biosimilar use leads to substantial reductions in healthcare spending, driven by price reductions of over 80% for drugs with multiple approved biosimilar brands at the time of the subsidy listing. For example, rituximab saw a sharp increase in biosimilar adoption and reduced spending (Figure 1).

Figure 1 **Monthly utilisation and spending of rituximab**



In contrast, trastuzumab biosimilar experienced a slower adoption — possibly explained by the availability of new drugs, such as trastuzumab deruxtecan, as well as the preference for the subcutaneous formulation of the RBP during the COVID-19 pandemic, due to ease of administration and no need for hospital visits (Figure 2). Through close monitoring and stakeholder engagement at public healthcare institutions, trastuzumab biosimilar adoption reached over 70% two years post-subsidy.

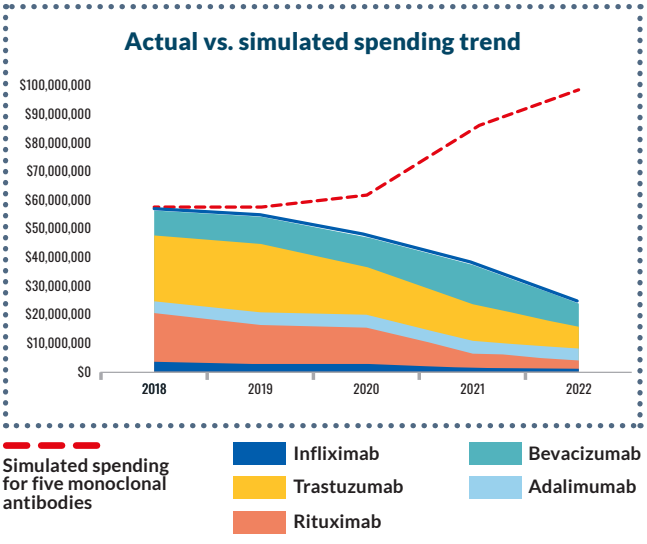
Figure 2 Monthly utilisation and spending of trastuzumab



Value-driven healthcare strategies implemented in Singapore's public healthcare institutions have contributed to high adoption rates of biosimilars, which reduced drug spending on the five monoclonal antibodies from nearly $57 million in 2018 to $25 million in 2022. These efforts have resulted in estimated cost savings of nearly $136 million to the healthcare system over a five-year horizon (Figure 3).

The adoption of biosimilars will continue to be a key initiative in keeping healthcare costs affordable and sustainable in Singapore. A full report of these findings has been published in *PharmacoEconomics – Open*.[4]

Figure 3 Actual versus simulated spending trend for the five monoclonal antibodies in Singapore public healthcare institutions between 2018 and 2022



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