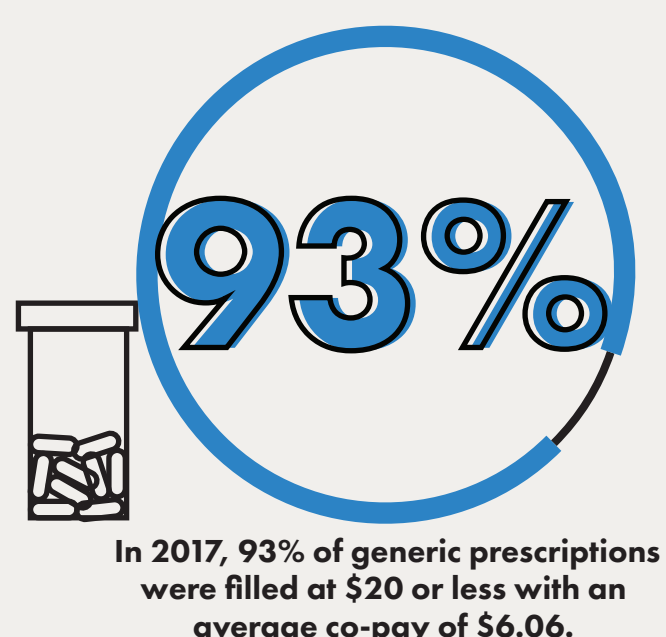




TRENDS IN GENERIC IN 2019

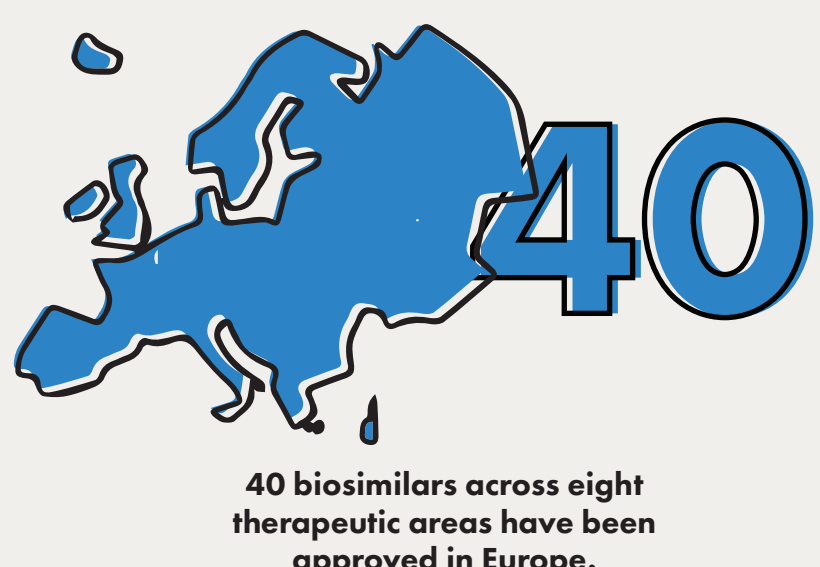
NO. 1 DRUG PRICING PRESSURES

Drug manufacturers are bearing the brunt of the focus as rising costs increase pressures across the pharmaceutical supply chain. NAFTA's renegotiated proposal will add an additional ten years of protection for branded medicines while limiting the amount of global exports from US-based generic manufacturers. In 2017, 93% of generic prescriptions were filled at \$20 or less with an average co-pay of \$6.06. By contrast, co-pays for branded prescriptions averaged \$40.30. Unavoidable price increases for generics should be handled with care as consumers, legislators, and regulators continue to be hyper-focused on costs.



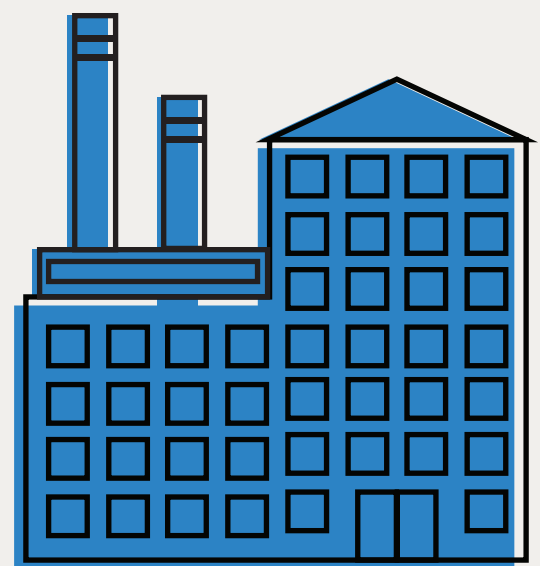
NO. 2 GROWTH IN BIOSIMILIARS

The number of biosimilar available on the market has exploded in recent years. 40 biosimilars across eight therapeutic areas have been approved in Europe, while 11 biosimilars have been approved in the US with over 60 more in development. This lush pipeline has led to an expected market size of \$26 billion by next year and \$62 billion by 2025. Promises of growth alongside a clear and expedited approval process have combined to make the field ultra-competitive. More generics manufacturers will look to claim their piece of the market by specializing in multiple therapeutic areas and by targeting patent expirations of branded equivalents.



NO. 3 DIVESTITURES, MERGERS & ACQUISITIONS

It's no surprise that divestitures and M&A will continue to trend in 2019. As generics manufacturers watch profit earning shrink, companies will begin focusing on their core products. Therapeutic targets, manufacturing facilities, and entire divisions that no longer align with a company's core strategy will change hands. Generics products will be sold in order to achieve the desired product portfolio, while divisions will be spun off to boost performance and provide opportunities for growth for the parent company.



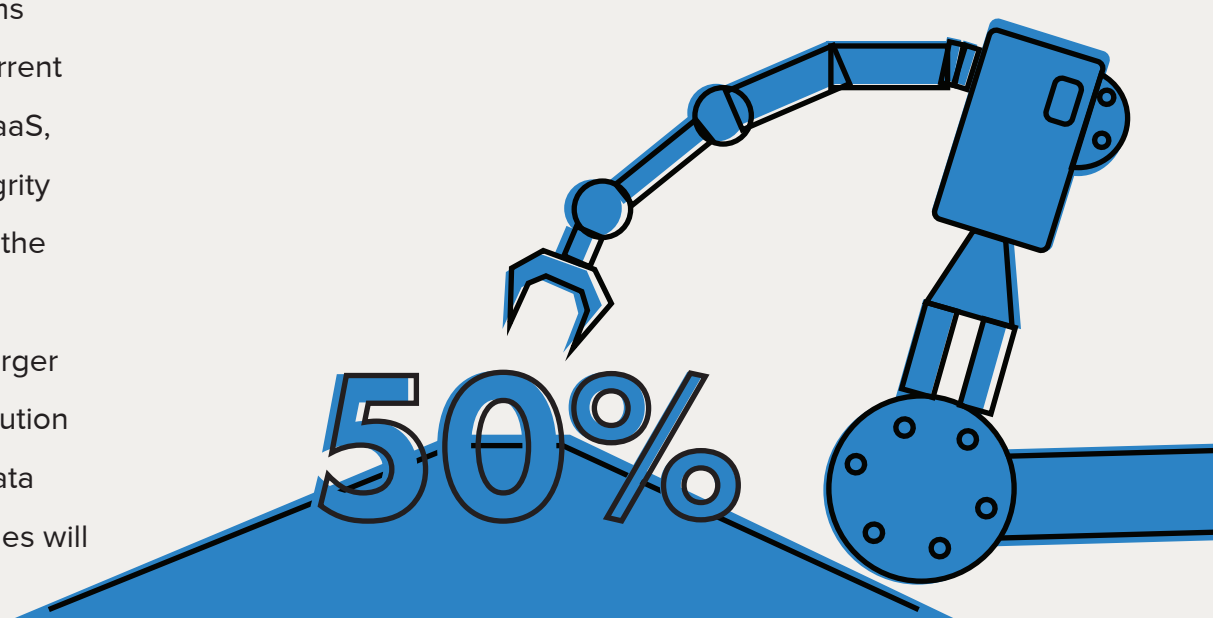
NO. 4 BRAND DIFFERENTIATION & CONSUMER EDUCATION

Most consumers don't realize that generics have decreased in price at an annual rate of almost seven percent. Branded manufacturers, however, have raised prices at a rate greater than 100 times inflation. As a result of this trend, generics will need to define their brand and invest in consumer education in order to fight price erosion and prepare for future price increases. Working with consumers to explain prescription options and keeping cost front and center will be key to achieving these goals. By partnering with advocacy groups and raising awareness about medication options, generics will be able to differentiate from branded manufacturers.



NO. 5 ROBOTICS, AI, AND AUTOMATION

Companies now realize that their equipment and systems need to both follow compliance regulations and stay current with trends in the world of robotics, cloud computing, SaaS, and integrated data. The need to comply with data integrity requirements has sparked investment in automation on the manufacturing floor. Data from key instruments and manufacturing equipment must be integrated into the larger enterprise resource planning (ERP), manufacturing execution system (MES), and quality platforms. Improvements in data collection, processing, and analytics mean that companies will be able to report on new business KPIs and monitor all aspects of the manufacturing process.



Nearly 50 percent of pharmaceutical and medical device companies have line automation integration underway.

