PREFILLED SAFETY SYRINGE MARKET THRIVES AMID SELF-ADMINISTRATION TREND

In this article, George I'ons, Head of Product Strategy and Insights at Owen Mumford Pharmaceutical Services, looks at how the growing trend of patient self-administration is driving demand for prefilled safety syringes.

It is well understood that many populations are ageing – for example, by 2030, it is anticipated that there will be more than 21,000 centenarians in the UK, with one in five people aged 65 and over.[1] As life expectancy rises, the likelihood of time spent in poor health with multiple chronic health conditions also increases.

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At the same time, the gap between the number of clinically trained staff needed and those available is projected to reach almost 250,000 by 2030,[2] leaving the existing workforce significantly overstretched. Emerging from the acknowledgment that constraints placed on hospitals by staff shortages, stretched budgets and an ageing population could impact the healthcare system as a whole, the growing trend of home-based treatment as well as patient self-administration is also evidence of a transitioning healthcare landscape.

In the past few years, a wave of biological therapies for patients with chronic conditions has entered the market. These therapies are often the ones to provide the best outcomes for patients suffering from chronic conditions such as neurological, cardiovascular and autoimmune diseases. Their administration, typically via subcutaneous injection, makes them a perfect candidate for self-administration using prefilled syringes.

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PATIENT QUALITY OF LIFE

Similarly, the frequency of injections required to treat these chronic conditions further increases their suitability for a home environment rather than obliging patients to visit a clinic for every single injection. Home-based treatment can greatly improve patient quality of life and provide support to patients who live far from a hospital or who are less able to travel.[3] Providing patients with the tools to self-administer their medication also hands them some power and responsibility to manage their own disease and is effective in helping to reduce the burden on hospitals.

Outsourcing low-risk medical procedures for chronic patients could alleviate some of the pressure on hospitals. However, needlestick injuries still present a risk to users and their carers in both clinical and non-clinical settings. In this sense, the shift of drug delivery towards home environments is a useful reminder that best practices around the safe usage of sharps, including needles, should not only be extended beyond hospital walls but also reinforced in the hospital setting.

Crucially, medical device manufacturers are key to shaping the future of products for self-administration of injections and should ensure designs have integrated robust needlestick-prevention features.

George I'ons
Head of Product Strategy and Insights
T: +44 1993 812021
E: pharmaservices@owenmumford.com

Owen Mumford Ltd
Brook Hill
Woodstock
Oxfordshire
OX20 1TU
United Kingdom

www.ompharmaservices.com

The activation and deployment of any needle-shielding feature should factor in the capabilities of all patients and should ideally be an automatic part of the normal use of the device.

HIGH RATES OF INJURY

The implementation of the EU Directive 2010/52/EU more than six years ago for the prevention of sharps injuries has had a positive outcome – yet needlestick injuries continue to occur, including among trained medical staff. A new survey suggests that 94% of practising UK surgeons have experienced a needlestick injury or have witnessed a colleague experience one.[4] With such high rates of injury, even within a formal healthcare setting, some of the solution now rests with manufacturers to engineer devices that are not only better suited to self-administering patients but also reduce risks of needlesticks for healthcare practitioners.

Beyond hospital walls, it is estimated that – across all EU economies – the compliance level for safety-engineered injection devices falls from 70% to 60% when moving from clinical to non-traditional settings.[5] Needless to say, non-compliance is linked to a higher risk of needlestick injuries occurring and of patients, carers and residential non-users contracting more than 20 possible blood-borne infections. Often unaware of the risks presented by a potentially contaminated device, family lack of awareness makes them highly unlikely to report any exposure or seek treatment or advice – with an estimated 50% of sharps injuries going completely unreported.[6]

Unsurprisingly, this backdrop of increasing self-administration has driven a growing need for prefilled safety syringes (Figure 1). Integrating safer features into the design of drug delivery devices may reportedly reduce needlestick injuries and contaminations by up to 80%.[7] More concretely, while devices with hollow-bore needles or syringes which retain an exposed needle after use present a heightened risk, retracting and needle-shielding mechanisms are much safer. It therefore comes as no surprise that global spending on safety syringes reached US$772 million (£594 million) in 2018 and is expected to grow by a compound annual growth rate of 8.1%, reaching $1.137 billion by 2023.[8]

Figure 1: The growing need for prefilled safety syringes is driven by the increasing number of injectable products designed for self-administration.

LEVEL OF INDEPENDENCE

More than reducing injuries, prefilled safety syringes must be designed and engineered factoring in the dexterity – or lack thereof – of the patients they may treat. The growing requirement for human factors testing, as well as the need for devices to be intuitive and easy to use, require minimal force to activate and include passive safety mechanisms to reduce additional activation steps, are further influencing the market for prefilled safety syringes.

In conclusion, enabling a wide range of patients to administer their medication safely without professional assistance, safety prefilled syringes are key to unlocking a certain level of independence for patients, whilst also minimising the safety risks typically present during unsupervised administration.

ABOUT THE COMPANY

Owen Mumford is a healthcare company and device manufacturer that commercialises pioneering medical products for its own brand and custom device solutions for the world's major pharma and diagnostic companies. Owen Mumford's goal is to enhance access to diagnostics, encourage adherence to treatment and reduce healthcare costs.

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ABOUT THE AUTHOR

George I'ons is Head of Product Strategy and Insights, having worked at Owen Mumford since 2006. His current focus is on deciphering the rapidly changing pharma and biotech sectors in relation to their needs for combination products. In his previous roles in business development, he worked closely alongside the research and development team to develop devices for a variety of global pharma and diagnostic clients. Prior to Owen Mumford, Mr I'ons worked for Abbott in marketing roles in Germany, focusing on its diabetes business.