

Trends in the Drug Delivery Devices Market ... an overview

The market for mechanical and electromechanical drug delivery devices continues to be an important and growing segment of the pharmaceutical and healthcare industry, with strong growth projections forecast in both parenteral (through the skin) and inhalation therapy areas.

Growth in the devices market is driven by a number of factors: slowing NCE pipelines & drug patent expirations, new biological drugs for previously refractory diseases, ageing populations and unsustainable healthcare economics. There is also strong evidence to suggest that 'medical device consumerism' will become an important driver in the sector, as existing technologies are being challenged by an increasingly empowered and enlightened patient group. These factors create a compelling case for further innovation as a cost-effective means of introducing new patient benefits, increasing product differentiation and extending product lifecycles.

But where are we going to see this innovation taking place?

Well, the growth in value terms of the \$26bn market for inhalation drug products will slow due to patent expirations, despite the growing incidence of chronic conditions such as asthma and COPD. Within this market, we are seeing the dominance of the Metered Dose Inhaler (MDI) waning gradually as a result of significant progress in the Dry Powder Inhaler (DPI) space, aided by the success of drugs like Advair and Spiriva. Device developers and pharmaceutical companies continue to invest in dry powder inhaler developments in an effort to access this highly valuable market segment. A key feature of these developments will be increased patient choice and benefits.

The growth in the \$40bn parenteral drug products market will continue, thanks in part to the focus on biological drug development which has resulted in a shift in the clinical pipeline towards parenteral administration. Some market commentators even predict that parenteral will surpass oral (the gold standard) delivery method over the next five to ten years. Furthermore, subcutaneous drug delivery is emerging as an alternative for drugs previously requiring infusion. Coupled with the broad therapeutic reach of injectable drugs, an increasing need for self-administration and home treatment, this trend is giving rise to significant opportunities in parenteral delivery device development.

For instance, innovation in the self-administration injectable segment is accelerating rapidly and taking on many forms as pharmaceutical companies seek to differentiate their drug products. The introduction of electronics, software, intelligent design and user-friendly interfaces is giving patients much higher levels of comfort and control and will ultimately result in better compliance.

Naturally, with new drugs and new patient needs, come the inevitable technical challenges for device developers to overcome through feature-rich, easy-to-use products. Having a deep technical competency is therefore an essential requirement for any successful device development organisation, but this alone is not enough to ensure commercial success. New delivery devices must be designed for the 'medical consumer' and so human factors are critical to future success. Real product advantage and competitive strength will come from the ability of developers to understand human factors - patient preference, comfort, safety and usability - and then translate these through the innovation and industrial design process into tangible product features with meaningful patient benefits.

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