

Editorial

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The global drug delivery systems market was valued approximately US\$ 510.0 Bn in 2016 and is anticipated to expand at a CAGR of over 6.9% from 2017 to 2025 to reach approximately US\$ 900 Bn by 2025. The North America NDDS market is expected to witness a CAGR of 8.7% during the forecast period, 2018-2023. Key companies operating in the global drug delivery systems market and profiled in the report include AstraZeneca plc, Bayer AG, Pfizer, Inc., Novartis AG, Amgen Inc., Johnson and Johnson Services, Inc., Baxter International, Inc., Boston Scientific Corporation, and Becton, Dickinson & Company.

Some of the factors driving the growth of the market are:

- Increased prevalence of chronic diseases
 - Technological advances
 - Increase in individual therapy
 - Increased understanding of drug metabolism among the population
 - The requirement of controlled drug release
- References:
- Transparency Market Research (TMR):
<https://www.transparencymarketresearch.com/drug-delivery-systems-market.html>
 - Mordor Intelligence:
<https://www.mordorintelligence.com/industry-reports/usa-drug-delivery-devices-market>

The global pharmaceutical drug delivery market is highly fragmented owing to the presence of several large and small players. Johnson & Johnson, Inc. (US), F. Hoffman-La Roche (Switzerland), Merck & Co., Inc. (US), Bayer AG (Germany), Pfizer, Inc. (US), Novartis AG (Switzerland), 3M Company (US), Becton, Dickinson and Company (US), GlaxoSmithKline plc, (UK), Sanofi (France), and Antares Pharma, Inc. (US) are some of the leading players operating in the market. Johnson & Johnson, Inc. is one of the prominent players in the pharmaceutical drug delivery market. The company offers a robust product portfolio and has a strong geographical presence in this market. The company has 125 manufacturing facilities all across the globe. J&J primarily focuses on products related to human

health and well-being. Innovation is an integral part of the company. The firm is committed to improving human therapeutic medicines through continuous investment in R&D. Novartis AG is another leading player in the pharmaceutical drug delivery market. The company's strong brand recognition and extensive product portfolio in this market are its key strengths. To maintain its leading position in the market, the company adopts organic as well as inorganic growth strategies such as acquisitions and expansions.

The market is driven by the factors such as, rising incidence of chronic diseases, growing demand for non-invasive drug delivery devices, increasing R&D expenditures in pharmaceutical and medical device companies. However, the factors restraining the market growth are high cost involved in development of drug delivery devices and product recalls. With the improvements in medical devices and certain transdermal delivery technologies, the non-invasive mode of drug delivery is now ready to compete with traditional methods of oral and injectable routes of drug delivery. The Non-Invasive Drug Delivery Systems encompasses the broad field of non-invasive drug delivery systems which includes drug delivery via topical, transdermal-active (device-aided enhanced penetration), transdermal-passive, trans-ocular membrane, trans-mucosal membrane, as well as delivery via alveolar membrane from inhaled medication. The traditional drug delivery techniques, like intramuscular, intravenous, oral and rectal drug administration are not suitable to certain patient populations. The non-invasive methods of drug delivery reduce dosing frequency and simplify dosing schedules. Moreover, non-invasive drug delivery system can significantly reduce the cost of clinical use because of self-administration of the drugs by the patients. The manufacturing cost may also be less for non-invasive dosage forms as compared to injections in many cases. pharmaceutical Research and Manufacturers of America (PhRMA), Inhalation Drug Delivery Association (IDDA), American Lung Association, Centers for Disease Control and Prevention, Chinese Diabetes Society, International Diabetes Federation and others.

The Global Drug Delivery Technologies Market is poised to grow strong during the forecast period 2017 to 2027

Some of the prominent trends that the market is witnessing include growing focus on paediatric and geriatric patients, rising demand for advancement in technologies, increase in the

transformation in lifestyle owing to rising urbanization. Based on the route of administration, the market is segmented into ocular drug delivery, trans mucosal drug delivery, pulmonary drug delivery, nasal drug delivery, parenteral route, oral drug delivery, topical drug delivery, injectable drug delivery, implantable drug delivery, and inhalation route. Ocular Drug Delivery is further divided into ocular devices and formulations. Ocular Devices is classified into ocular inserts and drug-coated contact lenses. Formulations are classified into semi-solid formulations and liquid formulations. Semi-Solid Formulations are subdivided into eye ointments, and gels. Liquid formulations are subdivided into liquid sprays, and eye drops. Transmucosal Drug Delivery is further segmented into oral transmucosal drug delivery and other transmucosal drug delivery. Oral Transmucosal Drug Delivery is sub-segmented into sublingual drug delivery and buccal drug delivery. Other Transmucosal Drug Delivery is sub-segmented into vaginal transmucosal drug delivery and rectal transmucosal drug delivery. Nasal Drug Delivery is further segregated into nasal powders, nasal drops, nasal gels, and nasal sprays. Parenteral Route is bifurcated into an intra-arterial, intramuscular, intravenous, and subcutaneous route. Oral Drug Delivery is further classified into liquid oral drugs, semi-solid oral drugs, and solid oral drugs. Liquid Oral Drugs is sub classified into syrups and solutions. Semi-Solid Oral Drugs is sub classified

into emulsions, elixirs, and gels. Solid Oral Drugs are sub-classified into capsules, pills, tablets, and powders. Topical Drug Delivery is divided into transdermal drug delivery and formulations. Transdermal Drug Delivery is subdivided into transdermal gels and transdermal patches. Formulations are subdivided into semi-solid topical drug delivery, solid topical drug delivery, and liquid topical drug delivery. Semi-Solid Topical Drug Delivery is further divided into pastes, creams, lotions, and ointments. Solid Topical Drug Delivery is divided into powders and suppositories. Liquid Topical Drug Delivery is subdivided into suspensions and solutions. Injectable Drug Delivery is classified into formulations and devices. Formulations are further classified into novel drug delivery formulations, long-acting injection formulations, and conventional drug delivery. Devices are classified into self-injection devices and conventional injection devices. Self-Injection Devices are further divided into auto injectors, wearable injectors, needle-free injectors, and pen injectors. Conventional Injection Devices are further divided into material, product, usability, and other injector devices. The material is sub-segmented into plastic and glass. Product is sub-segmented into prefilled syringes and fillable syringes. Usability is sub-segmented into disposable syringes and reusable syringes. Implantable Drug Delivery is segregated into passive implantable drug delivery and active implantable drug delivery.

PHARMACEUTICAL DRUG DELIVERY MARKET, BY REGION (USD BILLION)

