OptumRx Drug Pipeline Insights Report

Q2 2019

Top drugs in the pharmaceutical pipeline anticipated to make the biggest impact

An Introduction

from Sumit Dutta, Chief Medical Officer at OptumRx

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I am pleased to be able to share our inaugural *Drug Pipeline Insights Report.* Our goal for this report is to regularly detail key drugs in the development process that we anticipate being approved by the U.S. Food & Drug Administration (FDA) in the near future. Using our unique position in working with stakeholders across the health care system, as well as our differentiated data, analytic and clinical tools, we have compiled this list of five drugs that we expect to make the biggest impact in terms of their clinical quality, effectiveness and cost.

OptumRx actively monitors the drug development pipeline based on a wide range of professional resources, as well as our ongoing insight into pharmaceutical companies' drug development programs. That data is shared with our P&T Committee so that they can consider drugs before they come to market and informs our clinically-based formulary design process.

The OptumRx Pharmacy & Therapeutics (P&T) Committee, comprised of independent physicians and pharmacists, is the driving force behind our formulary evaluations. The P&T Committee evaluates existing and emerging drugs based on scientific evidence in order to appraise those drugs in an unbiased and evidence-based way. The P&T Committee meets regularly, and its deliberations are open and transparent to OptumRx customers and prospective customers.

OptumRx is proud to be known as a leading pharmacy care services business. Our 28,000 dedicated employees are working every day to promote safe, high-quality, and cost-effective use of prescription medications, while achieving the best possible health outcomes for the members we serve. I hope this report will add to your understanding of this critical marketplace.

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Drug Overview

Onasemnogene abeparvovec, brand name Zolgensma®

Zolgensma is a gene therapy drug for patients with spinal muscular atrophy (SMA), a chronic disease characterized by the loss of specialized nerve cells that control muscle movement. Affecting approximately 1 in 11,000 babies, SMA is the number one genetic cause of death for infants. An existing treatment for SMA (Spinraza® [nusinersen]) involves administering the drug into the spinal cord by injection every four months. As a gene therapy drug, Zolgesma would be a one-time intravenous infusion with potential for long-term benefits.

Zolgensma embodies the continued emphasis on orphan drugs in the drug development pipeline and if approved by the FDA, would be the second gene therapy available. While believed to have the potential to cure SMA, it is expected to have a price point of several million dollars per patient. However, when considering that Zolgensma is a one-time treatment (compared to a lifelong regime of recurring treatments), Zolgensma has the potential to reduce overall costs associated with SMA, and most patients will want to try it.

NKTR-181

NKTR-181 is a new opioid analgesic that differs from existing opioid analgesics in that it has a molecular structure that makes it more difficult to abuse, with a lower likelihood of developing dependency. In clinical trials, the chemical structure caused a delayed penetration into the brain with the potential for less euphoria usually attributed to other pain medications. However, studies also showed that patients had similar levels of drug liking compared to other opioids, thus leading some to be skeptical that NKTR-181's benefits will translate into less abuse in clinical practice.

NKTR-181 is particularly notable given the ongoing opioid epidemic in the United States. While NKTR-181 may provide hope for a safer opioid, if the abuse deterrence properties do not translate into reality, the drug will not have superiority over existing options, many of which are available as generics. If the anticipated benefits are proven, then adoption rates could be high since patients and prescribers will view it as a safer alternative to other opioids.

Golodirsen

Duchenne muscular dystrophy (DMD) is a rare genetic disease caused by a mutation in the gene responsible for production of the muscle protein dystrophin. Impacting 1 in 3,500 to 5,000 male births worldwide, DMD patients develop progressive muscle degeneration and weakness. Progressive muscle loss eventually leads to difficulty maintaining balance and walking, resulting in patients ultimately becoming wheelchair bound. DMD is considered universally fatal with death usually occurring before the age of 30 generally due to respiratory or cardiac failure.

Golodirsen targets a small subpopulation of DMD patients, only 8%, and addresses the genetic defect in a unique manner called "exon skipping"; the drug essentially provides a bridge over the genetic mutation found on exon 53 thus enabling production of a shorter but functional form of the muscle protein dystrophin. This drug is notable because it provides a treatment option for a serious condition with no other treatment options available and if approved, the majority of eligible DMD patients will seek treatment with it.

Drug Overview

Upadacitinib

Upadacitinib is a new oral treatment for adults with rheumatoid arthritis (RA), a chronic, progressive disease that can cause irreversible joint damage. Approximately 1.5 million people in the U.S. live with RA. Upadacitinib has high selectivity for the Janus kinase 1 (JAK1) enzyme, a mechanism of action similar to other oral JAK inhibitors such as Xeljanz® (tofacitinib) and Olumiant® (baricitinib). Upadacitinib is notable because it is the only product in the class to demonstrate superiority vs. Humira® (adalimumab) in RA patients at its expected approved dose. This data could give it an edge over competitors, potentially leading to widespread adoption.

Upadacitinib would be a late market entry in the class and there are also alternative treatment options for RA outside of the JAK inhibitor class. Many of the oral, non-biologic therapies are available generically whereas the biologic alternative therapies are generally still branded. Class-associated safety remains a potential concern, especially increased risk of serious infection, liver toxicity, and the potential for malignancies. RA is a large drug category, accounting for 25% of all specialty drug spending. Olumiant and Xeljanz have a price of $26,000 and $54,500 per year, respectively. TNF inhibitors such as Humira can cost more than $50,000 a year per patient.

Tafamidis meglumine, brand name Vyndaqel®

Vyndaqel is a first-in-class oral treatment for a rare disease called transthyretin amyloid cardiomyopathy (ATTR-CM). With this condition, proteins accumulate in the heart, leading to heart failure, heart block, and sudden death. Approximately 100,000 people have ATTR-CM in the U.S. and only one to two percent of those patients are diagnosed today.

Recently approved by the FDA for the treatment of ATTR-CM in adults to reduce cardiovascular mortality and cardiovascular-related hospitalization, the introduction of Vyndaqel is notable for several reasons. First, Vyndaqel is the first and only FDA-approved treatment for ATTR-CM. Other existing medications treat the associated symptoms, and, in rare cases, heart (or heart and liver) transplants are an option. Second, Vyndaqel can be taken as an oral capsule. In addition to the different clinical effects, the other available drugs (Tegsedi® [inotersen] and Onpattro® [patisiran]) require either subcutaneous injections weekly or intravenous infusions every three weeks. Vyndaqel could also be important to patients because it has the potential to lower cardiovascular-related hospitalizations and mortality. However, the cost of managing this condition is considerable: Treatment with Tegsedi or Onpattro costs approximately $450,000 per patient per year, and Vyndaqel costs approximately $250,000 per patient per year. With this new treatment option now available for ATTR-CM, there will be more incentive to diagnose and treat ATTR-CM, and widespread adoption could create pressure on treatment affordability.

Looking Ahead

Report Summary & Analyzation

The five drugs outlined in this report will impact payers, patients, and the general population, in terms of adoption, effectiveness, and anticipated cost.

For consumers, these drugs represent new options for certain niches within that condition. The introduction of several of these drugs gives consumers much-needed access to alternatives when first line treatments may have been ineffective. Prior authorization requirements are likely in order to ensure appropriate use.

Some of these drugs have outstanding questions about efficacy (magnitude and/or duration of benefit) or whether they are better than the treatments we already have today. This raises questions about how much value they bring to the table and if they are worth a premium price relative to existing options.

OptumRx evaluates the clinical merits of the drug in terms of safety and efficacy first and foremost when determining formulary inclusion. Only after this clinical evaluation is conducted is cost of the drug considered to determine tier placement. OptumRx will work to negotiate the best price to ensure that consumers have access to critical medications to treat rare, specialized health conditions at the lowest possible cost.

As payers and employers are tasked with coordinating the best possible care for their population, new drugs can be important for members seeking potentially more effective forms of treatment. When new products are effective and taken by patients who respond well, overall population health can improve, creating a more productive, healthy workforce.

OptumRx will continue to monitor new drugs in the pipeline to determine which will have the biggest influence on the prescription drug landscape.

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OptumRx specializes in the delivery, clinical management and affordability of prescription medications and consumer health products. We are an Optum® company — a leading provider of integrated health services. **Learn more at optum.com.**