Top 10 diabetes drugs by 2016 sales

by Carly Helfand, Tracy Staton

To say there’s a lot going on in the U.S. diabetes space right now would be an understatement. The formulary exclusions and payer pressure that have taken a toll on so many medications are continuing in full force, and thanks to new and forthcoming biosimilars, that likely won’t change anytime soon.

Value-based pricing has arrived on the diabetes scene, too, shaking payer relationships up even further. And price hikes, which some drugmakers have relied on for their long off-patent drugs, are no longer OK as far as the public and many lawmakers are concerned. All three of the diabetes giants—Novo Nordisk, Sanofi and Eli Lilly—have taken steps to allay the price-increase controversy, with Novo and Sanofi each pledging caps on their hikes, but all three are facing legal difficulties for their historical insulin pricing, too.

Then there’s the cardiovascular outcomes data that’s taken the arena by storm. These days, it’s no longer enough to show that your diabetes fighter doesn’t increase heart risks; to compete at the top of its game, a drug has to show it can pare down cardiovascular risks—or face potential upstaging by a rival that can.

And while diabetes is growing in prevalence, it’s still unclear just how well newer classes such as SGLT2 can keep up their growth acts.

With all of those factors in mind, it’ll be no surprise if 2016’s list of top 10 U.S. diabetes sellers sees something of a shake-up in the near future—and in fact, it’ll be pretty surprising if it doesn’t.

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**10 highest-selling diabetes drugs in 2016**

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Source: Evaluate Pharma, May 2017
But nevertheless, we’ve compiled last year’s sales rankings for you, along with some insight into what to expect for each of the top medications going forward. We focused on U.S. sales based on Evaluate Pharma data, because that’s where diabetes drugmakers are feeling the most pressure. Questions? Comments? As always, feel free to get in touch.

— Carly Helfand (email | Twitter) and Tracy Staton (email | Twitter)

1. Lantus

**Company:** Sanofi  
**2016 U.S. sales:** $3.9 billion  
**Drug class:** Basal insulin

Lantus has led the way, both in diabetes sales and in Sanofi sales, for years now, pumping out more than $7 billion worldwide for the company at its peak. But now, the stalwart basal insulin is on the wane. For the second year in a row, sales of Lantus (insulin glargine) dropped year over year in 2016, as U.S. payers pushed for higher rebates and rivals stole market share, partly by striking deals with payers.

And as of December, Lantus has even more competition in the U.S., in the form of its first biosimilar, Basaglar. Biosimilars aren’t traditional generics, of course, so their list prices are expected to run 15% to 20% lower than the brand, rather than the enormous discounts offered by small-molecule copycats. Still, Eli Lilly and Boehringer Ingelheim apparently made some aggressive deals with payers, because Basaglar won exclusive spots on at least two key formularies, UnitedHealth and CVS Health.

Losing share to a biosimilar isn’t good for the top line, but losing it to your own follow-up drug is—and some of Lantus’ market stake has gone to Sanofi’s longer-acting basal insulin, Toujeo. Since Toujeo launched in April 2015, Sanofi has been working hard to switch as many patients as possible over to the newer medication, in hopes of bridging its Lantus sales gap. But Toujeo’s sales still pale in comparison to Lantus itself: €475 million in the U.S. last year, €630 million worldwide.

Lantus faces other new competition in the basal insulin world, too: Novo Nordisk’s Tresiba, which launched last January armed with some Lantus-beating clinical trial data. One potential rival, however, failed to make the grade; Eli Lilly pulled the plug on its long-acting insulin peglispro after pivotal trial data raised safety questions.
2. Januvia

Company: Merck & Co.
2016 U.S. sales: $2.29 billion
Drug class: DPP-4

Merck’s Januvia has faced its share of obstacles, but it remains a mainstay of diabetes treatment—and of Merck’s revenue mix. The drug brought in $3.91 billion worldwide, $2.29 billion of that in the U.S., and that doesn’t include its combo-med cousin, Janumet, which makes an appearance lower down on this list.

Januvia sales suffered several years ago after safety questions hit the entire class of dipeptidyl peptidase-4 (DPP-4) inhibitors as well as the rival GLP-1 class; U.S. and European regulators later joined forces to sweep worries about pancreatitis and pancreatic cancer aside. Januvia since rebounded, and last year, its safety profile got a boost when a cardiovascular safety study turned up no additional risks. Importantly, that study didn’t turn up an increase in the risk of heart failure, as some had feared after some red flags for AstraZeneca’s DPP-4 med, Onglyza.

But that same study—called TECOS—didn’t show that Januvia conferred any CV benefits, either, and a couple of its competitors have: Eli Lilly and Boehringer Ingelheim’s SGLT2 drug Jardiance and Novo Nordisk’s GLP-1 med Victoza. Jardiance’s ability to cut CV risks won an FDA approval, and Novo is awaiting a decision on its own CV-risk update to Victoza’s label. What’s worse, the FDA refused to add the TECOS safety data to Januvia’s labeling.

Merck has its own SGLT2 drug in the pipeline, partnered with Pfizer, and it’s also working on an SGLT2-Januvia combo. In the meantime, Januvia remains an important tool in doctors’ box of diabetes remedies, Merck executives say, pointing out that diabetes patients often need to try different drugs, or combinations of drugs, as their disease progresses.

As payers press for discounts in the DPP-4 field as well as in other diabetes classes, Merck has experimented with pay-for-performance contracts linking Januvia costs to its performance. Last year, the drug giant inked a deal with Aetna to peg Januvia rebates to its effectiveness in managing type 2 diabetes.
3. Victoza

Company: Novo Nordisk
2016 U.S. sales: $2.10 billion
Drug class: GLP-1

As Sanofi’s Lantus has led the basal insulin field and Merck’s Januvia, the DPP-4 class, Novo Nordisk’s Victoza has been the dominant GLP-1 drug for years. Lately, however, its market share is on the wane thanks to new rivals, particularly Eli Lilly’s Trulicity, which comes in 10th on this list.

Luckily for Novo, however, the GLP-1 field has grown at a fast-enough clip to keep Victoza’s sales on the rise even as its market share shrinks—just as Novo and Lilly both predicted before Trulicity’s launch. Victoza brought in $2.98 billion worldwide last year, $2.1 billion of that in the U.S. And Novo now has U.S. approval for a combination med, Xultophy, that marries Victoza with its newer basal insulin Tresiba.

As of last June, Victoza also has some cardiovascular outcomes data to its credit, showing that it cut the composite risk of heart attack, stroke, and cardiovascular death by 13%, and CV death itself by 22%. If Novo gets its way, U.S. regulators will give Victoza a risk-reduction green light later this year. That reduction in cardiovascular risks is something that two of its GLP-1 competitors, Sanofi’s Lyxumia and AstraZeneca’s Byetta, have failed to prove, at least so far.

Victoza’s patent doesn’t expire until 2023 in the U.S., Novo says, though Teva Pharmaceutical Industries filed its generic version for approval at the FDA in February. But semaglutide, a longer-acting follow-up, is at the FDA for review, with a decision date later this year. Dosed weekly, rather than daily as Victoza is, semaglutide would compete on a more even footing with Trulicity, which also follows a weekly schedule.

In clinical trials, semaglutide has not only beat its Novo predecessor, but Merck’s Januvia and AstraZeneca’s weekly GLP-1 Bydureon. And semaglutide has put up some solid CV outcomes data of its own, with a smaller trial showing risk reductions even better than Victoza’s. The company plans a larger, follow-up outcomes trial as soon as the med wins U.S. approval. It’s also recruiting for a head-to-head study against Eli Lilly and Boehringer Ingelheim’s Jardiance, which boasts an FDA approval for a CV risk-reduction indication.
4. Levemir

**Company:** Novo Nordisk  
**2016 U.S. sales:** $1.82 billion  
**Drug class:** Basal insulin

Levemir has long lived in the shadow of Sanofi’s megablockbuster Lantus, but that doesn’t mean it’s not a powerhouse in its own right. The basal insulin has chugged along, putting up blockbuster sales year after year for the Danish drugmaker, with $2.54 billion last year worldwide, $1.82 billion of that in the U.S.

The basal insulin category has been a tough one lately, however, as payers saw the opportunity to pit the contenders against one another for bigger rebates and discounts. That pressure has eaten into sales growth across the category, despite regular price increases that recently landed Novo, Sanofi and their chief diabetes rival, Eli Lilly, under a microscope.

Levemir is an aging product, however, and Novo has big plans for its follow-up med Tresiba, which launched in the U.S. last January. It’s a longer-acting basal insulin that Novo touts as a superior therapy in its class. As selling points, the company points out that Tresiba lasts 42 hours and has a profile that allows patients to dose at any time of day, and it has generated data showing that the risk of hypoglycemia, a much-feared side effect of insulin therapy, is lower for Tresiba than with Lantus, particularly nighttime hypoglycemia.

But while Novo builds up its case for Tresiba—and awaits an FDA decision on a beefed-up label that includes its hypoglycemia benefits—Levemir will continue to jockey for basal insulin share against Lantus, its follow-up Sanofi med Toujeo, and its new biosimilar, Basaglar, plus Eli Lilly’s entrants in the same class. And it’s growing in emerging markets, with a 46% increase in China last year and a 27% hike in the 153 other nations outside the big U.S., Asian and European countries.
5. Humalog

Company: Eli Lilly
2016 U.S. sales: $1.69 billion
Drug class: Fast-acting insulin

Demand for Eli Lilly’s fast-acting insulin Humalog grew in the U.S. last year, but that didn’t stop sales from shrinking.

Sales for the Indianapolis drugmaker’s top product decreased 5% from the year before, driven by lower realized prices, Lilly said. Translation? Discounts in a drug class that’s been seriously pressured by payers. Rebates and discounts are digging into list prices, yielding less revenue on a net basis.

Things may get more difficult for the Lilly med as biosimilars move in. Sanofi, which knows a thing or two about insulin after fielding star med Lantus, is developing its biosimilar SAR342434. In May, that Humalog copy snagged a positive recommendation from the European Medicines Agency’s Committee for Medicinal Products for Human Use (CHMP). Globally, Humalog brought in $2.77 billion.

The Humalog biosim may find a U.S. audience ready and willing to prescribe it, too, according to results from a recent Barclays survey. 42% of respondents said they expected to write scripts for the medication once it arrives, versus just 10% who thought they’d prescribe Basaglar—a Lilly copy of Lantus—a year from now, analyst Geoff Meacham wrote to clients.

One potential reason? The rapid-acting insulin market is far more concentrated—namely on Humalog and Novo Nordisk’s NovoLog—than the basal insulin market, which features more competition, Meacham wrote. “Respondents may be more open to a potential new rapid-acting option as bargaining power could be limited.”
6. NovoLog

Company: Novo Nordisk
2016 U.S. sales: $1.64 billion
Drug class: Fast-acting insulin

Fast-acting mealtime insulin NovoLog, also sold around the world as NovoRapid, did well last year for maker Novo Nordisk in the U.S. The product raked in 56% of its $2.96 billion in global 2016 sales in the States. But the company had been hoping it would have an even quicker version approved before the year closed.

That fast-acting formula, already marketed as Fiasp in the U.K., Germany, and Canada, accelerates NovoLog’s onset of action, and it has potential for dosing both before and after meals.

The FDA, though, had different ideas. In October, it handed the Danish drugmaker a complete response letter, requesting more immunogenicity and clinical pharmacology data before it wrapped its review.

But the company is hoping the regulatory hurdle won’t set it back too far, especially as it struggles, along with its fellow diabetes drugmakers, under increased U.S. payer pressure. It’s already resubmitted the med in the U.S., and none too soon: Novo Nordisk’s formulation patent on NovoLog is set to expire this month.
7. Invokana

Company: Johnson & Johnson
2016 U.S. sales: $1.27 billion
Drug class: SGLT2

2016 wasn’t the easiest year for Invokana. For one, European regulators began scrutinizing the med over a potential link to toe amputations; in May, the FDA followed up with a black box warning citing an increased risk of leg and foot amputations.

And for two, Johnson & Johnson watched as SGLT2 class rival Jardiance, a med from Eli Lilly and Boehringer Ingelheim, landed a new indication for decreasing the risk of cardiovascular death among high-risk Type 2 diabetes patients.

Questions also swirled around the growth rate of the SGLT2 class in general, and how far it could go.

Still, J&J’s med posted a better sales year than it did in 2015—even if the numbers grew less than they had in the past. Worldwide sales rose to $1.41 billion, marking a 7.6% increase that the company attributed to SGLT2 market growth.

J&J is hoping 2017 can help Invokana ramp up further. It’s expecting its own cardiovascular outcomes data, which, if positive, could help it beat back competition from both Lilly and BI’s med and AstraZeneca’s Farxiga, which will be the last of the bunch to tally outcomes results.
8. Janumet

**Company:** Merck & Co.  
**2016 U.S. sales:** $984 million  
**Drug class:** DPP-4 combo drug

Janumet combines Merck’s blockbuster DPP-4 drug Januvia with metformin, the standard diabetes drug that’s many patients’ first introduction to treatment for their disease. In that, it’s like many metformin combo drugs on the market, including those in Janumet’s class—Eli Lilly’s Jentadueto, combining Tradjenta and metformin, or AstraZeneca’s Kombiglyze, an Onglyza-metformin marriage.

But Janumet is part of the overall Januvia franchise, and Januvia remains a powerhouse diabetes drug. The second-best-selling diabetes med in the U.S., Januvia brought in $2.29 billion in sales last year in the States, and almost $4 billion worldwide, despite competition in the field that continues to grow.

Like their fellow DPP-4 meds, Januvia and Janumet have to contend with other noninsulin diabetes therapies, including the newest class, SGLT2 drugs. And with one of those meds—Lilly and Boehringer Ingelheim’s Jardiance—now recognized by the FDA for its ability to cut cardiovascular risks, the interclass competition is increasingly fierce.

But that’s where a potential follow-up combination med to Janumet could be: in the SGLT2 field. Merck is working with Pfizer on an entry in that class, ertugliflozin, and a Januvia-ertugliflozin combination, too. In fact, the potential Januvia combo was one reason Merck jumped into the SGLT2 business in the first place, a Merck diabetes exec told FiercePharma last year.

Word on that new combo is expected by year’s end. The FDA accepted the two partners’ applications—for ertugliflozin, the ertugliflozin-Januvia combo and an ertugliflozin-metformin combo—in March of this year, with an agency action date set in December.
9. Humulin

Company: Eli Lilly
2016 U.S. sales: $862 million
Drug class: Human insulin

Eli Lilly’s Humulin has been around for a long, long time, but it’s still pumping out sales growth. In 2016, that sales growth measured a substantial 13% in the U.S.

The reasons? Demand for the Indianapolis drugmaker’s product increased, it said, and that was the primary driver. But Lilly also benefitted from higher net prices, thanks to a change in the estimate of a government rebate in the first quarter of last year.

For a long time, Lilly kept the growth coming with list price increases on its elderly and long-off-patent med. Between 2007 and 2013, Humulin’s price leapt by 354%, offsetting payer pressure and the termination of an agreement with Walmart.

After taking a 17.5% price hike on Humulin in 2015, however, Lilly cut its increase by more than half to 7.5% in 2016, according to Wells Fargo analyst David Maris. And as of late January of this year, the company had yet to take one at all.
10. Trulicity

Company: Eli Lilly
2016 U.S. sales: $738 million
Drug class: GLP-1

Eli Lilly’s Trulicity may not have the heart-helping data its GLP-1 rival Victoza has, but the once-a-week drug has been snatching up market share nonetheless. For the week ending May 19, Trulicity’s new-to-brand share increased by 73 basis points worldwide, and its total prescription share shot up by 54 basis points, according to Barclays analysts.

That share-stealing trend helped the medication post a huge year-over-year leap in U.S. sales in 2016. In 2015, its first full year on the market, Trulicity reeled in just $207.7 million. Growth of the GLP-1 class in general helped in that department too, Lilly said.

In the GLP-1 space, Trulicity is up against a Novo Nordisk foe in Victoza, which has shown it can lower the combined risk of heart attack, stroke and cardiovascular death among high-risk patients. But unlike Trulicity, Victoza is dosed daily. The Danish drugmaker has a weekly candidate on the way in semaglutide, and an outcomes trial suggested that medication can cut cardiovascular risks, too.

Trulicity last year got a data boost of its own, however, showing it could top Sanofi insulin giant Lantus in measures ranging from A1C reduction to weight loss. With that showing under its belt, Lilly turned right around and inked a pay-for-performance deal with Harvard Pilgrim.