Closer Look

MEMORANDUM

Express Scripts releases 2014 Drug Trend Report - August 24, 2015

Executive Highlights

- Express Scripts recently released its 2014 Drug Trend Report, which found that diabetes continued to post the highest drug spending of any non-specialty class, with increased unit costs accounting for a large portion of the total increase.
- Total diabetes spend increased 18% in the commercially-insured sector, 26% in Medicare, and 18% in Medicaid; Express Scripts projects that diabetes spend will continue to increase by 18% annually in 2015-2017. Some of this obviously relates to an increased number of patients though much more seems increases in prices of drugs. Though we believe that overall, more people taking the optimal drugs and the optimal time is very positive for long-term outcomes, these increases are very tough in a system that already has immense challenges.

Express Scripts recently released its 2014 Drug Trend Report, *which reported that for the fourth year in a row, per member drug spending was higher for diabetes than any other traditional, non-specialty area in 2014. As background, this report examines drug spending trends by product and disease area across Express Scripts' entire membership (Express Scripts is the country's largest pharmacy benefits manager by prescription volume according to the Wall Street Journal). By health coverage type, diabetes spending was $98, $359, and $106 per member per year (PMPY) in the commercially insured, Medicare, and Medicaid segments, respectively; total spend increase came in at 18% for the commercially insured, 26% for Medicare, and 18% for Medicaid. This means for EVERY member (not just those with diabetes!), that is what the spending was - that number for Medicare is obviously very high (though it reinforces that once someone has a heart attack, or experiences other long term and often avoidable complications, that number goes up even more!) The report noted that diabetes medications were the only class of traditional therapies (those for common chronic diseases) to have a significant increase in PMPY (per member per year) spend in 2014; Express Scripts largely attributed this to the arrival of the SGLT-2 inhibitor drug class, brand innovation, and price inflation, by the way, not to increased complications - though we believe with fewer long-term complications, that cost curve could be bent in a major way. Indeed, though, recent CDC research also demonstrated significant growth in prescription medication spending, indicative of the emergence of new drug classes - to be sure, while these newer drugs certainly have greater upfront costs, we believe that their greater safety and efficacy (less hypoglycemia and weight gain) will be an overall net positive for patients, providers, and payers in the long run. That said - we're in a "cure-driven" culture where positive implications on long-term complications are under-valued (if valued at all).*

In addition, the Drug Trend Report states that specific diabetes products accounted for more of the top ten highest PMPY spend drugs than any other class within the traditional therapy category. The high drug price trend is likely only to continue - Express Scripts projects an 18% PMPY increase in diabetes product spend every year for the next three years in the commercially-insured sector. Other interesting statistics in the report include: only 48% of prescriptions for diabetes were generic (much lower than expected actually) but generic drugs make up three of the five most common prescriptions for diabetes (metformin, glipizide, glimepiride); 39% of diabetes patients are what the report authors term "non-adherent"; and the average cost of each diabetes prescription was $111/month. Notably, although diabetes had the highest PMPY cost, the prevalence of use for diabetes medications was relatively low with diabetes prescriptions averaging 0.9 PMPY and the prevalence of use at only 5.1%. We find this low prevalence pretty surprising, although this likely speaks to greater increases in unit costs (see below), non-adherence, and underdiagnosis and undertreatment of diabetes. See below for more details on 2014 trends and additional commentary.

- **Increased unit costs accounted for a large portion of the total increase in PMPY spend, though utilization of diabetes products was also up.** In the commercially-insured sector, unit costs were up 16% in 2014, while unit costs were up 22% in the Medicare sector and 17% in the Medicaid sector. This also suggests that increased spending among existing patients was a bigger driver of total spend increase than new patient spending. The report noted that several new drug approvals in 2014 - especially in the SGLT-2 inhibitor class - likely contributed to increased prices: AZ's Farxiga (dapagliflozin), Lilly/BI's Jardiance (empagliflozin), J&J's Invokamet (canagliflozin/ metformin), and GSK's GLP-1 agonist Tanzeum (albiglutide) were all approved in 2014.
- **Diabetes products accounted for a significant portion of the top 10 traditional therapy drugs with the highest spend.** Within the commercial sector, Sanofi's Lantus (insulin glargine) had the third highest PMPY spend among traditional therapies, Lilly's Humalog (insulin lispro) came in at number five, OneTouch Ultra test strips took seventh place, and Merck's Januvia (sitagliptin) rounded out the list at number 10. Looking at Medicare, Lantus was the drug with the highest spend, followed by Januvia at number eight and Novo Nordisk's Levemir (insulin detemir) at number 10. In Medicaid, Lantus, Humalog, and OneTouch Ultra test strips took the second, third, and fourth places, respectively.
- **Not surprisingly, increases in insulin unit costs in particular drove increased diabetes spend.** Lantus saw an increase in unit cost of 34%, 32%, and 33% in commercially-insured, Medicare, and Medicaid, respectively. Humalog unit costs increased by 36% in the commercially-insured sector and 26% in Medicaid. Levemir unit cost increased 48% in Medicare. Express Scripts noted that price inflation of Lantus and Levemir, in particular, drove increased spend in the commercial sector. We imagine this is due to the huge portion (85%) of the basal insulin market and correspondingly, the huge number of patients the two products hold. On the other hand, Humalog saw the highest unit cost increase for an insulin and the highest total spend increase - a whopping 93% increase. While the increased unit cost undoubtedly drove some of this increase, the huge 57% increase in utilization likely played a bigger role. We imagine awarding of the exclusive Express Scripts contract to Humalog in 2014 likely accounted for this significant boost in Humalog utilization among Express Scripts members. Express Scripts' recently-released formulary exclusion list for 2016 continues to block out NovoLog in favor of Humalog, so we'd expect the utilization trend for Humalog to stabilize in future reports. Overall, the unit cost trend increases are a disappointing confirmation of growing grievances about rising insulin costs - see Dr. Irl Hirsch's presentation on this well-discussed topic at ADA as well as his third annual "rant."
    - **The Express Scripts report suggests that the increased insulin costs may stem from industry uncertainty surrounding the expiration of Lantus' patent.** The report seemed to suggest that the rising costs were a defensive measure against the threat of a market influx of significantly lower-priced biosimilars, noting that biosimilars could be priced at a 20%-40% discount. We learned during the Sanofi 2Q15 call that in overseas markets in which Lilly/BI's insulin glargine biosimilar is available, it is priced at a 15%-20% discount, though US discounts may well be larger. Interestingly, the report itself noted that Express Scripts does not expect an immediate impact from the arrival of biosimilars due to potential physician reluctance to switch patients who are doing well on the brand-name version - this has long been one of our key questions regarding the arrival of biosimilars.
- **The reported pointed out that cost increases due to PCSK9 inhibitors are on the horizon.** Though the current indication for the only US-approved PCSK9 inhibitor - Sanofi's Praluent (alirocumab) - is relatively narrow (patients with familial hypercholesterolemia or clinical atherosclerotic cardiovascular disease), the report noted that PMPY spend on high cholesterol medications could balloon if the class is approved for a wider LDL-lowering indication. Express Scripts cited projections that estimated the cost at $10,000 per patient per year - we've seen the pre-rebate list price for Praluent quoted at the price $40/day or $1120 for a 28-day supply, which translates to an even higher estimate of over $13,000 per year. Thus, reimbursement will be key for

this emerging drug class and while costly, PCSK9 inhibitors' impressive efficacy may prove to be a worthwhile investment if they can eventually be brought down to generic pricing of statins in the long-term future.

- **Express Scripts projects continued significant increases in diabetes spend for 2015-2017.** The report forecasts a steady 18% increase in PMPY diabetes spending each year for at least the next three years. The projected increase was largely attributed to brand innovation, inflation, and patients switching from generic monotherapies (like metformin) to combination products (such as metformin/DPP-4 inhibitor and metformin/SGLT-2 inhibitor combinations). Several new combinations have either arrived or are expected to hit the market soon, including Novo Nordisk's Xultophy (insulin degludec/liraglutide), Sanofi's LixiLan (insulin glargine/lixisenatide), Lilly/BI's Glyxambi (empagliflozin/linagliptin), and AZ's saxagliptin/dapagliflozin combination. In addition, Express Scripts expects the arrival of new, longer-acting DPP-4 inhibitor and GLP-1 agonists to drive diabetes spend increases in 2015 and beyond - as a reminder, Lilly's very patient-friendly Trulicity (dulaglutide) was approved toward the tail end of 2014 and will likely have an impact on 2015 diabetes spend.

-- by Helen Gao, Melissa An, Emily Regier, and Kelly Close