

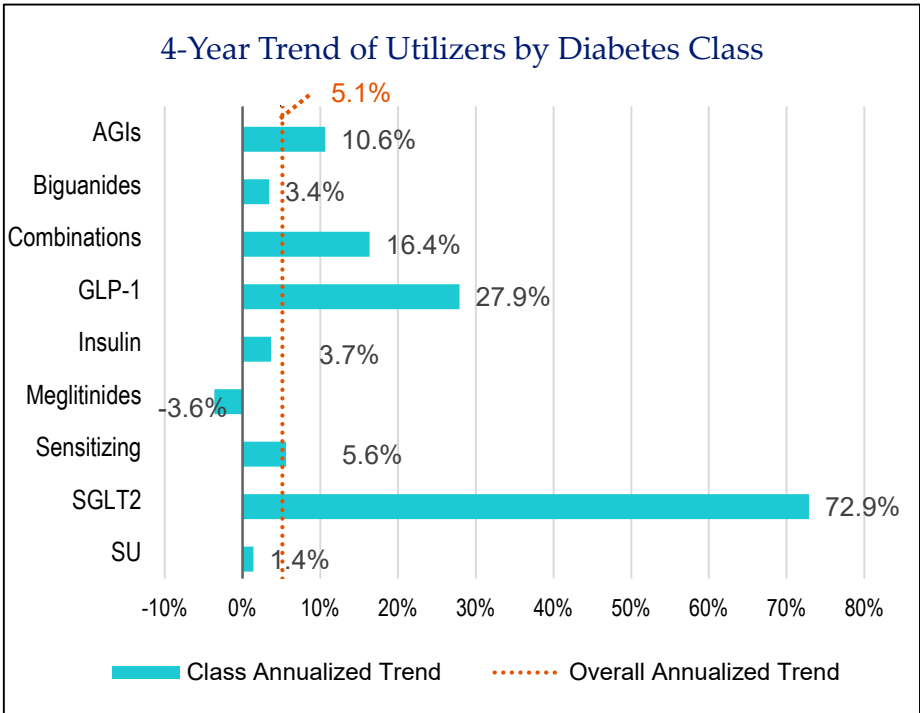
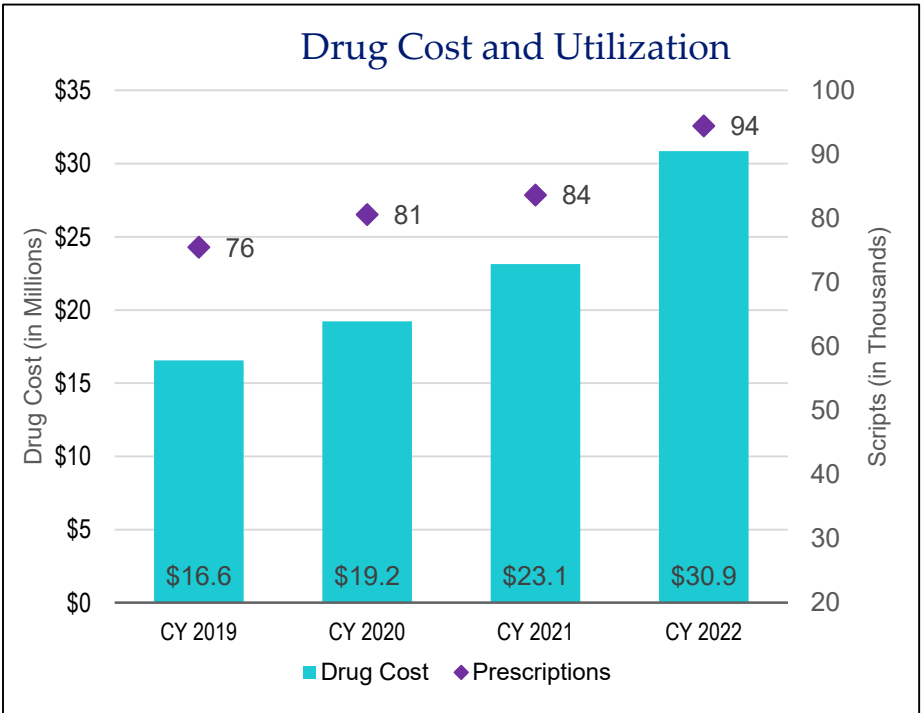


Spotlight On: Diabetes Medications

State of Arkansas – Employee Benefits Division

Diabetes Medications

Actives and Non-Medicare Retirees



Observations

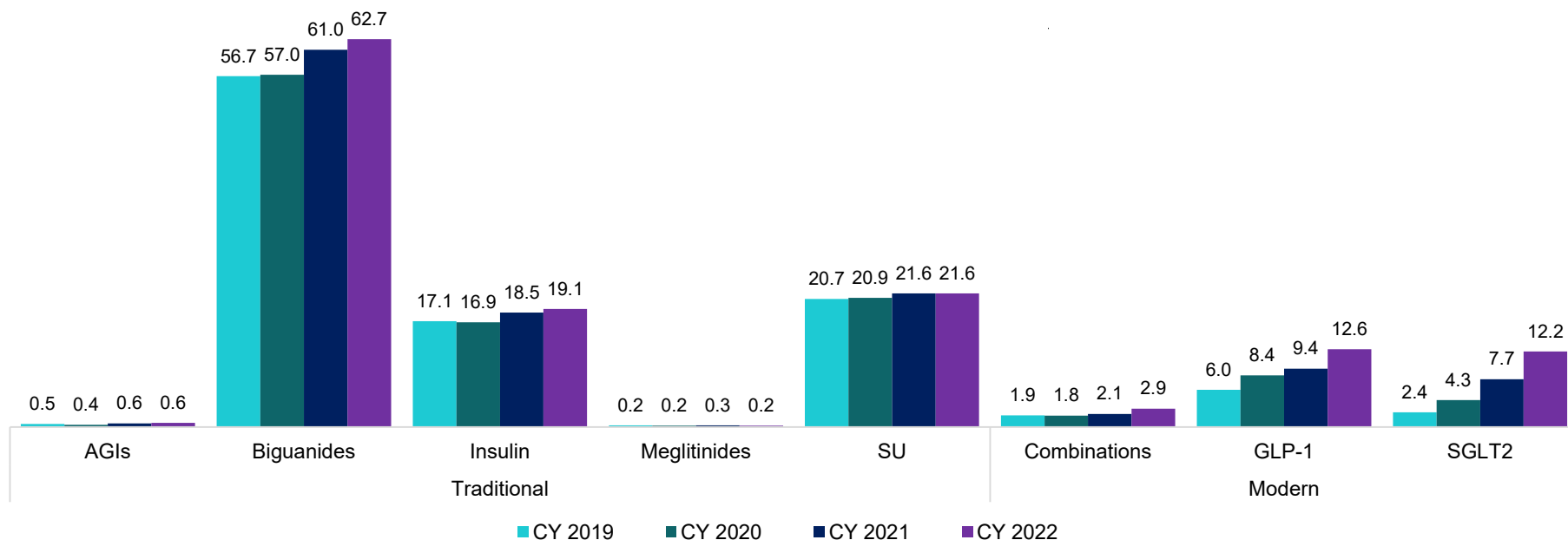
- Diabetic medication spend, on a PMPM basis, has increased at an annual rate of 21.5% from CY 2019 to CY 2022, while dispensed medications, on a per 1,000 basis, increased at a rate of 6.4% during the same period.
- The rate of increase in pharmacy total spend, scripts per 1,000, and pharmacy PMPM for diabetic medications have all increased year-over-year during this time
- Biguanides (metformin), traditionally considered first-line therapy, have increased at a rate of 3.4% over the 4-year period, below the overall rate of 5.1%, while SGLT2 and GLP-1 products have increased at an annual rate of 72.9% and 27.9% respectively. Refer to appendix for definitions of the diabetes classes.

Note: Drug costs are gross of rebates.

Diabetes Medications

Actives and Non-Medicare Retirees

Anti-Diabetic Utilizers per 1,000

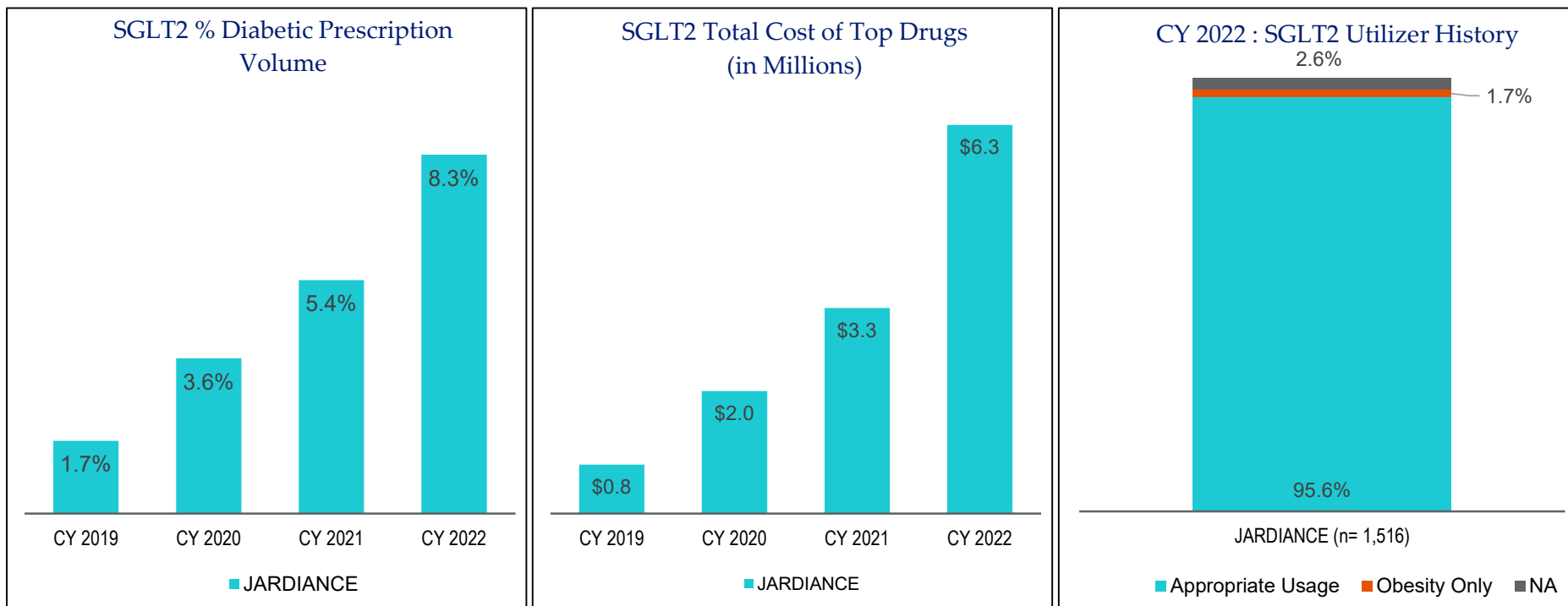


Observations

- As shown previously, SGLT2s and GLP-1s have seen the greatest increases in utilizers, followed by anti-diabetic combination products
 - These classes of medications are made up of newer, modern drug therapies compared to the other classes of medications
- Metformin (biguanides) are used by approximately 75% of all diabetic medication users in CY 2022, which has steadily decreased from 79.0% in CY 2019
- While SGLT2 utilization has increased to the greatest extent, the number of users per 1,000 is still slightly below that of GLP-1s (12.2 per 1,000 vs 12.6 per 1,000)
 - 14.6% of diabetic medication utilizers filled an SGLT2 medication in CY 2022 vs 3.3% in CY 2019 compared to 15.1% and 8.4% for GLP-1 medications in CY 2022 and CY 2019, respectively

Diabetes Medications (SGLT2)

Active & Non-Medicare Retirees



Observations

- For SGLT2s, Jardiance was the sole prescribed drug within the SGLT2 drug class (other SGLT2 medications were not covered prior to Oct 1, 2023)
- Jardiance's dispensed volume share increased from 1.7% (or \$0.8M in cost) of all diabetic medications dispensed in CY 2019 to 8.3% (or \$6.3M in cost) in CY 2022.
- The top right chart outlines the prior medical history of current period utilizers for these medications.
 - 95.6% of the 1,516 Jardiance utilizers in the current period had a history of an approved indication. Meanwhile, 2.6% of utilizers had a history of obesity in absence of an approved indication.

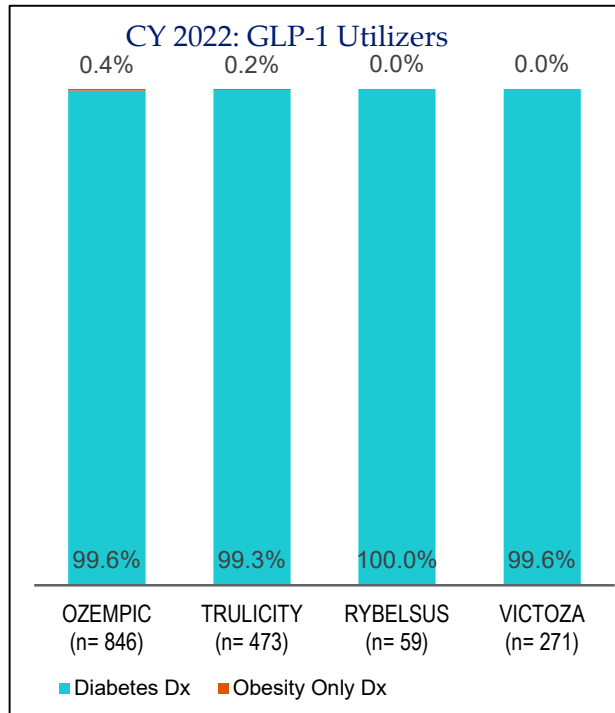
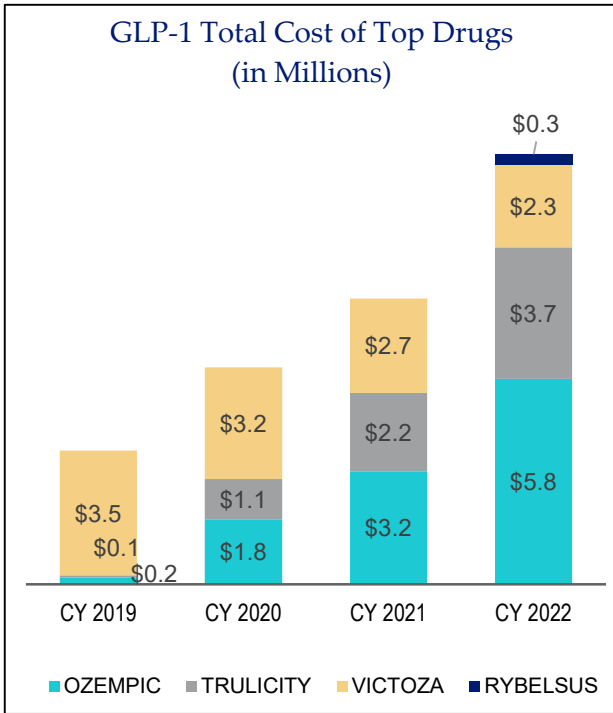
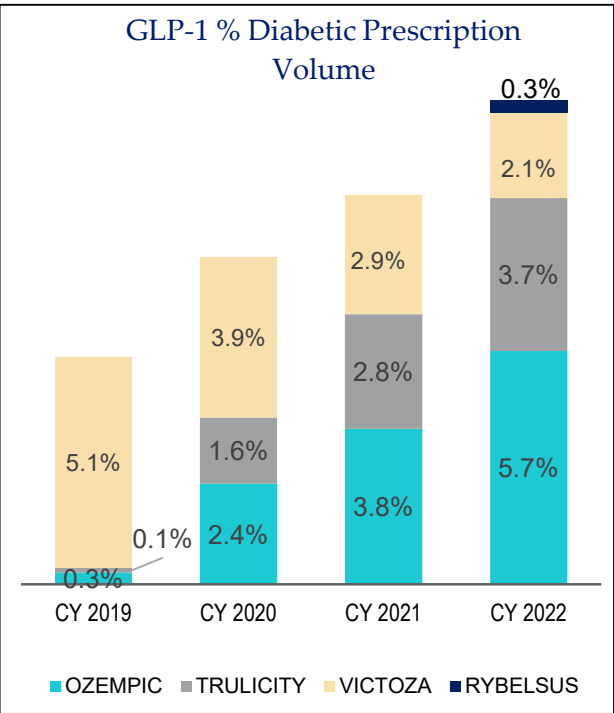
Appropriate Usage means the utilizer had a history of any combination of the following medical diagnoses: diabetes, heart failure, and/or chronic kidney disease.

Obesity Only means the utilizer had a history of obesity medical diagnosis and no history of diabetes, heart failure, and/or chronic kidney disease diagnosis.

NA means that there is no adequate history to assess prior diagnosis. This would include new members joining the Plan.

Diabetes Medications (GLP-1)

Actives and Non-Medicare Retirees



Observations

- Ozempic, Trulicity, Victoza, and Rybelsus comprise the list of drugs dispensed within the GLP-1 class (additional medications in the class were added to the formulary effective 10/1/2023).
- Ozempic has seen the highest change in dispensed volume share, increasing from 0.3% of all diabetic medications dispensed 4 years ago to 5.7% in CY 2022.
- The top right chart outlines historical medical diagnoses of current period utilizers for these medications – as with SGLT2s, there is little concern of off-label utilization
 - 843 (or 99.6%) of the 846 Ozempic utilizers in the CY 2022 had a history of diabetes. Only 3 utilizers had a history of obesity in absence of a diabetes diagnosis.

Diabetes Dx means that utilizer had history of diabetes medical diagnosis

Obesity Only means that utilizer had history of obesity medical diagnosis and no history of a diabetes diagnosis

NA means that there was no adequate history to assess historical diagnosis. This would include new members joining the Fund.

Diabetes Medications

Actives and Non-Medicare Retirees

Top 15 Diabetes Drugs (Ranked by Cost)

Rank	Drug Name	Drug Class	Rank Movement	CY 2022				4-Year Annualized Trend			
				Scripts ¹ per 1,000	Total Cost ² PMPM	Cost ² per Script	Utilizers per 1,000	Scripts ¹ per 1,000	Total Cost ² PMPM	Cost ² per Script	Utilizers per 1,000
1	JARDIANCE	SGLT2	▲ 5	63.1	\$4.22	\$802	12.2	81.0%	96.8%	8.7%	72.9%
2	OZEMPIC	GLP-1	▲ 7	43.1	\$3.90	\$1,087	6.8	188.9%	213.3%	8.4%	96.8%
3	TRULICITY	GLP-1	▲ 9	28.3	\$2.51	\$1,063	3.8	248.7%	278.9%	8.7%	133.1%
4	TOUJEO	Insulin	▬ 0	32.0	\$2.13	\$797	5.0	9.1%	11.5%	2.2%	6.5%
5	LANTUS	Insulin	▼ 3	41.7	\$2.05	\$588	8.8	-7.6%	-7.2%	0.5%	-1.6%
6	VICTOZA	GLP-1	▼ 3	15.8	\$1.57	\$1,197	2.2	-21.3%	-13.9%	9.4%	-24.4%
7	INSULIN	Insulin	▬ 0	67.5	\$1.45	\$258	11.7	81.9%	52.3%	-16.3%	39.7%
8	HUMALOG	Insulin	▼ 7	8.2	\$0.75	\$1,102	1.8	-38.9%	-35.0%	6.3%	-39.3%
9	HUMULIN	Insulin	▼ 4	7.8	\$0.59	\$910	1.3	-0.8%	1.4%	2.1%	-1.6%
10	SYNJARDY	Combinations	▲ 3	7.9	\$0.56	\$843	1.4	98.0%	130.3%	16.3%	78.5%
11	RYBELSUS	GLP-1	NA	2.2	\$0.20	\$1,070	0.5	No Historical Data			
12	METFORMIN	Biguanides	▼ 4	289.4	\$0.17	\$7	62.7	-0.5%	-7.4%	-6.9%	3.4%
13	LYUMJEV	Insulin	NA	2.5	\$0.15	\$740	0.4	No Historical Data			
14	SOLIQUA	Combinations	▲ 16	1.8	\$0.12	\$802	0.4	500.0%	962.2%	77.0%	268.8%
15	GLIPIZIDE	SU	▼ 5	58.2	\$0.07	\$14	12.2	1.9%	0.9%	-1.0%	5.5%
Top 20 (% of Total)				83,166 (88%)	\$30,447,646 (99%)						

Observations

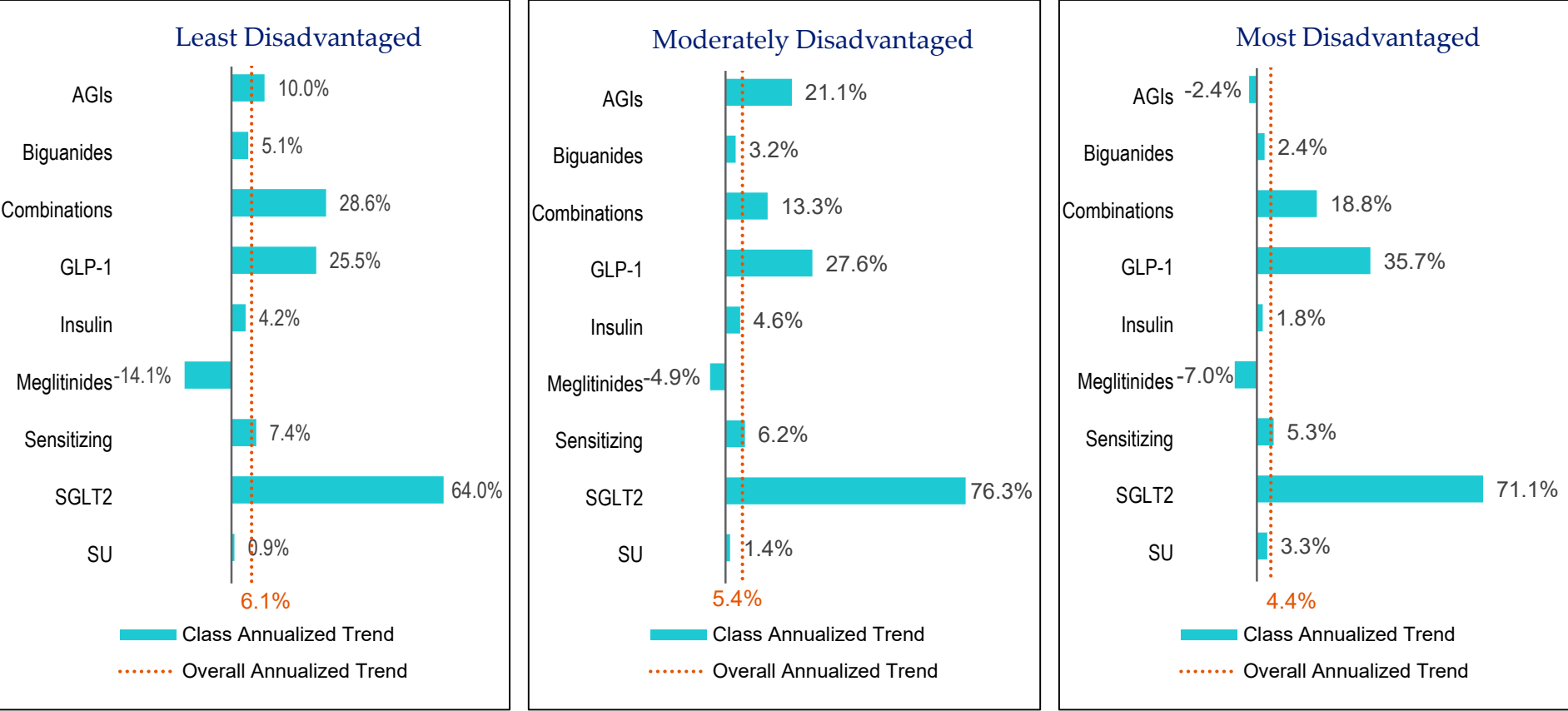
- Jardiance (SGLT2) was the highest diabetic drug by cost. Utilizers of Jardiance increased at an annual rate of 72.9% when compared to CY 2019.
- Utilizers of Ozempic (GLP-1), which ranked second highest, increased at an annual rate of 96.8% when compared to CY 2019.
 - Victoza, the earliest approved GLP-1 covered during this time, has seen decreased market share over the last 4 years
 - Total GLP-1 costs will likely increase due to continued higher utilization as well as addition of higher-cost agents effective Oct 1, 2023, such as Mounjaro
- Conversely, insulin costs should decrease with tier 1 generic options available for medications like Lantus and others

¹ Both 30-day and 90-day dispensed drugs are counted as one (1) script.

² Drug costs are gross of rebates.

Diabetes Medications

Actives and Non-Medicare Retirees



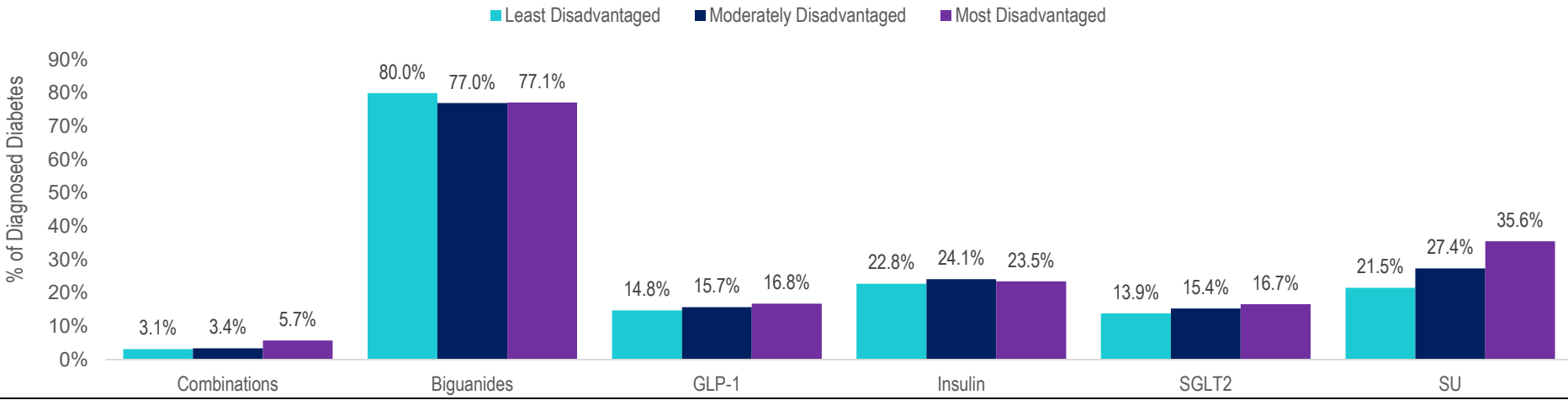
Observations

- The charts above compare the annualized trend by Area of Deprivation Index (ADI). Refer to the main Diabetes report for details regarding ADI.

Diabetes Medications

Actives and Non-Medicare Retirees

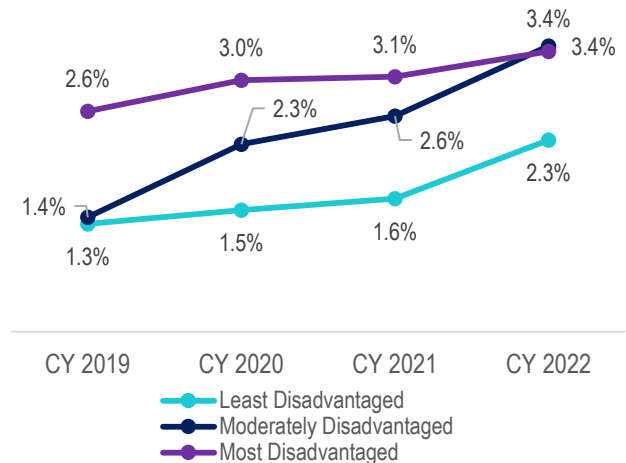
Anti-Diabetic Medication Class Utilization Rates by ADI



Observations

- The above shows the rate of utilization by Area of Deprivation Index (ADI) in CY 2022 for the most common anti-diabetic medication classes (Refer to the main Diabetes report for details regarding ADI).
- The most disadvantaged group has higher utilization rates of the newer GLP-1, SGLT2, and combination medications, as well as for older, higher-risk sulfonylurea medications compared to other groups
 - The newer medications are generally tier 2 and above, which result in higher OOP expense for members, which could be significant for those in the most disadvantaged group
- SGLT2 medications are considered first-line for diabetic members with cardiovascular disease risks, such as congestive heart failure. Members in the higher ADI groups have higher prevalence of CHF, which contributes to greater utilization among these members.
- Members with CHF often have total medical PMPY 5 – 10 times higher than the average population

CHF Prevalence in Diabetics



Appendix

Abbreviations for Diabetic Classes

Medication Class	Abbreviation	Typical Medication Use Case	Examples
Alpha-Glucosidase Inhibitors	AGIs	Inhibit the absorption of carbohydrates from the small intestine	Acarbose (Precose), Miglitol (Glyset)
Antidiabetic - Amylin Analogs	Amylin	Injected medicine for people with type 1 and type 2 diabetes that helps control blood sugar levels after eating	Pramlintide (Symlin)
Antidiabetic Combinations	Combinations	Medicines with two or more classes of antidiabetic agents (with different mechanisms of action) in one pill or dose	Sitagliptin/Metformin (Janumet), Insulin glargine/Lixisenatide (Soliqua)
Biguanides	Biguanides	Oral diabetes medication that helps lower blood sugar levels for people with Type 2 diabetes	Metformin
Diabetic Other	Other	Other diabetic medication such as glucose tablets.	Glucose tablets
Diabetic Supplies	Supplies	Supplies such as needles and test strips.	Needles, lancets
Dipeptidyl Peptidase-4 (DPP-4) Inhibitors	DPP-4	Used with diet and exercise to control high blood sugar in adults with type 2 diabetes	Linagliptin (Tradjenta), Sitagliptin (Januvia)
Dopamine Receptor Agonists - Antidiabetic	Dopamine	Used with diet and exercise to improve glycemic control in adults with type 2 diabetes	Bromocriptine (Cycloset)
Incretin Mimetic Agents (GLP-1 Receptor Agonists)	GLP-1	Used to treat type 2 diabetes mellitus and, in some cases, obesity	Dulaglutide (Trulicity), Semaglutide (Ozempic)
Insulin Sensitizing Agents	Sensitizing	Work to lower blood sugar by increasing the muscle, fat and liver's sensitivity to insulin	Pioglitazone (Actos)
Insulin	Insulin	Controls blood glucose levels	Insulin aspart (Novolog), Insulin glargine (Lantus)
Meglitinide Analogues	Meglitinides	Increases insulin secretion; in particular, during the early phase of insulin release	Nateglinide (Starlix), Repaglinide (Prandin)
Sodium-Glucose Co-Transporter 2 (SGLT2) Inhibitors	SGLT2	Used to lower blood sugar in adults with type 2 diabetes	Canagliflozin (Invokana), Empagliflozin (Jardiance)
Sulfonylureas	SU	Older class of oral antidiabetic medication that is rarely used nowadays	Glimepiride, Glyburide

A Word About Privacy

- Data presented has been “de-identified”, which means it does not contain names or SSNs, etc.
- Specific medical conditions are identified.
- If the plan administrator knows the identity of individuals with a specific condition, that information is considered PHI.
- PHI is subject to the HIPAA Privacy Rule's protections, which means it must be kept confidential and cannot be used for any reason other than health plan administration (e.g., using it for employment purposes, or by other benefit plans, is prohibited).