

MEDICAL

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Diabetes – Medication Utilization and Management

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State of Arkansas – Employee Benefits Division



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Diabetes											
Calendar Year	Members	% of Members with Type II	Overall Prevalence ¹	Total Cost	% of Total	Medical & Rx PMPM	Relative Cost ²	Medical Cost	Rx Cost	Rx Cost (Diabetic Only)	
2019 ³	8,475	91%	7.0%	\$88,522,241	17%	\$889	2.4x	\$57,529,843	\$30,992,398	\$15,800,151	
2020	9,435	90%	7.7%	\$118,321,880	22%	\$1,062	2.7x	\$80,602,400	\$37,719,480	\$18,581,485	
2021	10,015	90%	8.1%	\$124,924,807	21%	\$1,060	2.5x	\$79,466,391	\$45,458,416	\$22,387,750	
2022	9,981	92%	92% 8.0%		22%	\$1,083	2.6x	\$70,097,622	\$57,240,746	\$29,482,231	
	Histo	rical Diabetes	Prevalence	9			Historie	cal Cost Dist	ribution		
786		983	974	798		<mark>17%</mark> 18%	169 169	%	18% 18%	22% 23%	
7.0%		7.7% 8,452	9,041	8.0% 9,183	_	65%	68%	%	64%	55%	
2019		2020	2021	2022		2019	202	20 2	2021	2022	

- The average diabetes prevalence for Plan members is around 8%. This is high when compared to Segal's SHAPE⁴ benchmark of 6.1%.
- Members with diabetes account for 21%, on average, of the total medical and prescription drug spend for the Plan. This is in-line with our SHAPE benchmark of 22%.
- The bottom right chart shows that diabetic Rx spend has increased from about 35% in CY 2029 to 45% in CY 2022. Rx spend is evenly split between diabetes and non-diabetes related medications.



¹ Reflects the ratio of diabetic members to the total number of enrolled members

² Reflects the ratio of PMPM costs of members with diabetes to the PMPM cost of the total enrolled population.

³ Calendar year 2019 shows lower identified diabetics, when compared to other years, due to no claims experience being available prior to January 2019.

⁴ SHAPE is Segal's internal data warehouse. Benchmarks are based on calendar year 2021 claims experience for 2.3M lives.

Demographic Distribution by ADI¹ Active and Non-Medicare Retiree



Observations

- This page reflects the Plan's demographic breakdown by ADI, for CY 2022.
- The top left chart shows that diabetic members are predominantly females, with similar distribution across all ADI groups. This is comparable to the overall Plan membership.
- The top right chart shows that the majority of diabetics are aged 50+ with the highest ratio within the 8-10 band. Ageband distribution is vastly different when looking at the overall Plan membership.
- The Bottom right shows that Female 50 + have the highest number of diabetics and this number increases with the most severe ADI groups.





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¹ Refer to appendix for more details on Area Deprivation Index (ADI).

Members and Claims by ADI¹ Active and Non-Medicare Retiree

		Members		Diabetes Prevalence					
		5,804 (58%)				10.4%			
Categories	Least Disadvantaged (1-3)	Moderately Disadvantaged (4-7)	Most Disadvantaged (8-10)	2,869 (29%)		1,308	6.5%	8.5%	
	Member			(13%)	-		-		
Members	2,869	5,804	1,308	1.0	4.7	0.40	1.2	4.7	0.40
% of Total	29%	58%	13%	1-3	4-7	8-10	1-3	4-7	8-10
		Medical PMPM Rx PMPM							
Diabetes	6.5%	8.5%	10.4%						
Obesity	15.9%	19.0%	21.7%	\$569	\$612	\$588			
	Claim Exp				\$508	\$481	\$468		
Medical PMPM	\$569	\$612	\$588						
Rx PMPM	\$508	\$481	\$468						
Total PMPM	\$1,076	\$1,093	\$1,056	1-3	4-7	8-10	1-3	4-7	8-10

- Most diabetics, 58%, reside in moderately disadvantaged areas. However, the most disadvantaged areas have the highest diabetes prevalence for the Plan at 10.4%.
- Obesity prevalence is also the highest in the most disadvantaged areas, at 21.7%.
- Medical and Rx cost, on a PMPM basis, are comparable between ADI groups.



Key Utilization by ADI¹ Active and Non-Medicare Retiree

Area Depriva	Most to Least Variance						
Categories	Least Disadvantaged (1-3)	Moderately Disadvantaged (4-7)	Most Disadvantaged (8-10)	Hospital Inpatient			
Key Utilizat	Emergency Room	99	9%				
Hospital Inpatient	83	87	85			,.	
Emergency Room	268	316	291	Urgent Care	-64%		
Urgent Care	93	42	33	Droventive Visite	400/		
Preventive Visits	394	326	237	Preventive visits	-40%		
Telehealth Visits	909	488	336	Telehealth Visits	-63%		
Rx Scripts	38,877	41,771	47,489				
Diabetic Scripts	8,249	9,278	10,277	Rx Scripts (Diabetic)	25	<mark>5%</mark>	
Non-Diabetic Scripts (Maintenance)	21,221	23,149	27,281	Rx Scripts (Non-Diabetic)	21	1%	
All Other Scripts	9,407	9,344	9,930			10	

- The above breakdown of key utilization metrics shows that high-cost treatment settings, e.g. hospital inpatient and emergency room, is the highest for the most disadvantaged members (ADI 8-10). On the other hand, low-cost treatment settings, e.g. urgent care and telehealth, are the lowest for most disadvantaged members.
- Preventive visits were also the lowest for the most disadvantaged group.
- Dispensed Rx scripts, for all types of drugs, were highest for the most disadvantaged group compared to the other groups.



¹ Refer to appendix for more details on Area Deprivation Index (ADI)

Top Drug Indicators by ADI¹ Active and Non-Medicare Retiree

ADI Group	Drug Indication	Utilizers	% of Scripts ²	Drug Cost per Utilizer	Drug Cost PMPM ³	% of Total Rx PMPM ⁴	Top 5 Drug Indicators by ADI (Sorted by Drug Cost PMPM)					DI 1)		
Least Disadvantaged (n=2,869)	Diabetes	2,612	21%	\$2,654	\$204.93	48%		(50116	u by Diu	ig Co		(1)		
	Autoimmune Disease	35	0.3%	\$51,272	\$53.06	13%		Diabotos	· · ·			¢ე	005	
	Oncology	93	0.5%	\$15,848	\$43.58	10%	-3)	Autoimmune Disease	_	\$53		φz	∎ ⊅205	
	Psoriasis	13	0.1%	\$71,192	\$27.36	6%	st (1.	Oncology	\$4	44 44				
	Cardiovascular	151	0.8%	\$4,463	\$19.92	5%	Lea	Psoriasis	\$27					
Moderately Disadvantaged	Diabetes	5,396	22.2%	\$2,666	\$210.65	54%		Cardiovascular	\$20					
	Autoimmune Disease	68	0.2%	\$38,940	\$38.78	10%	(7-4	Diabetes	¢-2(0		\$	5211	
	Psoriasis	38	0.1%	\$48,984	\$27.26	7%	ate (2	Autoimmune Disease Psoriasis	\$27	9				
(n=5,804)	Cystic Fibrosis	4	0.0%	\$267,191	\$15.65	4%	odera	Cystic Fibrosis	\$16					
	Oncology	160	0.4%	\$6,318	\$14.80	4%	Mc	Oncology	\$15					
Most Disadvantaged (n=1,308)	Diabetes	1,224	21.6%	\$2,676	\$212.07	56%	(0	Diabetes				\$	\$212	
	Autoimmune Disease	17	0.3%	\$52,747	\$58.06	15%	(8-1	Autoimmune Disease	¢07	\$58				
	Psoriasis	10	0.1%	\$42,409	\$27.46	7%	hest	Psoriasis	\$2/ \$13					
	Oncology	34	0.3%	\$5,974	\$13.15	3%	Hig	Blood Disorders	\$12					
	Blood Disorders	118	1.2%	\$1,525	\$11.65	3%			J 1		1	I		

- The overall disease categories used by the three ADI groups is similar with the primary exception of oncology
 - Members of the least disadvantaged group have higher relative spend on oncology medications in the pharmacy setting than the other groups, which could be an indicator of issues with affordability or preventive cancer screenings seen in those groups
- Additionally, PMPM spend on diabetes is highest in the most disadvantaged group while the total Rx PMPM is lowest as seen previously
 - As newer medications are utilized, member OOP increases due to higher brand copays, which could have a greater impact on this group



¹ Refer to appendix for more details on Area Deprivation Index (ADI)

² Reflects the ratio of scripts dispensed for the specific drug indicator to the total number of scripts dispensed within the specified ADI group.

³ Reflects the drug cost, per diabetic per month, of the specified drug indicator.

⁴ Reflects the ratio of drug cost PMPM of the specific drug indicator to the total drug cost PMPM within the specified ADI group.



About the Area Deprivation Index (ADI)

The Area Deprivation Index (ADI) is based on a measure created by the Health Resources & Services Administration (HRSA) over three decades ago, and has since been refined, adapted, and validated to the Census Block Group neighborhood level by Amy Kind, MD, PhD and her research team at the University of Wisconsin-Madison. It allows for rankings of neighborhoods by socioeconomic disadvantage in a region of interest (e.g. at the state or national level). It includes factors for the theoretical domains of income, education, employment, and housing quality. It can be used to inform health delivery and policy, especially for the most disadvantaged neighborhood groups.

https://www.neighborhoodatlas.medicine.wisc.edu/

What do the ADI values mean?

The ADIs on this website are provided in national percentile rankings at the block group level from 1 to 100. The percentiles are constructed by ranking the ADI from low to high for the nation and grouping the block groups/neighborhoods into bins corresponding to each 1% range of the ADI. Group 1 is the lowest ADI and group 100 is the highest ADI. A block group with a ranking of 1 indicates the lowest level of "disadvantage" within the nation and an ADI with a ranking of 100 indicates the highest level of "disadvantage".

Similarly, ADIs are also available in deciles from 1 to 10 for each individual state. The state deciles are constructed by ranking the ADI from low to high for each state alone without consideration of national ADIs. Again, group 1 is the lowest ADI (least disadvantaged) and 10 is the highest ADI (most disadvantaged).



Appendix

Map of Area Deprivation Index

https://www.neighborhoodatlas.medicine.wisc.edu/mapping



