Should Medicare Cover Ozempic for Weight Loss?

Han Zhang

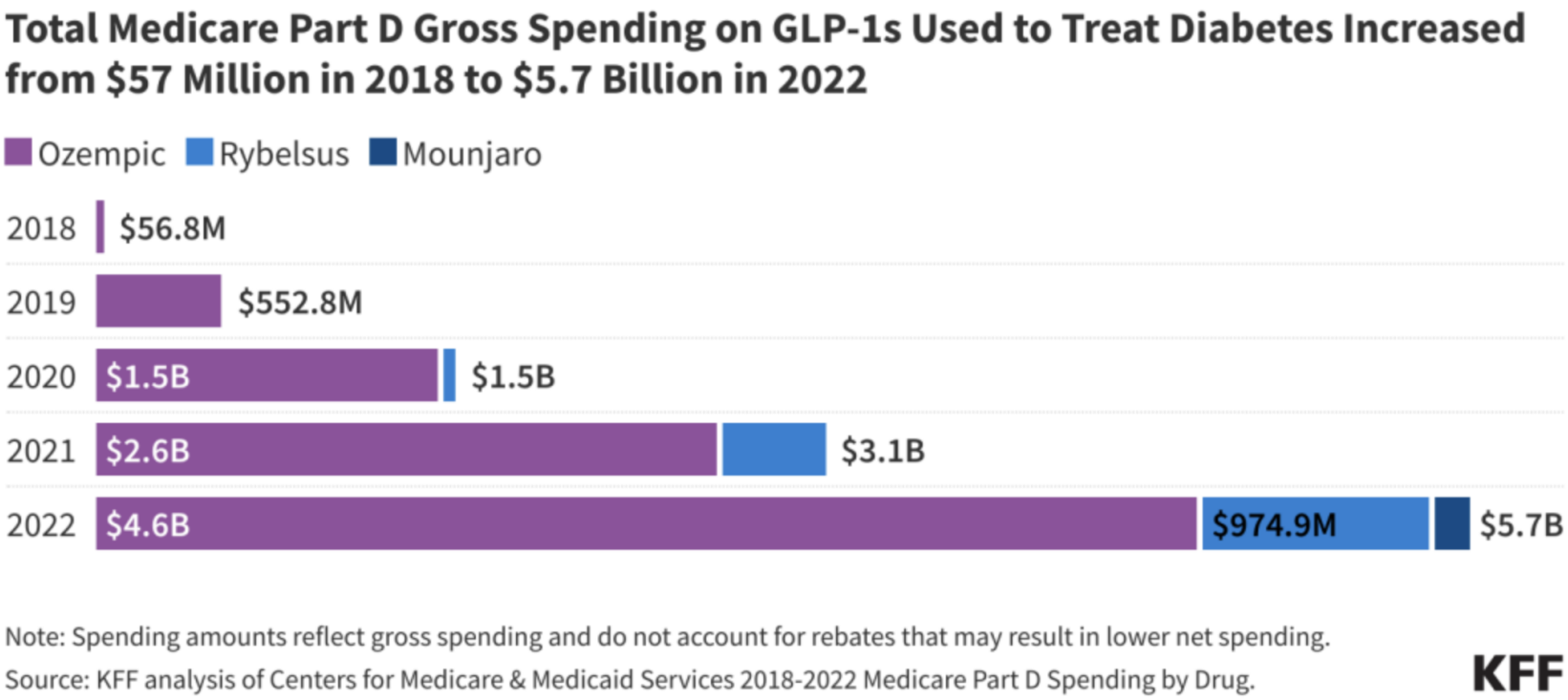
UT Austin

Outline

What is Ozempic

- Ozempic, a GLP-1 receptor agonist, primarily treats type 2 diabetes by regulating blood sugar levels and inducing weight loss through appetite suppression and slowed gastric emptying.
- While officially approved for diabetes, Ozempic is also used off-label for weight loss
- Its coverage under Medicare Part D for diabetes management sparks discussions about extending coverage for weight loss.
- Other GLP-1 drugs, like Rybelsus, offer similar diabetes management but differ in manufacturing and dosage.
- Semaglutide stands out for its effectiveness, with a weight loss potential of 15% to 20%, higher than traditional drugs, albeit necessitating consistent usage for sustained benefits.

Total Spending on Ozempic



Policy Background

- Medicare currently does not cover medications specifically intended for weight loss, stemming from concerns dating back to the 1990s about the safety and effectiveness of obesity treatments.
- The Medicare Prescription Drug, Improvement, and Modernization Act of 2006 established the Medicare Part D prescription medication benefit but prohibited coverage for drugs used for weight loss.
- The perception of weight-loss medications as addressing cosmetic rather than medical concerns has further contributed to the lack of coverage.
- Despite obesity being recognized as a significant public health issue, Medicare's coverage ban on weight-loss treatments remains in place.
- Efforts to overturn Medicare's coverage moratorium, such as the introduction of bills like the Treat and Reduce Obesity Act (TROA)

Existing Studies

- One unpublished study of medical claims conducted by a pharmacy benefit manager found that in the first year after treatment began, the use of GLP-1 was associated with an increase in the total cost of care roughly equal to the cost of the GLP-1 (Leach et al. 2023)
- white paper using simulation shows that Medicare coverage of weight-loss therapies would save as much as $245 billion in the first 10 years of coverage alone (Ward et. al, 2023)
- study from ICER shows that semaglutide is not cost-effective.

Literature

- the cost of obesity (Finkelstein et al., 2009; Yang and Hall, 2007; MacEwan et al., 2014)
- cost and benefit of obesity treatments (Finkelstein and Brown, 2005; Michaud et al., 2012)
- Medicare coverage and drug utilization

Data

- Medical Expenditure Panel Survey (MEPS)
- The study utilizes MEPS data from 2018 to 2021, covering the period after Ozempic's FDA approval in December 2017.
- Individuals with kidney issues, who are not recommended to take Ozempic, are excluded from the analysis to ensure sample relevance.

Summary Statistics

Table 1: summary statistics for the full sample

Statistic	N	Mean	St. Dev.
BMI	33,910	28.981	7.485
Education year	33,910	13.463	2.848
AGE	33,910	56.834	17.547
Family Income	33,910	76,372.130	70,622.610
OOP drug expense	33,910	287.219	977.570
drug expense	33,910	3,065.945	16,661.060
drug expense- Medicare	33,910	1,379.810	14,520.120
drug expense- private insurance	33,910	955.379	6,566.710
Ozempic quantity	33,910	0.129	3.936
Ozempic spending- Medicare	33,910	10.141	286.969
Ozempic spending- private insurance	33,910	15.449	384.436
Ozempic OOP	33,910	0.960	29.174
Ozempic spending	33,910	29.568	521.286
Total Medical Expense	33,910	11,556.680	28,664.780

Table 2: summary statistics for the Ozempic takers

Statistic	N	Mean	St. Dev.
BMI	182	35.561	8.242
Education year	182	13.659	2.760
AGE	182	58.956	14.167
Family Income	182	74,099.500	57,763.890
drug expense	182	12,911.600	9,515.078
drug expense- private insurance	182	5,498.983	8,024.933
OOP drug expense	182	747.974	1,098.285
drug expense- Medicare	182	5,555.849	9,094.275
Ozempic quantity	182	23.937	48.231
Ozempic spending- Medicare	182	1,889.440	3,443.470
Ozempic spending- private insurance	182	2,794.792	4,372.991
Ozempic OOP	182	178.263	357.288
Ozempic spending	182	5,422.046	4,555.246
Total Medical Expense	182	21,788.810	15,841.330

Utilization Pattern

logistic regression

$$\ln(\frac{p}{1-p}) = \beta_0 + BMI_{it} \times diabetes_{it} + \beta X_{it}$$

with p being the probability of using Ozempic in the year t.

Utilization Pattern

	Dependent variable:		
	OZ		
	(1)	(2)	(3)
AGE	0.001	0.006	−0.003
	(0.005)	(0.009)	(0.021)
diabetic	1.059***	1.124***	0.854**
	(0.156)	(0.219)	(0.368)
BMI < 27	−0.850***	−1.171***	−0.556
	(0.243)	(0.409)	(0.501)
BMI ≥ 27	−1.034***	−1.065**	−0.687
	(0.319)	(0.485)	(0.623)
BMI ≥ 35	0.614***	0.784***	1.041**
	(0.222)	(0.289)	(0.493)
BMI ≥ 40	0.872***	0.901***	1.370**
	(0.230)	(0.294)	(0.542)
diabetic:BMI < 27	0.497**	0.916**	0.270
	(0.243)	(0.409)	(0.499)
diabetic:BMI ≥ 27	0.040	−0.245	−0.127
	(0.319)	(0.485)	(0.622)
diabetic:BMI ≥ 35	−0.045	0.015	−0.150
	(0.221)	(0.288)	(0.492)
diabetic:BMI ≥ 45	0.120	0.159	−0.348
	(0.224)	(0.289)	(0.535)
Constant	−5.980***	−6.493***	−5.077***
	(0.617)	(0.848)	(1.843)
Observations	33,910	20,636	7,029
Log Likelihood	−948.785	−537.777	−208.906
Akaike Inf. Crit.	1,927.570	1,105.553	447.811
Note:			*p<0.1; **p<0.05; ***p<0.01

Short Term Cost Analysis

draw from other literature findings on the reduction in annual medical spending associated with BMI reduction (Crawley et al. 2014). Assuming an annual cost of $9055:

Table 4: Predicted change in total annual medical expenditures ($US)

starting BMI	Without Type 2 Diabetes		With Type 2 Diabetes	
	15% BMI reduction	20% BMI reduction	15% BMI reduction	20% BMI reduction
30	-8238.5	-8014.25	-7328.85	-6910.25
31	-9053.6775	-7916.5	-7090.8	-6620.45
32	-8041.85	-7808.4	-6751.55	-6292.7
33	-7982.05	-7693.4	-6520.4	-5924.7
34	-7882	-7535.85	-6177.7	-5439.4
35	-8923.9	-7433.5	-5793.6	-5044.95
36	-7657.75	-7287.45	-5361.2	-4521.7
37	-7531.25	-7131.05	-4873.6	-3275.1
38	-7394.4	-6962	-4325.05	-2534.5
39	-7298.95	-6779.15	-3662.65	-2854.2
40	-7088.5	-6582.5	-3016.35	-1704.2
41	-6917.15	-6370.9	-2237.8	-772.7
42	-6733.15	-6143.2	-1362.65	271.5
43	-6534.2	-5897.1	-380.55	1442.2
44	-6320.3	-5633.75	722.3	2753.2
45	-6089.15	-4513.65	1958.55	6525.2

Short Term Cost Analysis

- Ozempic use does not result in cost savings for non-diabetic individuals.
- Only diabetic individuals with extremely high BMI levels may experience a net saving with Ozempic use, Rationing Ozempic to diabetic individuals with severe obesity yields the greatest benefit.
- However, the utilization pattern shows that diabetic individuals do not significantly increase their usage with higher obesity levels.
- If Medicare were to cover Ozempic for weight loss, there would likely be a substantial increase in utilization, particularly among the non-diabetic population. Indicates that this increased coverage would lead to a significant rise in Medicare spending without substantial reductions in other medical costs.
- covering Ozempic for weight loss is projected to incur a net cost, at least in the short term, given the current findings.

Long Term Cost Analysis

- Long-term perspectives are essential for understanding the full impact of medical interventions, considering competing risks and co-morbid conditions.
- Integrating the Future Elderly Model (FEM) with current estimates on the long-term effectiveness of obesity treatments offers insights into various outcomes, including longevity, healthcare costs, tax revenue, and Social Security expenditures, relating to the study of Michaud et al. (2012)
- However, implementing the FEM requires detailed patient information beyond the scope of this study.

Conclusion

- Financial implications of Medicare coverage for Ozempic may lead to short-term net medical costs, considering the high monthly medication expenses.
- informed policy decisions require a comprehensive understanding of benefits, risks, and financial implications. Continued research is essential to assess long-term effectiveness and address barriers to utilization among Medicare beneficiaries.