The Impact of an Ambulatory Clinical Pharmacist-led Obesity Management Program to Improve Weight Loss Goals Within an Integrated Health-System Specialty Pharmacy

Cerris Chung, PharmD, BCACP; Mallory Telese, BA, PharmD, BCACP, CSP; Kate Smullen, PharmD, CSP, MSCS; Martha Stutsky, PharmD, BCPS; Carolkim Huynh, PharmD, CSP; Shreevidya Periyasamy, MSHIA; Rachel Quinn, PharmD, BCACP; Sharon Zhu, PharmD, BCGP; Kenny Yu, PharmD, MBA, ACE

SCAN ME

BACKGROUND

- Obesity (BMI ≥30 kg/m2) has been increasing over the past 30 years, causing a public health crisis.[1] AACE/ACE 2016 Obesity Guidelines recommend a weight loss goal of 5-15%. Glucagon-Like Peptide-1 Receptor Agonists (GLP-1RAs) are a popular treatment option due to efficacy and side effect profile.[1] Additionally, studies have indicated an inverse correlation between health care expenditure and weight loss.
- Given the importance of weight reduction and emerging use of GLP-1RAs, an integrated health-system specialty pharmacy (HSSP) established an ambulatory clinical pharmacist (ACP) program to support management of GLP-1RAs in the obese population.
- The purpose of this study is to evaluate the impact an ambulatory clinical pharmacist-led obesity management program in an integrated HSSP to achieve weight loss goals.

METHODS

Inclusion Criteria: NYU Langone Health Clinic patients aged ≥18 years who were filling new or existing prescriptions for medications containing liraglutide, semaglutide, or tirzepatide for obesity treatment between January 2022 and April 2024 and had ≥ 2 ACP encounters ≥ 30 days apart with a baseline and ≥ 1 subsequent weight collected since starting the ACP program.

Outcomes:

- **Primary:** Mean weight loss percentage; percentage of patients achieving ≥ 5% weight loss
- **Secondary:** percentage of patients achieving ≥5%, ≥10%, and ≥15% weight loss; annual savings in medical expenditures based on percentage of BMI reduction; number of pharmacist interventions

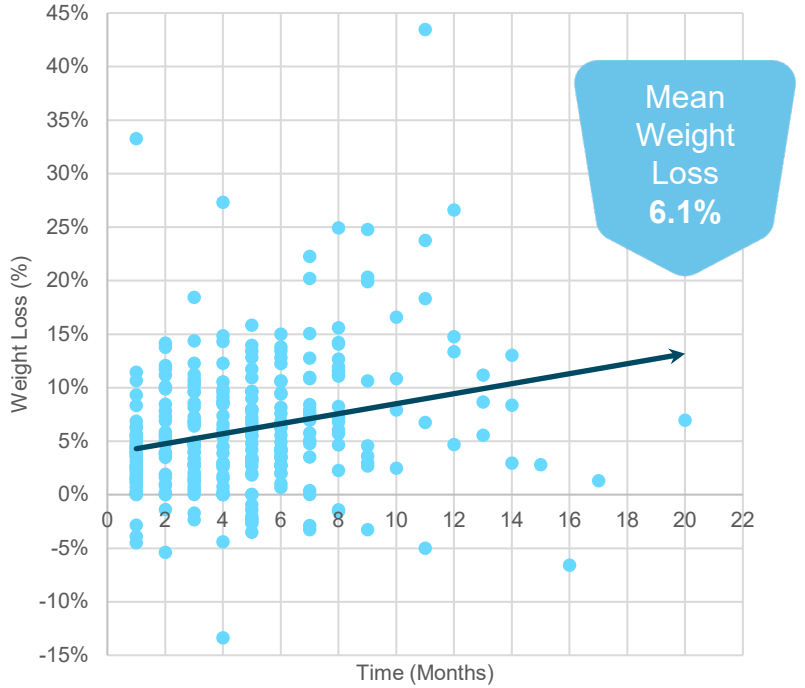
Analysis: Descriptive statistics were utilized to summarize patient characteristics and outcomes. Annual savings was calculated using predicted change in total annual medical expenditures based on reduction in BMI.[3]

RESULTS

Table 1: Patient Characteristics and Outcomes

Characteristic	N=286
Mean age (years)	49
Sex (n, %)	
M	208 (73)
F	78 (27)
Mean baseline weight (kg)	101.8
Medication (n, %)	
Liraglutide	12 (4)
Semaglutide	185 (64)
Tirzepatide	89 (32)
Clinical Outcomes	
Mean weight loss (%)	6.1
% of patients achieving a weight loss of	
≥5%	48.6
≥10%	22.0
≥15%	6.3
Total pharmacist interventions completed	175
Requiring a response from providers	163
Interventions accepted	150
Interventions not accepted	13

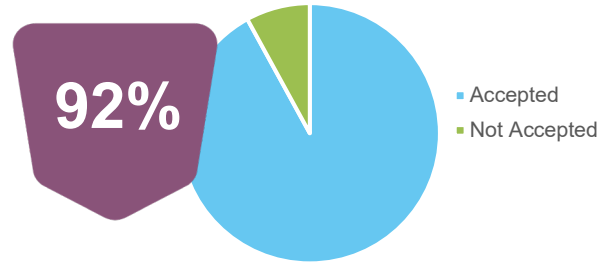
Figure 1: Mean Weight Loss Per Patients Enrolled in ACP-Led Obesity Management Program



Annual Savings Associated with Weight Loss[3] **$689,094.98**

Annual Average Savings per Patient **$2,409.42**

Figure 2: Percentage of Pharmacist Interventions Accepted vs. Not Accepted (N=163)



CONCLUSION

The implementation an ACP-led obesity management program to support the use of GLP1RAs demonstrated the beneficial impact of pharmacist involvement to improve weight loss outcomes and reduce annual healthcare costs despite ongoing GLP1RA backorders.

REFERENCES

1. Garvey WT, Mechanick JI, Brett EM, et al. American association of clinical endocrinologists and American college of endocrinology comprehensive clinical practice guidelines for medical care of patients with obesity. *Endocr Pract.* 2016;22 Suppl 3:1-203. doi:10.4158/EP161365.GL
2. Knell G, Li Q, Pettee Gabriel K, Shuval K. Long-Term Weight Loss and Metabolic Health in Adults Concerned With Maintaining or Losing Weight: Findings From NHANES. *Mayo Clin Proc.* 2018 Nov;93(11):1611-1616. doi: 10.1016/j.mayocp.2018.04.018. Epub 2018 Aug 14. PMID: 30119916; PMCID: PMC6526934.
3. Cawley J, Meyerhoefer C, Biener A, Hammer M, Wintfeld N. Savings in Medical Expenditures Associated with Reductions in Body Mass Index Among US Adults with Obesity, by Diabetes Status. *Pharmacoeconomics.* 2015;33(7):707-722. doi:10.1007/s40273-014-0230-2