

Supporting Diabetes Management and Food Insecurity Year-Round Pilot Summary Report



Background

Several studies link diabetes plus food insecurity with hypoglycemic events, high healthcare utilization and high costs.

- For people with diabetes and low incomes, there is a higher risk of hypoglycemic events, which result in emergency department (ED) visits and inpatient stays during the fourth week of the month, when financial resources may run out.¹
- High and low blood sugar are risk factors for repeat ED visits and hospitalizations.²
- Better glycemic control can help prevent ED visits and hospitalizations, thereby reducing costs.³

HUMANA'S BOLD GOAL:
To improve the health of the communities we serve by 20 percent

Objectives

As part of Humana's Bold Goal, Mom's Meals and Humana collaborated on a pilot program to:

- Evaluate the feasibility of providing a year-long, medically tailored, home-delivered meals program to individuals with diabetes who are food insecure
- Examine changes in engagement, retention, healthy days, food insecurity status and utilization as a result of a home-delivered meals program

TARGET POPULATION (n=367)

Humana Medicare Advantage (MA) plan members aged 65 and older who have diabetes and who are food insecure.

RECRUITMENT: PRE-PROGRAM SURVEY (n =3,904)

Mom's Meals attempted to call 3,904 eligible Humana plan members over a two-week period to screen for food insecurity across three Bold Goal markets: Baton Rouge, LA, Cleveland, OH and Houston, TX.

ENROLLMENT (n =367)

Enrollees screened positive for food insecurity and indicated a desire to take part in the program.

LA: 121 enrollees
OH: 124 enrollees
TX: 122 enrollees

INTERVENTION

Enrollees received a delivery of 14 diabetes-friendly meals to their home during the fourth week of each month for 12 months.

Main Measures

Mom's Meals conducted a pre-program phone survey and follow-up surveys in May (n=225), September (n=154) and December (n=119) 2020. Claims data were collected from January–December 2020.

1. Healthy Days

This program used the Centers for Disease Control and Prevention assessment tool "Healthy Days Measures"⁴ to determine the mentally and physically unhealthy days of individuals over time. Participants were asked how many days during the past 30 days their physical and mental health has not been good.

2. Food Insecurity

Food insecurity status was determined by asking participants the Hunger Vital Sign™ two validated questions⁵ about how often in the past 12 months they:

- Worried their food would run out before they had money to buy more
- Ran out of food and did not have money to buy more

3. Health & Food Insecurity Score

Participants received a calculated health and food insecurity score based on responses to healthy days and food insecurity questions. Final scores were divided into three food insecurity categories: Low | Mid | High

4. Healthcare Resources Utilization & Costs

Claims data from the 2020 plan year were used to estimate the costs of ED visits and inpatient hospitalizations for program participants and a propensity-matched control group.

5. Satisfaction & Quality of Life

Satisfaction among participants was measured throughout the program.

Engagement remained high. 270 enrollees (74%) received meals for all 12 months.

RESULTS

over a 12-month period

HEALTHY DAYS

Participants' physical and mental health continuously improved.



DECREASE
in # of days physical health was NOT GOOD

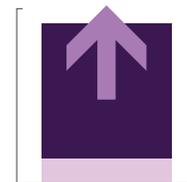


DECREASE
in # of days mental health was NOT GOOD

FOOD INSECURITY

Participants became **LESS WORRIED** about running out of food before they had money to buy more.

of participants who actually ran out of food and money **DECREASED**.



81%
INCREASE
in # of respondents in the low food insecurity category

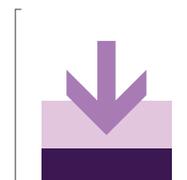
UTILIZATION

Due to the small sample size and broad decrease in utilization across healthcare due to the COVID-19 pandemic, claims analysis results were inconclusive.

NET PROMOTER SCORE (NPS)



Humana received a very high NPS (members who would recommend Humana for working with partners like Mom's Meals) from respondents who completed the study.



86%
DECREASE
in # of respondents in the high food insecurity category

SATISFACTION



OVERALL PROGRAM
satisfaction rate



MEALS
satisfaction rate



Participants who reported an
IMPROVED QUALITY OF LIFE

Discussion & Conclusion

A year-long home-delivered meals program is feasible, is readily accepted, and results in positive health and quality-of-life outcomes.

Combining the medical and social aspects of care drives innovation in healthcare. Providing diabetes-friendly meals periodically (monthly) to members facing food insecurity—at a time when they are at highest risk for hypoglycemic events (month-end)—addresses clinical and social needs and allows for sustainable year-round support of this vulnerable population. Program results were overwhelmingly positive.

Members:

- Engaged at a high rate
- Reported improved physical and mental health during a global pandemic, when many faced physical and mental health crises
- Experienced relief from food insecurity at a time when pandemic-related food insecurity increased dramatically in the U.S.
- Enjoyed improved quality of life
- Felt extremely satisfied with the program and food received from Mom's Meals and Humana

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¹Basu S, Berkowitz SA, Seligman H. The Monthly Cycle of Hypoglycemia: An Observational Claims-based Study of Emergency Room Visits, Hospital Admissions, and Costs in a Commercially Insured Population. *Med Care*. 2017 Jul;55(7):639-645. doi: 10.1097/MLR.0000000000000728. PMID: 28481762; PMCID: PMC5695234 ²<https://www.sciencedaily.com/releases/2017/07/170707135143.htm> ³R.G., Lipska, K.J., Herrin, J. et al. Hospital Readmissions among Commercially Insured and Medicare Advantage Beneficiaries with Diabetes and the Impact of Severe Hypoglycemic and Hyperglycemic Events. *J GEN INTERN MED* 32, 1097-1105 (2017). <https://doi.org/10.1007/s11606-017-4095-x> ⁴<https://www.cdc.gov/hrqol/methods.htm> ⁵<https://childrenshealthwatch.org/public-policy/hunger-vital-sign/>