

# MEDICALLY TAILORED MEALS: THE PROOF



This summary was compiled from peer-reviewed research studies and white papers conducted by members of FIMC for over a decade and is meant to provide a high-level overview of the types of impact that the MTM intervention has had on individuals living with severe, complex or chronic illnesses.



## MEDICALLY TAILORED MEALS IMPROVE HEALTH OUTCOMES & PATIENT SATISFACTION

While receiving MTMs, patients report:



**Improved quality of life.** <sup>1,3</sup>

**Fewer days when mental health interfered with quality of life.** <sup>11</sup>

People who receive medically tailored meals experienced:



### Improved mental health:

Study participants experienced approximately two fewer depressive symptoms and 13% of respondents reported less binge drinking once they started receiving meals<sup>1</sup>



### Better diabetes management:

Among patients with type 2 diabetes, 47% reported an episode of hypoglycemia while they were receiving MTM, versus 64% while they were not receiving MTM. BMI decreased from 36.1 at baseline to 34.8 at follow-up.<sup>2</sup>



### Healthier eating habits:

Recipients of MTM reported increasing fruit and vegetable intake to more than 2 times per day.<sup>4</sup> Saturated fat servings decreased.<sup>3</sup>



### Improved medication adherence:

Among participants with HIV, ARV medication adherence of 95% or greater increased from 46.7% of participants at baseline to 70% of participants at follow-up.<sup>3</sup>

### Snapshot of Key Outcomes Measured for Different Health Conditions <sup>14</sup>

Health Condition	Outcomes with MTM	Result
Multiple health conditions	Self-reported healthier eating	↑
	Self-reported healthier status	↑
Type 2 diabetes	Healthy Eating Index Score	↑
	Dietary quality 18-item Multifactor Screener	↑
	Increased efficacy of diabetes management and awareness	↑
	Depression (Patient Health Questionnaire)	↓
	Binge Drinking	↓
	Hypoglycemia	↓
	Diabetes distress	↓
	BMI	↓
HIV/AIDS	Dietary quality (18-item Multifactor Screener)	↑
	Self-reported ART adherence	↑
	Depression Scores	↓
	Binge drinking	↓
Heart failure	Improvement in cardiomyopathy score	↑
Chronic liver disease	Improvement in quality of life metrics	↑
	Paracenteses	↓



# 2

## MEDICALLY TAILORED MEALS LOWER HEALTHCARE COSTS

In comparison, nutrition related costs are an inexpensive medical intervention. For the same cost as 1 day in the hospital (approx. \$2,419), many FIMC agencies can feed someone at home for 6 months.<sup>5</sup>

16%

Reduction in Net Health Care Costs<sup>7</sup>

50%

Decrease in Hospitalizations<sup>7</sup>

70%

Drop in Emergency Department Visits<sup>7</sup>

Modelled nationally, in just one year, MTMs could save **\$13.6B** in healthcare spending

and help avoid **1.6M** possible hospitalizations.<sup>6</sup>

### Healthcare Cost Savings:

- In a cost-modelling study, national implementation of MTMs for individuals with diet-sensitive conditions and activity limitations could annually avert 1.6 million hospitalizations; and save a net \$13.6 billion in health insurance, with most savings occurring in Medicaid and Medicare.<sup>6</sup>
- In a study of the effect of MTM, meal delivery correlated with a reduction in health care cost of 16%.<sup>7</sup>
- The average monthly health care costs for recipients of MTM is 31% lower than those without MTM.<sup>8</sup>
- Average monthly health care costs fell 62% for 3 consecutive months after service began for individuals living with acute or chronic conditions.<sup>9</sup>
- Managed Care Organizations paid out \$12,000 less per month than for a comparison group without nutrition intervention.<sup>10</sup>

### Fewer Hospitalizations:

- Receipt of MTM was associated with 50% fewer inpatient admissions and 70% fewer emergency visits compared with a matched cohort that did not receive meals.<sup>8</sup>
- MTM was associated with 70% fewer ED visits, 50% fewer hospitalizations and 72% fewer uses of emergency transport.<sup>11</sup>
- Among a group of patients with type 2 diabetes, share of hospitalizations fell from 25% to 6.9%. The share of patients reporting visits to the ED fell from 31% to 13.8%.<sup>3</sup>
- Among a group of patients living with HIV, hospitalizations fell from 10% to 3.3%.<sup>3</sup>
- In a study of the effect of MTM, 93% of recipients of MTM with inpatient hospitalizations were discharged to their homes as compared to only 18% of those without MTM.<sup>9</sup>
- Receipt of MTM was associated with 72% fewer skilled nursing facility admissions compared to a group that did not receive MTM.<sup>11</sup>
- Clients receiving MTM were 20% more likely to be released from the hospital to their homes instead of an acute care facility.<sup>10</sup>
- For clients with heart failure – 50% reductions in hospitalizations.<sup>12</sup>

# 3

## FOOD IS MEDICINE INTERVENTIONS IMPROVE FOOD SECURITY, LEADING TO IMPROVED HEALTH

A robust body of evidence links food insecurity to poor health outcomes. Recipients of MTMs report reduced food insecurity from 62% to 42% versus a matched comparison group.<sup>11</sup>

### Snapshot of Key Outcomes Measured for Different Health Conditions<sup>14</sup>

#### Health Condition

#### Outcomes with MTM

#### Result

Multiple health conditions

Emergency department visits



Inpatient admissions



Overall health care costs



Admission to skilled nursing facility



Type 2 diabetes

Food security



Tradeoffs between health care and food



HIV/AIDS

Food security



Tradeoffs between health care and food



Chronic liver disease

Days in the hospital



**Sources:**  
<sup>1</sup>Kartika Palar et al, Comprehensive and Medically Appropriate Food Support Is Associated with Improved HIV and Diabetes Health, JOURNAL OF URBAN HEALTH, (2017).  
<sup>2</sup>Seth A. Berkowitz et al., Medically Tailored Meal Delivery for Diabetes Patients with Food Insecurity: A Randomized Cross-Over Trial, J. GEN INTERN MED, (2018).  
<sup>3</sup>January 2017 J Urban Health. Study from UCSF  
<sup>4</sup>Kartika Palar et al, Comprehensive and Medically Appropriate Food Support Is Associated with Improved HIV and Diabetes Health, JOURNAL OF URBAN HEALTH, (2017).  
<sup>5</sup>Hospital Adjusted Expenses per Inpatient Day, AHA Annual Survey, Copyright 2019 by Health Forum, LLC, an affiliate of the American Hospital Association  
<sup>6</sup>Hager K et al. Association of National Expansion of Insurance Coverage of Medically Tailored Meals With Estimated Hospitalizations and Health Care Expenditures in the US. JAMA Network Open. 2022;5(10):e2236898. doi:10.1001/jamanetworkopen.2022.36898  
<sup>7</sup>Seth A. Berkowitz et al. Meal Delivery Programs Reduce the Use Of Costly Health Care In Dually Eligible Medicare And Medicaid Beneficiaries, HEALTH AFFAIRS, (2018).  
<sup>8</sup>Jill Gurvey et al, Examining Health Care Costs Among MANNA Clients and a Comparison Group, JOURNAL OF PRIMARY CARE & COMMUNITY HEALTH, (2013).  
<sup>9</sup>April 2019 Study of Community Servings Clients and a Comparison Group measuring impact of home-delivered, medically-tailored meal service (and MNT) for individuals living w/ acute or chronic conditions, Published in JAMA (Same as footnote 8)  
<sup>10</sup>June 2013 Study of MANNA Clients and a Comparison Group measuring impact of home-delivered, medically-tailored meal service (and MNT) for individuals living w/ acute or chronic conditions, including diabetes  
<sup>11</sup>Seth A. Berkowitz et al., Association Between Receipt of a Medically Tailored Meal Program and Health Care Use, JAMA, (2019)  
<sup>12</sup>Hummel SL et al. Home-delivered meals post-discharge from Heart Failure hospitalization: The GOURMET-HF pilot study. Circ Heart Fail. 2018; 11(8): 3004886. doi:10.1161/CIRCHEART-FAILURE.117.004886; Go AS et al., Effect of Medically Tailored Meals on Clinical Outcomes in Recently Hospitalized High-Risk Adults. Medical Care. 2018; 60; 10. Pedroza-Tobias A, et al. Medically supportive food and nutrition education improves health and reduces readmissions for safety-net patients hospitalized with heart failure exacerbation: A pilot randomized controlled trial. Presented at AHA Annual Meeting, November 6-9 2022).  
<sup>13</sup>Elliot B Tapper, Jad Baki, Samantha Nikirk, Scott Hummel, Sumeet K Asrani, Anna S Lok, Medically tailored meals for the management of symptomatic ascites: the SALTYFOOD pilot randomized clinical trial, Gastroenterology Report, Volume 8, Issue 6, December 2020, Pages 453-456, https://doi.org/10.1093/gastro/goaa059  
<sup>14</sup>https://www.aspeninstitute.org/wp-content/uploads/2022/01/Food-is-Medicine-Action-Plan-Final\_012722.pdf

