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# MPN Member-Sponsored Briefing: Measuring Impact for Food is Medicine and Medically Tailored Meals Interventions in MD









#### **PRESENTERS**

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#### **KEY NATIONAL DATA**



#### Improved access to quality food

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>



#### **Improved mental health**

Recipients of MTMs reported fewer days when mental health interfered with quality of life. 

1 3 Study participants experienced approximately two fewer depressive symptoms and 13% of respondents reported less binge drinking once they started receiving meals. 

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# 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>

#### Save \$13.6 Billion

in healthcare spending in just one year<sup>6</sup> if modeled nationally.

#### **Avoid 1.6 Million**

possible hospitalizations in just one year<sup>6</sup> if modeled nationally.

#### **16% Reduction**

in net health care costs.<sup>7</sup>
Six months of meals costs
the same as one day in the
hospital.<sup>5</sup>



#### **URGENCY BASED ON NEED**



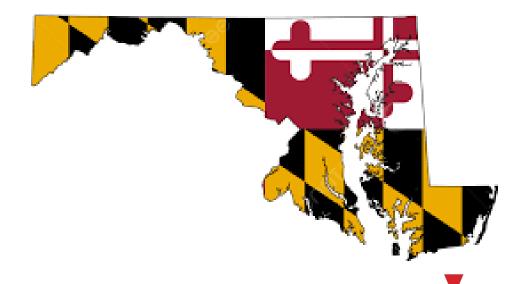
# BUT WHAT ABOUT YOUR INTERVENTION IN MD?





# QUESTIONS

- Do you have data specific to your intervention?
- Does it work in Maryland?
- Couldn't we serve more people if:
  - we use cheaper food?
  - we limit the time on service?



# **OUR QUESTION**



# WHY THIS STUDY THIS WAY

- Urgency of the question
- Aligning process with resources to maximize impact





### **PARTNERSHIPS**









#### SAMPLE & DATA SOURCES

- n=2,214 individuals
- CRISP pre-post reporting (6-month)
- Internal patient records
- Deidentified records matched using unique ID
- IRB exempt status



#### **ANALYTIC DECISION POINTS**

- Pre-post raw differences vs. percentage differences
- Outpatient visits as "desired utilization"
- Sample inclusion and exclusion
- Continuous vs. categorical variables
- Calculating dosage
- 6-month pre-post (as opposed to 3- or 12-month)



#### **ANALYTIC METHODS**

- Bivariate pre-post analyses (paired t-tests)
- Adjusted regression analyses (linear regression)
  - Predictor: dosage (average meals/week)
  - o Covariates: time on meals, gender, age, income, region
  - Outcomes: charges, PAU, visits
- Subgroup analyses
  - High-cost patients (top 25%)
  - Medicare eligible (65+)
  - Medicaid eligible (138% FPL)
  - o Chronic illness: diabetes, CVD, kidney disease
  - BIPOC



### **LIMITATIONS**

- No control group
- Potentially underestimated effects
  - Truncated dosage / time on meals for longstanding clients
  - Incomplete PAU data (lower sample size)
- Chronic illness comorbidities
- Self-report, missingness for demographic data



#### **RESULTS**

#### AVERAGE AMONG ALL CLIENTS

(n=2,214)

**33**% (\$10,640)

REDUCTION IN CHARGES

**21**%

(0.10 PAU)

REDUCTION IN PAU **24**%

(0.57 VISITS)

REDUCTION IN VISITS



#### **AVERAGE AMONG HIGH-COST PATIENTS**

(n=491)

High-cost patients are those in the top 25% of hospital charges.

**59**%

(\$55,379)

REDUCTION IN CHARGES

**35**%

(0.43 PAU)

REDUCTION IN PAU

**38**%

(1.8 VISITS)

REDUCTION IN VISITS



High-cost patients accounted for 77% of hospital charges in the pre-intervention period

High-cost patients were more likely to be Black (vs NH White) and male compared to the rest of the sample



Those with a higher poverty level had a larger reduction in charges (p<0.001)

At or below FPL

-\$14,270.10

Up to 138% of FPL

139%+ FPL

\$1,360.47





Higher meals per week was associated with a larger reduction in charges (p=0.037)

Standard (12+ meals/week)

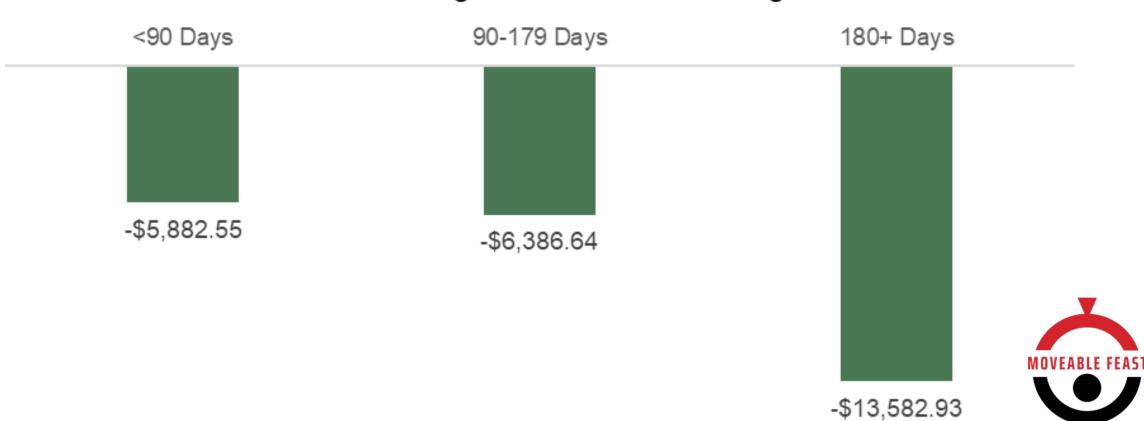
Non-Standard (<12 meals per week)



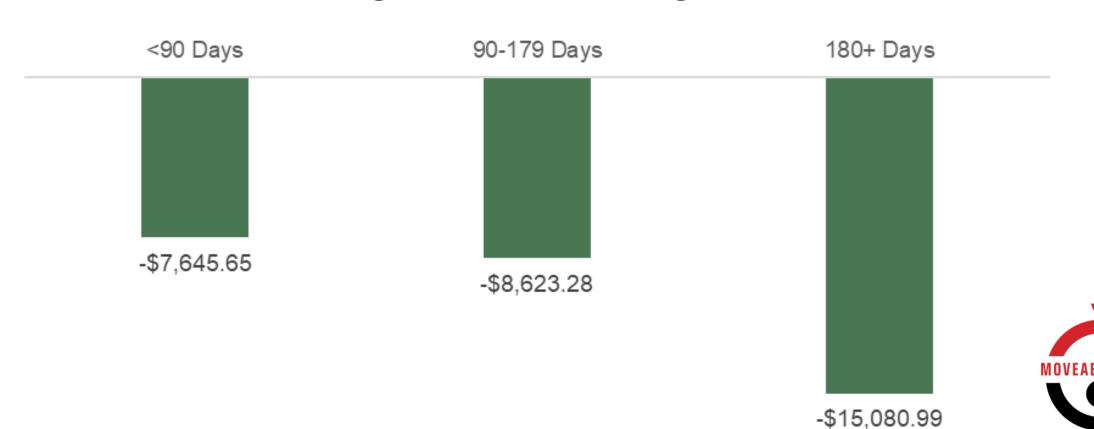
-\$10,057.76



Among those with diabetes, longer time on service was associated with a larger reduction in charges (p=0.004)



Among those 65+, longer time on service was associated with a larger reduction in charges (p=0.028)



#### **WHAT IS PAU?**

"Hospital care that is unplanned and could be prevented through improved care, care coordination, or effective community-based care."

As defined by Maryland's Health Services Cost Review Commission (HSCRC)



#### **RESULTS - PAU**

- Participants averaged 21% reduction in PAU (0.10 fewer) at post than at pre (n=1,778; p=0.001).
- No significant independent predictors of pre-post reductions in PAU by subgroup.



#### RESULTS - HOSPITAL AND ED VISITS

In bivariate analyses, participants averaged 24% reduction (0.57 fewer visits) at post than at pre (n=2,214; p<0.001).

Men saw a larger reduction in visits than women (p<0.001)





-0.98

# WHO BENEFITS THE MOST



- Those who use the most healthcare
- Those with lowest incomes
- Those with chronic diseases and people 65+ benefit from longer duration of service

### **KEY TAKEAWAYS**

- Our services are associated with absolute reductions in healthcare spending
  - 33% reduction in charges (net savings of over \$7,000 even after accounting for all costs)
  - Six months of MTM = Cost of one day in the hospital in Maryland
- We can now target more accurately toward the people who are likely to have the highest return
- There is an abundance of data (even high-quality data) in the community setting
- Leveraging partnerships can enhance resources





Q&A

# FOOD IS MEDICINE, FOOD IS POWER

#### Our Mission:

To improve the health of Marylanders experiencing food insecurity and chronic illness by preparing and delivering medically tailored meals and providing nutrition education, thereby achieving racial, social, and health equity.

Our movement to reach, teach and feed Marylanders living with serious chronic illness continues to gain momentum as medically tailored meals are recognized on a national level for their contribution to improved health and reduced costs. It is time to set a place at the table for anyone in need of our services.





#### **MF VALUES**

#### **COMPASSION**

Cultivate authentic and deep connections with one another and our diverse community through understanding, care, and empathy

#### **EQUITY**

Ask questions and seek solutions to overcome barriers and alleviate root causes of food insecurity and health disparities

#### **QUALITY**

Include multiple perspectives and strive for excellence in the meals we produce, the services we provide and all we do

#### **INTEGRITY**

Show up, be honest, follow through, and be accountable HOPE

Envision and build together a future where people facing serious illness have the nutritious food they need to fight disease

### **WHAT'S NEXT**

- Continue to focus on low-income and high-risk populations
- Longer duration at least 6 months
- High quality intervention
- Leveraging the data
  - Disseminate results widely
  - Make the case for more investment
  - More to learn additional \$ for research
- Demand 300 people waiting for services; stopped accepting applications since May





# MD COALITION FOR FOOD IS MEDICINE

- Build a coalition to further FIM investments
- Advocate for CBOs as providers















#### WHAT'S NEXT - STRATEGIC PLAN

- Production facility to scale intervention
- Technology solutions
  - Local procurement
  - Client choice
- Maternal Health



## WHAT'S NEXT - SCALE FOR IMPACT

- Significant investment
- Partnership
- Innovation
- Courage



# **NOW**

# **FUTURE**







# MOVEABLE FEAST

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# THANK YOU!