MOM'S MEALS®

Addressing Nutritional Needs in High-Risk Populations through Innovative Public and Private Collaboration

Mom's Meals®, A PurFoods® Company
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Confidential and Proprietary

TODAY'S SPEAKERS

Tim Conroy
National VP, Government and Healthcare Partnerships, Mom's Meals

Tim is responsible for overseeing long-term services and support waiver benefit programs and helping customers and clients access state benefit programs for home-delivered meals. He partners with executive management teams at managed care organizations, local Area Agencies on Aging and community-based organizations to ensure the continuation of partnerships to support member services. Additionally Tim works on advocacy issues with state and federal government programs to expand innovation around SDOH and health equity programs.

Dara Hall, MSN, RNC-NIC
Maternal Child Health Clinical Lead
Delaware Health and Social Services - Division of Medicaid and Medical Assistance

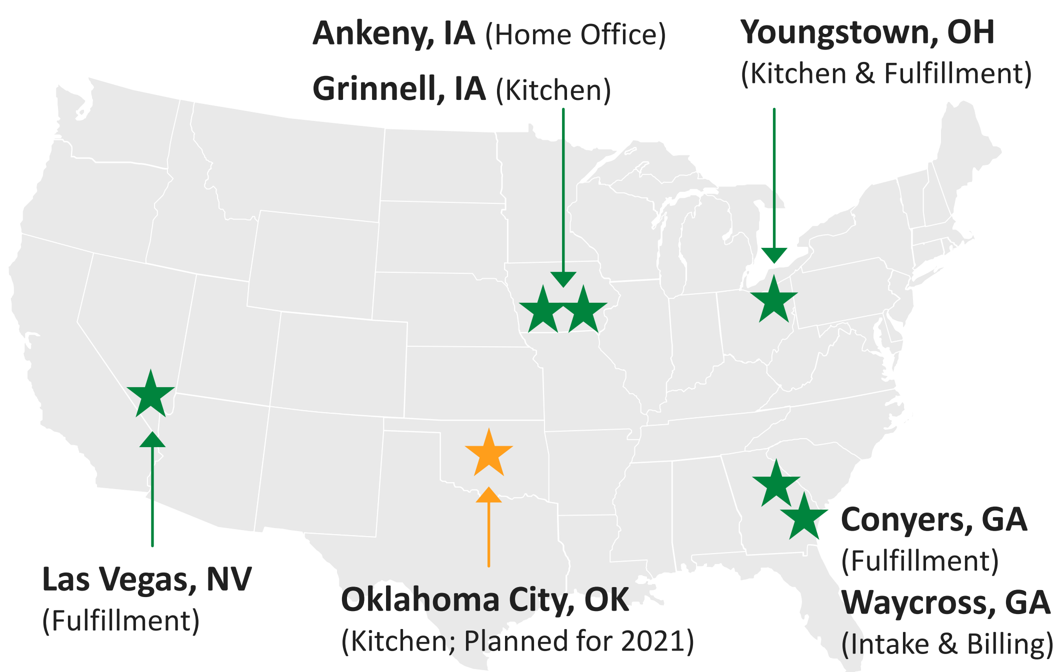
Dara is a registered nurse and the Maternal Child Health Clinical Lead of the Division of Medicaid and Medical Assistance (DMMA) for the Delaware Department of Health and Social Services. She oversees clinical and quality outcomes of maternal and child health within DMMA, participates in statewide efforts to address maternal and child health, and has worked to implement and oversee special projects, including a postpartum, food box delivery program. She is passionate about strengthening the mother-infant dyad and improving outcomes through increasing access and addressing social determinants of health.

MOM'S MEALS®

ABOUT MOM'S MEALS

Only national provider of **refrigerated, medically tailored, home-delivered meals**

2,100+ employees; leaders with deep experience in food and healthcare industry



20+ Years in Healthcare

- Medicaid LTSS/HCBS Waivers
- Managed Medicaid
- Medicare Advantage
- Dual Eligibles/DSNPs
- Hospitals & Health Systems
- Government Programs
- AAAs
- Private Pay

Programs

- Long-Term Services and Support
- Post-Discharge Care
- Chronic Care Management

50M+ meals delivered annually to **all 50 states and U.S. territories**

ABOUT DELAWARE DEPARTMENT OF HEALTH AND SOCIAL SERVICES

Mission Statement: To improve the quality of life for Delaware's citizens by promoting health and well-being, fostering self-sufficiency, and protecting vulnerable populations.

Vision Statement: Together we provide quality services as we create a better future for the people of Delaware.

Priorities

- Maximize Personal and Family Independence
- Be a self-correcting organization working to retool to keep pace with changing client needs and a changing service delivery environment

Goals

- DHSS will be customer service focused.
- DHSS will be driven by a shared vision.
- DHSS will communicate effectively, both internally and externally.
- DHSS will live its Beliefs and Principles and Management Principles.
- DHSS will function as an integrated organization which partners with outside organizations to improve the quality of services provided to our clients.

FOOD SECURITY: CRITICAL SDOH

Survey respondents reporting higher inpatient (IP) or emergency room (ER) utilization were more likely to report unmet social needs.

% of respondents with IP utilization reporting unmet social need

	≥1 inpatient stays (n = 389)	0 inpatient stays (n = 4,569)
Food	35	23
Transportation	24	10
Housing	25	13
Community safety	28	21
Social support	13	14
Personal safety	19	9

% of respondents with ER utilization reporting unmet social need

	≥2 ER visits (n = 240)	0 ER visits (n = 4,257)
Food	51	22
Transportation	31	10
Housing	32	13
Community safety	35	20
Social support	19	14
Personal safety	30	9

Source:
https://www.mckinsey.com/~/media/McKinsey/Industries/Healthcare%20Systems%20and%20Services/Our%20Insights/Understanding%20the%20impact%20of%20unmet%20social%20needs%20on%20consumer%20health%20and%20healthcare/understanding-the-impact-of-unmet-social-needs.pdf?shouldIndex=false

UNMET SOCIAL NEEDS EXIST ACROSS PAYER TYPES

Nearly half of the surveyed population reported at least one unmet social need, including 44% of respondents with employer-sponsored group insurance.

Number of unmet social needs
% of individuals

	Overall population (4,958)
3+ unmet social needs	12
2 unmet social needs	12
1 unmet social needs	24
0 unmet social needs	52

48% of respondents report at least one unmet social need

Number of unmet social needs by insurance coverage
% of individuals

	Group	Individual	Medicare	Medicaid	Uninsured
n	2,412	258	626	1,103	559
3+ unmet social needs	9	11	7	30	13
2 unmet social needs	11	12	8	19	13
1 unmet social needs	24	20	24	24	29
0 unmet social needs	56	57	61	27	45

Source:
https://www.mckinsey.com/~/media/McKinsey/Industries/Healthcare%20Systems%20and%20Services/Our%20Insights/Understanding%20the%20impact%20of%20unmet%20social%20needs%20on%20consumer%20health%20and%20healthcare/understanding-the-impact-of-unmet-social-needs.pdf?shouldIndex=false

THE BUSINESS CASE FOR SDOH

Cost of Care

The number of deaths attributable to social factors in the U.S. are comparable to the number attributed to pathophysiological and behavioral causes.[1]

Estimated cost of U.S. healthcare inequities from 2003–2006[2]:

- Estimated combined costs of health inequalities & premature death = $1.24 trillion
- Annual loss to the U.S. economy = $309 billion
- Eliminating minority disparities would reduce direct medical costs by $229 billion for 2003-2006.

Non-Medical Models

- Countries that spend more on social services, such as family/child supports, disability, unemployment and housing relative to their gross domestic product have significantly better population health outcomes.[3]
- Assessing patients and members in a more holistic way can lead to significant improvements in health and wellbeing, as well as costs savings.
- SDOH are becoming as important as medical record information.

[1]Galea et al. Estimated Deaths Attributable to Social Factors in the United States. 2011. Am J of Public Health. 101(8): 1456-1465.
[2]LaVeist, T., Gaskin, D., and P. Richard, “The Economic Burden of Health Inequalities in the United States,” Joint Center for Political and Economic Studies, September 2009.
[3]Shrank, Keyes & Lovelace. Redistributing Investment in Health and Social Services – The Evolving Role of Managed Care. 2018. JAMA.

PATHWAYS FOR ADDRESSING SDOH: MEDICAID

Press release

CMS Issues New Roadmap for States to Address the Social Determinants of Health to Improve Outcomes, Lower Costs, Support State Value-Based Care Strategies

Jan 07, 2021 | Medicaid & CHIP

Share

Today, the Centers for Medicare & Medicaid Services (CMS) issued guidance to state health officials designed to drive the adoption of strategies that address the social determinants of health (SDOH) in Medicaid and the Children's Health Insurance Program (CHIP) so states can further improve beneficiary health outcomes, reduce health disparities, and lower overall costs in Medicaid and CHIP. SDOH describe the range of social, environmental, and economic factors that can influence health status—conditions that can often have a greater impact on health outcomes than the actual delivery of health services. The new guidance describes how states can leverage existing flexibilities under federal law to tackle adverse health outcomes that can be impacted by SDOH and supports states with designing programs, benefits, and services that can more effectively improve population health and reduce the cost of caring for our nation's most vulnerable and high-risk populations.

The United States spends more on health care than almost any other country yet often underperforms on key health indicators including life expectancy, reducing chronic heart disease, and maternal and infant mortality rates. According to the CMS Office of the Actuary, national health spending is projected to grow rapidly and reach $6.2 trillion by 2028. For its part, in 1985, Medicaid spending consumed less than 10% of state budgets and totaled just over $33 billion dollars. In 2019 that number had grown to consume 29% of total state spending at a total cost of $604 billion dollars.[1]

To address the contradiction between rising costs and low health outcomes, CMS has committed to accelerating the industry's shift away from traditional fee-for-service

Medicaid Options

- Benefit
- Waivers: 1115, 1135(b), 1915(c)
- Administrative dollars

Issues

- Multiple paths to providing benefits create confusion

WHAT'S NEEDED TODAY AND TOMORROW?

Today	Tomorrow

Today

- **Product advocate** who knows the policy pathways
- **Data** to ID members who can benefit from SDOH support
  - HRA
  - Case Management System
- **Case Management Team**
  - Awareness of Benefit
  - Access to the Benefit
  - Advocate to use the Benefit

Tomorrow

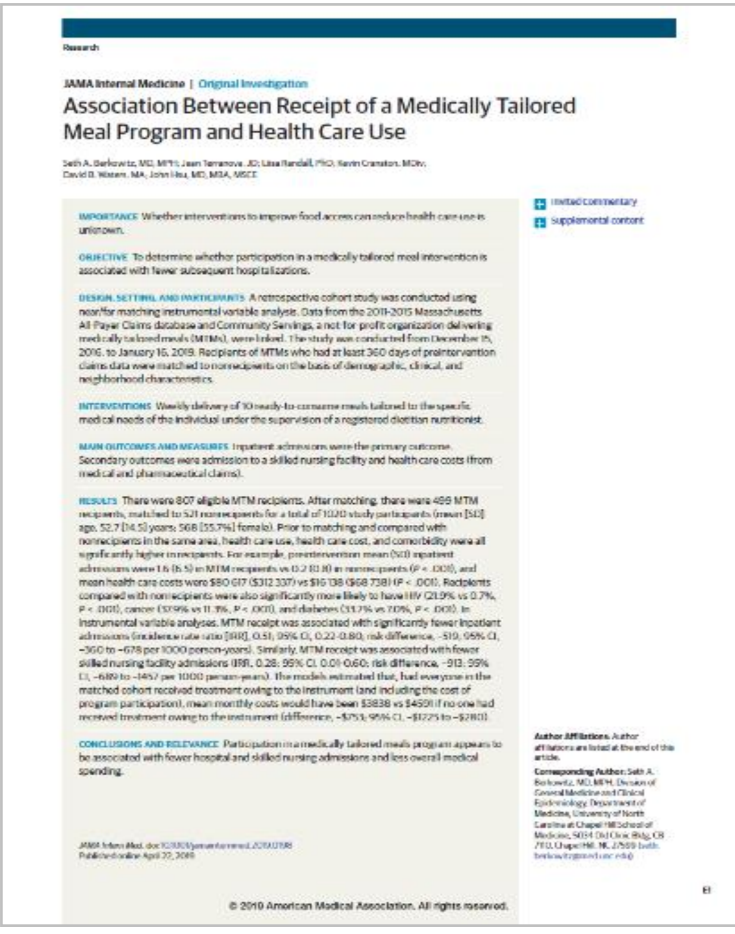
- Allocated budget
- Policy clarity
- Incentives
- Measurement
- Provider awareness z-codes
- Member awareness

FOUNDATIONAL RESEARCH

JAMA: Meals Lower Costs For Chronically Ill

People with chronic conditions who received condition-appropriate home-delivered meals for an average of 12 months (median 9 months) had **16% lower health care costs** compared to matched controls.

- $3,838 vs. $4,591 difference in monthly cost of care
- $712/month savings in IP and SNF – majority of savings
- ED visits were not measured



Research

JAMA Internal Medicine | Original Investigation

Association Between Receipt of a Medically Tailored Meal Program and Health Care Use

Seth A. Berkowitz, MD, MPH; Jean Terranova, JD; Lisa Randall, PhD; Kevin Cranston, MDiv; David B. Waters, MA; John Hsu, MD, MBA, MSCE

Invited commentary
Supplemental content

IMPORTANCE Whether interventions to improve food access can reduce health care use is unknown.

OBJECTIVE To determine whether participation in a medically tailored meal intervention is associated with fewer subsequent hospitalizations.

DESIGN, SETTING, AND PARTICIPANTS A retrospective cohort study was conducted using near/far matching instrumental variable analysis. Data from the 2011-2015 Massachusetts All-Payer Claims database and Community Servings, a not-for-profit organization delivering medically tailored meals (MTMs), were linked. The study was conducted from December 15, 2016, to January 16, 2019. Recipients of MTMs who had at least 360 days of preintervention claims data were matched to nonrecipients on the basis of demographic, clinical, and neighborhood characteristics.

INTERVENTIONS Weekly delivery of 10 ready-to-consume meals tailored to the specific medical needs of the individual under the supervision of a registered dietitian nutritionist.

MAIN OUTCOMES AND MEASURES Inpatient admissions were the primary outcome. Secondary outcomes were admission to a skilled nursing facility and health care costs (from medical and pharmaceutical claims).

RESULTS There were 807 eligible MTM recipients. After matching, there were 499 MTM recipients, matched to 521 nonrecipients for a total of 1020 study participants (mean [SD] age, 52.7 [14.5] years; 568 [55.7%] female). Prior to matching and compared with nonrecipients in the same area, health care use, health care cost, and comorbidity were all significantly higher in recipients. For example, preintervention mean (SD) inpatient admissions were 1.6 (6.5) in MTM recipients vs 0.2 (0.8) in nonrecipients (*P* < .001), and mean health care costs were $80 617 ($312 337) vs $16 138 ($68 738) (*P* < .001). Recipients compared with nonrecipients were also significantly more likely to have HIV (21.9% vs 0.7%, *P* < .001), cancer (37.9% vs 11.3%, *P* < .001), and diabetes (33.7% vs 7.0%, *P* < .001). In instrumental variable analyses, MTM receipt was associated with significantly fewer inpatient admissions (incidence rate ratio [IRR], 0.51; 95% CI, 0.22-0.80; risk difference, −519; 95% CI, −360 to −678 per 1000 person-years). Similarly, MTM receipt was associated with fewer skilled nursing facility admissions (IRR, 0.28; 95% CI, 0.01-0.60; risk difference, −913; 95% CI, −689 to −1457 per 1000 person-years). The models estimated that, had everyone in the matched cohort received treatment owing to the instrument (and including the cost of program participation), mean monthly costs would have been $3838 vs $4591 if no one had received treatment owing to the instrument (difference, −$753; 95% CI, −$1225 to −$280).

CONCLUSIONS AND RELEVANCE Participation in a medically tailored meals program appears to be associated with fewer hospital and skilled nursing admissions and less overall medical spending.

Author Affiliations: Author affiliations are listed at the end of this article.

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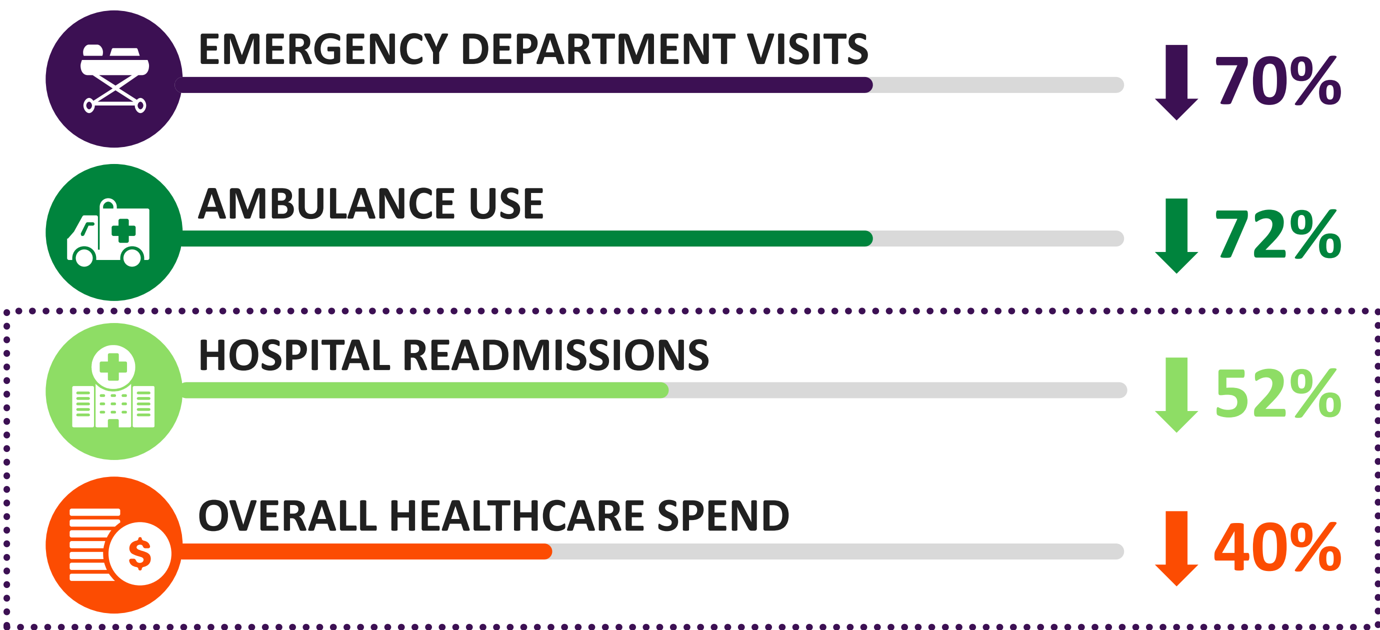
Source: JAMA Intern Med. doi:10.1001/jamainternmed.2019.0198. Published online April 22, 2019.

FOUNDATIONAL RESEARCH

Good Nutrition Helps Control Chronic Conditions

Impact of medically tailored meals delivered weekly to members at nutritional risk (weight change, food insecure, chronic conditions) for six months

Results only for **medically tailored** meal programs



Source: Seth A. Berkowitz, Jean Terranova, Caterina Hill, Toyin Ajay, Todd Linsky; Meal Delivery Programs Reduce the Use of Costly Health Care in Dually Eligible Medicare and Medicaid Beneficiaries, Health Affairs, Vol. 37, No. 4, April 2018

PILOT: CHRONIC CONDITIONS

UPMC & MOM'S MEALS' MEDICALLY TAILORED MEAL PROGRAM

Background

- Without adequate nutrition, individuals with chronic conditions may struggle with condition self-management, which ultimately affects a higher overall medical spend to care for those members.[1]
- Food insecurity and food insufficiency lead to poor nutritional status and low medication adherence, which contribute to poor clinical outcomes.
- By improving engagement in care and medication adherence, medically tailored meals can help t o improve the effectiveness of treatment plans by providers and care managers.

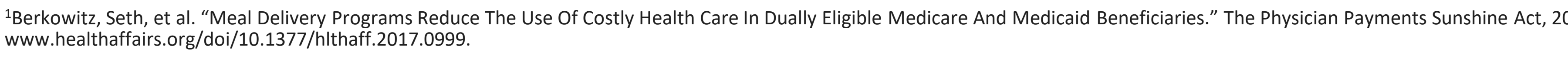
Objective & Expected Outcomes

Objective

To improve chronic care management and lower the cost of care for plan members through a 13-week home-delivered meals intervention

Expected Outcomes

- Reduction in total medical spend as measured by medical claims
- Increased medication adherence as measured by pharmacy claims



[1]Berkowitz, Seth, et al. "Meal Delivery Programs Reduce The Use Of Costly Health Care In Dually Eligible Medicare And Medicaid Beneficiaries." The Physician Payments Sunshine Act, 2017, www.healthaffairs.org/doi/10.1377/hlthaff.2017.0999.

UPMC/MOM'S MEALS PILOT—TARGET & RECRUITMENT

High-risk, chronically ill UPMC *for You* members with:

- Multiple co-morbidities
- Nutrition-sensitive condition(s)
- Psychosocial needs

The pilot targeted members enrolled in the UPMC Community Health Worker (CHW) Impact Program or Community Team Program who did not need housing assistance.

CHWs and care managers determined eligibility based on:

- Food insecurity
- Household size
- Meal prep equipment (refrigerator and/or microwave oven)

UPMC/MOM'S MEALS PILOT—ENROLLMENT & INTERVENTION

Enrollment (100 members)

Enrollees had a history of a high condition-based medical spend. Each member had at least one of the following conditions:

- Diabetes
- Asthma
- Coronary Artery Disease
- Heart Failure
- Chronic Obstructive Pulmonary Disease (COPD)
- Severe Persistent Mental Illness (SPMI)
- Substance Abuse Disorder

Intervention

3 meals/day for 13 weeks

Enrollees received weekly deliveries of fully prepared, condition-appropriate, refrigerated meals during a 3-month timeframe between October 2019 and June 2020.

UPMC & MOM'S MEALS' PILOT—MAIN MEASURES

Claims data for enrollees were evaluated against a comparison group of members who met SDOH food insecurity criteria. The equated sample was selected based on eligibility month, age, gender, residence and co-morbidity using propensity scores.

Engagement remained high—74 enrollees (74%) received meals for 13 weeks.

- To account for a decrease in utilization due to COVID-19, change in cost and utilization for members receiving meals were compared to similar members not receiving meals.
- Due to small sample size, distribution and COVID-19, a nonparametric statistical analysis was conducted.
    - Total cost of care
    - Medical costs
    - Pharmacy costs
    - Average change in ED utilization

PILOT OUTCOMES SHOW A POSITIVE TREND IN FINANCIAL RETURN

TOTAL COST OF CARE

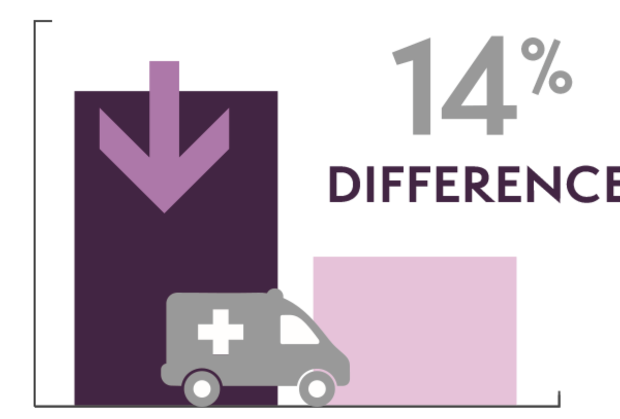
19%
DIFFERENCE

36% DECREASE
in median total cost of care for 6 months post meals

vs.

18% DECREASE
in comparison group

ED UTILIZATION



14%
DIFFERENCE

31% DECREASE
in ED utilization for 6 months post meals

17% DECREASE
in comparison group

INSIGHTS

Individuals who received meals had a 19% total cost of care reduction, largely driven by a decrease in ED utilization.

- 19% TCOC on top of COVID- 19 decrease in utilizations, as displayed in analysis
- Total cost of care decrease support return on investment for meal delivery

The largest ED reduction was identified among members with a diagnosis of SPMI.

- Non-emergent ED utilization drivers are NOT medical
- Facilitating basic needs contributes to tangible cost savings

Pilot displays promising results in cost containment and reduction in avoidable unplanned care.

- Larger population/longer post meal time frame – path to statistical significance
- Supports research that SDOH investment reduces medical costs
- Unmet biopsychosocial needs contribute to medical costs/unplanned care
- Start-up investment; longitudinal payback

PILOT PROGRAM: DIABETES

COLLABORATION WITH AMERIHEALTH CARITAS DC

Chronic Care Meals Program for Members with Diabetes

- AmeriHealth Caritas DC contracted with Mom's Meals to provide in-home delivery of condition-appropriate meals to select members where nutrition has the potential to positively impact their condition.
- Members in this program included those with:
  - Pre-diabetes
  - Uncontrolled diabetes
  - Gestational diabetes or hypertension
  - Designated conditions following an inpatient stay
- Those with pre-diabetes and uncontrolled diabetes were enrolled for 90 days.
- Those with gestational diabetes or hypertension were enrolled for the duration of their pregnancy plus 2 weeks following delivery.
- Each week, participants received up to 21 specially packaged ready-to-eat meals.

EARLY RESULTS: CHRONIC CARE PILOT

Among Members with Pre-Diabetes, Uncontrolled Diabetes, Gestational Diabetes or Hypertension, or Designated Conditions After Hospital Stay

Decline in A1c Levels:

- **Average:** .25 point (3.1%)
- **Range:** 1.2 to +0.1 points (-9.3% to 0.8%)

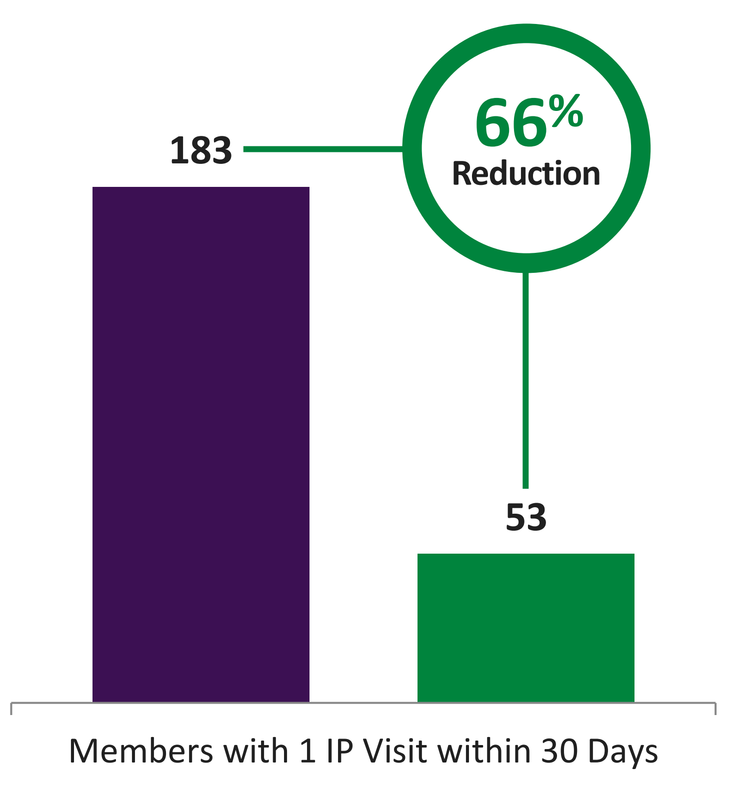
Weight Loss:

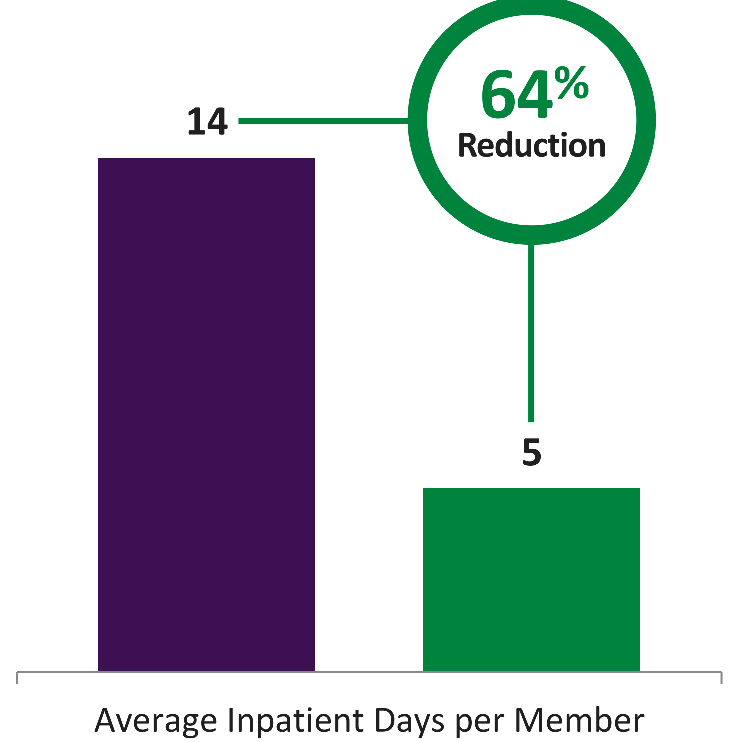
- **Average:** 3.9 pounds (1.4%)
- **Range:** 16 pounds to + 6.4 pounds (5.6% to + 3.8%)

66 participants with diabetes or pre-diabetes; 22 with complete pre- and post-data; about 2/3 female

CHRONIC CARE PILOT: RETROSPECTIVE CLAIMS ANALYSIS

Among 392 Members





Prior to receiving Mom's Meals   **After** receiving Mom's Meals

PILOT PROGRAM: RENAL HEALTH

HDM AND RENAL PATIENTS

Researchers From the University of Illinois Urbana-Champaign with Grant Support From the Renal Research Institute

Challenge

- Patients with kidney failure on hemodialysis (HD) have significant dietary restrictions, including reduced sodium intake.
- Behavioral counseling is rarely effective.
- Many patients live in a “high-sodium food environment” and may have barriers to dietary and behavioral changes.

Question

- Can home-delivered meals help support reduction in dietary sodium to drive clinical impact and help meet health goals?

STUDY DESIGN

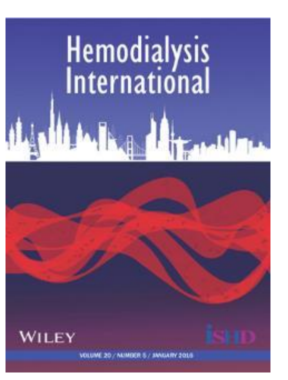
Twenty HD patients

Participants followed a usual (control) diet for the first 4 weeks followed by 4 weeks of 3 low-sodium, home-delivered meals per day.

Meals had <700 mg sodium each (<2,000 mg total sodium per day) and were low in potassium and phosphorus.

Measurements	Interdialytic weight gain (IDWG)	Hydration status (bioimpedance)	Blood pressure	Food intake (3-day dietary recall)	Muscle sodium (magnetic resonance imaging)

CLINICAL FINDINGS PUBLISHED IN HEMODIALYSIS INTERNATIONAL



-0.82 kg

Significant reduction in interdialytic weight gain (IDWG)

-1687 mg

Reduction in sodium intake

-23%, -25%

Reduced thirst (-23%) and dry mouth (-25%) scores

-1.55 mg/dL

Reduced plasma phosphorus

-1.1 L

Reduction in volume overload

-18 mmHg

Reduction in systolic blood pressure

Source: Perez LM, Fang H-Y, Ashrafi S-A, et al. Pilot study to reduce interdialytic weight gain through low-sodium home-delivered meals in hemodialysis patients. Hemodialysis International. 2020.

CONVENIENCE OF HDM HELPED DRIVE RESULTS

Overall, participants reported eating an average of **66 out of 84 meals** provided, which translated to approximately **2.4 meals per day** eaten, for overall average adherence rate of **79%**.

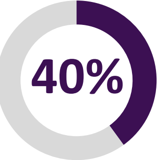
In summary, home delivery of low-sodium, kidney-friendly meals is a feasible short-term approach to reduce sodium intake, thirst, dry mouth, IDWG, blood pressure, plasma phosphorus, and volume overload in HD patients.

– Perez LM, Fang H-Y, Ashrafi S-A, et al

4 Most Common Feedback Themes Provided by Participants

"helped with not cooking and shopping"

"liked the different meal options and taste"



"helped with thirst, fluid intake, and/or fluid gain"

"helped with busy work or life schedule"

PARTNERSHIP PILOTS SHOW STRONG EARLY RESULTS

Program	Condition	Partners
Long Term & Chronic Care	Diabetes	AmeriHealth Caritas District of Columbia; Howard University Hospital
	Diabetes	AgeOptions; Department of Health & Human Services USA
	Renal	Illinois; Renal Research Institute
	Diabetes	CareMore Health
	Heart Failure	VA U.S. Department of Veterans Affairs
	Arthritis	Vanderbilt University; NIH National Institutes of Health
	Behavioral Health	UnitedHealthcare Community Plan
	Renal	Tufts University; Renal Research Institute
Post-Discharge	Heart Failure	Medical School University of Michigan; NewYork-Presbyterian Columbia University Medical Center; NIH National Institutes of Health
	Heart Failure	Stony Brook School of Medicine; NIH National Institutes of Health
	Heart Failure	BayCare
	Food Insecurity	Central California Alliance for Health; Medi-Cal

POSTPARTUM FOOD BOX PARTNERSHIP PROGRAM

"Food Box Delivery after Delivery"

Dara Hall, MSN - DMMA

BACKGROUND

- Food insecurity – lack of consistent access to sufficient food
- Food insecurity disproportionately impacts:
  - Female-headed households
  - Households at or below FPL
  - Households with children <6
  - Individuals of color
- Food insecurity exacerbated by COVID-19 pandemic in Delaware & the US
- Food insecurity not often disclosed due to social stigma

IMPACT

- Food insecurity has impacts for maternal-infant dyad
  - Increased risk for major depression & general anxiety disorder
  - Increase risk of postpartum depression (PPD)
  - Decrease rates of breastfeeding
- Food insecurity increase risk of contracting COVID-19
  - Food insecurity = forced to obtain food in person
  - Long waits at crowded food pantries – increased exposure
- Food insecurity does not occur in isolation from other SDOH

RESPONSE

- Developed a Postpartum Food Box Delivery program
- Partnership between
  - Division of Medicaid and Medical Assistance (DMMA)
  - Food Bank of Delaware
  - ModivCare
  - Amerihealth Caritas and Highmark Health Options, the Medicaid managed care organizations (MCOs)

PROCESS

- Members notified of program through hospitals, community programs, providers, and MCOs
  - Members had choice of 2 box options
  - Variety of shelf-stable food
  - Deliveries Tuesday & Thursdays
- Members called their MCO to set up deliveries
- MCOs shared delivery information with Modivcare
- ModivCare coordinated food box orders with Food Bank

TIMELINE

- Partnership meeting October 2020
- Finalization of roles & responsibilities December 2020
- Implemented c-section pilot February 2021
- Expanded to all postpartum members July 2021

ROLES & RESPONSIBILITIES

MCOs	ModivCare	Food Bank
Receive incoming calls from members.	Contact members on report to schedule delivery date & verify information	Make food boxes according to Modivcare orders
Provide email to Modivcare daily on member interest, boxes requested, box options, delivery dates	Email Food Bank prior to pick-up with information on box types and pick-up locations	Provide boxes at location for drivers (2 locations in state)
	Make scheduled deliveries	
	Return boxes that couldn't be delivered	

MEMBER FEEDBACK

Reduced burden with accessing food

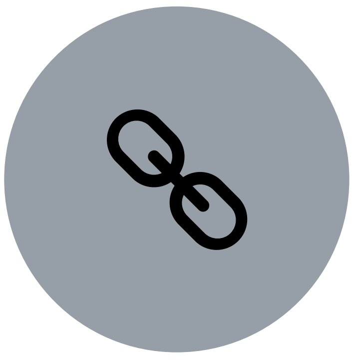
Decreased stress with traveling outside home with newborn

Enhanced relationship with MCOs to address SDOH needs

PARTNERS FEEDBACK

PROGRAM HAS HELPED TO IDENTIFY FOOD INSECURITY

ENHANCED CONNECTION WITH MEMBERS DIFFICULT TO REACH



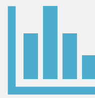
ENSURE LINKAGES TO RESOURCES TO ADDRESS FOOD INSECURITY LONG-TERM

LESSONS LEARNED

- Communication is key
  - Frequent & on-going
- Continue to amend and make changes
  - Flexibility & continued evaluation
- Clearly define roles & responsibilities
  - Establish prior to implementation but ensure flexibility

NEXT STEPS

Program funded through 2022



Identification of quantitative measures to assess impact

THANK YOU FOR ATTENDING

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