True Cost of Food:
Food is Medicine Case Study

Tufts
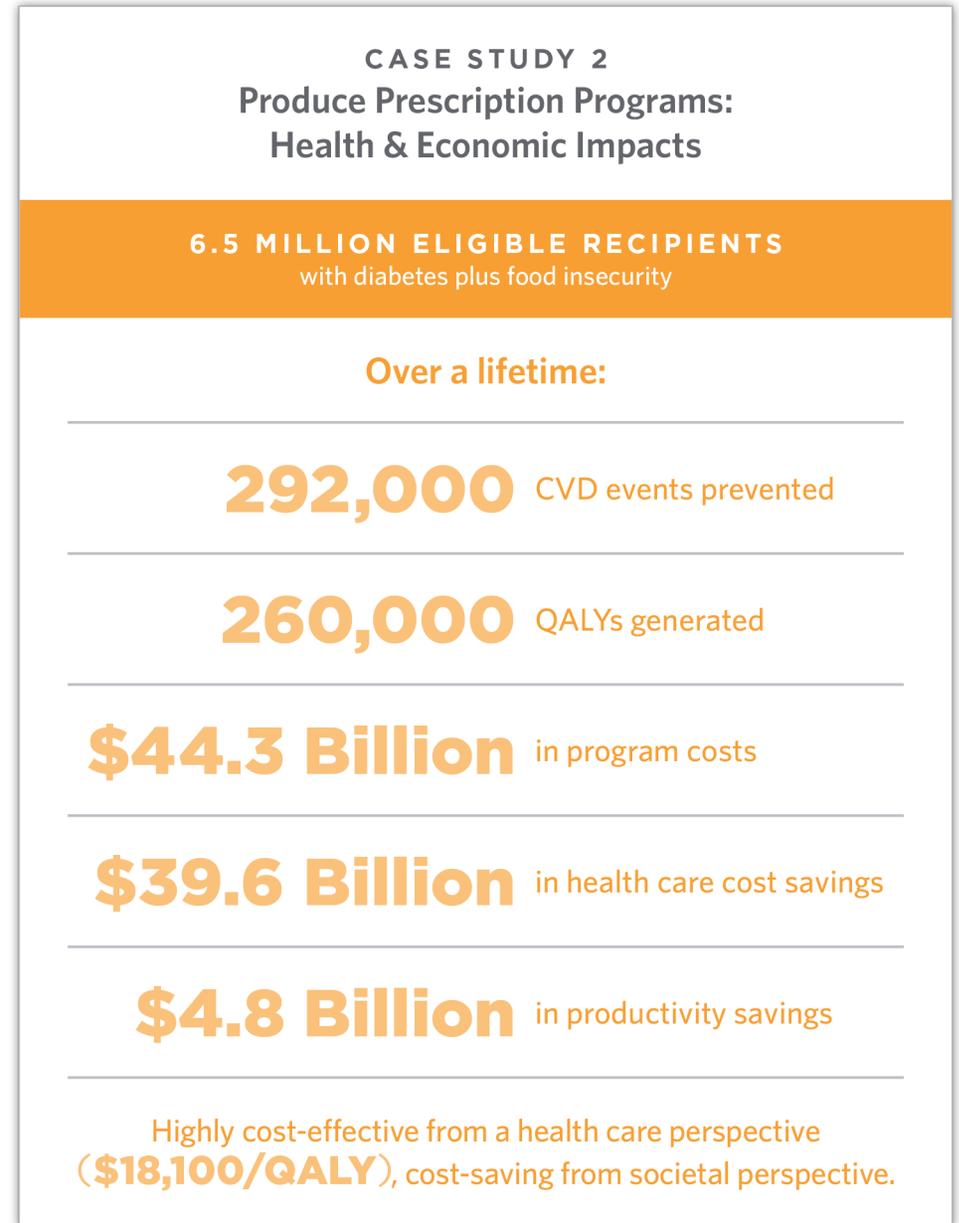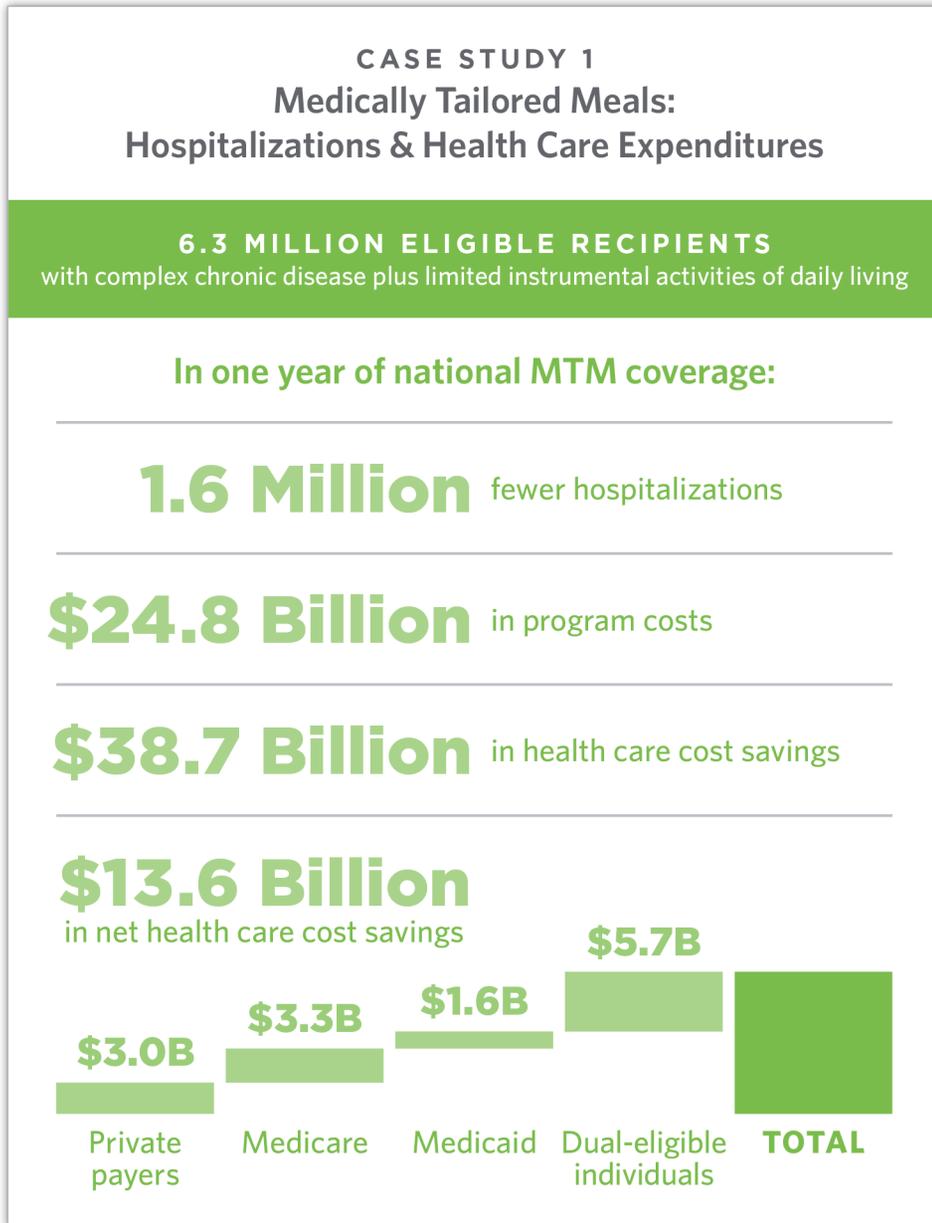UNIVERSITY

Gerald J. and Dorothy R. Friedman
School of Nutrition Science and Policy
FOOD IS MEDICINE INSTITUTE

CASE STUDY 1
Medically Tailored Meals:
Hospitalizations & Health Care Expenditures

6.3 MILLION ELIGIBLE RECIPIENTS
with complex chronic disease plus limited instrumental activities of daily living

In one year of national MTM coverage:

1.6 Million fewer hospitalizations

$24.8 Billion in program costs

$38.7 Billion in health care cost savings

$13.6 Billion
in net health care cost savings

$3.0B Private payers
$3.3B Medicare
$1.6B Medicaid
$5.7B Dual-eligible individuals
TOTAL

CASE STUDY 2
Produce Prescription Programs:
Health & Economic Impacts

6.5 MILLION ELIGIBLE RECIPIENTS
with diabetes plus food insecurity

Over a lifetime:

292,000 CVD events prevented

260,000 QALYs generated

$44.3 Billion in program costs

$39.6 Billion in health care cost savings

$4.8 Billion in productivity savings

Highly cost-effective from a health care perspective
(**$18,100/QALY**), cost-saving from societal perspective.

Medically Tailored Meals: Hospitalizations and Health Care Expenditures

BACKGROUND

Medically Tailored meals (MTMs) have been suggested to effectively improve disease management, and reduce healthcare utilization (e.g. hospitalizations, emergency department admissions, nursing home visits) and health care expenditures based on evidence from observational studies and pilot randomized clinical trials.[29, 30, 31, 32, 33, 34] To date, MTMs have generally been provided by community-based organizations supported by grants, donations, and additional ad hoc restricted funding from home health care services benefits, Medicare Advantage programs, or state Section 1115 waivers allowing coverage of MTMs, with limited coverage nationally. The potential changes in health care expenditure and hospitalization if MTMs were covered nationally by health insurance for an entire eligible population have not been quantified. The objective of this case study was to estimate the 1-year and 10-year potential changes in annual hospitalizations, health care expenditures and net costs, and cost effectiveness associated with national MTM coverage for U.S. patients with at least one diet-related health condition and limited instrumental activities of daily living (IADLs) who are covered by Medicaid, Medicare, or private insurance.

The MTM intervention evaluated in the study was meals that were medically tailored and provided only for the patient (i.e., no meals were provided for other household members). In practice, MTM organizations often have available 10 to 15 different daily medically tailored meal plans for different patients. Programs generally provide between 10–21 meals per week to each patient (such as lunch and dinner for all weekdays) based on disease diagnosis and nutritional assessment.[35] Meals are developed by Registered Dietitian Nutritionists (RDN) who tailor ratios of macronutrients and micronutrients for specific diagnoses, incorporate optimal quantities of healthy food groups such as fruits and vegetables, account for dietary preferences such as vegetarian options, and provide options for individuals who have challenges chewing solid foods. MTM dietary guidelines for common diagnoses can be found on the Food is Medicine Coalition website.[36]

For this case study, a population-level, cohort policy simulation model was created based on nationally representative samples from the 2019 Medical Expenditure Panel Survey (MEPS). The model estimated 1- and 10-year potential changes in annual hospitalizations, potential changes in annual health care expenditures, and overall policy cost effectiveness associated with national MTM coverage, compared with no new MTM policy. The model further incorporated evidence on annual hospitalizations and expenditures from MEPS, relative risks of hospitalizations and the percentage change in health care expenditures associated with MTM receipt, and MTM program costs. Participants were U.S. adults aged 18 years or older who had Medicare, Medicaid, or private payer insurance and at least one diet-related condition (diabetes, congestive heart failure, myocardial infarction, other heart disease, emphysema, stroke, nonmelanoma cancer, chronic kidney disease, and HIV infection) and one IADL limitation (i.e., a positive survey response to receiving help or supervision using the telephone, paying bills, taking medications, preparing light meals, doing laundry, or going shopping, due to an impairment or health problem).

The model outputs included changes in annual inpatient hospitalizations and health care expenditures, MTM program costs, and net policy costs from the health care perspective, separately analyzed among Medicaid, Medicare, dual-eligible, and privately insured patients, for both a 1-year (2019) and a 10-year (2019-2028) time horizon.