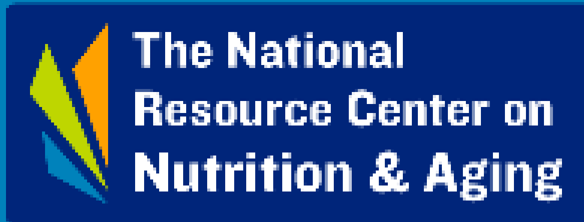


Data Driven Decision Making

Nutrition's Role in the Changing Healthcare Environment

www.nutritionandaging.org

Presenters:

Linda Netterville, MA, RD, LD
Project Director, National Resource Center on Nutrition and Aging

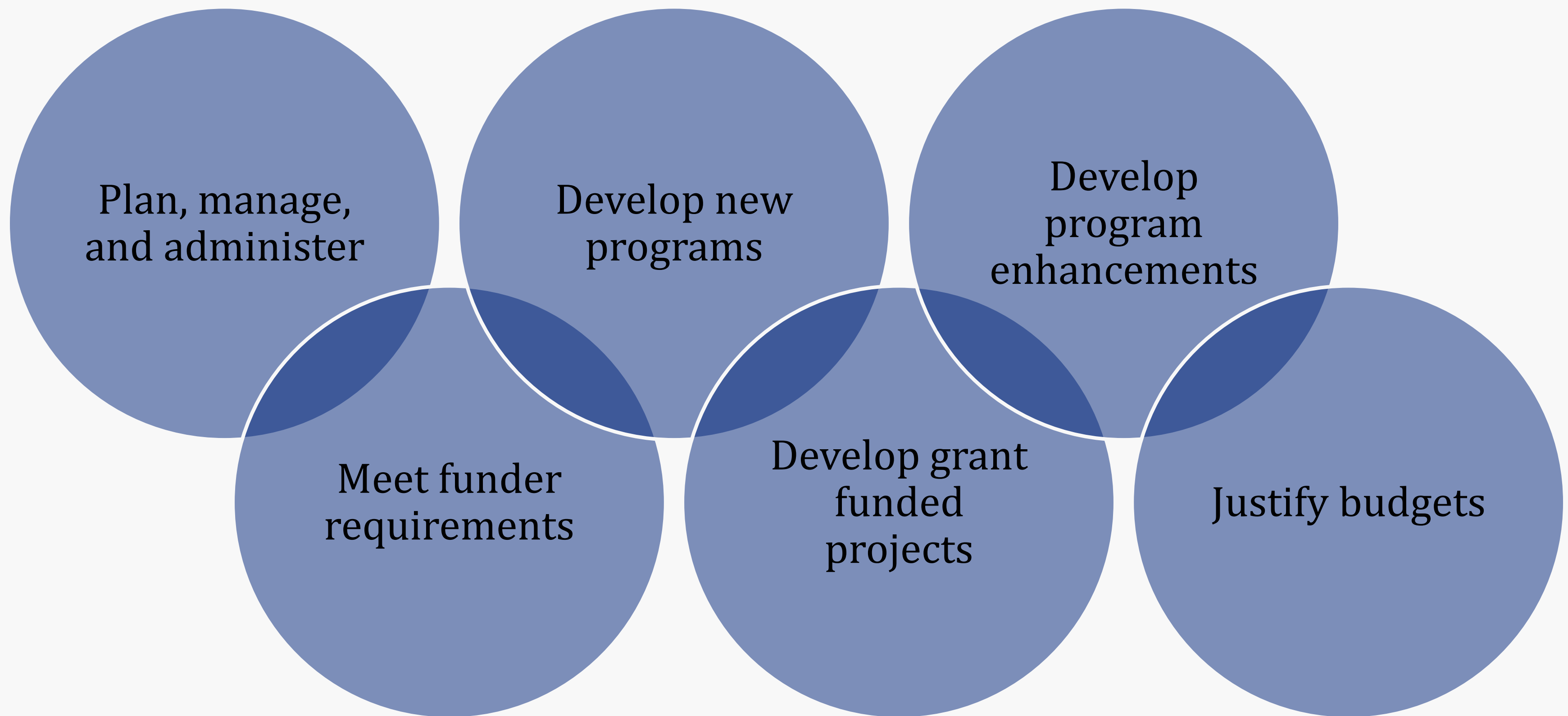
Sherry Simon, RD, LD
Vice President of Nutrition and Health Programs
Meals On Wheels, Inc. of Tarrant County

Alan Stevens, PhD
Director, Center for Applied Health Research
Scott and White Healthcare System

Kali S. Thomas, PhD, MA
Assistant Professor, Center for Gerontology and Healthcare Research
Brown University
Research Health Science Specialist, Providence VA Medical Center

The National Resource Center on Nutrition & Aging

Data Driven Decision Making



The USE of DATA to Validate Need: AN Example with Meals On Wheels, Inc. of Tarrant county

Sherry Simon, RDN/LD
Vice President of Nutrition and Health Programs
Meals On Wheels, Inc. of Tarrant County

Nutrition Program Perspective

What's Happening at MOWI

- Types of MOWI Programs / Data Collected
  - Meals Program including Choice Meals
  - Homeland Security Questions
  - Referrals
  - Accounting
  - Health, Medical, and Medication
  - Required Assessments and Evidenced-Based Screening Tools
  - Grant Projects: Diabetes, HomeMeds, PAM, Vision
  - Nutrition Diagnosis
  - "Healthy Days" Data

What Data
Is
Collected?

Types of Data Collected

- Demographic Information (name, address, route #)
- Program(s) (Meals, RD Educ, HomeMeds, PAM, SAGE---with start and end dates)
- Meals Detail (meal type, beverage type, food allergies, funding source)
- Meal History (accounts for all the meals and how they were funded)
- Medical Screen (major health concern, diagnosis, medical needs, PCP, Homeland Security Questions-emergency transportation, Hospitalizations and ER visits, Insurance type)
- Medications (also includes herbs & vitamin/minerals, falls, dizziness, alcohol intake)

Types of Data Collected

- Health Screen (Height, Weight, other agencies involvement, health insurance details)
- Documentation (free form writing with indication of type of note)
- Assessments (DADS 2060, Nutrition Screen, Malnutrition Screen, Diabetes Screen, Emergent Care Screen, Healthy Days, EQ-5D)
- Dietitian Notes (pretty an electronic medical record with BMI, diet recall, Nutrition Diagnosis)
- Outcome Questions (facility specific questions, Healthy Days, questions taken from evidence based sources)
- Client Contributions (a record of the contributions made by or on behalf of the client)

Sample of Documentation

rpt Client HAIL Initial Assessment - Microsoft Access

Meals on Wheels, Inc. of Tarrant County
Initial Assessment

Date: 2/5/2014
Staff: kjacobson
Risk: High
Last Name: [redacted] First Name: [redacted] MI: M Sex: F
Primary Health Concern: Arthritis-Rheumatoid/Osteo Age: 84
Stated Height: 5 ft 0 in Stated Weight 170 lbs Ideal Body Weight: 100 lbs BMI Score: 33.2

Additional Health Concerns:

Border line Diabetes (has to	Confused/Forgetful	Edema	Eye Problems-Cataracts
Heart-CHF	Hypertension	Incontinent	Broncitis
Mental Health-Depression/	Weakness		

Medications:

Omeprazole	Hydrocodone	Nitrostat	Diazepam
Risperidone	Cloridogrel	Bayer / Aspirin	Lisinopril
Furosemide	Amlodipine / Norvasc	Celebrex	Advair
Donepezil	Simvastatin	Calcium Supplement	MVI

Diet Recall: Client eats 3 daily. Snacks/Supplements: No

Breakfast 7:30	Lunch 12:00	Supper 5:00	Snacks
Peanut butter sandwich with wheat bread + banana + coffee with cream & sweet n' low	MOW meal with milk	Chicken sandwich + collard greens + cherry pie with water	Usually does not have snacks

Fluids: 2- 32oz glasses of water/day
Dentition/GI: Natural, cleans daily. Client reports constipation- tx with stool softner, prunes, laxative. Client reports reflux- tx with omeprazole

Physical Activity: PT / chair exercises daily

Client does not use tobacco/smoke. Client reports alcohol use.

Client cannot walk or stand by herself- she has to have assistance. Client does have rollator but only walks with assistance from someone else. Client has an attendant who helps her with ADL's. Client reports she does have trouble breathing on occasion due to CHF. Client reports that her heart doctor never mentioned any type of fluid restriction. Client reports she does not add salt or pepper to her meals. Client reports she has a good appetite. Client reports she has gained ~10# unintentionally. Client reports she is borderline of having diabetes. Client reports she checks her blood sugars 1x/week- before breakfast. Client reports it was 114 the most recent time she checked it. Client reports tingling/numbness in extremities. Client was wearing shoes upon arrival. Client does not usually check her feet. Client reports her son goes to the grocery store as needed.

Nutrition Diagnosis:

P:	E:	S:
NI-5.8.5 Inadequate fiber intake	(knowledge) r/t food and nutrition knowledge deficit concerning: desirable quantities of fiber	(digestive system) AEB bowel function, constipation (NI-4.2, NI-5.5, NI-5.7.1, NI-5.8.5, NI-5.8.6, NC-1.4, NB-1.5)

Estimated Energy Needs: 1125 - 1350 kcal
Estimated Protein Needs: 45 - 67 grams
Estimated Fluid Needs: 1125 - 1350 ml

Healthy Days Questions

- 1. Would you say that in general your health is excellent, very good, good, fair, or poor?
- 2. Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?
- 3. Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?
- 4. During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?

Note these are four questions (Core Module) out of a 14 question questionnaire—other questions are more specific---Activity Limitation Module and the Healthy Day Symptoms Module

How Is
Data
Collected?

Data Collection

- Case Managers have Netbooks and use air cards to get onto the database and document while out in the field or in their homes
- At the same time, the staff in office are also updates and using the database
- We essentially built an electronic medical record for the HAIL, PAM, and HomeMeds where we can format into an actual medical personnel note
- We can build a report with any inputted data
- Examples----Fort Worth Emergency Management, Tarrant County Health Dept, EMS on the way to a clients home can print Medical HX and Meds

Reports Screen

Report Dialog - MOWI Clients

File | Home | Create | External Data | Database Tools | Acrobat

Navigation Pane

Meals on Wheels, Inc.
of Tarrant County

Clients

Reports

Daily Reports

Today's Date: 08/13/2013

Enter Date For Report: 08/14/2013

Wednesday

Generate:

- Route Sheets
- Daily Meal and Beverage Report
- Client File Labels
- Daily Changes and LC Report
- Daily Meal _Bev-Special Meals
- Deposit Report

Monthly Reports

Select Month and Year For Report: August 2013

- Cumulative Meals Reports
- Ensure Report
- Recertification Report
- Pet Food Clients by Volunteer
- Supl. Food Clients by Volunteer
- Ensure Prescriptions Due Report
- Deposit Report
- Birthday Report
- WOW Clients by Volunteer

Misc Reports

- Master Route Sheet
- Route Totals
- Meal Summary By Date
- Clients and Meals Served
- Count of Clients by Route
- Ensure Delivery List
- Client Services by Zip
- NA Case Notes
- Clients w/Meals-No Contrib
- Meal Selection A Totals
- Meal Selection B Totals
- Yellow Slips Query
- Postage Report Query.

Close

- Diabetes Assessments
- Assessment Reports
- Program Enrollment
- HAIL Reports

Form View | Num Lock | Scroll Lock

Desktop | Libraries | Carla Jutson | Computer | 10:15 AM 8/13/2013

Evaluation Team Specific Reports

Microsoft Access

Report | Starting Date:
Ending Date:

View HAIL Goal Achievements

View HAIL Notes by Date

View PAM Notes by Date

Export HAIL Data

Export PAM Data

Export HomeMeds Data

Export Screenings

Close

Form View

How Is
Analysis
Supported?

Internal Support

- Office Staff dedicated daily to different aspects of the database
- IT Manager
- Technology Committee
- Every call/action documented in the database

External Support

- Database Programmer
- Evaluation Team
- Hosting of Server
- Interface with other Organizations
- Funders with specific needs

How Are Results Used?

How Data Used

- Pre and Post Data or Annual Data
- Reports to Funders
- Reports to Stakeholders
- Adds validity
- Benchmarking
- Able to have measurement of what is being done
- Reproducible data
- Share among like Agencies/Organizations
- More that use these tools the stronger our message
- Data=Results!

Contact

Sherry Simon
Vice President of Nutrition and Health Programs
Meals On Wheels, Inc. of Tarrant County
ssimon@mealsonwheels.org
Office Number: 817-258-6427

REINVENTING THE MEALS ON WHEELS

Findings of MOWAA/Wal-Mart Expanding the Vision Grant

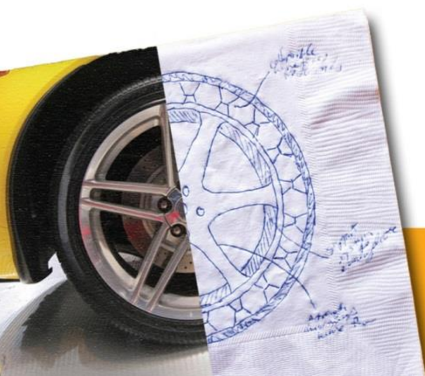
Alan B. Stevens. PhD

Director, Center for Applied Health Research

Community Research Center *for* Senior Health

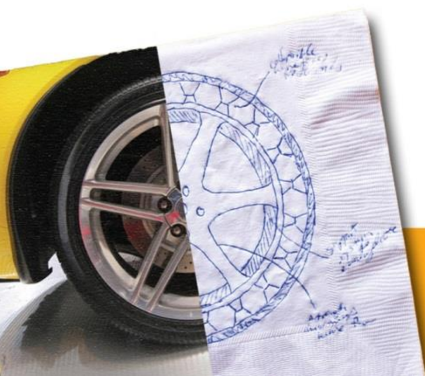
MOWAA/Wal-Mart Expanding the Vision Grant

- The goal of the grant is to expand MOWAA organization's nutrition and meal services
- Meals On Wheels, Inc. (MOWI) of Tarrant County was one funded agency
  - We were contracted to complete an evaluation of the MOWI project
- Project period: March, 2013 — March, 2014



Meals On Wheels, Inc. (MOWI) of Tarrant County

- Mission:
  - To promote the dignity and independence of older adults, persons with disabilities, and other homebound persons by delivering nutritious meals and providing or coordinating needed services.



REINVENTING THE MEALS ON WHEELS

MOWI Programs/Services

- Meals Program
- Comprehensive Case Management
- Client Services (e.g., fans/air conditioners, blankets, walkers, smoke detectors, minor home repairs)
- Companion Pet Meals
- Friend to Friend
- HELLO (Help Eliminate Life's Loneliness for Others)
- WOW (Words On Wheels)
- Community Health Navigator
- Diabetes/Nutrition Counseling
- HomeMeds

REINVENTING THE MEALS ON WHEELS

Meals on Wheels, Inc.
of Tarrant County

Clients
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- Postage Report Query.

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- Diabetes Assessments
- Assessment Reports
- Program Enrollment
- HAIL Reports

Meals on Wheels, Inc. of Tarrant County
Initial Assessment

Date: 2/5/2014

Staff: kjacobson

Risk: High

Last Name: [redacted] First Name: [redacted] MI: [redacted] Sex: [redacted]

Primary Health Concern: Arthritis-Rheumatoid/Osteo Age: [redacted]

Stated Height: 5 ft 0 in Stated Weight 170 lbs Ideal Body Weight: 100 lbs BMI Score: 33.2

Additional Health Concerns:

Border line Diabetes (has to	Confused/Forgetful	Edema	Eye Problems -Cataracts
Heart-CHF	Hypertension	Incontinent	Broncitis
Mental Health-Depression/	Weakness		

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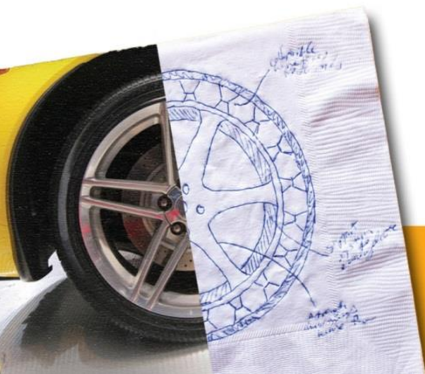
Estimated Energy Needs:	1125 - 1350 kcal
Estimated Protein Needs:	45 - 67 grams
Estimated Fluid Needs:	1125 - 1350 ml

Page 1 of 2

THE WHEELS

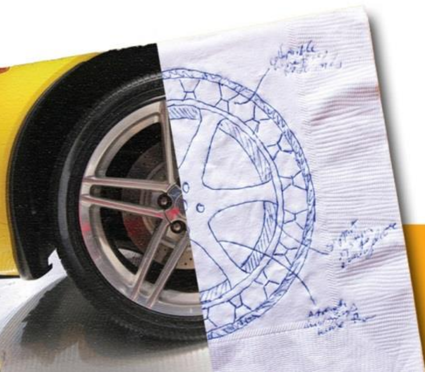
MOWI of Tarrant County Vision Grant

- Collaborated with:
  - Area Agency on Aging of Tarrant County (AAA),
  - United Way of Tarrant County, and
  - John Peter Smith Hospital (JPS)



Grant Goals: Outputs

- Outputs:
  - Provide 18,000 meals to a minimum of 120 recently discharged hospital or emergency room patients



REINVENTING THE MEALS ON WHEELS

Grant Goals: Outcomes

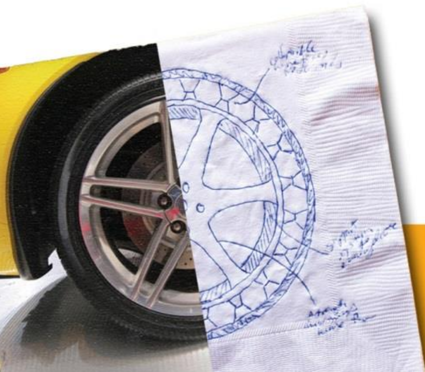
- Outcomes:
  - 50% of clients served (60) will not have another hospital admission during the project period
  - 10% of clients served (12) will reduce their Emergent Care Assessment score upon ending the meal program
  - 50% of clients served participating in the HomeMeds program will have eliminated all medication alerts within 30 days

Goal Achievement

Goal: 18,000 meals to a minimum of 120 recently discharged hospital or emergency room patients

A total of 18,010 meals provided during the funding period.

A total of 121 patients received meal services during the funding period.



REINVENTING THE MEALS ON WHEELS

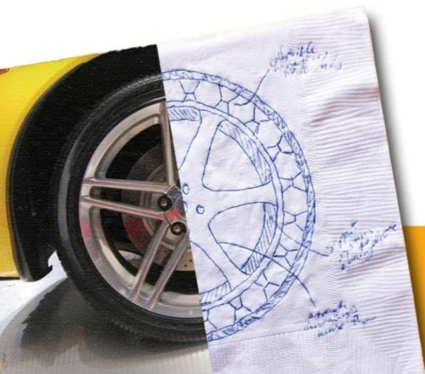
Total Number of Meals Provided

Category	Number
Meals Provided	18,010
Noon Meals	11,288
Breakfast Meals	4,954
Shelf-stable Meals	93
Frozen Breakfast Meals	70
Frozen Noon Meals	420
Holiday Meals	319
Weekend Meals	856

REINVENTING THE MEALS ON WHEELS

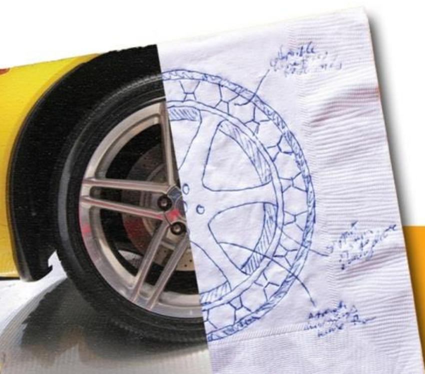
Vision Clients Meal Information

- Average number of meals: 131 meals
- Average length on the program: 132 days



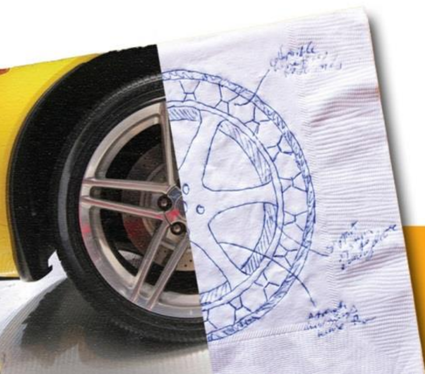
Demographic Characteristics of Clients Served

- Mean age: 71.51 years (42-94 years)
- Female: 60%
- White/non-Hispanic: 75%
- Hispanic: 6%
- Black/African American: 19%



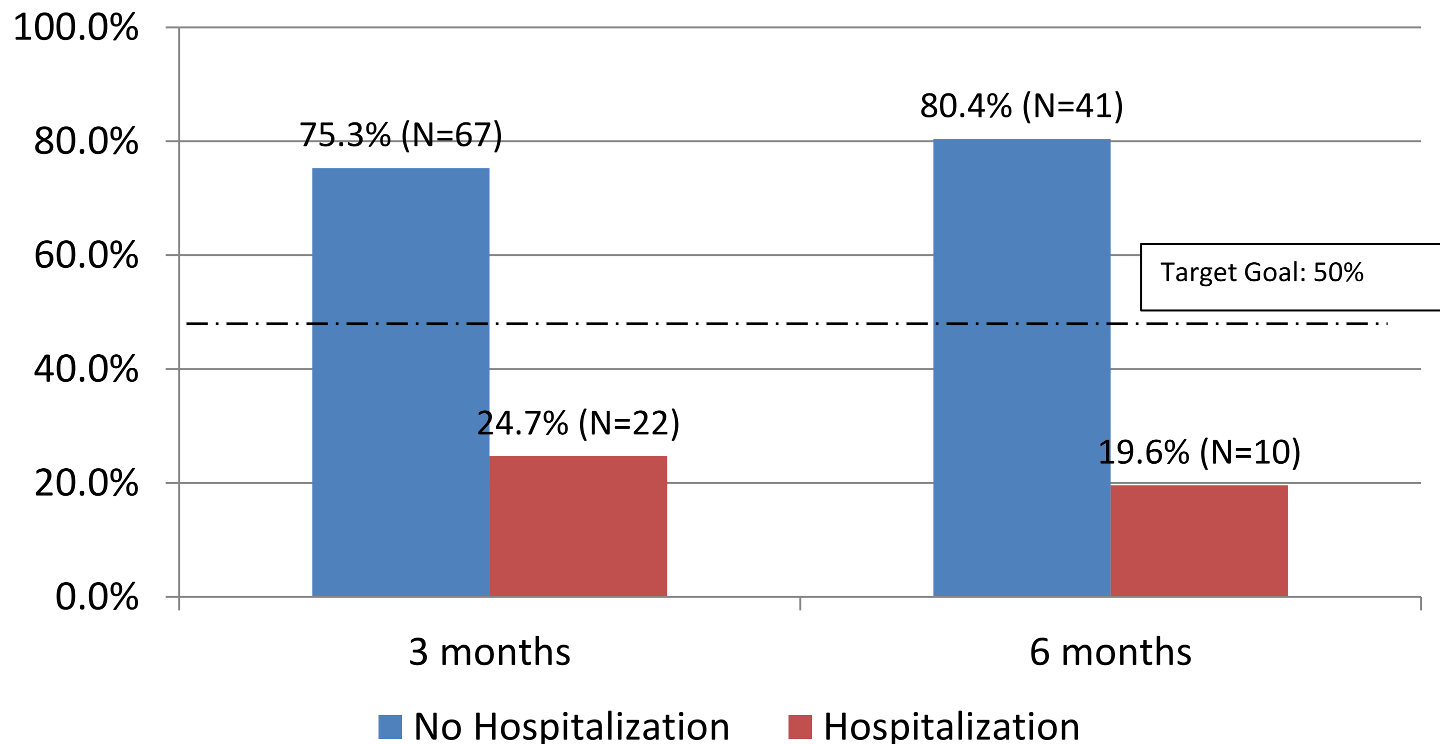
Hospitalizations at Intake

- Among 121 reached clients, 105 clients had at least one recent hospitalization (average nights of hospitalization= 10.75) and 20 had a recent ER visit at intake.
- Four clients had both a recent hospitalization and ER visit at intake.



Outcome Achievement: Hospitalizations

- 50% of clients (60) served will not have another hospital admission during the project period.
  - *This outcome was achieved.*

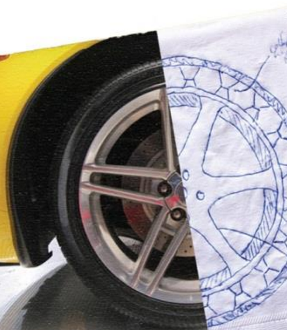


Outcome Achievement: ER Visits

- 50% of clients (60) served will not have another hospital admission during the project period.
  - ***This outcome was achieved.***

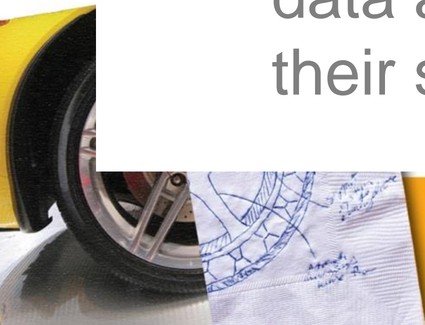
	No ER Visits	ER Visits
3 months	89.9% (N=80)	11.1% (N=9)
6 months	90.2% (N=46)	9.8% (N=5)

Target Goal: 50%



Outcome Achievement: Emergent Care Assessment

- 10% of clients (12) served will reduce their Emergent Care Assessment (an evidence-based tool used to determine a persons' risk of hospitalization) score upon ending the meal program.
  - ***This outcome was achieved.***
  - Average Emergent Care score at intake was 6.24.
  - 49 clients to date have Emergent Care Assessment data at 6 months, of which, 27 (55.1%) have reduced their score.



REINVENTING THE MEALS ON WHEELS

Outcome Achievement: HomeMeds Alerts

- 50% of clients served participating in the HomeMeds program will have eliminated all medication alerts within 30 days.
  - ***This outcome was achieved.***
  - 93 clients enrolled in the HomeMeds Program and 51 (55%) had medication alerts identified (mean=2.06 alerts).
  - Based on the 41 clients with data on alert resolution, 40 (98%) clients with alerts had them resolved within 30 days.

REINVENTING MEALS ON THE WHEELS

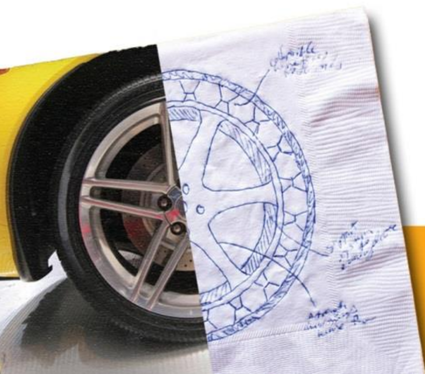
Findings: Meals Program

- Clients served were identified to be at high risk of readmission or other negative health outcomes
- After starting the meals program, the number of clients with readmissions was very low.
  - At 3 months, of the 89 clients, 75.3% were not hospitalized and 89.9% had not gone to the ER.
  - At 6 months, of the 51 clients, 80.4% of them had not hospitalized and 90.2% had not gone to the ER.

REINVENTING THE MEALS ON WHEELS

Findings: Meals Program + HomeMeds

- Clients who enrolled in both HomeMeds and the meals program had significant improvements
  - 55% of clients enrolled in both meals and HomeMeds had at least one medication alert identified
    - Average of 2.06 alerts per client
  - Of those with information on alert resolution, 98% of clients had their alerts resolved within 30 days.



Additional Analyses Will Occur

- Building a collaboration with the DFWHC Foundation to explore inpatient health care utilization data
- Three way partnership: Meals on Wheels, DFWHC Foundation and Baylor Scott & White Health
- We will attempt to match personal identifiers collected by MOWs with the claims data held by DFWHC Foundation
- Health economist will be engaged in these new analyses

Providing More Home-Delivered Meals Is One Way To Keep Older Adults With Low Care Needs Out Of Nursing Homes

Kali S. Thomas, PhD

Research Health Scientist, Providence VAMC

and

Assistant Professor, Department of Health Services, Policy and Practice, Brown University

Outline

- Low-Care Residents
- Findings from Initial Study
- Financial Impact on States
- How to Utilize this Information
- Current Work and Future Directions

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Background

- Olmstead Decision in 1999
- Increase in home and community based services (HCBS)
- Increase in acuity of nursing home (NH) residents
- Despite these increases, still alarming proportion of NH residents with low care needs
- Measure of quality of long-term care (LTC) system

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Who are Low-Care Residents?

- Do not require assistance in Bed Mobility, Toileting, Transferring, or Eating
- Are not "Clinically Complex" or require "Special Rehab"
- Could be cared for in a less-restrictive setting

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How big is the issue?

Percent of Nursing Home Residents Classified as Low-Care (2000-2009)

Year	Percent
2000	17.85
2001	17.46
2002	16.93
2003	16.53
2004	15.93
2005	15.36
2006	14.83
2007	14.23
2008	13.46
2009	12.58

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Why are they there?

- Much variation among states in the prevalence of low-care NH residents
- A greater share of Medicaid LTC expenditures on HCBS is related to fewer NH residents with low-care needs
- More assisted living = fewer low-care residents
- More NH competition = fewer low-care residents
- Missing from the literature was relationship of additional HCBS programs (i.e. Older Americans Act services) to low-care residents in NHs

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Hypothesis

- We hypothesized that higher per capita state expenditures on OAA Title III services will be associated with a lower percentage of NH residents with low-care needs

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Data

- AGing Integrated Database (AGID)
  - AoA related data files and surveys
  - U.S. Census data

Administration on Aging
AGing Integrated Database (AGID)

- 2000-2009 OAA Expenditures
  - Personal care, homemaker, chore, home-delivered meals, adult day care, and case management per older adult aged 65+

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Data

- LTCfocUS.org
  - 2000-2009
  - Facility characteristics
  - Market characteristics
  - State policy variables

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Results

- Out of all the programs, including Medicaid HCBS, increased spending in home-delivered meals was the only significantly associated with decreases in the proportion of low-care residents in nursing homes during the decade

Reference: Thomas, KS & Mor, V (2012) Health Services Research

Results in Context

- Every additional $25 states spend on home-delivered meals per year, per person aged 65+ in the state, is associated with a decrease in the low-care NH population of 1 percentage point
- A state like Washington, that spent approximately $8.10 per capita aged 65+ would have an average low-care population of 16.8%
- A state like Wyoming, who spent $82.46 per capita aged 65+, would have an average low-care population of 13.8%

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Follow-up Analysis

- Relationship between the proportion of older adults in a state receiving home-delivered meals and low-care residents
- Calculated the potential savings to states

Results

- Every 1% increase in the proportion of older adults receiving meals is associated with a 0.2% decrease in the proportion of low-care residents
- The majority of low-care residents are dually-eligible
- Calculated each state's potential costs/savings by increasing proportion of older adults served

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Potential Annual Financial Impact

Annual impact	States (descending order of savings)
>$500,000 saved	PA, NY, MA, OH, NJ, MN, IL, WI, MO, LA, MI, AR
<$500,000 saved	MS, NH, IA, KS, NM, NE, ND, MT, RI, DE, WY, UT, VT, AL
<$500,000 spent	SD, ID, SC, ME, WV, CO, CT, OK, OR, NC
>$500,000 spent	KY, NV, GA, TX, WA, MD, AZ, TN, IN, VA, CA, FL

Reference: Thomas, KS & Mor, V (2013) Health Affairs

Conclusions

- Decreases in low-care NH residents coincides with increased HCBS spending over the past decade
- Increased expenditures on home-delivered meals and increased prevalence of older adults receiving meals are related to decreasing proportions of low-care residents in NHs
- Home-delivered meal services provide more than just food
- These services may be key to allowing older adults to remain independent in their homes

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How Can This Information be Utilized?

- Ex: legislative testimony, letters to elected officials, grant writing
- Visit LTCfocUS.org for local low-care figures and population characteristics
- Visit www.agid.acl.gov for SPR, National Survey of OAA Participants, Census data
- Make the business case that home-delivered meals matter

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Current Work and Future Directions

- 8 Programs across the US
- 619 older adults on waiting lists
  - 212 control group
  - 194 once weekly frozen meals
  - 213 daily hot meals
- Pre- and Post-Survey and Medicare claims
- Evaluating improvements in quality of life, social isolation, health, and healthcare utilization after 15 weeks

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More to come…

Thank you!

kali_thomas@brown.edu

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