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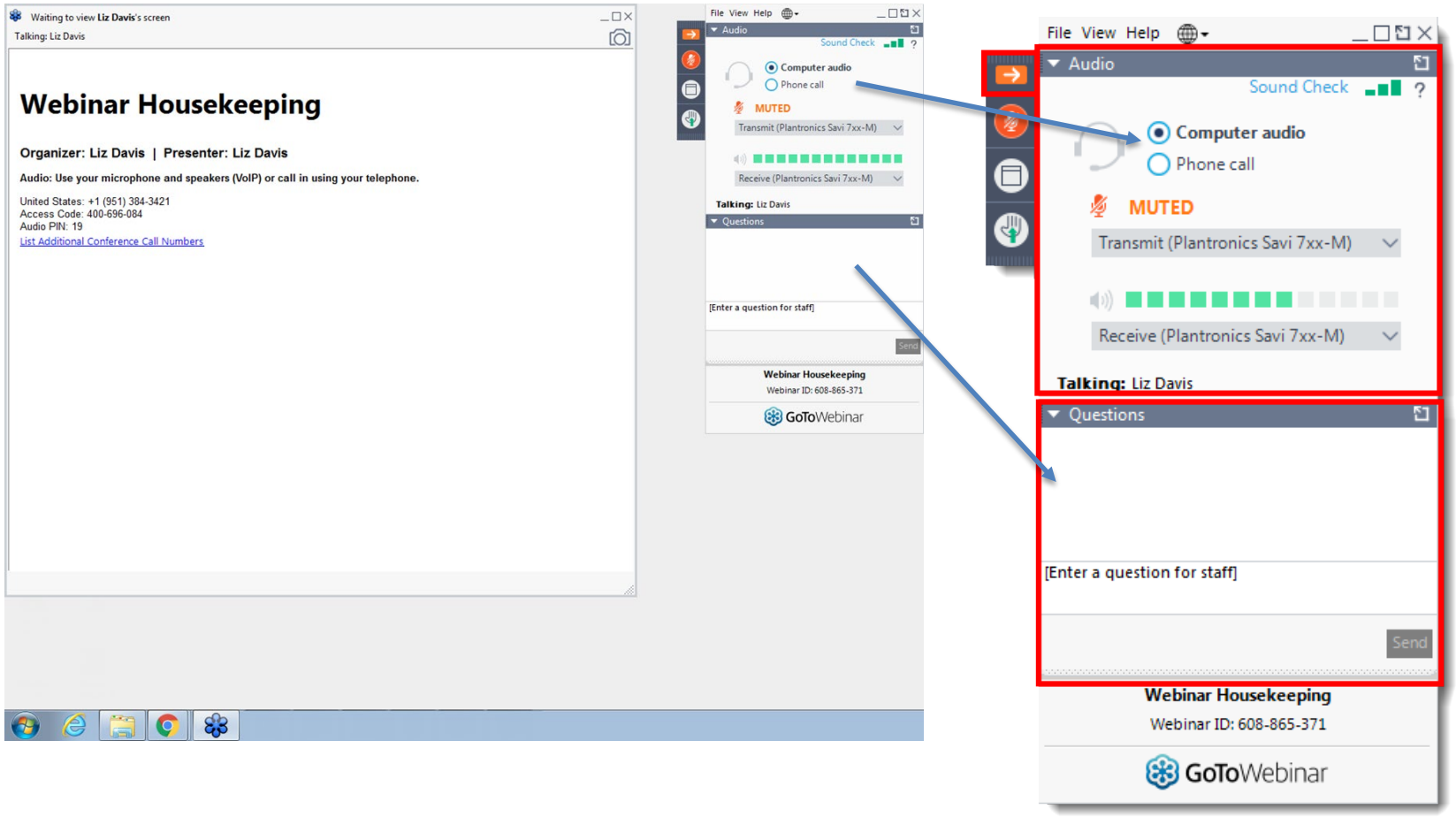
westhealth

Connecting the Dots Across Oral Health, Food Insecurity and Malnutrition

Webinar

June 18, 2019

GoToWebinar



Your Participation

Open and close your control panel

Join audio:

- Choose **Mic & Speakers** to use your computer
- Choose **Telephone** and dial using the information provided

Submit questions and comments via the Questions panel

Meet our Presenters

Mario Orozco, MPH, MBA, CCRP
Principal Investigator,
Oral Healthcare and Coordination
West Health Institute

Tim Platts-Mills, MD
Vice Chair of Research,
Emergency Medicine
University of North Carolina at Chapel Hill

Kavita Ahluwalia, DDS, MPH
Associate Professor of
Dental Medicine
Columbia University
College of Dental Medicine

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Bob Blancato
National Coordinator

Brenda Schmitthenner, MPA
Senior Director, Successful Aging, West Health Institute

West Health: Partnering to Make Significant Impact

Dedicated to lowering healthcare costs to enable seniors to successfully age in place with access to high-quality, affordable health and support services that preserve and protect their dignity, quality of life and independence.

Outcomes-based philanthropy

Applied medical research

Policy research and education

GARY & MARY west foundation™ EST. 2006

westhealth™ institute

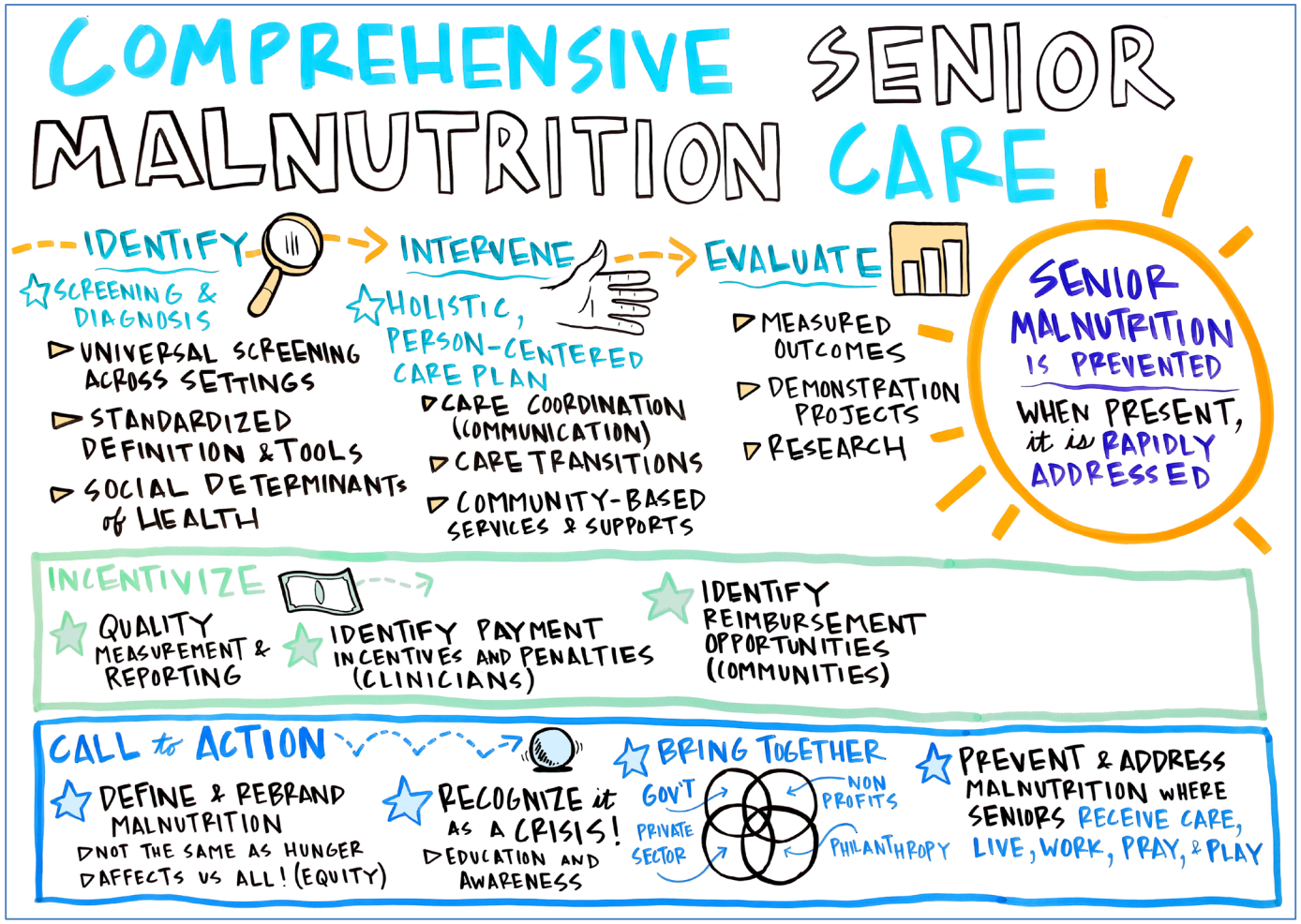
westhealth™ policy center

The Human and Financial Impact of Malnutrition

- Up to 1 out of 2 older adults is either at risk of becoming or is malnourished
- Disease-associated malnutrition in older adults is estimated to cost $51.3 billion annually
- In community care settings an estimated 6%-30% of seniors are malnourished

Executing the Roadmap for Comprehensive Malnutrition Care

Senior Malnutrition Visioning Session



Mario Orozco, MPH, MBA, CCRP
Principal Investigator, Oral Healthcare

Serving Seniors: Gary and Mary West Senior Wellness Center

SERVING SENIORS

Gary & Mary West Dental Clinic – Serving Seniors Collaboration

GARY & MARY WEST
SENIOR DENTAL CENTER

- Administration of Comprehensive Geriatric Assessment
  - including screening for food insecurity and malnutrition
- Co-located Dental Center
- Care Coordination
  - including nutrition

"Each dental visit is a chance to make sure prescribed medications are being taken, social problems are being addressed and nutritious food is being eaten" -Dr. Zia Agha, chief medical officer for West Health

Oral Health & Malnutrition

Oral health is “a state of being free from chronic mouth and facial pain, oral and throat cancer, oral infection and sores, periodontal (gum) disease, tooth decay, tooth loss, and other diseases and disorders that limit an individual’s capacity in biting, chewing, smiling, speaking, and psychosocial wellbeing.”

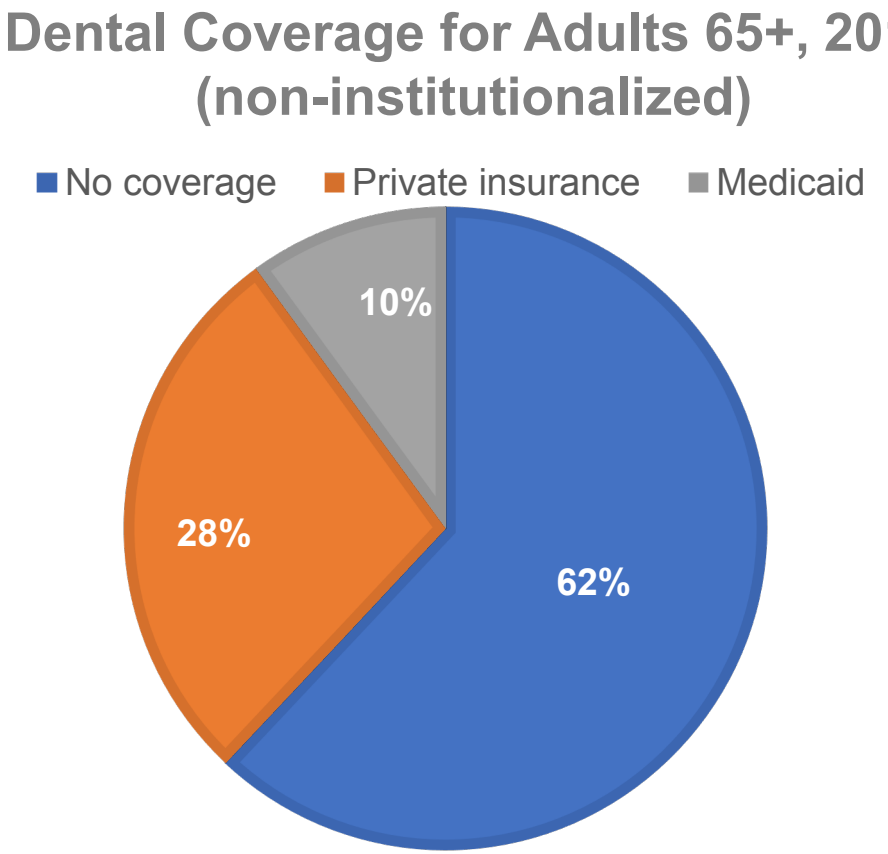
Malnutrition is a complex condition defined as a lack of proper nutrients that leads to a change in body composition and functional decline. Transportation barriers, food insecurity, poverty, social isolation, chronic conditions, medication, frailty, depression, impaired swallowing, and poor oral health are often the root causes of malnutrition.

https://www.who.int/oral_health/en/
Agarwal E, Miller M, Yaxley A, Isenring E, “Malnutrition in the Elderly: a Narrative Review,” Maturitas, 2013, vol.76, pgs.296-302.
Burks, C. E., Jones, C. W., Braz, V. A., Swor, R. A., Richmond, N. L., Hwang, K. S., ... & Platts-Mills, T. F. (2017). Risk Factors for Malnutrition among Older Adults in the Emergency Department: A Multicenter Study. Journal of the American Geriatrics Society.
National Academies of Sciences, Engineering, and Medicine (NASEM). 2016. Meeting the dietary needs of older adults: Exploring the impact of the physical, social, and cultural environment: Workshop summary. Washington, DC: The National Academies Press. doi: 10.17226/23496.

Oral Health & Dental Care Challenges for Seniors

- Access to Dental Care
- Cost of Dental Care
- Lack of screening for and addressing health and social comorbidities related to poor oral health, like food insecurity and malnutrition

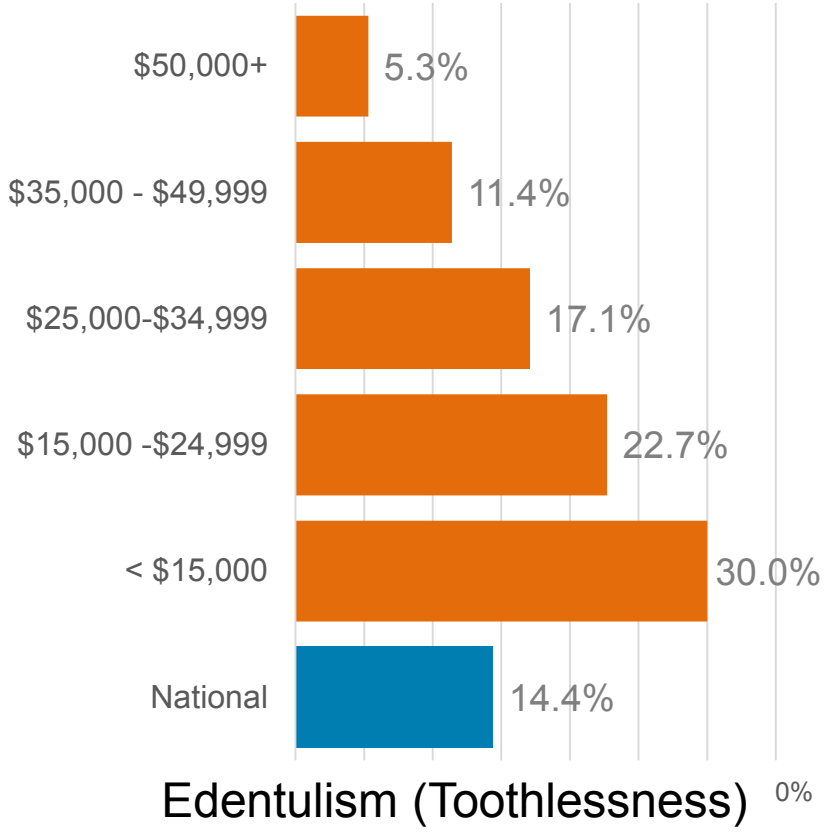
Reality Bites: Dental Care Cost and Coverage



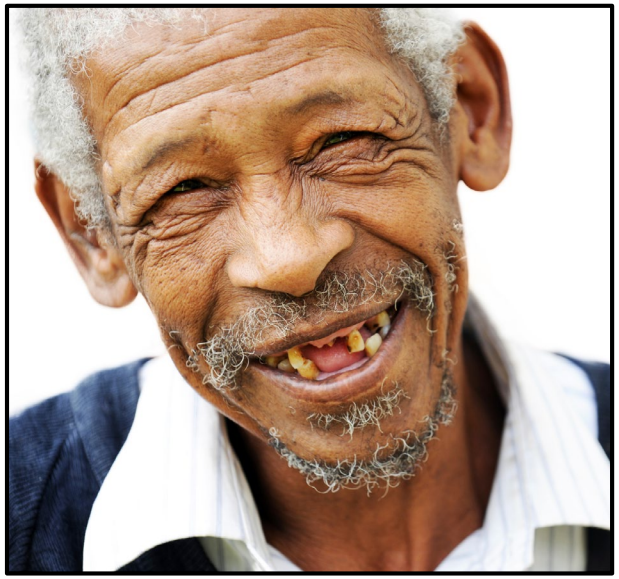
- 47% of adults 65+ had a dental visit
- $913 average expense
- $586 out-of-pocket expense

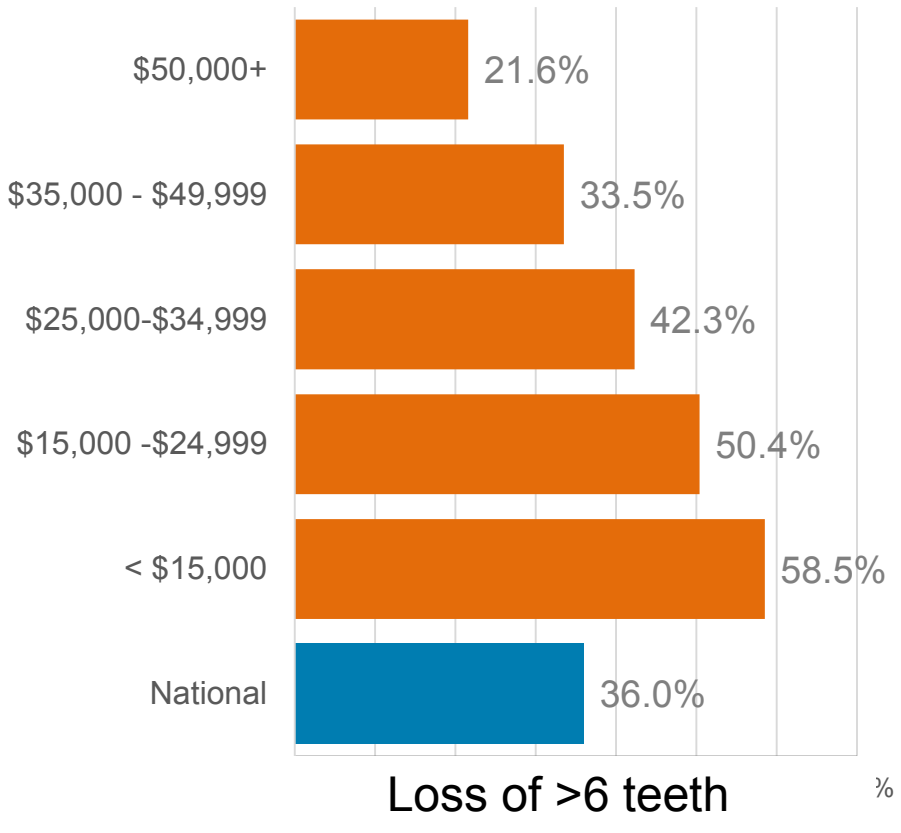
Manski RJ and Rohde F. *Dental Services: Use, Expenses, Source of Payment, Coverage and Procedure Type, 1996–2015*: Research Findings No. 38. November 2017. Agency for Healthcare Research and Quality, Rockville, MD.
https://meps.ahrq.gov/mepsweb/data_files/publications/rf38/rf38.pdf.

Correlation Between Tooth Loss, Poverty and Malnutrition Risk



Edentulism (Toothlessness)





Loss of >6 teeth

2016 data (non-institutionalized)

Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Oral Health. Oral Health Data [online]. 2015. [accessed Apr 29, 2019]. URL: https://nccd.cdc.gov/oralhealthdata/

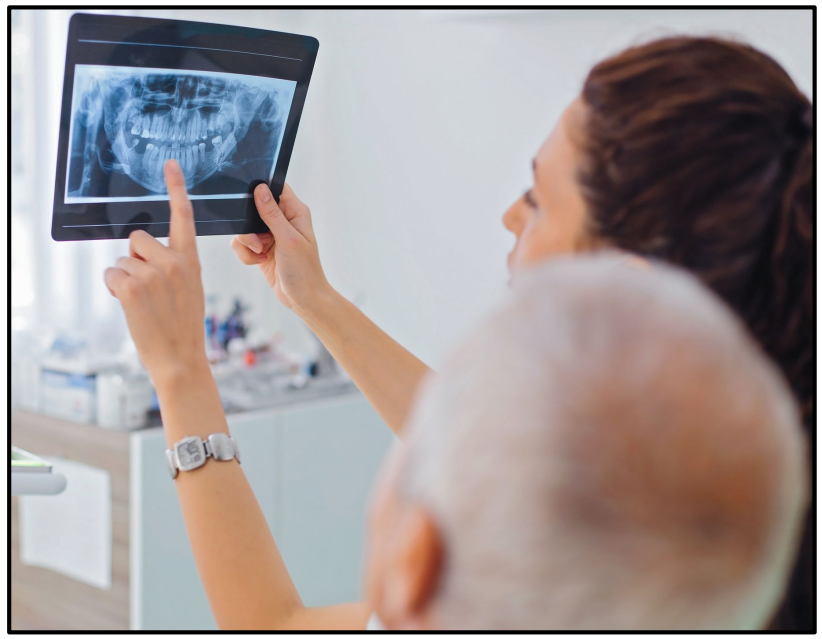
The State of Oral Health Among Older Adults

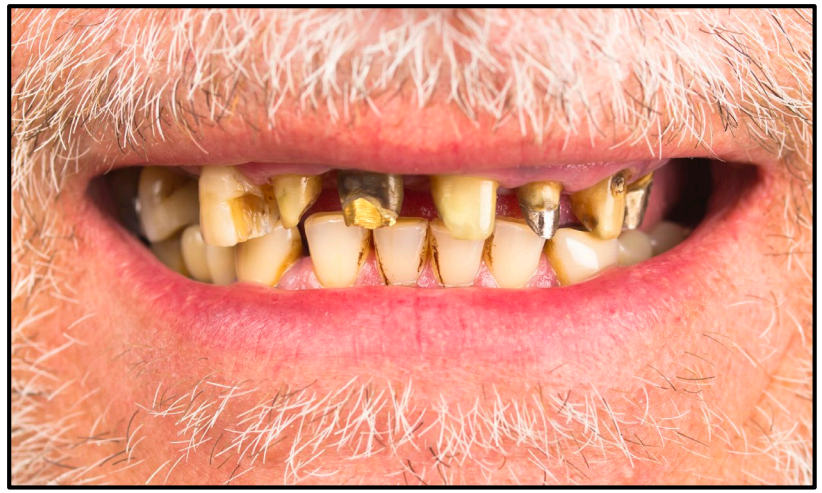
- **19%** of older adults have **untreated tooth decay**
- **96%** have experienced tooth decay in their lifetime
- **51%** of adults 65+ have mild or moderate periodontal disease
- **9%** have severe periodontitis

Dye BA, Thornton-Evans G, Li X, Iafolla TJ. Dental caries and tooth loss in adults in the United States, 2011–2012. NCHS data brief, no 197. Hyattsville, MD: National Center for Health Statistics. 2015 CDC/NCHS, National Health and Nutrition Examination Survey, 2011–2012.

Eke, PI et al. Periodontitis in US Adults. National Health and Nutrition Examination Survey 2009-2014. JADA, Volume 149, Issue 7, 576 – 588.e6

Association of Oral Health and Systemic Conditions





- Diabetes
- Respiratory infections
- Chronic pain
- Nutritional deficiencies
- Cardiovascular disease
- Malnutrition
- Dementia

Takeaways

The number and distribution of teeth in the mouth and the presence and condition of dentures influence the foods one consumes

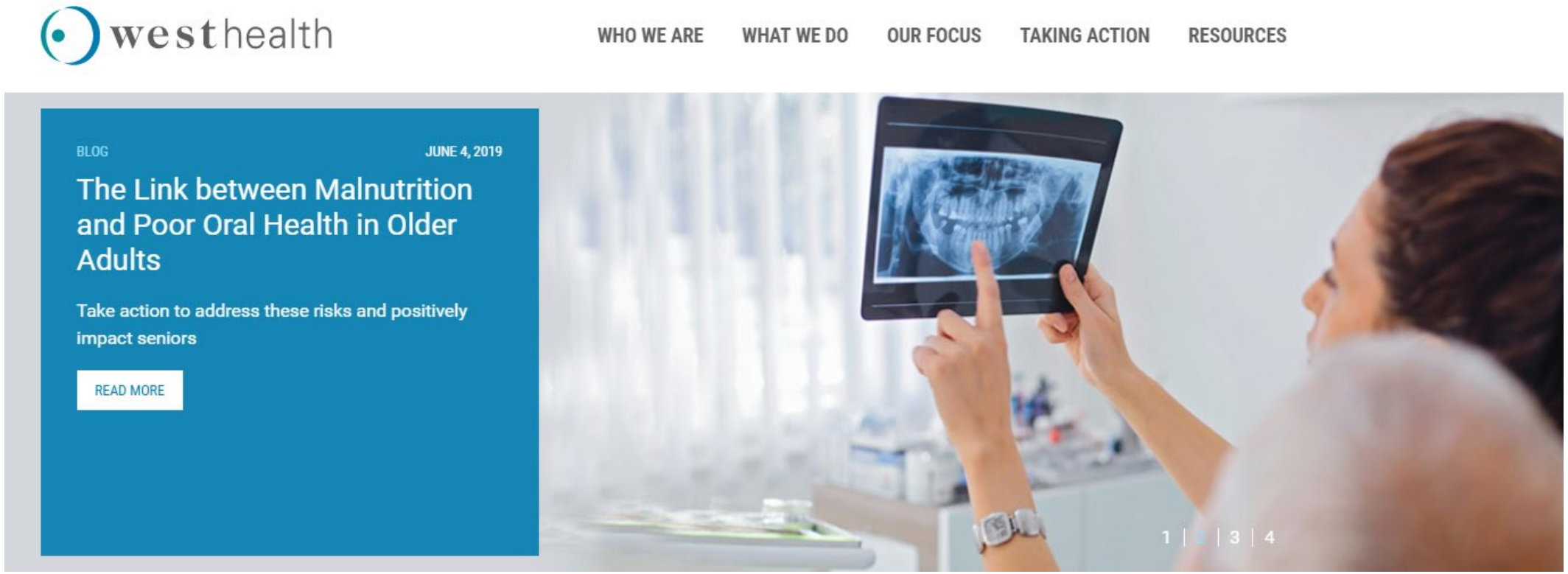
Many of the food choices for persons with suboptimal oral health are "less healthy foods"

Oral health interventions *alone* do not influence the foods one chooses to eat; therefore the concurrent intervention of a dietitian must be part of the care to prevent malnutrition

What Can You Do?

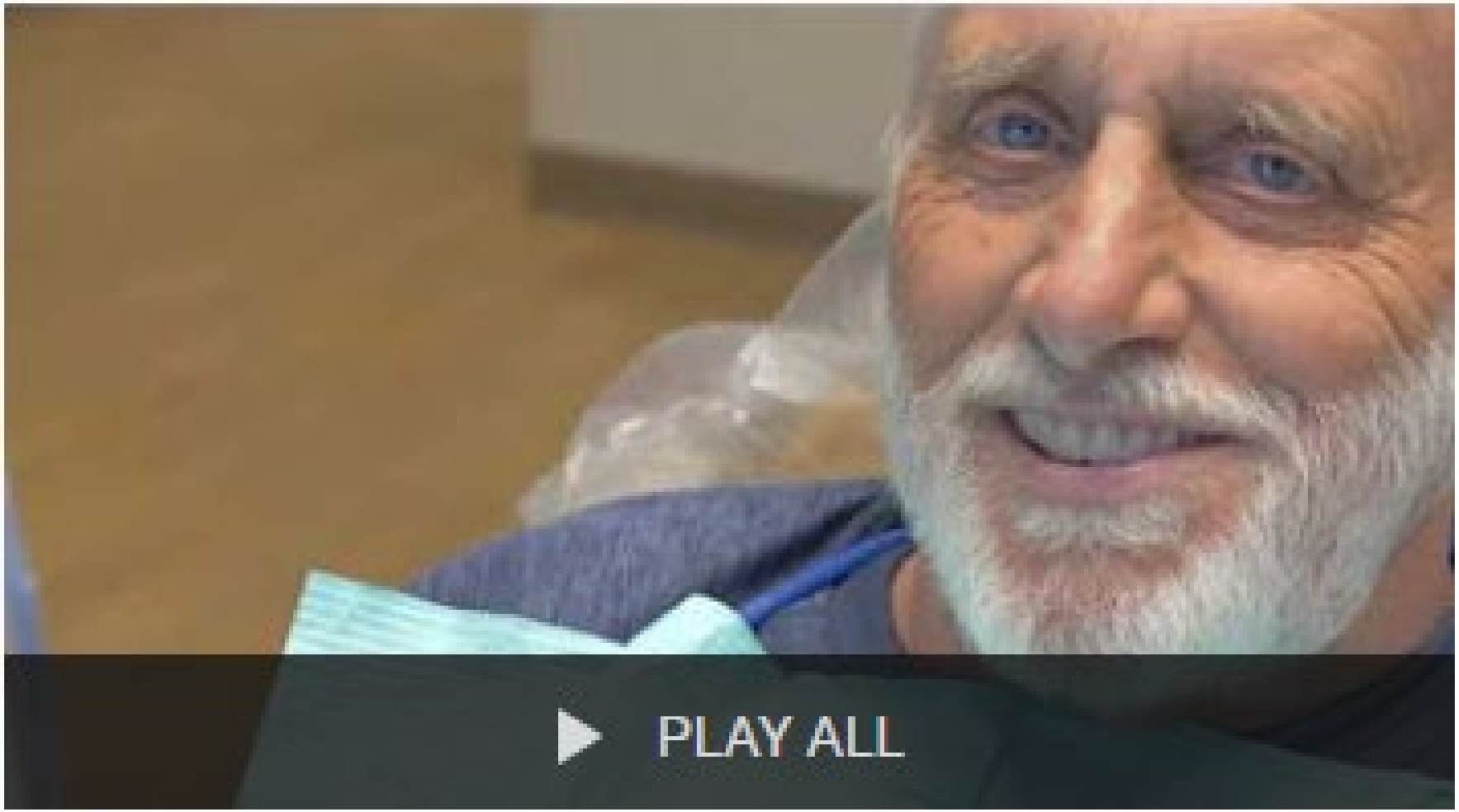
- Educate your colleagues and patients/clients about the connection between malnutrition and oral health
- Screen for malnutrition and oral health concerns in your program
- Connect your patients/clients to resources in your community (e.g., list of food assistance benefits, list of low-cost dental clinics)

Oral Health/Malnutrition Blog



https://www.westhealth.org/the-link-between-malnutrition-and-poor-oral-health-in-older-adults/

Mike’s Story



https://www.youtube.com/watch?v=Su8hsFDCZLc&t

Tim Platts-Mills, MD
Vice Chair of Research – Emergency Medicine
University of North Carolina at Chapel Hill

Oral Health and Malnutrition: Findings from Studies of Emergency Department Patients

DR. TIM PLATTS-MILLS

UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

Why is the Emergency Department an Important Clinical Setting?

- Common site of care for patients with limited access to primary care
- Screening already standard practice for domestic violence, substance abuse, HIV
- Regulated care setting with fairly consistent culture and practice nationally
- Case managers

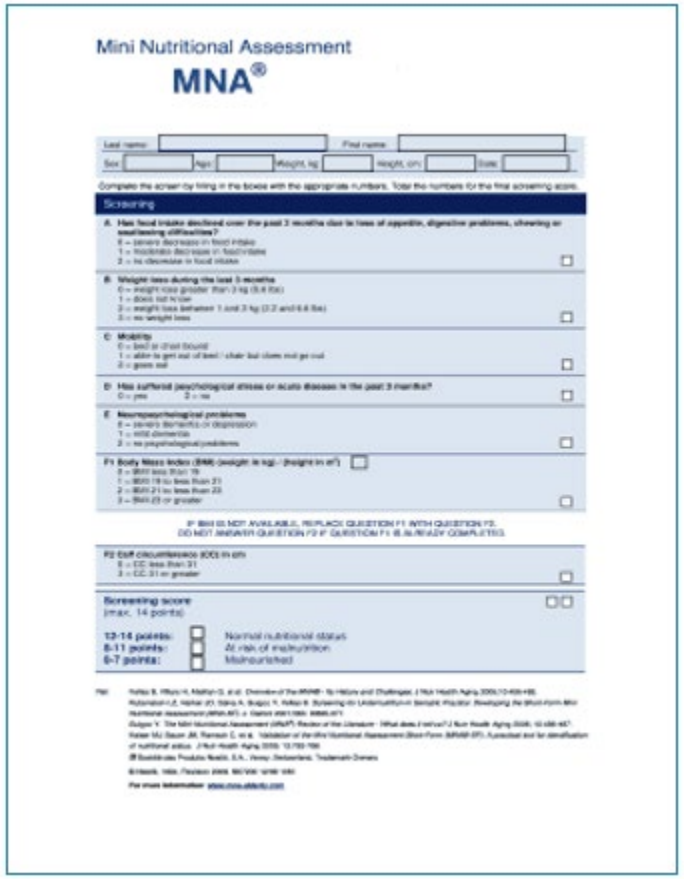
Malnutrition in the Emergency Department: First Prospective Observational Study (2015)

Study Aim: Estimate burden of malnutrition among older adults in the ED

- One site – mixed rural/urban; broad mix of socioeconomic status
- Mini-Nutritional Assessment – Short Form

Results:

- N=138: 16% malnourished; 60% malnourished or at risk for malnutrition
- Risk factors: Difficulty buying groceries and difficulty eating
- Difficulty eating due to problems with dentures, dental pain, and difficulty swallowing


Mini Nutritional Assessment

MNA®

Reference: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4275371/

Malnutrition in the Emergency Department: Second Prospective Observational Study (2017)

Study Aim: Examine contributing causes to malnutrition among older adults in the ED.

- 252 patients, age 65 and older
- Three sites – South, Northeast, Midwest U.S.
- Mini-Nutritional Assessment – Short Form

Results:

- Overall 12% malnourished; 48% at risk for malnutrition (NC had 16% malnourished)
- Poor or moderate oral health was reported by more than 50% of patients, and >50% of risk.
- Food insecurity accounted for 14% of the population attributable risk proportion

Table 2

Malnutrition prevalence and population attributable risk proportion, by risk factor.

Risk Factor	Total n	Malnourished N (%)	Population attributable risk proportion % (95% CI)
Oral health[a]			
Poor or moderate	138	23 (17)	54.3 (15.5,78.1)
Good	114	6 (5)	
Food insecurity[b]			
Severe or moderate	20	6 (30)	13.9 (3.0,30.6)
Mild or none	232	23 (10)	

Reference: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5555801/

Malnutrition in the Emergency Department: Second Prospective Observational Study (2017)

Other findings:

- trouble biting or chewing food (19%)
- limited kind or amount of food due to dental problems (8%)
- difficulty accessing dental care (11%)
- self-conscious about problems with teeth or gums (13%)
- uncomfortable eating in front of others due to dental problems (8%)
- teeth or gums sensitive (19%)
- last dental visit more than 2 years ago (34%)
- last dental visit more than 5 years ago (18%)

B.R.I.D.G.E – Phase 1 (2018/19)

Building **R**esilience and **I**n**D**ependence for **G**eriatric Patients in the **E**mergency Department

Study Aim: Estimate prevalence of malnutrition and food insecurity and need for social services among these patients.

- 127 patients, age 60 and older
- UNC Chapel Hill Emergency Department
- Malnutrition Screening Tool and Hunger Vital Signs

Results:

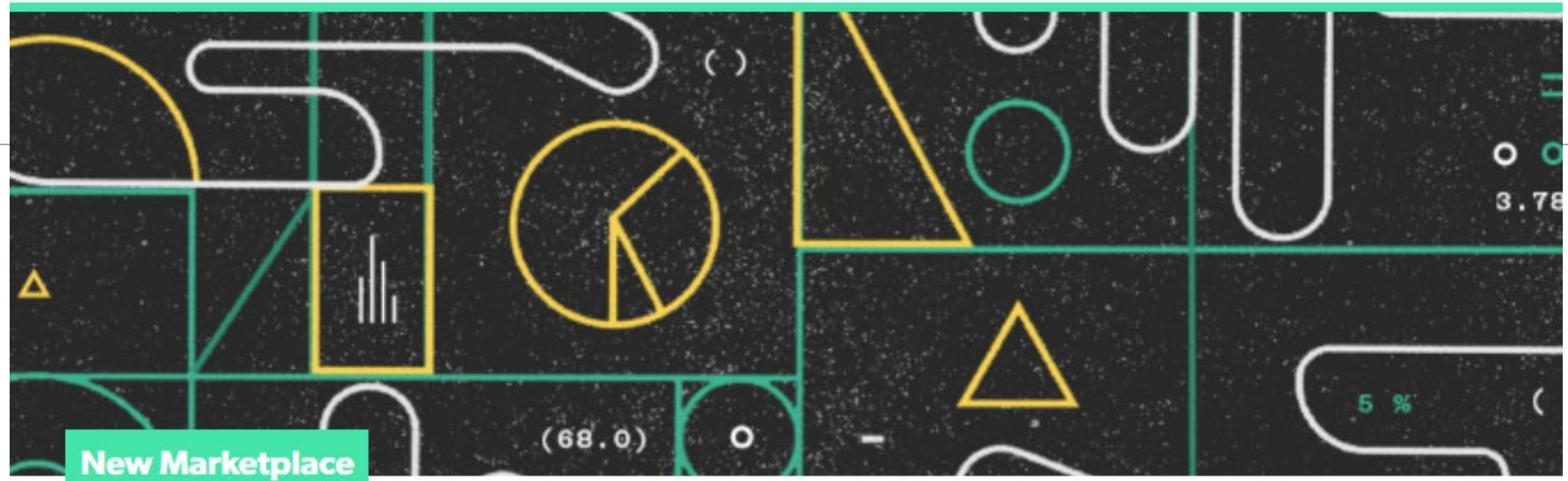
- 28% screened positive for malnutrition risk
- 16% screened positive for food insecurity
- 5% screened positive for both

Health-Related Social Needs among older ED Patients

	Food Insecure (HVS+) n=20 [1]		At-risk for malnutrition (MST+) n=36 [1]		Both (HVS+ and MST+) n=6		Neither n=77	
Receptive to services								
Yes	13	65%	14	38%	5	83%	23	30%
Services desired								
Any	13	65%	8	22%	5	83%	15	19%
Meals on Wheels	7	35%	4	11%	3	50%	2	2%
Congregate Meals	0	0%	0	0%	0	0%	0	0%
SNAP	5	25%	5	14%	4	66%	1	1%
Transportation	4	20%	1	3%	1	16%	4	5%
Home care	2	10%	3	8%	1	16%	3	4%

What Can We Do About This Problem?

- Food is relatively inexpensive
- Dental care is more expensive
  - Need more emphasis and investment on basic preventive care to affect nutritional health as well as other health issues
- Shift to value-based care
  - Opening funding mechanisms for screening and referral to services



New Marketplace

Engineering a Rapid Shift to Value-Based Payment in North Carolina: Goals and Challenges for a Commercial ACO Program

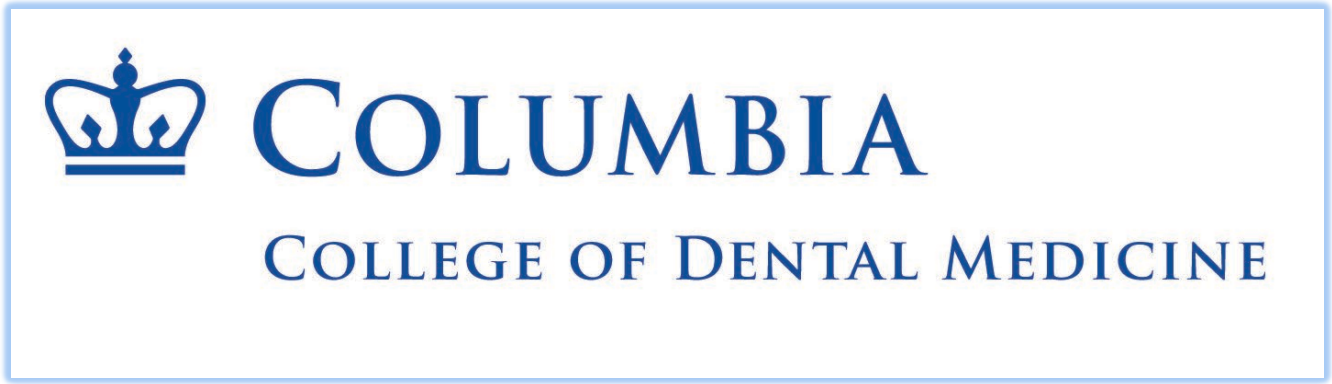
JP Sharp, JD, MPH, Patrick H. Conway, MD, MSc & Rahul Rajkumar, MD, JD

Blue Cross and Blue Shield of North Carolina

Article · January 23, 2019

Summary

- Emergency Department is unique and important setting to identify malnourished older adults
- Poor oral health and food insecurity are important contributors to malnutrition in these patients
- ED screening and links to services inexpensive method to have population-level impact
- Partnerships with health systems and insurers through value-based care initiatives



Kavita Ahluwalia, DDS, MPH
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Columbia University, College of Dental Medicine

COLUMBIA
COLLEGE OF DENTAL MEDICINE

Using a CBPR Approach to Addressing Oral Health and Healthcare in Home Delivered Meal (HDML) Recipients in New York City

KAVITA P. AHLUWALIA, DDS, MPH
COLUMBIA UNIVERSITY COLLEGE OF DENTAL MEDICINE

Supported by the Bronfenbrenner Center for Translational Research, Cornell University

Nutrition and Successful Aging

Nutrition is central to health and essential to maintaining good health and wellness

Nutrition, delivered through the HDML system, congregate meals and institutional care system is central to successful aging

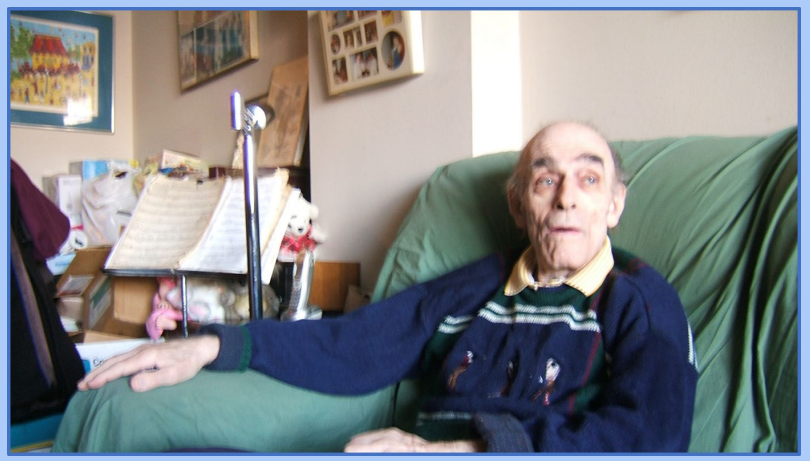
Addressing Oral Health in NYC HDML Recipients

- We chose to focus on oral health in the HDML system because:
  - Mouth is central to ability to eat, and in most cases, nutrition
  - Oral diseases are intimately associated with diet and may be associated with nutrition, which is central to the mission of HDMLs
  - Morbidity associated with oral diseases can be prevented/mitigated through daily self care

- Since this is a hard to reach population, integration with an existing system of service delivery may result in improved oral health related outcomes

Home-Delivered Meals in New York City

- Administered by the Department for the Aging (DFTA)

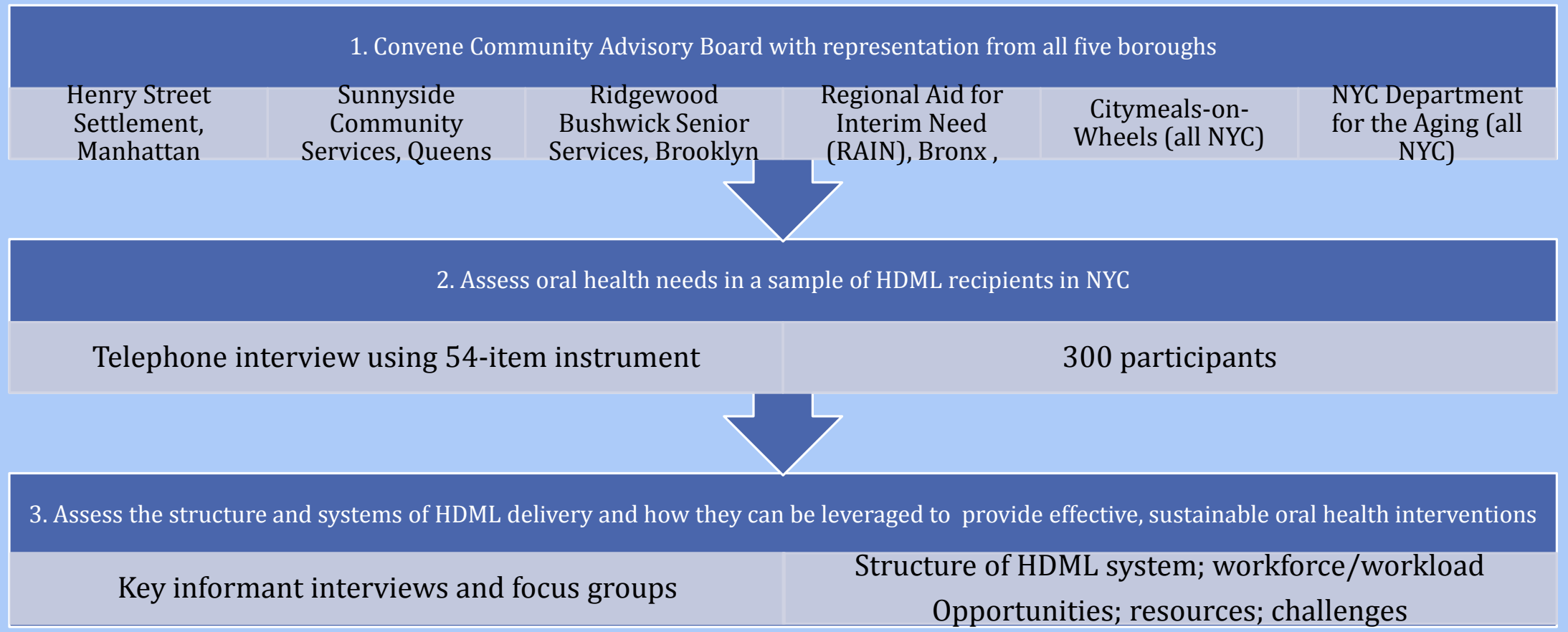


- Meals delivered by 33 agencies across five boroughs
  - 16,500 recipients
  - Five meals per week funded by DFTA

- HDM recipients are vulnerable and hard-to-reach
  - Mean age is 80, 73% live alone, 40 % minority, 40% never leave the home, 20% have Medicaid

Although this federally funded program has been in existence for over 40 years, there has been **no systematic evaluation of feasibility to provide oral health promotion/disease prevention**

Aims and Methods



HDML Recipients (N=300)

Characteristic	Frequency
Demographics	
Mean age in years (SD)	78.0 (9.3)
% Female	67.7
% < High School Degree	23.7
% Medicaid	15.0
Access to and utilization of dental services	
% Dental insurance	40.0
Mean # months since last dental visit (SD)	37.7 (69.5)
% Dental visit in past year	55.0
Reasons for not visiting dentist in past year (n = 135)	
% Cost	13.7
% No teeth	12.3

HDML Recipients (N=300)

Characteristic	Frequency (%)
Oral Health Status	
Missing at least one tooth	91.9
Edentulous (Replacement dentures)	26.0 (49.0)
Painful aching in mouth	14.1
Toothache	11.4
Dentures do not fit well/uncomfortable dentures	34.5/36.3
Difficulty Eating and Chewing	
Difficulty chewing some foods	38.0
Uncomfortable eating some foods	34.2
Avoid eating some foods	37.5

Focus Groups and Key-informant Interviews

- All stakeholders agree oral health is important
- Oral health is not addressed systematically, but on an “as needed” basis
- Workforce has numerous competing demands and priorities
- Case managers are:
  - aware of dental needs but do not have the tools to connect meal recipients to dental services

Potential Interventions

- Delivery of daily oral care aides
- Documentation of oral health status/needs
  - Improvements in case manager training
- Linking meal recipients to dental providers
  - Improvements in case manager training
  - Development of resource directory
- Delivery of outreach/oral health promotion materials
  - Development of toolkit
- Delivery of special texture meals

Outcomes

Expanded Partnership

- NYC Dept for the Aging (DFTA)

Policy

- Six oral health items included in Senior Tracking Analysis and Reporting System (STARS)
  - Used to assess medical, social, environmental needs bi-annually
  - 19,500 clients

Training

NYC Supervisors (N=66) and case managers (N=223) trained to:

- Correctly use STARS items
- Link clients to services and education (toolkit)
- Funded by DFTA

Toolkit

- Resource directory (500 NYC dentists surveyed)
- Toothbrushes/paste donated
- Outreach materials developed with community partners and DOHMH
  - Delivered once per quarter/as needed

STARS Client Assessment Database
Oral Health-related Items

1. In the last 3 months, did the client have problems eating due to oral or other health problems?

2. If “yes” please indicate why the client had problems eating (Select all that apply)
   - Allergies to certain foods
   - Dietary restrictions
   - General mouth pain/painful sores in the mouth
   - Illness causing pain when eating/digesting
   - Loose/ill-fitting dentures
   - Missing teeth and no partial denture
   - No appetite due to medication or medical problem
   - No teeth at all and no dentures
   - Problems swallowing

3. This client has (select all that apply)
   - Natural teeth
   - Dentures

4. In the past 3 months, has the client been able to brush their teeth and/or clean their dentures regularly (at least once a day)?

5. If “no” why not? (Select all that apply)
   - Cannot hold toothbrush/denture brush
   - No toothbrush/denture brush
   - No toothpaste/denture cleaner
   - Has trouble remembering/forgets

6. When was the last time the client visited a dentist or hygienist?
   _____Months

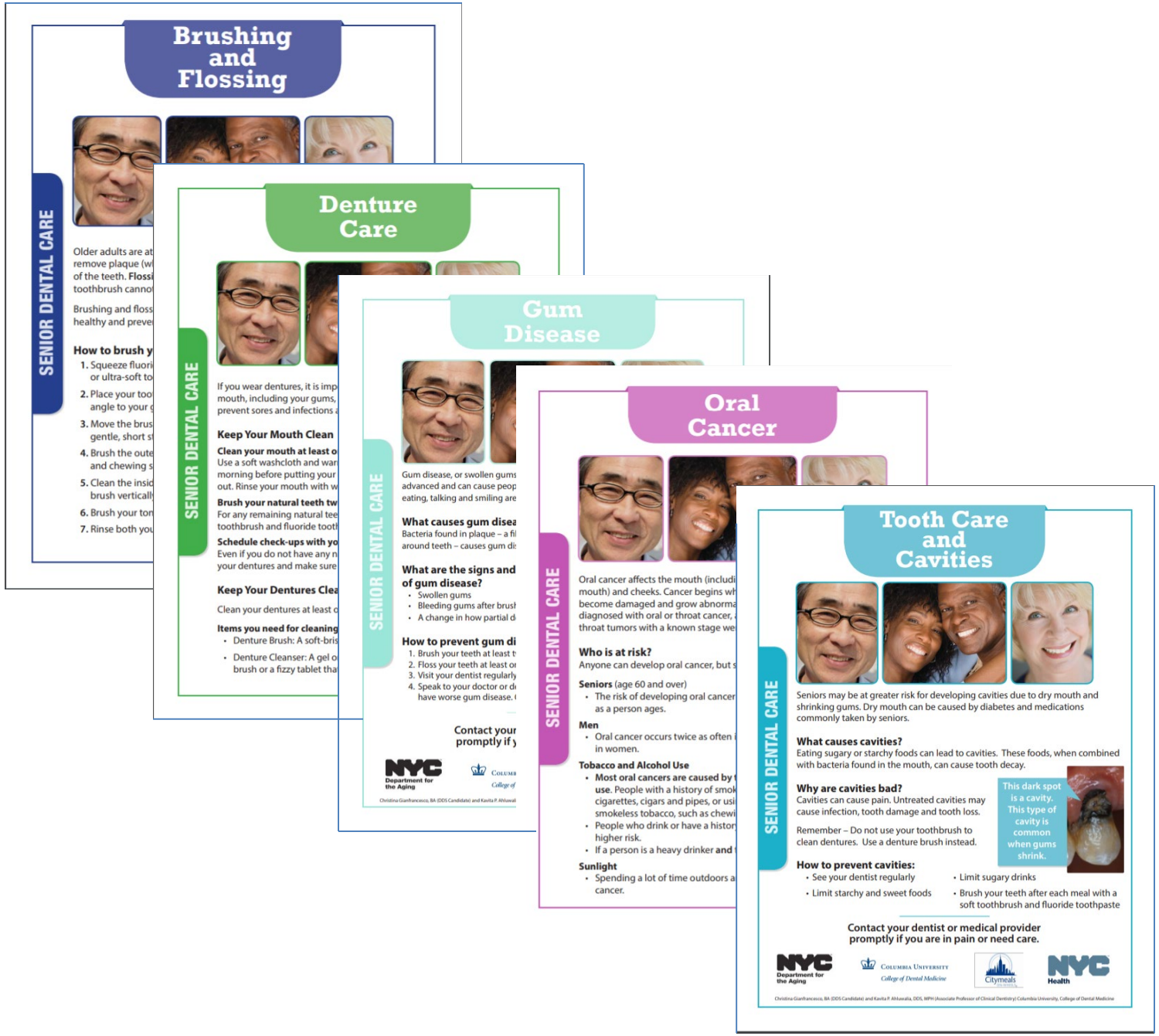
Oral Care Provider Directory

A resource directory for use by New York City Department for the Aging partner agencies to help older adults access dental care providers

Columbia University College of Dental Medicine

NYC Department for the Aging

A project of the New York City Department for the Aging and Columbia University College of Dental Medicine



Lessons Learned

- ✓Find a “hook” that is important to the partner. In this case, nutrition and ability to eat
- ✓Community partners have valuable knowledge and can facilitate access to funding
- ✓Partnership must be “equal” in access to data, decision-making and dissemination if potential interventions are to be relevant and sustainable
- ✓Can take longer than traditional approaches but outcomes are robust and have a high potential for sustainability

Addressing Oral Health: Multidisciplinary Approach

We need a multidisciplinary comprehensive approach that involves community, dental and non-dental providers and policymakers

- Financing for access to and utilization of professional dental services
  - Coverage for dental services under Medicare
  - Coverage for daily oral care aides (toothbrush, toothpaste, denture care)
- Integrate oral health services among existing service delivery systems that target older adults
  - Home care, LTC, Home-Delivered Meals, Senior Centers, NORCs, Congregate meals, etc
    - Daily oral care, linkages to dental services, QA
- Improve training of dental and non-dental providers to address oral health in older adults
  - Physicians, nurses, home care workers, LTC workers, peer educators

Q&A

Please submit your questions

Thank you!

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