



# Hunger & Health: Connecting Patients to Nutrition Assistance

June 23, 2015

# Today's Program:

**Moderator:** Ellen Vollinger, Legal/Food Stamp Director, FRAC

**Facilitator:** Melanie Meisenheimer, Emerson National Hunger Fellow, FRAC

## **Children's HealthWatch**

Dr. Deborah A. Frank, Founder and Principal Investigator

## **Oregon Food Bank**

Lynn Knox, Clinical Outreach & Training Coordinator

## **Hunger Solutions Minnesota**

John Randolph, SNAP Outreach Associate,

## **Kaiser Permanente Colorado**

Dr. Sandra Stenmark



# Why Does it Matter?

- An estimated 14.3% of U.S. households (49.1 million people) are food insecure
- Poverty and food insecurity have serious consequences for health – today and tomorrow
- E-newsletter prepared by FRAC and Children's HealthWatch: "Food Insecurity & Hunger in the U.S.: New Research"

<http://frac.org/reports-and-resources/fracs-weekly-news-digest/>

# Federal Nutrition Programs Work

- Research shows nutrition assistance programs play a critical role in improving food security and health
  - SNAP, school lunch and breakfast, afterschool and summer meals, CACFP, WIC, CSFP
- “SNAP and Public Health”  
[http://frac.org/pdf/snap\\_and\\_public\\_health\\_2013.pdf](http://frac.org/pdf/snap_and_public_health_2013.pdf)
- “Breakfast for Health”  
<http://frac.org/wp-content/uploads/2011/08/breakfastforhealth.pdf>



# Importance of “Trusted Messengers”

- Trusted messengers play a critical role in connecting eligible people with benefits
  - AARP Foundation/FRAC toolkit: **Combatting Food Insecurity: Tools for Helping Older Adults Access SNAP**
  - <http://frac.org/combating-food-insecurity-tools-for-helping-older-adults-access-snap/>
- Health care professionals are highly trusted by their patients



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FRAC.org

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## Connect With FRAC



@fractweets



@fracgram



Facebook.com/foodresearchandactioncenter



Linkedin.com/company/food-research-and-action-center



# FOOD INSECURITY

*The limited or uncertain availability of nutritionally adequate and safe foods or uncertain ability to acquire acceptable foods in socially acceptable ways.*

*USA National Research Council*

# US FOOD SECURITY SCALE

## 18-Item Scale Includes:

- 3 items that ask about experiences of the entire household
- 7 items that ask about experiences and behaviors of the adult members of the household as a group, or of the adult respondent individually
- 8 items that ask about experiences and conditions of the children in the household as a group

1. Bickel G et al. Guide to Measuring Household Food Security, Revised 2000. USDA/FNS/OANE, Alexandria, VA, March 2000.
2. Nord M and Bickel G. Measuring Children's Food Security in US Households, 1995-1999

# Do We Have to Ask 18 Questions to Identify Food Insecurity?



## No – 2 Item Screen 97% Sensitive and 83% Specific

- If caregiver answers either sometimes or often true to either of these statements (first two questions of the 18 item scale) in past 12 months:
  - We worried food would run out before we got \$ to buy more.
  - The food we bought just didn't last and we didn't have \$ to get more.

» Hager 2010

# The Cycle of Food Insecurity & Diet-Sensitive Chronic Disease



# Real Cost of a Healthy Diet

Can parents afford to purchase healthy food?



\$1.33

880 calories



\$2.79

880 calories

*Stop and Shop  
Price Check  
Sept 2010*

Drewnowski 2004

Tight budgets limit food choices;  
cheap calories provide little nutritional value.

# What are the Health Impacts of Food Insecurity: Especially on Maternal/Child Health ?

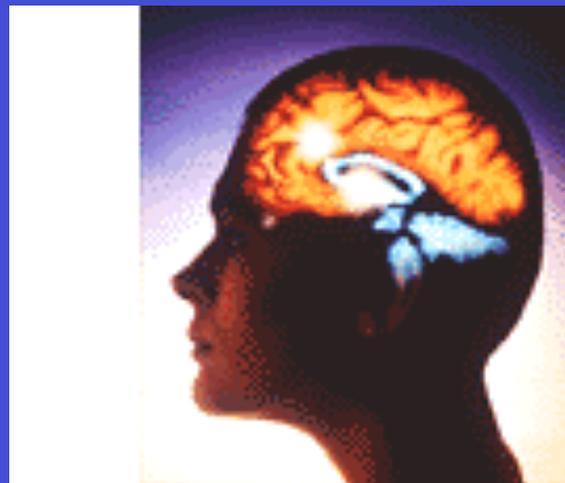
# The First 1000 Days are Critical for Brain Growth



# Brain

- **Brain structure most vulnerable to nutritional insults early in development**
- **Brain function is sensitive to *quality* and *quantity* of foods consumed throughout live span**
- **Requires high energy consumption and can't store energy**

(Lyle et al, 1984)



# Developmental Risk

Rose-Jacob, 2008



Young children in food insecure households are **40% more likely to score at *developmental / behavioral risk* than other low income children**

# Economic Hardship



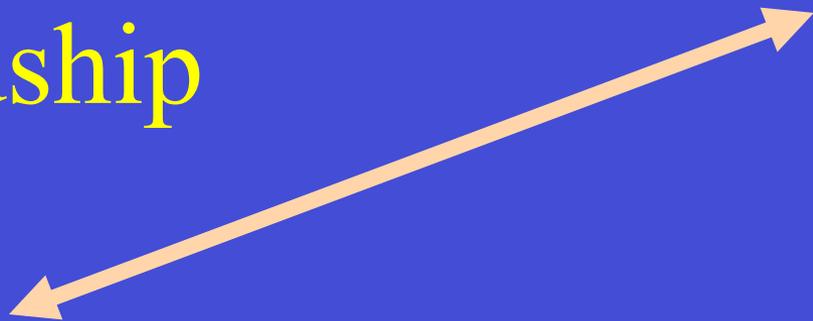
Housing Insecurity



Food Insecurity



Energy Insecurity



# Food Insecurity Associated with Perinatal Complications



# FOOD INSECURITY IN PREGNANCY

(Carmichael 2007)



- Is associated with anencephaly and other neural tube defects

# Food Insecurity in Pregnancy Increases Risk of LBW (Borders,2007)



# Post-natal Child Health Impacts of Food Insecurity

- Food Insecure children suffer 2-4 times as many health problems as other children *within same income level*
  - Stomach aches, head aches, colds, ear infections
  - Higher hospitalization rates
  - Iron-deficiency anemia
  - Decreased bone mineral density
  - More susceptible to lead poisoning
  - Poor oral health

# REMEMBER FAMILIES MAY BE FRIGHTENED TO DISCLOSE FI TO CLINICIANS



HOW ABOUT ADULTS?

TREAT OR EAT

# Food Insecure: Poor Medication Adherence

Sullivan 2008

I LIVE IN THE RICHEST COUNTRY ON EARTH, YET I'M FACED WITH CHOOSING BETWEEN MILK AND MEDICINE.

AT LEAST YOU'LL BE USED TO IT BY THE TIME YOU'RE ON MEDICARE.



# Food Insecurity Linked to Poor Sleep

Ding 2015



# Obesity and Food Insecurity are Linked in Adults

Need to minimize per  
calorie cost

Stress hormones

Cyclic deprivation/  
overeating

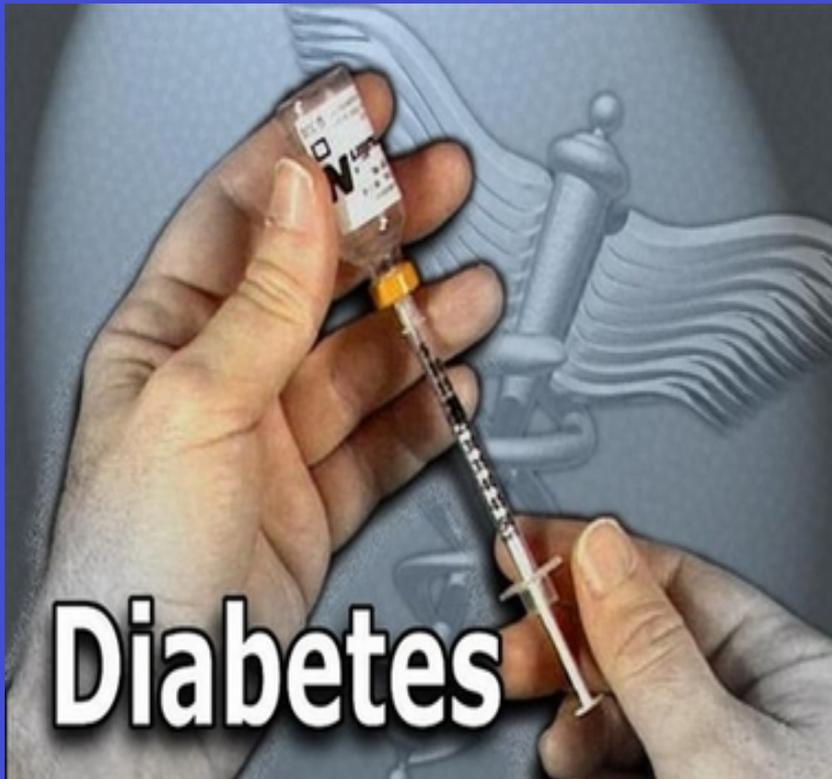


# FI Associated with Hypertension

Seligman, 2010



# FI: Hypoglycemia and Poor Glycemic Control



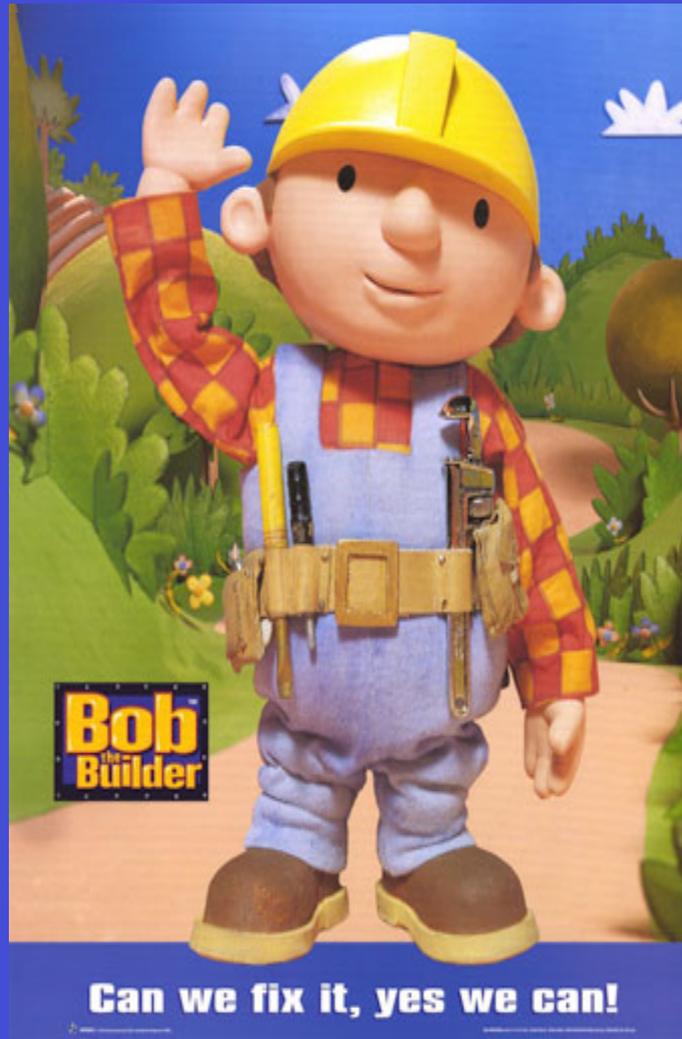
- Admissions for hypoglycemia peak 4<sup>th</sup> week of month
- Poor medication adherence
- Increased HgbA1C
- More outpatient visits

Seligman, Berkowitz 2011,2012, 2013, 2015

# Food Insecurity Linked to Depression in Adults and Children



# Can We Fix It?



YOU NEED A



# Hospital Food Pharmacies: Food is the Cheapest Medicine



# Could We Help People Apply for SNAP and Health Insurance at Same Time?



SNAP Good Medicine Dose Too  
Low

Even Low Dose Better than  
No Dose

**WIC WORKS: Each \$ Saves  
\$4.21 in Perinatal Costs**



# UNIVERSAL GRACE

- *Give bread to those who are Hungry and Hunger for Justice to those who have bread*





CHILDREN'S  
HealthWatch

Thank You!

[www.childrenshealthwatch.org](http://www.childrenshealthwatch.org)

@childrensHW

# INSTIGATORS: Childhood Hunger Coalition

- Health Professionals & Hunger Activists
- Provider survey
- Children's care algorithm, ICD codes
- CME course at [www.childhoodhunger.org](http://www.childhoodhunger.org)
- Pilot at OHSU in 2013

A screenshot of the Childhood Hunger Coalition website. The header includes the organization's name and logo, a navigation menu with links for ABOUT, RESEARCH, PROVIDER RESOURCES, FAMILY PROGRAMS, and NEWS, and the Oregon Food Bank logo. The main content area features a large image of a young girl eating, with a green banner at the bottom displaying the website URL www.childhoodhunger.org. To the right, a yellow box contains the text "CHILDHOOD HUNGER IS LINKED TO DEVELOPMENTAL, BEHAVIORAL & ACADEMIC PROBLEMS" and a small image of a young boy. Below this, a section titled "CONTINUING EDUCATION NOW AVAILABLE" lists a course: "Childhood Food Insecurity: Health Impacts, Screening & Intervention".

Childhood Hunger COALITION

ABOUT RESEARCH PROVIDER RESOURCES FAMILY PROGRAMS NEWS

www.childhoodhunger.org

CHILDHOOD HUNGER IS LINKED TO DEVELOPMENTAL, BEHAVIORAL & ACADEMIC PROBLEMS

CONTINUING EDUCATION NOW AVAILABLE

Childhood Food Insecurity: Health Impacts, Screening & Intervention

# Oregon Context for Screen & Intervene Expansion



- Massive Medicaid Expansion
- Uninsured rate now only about 5%
- Medicaid enrollment twice as large as next largest insurer
- Medicaid system, (Coordinated Care Organizations, CCO's) gains control of state retiree & teacher's insurance system in 2016

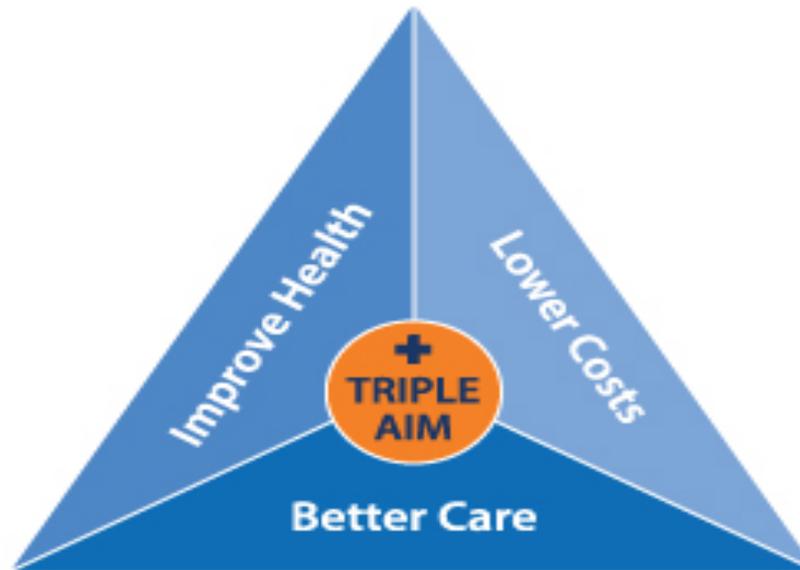
# Expansion Begins April 2014

**TOOLS:** 1 page overview, 2 validated questions, 1 page EHR ready local resource handout in many languages, ICD codes

**MODEL:** On-going written screening integrated into clinic flow  
Results to clinician for exam  
Resource handout in AVS  
Immediate review with patient by staff, intern, or volunteer

**FOLLOW-UP:** phone check-in a week later, provider check-in at next visit, review handout for other possible actions

# Motivated System - Metrics



# Expansion Process: Sales/Community Organizing



# Current Status

- About 200 clinics & hospitals screening, plus Head Start & WIC
- Urban & Rural Success
- On-deck Medicaid state performance metric, committee for technical reporting issues





# Next Steps

- ✓ Evaluate different models & settings
- ✓ Implement screening with an onsite continuum of interventions & evaluate
- ✓ Expand use of Medicaid funding for food interventions
- ✓ Oregon adopts food insecurity screening & intervention as performance metric starting January 2017

Food Insecurity  
Screening and  
intervention

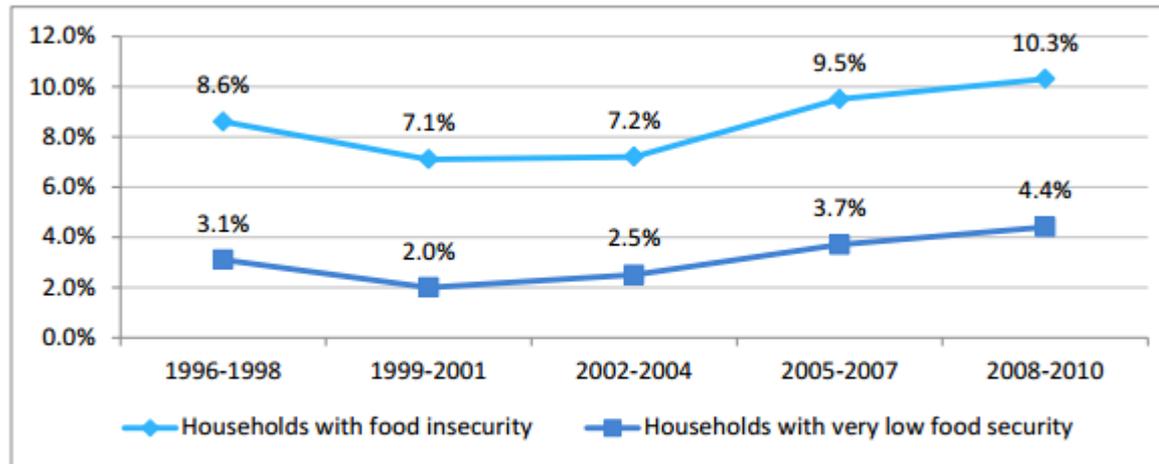
**HUNGER  
SOLUTIONS**

Winning Minnesota's Food Fight



## Hunger in Minnesota

**Food security\* in Minnesota: 1996-2010 (three-year averages)**



\* Denotes households experiencing food insecurity and very low food security.

Source: U.S. Department of Agriculture, Economic Research Service. (2010).<sup>44</sup>

## Health Disparities in MN

*“Communities of color in Minnesota are less likely to receive preventive care; more likely to suffer from serious illnesses and have less desirable health outcomes; and less likely to receive clinically-necessary procedures and services. These inequities pose a threat to the health and economic stability of all Minnesotans” – (2014 Health Equity of Care Report)*



MINNESOTA **FOOD**  
**HELPLINE**

## Minnesota Food Helpline

- SNAP screenings and application assistance
- Food shelves and hot meal locations
- Meals-on-Wheels
- Discount grocery programs
- Other public nutrition programs



## Screening and Intervention: Social Service Org Perspective

- Navigating the health care system
  - Low lift, flexible, scalable, replicable
- Our referral system

# Fax Releases

## Government Assistance Agencies Authorization to release

Patient Name: \_\_\_\_\_ Patient #: \_\_\_\_\_

Facility Name: \_\_\_\_\_

I hereby authorize the above organization/its subsidiaries to disclose the following information about me to the types of recipients listed below:

Information:

- Name
- Address/phone number
- Results of Food Insecurity Screening
- Other \_\_\_\_\_

The purpose of this disclosure(s) is to provide information to the Minnesota Food HelpLine, so that they may contact you about various food and nutrition resources for which you may be eligible.

I understand the provision of healthcare treatment is not dependent on this authorization and I am not required to sign this authorization, however the information will not be disclosed without it. I understand any information used or disclosed pursuant to this authorization may be subject to redisclosure.



“Before SNAP Rx we didn't have a proper system for screening for food insecurity, and had few resources to treat it. Now we're screening, referring, and watching our patients get the help they need. With just a few minutes of our time, we're able to provide a significant improvement in the patient's ability to meet their nutritional needs each day. Its one of the best things we've started in our clinic this year! ”

-Katelyn Engel RD, LD



***“...social and economic disparities worsen the impact of diabetes disparities by making it more difficult for People of Color and American Indians to care for their diabetes and to access recommended medical care to prevent diabetes complications.”***

*-(Minnesota's Disparities in Diabetes by Race/Ethnicity 2005)*

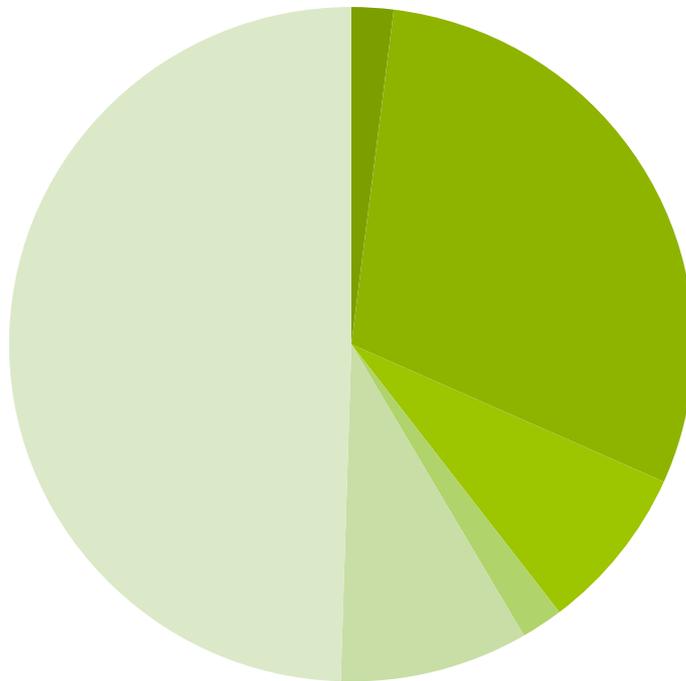


## **St Paul Clinic Demographics**

- 40% 65+
- 32% Asian
- 73% Medicare/ Medicaid
  - 56% Medicare Low Income Subsidy
  - 17% Medicaid only



## Referrals by Race



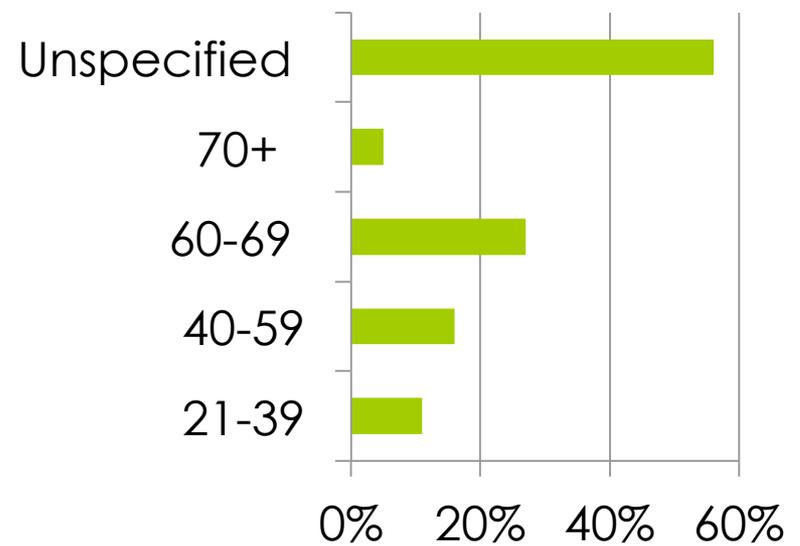
- Latino 2%
- Asian/Pacific Islander 30%
- Black/African American 8%
- White 2%
- African Born 8%
- Unspecified 50%



## Call Language

English	83%
Spanish	3%
Somali	3%
Hmong	6%
Other	3%

## Calls by Age



## Expanding Services



- Mobile Food Shelves
- Working with SNAP Ed
- Supplementing existing services (Lakewood Health System)



# Questions?

**John Randolph**

SNAP Outreach Associate

Hunger Solutions Minnesota

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# Improving Food Security

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Food Insecurity Screening and Referral in Health Systems

FRAC Webinar- June 23, 2015

Dr. Sandra Stenmark



# Kaiser Permanente's History and Values

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Our Mission:

*“To provide high quality, affordable health care, and to improve the health of our members and the communities we serve”*

*Clinical and Preventive Medical Care*

*Social and Economic Factors*

*Physical Environments*



- Improve access to government food programs
- Screen for food insecurity and refer to resources
- Increase healthy food retail
- Improve nutritional quality of food pantries



## *Poorer Health*

*Poorer Diet Quality and Nutritional Deficiencies*

*Acute and Chronic Illnesses*

*Obesity, Diabetes, Heart Disease, Hypertension*

*Anxiety, Depression, Stress*

*Developmental Delays*

*Learning and Attention Problems*

**One third of U.S. adults with chronic illness can not afford food, medicine or both.**



*Source: Berkowitz, The American Journal of Medicine (2014) 127, 303-310.*

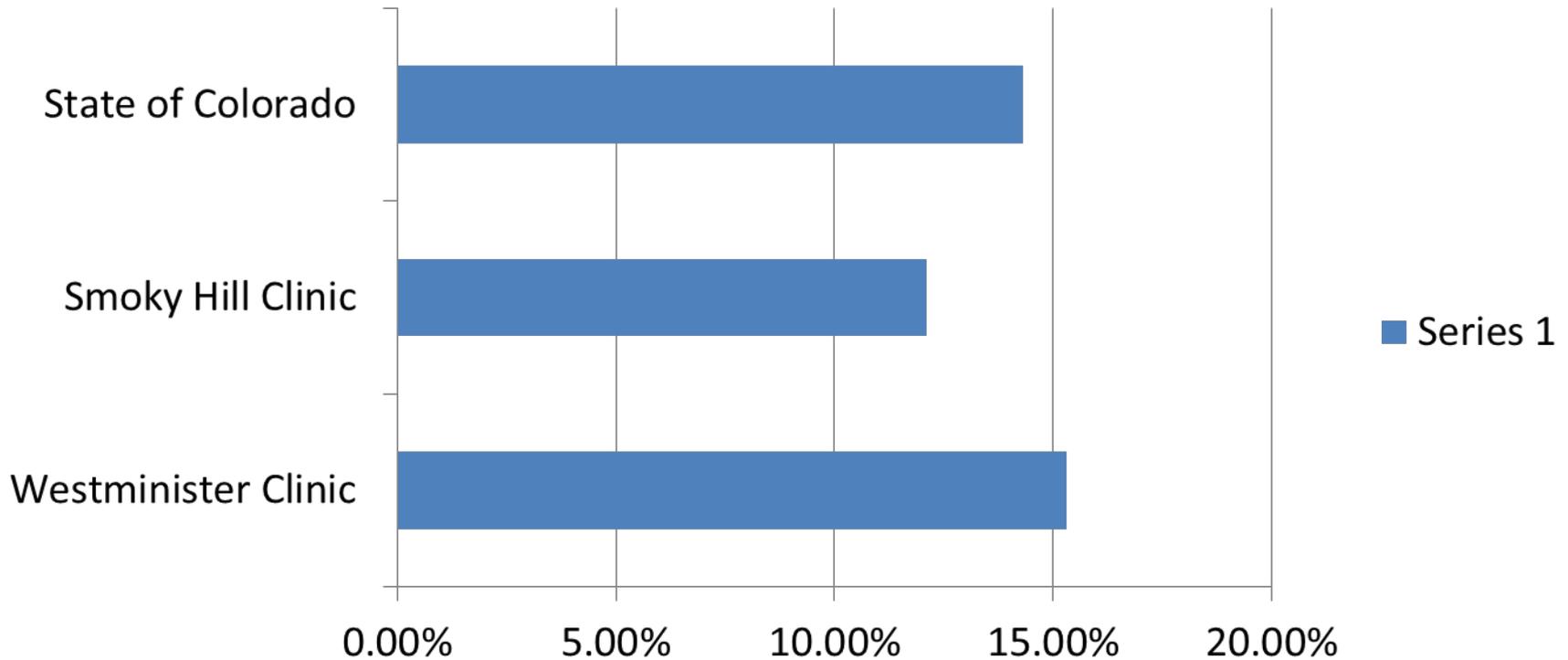
# Where is Food Insecurity in the Differential Diagnosis?

- 3-year-old with failure to thrive
  - Cystic fibrosis
  - Heart disease
  - Protein losing enteropathy
  - Celiac disease
  - Inflammatory disease
  - Chronic infection
  - Autoimmune disease
  - Renal tubular acidosis



# Food Insecurity Exists in KPCO- 2011

## Prevalence of Food Insecurity 2011



# Hunger Free Colorado Resources

- **Screen and enroll residents in all federal nutrition programs**
- **Follow up** with patients requesting SNAP
- **Connect to food resources:** local food pantries, farmer's markets, Meals on Wheels, soup kitchens, senior centers with meals
- **Connect patients to free nutrition classes**



## ● KPCO

- Geriatrics: frailty, depression, medication under use
- Diabetes Care Team: glycemic control/ hospitalization
- Obstetrics: preterm birth, gestational diabetes, obesity

## ● Community Outreach

- School Nurses: absenteeism, attention/behavioral problems
- Hospitals: readmission rates, non-profit status



## ❖ Knowledge:

- Prevalence
- Red Flags
- Health impacts
- Screening question
- Screening system

## ❖ Connection

- Simple **outreach** referral
- Patient confidentiality
- Business agreements
- Information exchange
- Measurement and Feedback

## CONNECT OLDER ADULTS TO FOOD & NUTRITION RESOURCES

Seniors are more likely to be at risk of hunger or food insecurity if they are:

- Between the ages of 60 and 69
- Living in poverty
- A high school dropout
- Divorced, widowed, or living alone
- Caring for a grandchild
- A renter
- Frail (decreased physical functioning)
- Living in a rural community

Red flags for food insecurity and/or malnutrition:

- Low intake of nutrient-rich foods—vitamin or mineral deficiencies
- Skipping or splitting medication dosages
- Not taking medication with food as directed
- Poor wound healing or immune dysfunction
- Frailty
- Depression; apathy; anxiety

### HOW TO SUPPORT A SENIOR WITHOUT ADEQUATE FOOD RESOURCES

1. Screen patients for food insecurity by asking: "In the past 3 months have you worried whether your food would run out before you got money to buy more?"
2. Or ask "Medication and healthy foods can be expensive, but both are important; would you like information on resources that can help stretch your budget?"
3. If yes, assist seniors by calling the Hunger Free Hotline.

**HUNGER FREE HOTLINE:**  
**855-855-4626**  
TOLL-FREE, STATEWIDE, MULTILINGUAL

Additional Kaiser Permanente services - Refer to a Kaiser Permanente Community Specialist

**HOURS:**  
Mon. through Fri.  
8:00 a.m. - 4:30 p.m.

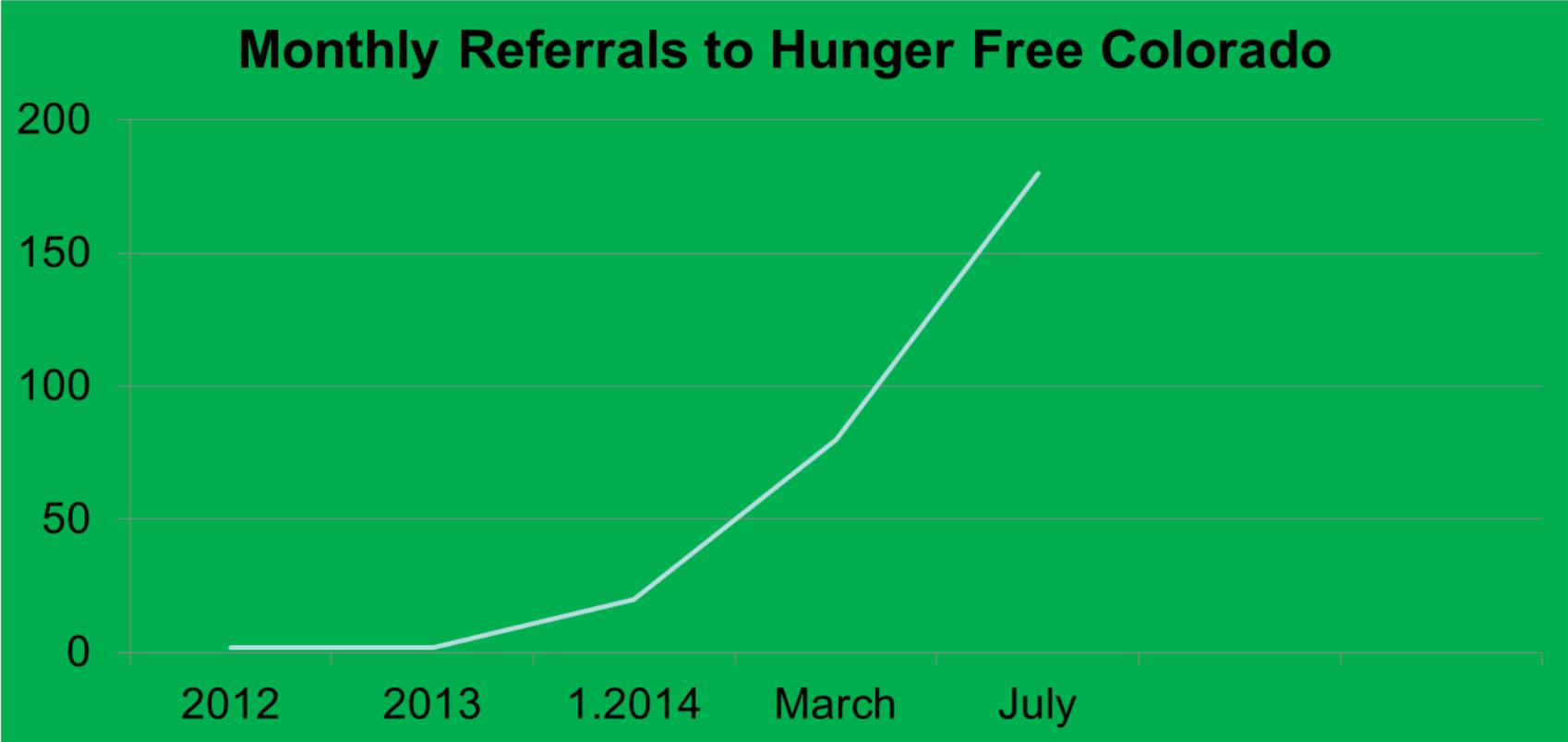


### Hunger Free Hotline Food navigators will:

- Screen and refer patients to government nutrition programs (SNAP/food stamps, The Emergency Food Program), senior programs (commodity foods, home-delivered meals, congregate meals) & community food programs.
- Assist and follow-up with completion of the SNAP/food stamp application over the phone
- Connect patients to free nutrition classes

For patients who require more than food resources, contact Aging and Disability Resources for Colorado (ADRC) at **1-844-COL-ADRC** (1-844-365-2372).

# KP referrals to HFC are increasing



# Making the Case for Screening and Referral: Healthcare Costs

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KAISER PERMANENTE®

- Hospitalization and readmission rates
- Medical compliance decreased
- Higher incidence of chronic diseases
- KPCO patients are receiving \$5,690.00/month



## *Sources:*

*Seligman, Health Affairs 33, No. 1 (2014): 116–123*

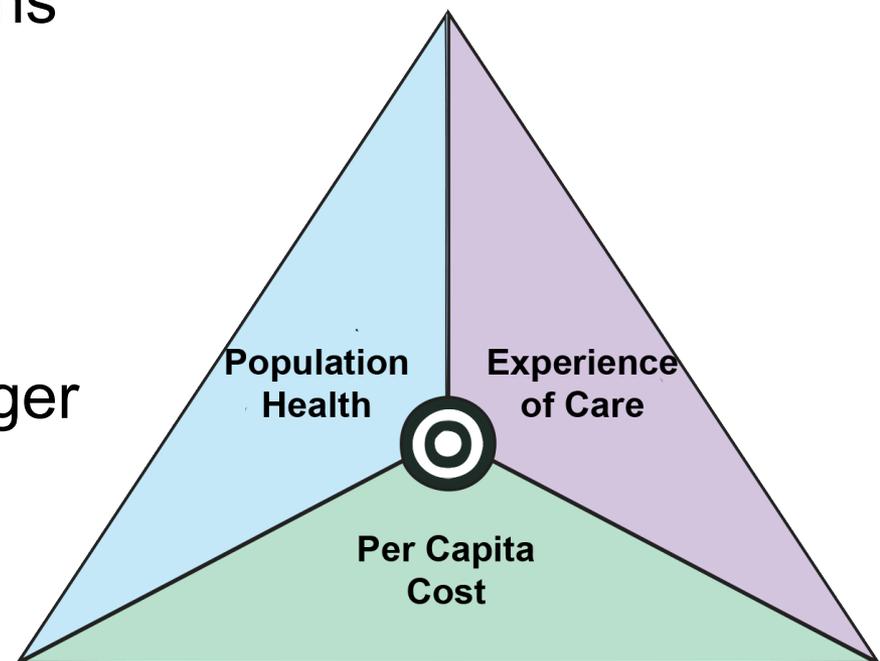
*Kangovi, JAMA. 2011;306(16):1796-1797.*

*Berkowitz: The American Journal of Medicine (2014) 127, 303-310*



# What We Still Need to Learn

- ❖ Prevalence in specific populations
- ❖ Care experience of outreached members
- ❖ Health impacts
- ❖ Cost savings of addressing hunger



IHI Triple Aim

# Thank you

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