

Fresh Food Pharmacy

Changing How We Care for Patients with Food Insecurity

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Food Insecurity: Definition

- Food insecurity is defined as “... the inability to afford nutritionally adequate and safe foods.”
- Food insecurity is evident when families or individuals:
 - Lack access to food
 - Depend on food assistance programs
 - Skip meals
 - Substitute nutritious foods with less expensive alternatives
 - Seek assistance from soup kitchens and food pantries

Anderson SA. Core indicators of nutritional state for difficult-to-sample populations. J Nutr. 1990;120 Suppl 11:1559–600

Food Insecurity Questions

- Within the past 12 months, we worried whether our food would run out before we got money to buy more (Y/N).
- Within the past 12 months, the food we bought just didn't last, and we didn't have money to get more (Y/N).

Food Insecurity: Statistics

- In 2015 it was estimated that:
 - 13% (almost 1 in 8) of Americans were food insecure*
 - 18% (1 in 6) of American children were food insecure^
- Food insecurity and poverty, while closely linked, are not synonymous.
 - Each family has its own expenses and standard of living, and different costs.
 - It is possible to earn below poverty levels and be food secure or earn above poverty level and be food insecure.^

*<http://www.worldhunger.org/hunger-in-america-2015-united-states-hunger-and-poverty-facts/>

^<https://www.childtrends.org/indicators/food-insecurity/>

^^http://www.medscape.com/viewarticle/865606#vp_2

Comparison

Compared to the food secure, people who are food insecure are...

- More likely to be:
 - In households with children (who may also go hungry)
- More likely to have:
 - Poorer self-rated health
 - Limited healthcare access
 - More frequent poor physical and mental health days
 - Higher BMI
 - Higher prevalence of diabetes, smoking, depressive symptoms, and every type of functional limitation

https://www.cdc.gov/pcd/issues/2016/16_0103.htm

Food Insecurity and Health Implications

- Compared to the food secure, food insecure people:
 - Are disproportionately poorer in health and functional status
 - Have higher prevalence of risky health behaviors
 - Have greater prevalence of mild and severe depressive symptoms
 - Are less likely to report arthritis, cancer, hypertension, and diabetes due to limited access to healthcare
 - Have more unmet needs for chronic disease screening and prevention

https://www.cdc.gov/pcd/issues/2016/16_0103.htm

Diabetes and Related Diseases in Our Community

- 1 in 4 diabetics don't know they have diabetes and are untreated
- An additional 22,000 Northumberland County adult residents have pre-diabetes and most (90%) don't know it
- Heavy burden of food insecurity and diabetes in Northumberland, Lackawanna, and Juniata Counties

	Northumberland	Lackawanna	Juniata	PA	USA
Food-Insecurity Rate	14.2%	13.0%	11%	13.8%	12.7%
Child Food-Insecurity Rate	22.5%	22.0%	18%	19.3%	18%
Diabetes Rate	12.1%	11.0%	12.3%	9.6%	9.3%

Food Insecurity and Diabetes

- The food insecurity is much higher for people with diabetes:
 - Feeding America reports 12.3% (almost 1 in 8) of Americans are food insecure
 - Americans with an A1c of 6.5-8.9: about 20%, or 1 in 5 of the population are food insecure*
 - Americans with an A1c of 9 or higher: 25%, or 1 in 4, of the population are food insecure*

*Berkowitz SA, Baggett TP, Wexler DJ, Huskey KW, Wee CC. Food insecurity and metabolic control among U.S. adults with diabetes. *Diabetes Care*. 2013;36:3093-3099.

Diabetes Is the Fastest Growing Chronic Condition

- 39 million or 15% of adults will have diabetes by 2020.
- 1 in 3 adults will have diabetes by 2050¹

1. Diabetes Statistics Report, 2014; 2. United Healthcare, United States of Diabetes, 2010



A Vicious Bidirectional Relationship—Which Came First?

- Food insecurity can worsen a person's diabetes and vice versa
 - Lower dietary quality
 - Lack of funds or access to nutritious foods
 - High availability of nutritiously poor foods
 - Increased spending on medical care (“treat or eat”)
 - Decreased capability for self-care
- Reduced capacity to work
- Higher stress and obesity
- Poorer mental health
- Lack of opportunities to be physically active
- Limited access to healthcare
- Lack of transportation
- More emergency-room visits

<http://www.medscape.com/viewarticle/865606>

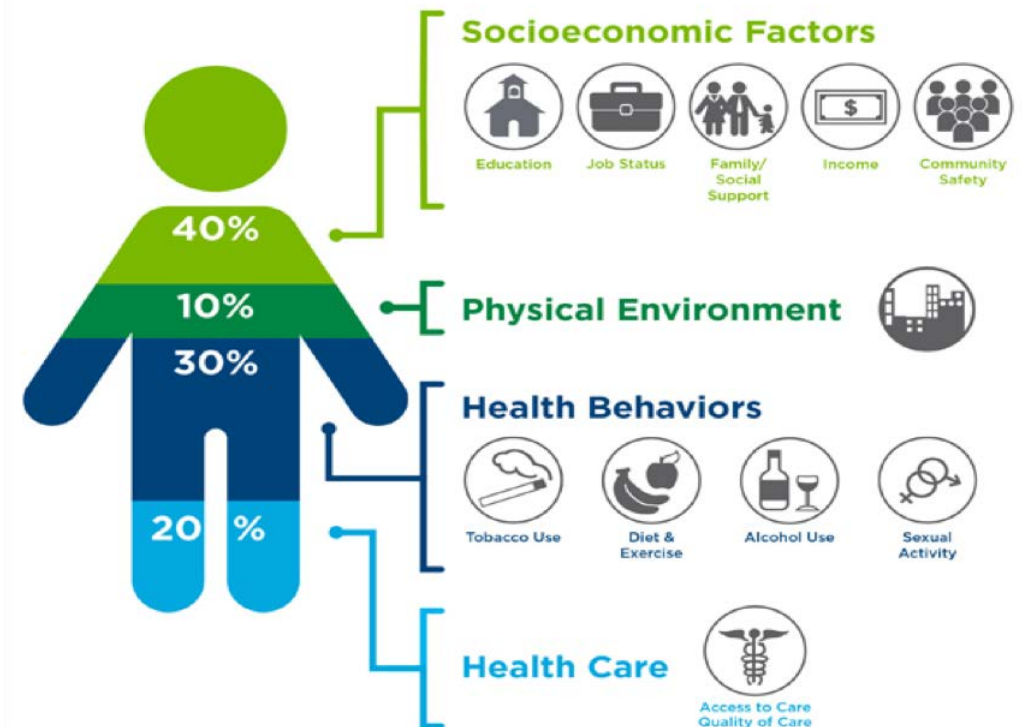
<https://www.diabetesselfmanagement.com/blog/are-you-food-insecure/>

Multiple Factors Impact Patient Health

Four areas impact health:

- **Socioeconomic Factors**
 - Education
 - Job Status
 - Family/Social Support
 - Income
 - Community Safety
- **Physical environment**
- **Health behaviors**
 - Tobacco use
 - Diet and exercise
 - Alcohol use
 - Sexual activity
- **Healthcare**
 - Access to care
 - Quality of care

What Goes Into Your Health?



Source: Institute for Clinical Systems Improvement, Going Beyond Clinical Walls: Solving Complex Problems (October 2014)

The Bridgespan Group

Program Premise

What if we could eliminate hunger and prevent chronic disease?



Where Did We Start?

- Fresh Food Pharmacy program
 - Kulpmont pilot began in July 2016
 - Full program expansion in March 2017 to serve 250+ patients and their family members in Year 1
- Food-as-medicine approach
 - Addresses both medical and socioeconomic determinants of health
- Starting with diabetic patients and will expand to treat obese, pre-diabetic, and patients with other chronic conditions



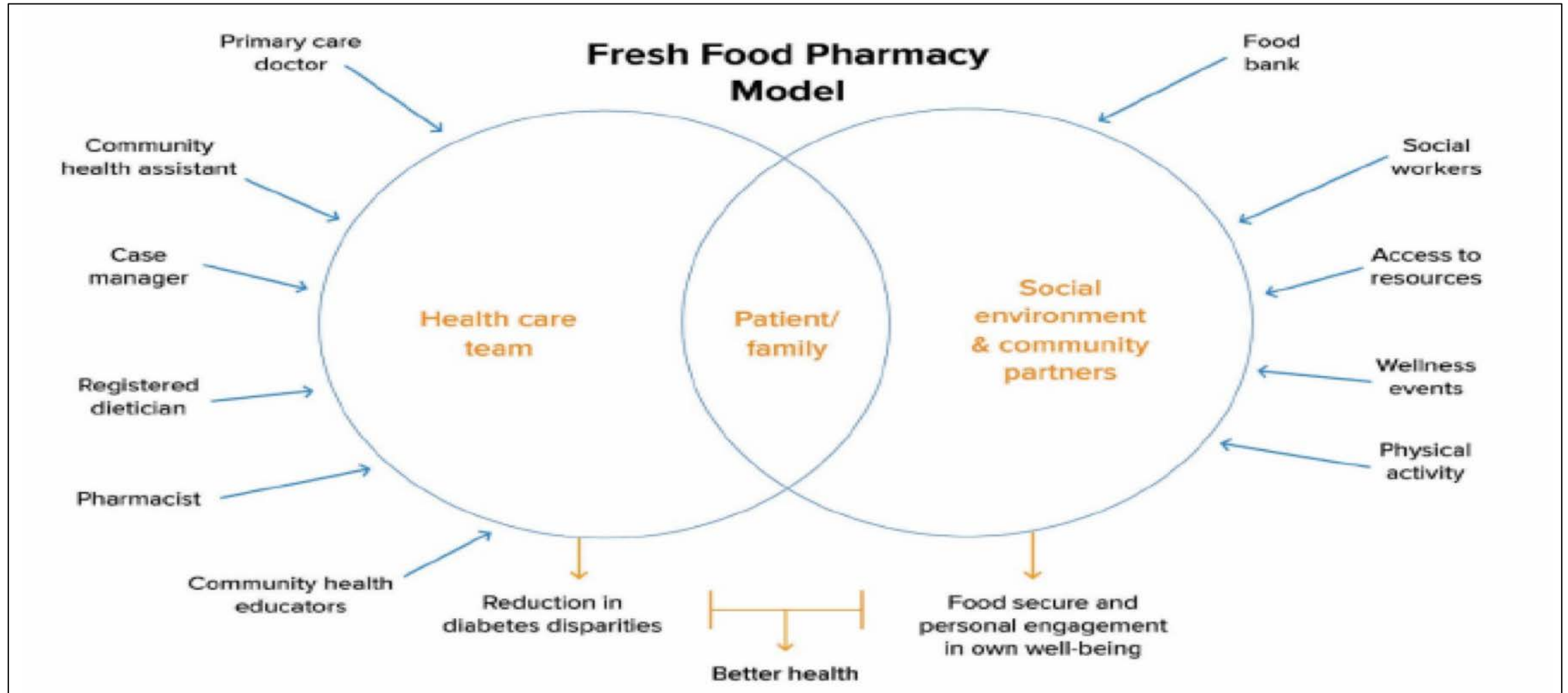
Coming Together

Partnership already includes:

- Central Pennsylvania Food Bank
- Weis Markets
- Shamokin Area School District and Northumberland County Career and Technology Center
- Degenstein Foundation
- Many local community organizations
- Geisinger healthcare team



Fresh Food Pharmacy Model



Program Structure

Clinical criteria:

- 18 years of age or older
- Diagnosed with Type II DM
- HBA1c 8.0% or greater
- Geisinger primary or specialty care
- Food insecure

How the Program Works

- Identified patients with A1c levels over 8.0 who are food insecure
- Geisinger provides clinical care team intervention:
 - RN Health Management
 - Pharmacy
 - Diabetes education
 - Nutrition consult
 - Healthy food prescription and delivery each week of healthy food for patient and family

How the Program Works (cont.)

- Food provided for 2 meals per day, 5 days per week for the patient and patient's family
 - Feeds on average 4 people in the household, including children
- Transportation gaps closed
- Food pick-up coordinated with classes and care-team appointments
- Comprehensive meal planning and recipes provided
- Stanford-designed Diabetes Self Management (DSMP) classes provided

End

