

# Community Partnerships: The Key to Sustainable Expansion of Food-As-Medicine Programing

Terrah Keck-Kester, MD, FAAP, FABOIM

Laurie Crawford, MPM

Kayla Rutt, MS, ACSM-CEP



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# Learning Objectives

- Understand how community partnerships can assist Academic Health Systems to optimize Food-As-Medicine work
- Learn ways to systematically evaluate community partnerships
- Apply the 4 pillars of Academic Medicine: research, service, education, and clinical care to work with community partners



# Our Team

## **Terrah Keck-Kester**

Assistant Professor, Penn State College of Medicine, Integrative Medicine Pediatric Physician

## **Laurie Crawford**

Program Manager for Food Access and Community Gardens, Penn State Health

## **Kayla Rutt**

Research Project Manager for Food as Medicine Initiative, Penn State College of Medicine

## **Ashley Visco**

Senior Director of Community Health, University of Maryland Medical System

## **Susan Veldheer**

Associate Professor, Penn State College of Medicine, Department of Family and Community Medicine

## **Analysts, Students and Community Partners**



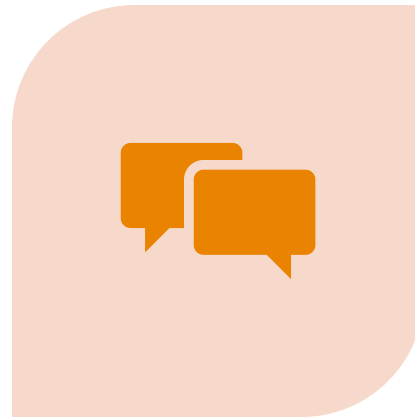
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PRESENTATION



FACILITATED  
DISCUSSION/QUESTIONS



SMART GOAL  
DEVELOPMENT



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# Food As Medicine, why Community focus?



- Food as Medicine refers to approaches that promote optimal health and healing by providing nutritious food.
- Goals
  - Recognizes Nourishment Is Essential for Good health, Well-being, and Resilience
  - Facilitates Easy Access to Healthy Food Across the Health Continuum in the **Community**
  - Cultivates Understanding of the Relationship Between Nutrition and Health
  - Unites **Partners** With Diverse Assets to Build Sustained and Integrated Solutions
  - Invests in the Capacity of Under-resourced **Communities**

Health.gov

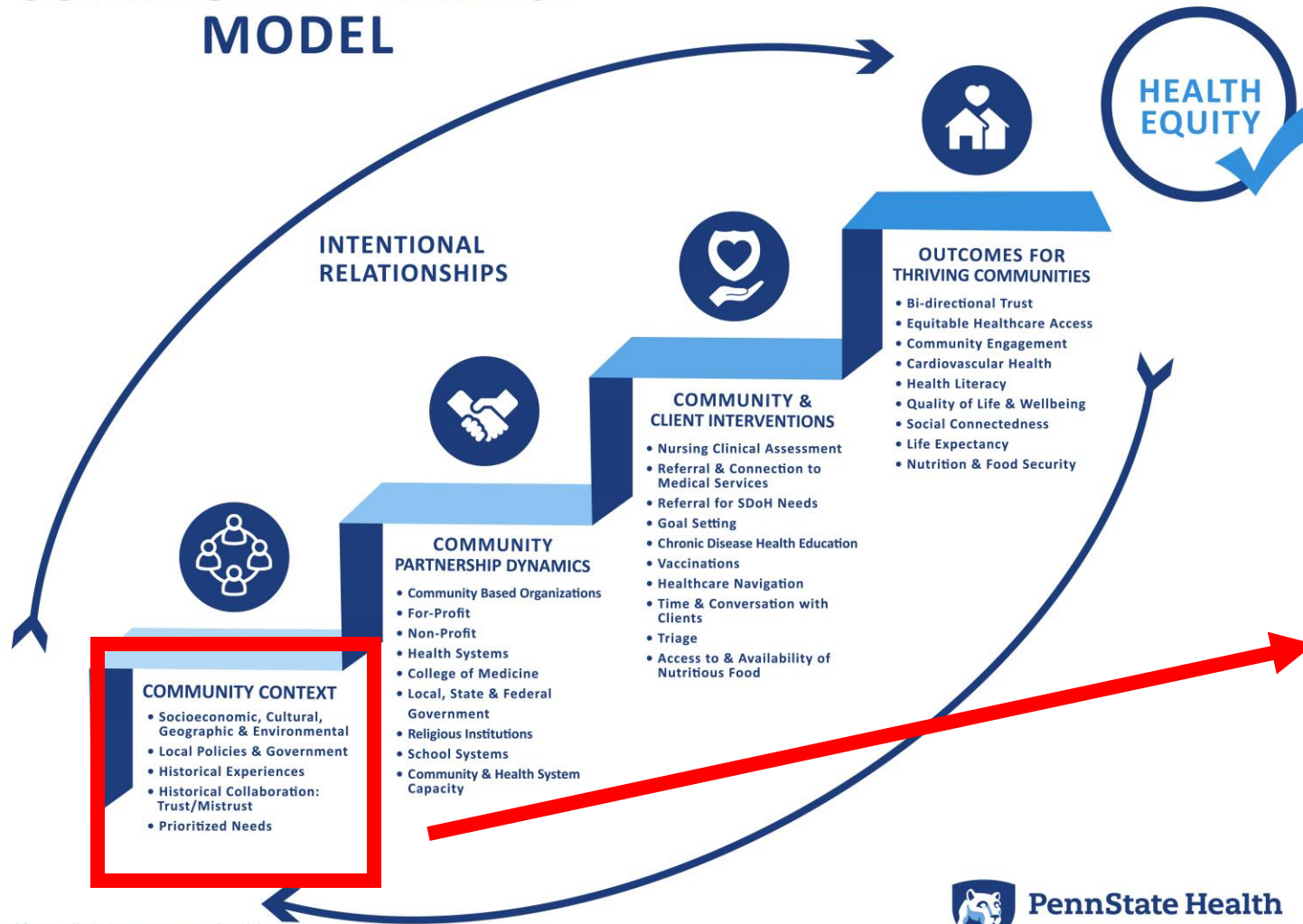


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# COMMUNITY IMPACT MODEL



## Community Context

- Socioeconomic, Cultural, Geographic & Environmental
- Local Policies & Government
- Historical Experiences
- Historical Collaboration: Trust/Mistrust
- Prioritized Needs

Adapted from Wallerstein 2008 Conceptual Model and 2022 ACE Conceptual Model  
Created by Ashley Visco, MSW, LCSW and Susan Veldheer, DEd, RD, LDN

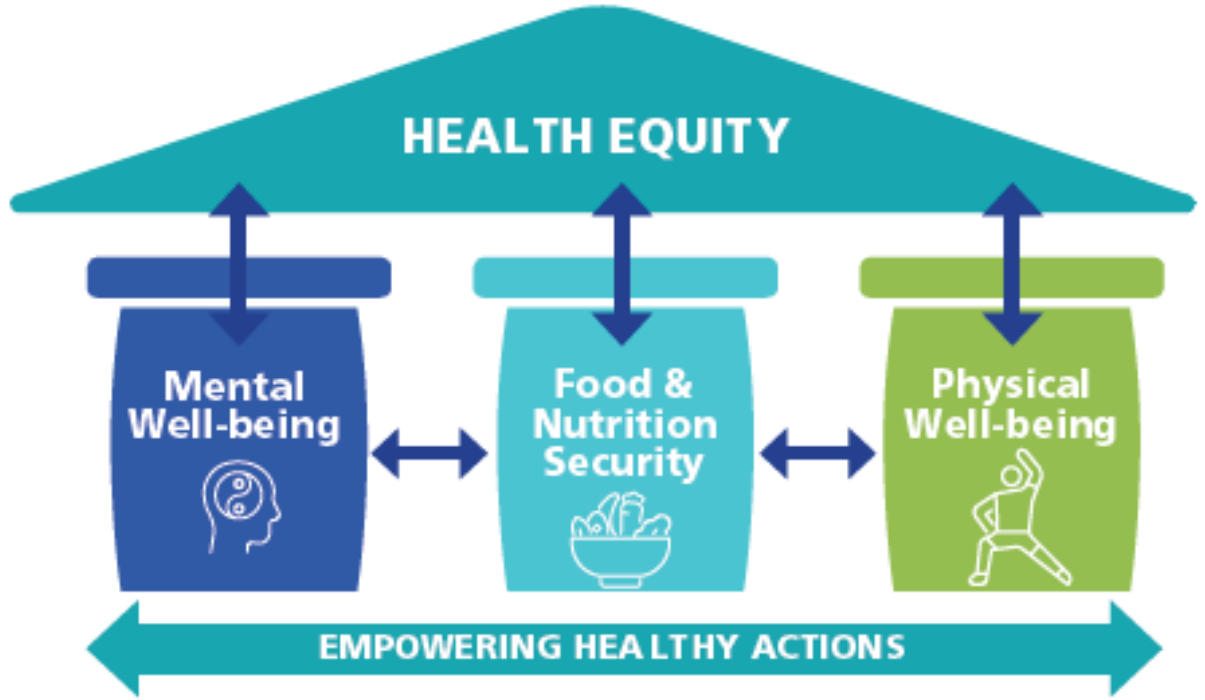


# PSH Community Health Needs Assessment

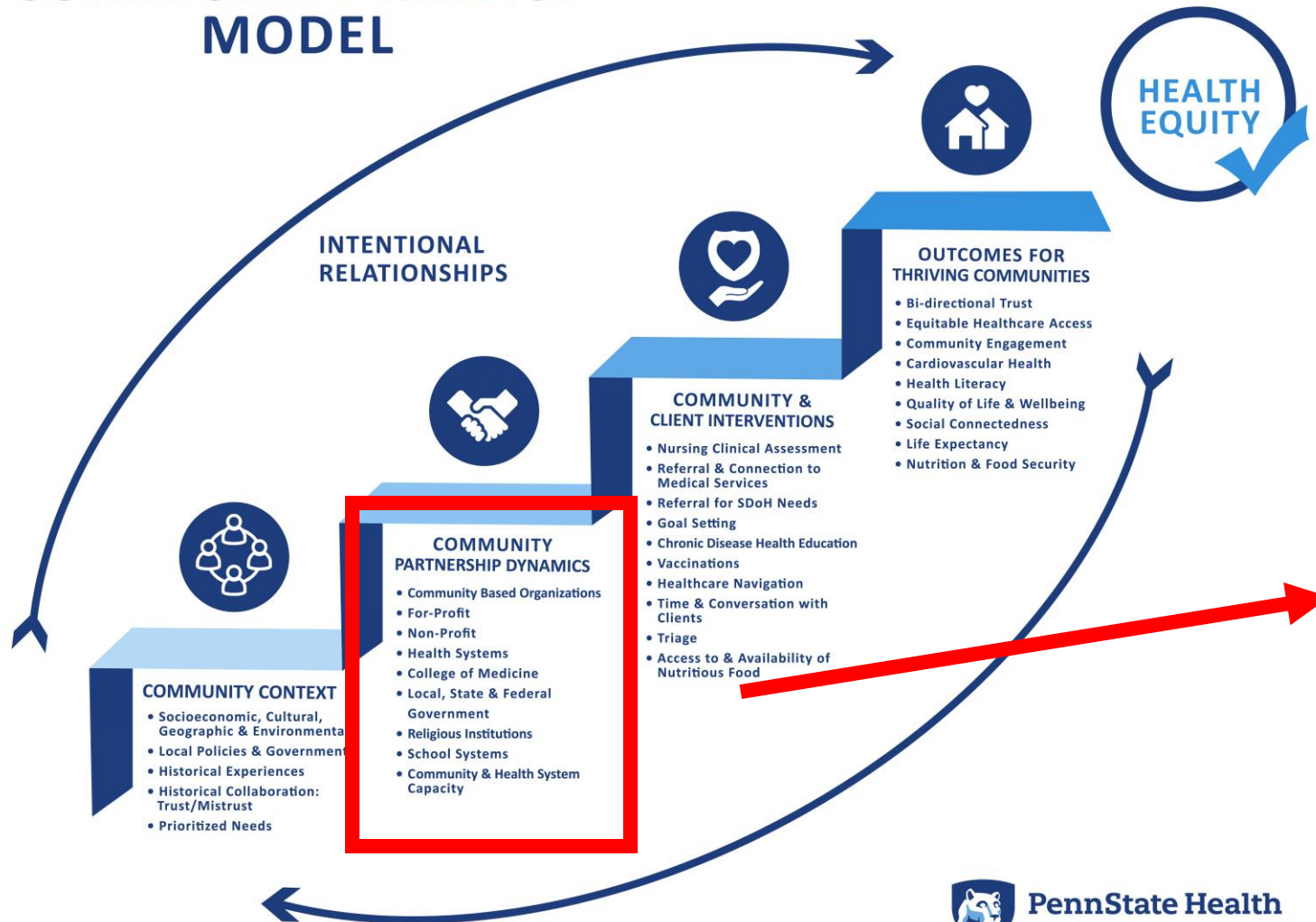
2021-2024



2025- 2028



# COMMUNITY IMPACT MODEL



## Community Partnership Dynamics

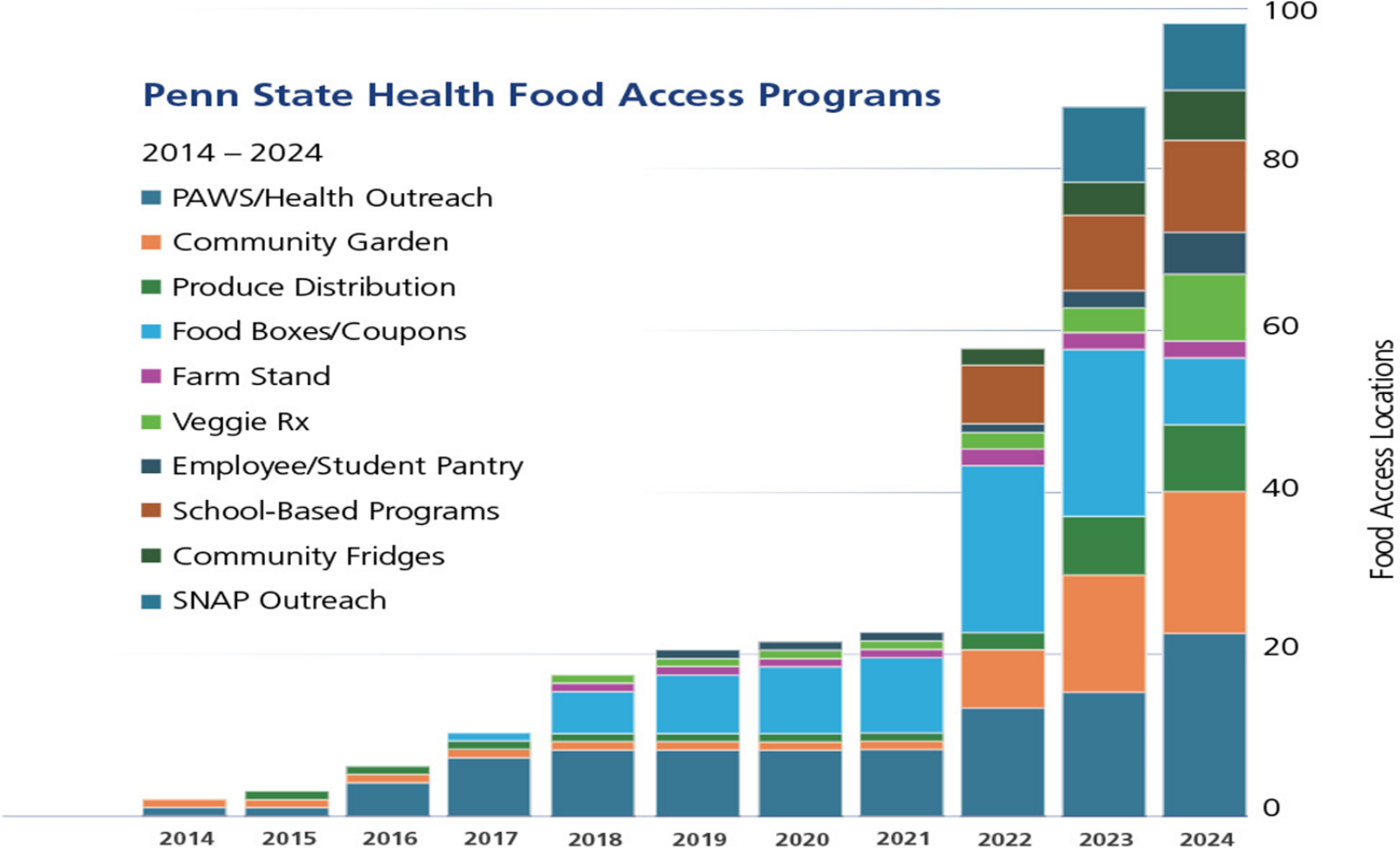
- Community Based Organizations
- For Profit & Non-Profit
- Health Systems
- College of Medicine
- Local, State & Federal Government
- Religious Institutions
- School Systems
- Community & Health Systems Capacity

Adapted from Wallerstein 2008 Conceptual Model and 2022 ACE Conceptual Model  
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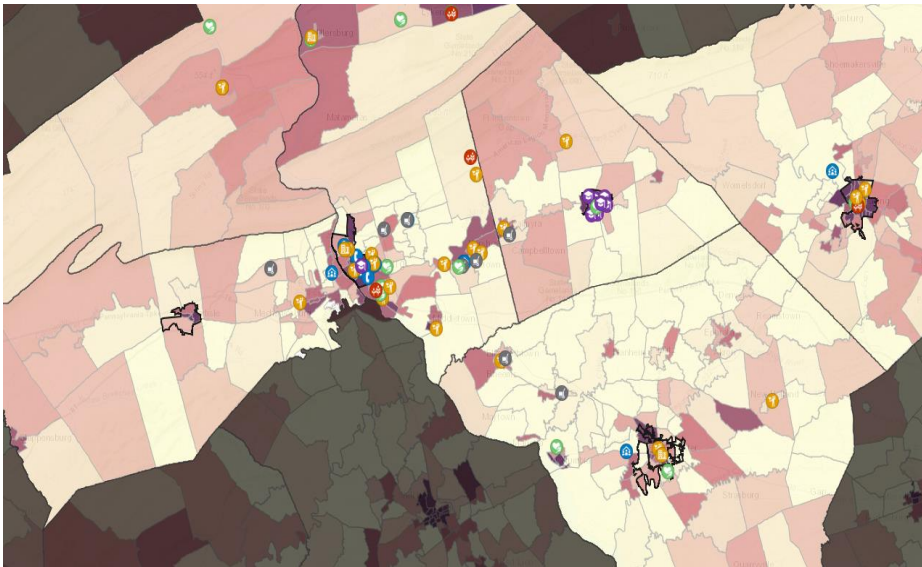




# FAM Nutrition and Food Access work across Penn State



# The Right Partner for our Program



 GIS Mapping Tool

 Alignment with Impact Model


 Implementation Table

 Environmental Scan of Current Programs and Organizations

 Community Partner with Community Connection

 Projects in Progress

 Data Collection can be completed

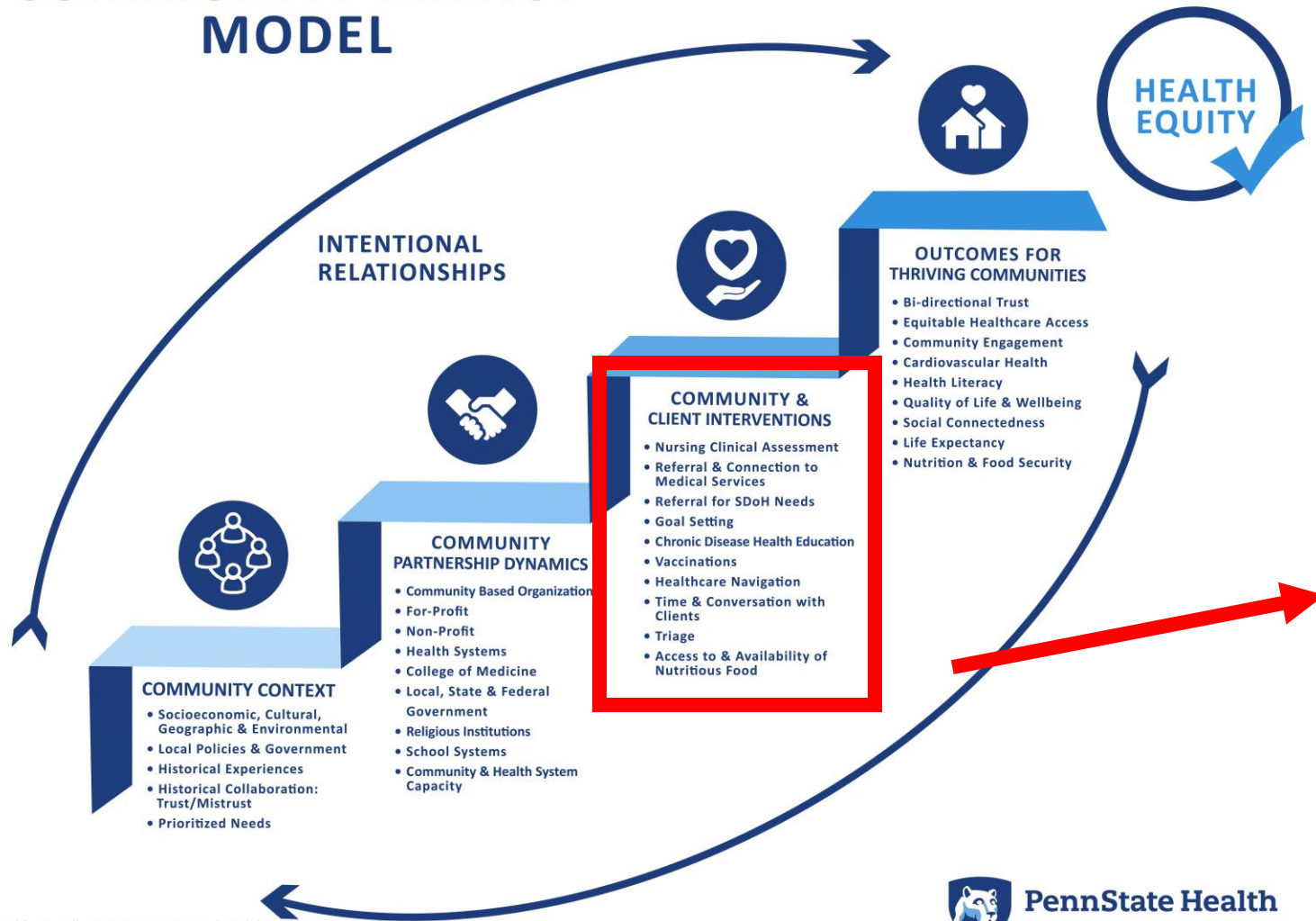
 Right time for the partner and for the project

# Partner Highlight: Chestnut Street Community Center

- Partner had a plan for the garden but needed the funding
- Location was in low food access area, next to a school, in an urban area, around the corner from the WIC office.
- Room for expansion: Community Fridge, Classes, Farmers Market
- Support from the Board, the Center tenants and the owners
- Great community connections



# COMMUNITY IMPACT MODEL



## Community & Client Interventions

- Nursing Clinical Assessment
- Referral & Connection to Medical Services
- Referral for SDoH Needs
- Goal Setting
- Chronic Disease Health Education
- Vaccinations
- Healthcare Navigation
- Time & Conversation with Clients
- Triage
- Assess to & Availability of Nutritious Food

Adapted from Wallerstein 2008 Conceptual Model and 2022 ACE Conceptual Model  
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# Other Partner Considerations



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Passion and a Plan

---

Leadership in place

---

Board support and structure

---

Land ownership and contracts

---

Neighborhood Support

---

Existing collaborations

---

Complimentary funding and projects



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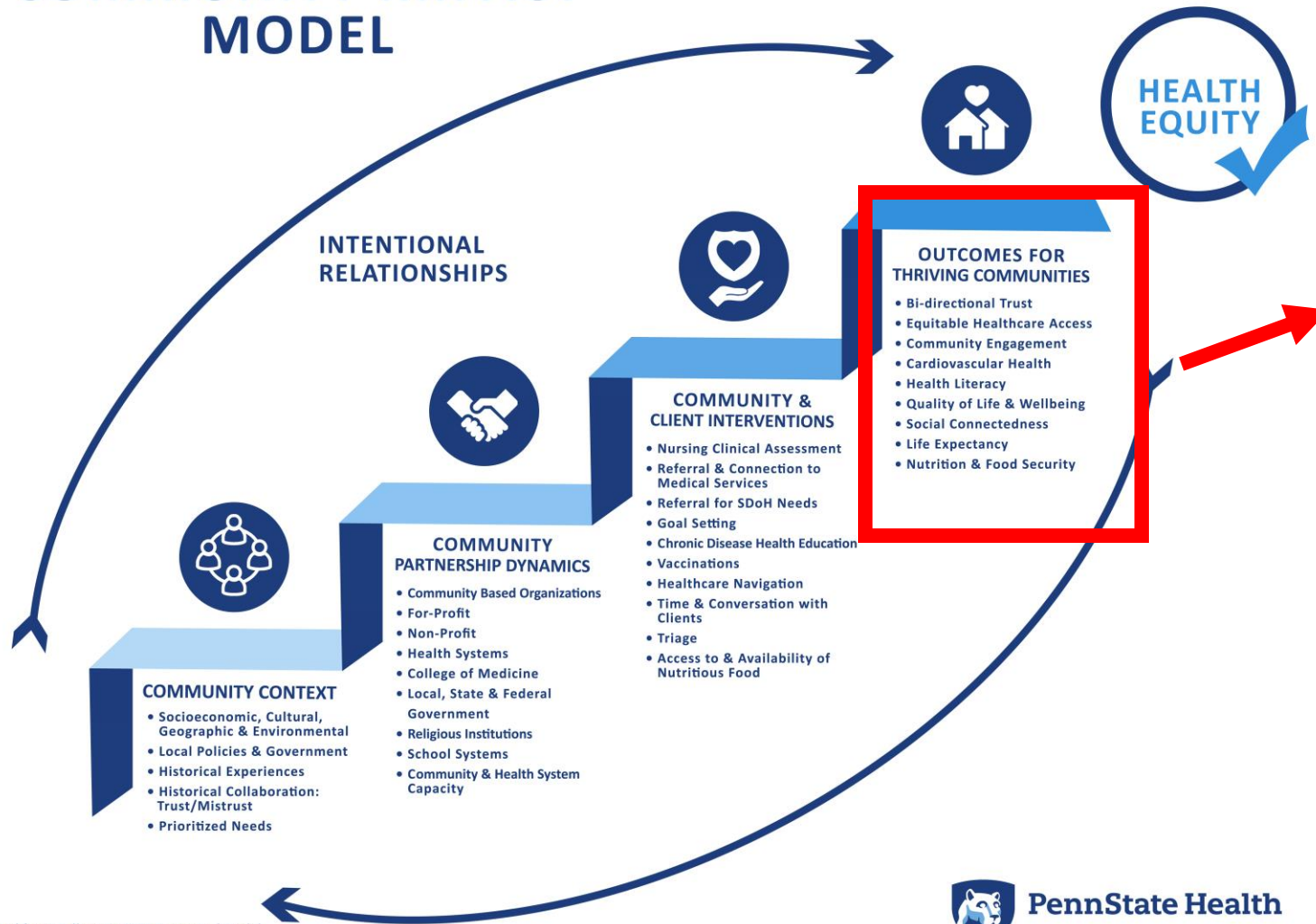
# Partner Highlight: Perry County Kids Garden Club

- Partner had existing garden in public park
- Strong ties to the community and food pantry.
- Support from organization for education and leadership funding
- Expanded reach to schools
- In two years
  - Garden size doubled
  - Provides weekly produce to pantry
  - New School Gardens
  - Expansion plans for 3 more school gardens in the network





# COMMUNITY IMPACT MODEL



Utilizing research to assess and optimize the impact of community partnerships and create Outcomes for a Thriving Community

- Bi-directional Trust
- Equitable Healthcare Access
- Community Engagement
- Cardiovascular Health
- Health Literacy
- Quality of Life & Wellbeing
- Social Connectedness
- Life Expectancy
- Nutrition & Food Security

Adapted from Wallerstein 2008 Conceptual Model and 2022 ACE Conceptual Model  
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# Why Evaluate Community Partnerships?

1

Determine the effectiveness of interventions

2

Identify approaches on what worked well, and what needs more attention

3

Improve communication among community partners

4

Gain insights into community perspectives and priorities



# What have we assessed? - Action Target



Cardiovascular  
Health



Community  
Engagement



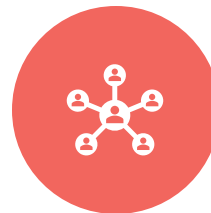
Bi-directional  
Trust



Nutrition and  
Food Security



Health and  
Nutrition Literacy



Social  
Connectedness/  
Isolation



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# Implementation Through Community Gardens

## Cardiovascular Health

- lbs. of fruits and vegetables
- Time spent working in the garden
- Traveling to the garden by walking/biking

## Social Connectedness/Isolation

- # of volunteers and volunteer hours
- # of people served
- # of events held at site

## Bi-directional Trust

- # of years in collaboration with partner
- # of partner sites
- Sustainable funding of programs and garden





# Community Garden Outcomes

- 15 Gardens
- Harvested over 8,861.05 pounds of produce in 2024
- 99.4% of participants reported that the garden is a welcoming and inclusive place, that gives them a sense of community
- 95.5% of participants reported that the garden makes them more willing to include fruits and vegetables in their diet



# Garden Survey and Development



- Incorporated survey questions from validated questionnaires
- QR to scan survey in 2023 → paper survey in 2024
  - 2023 – 33 surveys completed
  - 2024 – 161 surveys completed
- Could complete on their own time
- Incentivized for completion of survey



# Implementation Through Veggie Rx

## Community Engagement

- # of classes completed
- # of participants who attended and completed the program
- Instructor ratings

## Cardiovascular Health

- Changes in BP, BMI, Lipids, TG, A1c

## Nutrition and Food Security

- # of voucher distributed
- % of voucher redeemed
- # of sites where participants can redeem vouchers



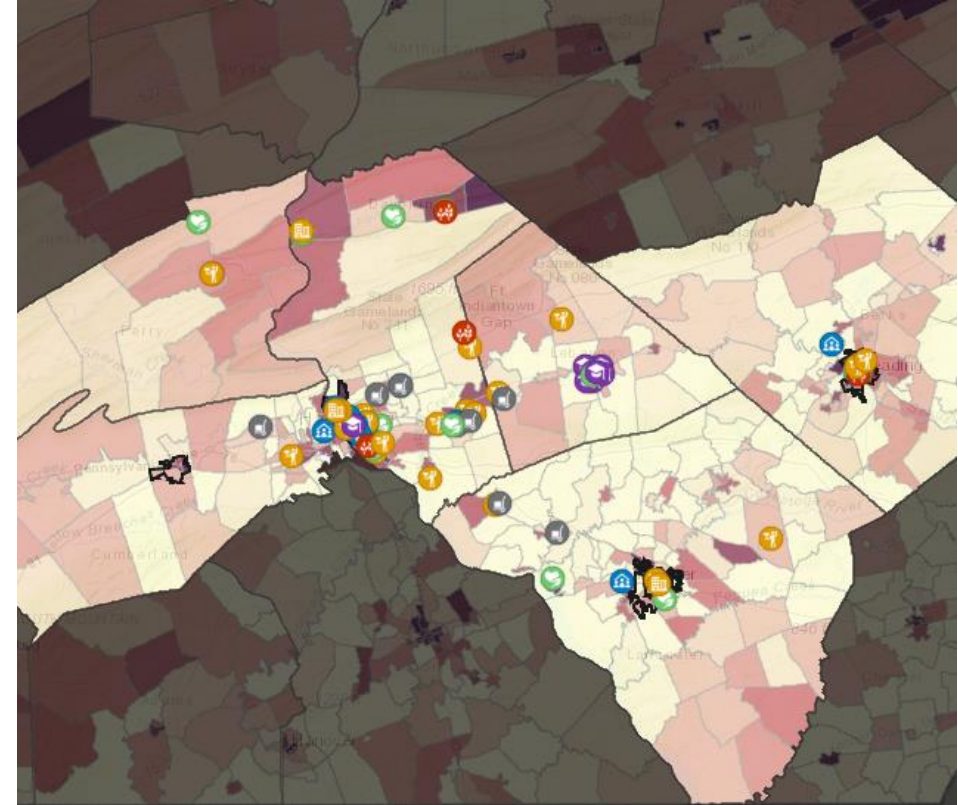
# Veggie Rx Outcomes

- 6 sites
- 12 nutrition education classes offered at each
  - Attendance was incentivized through vouchers
- 62 program finishers
- 46.3% redemption rate



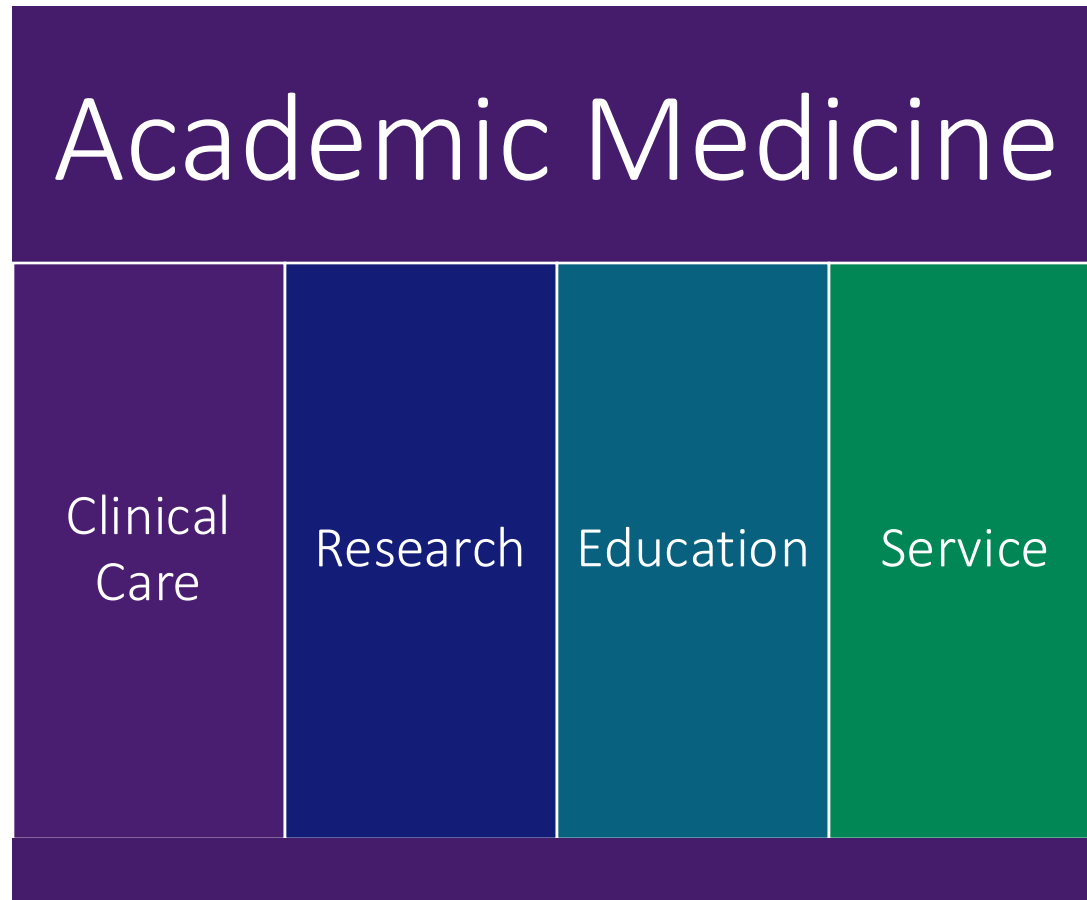
# New Partnerships

- GIS methods
  - Identify community needs
    - Current health data
    - Food deserts
    - Community health trends – where are our programs at?
  - Identify potential partners
    - Help locate community centers, healthcare clinics, other organizations
    - Analyze proximity of different partners
    - Map local food systems (food banks, pantries, gaps, etc.)





# Community Based Academic Medicine



Lynch 2023, AJCN, [A Concept for Comprehensive Food is Medicine Networks or Centers of Excellence - PubMed \(nih.gov\)](#)



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# Academic Medicine - Service



Working in  
Community  
Gardens

Events in the  
Gardens

CHNA Task  
Force  
Membership

Committee  
Leadership



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# Academic Medicine – Clinical Care

- PaWS
  - Pediatric Residents
- Veggie Rx
- Group Visits-Starting in April
- Culinary Nutrition Education



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# Academic Medicine - Teaching



## Community Teaching

- Container Gardens
- Kids Garden Events
- Seed to Supper Programs
- Veggie Rx
- Culinary Classes

## Medical Professional Teaching

- Medical Students
  - Survey Data
  - Posters
  - Manuscripts
- Public Health Students
  - How-To-Booklets
- Residents
  - Food Boxes
  - Community Fridge



# Academic Medicine - Research

## Posters:

ICIMH 2023, 2024, 2025

Penn State Peds Research Day 2023, 2024

Society of Behavioral Medicine Annual Meeting 2024

## Conference Presentations:

ICIMH 2024, 2025

Accelerating Health Equity Conference - 2024

PA Rural Health Conference 2023

STFM Annual Meeting, Society of Teacher of Family Medicine 2023

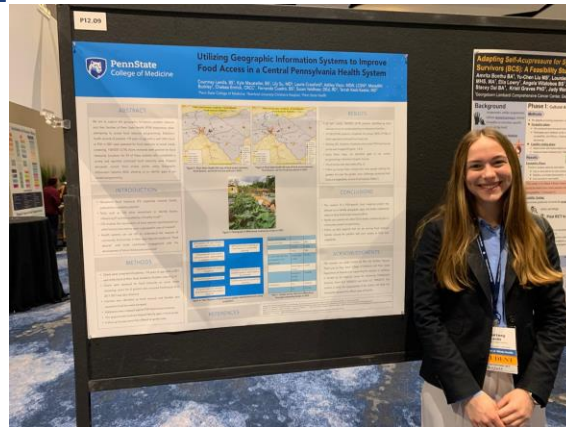
American Society of Nutrition Annual Meeting 2023, 2022

Society of Behavioral Medicine Annual Meeting 2022

North American Primary Care Research Group 2021

American Society of Nutrition 2020

North American Primary Care Research Group 2019



## Manuscripts:

- In process: Mausteller, Kyle et al. *Utilization of survey data and survey data to optimize community food access locations.*
- Wang, K., Li, Y., Chen, X., Veldheer, S., Wang, C., Wang, H., Sun, L, Gao, X. (2024). Gardening and subjective cognitive decline: A cross-sectional study and mediation analyses of 136,748 adults aged 45+ years Nutrition Journal
- Veldheer, S., Whitehead-Zimmers, M., Bordner, C.,\* Weinstein, O., Choi, H.,\* Spreenbergs-Bronsoms,† K., Davis, J., Conroy, D.E., Schmitz, K.H., Sciamanna, C. (2023). Growing Healthy Hearts: a single-arm feasibility study of a digitally delivered gardening, cooking, and nutrition intervention for adults with risk factors for cardiovascular disease. Journal of Pilot and Feasibility Studies
- Veldheer S, Tuan, W.-J., Wadsworth, M., Sinoway, L., Schmitz K, Sciamanna C, Gao X. (2023). Gardening is Associated with Better Cardiovascular Health Status Among Older Adults in the United States: Analysis of the 2019 Behavioral Risk Factor Surveillance System Survey. J Acad Nutr Diet,
- **11 total to date**



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# Academic Medicine-Wellbeing

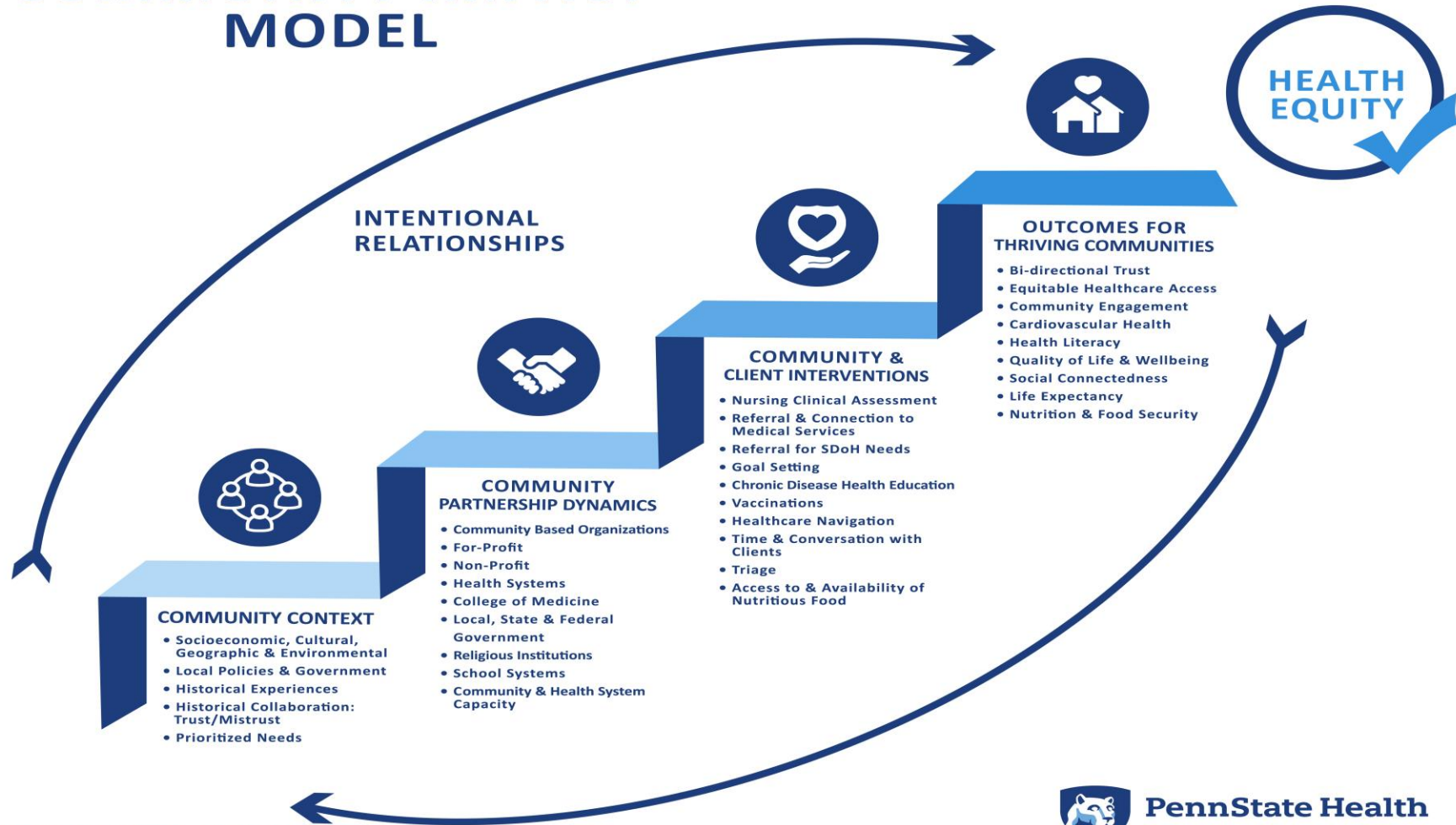


## Health Care Worker Satisfaction

- Connection with the Community
- Decreased Loneliness
- Purpose Driven work
- Family inclusiveness



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# SMART GOAL DISCUSSION




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**COMMUNITY BASED**

**S M A R T**

**GOAL**

If a problem seems too big, it is probably because the first step is not small enough.



**Think about the community that your health center serves...**

What are the identified needs?

Can you identify areas where you may have interest or expertise to assist in addressing these needs?

**Considerations to increase the community impact:**

How was the need assessed?

How will you measure impact or success?

**Where do you need help?**

List a few people to partner with inside your institution:

List a few potential community partners...current/future:



# Questions & Conversation

## Contact:

**Terrah Keck-Kester, MD, FAAP, FABOIM**

**[tkeckkester@pennstatehealth.psu.edu](mailto:tkeckkester@pennstatehealth.psu.edu)**

**Laurie Crawford, MPM**

**[lcrawford4@pennstatehealth.psu.edu](mailto:lcrawford4@pennstatehealth.psu.edu)**

**Kayla Rutt, MS, ACSM-CEP**

**[krutt1@pennstatehealth.psu.edu](mailto:krutt1@pennstatehealth.psu.edu)**

- Link to the GIS mapping tool:  
<https://cpfb.maps.arcgis.com/apps/webappviewer/index.html?id=c963d1d9b14741ecaa03dd8f57fa967d>



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