## PRIMARY CARE & & UNDERSERVED POPULATIONS

Brita Roy, MD, MPH, MHS Assistant Professor of Medicine Director of Population Health Yale University School of Medicine October 7<sup>th</sup>, 2016

# Preparation...

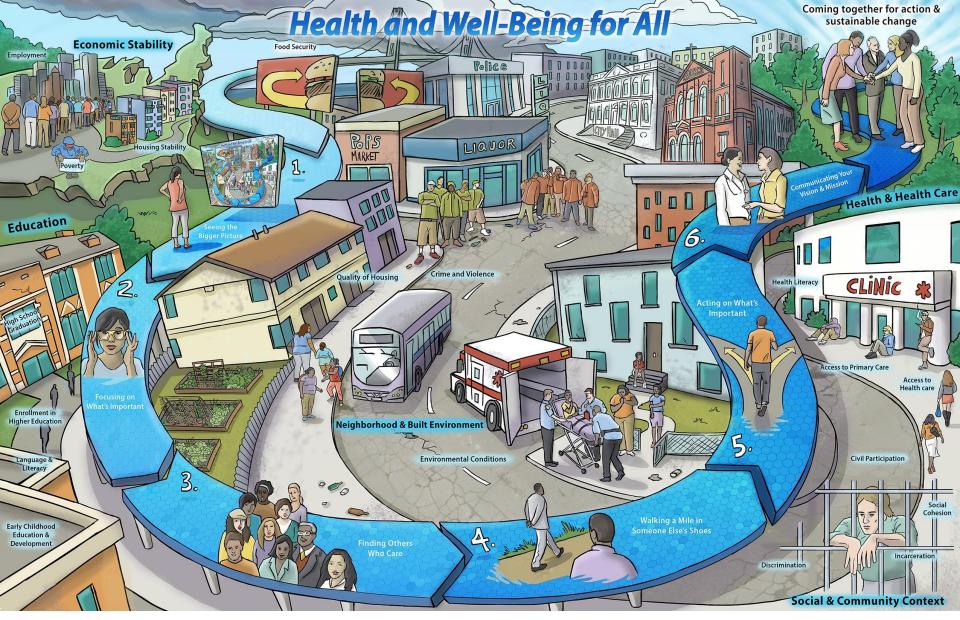
## Find the chat box!

Interactive workshop

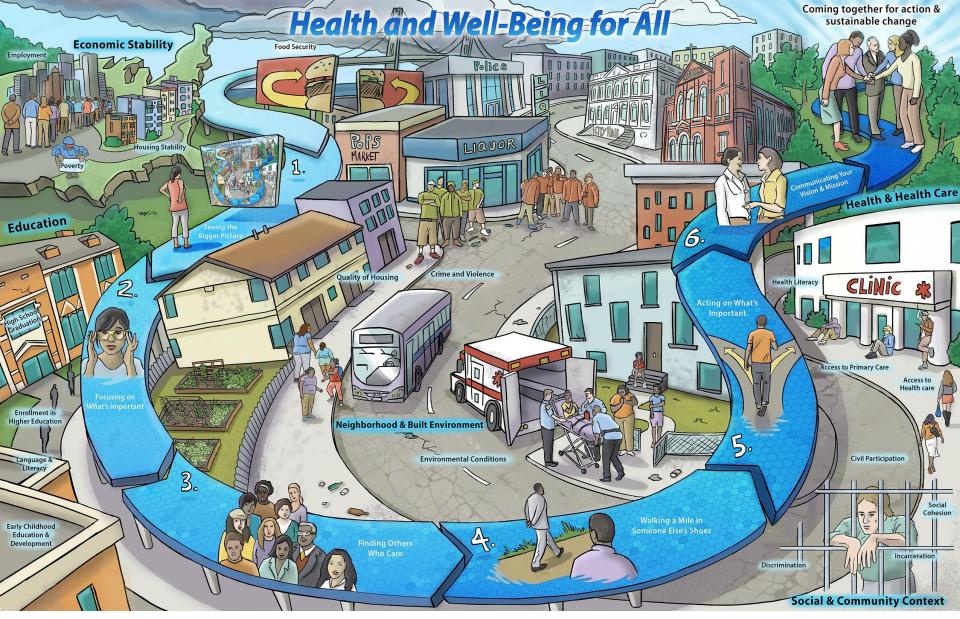


 Be prepared to talk about things that might be uncomfortable

# WHAT IMPACTS HEALTH?



 Type into the chatbox what you observe in this visual that impacts health...



 Type into the chatbox what you do NOT observe in the visual that impacts health.



 Type into the chatbox what you do NOT observe in the visual that impacts health.

## THE PATIENT PERSPECTIVE

Meet Raeshawn...

Raeshawn is an 11-year-old African-American boy you've been seeing in your primary care office since he was born. He experienced difficulty breathing during gym class at school. He's had prior hospitalizations due to his asthma. **Background**:

- Housing development has ongoing problems with roaches and rodents
- He walks to school near a major highway
- His mother, a single mom, is a smoker and works 2 jobs
- Family has no insurance, but is assisted by Medicaid
- Limited access to clinics that are an easy traveling distance, that accept Medicaid, and/or are still open
- Raeshawn's father lost his job, disappeared, and was recently arrested for drug abuse
- His mom's stress level is high as she's concerned about her son's health and providing for all her kids
- His grandmother lives with the family, cooking meals and helping the children with homework

- Prescribe rescue inhalers
- Develop an asthma action plan
- Prescribe preventive medications
- Counsel on the importance of exposure reduction

- Prescribe rescue inhalers
- Develop an asthma action plan
- Prescribe preventive medications
- Counsel on the importance of exposure reduction
  - Mom's cigarette use
  - Roaches and rodents
  - Proximity to a highway

- Prescribe rescue inhalers
- Develop an asthma action plan
- Prescribe preventive medications
- Counsel on the importance of exposure reduction
  - Mom's cigarette use
  - Roaches and rodents
  - Proximity to a highway
- You're also aware of other risk factors worsening his asthma, like chronic stress and exposure to trauma

- Prescribe rescue inhalers
- Develop an asthma action plan
- Prescribe preventive medications
- Counsel on the importance of exposure reduction
  - Mom's cigarette use
  - Roaches and rodents
  - Proximity to a highway
- You're also aware of other risk factors worsening his asthma, like chronic stress and exposure to trauma

What else can you do???

# **POPULATION HEALTH**

A related concept...

## What is "population health"?

## What is "population health"?

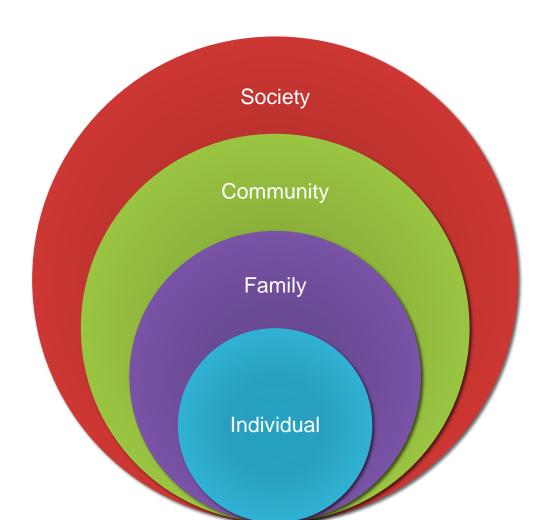
The health outcomes of a group of individuals including the distribution of outcomes within the group

-Kindig & Stoddart

## Why think of patients in "populations"?

## Why think of patients in "populations"?

<u>Context</u>



# Who is the "population"?

Type into the chatbox: What are possible ways you might group patients

## Who is the "population"?

• Your ideas:

# Who is the "population"?

## **Geopolitical**

- City
- Neighborhood
- County
- State or country

### **Demographic**

- African Americans
- Latinos/Latinas
- Children
- Older adults

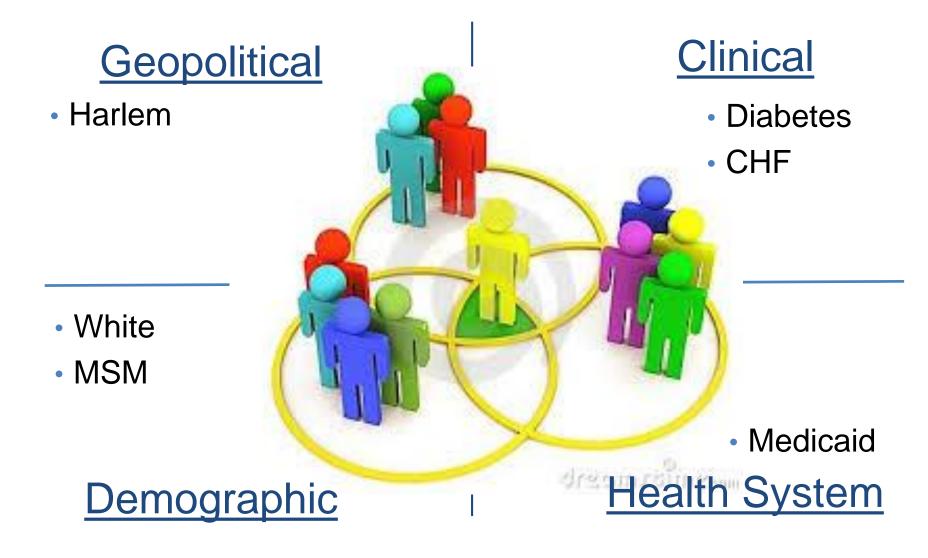
## **Clinical**

- Diabetes
- Hypertension
- Smokers
- Obese

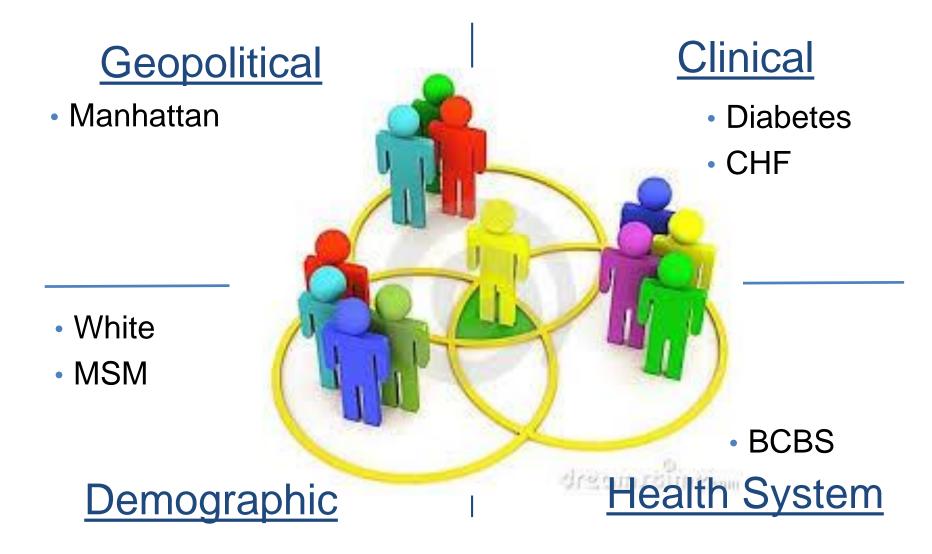
### Health System

- Highest cost
- High frequency ED utilizers
- Insurance enrollment
- Employer

## Each person belongs to many groups



## Each person belongs to many groups



## WHERE YOU LIVE MATTERS

Did you know...?

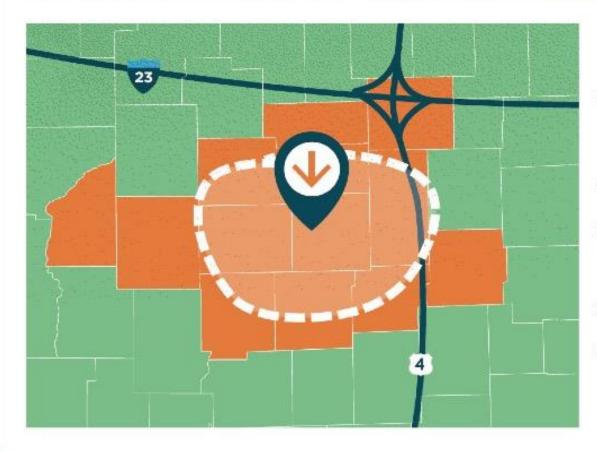
## Questions for you:

As you look through the next few slides, type in answers to the following 3 questions:

- 1. What information surprises you?
- 2. What information does NOT surprise you?
- 3. Why is it important to be aware of this information?

### Did You Know?

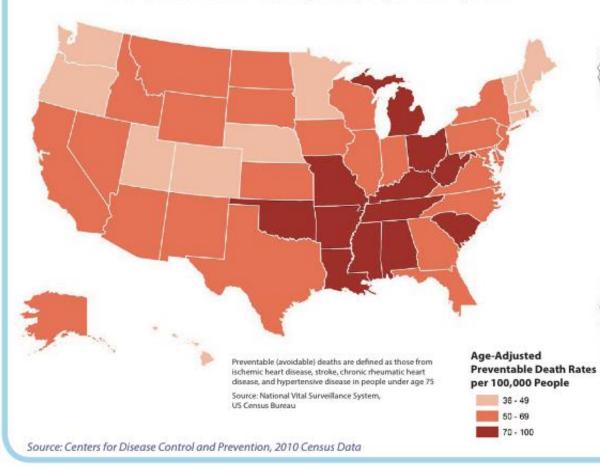
#### **FOCUS ON AREAS OF GREATEST NEED**



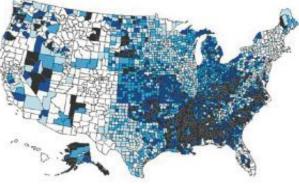
Your ZIP Code can be more important than your genetic code. Profound health disparities exist, depending on where you live.

#### **UNDERLYING CAUSES OF DEATH IN THE UNITED STATES, 2000**

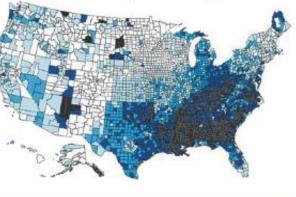
#### Preventable Death Rates by State, Ages 0 to 74, 2010



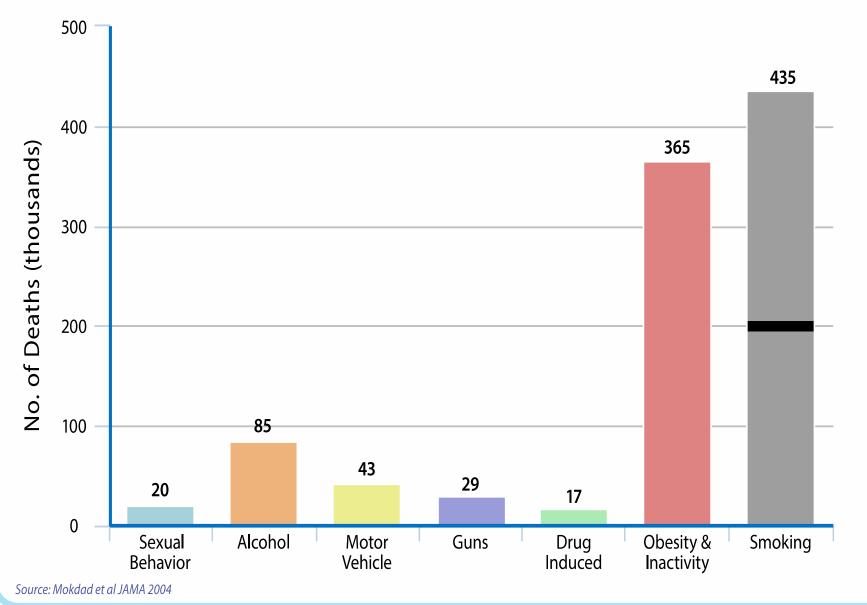
#### **Obesity by County**



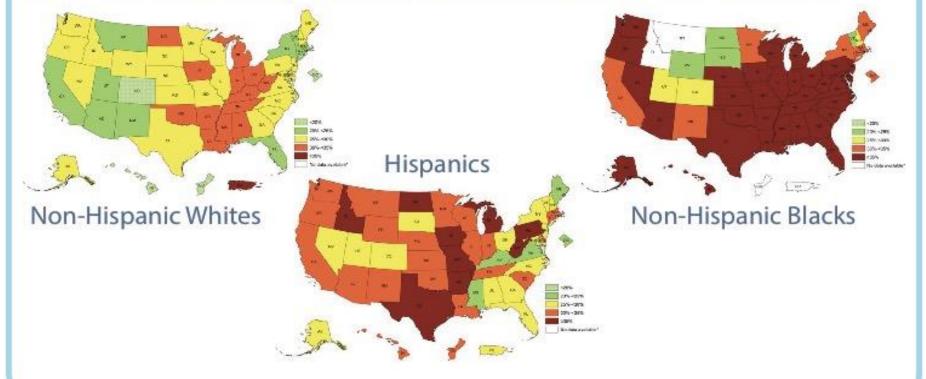
#### **Diabetes by County**



### **UNDERLYING CAUSES OF DEATH IN THE UNITED STATES, 2000**



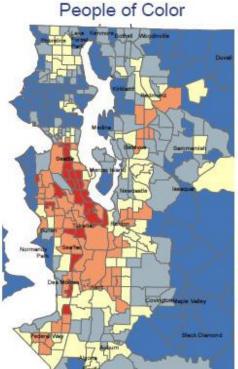
#### AS OF 2014, MORE THAN 1 IN EVERY 3 AMERICAN ADULTS HAD OBESITY (BMI GREATER THAN OR EQUAL TO 30). BUT THE PREVALENCE OF OBESITY DIFFERS BY OTHER FACTORS, INCLUDING RACE AND ETHNICITY.

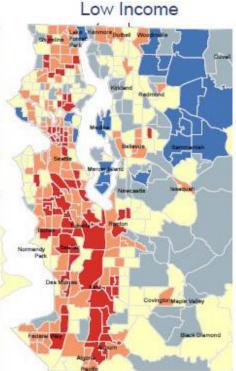


Prevalence of Self-Reported Obesity Among U.S. Adults by Race/Ethnicity, State and Territory, BRFSS, 2012-2014

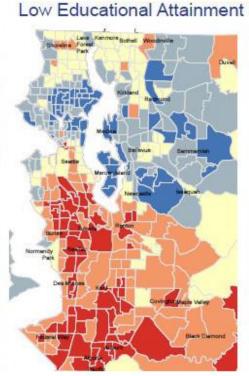
More information on reverse side

# WHAT DO YOU NOTICE ABOUT THESE MAPS OF KING COUNTY, WASHINGTON?



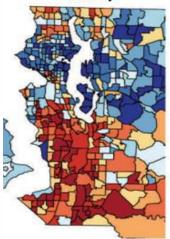




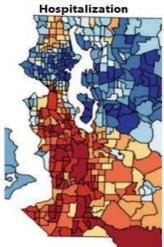


Public Health

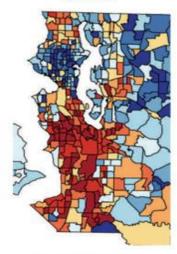
Obesity



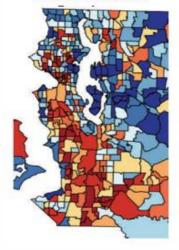
Preventable



#### Diabetes

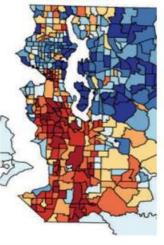


Adverse Childhood

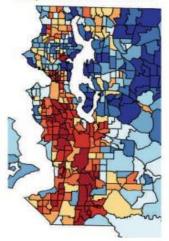


#### More information on reverse side

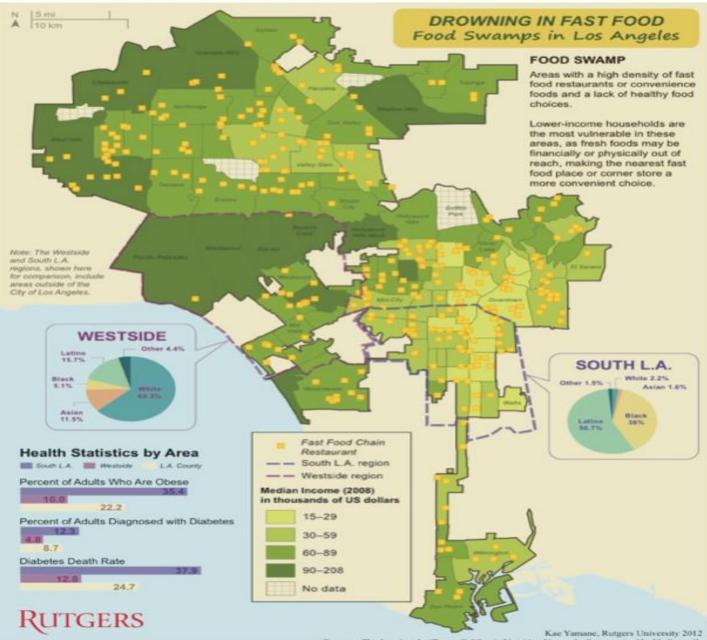
Tobacco Use



#### Frequent Mental Distress



#### YOU CAN LIVE IN A DESERT, BUT STILL DROWN IN A SWAMP.



Sources: The Los Angeles Times, California Nutrition Network, Community Health Councils

### Did You Know?

#### 6 SUBWAY STOPS, WORLDS APART – NY NEIGHBORHOODS

Neighborhood	Murray Hill	East Harlem
Life Expectancy	85 years	76 years
<section-header></section-header>		

#### NEIGHBORHOOD AND HOUSING CHARACTERISTICS AND HEALTH

More information on reverse side

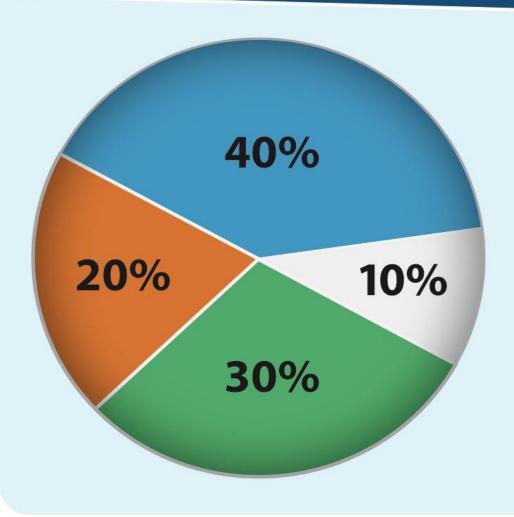
### Did You Know?

#### 6 SUBWAY STOPS, WORLDS APART – NY NEIGHBORHOODS

Neighborhood	Murray Hill	East Harlem
Life Expectancy	85 years	76 years
<section-header></section-header>		

### **Know What Affects Health**

More information on reverse side



# Match these factors to their impact level:

- Physical environment
- Clinical care
- Socioeconomic factors
- Health behaviors

### **Know What Affects Health**



# HEALTH DISPARITIES

Unequal distribution of health outcomes

## What is "population health"?

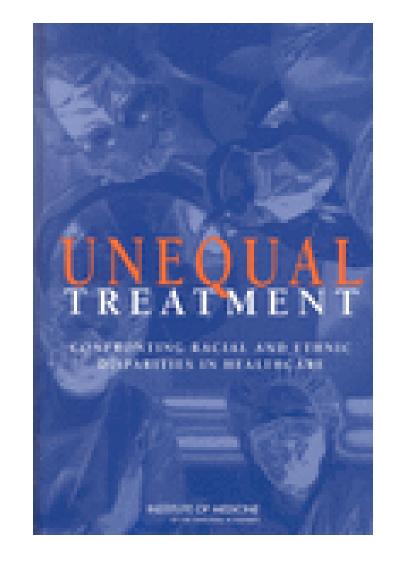
The health outcomes of a group of individuals including the *distribution* of outcomes within the group

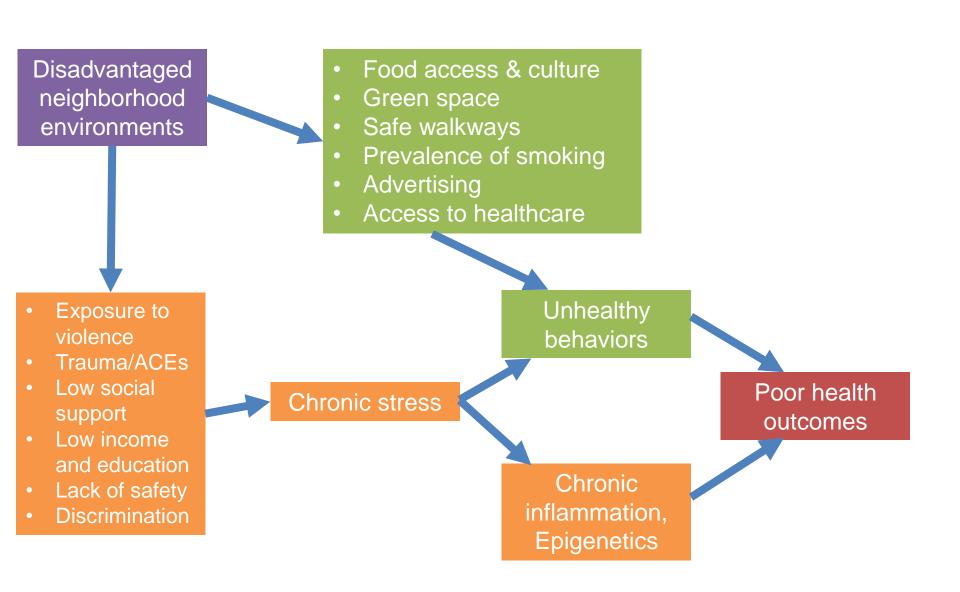
-Kindig & Stoddart

## What affects distribution of health?

Type your ideas into the chatbox (*hint*: think direct and indirect)

### **Differential distribution**





# SUMMARY

Back to Raeshawn...

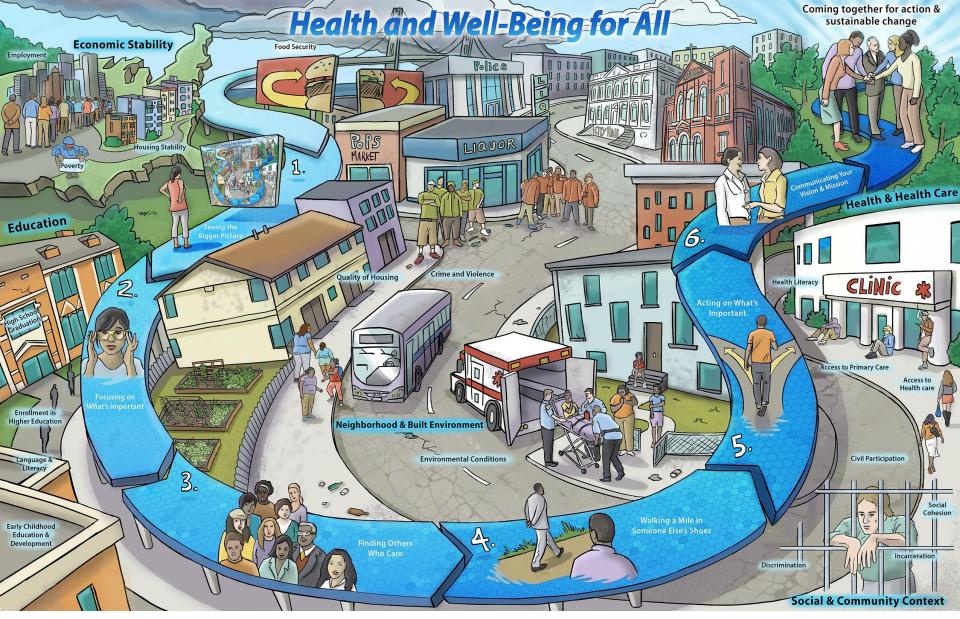
Raeshawn is an 11-year-old African-American boy who experiences difficulty breathing during gym class at school. He's had prior hospitalizations due to his asthma. **Background**:

- Housing development has ongoing problems with roaches and rodents
- He walks to school near a major highway
- His mother, a single mom, is a smoker and works 2 jobs
- Family has no insurance, but is assisted by Medicaid
- Limited access to clinics that are an easy traveling distance, that accept Medicaid, and/or are still open
- Raeshawn's father lost his job, disappeared, and was recently arrested for drug abuse
- His mom's stress level is high as she's concerned about her son's health and providing for all her kids
- His grandmother lives with the family, cooking meals and helping the children with homework

Raeshawn is an 11-year-old African-American boy who experiences difficulty breathing during gym class at school. He's had prior hospitalizations due to his asthma. **Background**:

- Housing development has ongoing problems with roaches and rodents
- He walks to school near a major highway
- His mother, a single mom, is a smoker and works 2 jobs
- Family has no insurance, but is assisted by Medicaid
- Limited access to clinics that are an easy traveling distance, that accept Medicaid, and/or are still open
- Raeshawn's father lost his job, disappeared, and was recently arrested for drug abuse
- His mom's stress level is high as she's concerned about her son's health and providing for all her kids
- His grandmother lives with the family, cooking meals and helping the children with homework

- See the WHOLE patient, in the context of their lives
- Work with the patient and their family to reduce health risks and promote health
  - Medications and adherence plan
  - Risk reduction
- Lead change in your community
  - Who else cares about this issue?
    - Create a coalition of the willing
  - Collaborate and communicate
  - Monitor impact



 Follow the blue path for the steps leading to sustainable community change.

# QUESTIONS?

brita.roy@yale.edu