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ASSOCIATION OF ASIAN PACIFIC COMMUNITY HEALTH ORGANIZATIONS

“Strategies to Increase Diabetes Screening Among Asian American Populations"

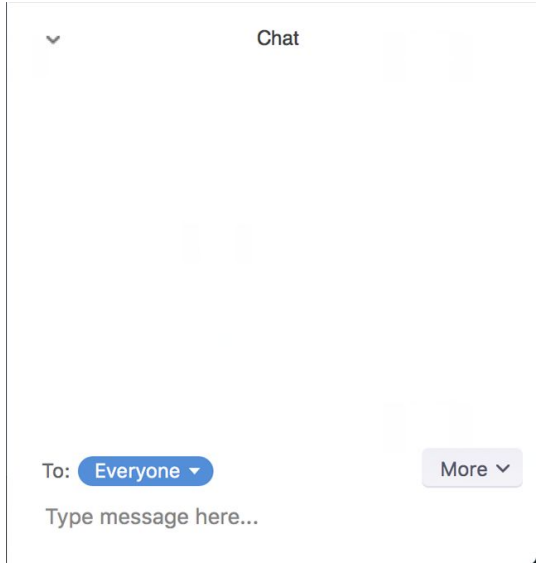
Session 1

An Overview of Diabetes Prevalence Among AA Populations

March 8th, 2021

10-11:30am HT | 12-1:30pm PT | 3-4:40pm ET

Zoom housekeeping



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Moderators

Sakura Miyazaki
Program Manager, Training and Technical Assistance
Association of Asian Pacific
Community Health Organizations

Jen Lee
Deputy Director
Association of Asian Pacific
Community Health Organizations

Albert Ayson, Jr.
Associate Director, Training and Technical Assistance
Association of Asian Pacific
Community Health Organizations

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About AAPCHO

The Association of Asian Pacific Community Health Organizations (AAPCHO) is dedicated to promoting **advocacy**, **collaboration**, and **leadership** that improves the health status and access of Asian Americans (AAs), Native Hawaiians (NHs), and Pacific Islanders (PIs) within the United States, the U.S. territories, and the Freely Associated States

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Our Impact

650,000 Patients at **28 Federally Qualified Health Centers**

1.3 Million AAs, NHs, and PIs served at health centers

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Learning Collaborative Overall Objectives

- Increase **knowledge** regarding the health challenges and disparities for AA populations with respect to diabetes and prediabetes.
- Learn the diabetes **screening guidelines** as it pertains to AA populations.
- Identify appropriate **screening protocols** for AA patients at their health centers.
- Understand the direct and indirect **implications** of implementing screening protocols for AA populations.

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Overview of Learning Collaborative

- Four 90-minute sessions every Monday
  - **Session 1: Overview of Diabetes Prevalence Amongst AA Populations**
  - Session 2: Diabetes Screening Guidelines for AA Populations
  - Session 3: Implementing Diabetes Screening Protocols for AA Populations at Health Centers
  - Session 4: Direct and Indirect Implications of Implementing Screening Protocols

- The panelist presentations will be recorded and shared publicly, but the discussion sections will not be shared.

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Your Interests, Needs, and Expectations

Key themes:

- Culturally appropriate approaches in working with AA subpopulations
- How diabetes impacts subpopulations differently
- Patient support post-screening
- Sharing of best practices

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Today's Learning Objectives

- To increase knowledge regarding the unique diabetes challenges of AA patients
- To identify and foster discussion regarding the needs of AA patients who are at-risk/prediabetic/undiagnosed

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Panelist

Alka Kanaya, MD

- Professor of Medicine, Epidemiology and Biostatistics at the University of California, San Francisco (UCSF) in the Division of General Internal Medicine
- Expert in type 2 diabetes and cardiovascular disease prevention and focused her research on AA health disparities
- Bachelor of Science degree in Biochemistry from the University of California, Davis and an M.D. degree from UCSF
- Leads the Mediators of Atherosclerosis in South Asians Living in America (MASALA) Study

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Agenda

- Introductions
- Dr. Kanaya's presentation
- Q&A/Discussion
- Assign homework and preview of next session

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Poll

Which of the following best describes your organization type?

- Community Health Center (FQHC, Look-Alike)
- Primary Care Association (PCA)
- National Training & Technical Assistance Partner (NTTAP)
- Health Center Controlled Network (HCCN)
- Government
- Academic Institution
- Social Service or Community-Based Organization (CBO)
- Other

On a scale of 1-5, how familiar is your organization with the screening needs/guidelines for Asian Americans at risk of diabetes?

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Introductions

- Name
- Pronouns
- Organization
- Position
- Favorite comfort food

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Diabetes in Asian Americans

ALKA KANAYA, M.D.

PROFESSOR OF MEDICINE, EPIDEMIOLOGY & BIOSTATISTICS

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

U.N. Subregions of Asia: 48 countries

‘Asian Americans’

East Asians, South Asians, Southeast Asians from 23 countries

Census 2010

Total “Asian”: ≈ 14.7M (5%)

Asians □ 43% from Census 2000

Top three Asian subgroups:

- Chinese: 3.3M
- Asian Indian: 2.8M
- Filipino: 2.6M

ACS 2018 estimates

Total “Asian”: ≈ 18.4M (5.6%)

Asians □ 20% from Census 2010

Top three Asian subgroups:

- Chinese: 4.2M (□21%)
- Asian Indian: 4.2M (□33%)
- Filipino: 2.9M (□10%)

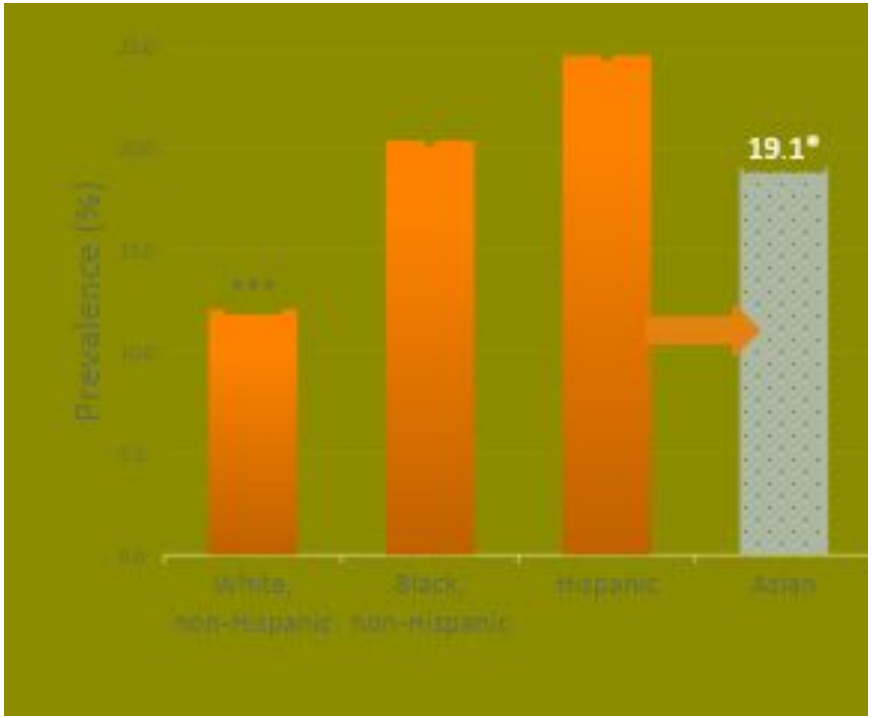
United States® Census Bureau

Roadmap

1. How much diabetes exists among Asian Americans?
2. Why so much in some groups?
3. How can we prevent diabetes?

Diabetes in the United States

NHANES 2011-2016



* p <0.05, ** p <0.01, *** p <0.001

Cheng Y, Kanaya AM, et al, Jama, 2019

Diabetes in the United States

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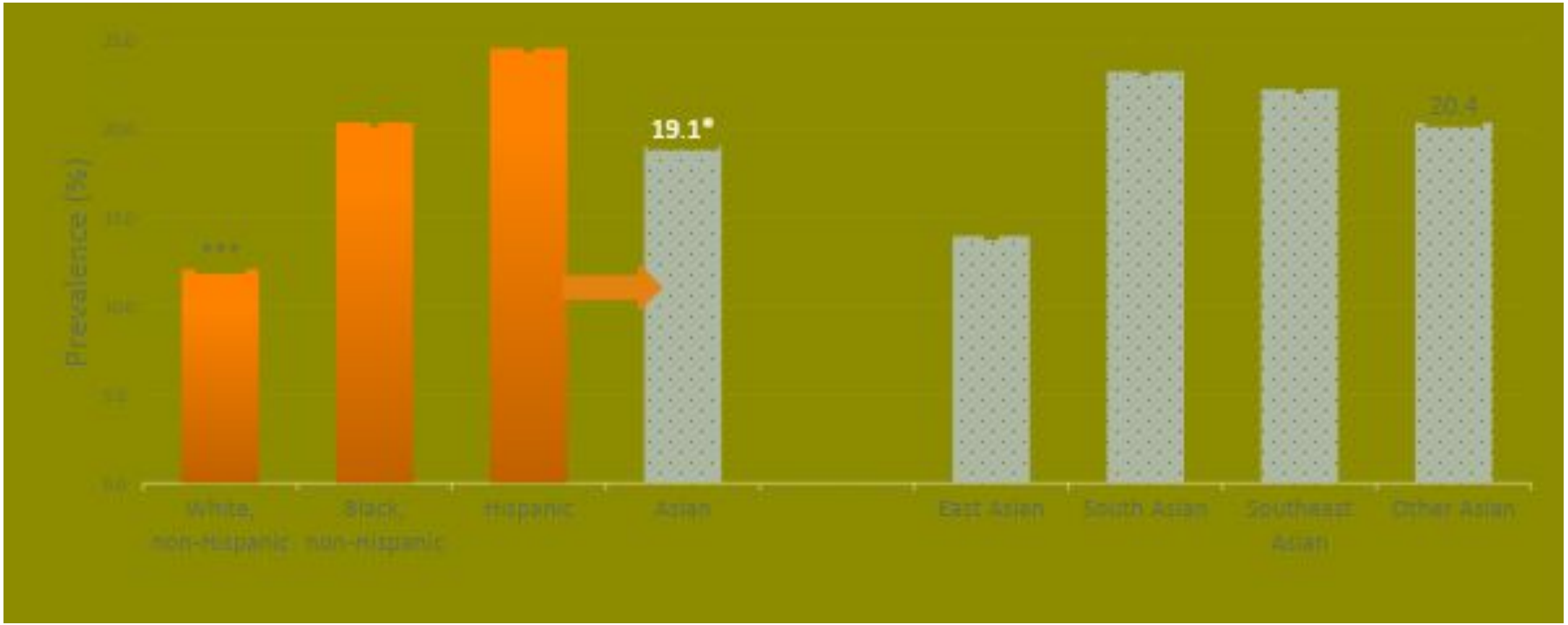
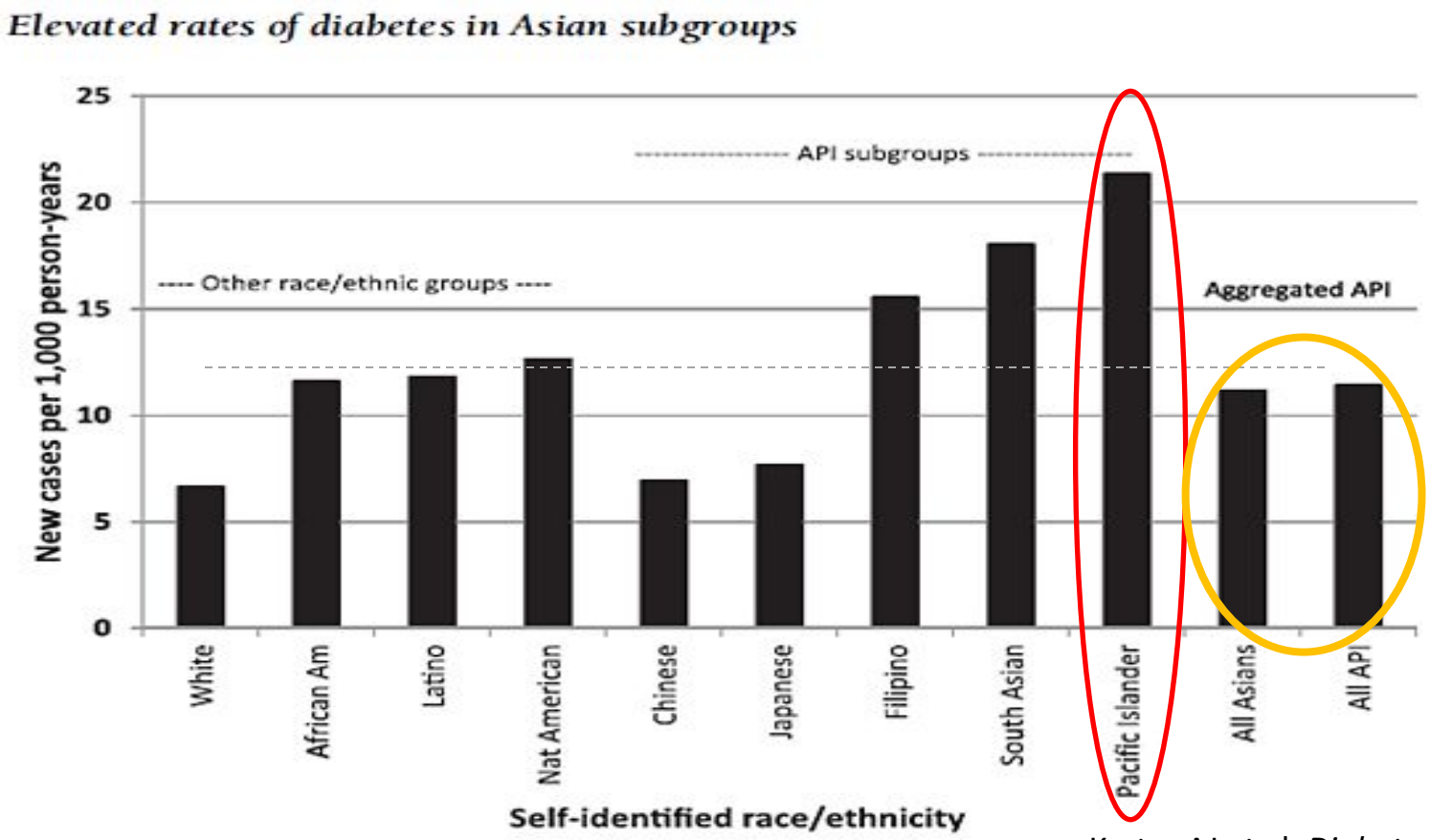


* p <0.05, ** p <0.01, *** p <0.001

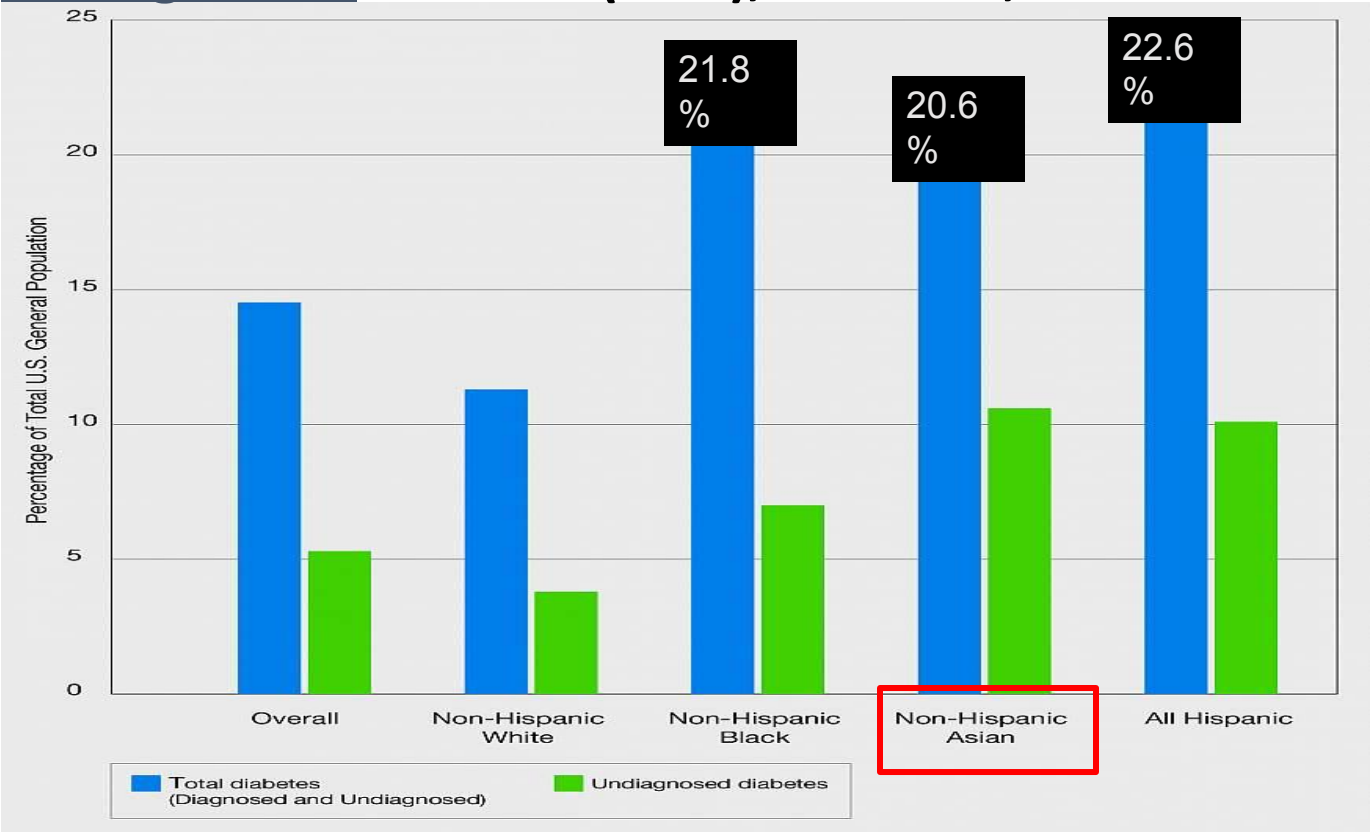
Cheng Y, Kanaya AM, et al, Jama, 2019

Diabetes Incidence (per 1,000 Person-years), Kaiser Permanente Northern California, 2010



Karter AJ et al. *Diabetes Care, 2013*

Asian Americans have the highest prevalence of undiagnosed diabetes (51%), NHANES, 2011-2012

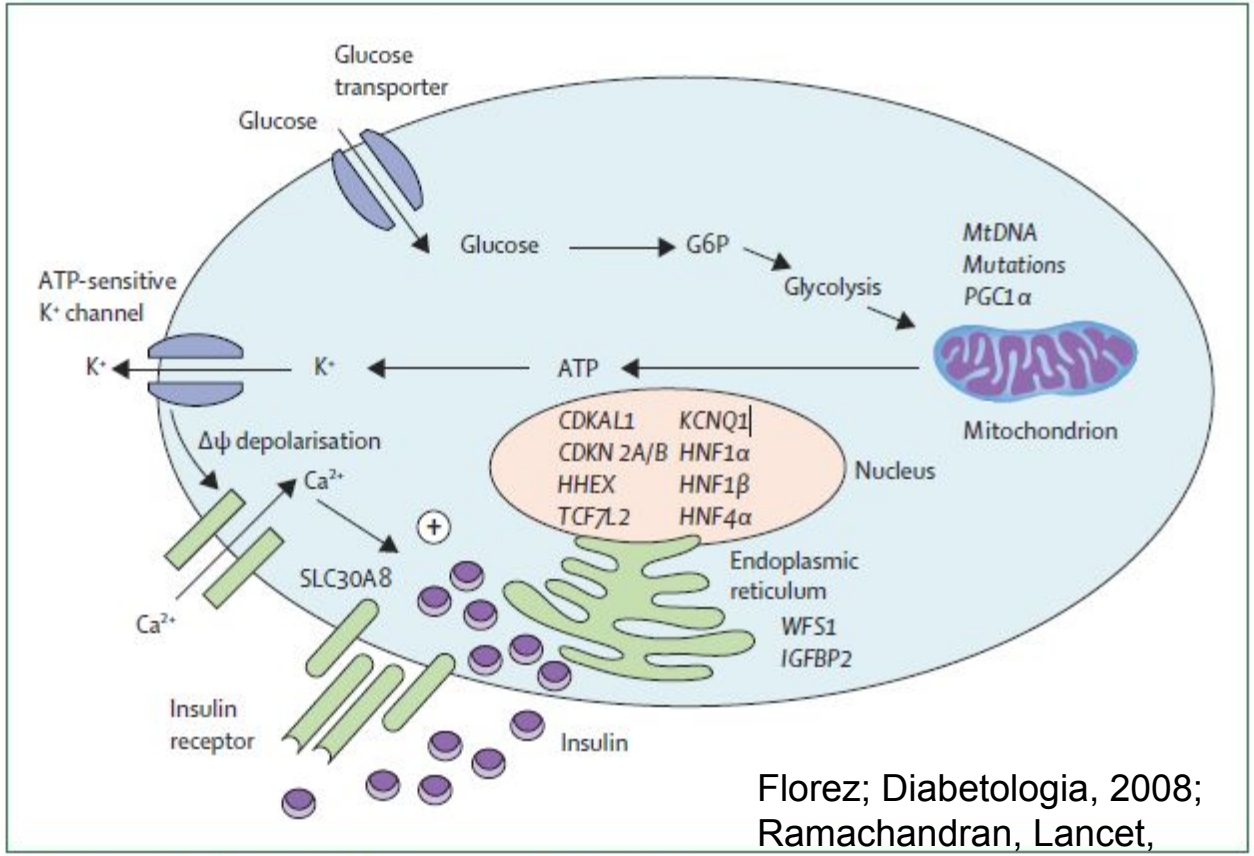


Menke, *Jama*, 2015

Why so much more diabetes?

1. Genetics?

Diabetes genes



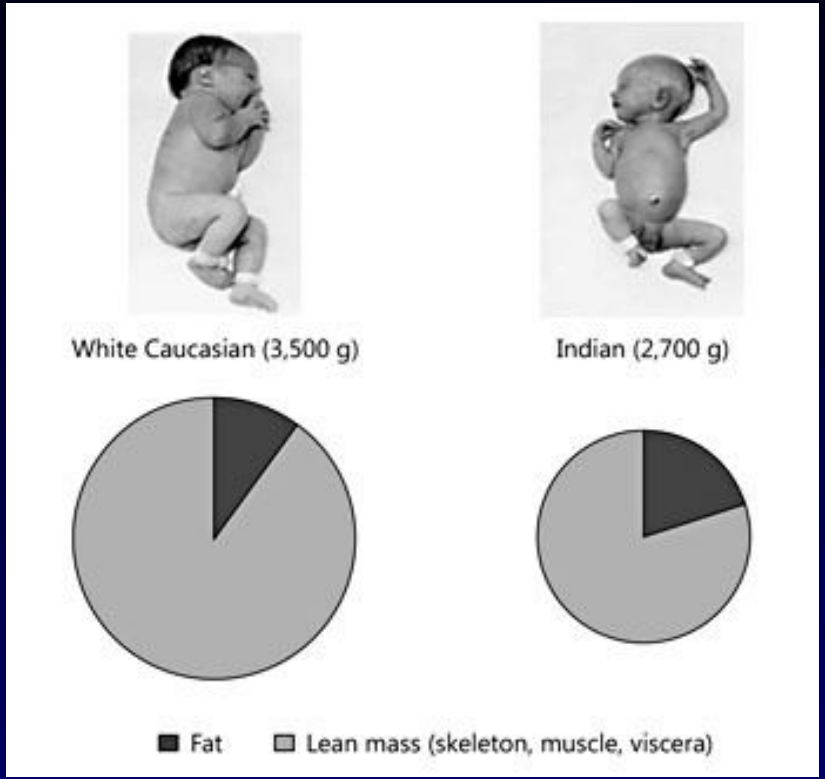
Florez; Diabetologia, 2008; Ramachandran, Lancet, 2010

Why so much more diabetes?

1. Genetics
2. Fetal development?

Development of the Fetus

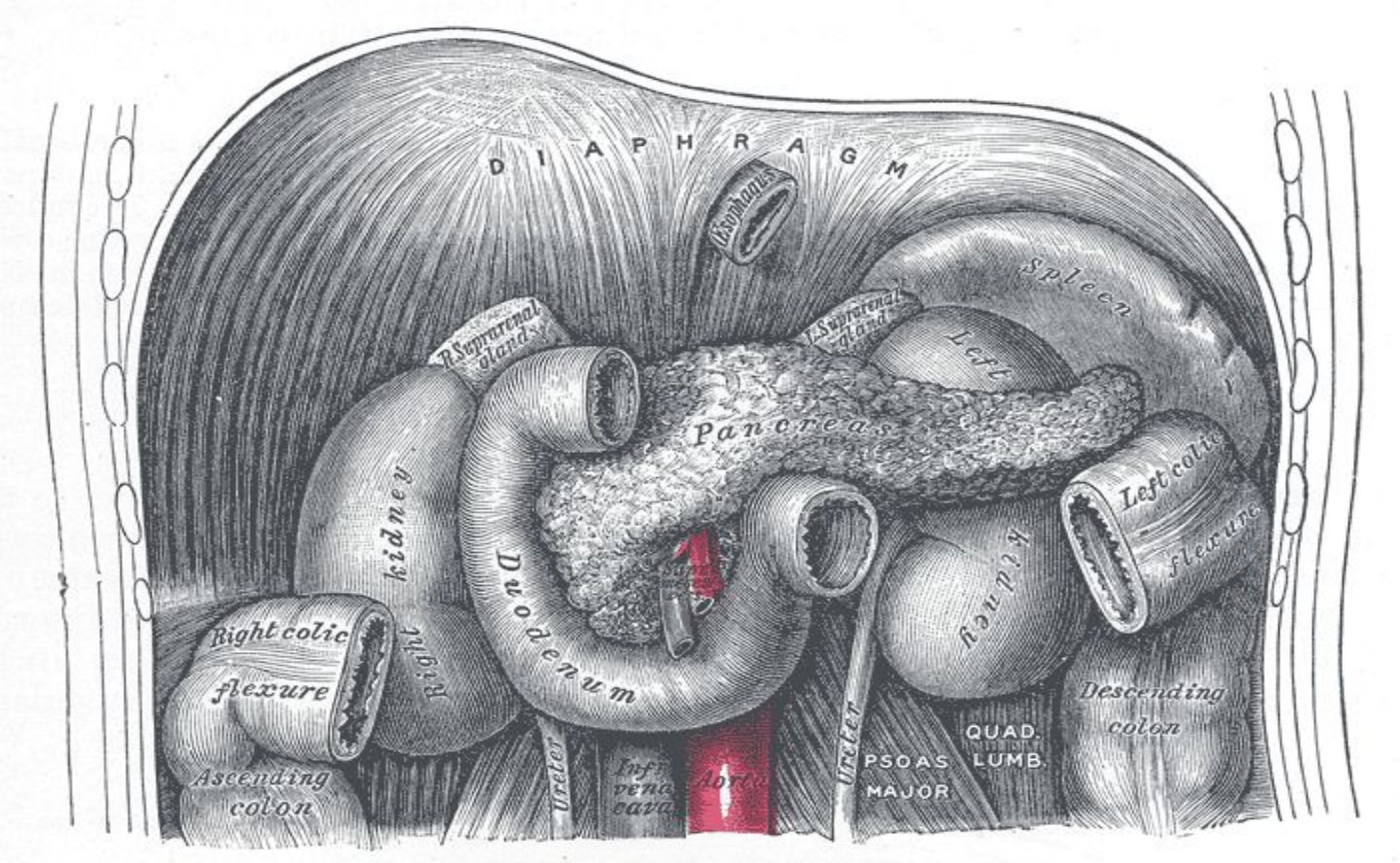
- Indian babies have lower birth weight from fetal undernutrition
- But, they have still have higher body fat!



Why so much more diabetes?

1. Genetics
2. Fetal development
3. Higher levels of insulin resistance and lower pancreatic function?

Insulin Secretion & Insulin Resistance



Mediators of **A**therosclerosis in **S**outh **A**sians **L**iving in **A**merica

Multi-**E**thnic **S**tudy of **A**therosclerosis

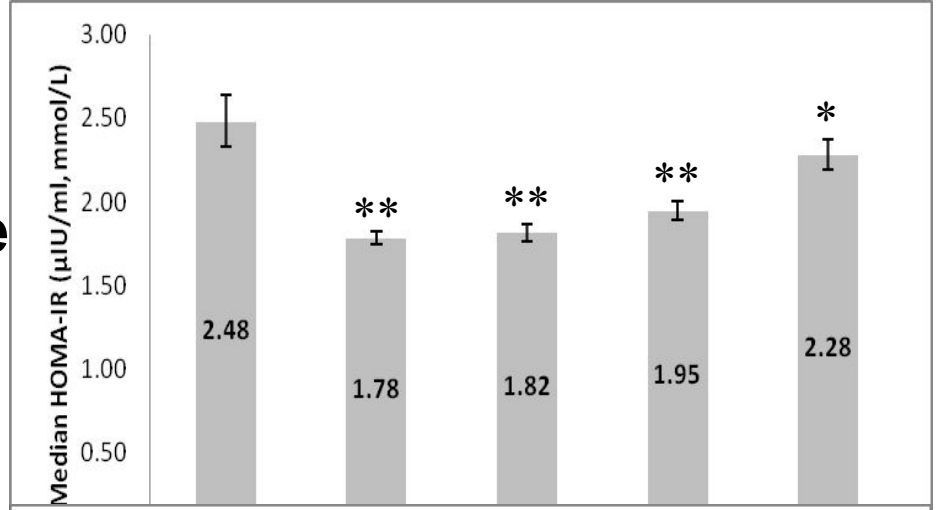
NIH National Heart, Lung, and Blood Institute

Adjusted diabetes prevalence

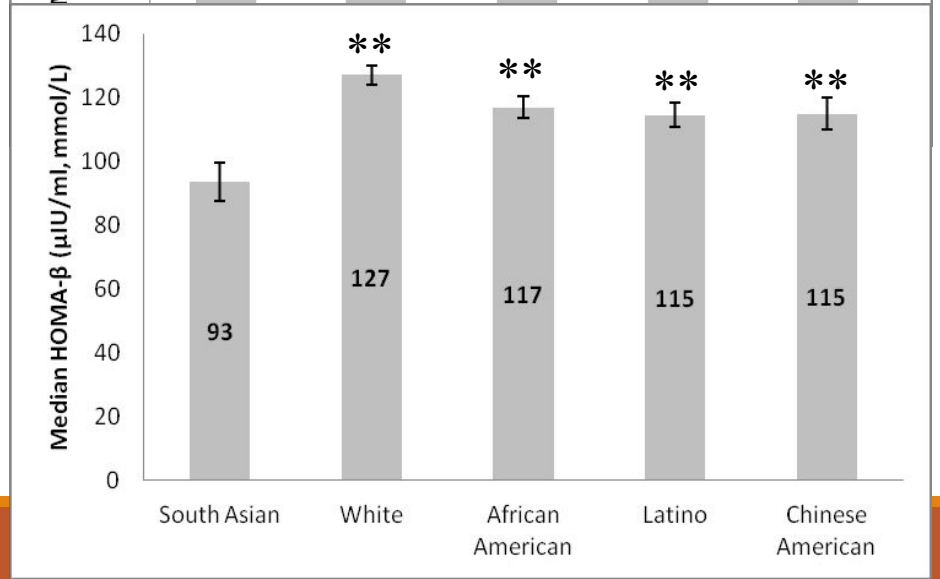
	South Asian n=799	White n=2,611	African American n=1,879	Latino n=1,493	Chinese American n=801
Crude prevalence, %	21.1 (18.3-24.0)	6.0* (5.1-7.0)	17.7** (15.9-19.4)	17.7** (15.7-19.6)	13.1* (10.8-15.4)
Fully adjusted†, %	26.7 (21.2-32.3)	6.3* (5.3-7.3)	16.4** (14.5-18.3)	14.4* (12.6-16.3)	16.0* (12.9-19.1)

* p<0.05; **p<0.001 compared to South Asians
†adjusted for age, sex, clinical site, education, family income, smoking, alcohol use, exercise, BMI, waist circumference, HDL-cholesterol, triglycerides, hypertension, and fasting insulin

Higher levels of Insulin Resistance



Lower levels of Beta cell function



Excludes those on diabetes medications

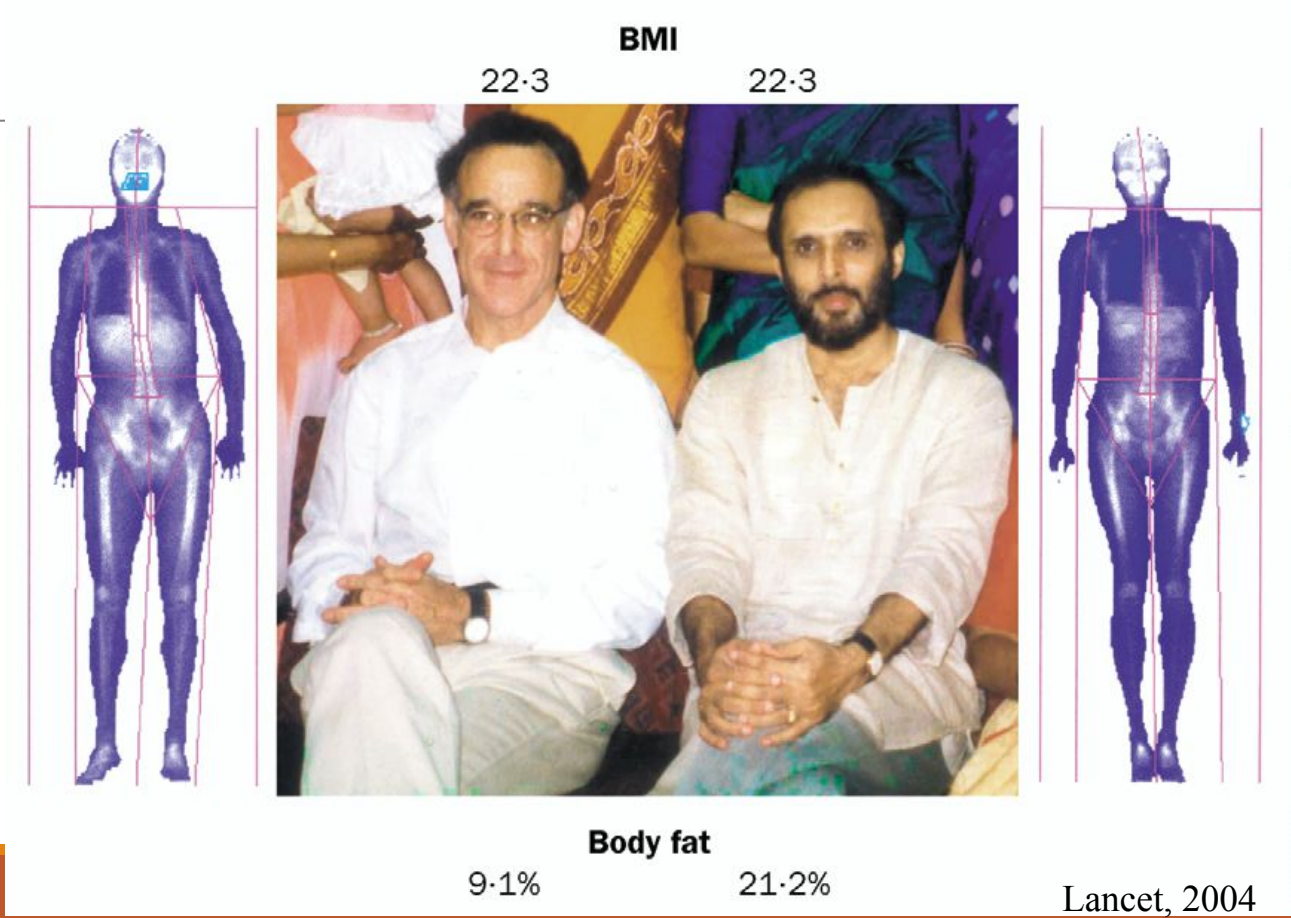
Adjusted for age, sex, BMI, waist circumference

* p<0.05

**p<0.001 compared to SA

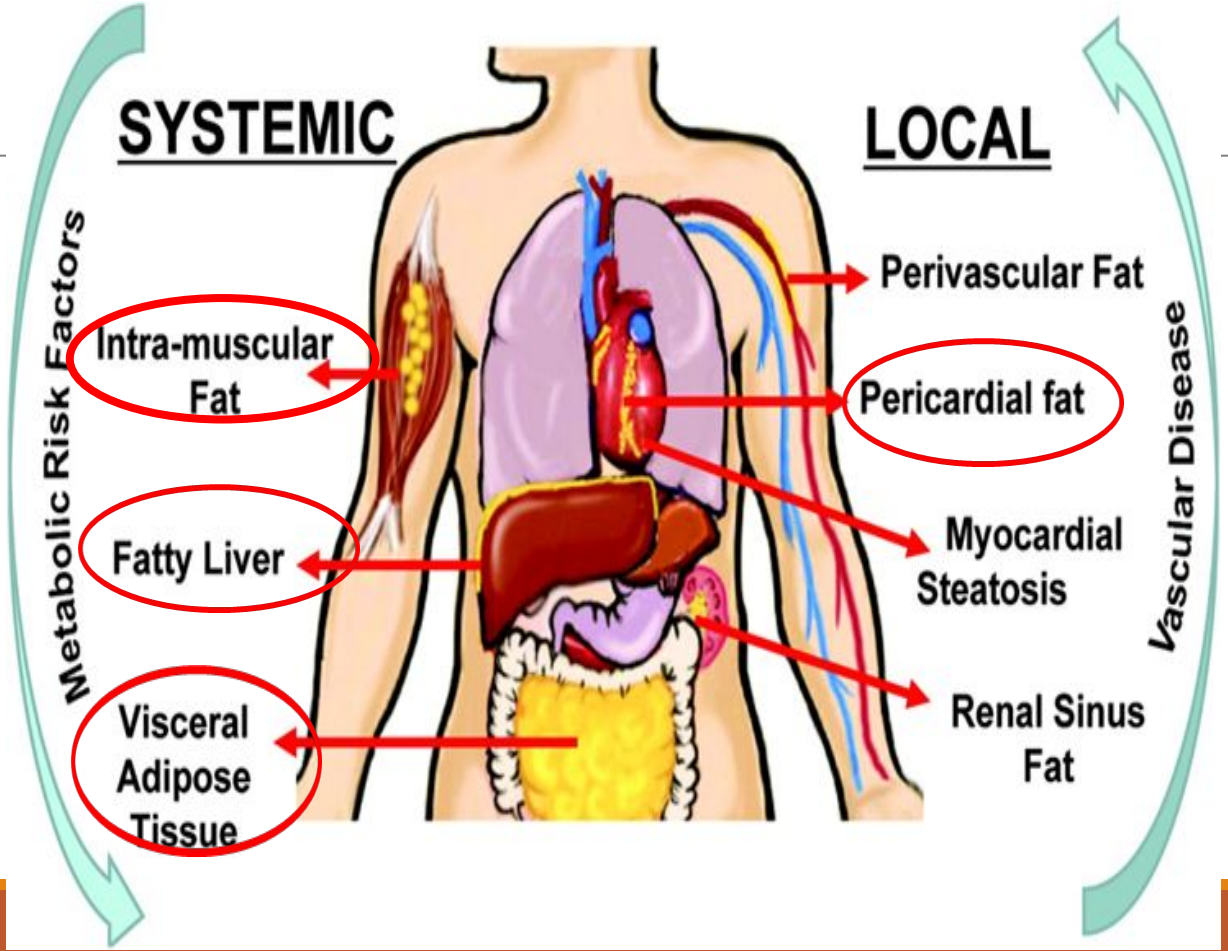
Kanaya, *Diabetes Care*,

Yudkin-Yajnik Paradox

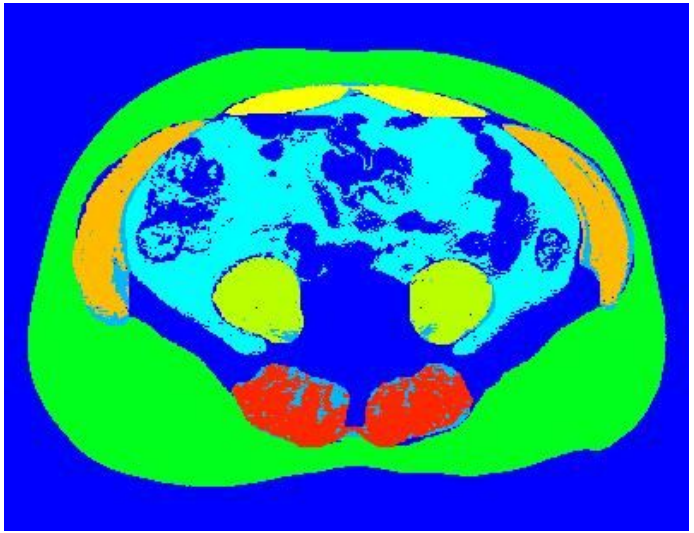


Lancet, 2004

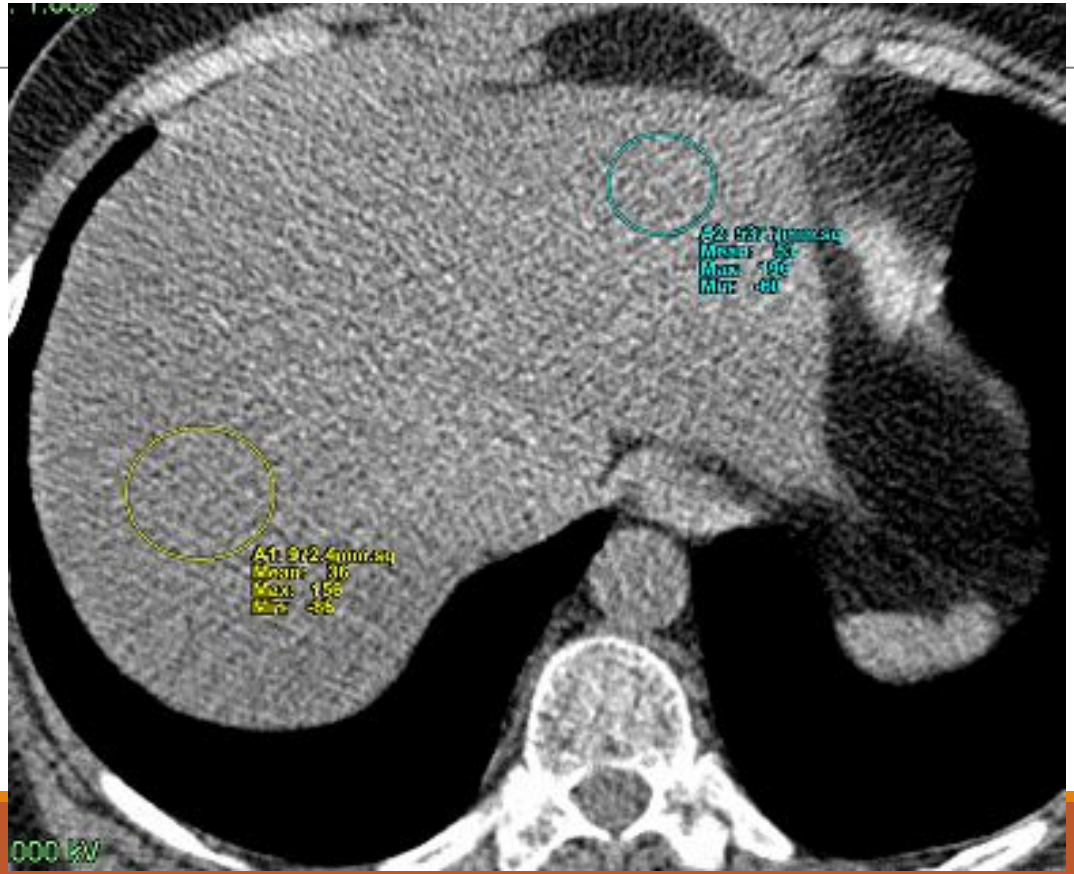
Hidden Fat Stores

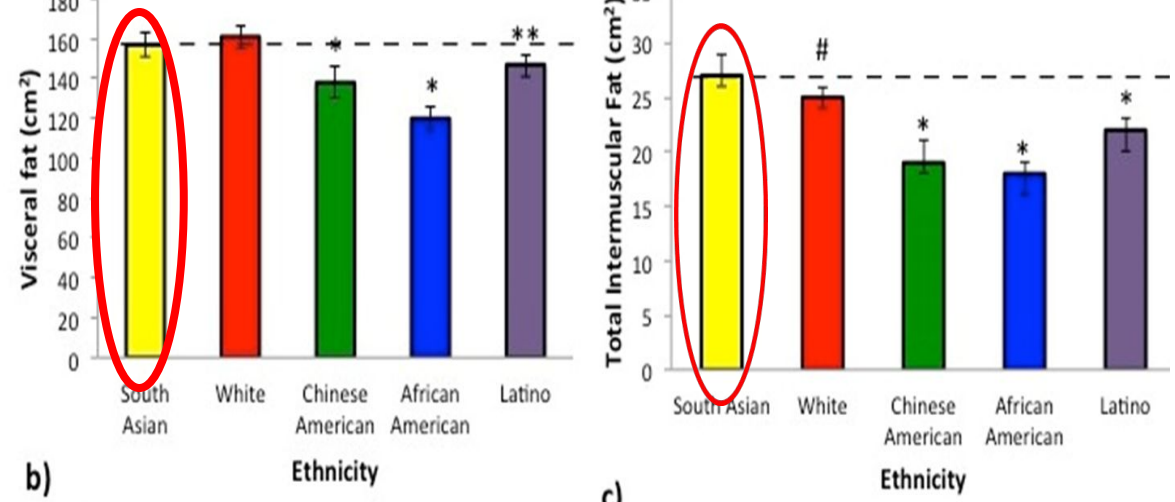


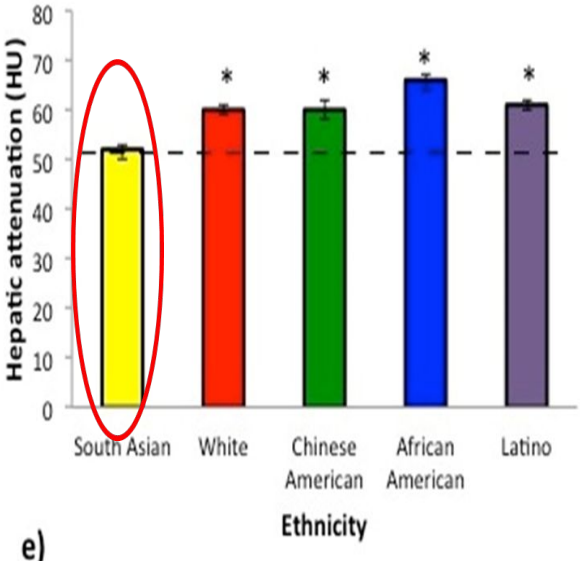
Abdominal CT scans

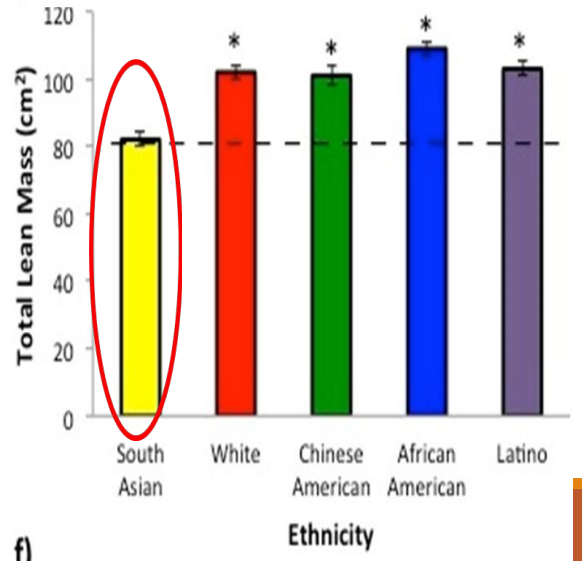


Fatty Liver









South Asians Store fat in all of the wrong places

Shah, *Intl J Obes*, 2016

Why so much more diabetes?

1. Genetics
2. Fetal development
3. Higher levels of insulin resistance and lower pancreatic function
4. High amounts of body fat

South Asian foods

Three major dietary patterns in MASALA Study

Animal protein

Fried snacks, sweets, and high fat dairy

Fruits, vegetables, nuts, and legumes

Both the Animal Protein diet and the Fried snacks, sweets, and high-fat dairy patterns

Linked with

- **Higher body mass index**
- **Higher waist circumference**
- **Higher total cholesterol**
- **Higher LDL cholesterol**
- **Lower HDL cholesterol**
- **Higher insulin resistance**

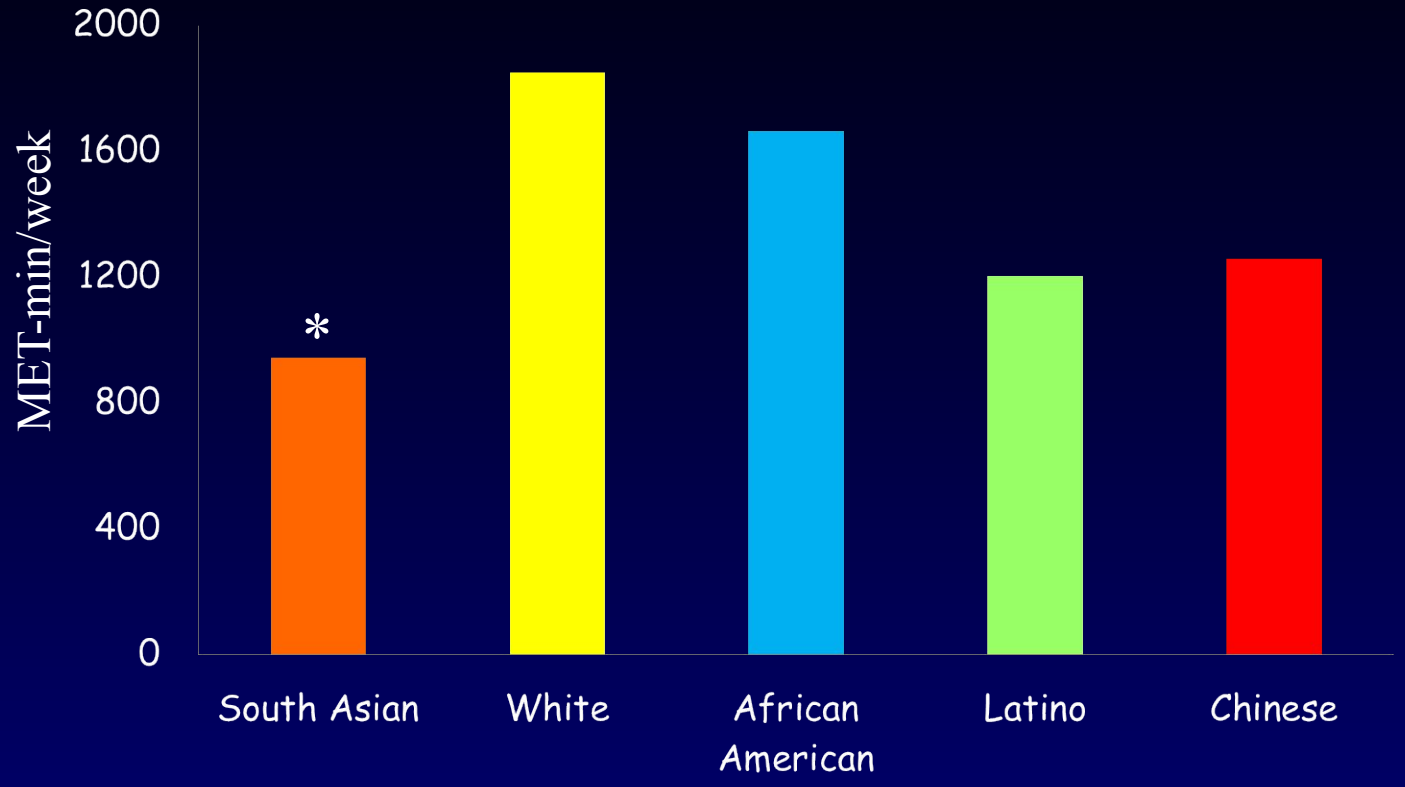
Fruits, vegetables, nuts, and legumes pattern

- **Lower rates of hypertension**
- **Fewer risk factors for heart disease, diabetes, stroke (metabolic syndrome)**

Why so much more diabetes?

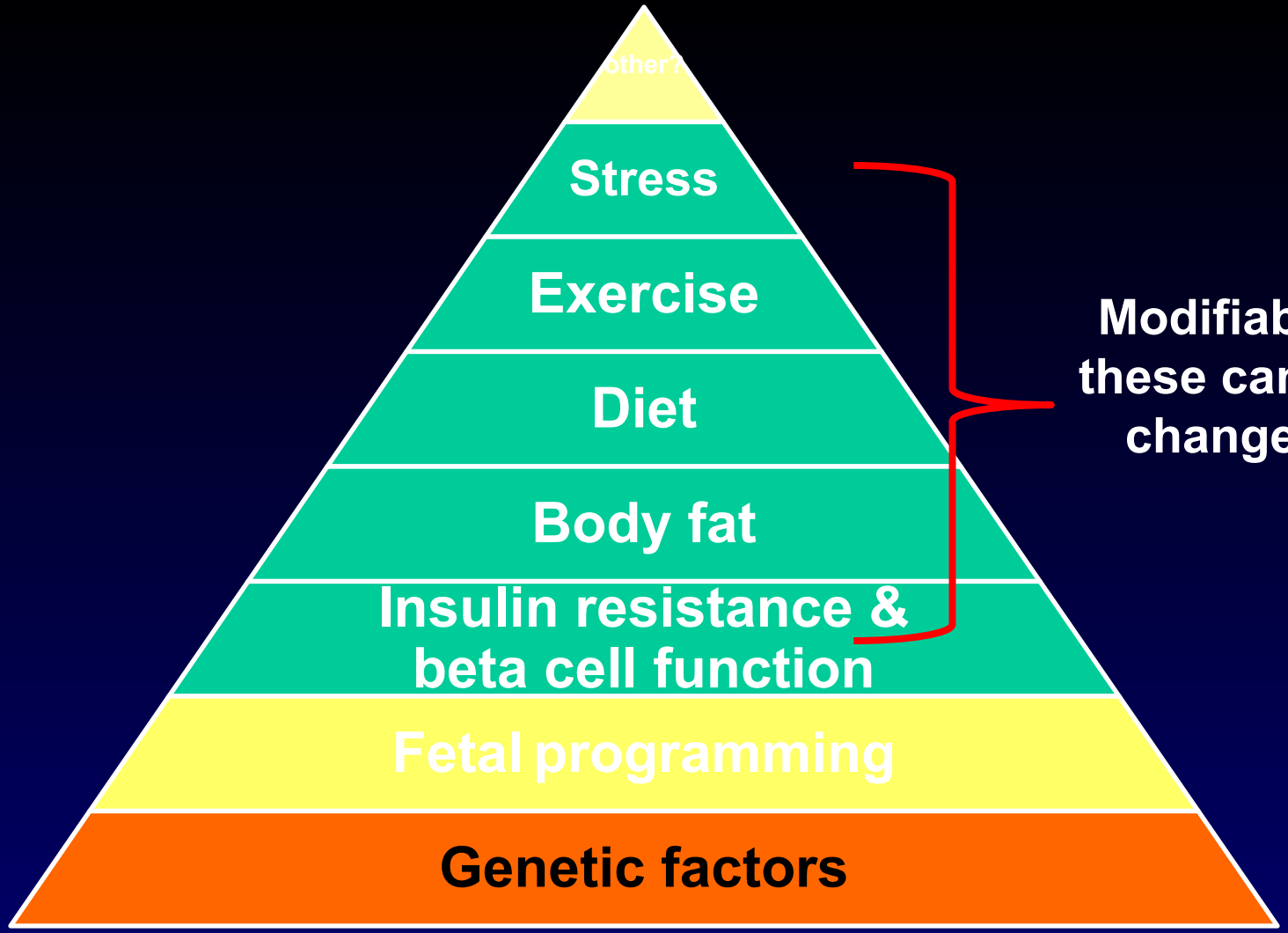
1. Genetics
2. Fetal development
3. Higher levels of insulin resistance and lower pancreatic function
4. High amounts of body fat
5. Adverse dietary patterns
6. Low levels of exercise

Much Lower Exercise



Why so much more diabetes?

1. Genetics
2. Fetal development
3. Higher levels of insulin resistance and lower pancreatic function
4. High amounts of body fat
5. Adverse dietary patterns
6. Low levels of exercise
7. Other factors (stress, environment, sleep…)


other?
Stress
Exercise
Diet
Body fat
Insulin resistance &
beta cell function
Fetal programming
Genetic factors
Modifiable!
these can be
changed!

Thank you to our participants,
study staff, investigators, and funders of MASALA!

Email: alka.kanaya@ucsf.edu
Website: www.masalastudy.org
Twitter: @masala_study; @alka_kanaya

National Institutes of Health

National Heart Lung and Blood Institute

Treatment of Diabetes

1. Nutrition
2. Weight loss
3. Exercise
4. Smoking cessation
5. Glucose control
6. Blood pressure control
7. Lipid control
8. Self-care practices

Q&A

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What is most challenging about increasing diabetes screening for your Asian American population at your health center/organization?

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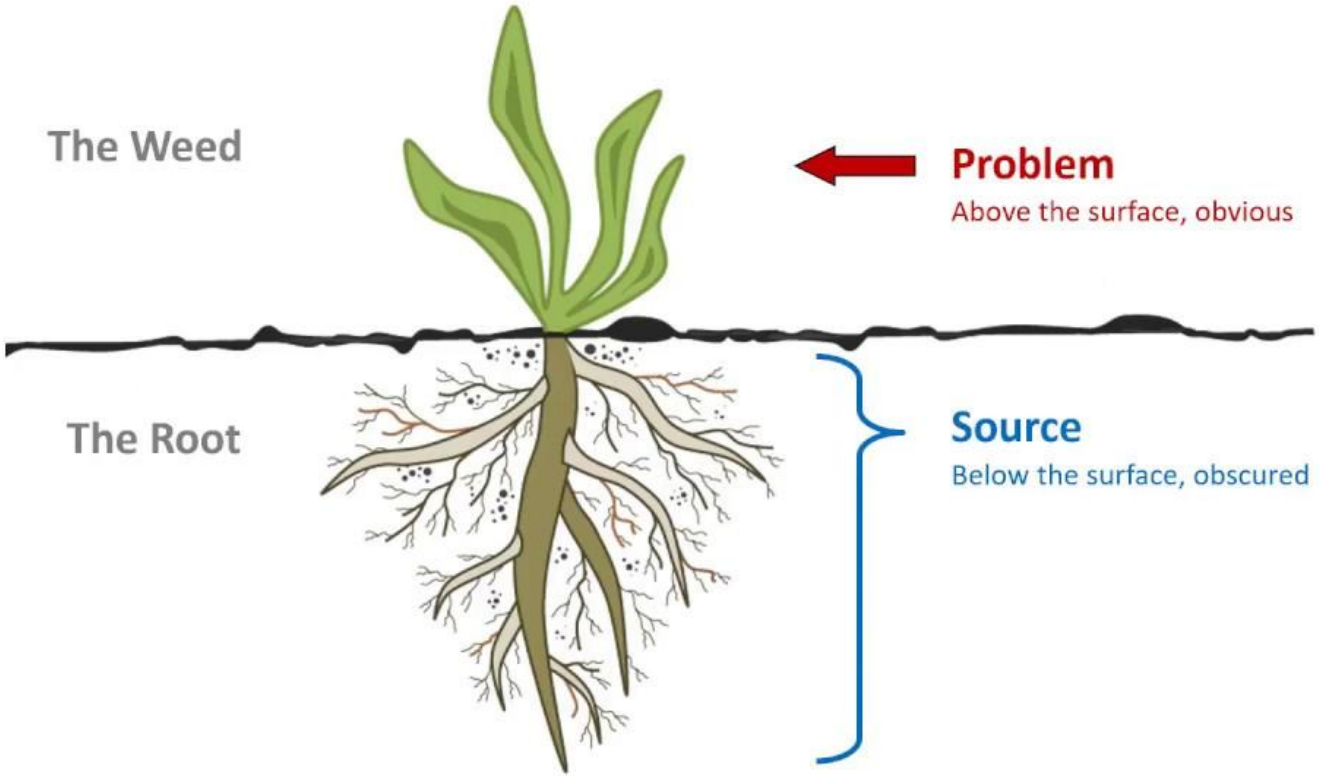
Root Cause Analysis - The Concept



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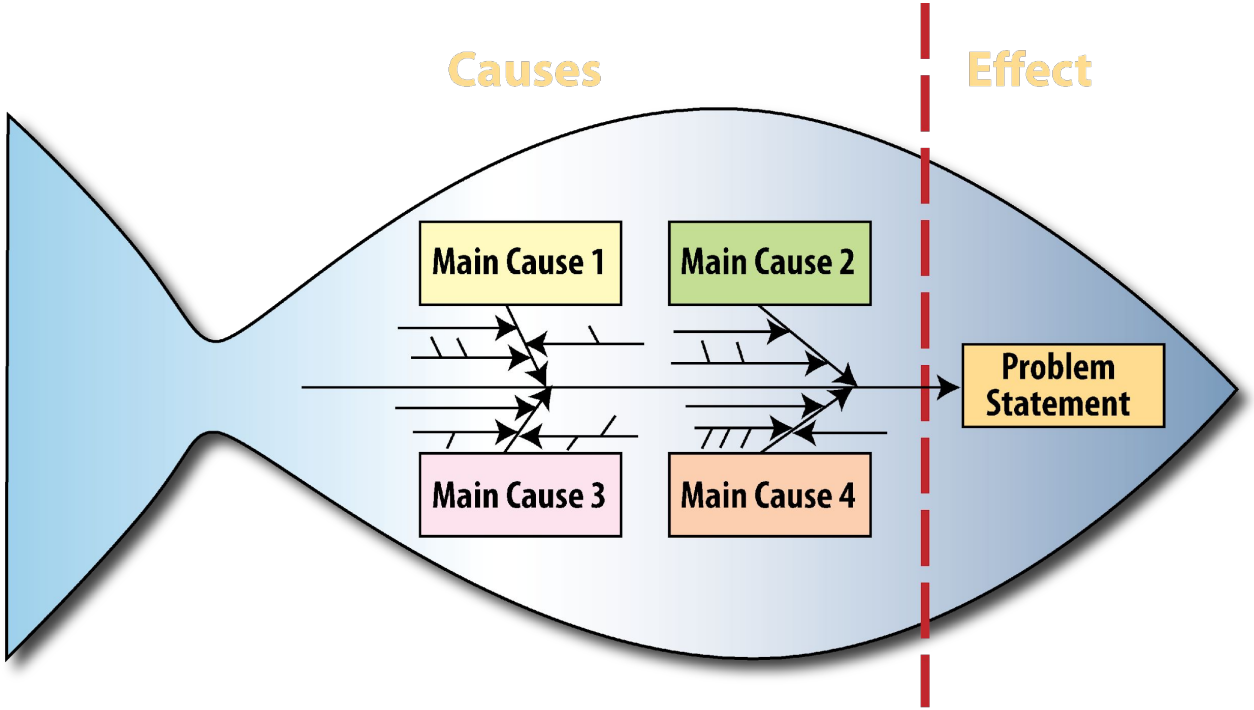
Fishbone diagram



Source: AIDS Education & Training Centers, 2007

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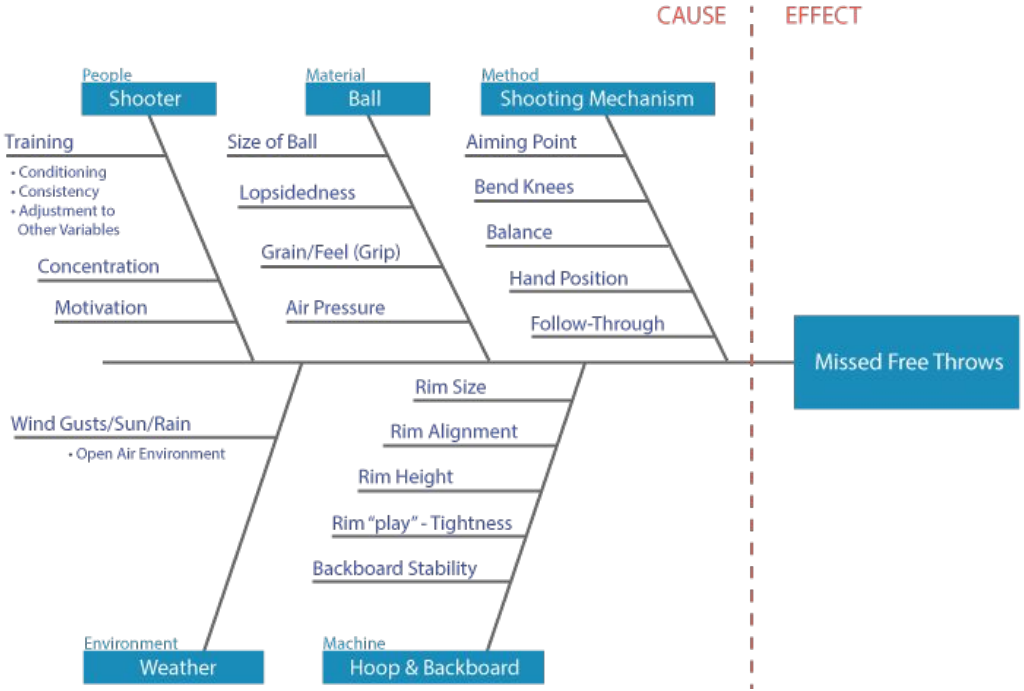
Fishbone diagram



Source: MoreSteam

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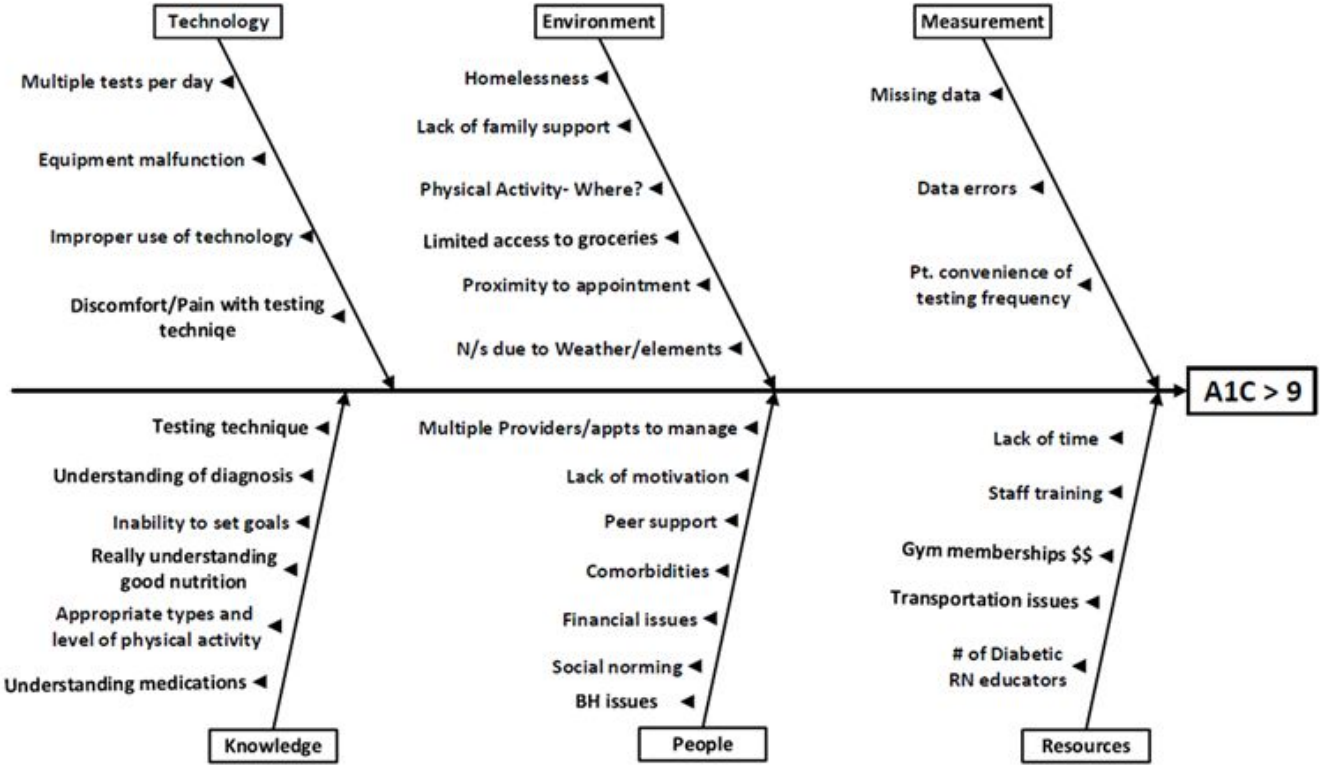

Source: Holyoke Health Center

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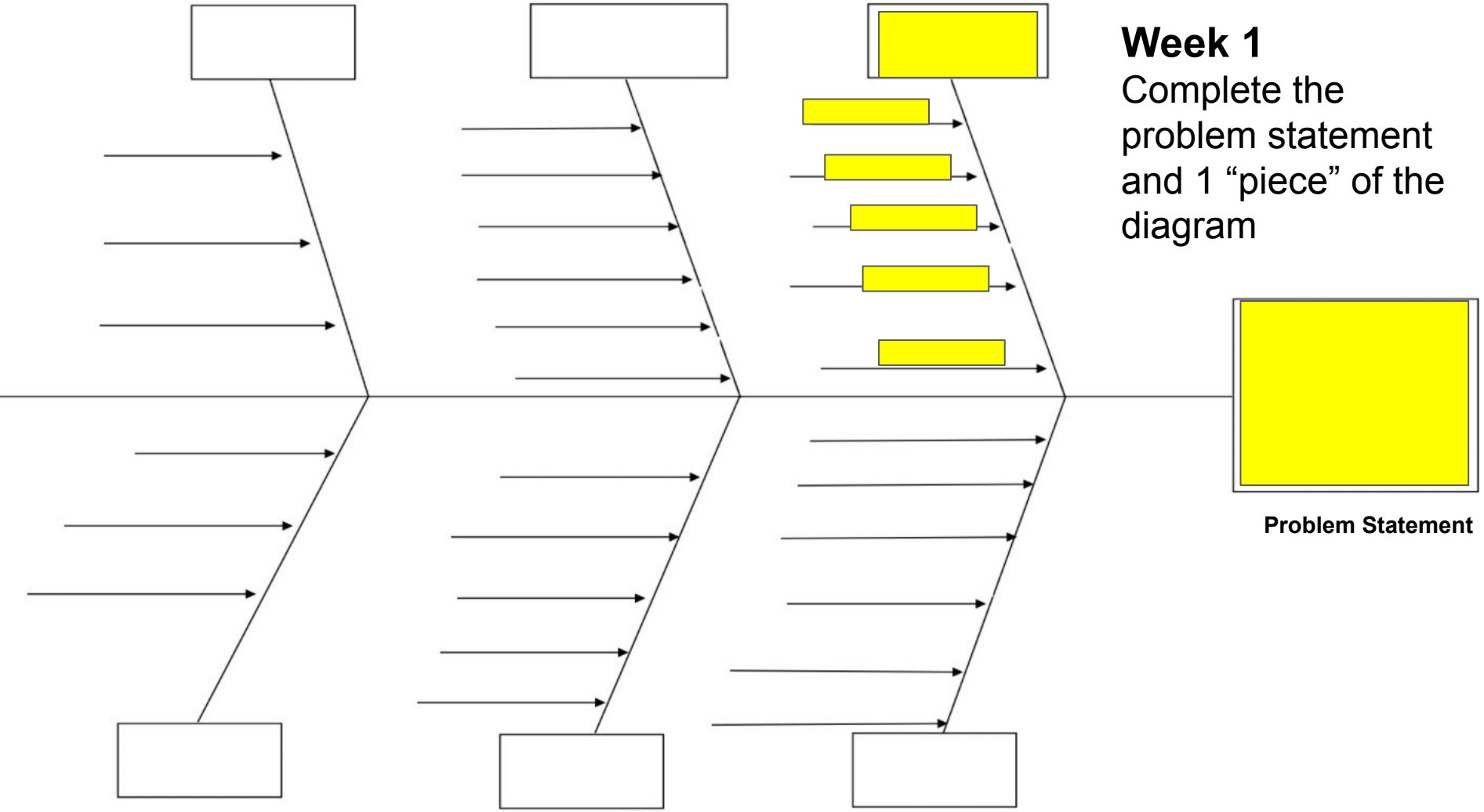

Week 1

Complete the problem statement and 1 “piece” of the diagram

Problem Statement

Upcoming: Session 2

- Monday, March 15th
- Same time (for participants impacted by Daylight Savings):

  9-10:30am HT | 12-1:30pm PT | 3-4:40pm ET
- Diabetes Screening Guidelines for AA Populations
- Panelists from Joslin Diabetes Center
- Complete the problem statement section and one “piece” of fishbone diagram before session 2

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Exit Poll

1. Overall, how satisfied are you with this session?
2. How confident are you that you will be able to apply information from this session at your health center/organization?
3. Based on your level of knowledge prior to the session, how would you rate changes to your knowledge as a result of the session?

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Exit Survey

Optional, but feel free to share your thoughts with us!

https://www.surveymonkey.com/r/HTW729K

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Thank you!
See you next Monday

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