

Global Innovations in Patient-Centered Kidney Care



School of Medicine
& Health Sciences

THE GEORGE WASHINGTON UNIVERSITY

Disrupting Disease Progress:
**Mobilizing the People to
Prevent Kidney Disease
Progress**

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The Rogosin Institute

May 22, 2019

Disclosures:

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President/CEO

The Rogosin Institute

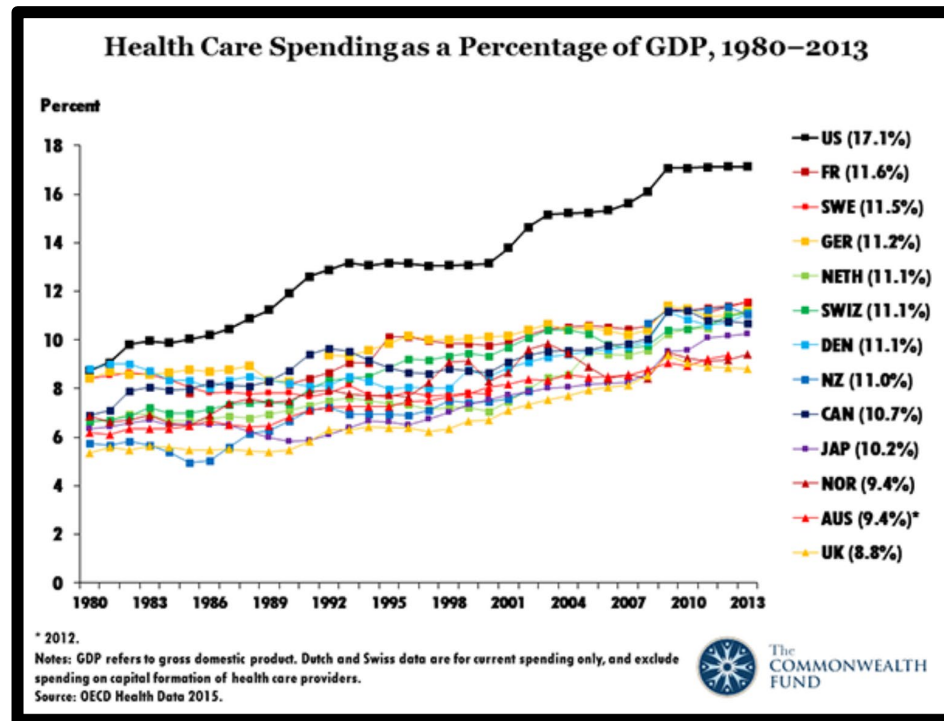
NONE

Background:

Current State of the U.S. Healthcare System

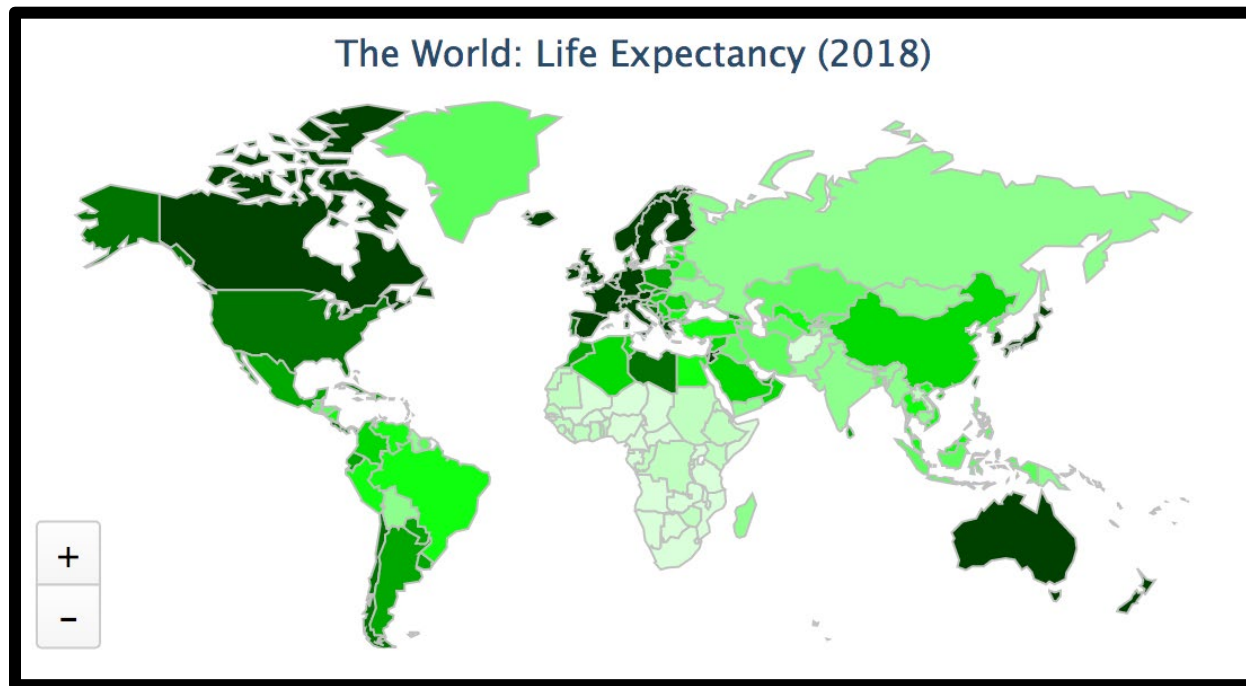
The Cost of U.S. Health Care

The U.S. Example:
U.S. spent 17.8% of GDP on its healthcare
in 2015; 19.9% in 2025



Suboptimal Outcomes

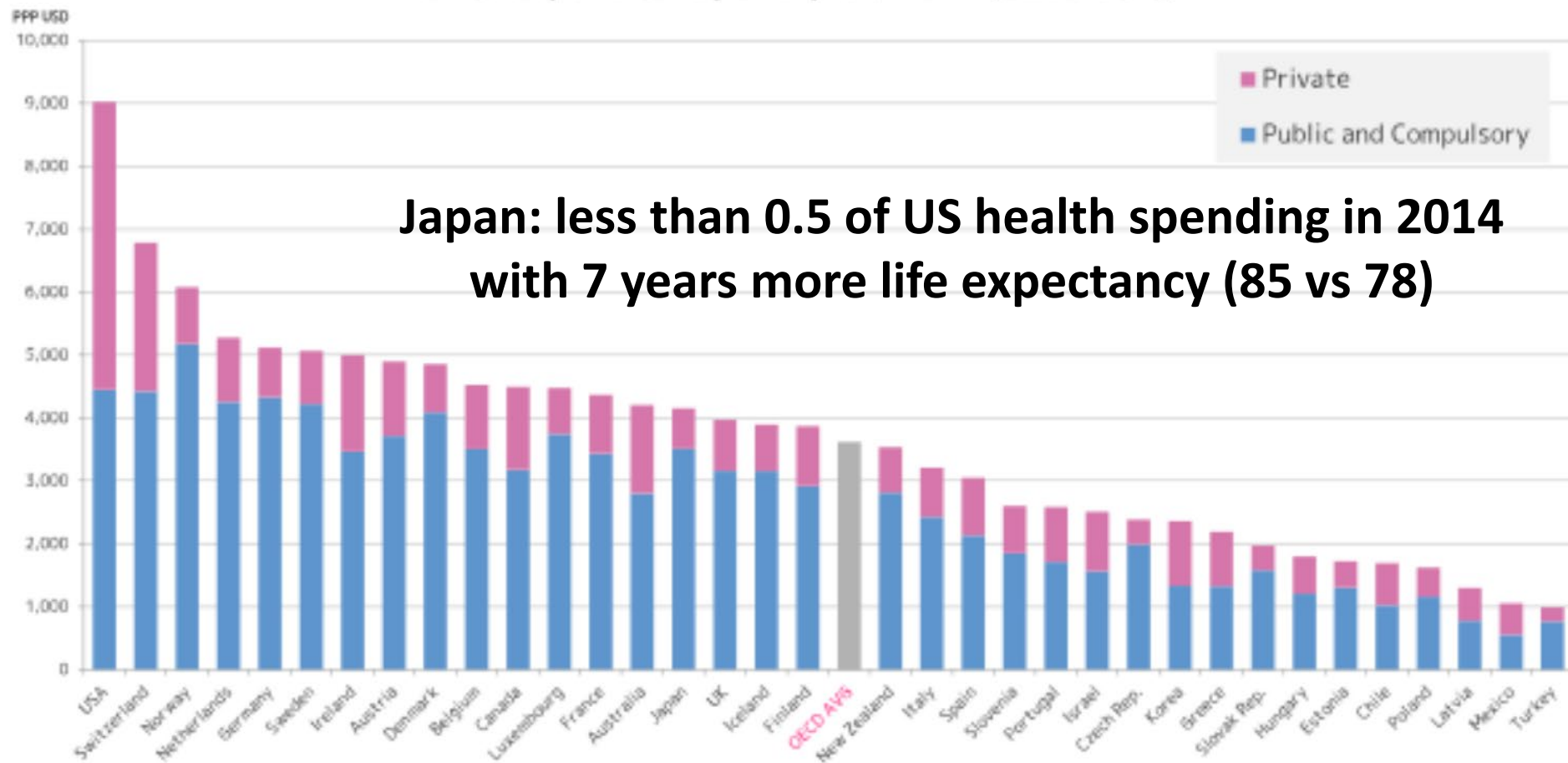
Shorter and Decreasing Life Expectancy



U.S. #53 @79.25 (now 78.6) yrs; 68 yrs. in Brownsville, Brooklyn
Monaco [#1@89.37](#); Japan #2@85.52

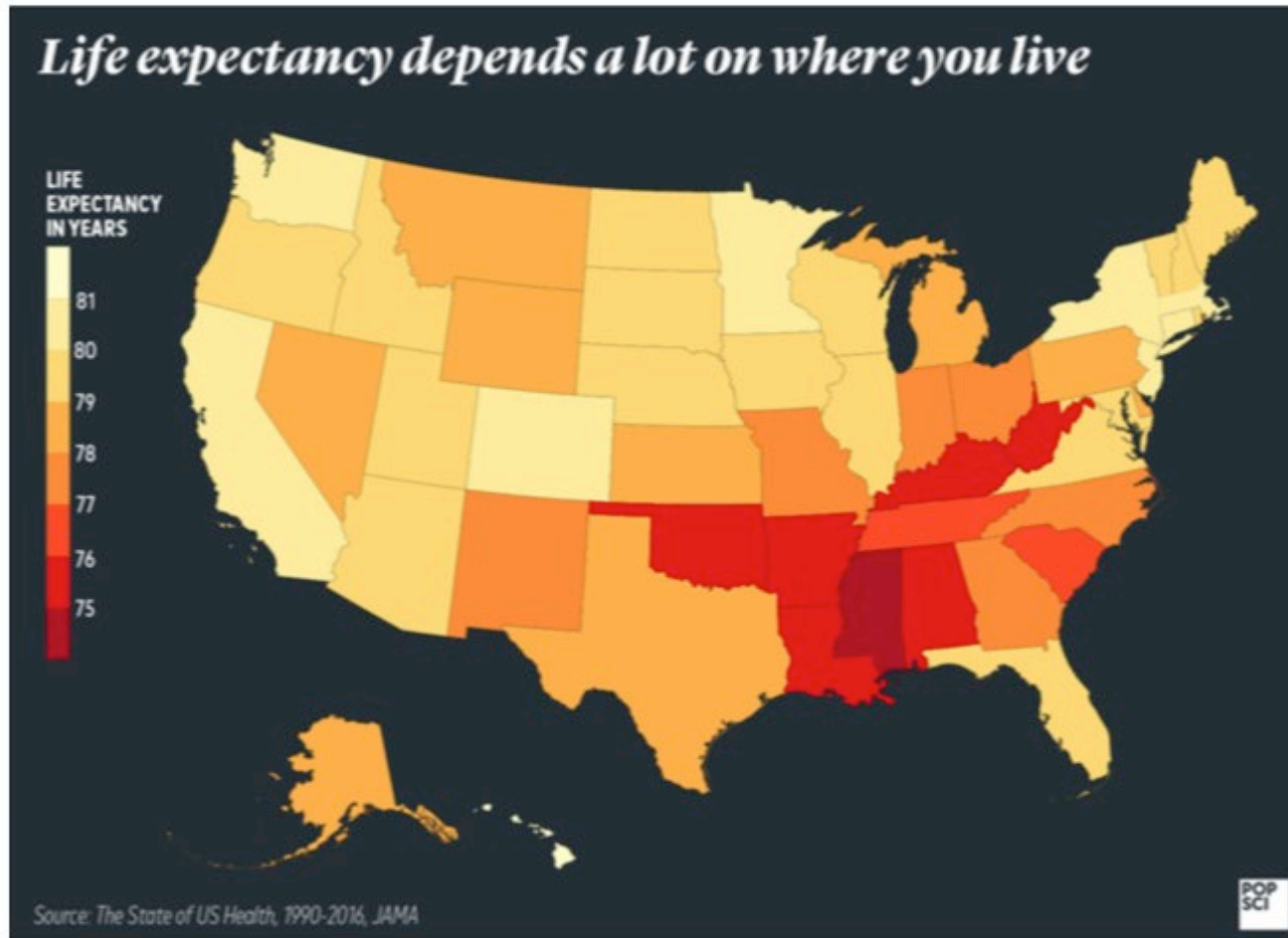
Healthcare Spending as % GDP Worldwide

Health expenditure per capita, 2014 (OECD stat)



**Japan: less than 0.5 of US health spending in 2014
with 7 years more life expectancy (85 vs 78)**

U.S. Life Expectancy



Healthcare System Failure!!!!

Medicare “bankruptcy” by 2024?

Social Security failure by 2033?

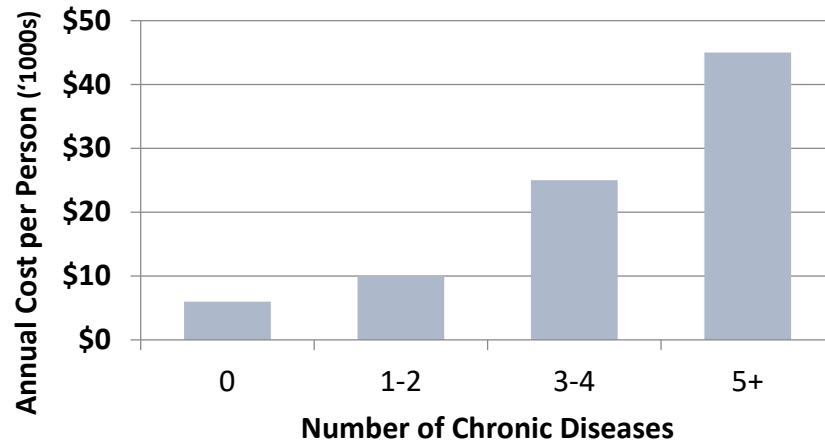
(75% of today's benefits to be paid by 2033)

**Chronic illness as
a big
and growing
problem.**

The Impetus for Healthcare System Change

SPENDING ON HEALTH CARE ACCOUNTS FOR ~ 18% OF GDP IN THE U.S.¹

HEALTH CARE COSTS ARE CONCENTRATED AMONG THOSE WITH MULTIPLE CHRONIC DISEASES²



HEALTH CARE SYSTEM



Obesity, diabetes, hypertension, chronic kidney disease

1. Mitchell E. and Machlin S. Concentration of Health Expenditures and Selected Characteristics of High Spenders, U.S. Civilian Noninstitutionalized Population, 2015. Statistical Brief #506. AHRQ, 2017.
2. Cohen, SB. The concentration and Persistence in the Level of Health Expenditures for the U.S. Population, 2012-2013. Statistical Brief #481. AHRQ, 2015.

CKD and ESRD

**Chronic and End-Stage Kidney
Disease**

as

**Prime Model of the Burden of
Chronic Illness:**

Cost:

Quality of Life

Economic

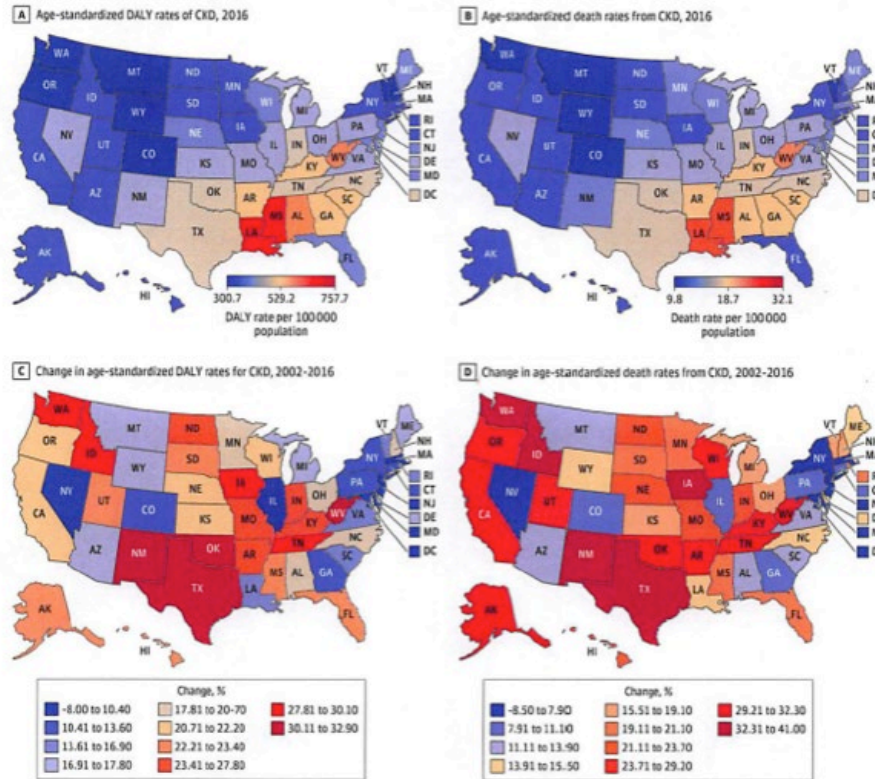
**23% of Medicare budget
(>\$113 billion)**

The Burden of U.S. Kidney Disease

2002-2016

40,000,000 Americans – 96% not aware of their CKD

Figure 1. Maps of Age-Standardized Disability-Adjusted Life Years (DALYs) and Death Rates Due to Chronic Kidney Disease (CKD) in 2016, and Percentage Change From 2002 to 2016



Age-Std
CKD DALYs:
Vermont: 321
Mississippi: 697
(per 100,000)
Overall: +18.6%
Death: +58.3%
(Ages 20-54:
25.6% - CKD DM

DALY increase
risk factors:
Metabolic (DM):
93.8%
Dietary: 5.3%

Maps of percentage change are colored by deciles of their respective values.

JAMA Network Open. 2018;1(7):e184412. doi:10.1001/jamanetworkopen.2018.4412

November 30, 2018 5/16



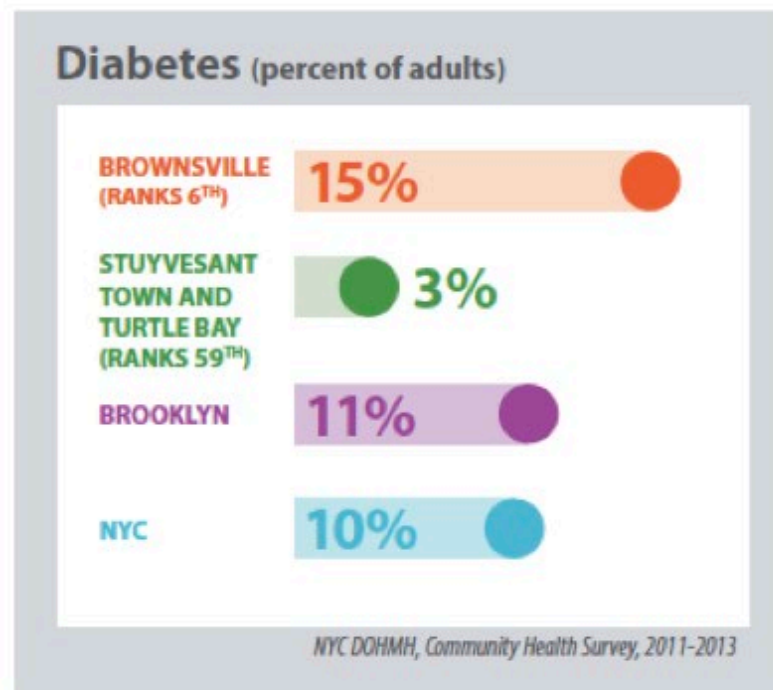
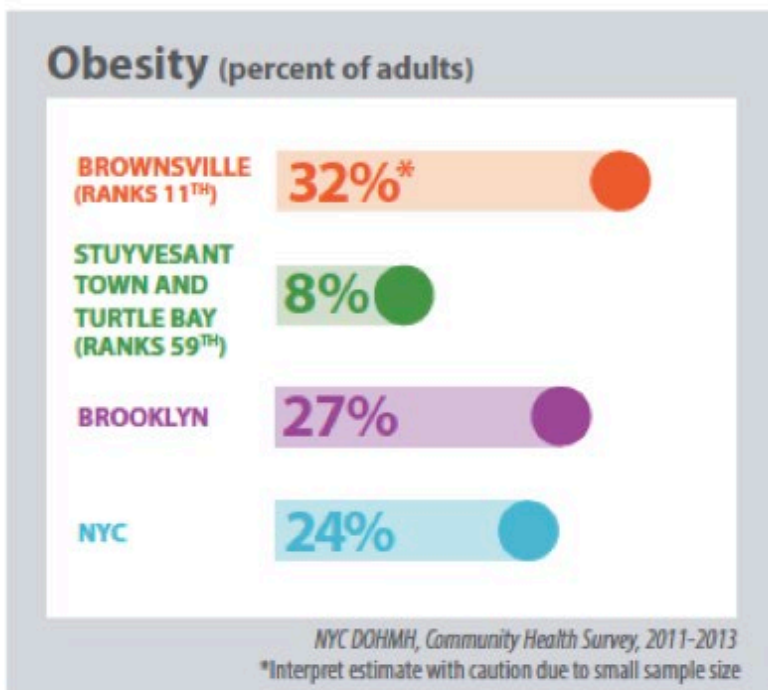
The Rogosin Institute

Diabetes and/or Hypertension
are responsible for 60% of our
end-stage renal patients
requiring either dialysis or
kidney transplantation to
continue to live:

Obesity is linked to both

Central Brooklyn Health Disparities

Significant differences in health outcomes between Brownsville and other parts of NYC



Obesity

- More than 60% of Americans are overweight (including “obese”):
 - Of all the developed economies, US has highest rate of obesity – 75% predicted by 2020
 - Up to 400,000 U.S. deaths per year
 - Annual societal cost: \$117 billion (\$2.5

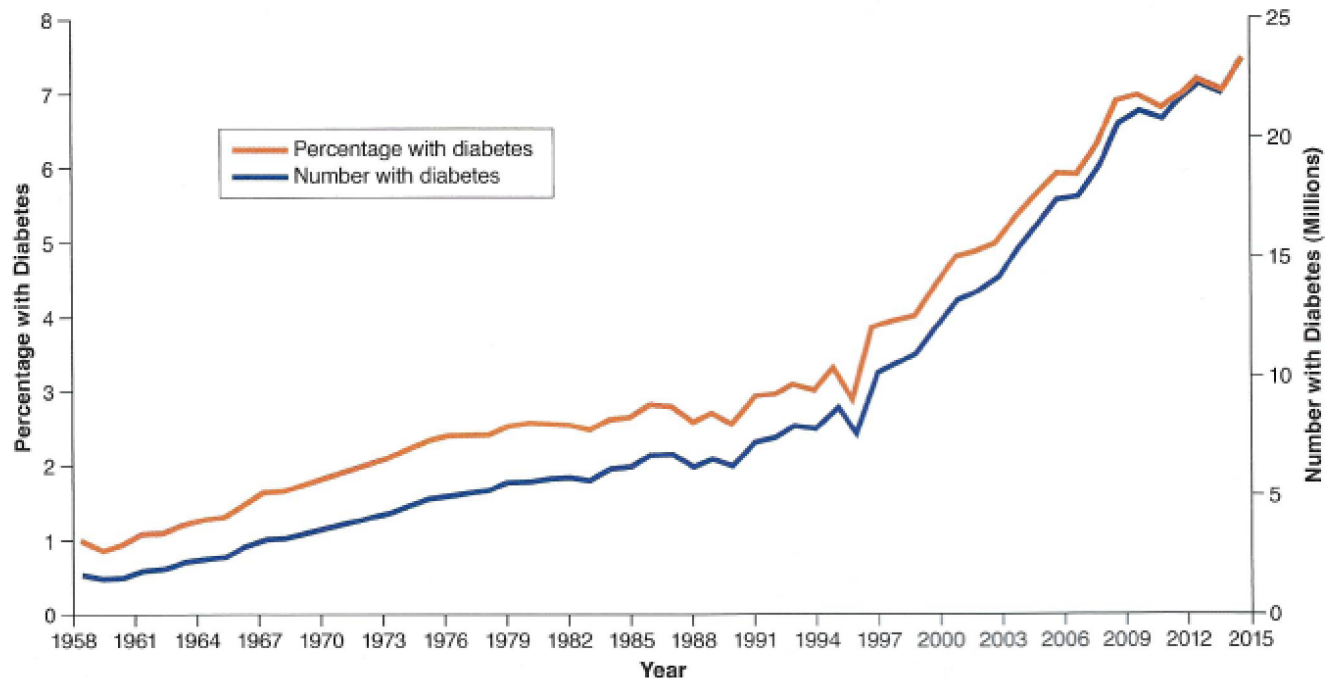
Prevalence of obesity highest in Americas and lowest in SE Asia

Diabetes Facts:

- Worldwide, no. of diabetics has risen from 108 million in 1980 to 422 million in 2014.
- Prevalence of diabetes among adults >18 over 18 has risen from 4.7% in 1980 to 8.5% in 2014.
- Rising more rapidly in middle- and low-income countries.
- Diabetes: major cause of blindness, kidney failure, heart attacks, stroke and lower limb amputation.

Type 2 Diabetes in the U.S.A.

FIGURE 1 Number and Percentage of U.S. Population with Diagnosed Diabetes, 1958-2015²



From Centers for Disease Control and Prevention, Division of Diabetes Translation. United States Diabetes Surveillance System, available at: <http://www.cdc.gov/diabetes/data>.

Some Facts About Chronic Illness: Hypertension and Diabetes as Examples

Hypertension:

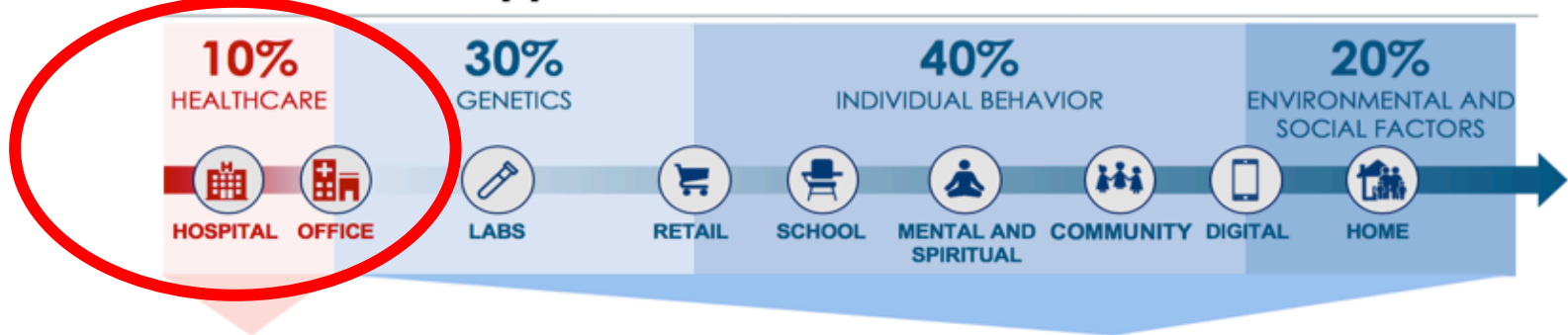


- Enormous global problem: 972 million in 2000; 1.56 billion by 2025
- China: Prevalence 27.8% of Chinese people (increases steeply with age); overall control 9.7% (Yichong et al, Intl J Cardiol, 2017)
- U.S. 23.4% or 76.2 million people
- 18% of global deaths; 162 million years of life lost

**What,
if anything,
can we do about it?**

Where does health care happen?

Disruption requires new models based on delivering services where health happens...



CLINICAL SETTING

- Where majority of complex services are delivered and **costs are realized**
- Focus on **managing healthcare spend** in most appropriate way
- **Episodic / Transactional**, where consumer spends ~ <10% or time
- Value = quality of the **Outcome** delivered (measuring defect rates)
- **Specialization** critical to high quality

COMMUNITY SETTING

- Where health is **determined, improved, and maintained**
- **Requires near-term investments** to improve health and reduce longer-term, costly complications
- **Continuous**, where consumer spends ~ >90% or time (and would prefer to spend 100%)
- Value = **Progress** towards consumer's goals
- **Familiarity and connectedness** with the consumer is critical to ensure high quality

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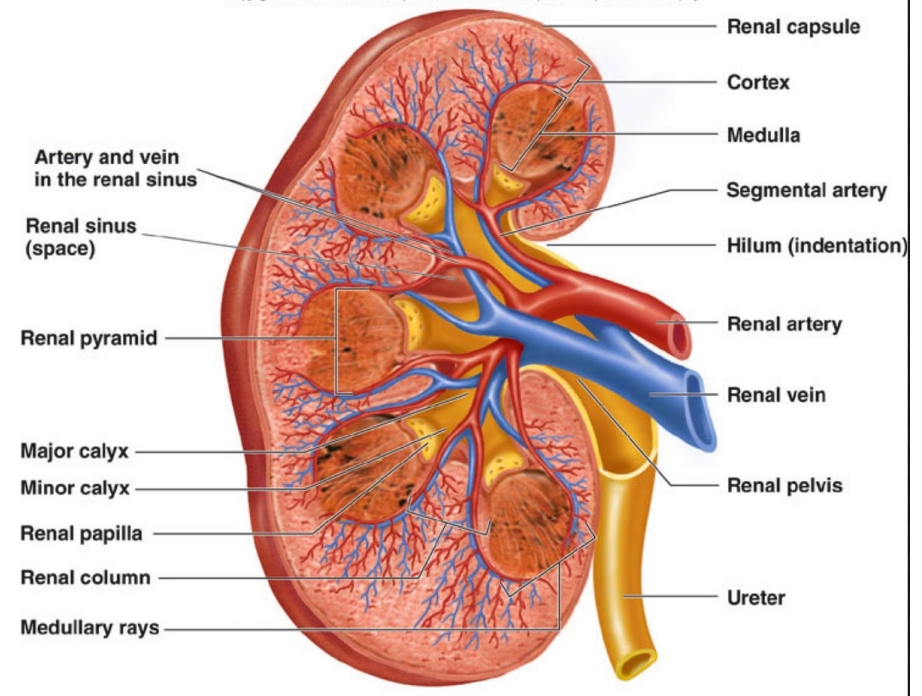
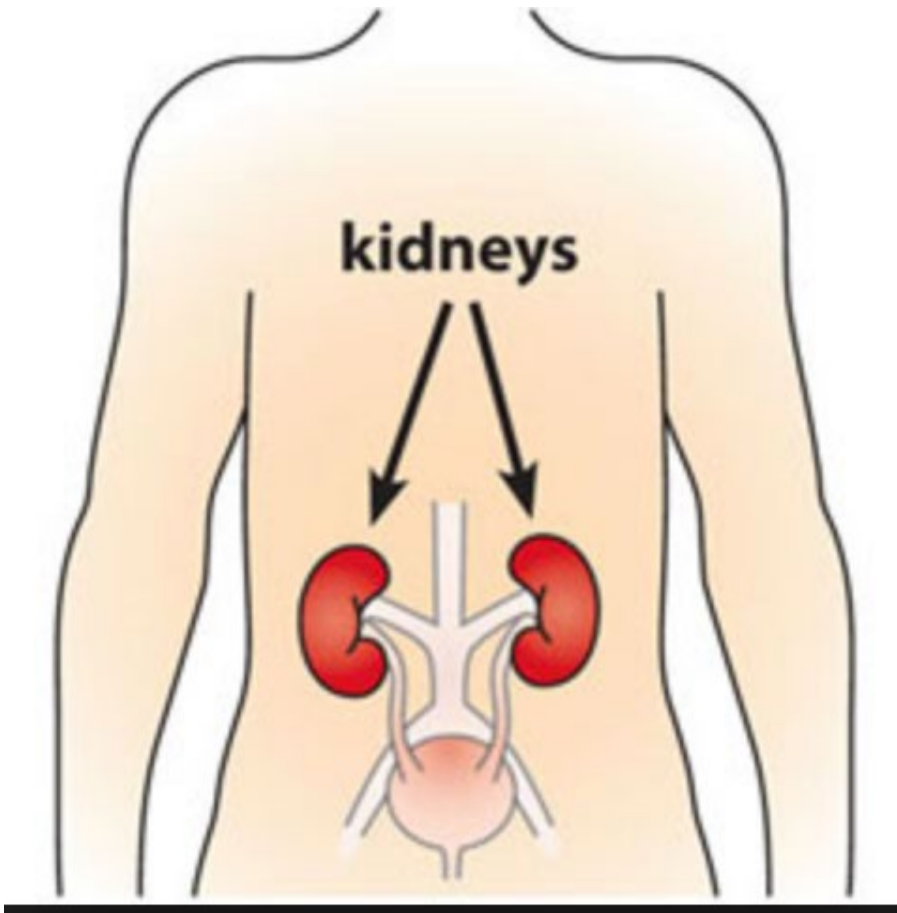
Independent, Non-Profit (501c3)
Clinical Care and Research Institute closely
affiliated with

— **NewYork-Presbyterian**
— **Regional Hospital Network**



The Kidney

Waste removal system; blood pressure control; red blood cell control

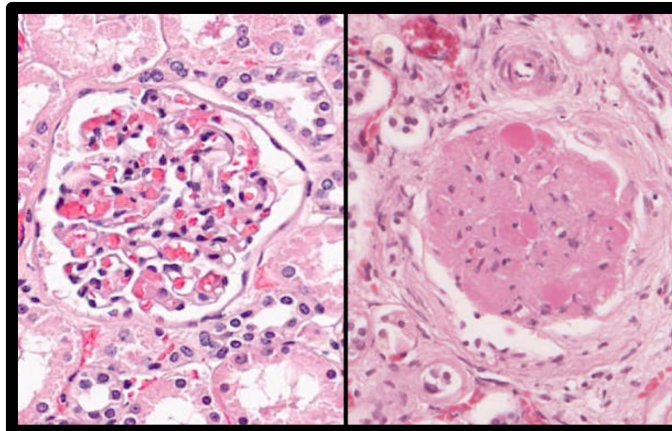




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Normal
Glomerulus



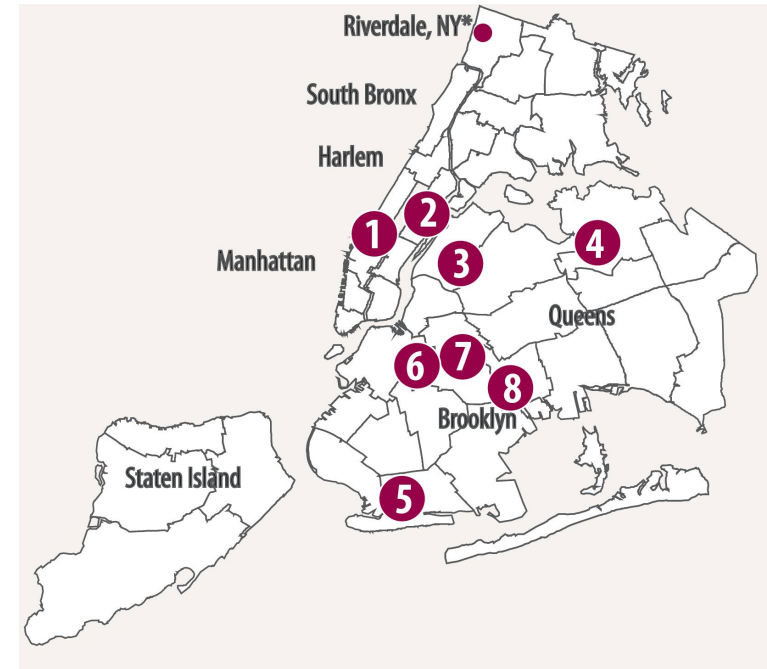
End-Stage Diabetic
Glomerulus



The Rogosin Institute:

510 people serving NYC (110 Nurses)

- 11 dialysis units in NYC (2,000 ESRD patients)
- Chronic Kidney Care
- Clinical research
- Kidney transplant program
- Center for Health Action and Policy
- Focus on prevention and wellness



Achieving Better Health

The Centers for Disease Control and Prevention estimates that 80% of chronic illness could be eliminated with attention to these four basic health factors:

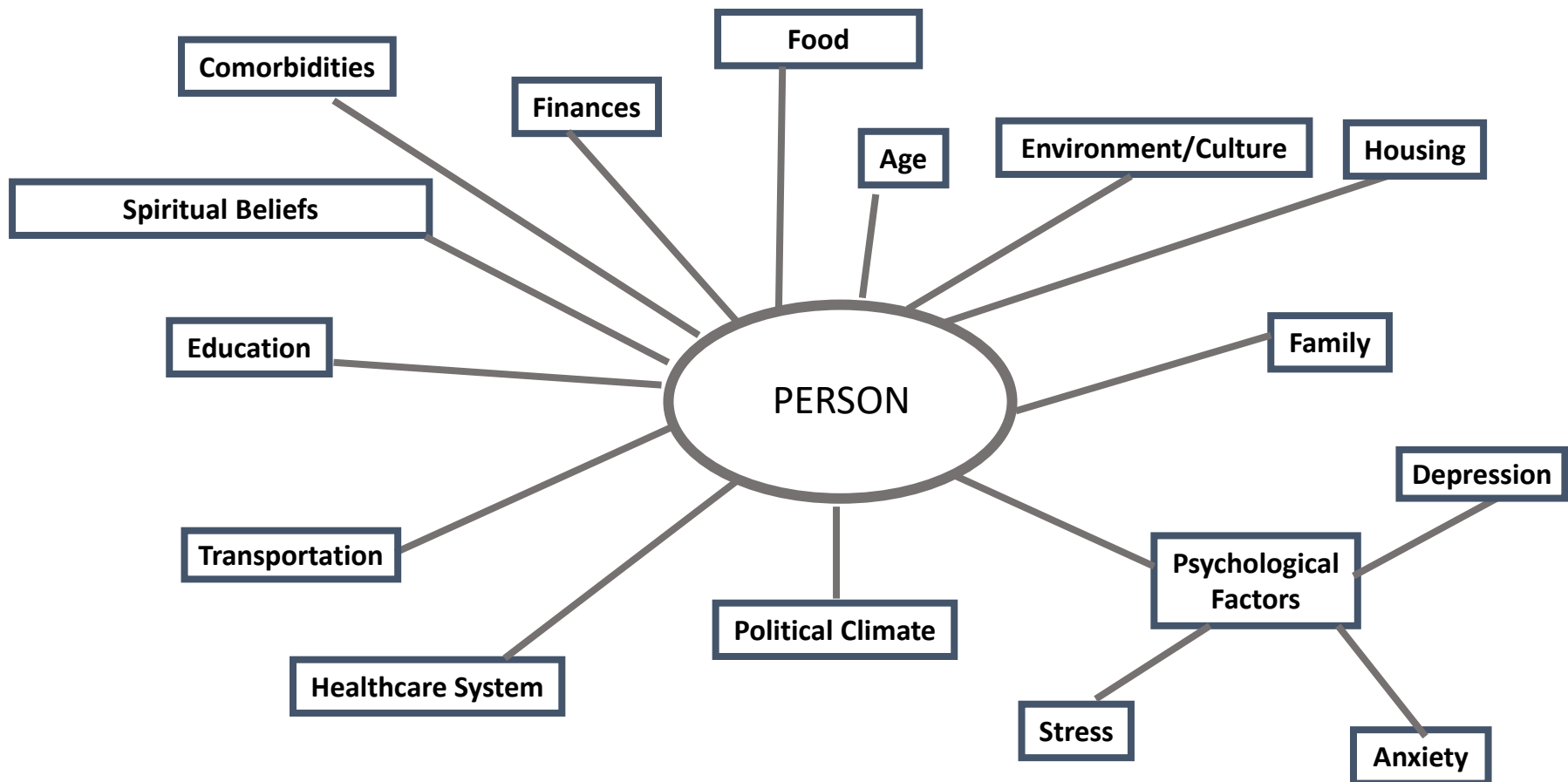
Better nutrition

More physical activity

Moderate to no alcohol use

No tobacco

A Too-Narrow View of Health: A multiplicity of factors – biological to societal: Making people **WHOLE**!!



U.S. Centers for Disease Control (CDC) National Diabetes Prevention Program



What's
missing
here?

The PEOPLE

Who Can Fix the US Healthcare System?

Who can make us all healthier?

YOU!!

**The current statistics are unacceptable! We won't
take it anymore!**

**You can be the ones to change the way things are
and turn America around!!!**

Some Challenges

- Disparities – in health, SES, educational attainment, health “literacy”
- Diverse health audiences to reach or accommodate
- Stress – toxic stress, expenses (rent), dealing with dialysis
- Transportation – rural vs. urban; few personal cars, subway inaccessibility
- Housing – home dialysis limitations, non-functional elevators in city housing interferes with access to care
- Food - healthy choices expensive, not always available



We are going to do this right here in Central Brooklyn

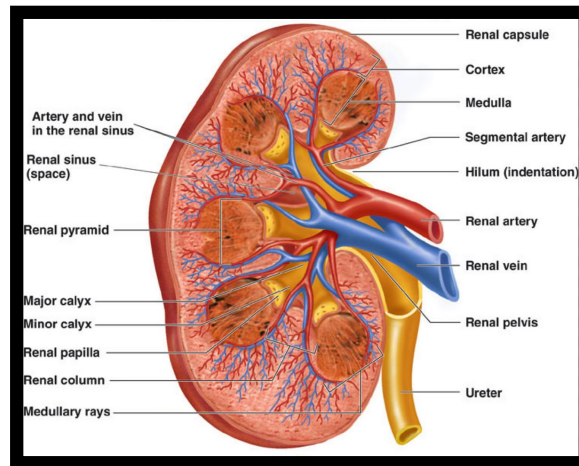
NO EXCUSES

!!!!

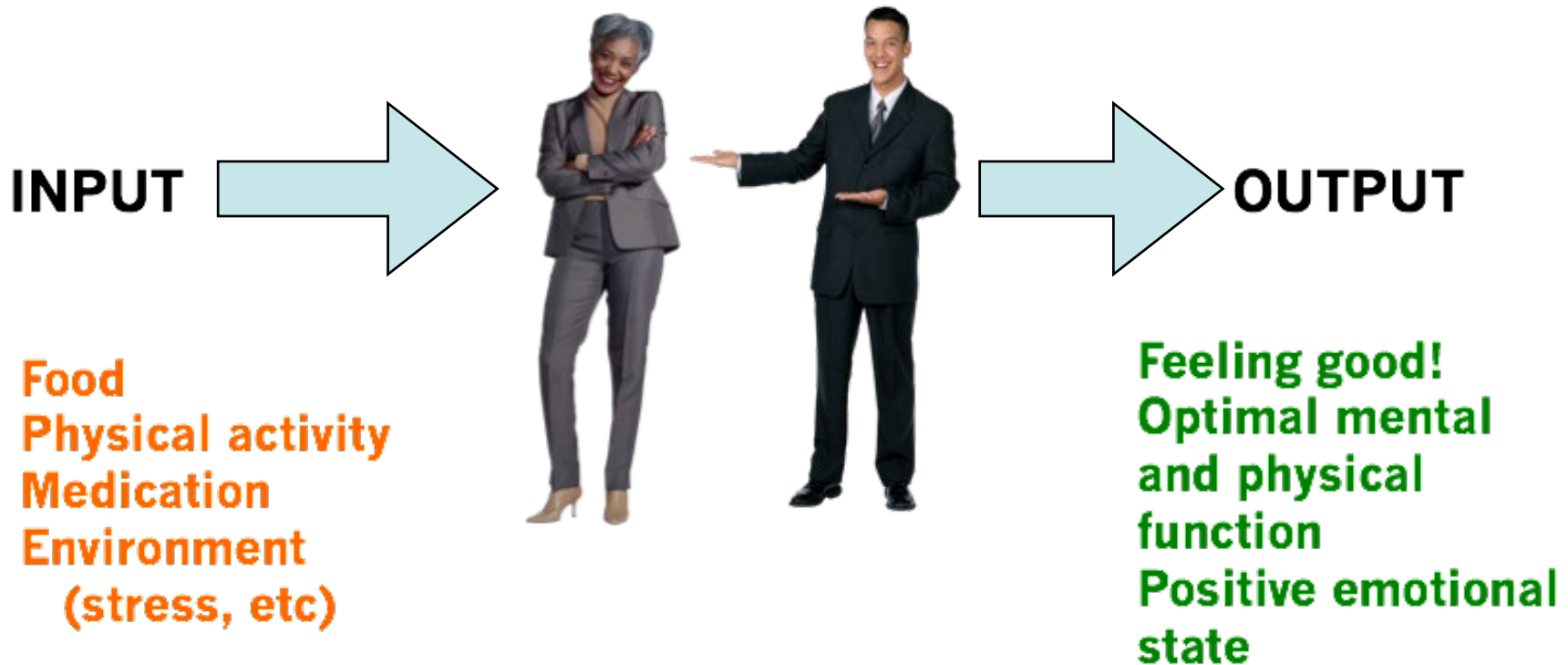
Nutrition:

Just how important is it?

How should we be thinking about it?



The human body as a finely-tuned machine



Matching the fuel to the engine requirements



Mixing the Fuels

RECOMMENDED FUEL PORTIONS

Carbohydrates

Starches: breads, cereals,
grains, rice, pasta

Dried **beans**, peas, lentils

Fruits

Vegetables - corn, peas,
winter squash, lettuce,
leafy greens

Milk, yogurt

Sugar, sweets, desserts

about 50%

Protein

Meats - beef,
pork, lamb,
poultry, fish,
shellfish

Eggs

Cheese

Tofu

25%

Fats

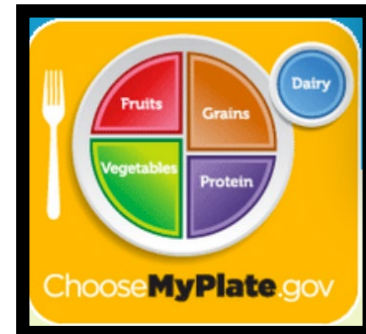
Oils

Margarine

Animal fats -
dairy, poultry fish,
shellfish

Nuts

25%



Read the Label

NEW LABEL / WHAT'S DIFFERENT

Servings:
larger,
bolder type

Nutrition Facts

8 servings per container
Serving size 2/3 cup (55g)

Amount per serving
Calories 230

% Daily Value*

Total Fat 8g 10%

Saturated Fat 1g 5%

Trans Fat 0g

Cholesterol 0mg 0%

Sodium 160mg 7%

Total Carbohydrate 37g 13%

Dietary Fiber 4g 14%

Total Sugars 12g

includes 10g Added Sugars 20%

Protein 3g

Vitamin D 2mcg 10%

Calcium 260mg 20%

Iron 8mg 45%

Potassium 235mg 6%

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Serving sizes
updated

Calories:
larger type

Updated
daily
values

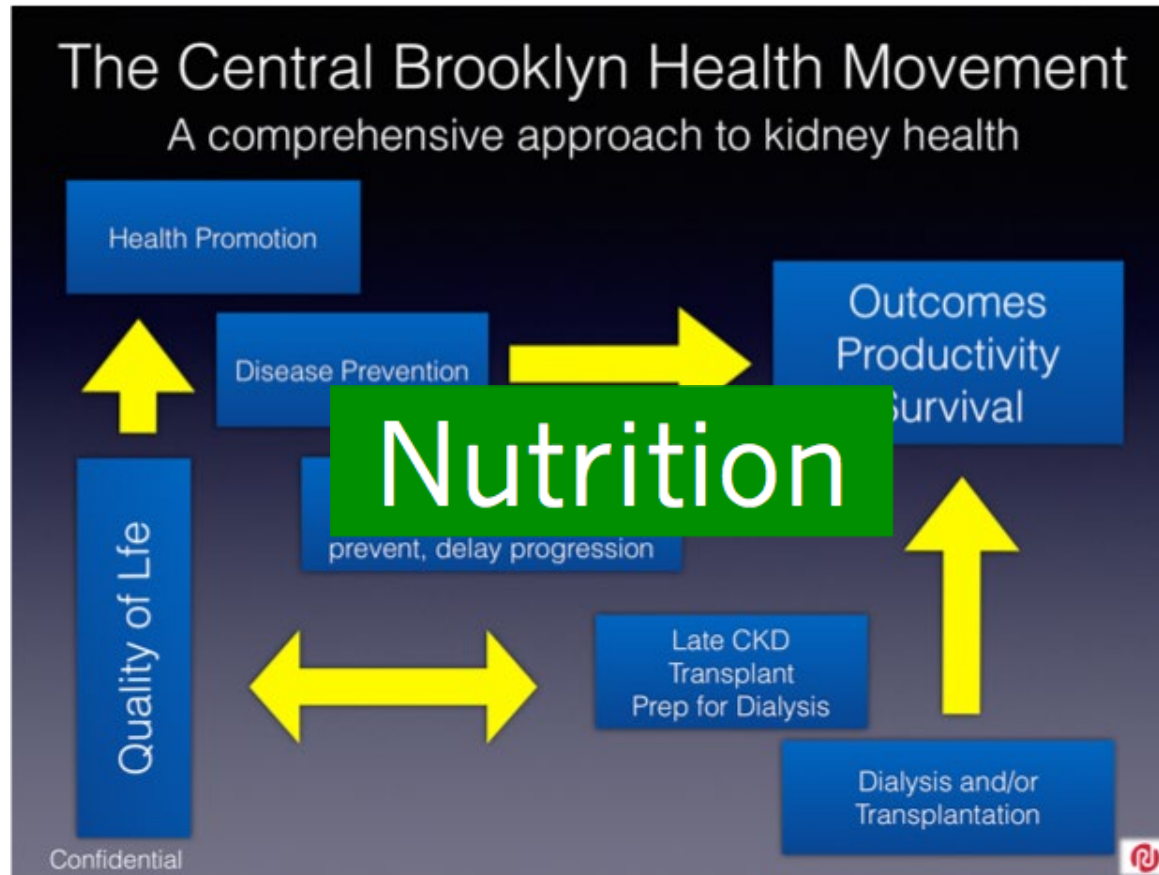
Actual
amounts
declared

New
footnote

New:
added sugars

Change
in nutrients
required

The Importance of Nutrition



FOOD as MEDICINE

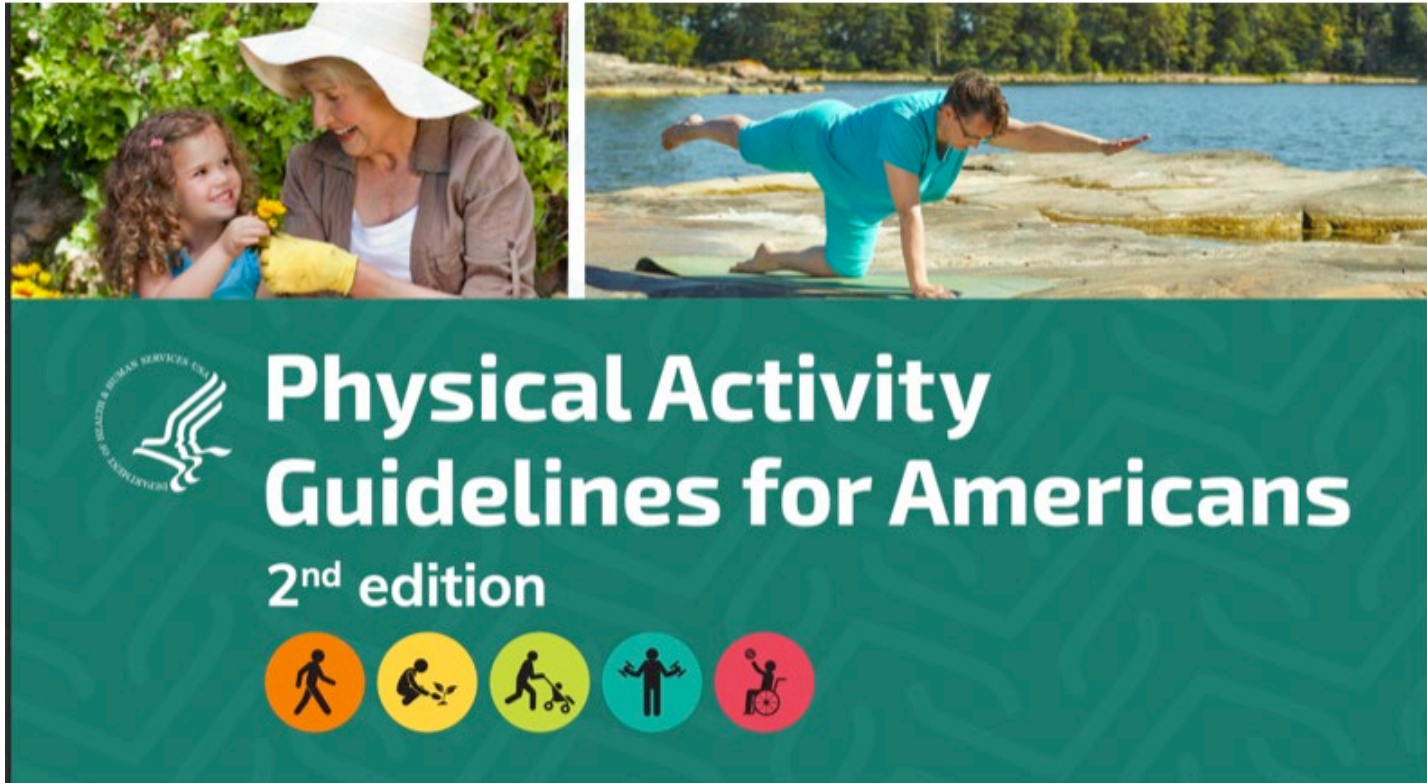
Health effects of dietary risks in 195 countries, 1990–2017:
a systematic analysis for the Global Burden of Disease
Study 2017 *Lancet*, April 3, 2019

In 2017, 11 million deaths and 255 DALYs were due to dietary risk factors:

Key factors:

- **too much sodium (salt)**
- **Low intake of whole grains**
- **Low intake of fruits**

Physical Activity



Physical Activity Recommendations

MOVE YOUR WAY

Adults need a mix of physical activity to stay healthy.

Moderate-intensity aerobic activity*
Anything that gets your heart beating faster counts.

at least **150** minutes a week

Muscle-strengthening activity
Do activities that make your muscles work harder than usual.

at least **2** days a week

AND

* If you prefer vigorous-intensity aerobic activity (like running), aim for at least 75 minutes a week.

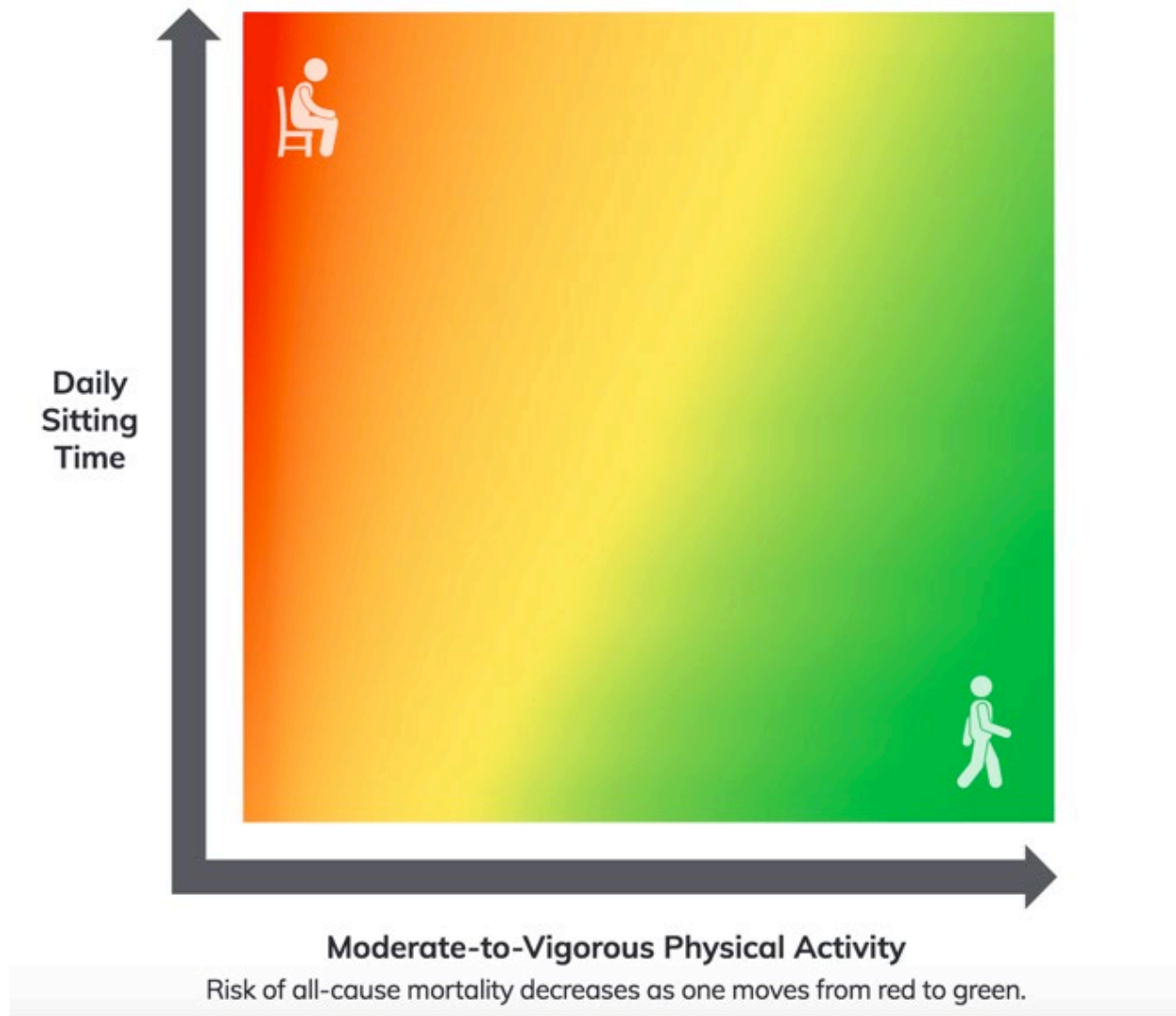
If that's more than you can do right now, **do what you can.** Even 5 minutes of physical activity has real health benefits.

Walk. Run. Dance. Play. What's your move?

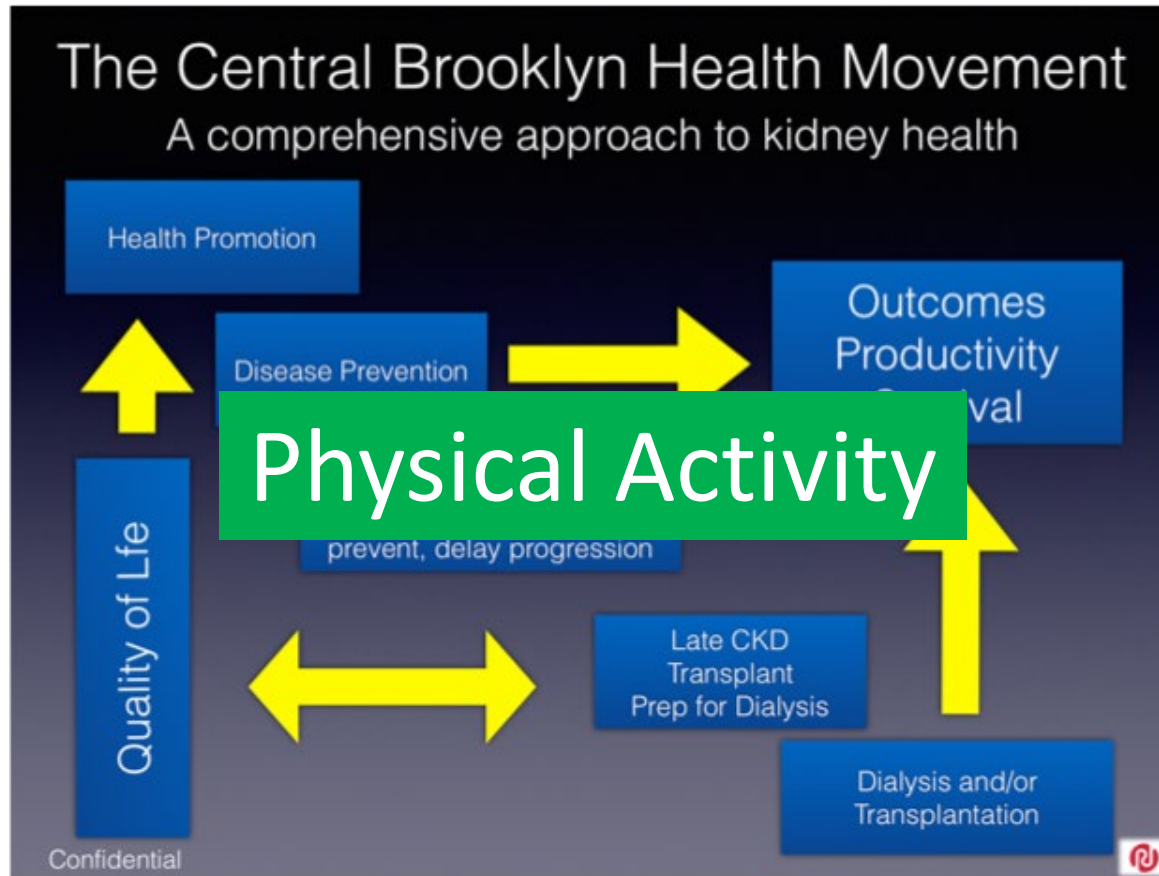
Some examples



Activity and Mortality



The Importance of Physical Activity



No-to-light alcohol use



No Smoking



Rethinking Our Approach to “Health”

Shifting from Medical/Nursing Care to Wellness Promotion

- The failure of our present approach – medically and technology oriented; overly disease-focused;
- Neglect of “public” health
- Specific disease focus as opposed to wholistic, integrated approach to the human being

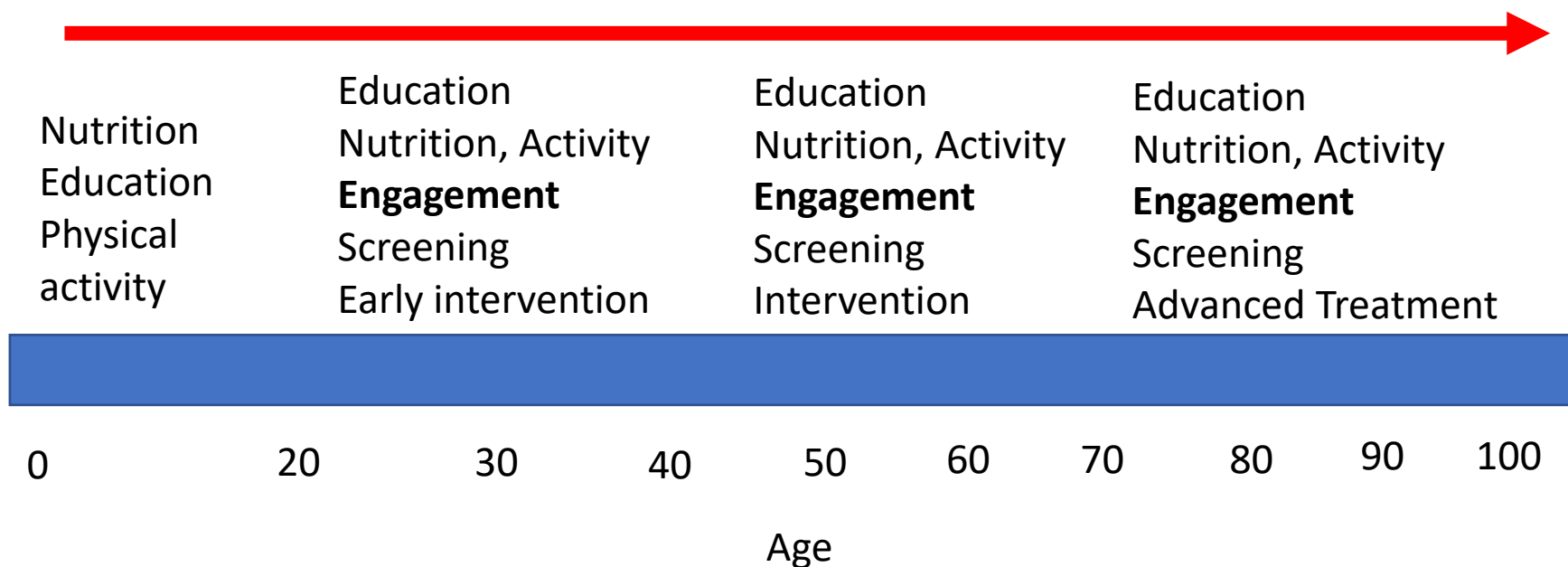
A New Model

Integrated

- education(school); good nutrition; activity
- public health prevention
- screening and early detection/intervention
- treatment and prevention of progression
- advanced compassionate care when necessary
- Personal engagement at all times

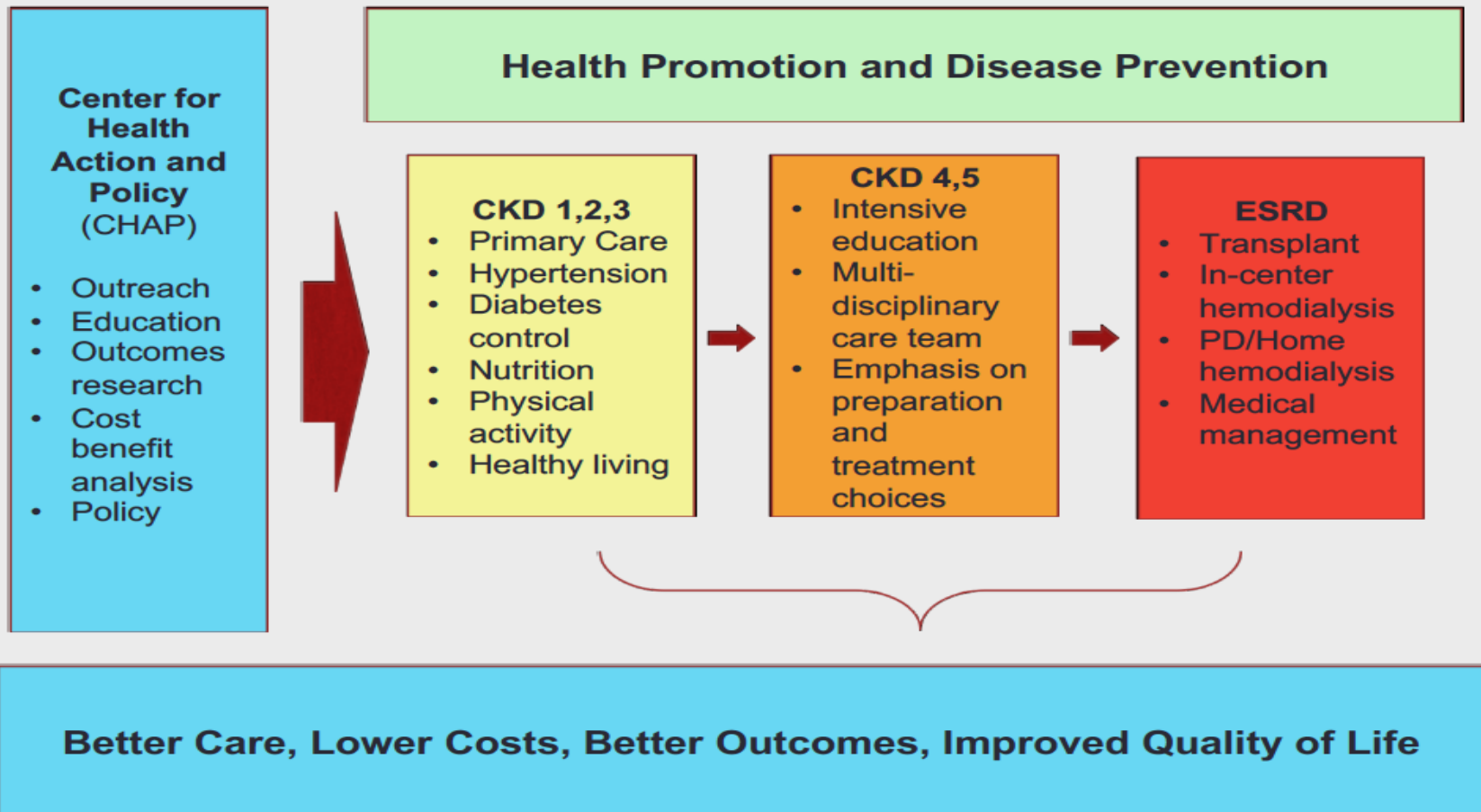
The Model

Wellness and QOL Continuity Across the Lifetime of Individuals and Families





The Rogosin Kidney Care Model



**It is never too late
to make a
difference!!!**

Central Brooklyn Health Movement

The Place: Central Brooklyn



A movement of, by, and for the people!!

A Proposed Solution: Central Brooklyn Health Movement (CBHM)

CBHM Fundamental Principle:

The people with the problems are not the problem, rather they must be an **ACTIVE** part of the solution



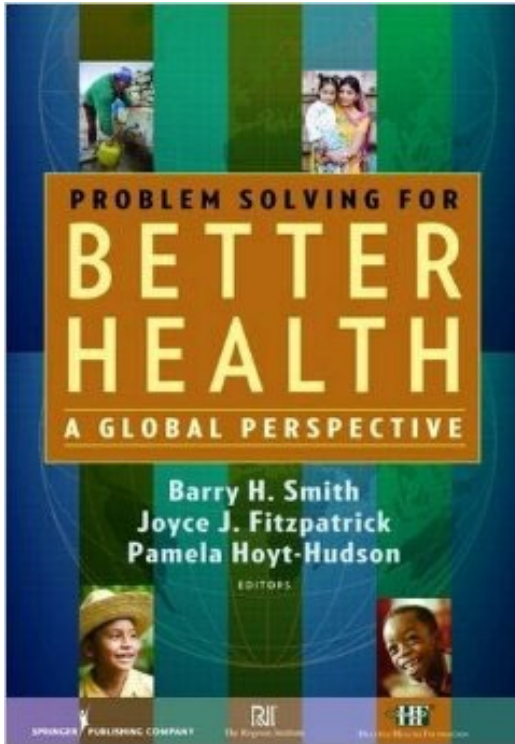


The People as Partners

Rogosin has over 25 years of experience in community outreach and mobilization utilizing the *Problem Solving for Better Health*® (PSBH®) methodology

- Implemented in 32 countries
- Over 60,000 participants, and 40,000 health promotion projects

Problem Solving for Better Health®



PSBH® Methodology

1. Defining the problem
2. Prioritizing the problem
3. Defining a solution/
Asking the “Good Question”
4. Creating an action plan
5. Taking action



Participants **apply** PSBH® to solve local public and individual/family health problems

Thank You!

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