OLIVER WYMAN

Health Innovation Summit2018

MOVING FROM PERSONALIZED MEDICINE TO PERSONALIZED HEALTH

Eric Dishman

Director, All of Us Research Program,
National Institutes of Health

#OWHIC

oliverwyman.com/owhic-summit-2018

From mainframe to personal health for *all* of us…

#JoinAllofUs

Eric Dishman

Entrepreneurial patient, caregiver, & advocate

Director, All of Us Research Program, NIH

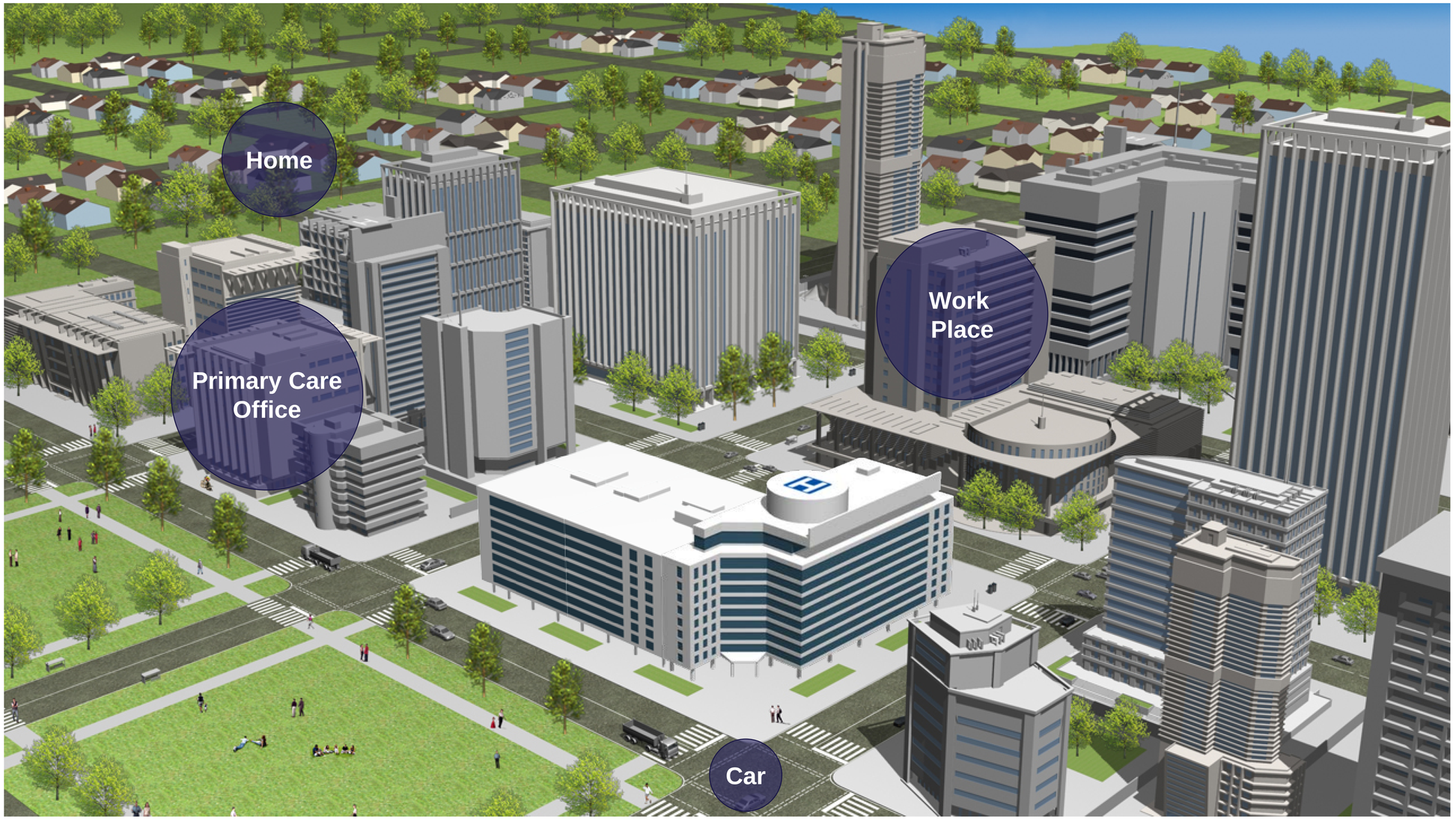
eric.dishman@nih.gov

National Institutes of Health

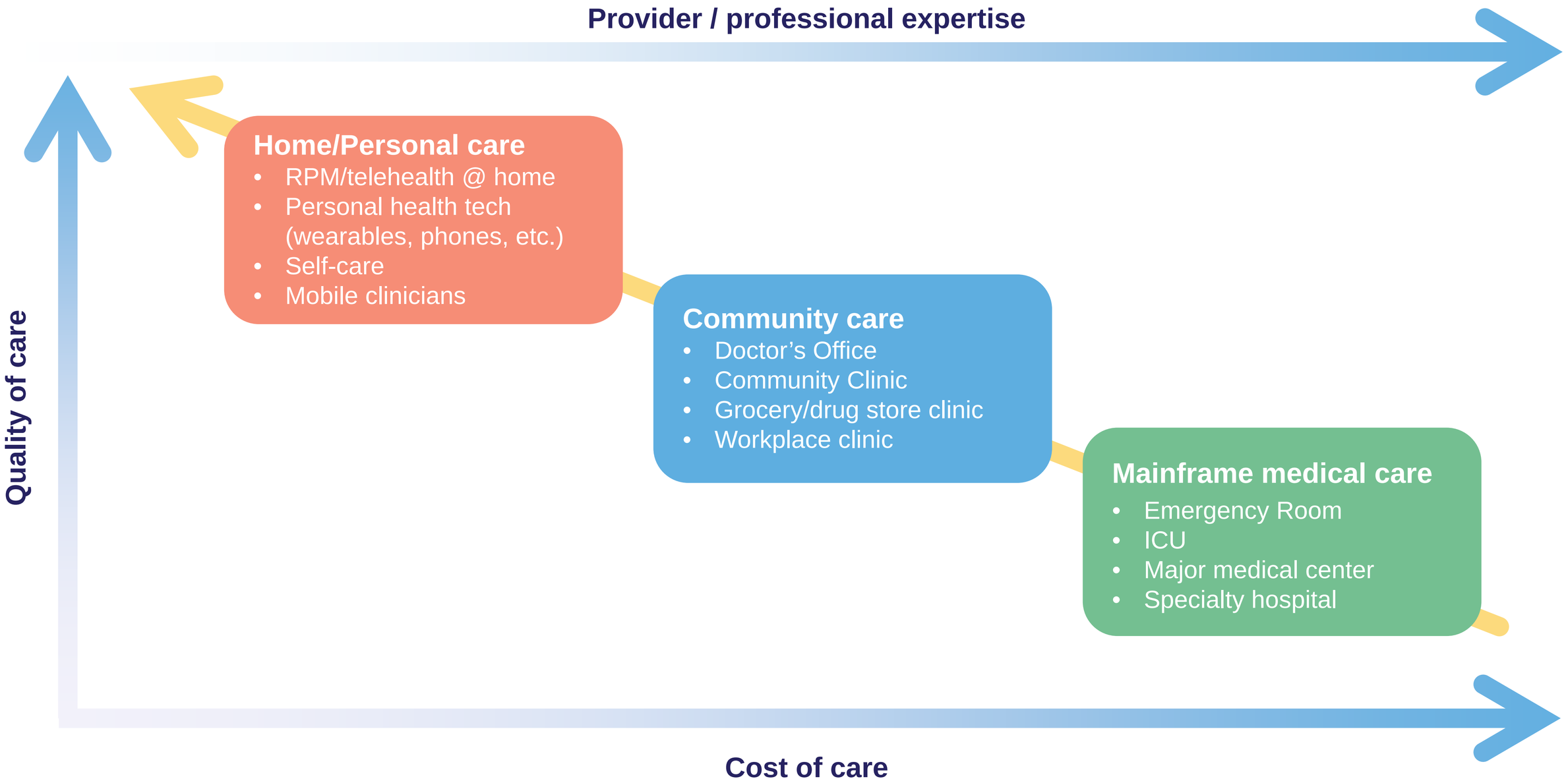
Disrupting health *care*…

Today people mostly “timeshare” expensive resources at medical mainframes

Must distribute care capacity & expertise from campus to community…



For three decades now I have selfishly pushed for “Shift Left” transformations



Tech innovation enabling Shift Left, but care & biz models too slow to reinvent

Provider / professional expertise

Quality of care

Home/Personal care

Defibrillator

Ultrasound

EKG

Mainframe medical care

Defibrillator

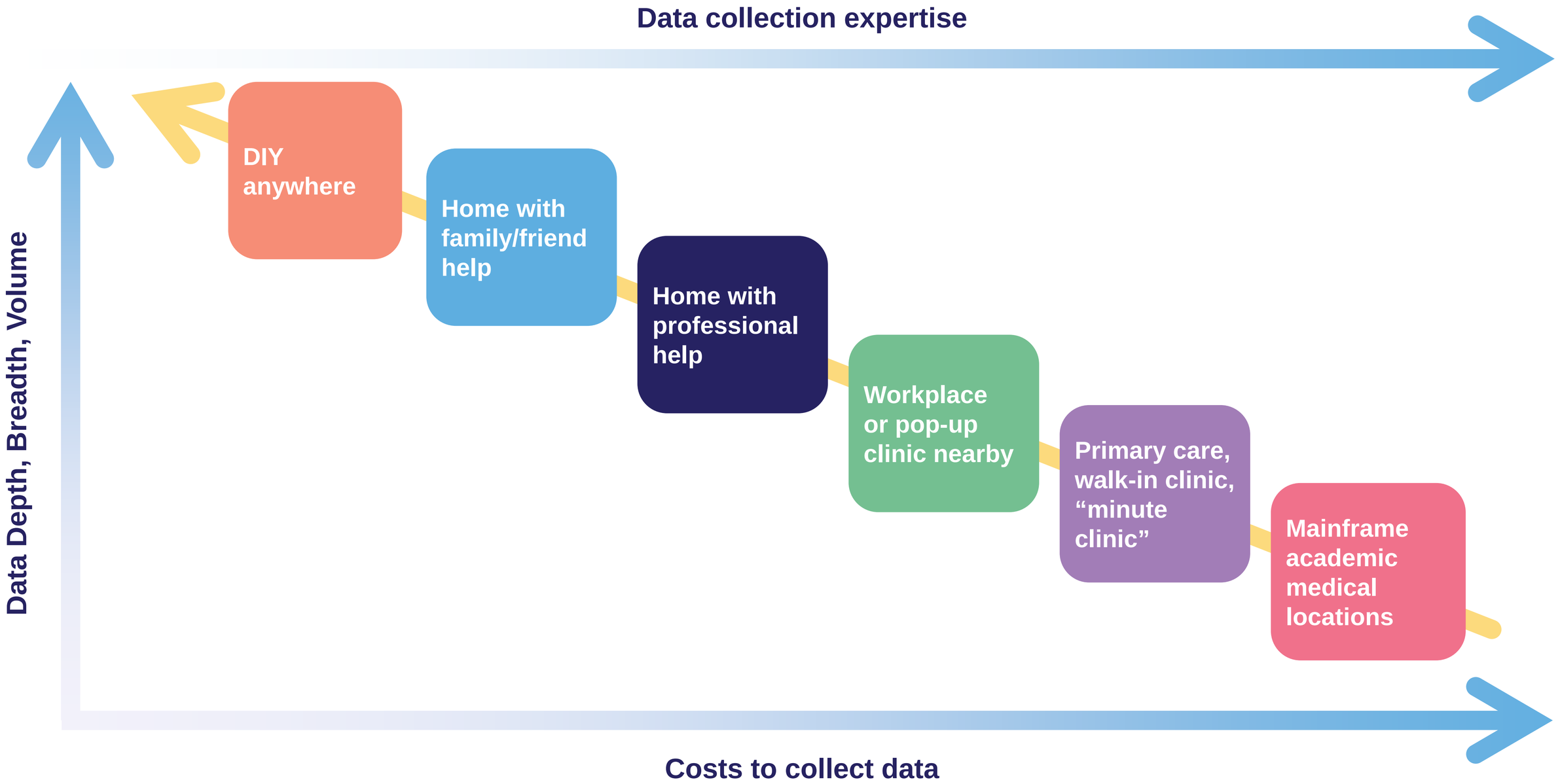
Ultrasound

EKG

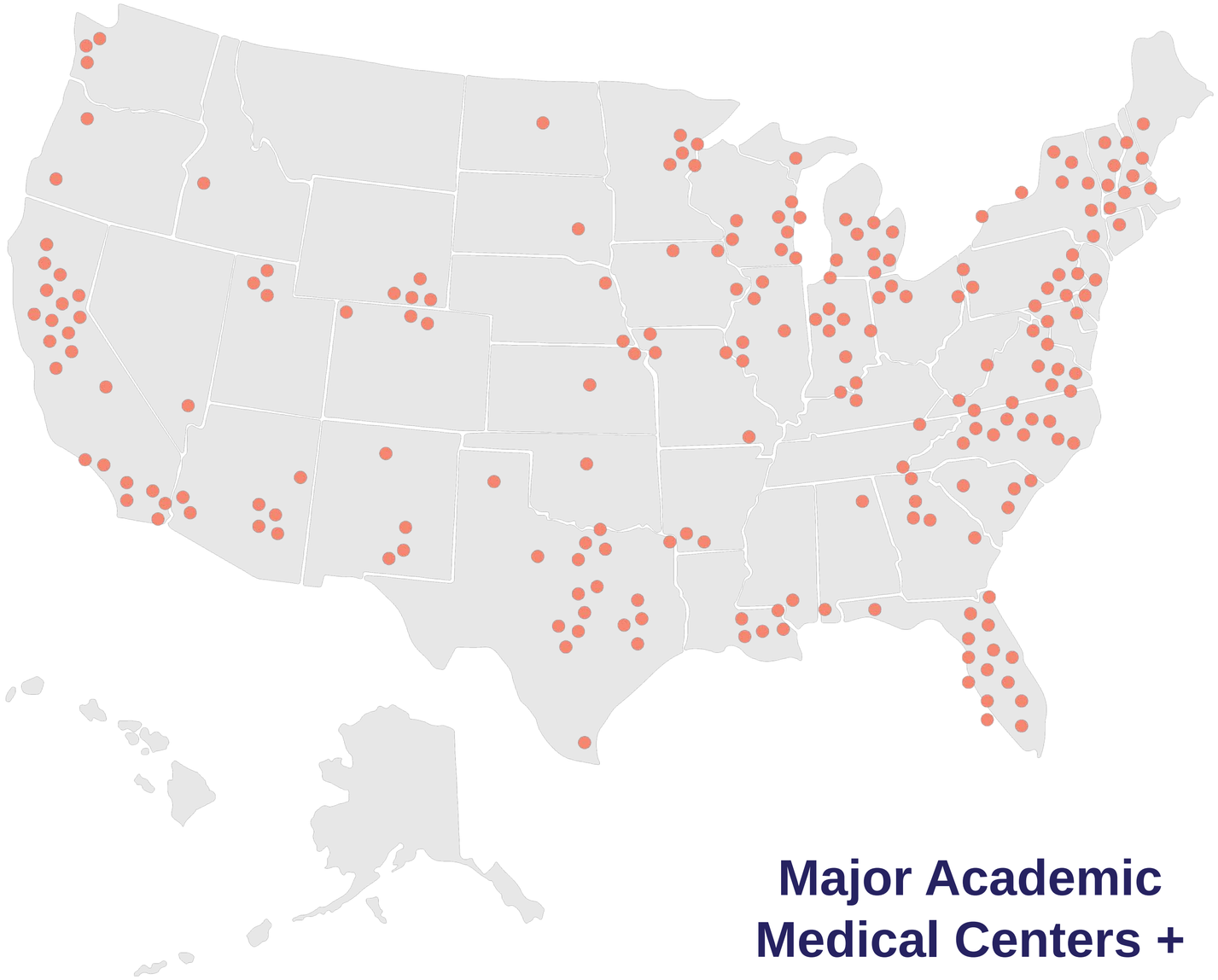
Cost of care

Disrupting health *research*…

Must also “Shift Left” towards personal, distributed health *research*

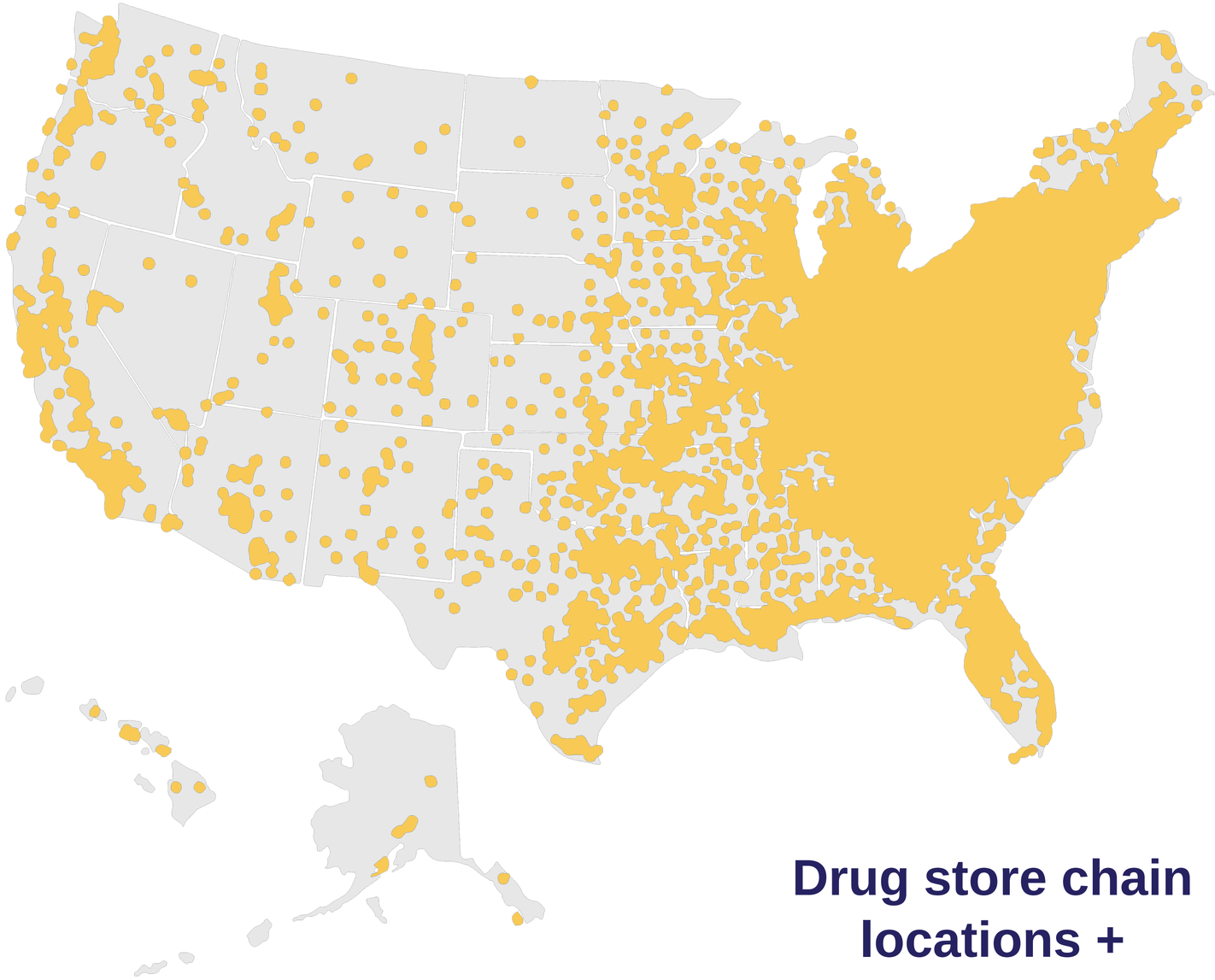


Biomedical research held fast by gravity of our expensive medical mainframes



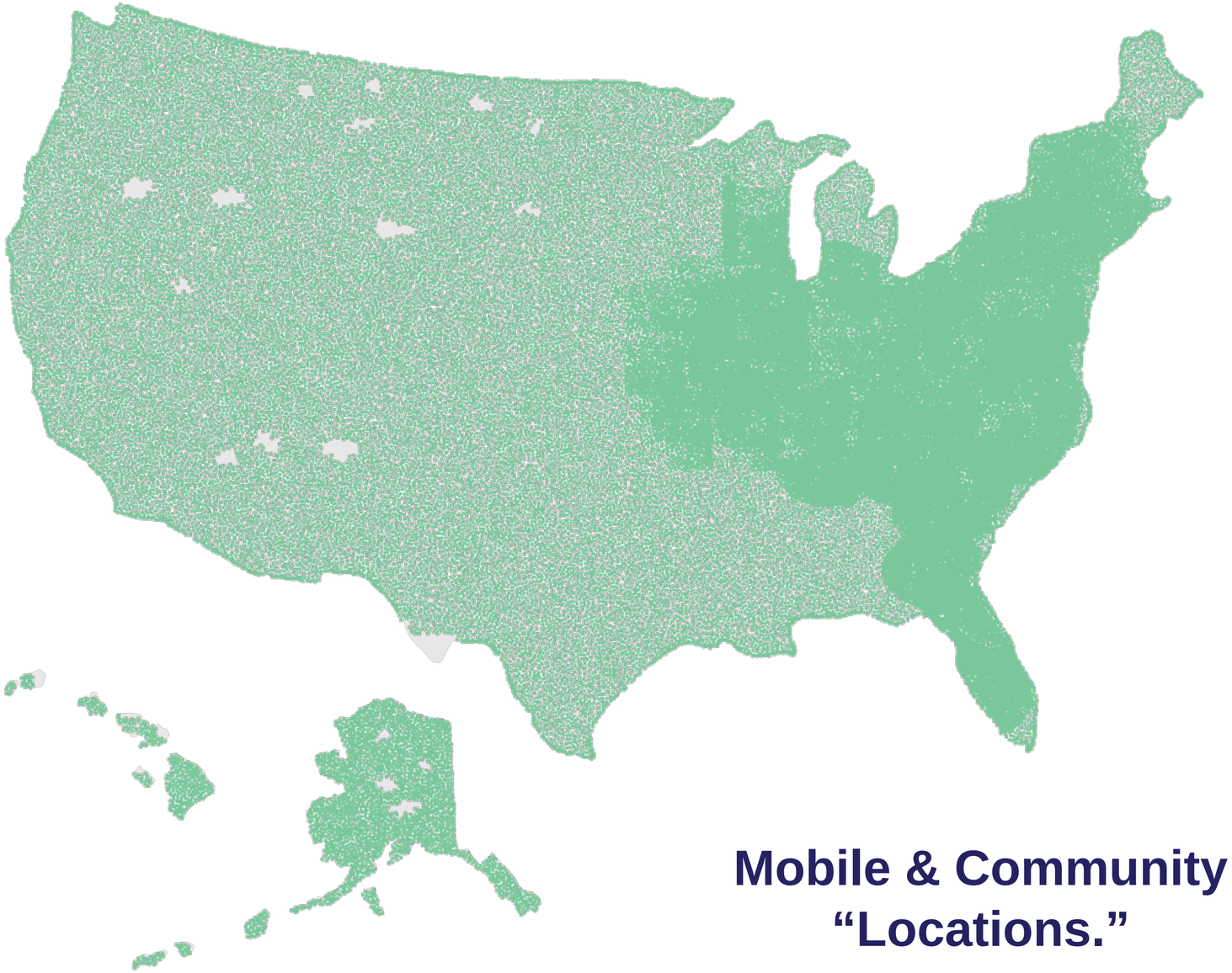
Major Academic Medical Centers +

With new care locations in the community, we have new nodes for research



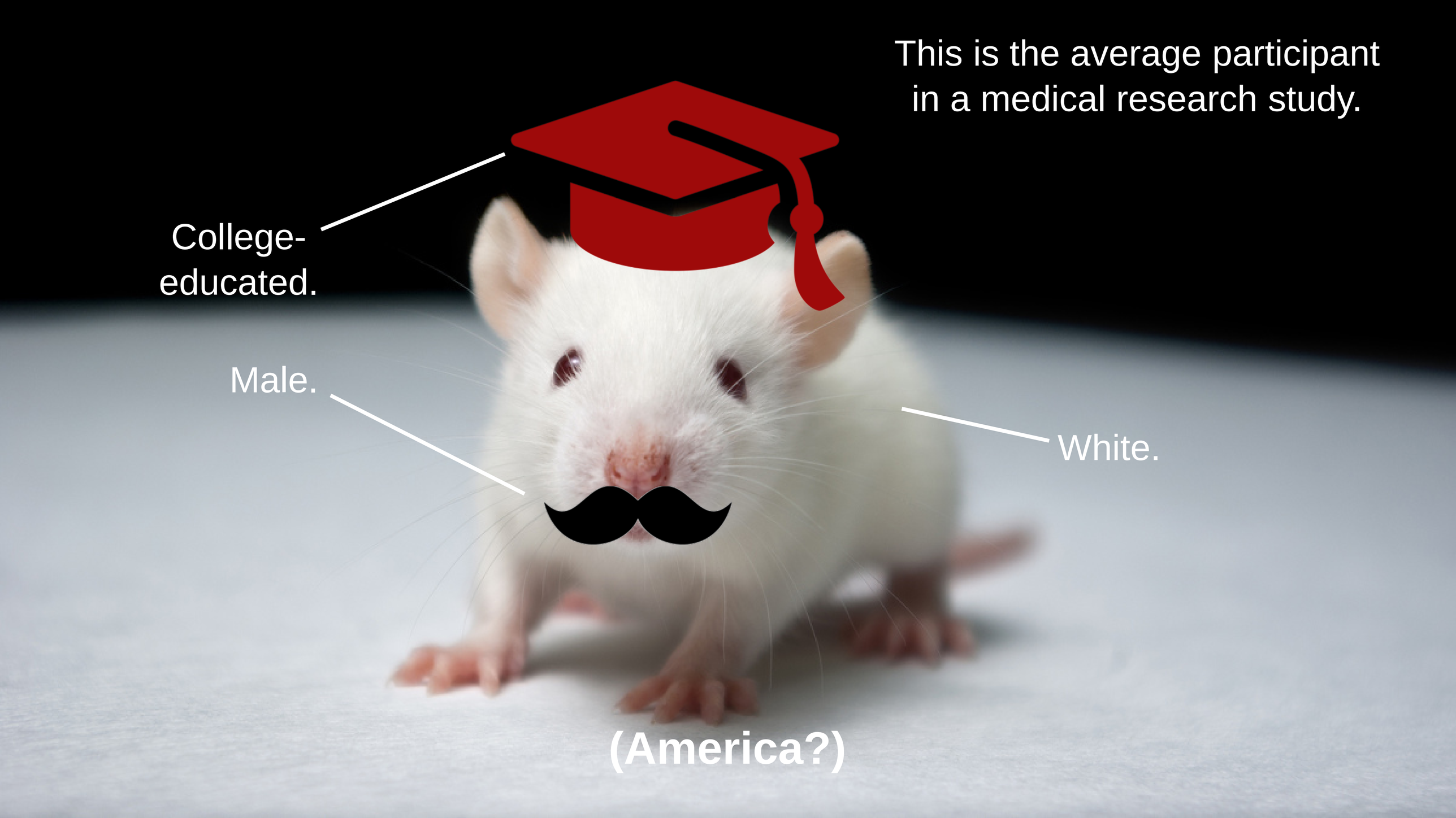
Drug store chain locations +

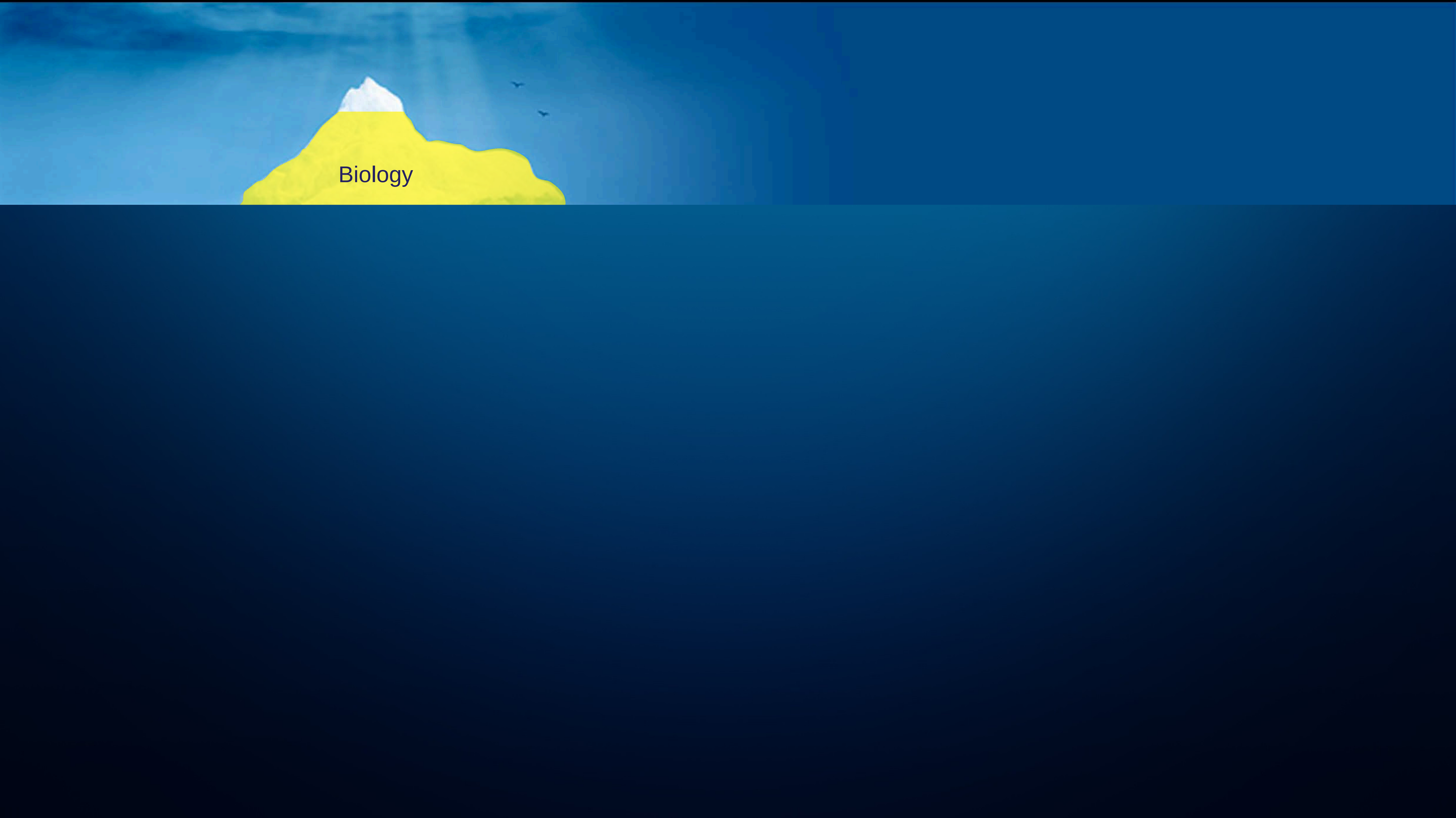
Through mobile devices, web services, & home delivery: “research everywhere”



Mobile & Community “Locations.”

This is the average participant in a medical research study.




Biology

All of Us Research Program @ NIH is about disrupting research & care

Nurture relationships
with one million or more participant partners, from all walks of life, for decades

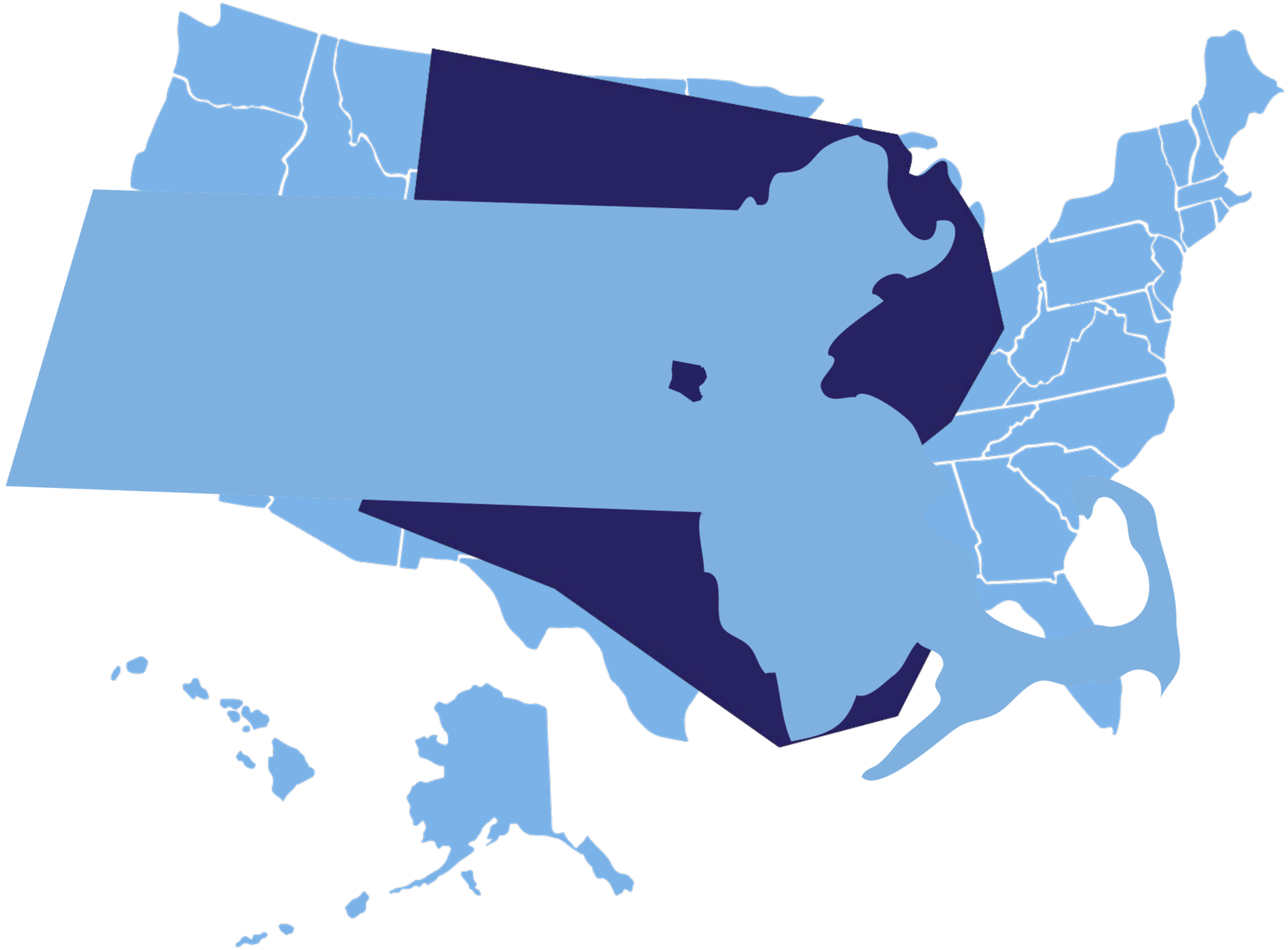
Our mission
To accelerate health research and medical breakthroughs, enabling individualized prevention, treatment, and care for all of us

Deliver the largest, richest biomedical dataset ever,
making it as easy, safe, and free to use as possible

Catalyze a robust ecosystem
of researchers and funders hungry to use and support it

1. Diversity of people at scale; 2. Diversity of data; 3. Participant-centeredness; 4. Open resource for all

Framingham for all people, all places, all conditions at the scale of 1+ million



A nationwide, lifelong partnership to collect holistic health data fueling thousands of studies!

The first of many protocols now open to people 18 & above, children soon

Enroll, Consent and Authorize EHR

- Recruiting 18+ years old initially; plan to include children in 2019
- Online, interactive consent
- Includes authorization to share Electronic Health Record (EHR) data

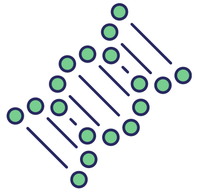
Answering Surveys

- Three initial surveys: The Basics, Overall Health, & Personal Habits
- Additional surveys will be released on an ongoing basis.

Physical Measurements*

- Blood pressure
- BMI
- Heart rate
- Height
- Hip circumference
- Waist circumference
- Weight

**Based on diverse sampling and capacity*



Provide Biosamples*

- Blood (or saliva, if blood draw is unsuccessful)
- Urine specimen
- Biosamples will be stored at the program's biobank

**Based on diverse sampling and capacity*

Wearables and Digital Apps

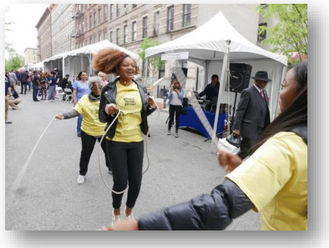
- Share data from wearable fitness devices, starting with FitBit
- Share data about mood & cardio-respiratory fitness through integrated apps
- More integrations to come

Coming soon

Already beta testing: richer EHR data, health apps, wearables, return of genetic info, researcher portal

Six grand experiments *All of Us* is undertaking to disrupt research

Diversity at the scale of 1M people: demographically, geographically, medically, and especially those underrepresented in biomedical research

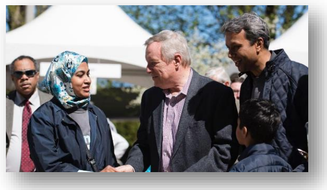


Participants as partners: included in governance, invited to co-design systems; choice to receive all data and information back

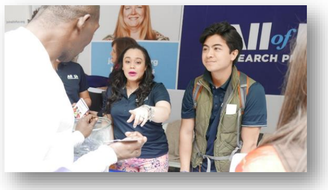
Diversity of data types: clinical, environmental, genetic, behavioral, socioeconomic, collected longitudinally

Diversity of researchers and open science: open to the public and all researchers, with open source software and tools

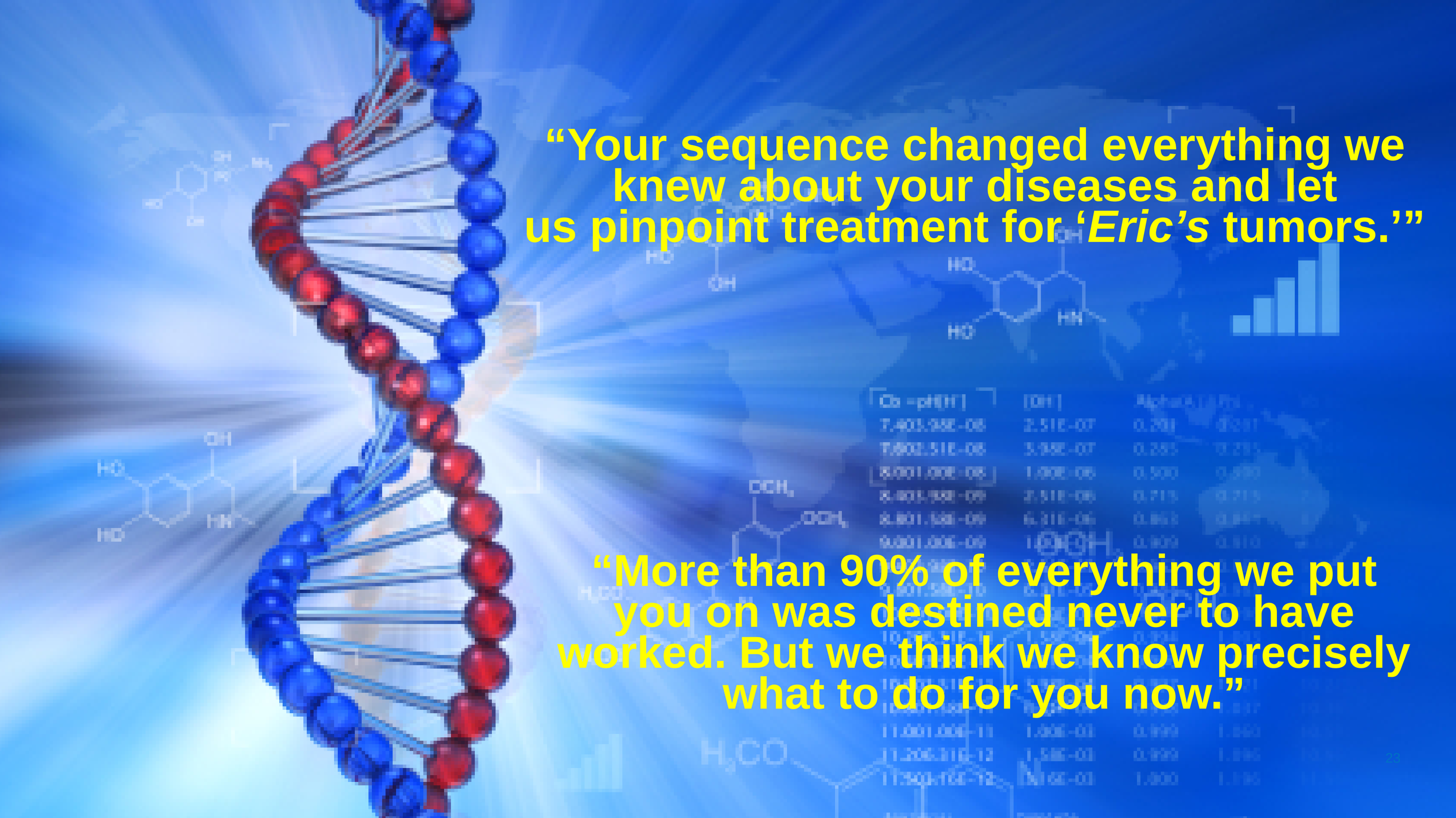
"Shifting left" the research capacity: capabilities to bring research capacity to within 0-to-35 minutes of where 95+% of our population live



Designing for scale much more than 1 million: conducting experiments & sharing learnings that can lead to a learning health system



Living proof that personal health is possible…


“Your sequence changed everything we knew about your diseases and let us pinpoint treatment for ‘*Eric’s* tumors.’”
“More than 90% of everything we put you on was destined never to have worked. But we think we know precisely what to do for you now.”

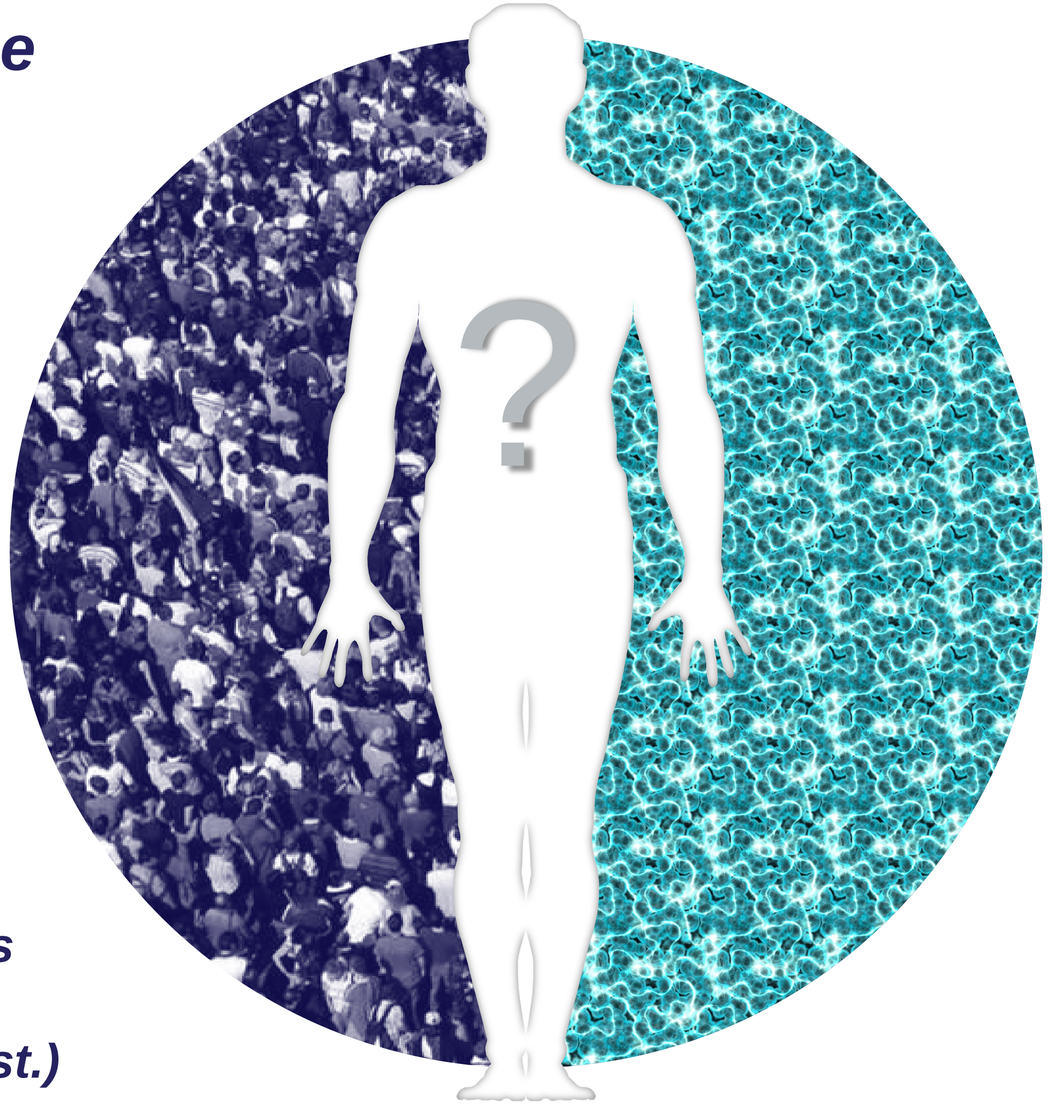

Big Ed's
PIZZA


Scan
Done
Adjust
Save Video
Print Frame
Save Frame


MobiSante

Even as a wealthy white male in 15 trials, no one could see the real me…

Through the lens of the <u>macroscope</u>…

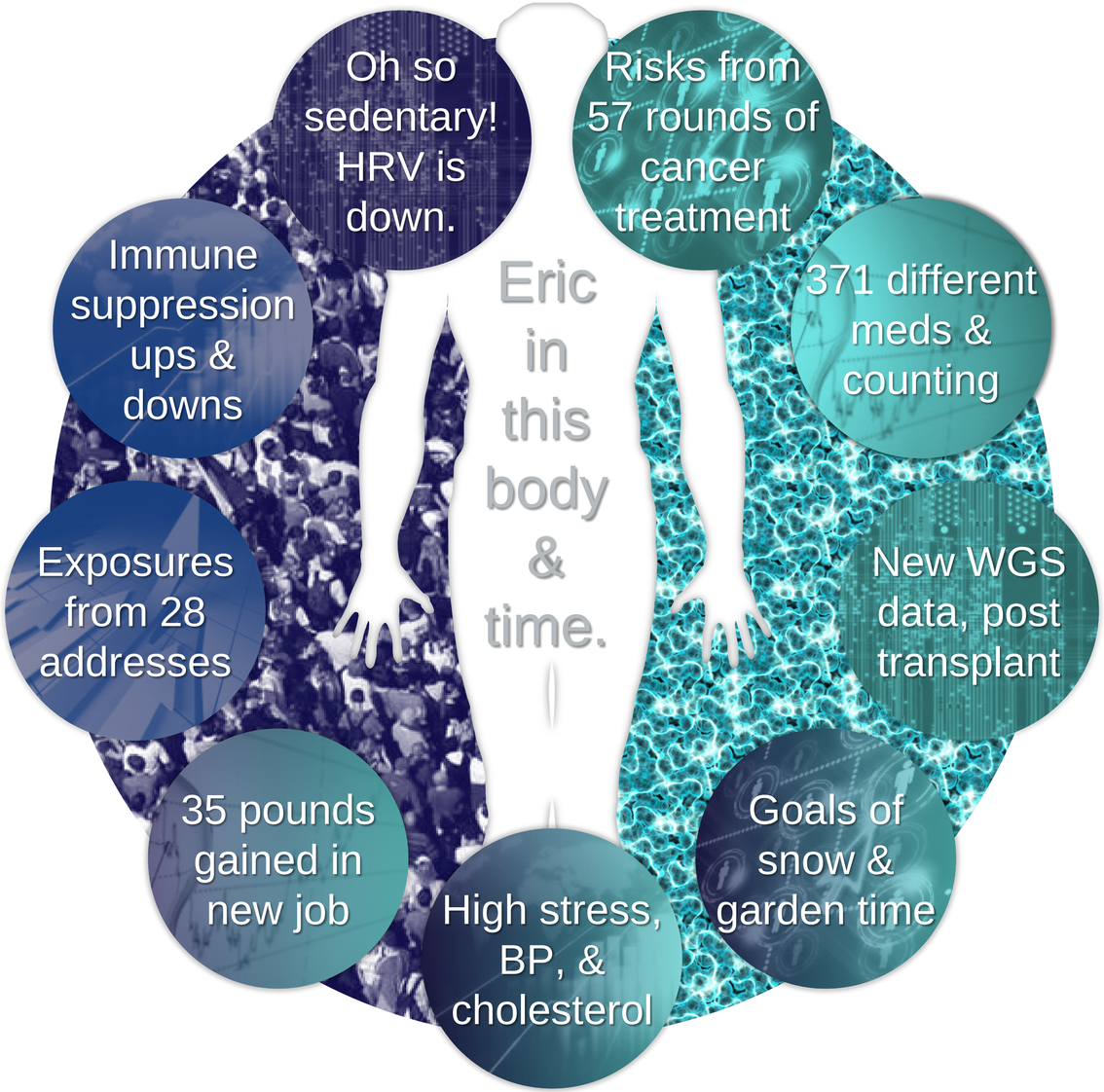


Through the lens of the <u>microscope</u>…

(I am not the average of the people with similar diagnosis codes who happened to have been studied in the past.)

(I am not the average of the tissues, cells, or molecules that happened to have been collected at a moment in time.)

We are complex adaptive systems. How do we research & treat people as such?



I barely got access to precise, personal health care in the 11th hour. How does this scale to everyone?

How can *she* participate in biomedical research & the personal health benefits it produces?

Maybe *she* will enable the era of personal health for all! Disruptions come from the most unlikely places.

Help disrupt health research & care by joining the *All of Us* Research Program!

JoinAllofUs.org

@AllofUsResearch
#JoinAllofUs

AllofUs.nih.gov