1867 Health Innovations Project

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How Digital Health Solutions Can Help Close The Health Equity Gap

Michael Crawford, MBA, MHL
Associate Dean for Strategy, Outreach, and Innovation
Founding Executive Director of 1867 Health Innovations Project
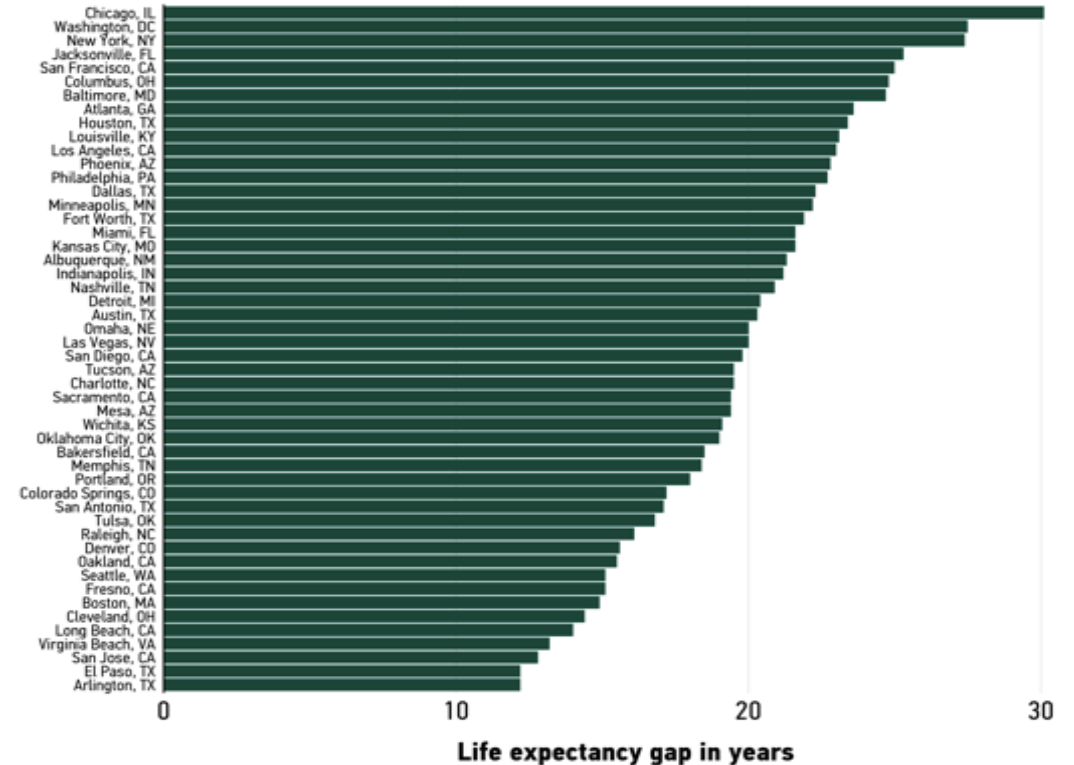
AGENDA

- Background
- 1867 Health Innovations Project
- HIEs Role In Catalyzing Innovation
- Q & A

Why Now?

- Among the 500 largest U.S. cities, 56 have very large life expectancy gaps between census tracts, where on average people in one neighborhood can expect to live **20 to 30 years** longer than their neighbors a few miles away. [1]

- Chicago had the largest gap in life expectancy across neighborhoods at **30.1 years**. Washington, DC had a life expectancy gap **of 27.5 years**, followed by New York City at **27.4 years**, and New Orleans and Buffalo, both with gaps of **25.8 years.** [1]

- People living in East Harlem live an average of **71.2 years** while those living in the Upper East Side, just a few blocks away, live to **89.9 years**. [1]

Max life expectancy gap between neighborhoods
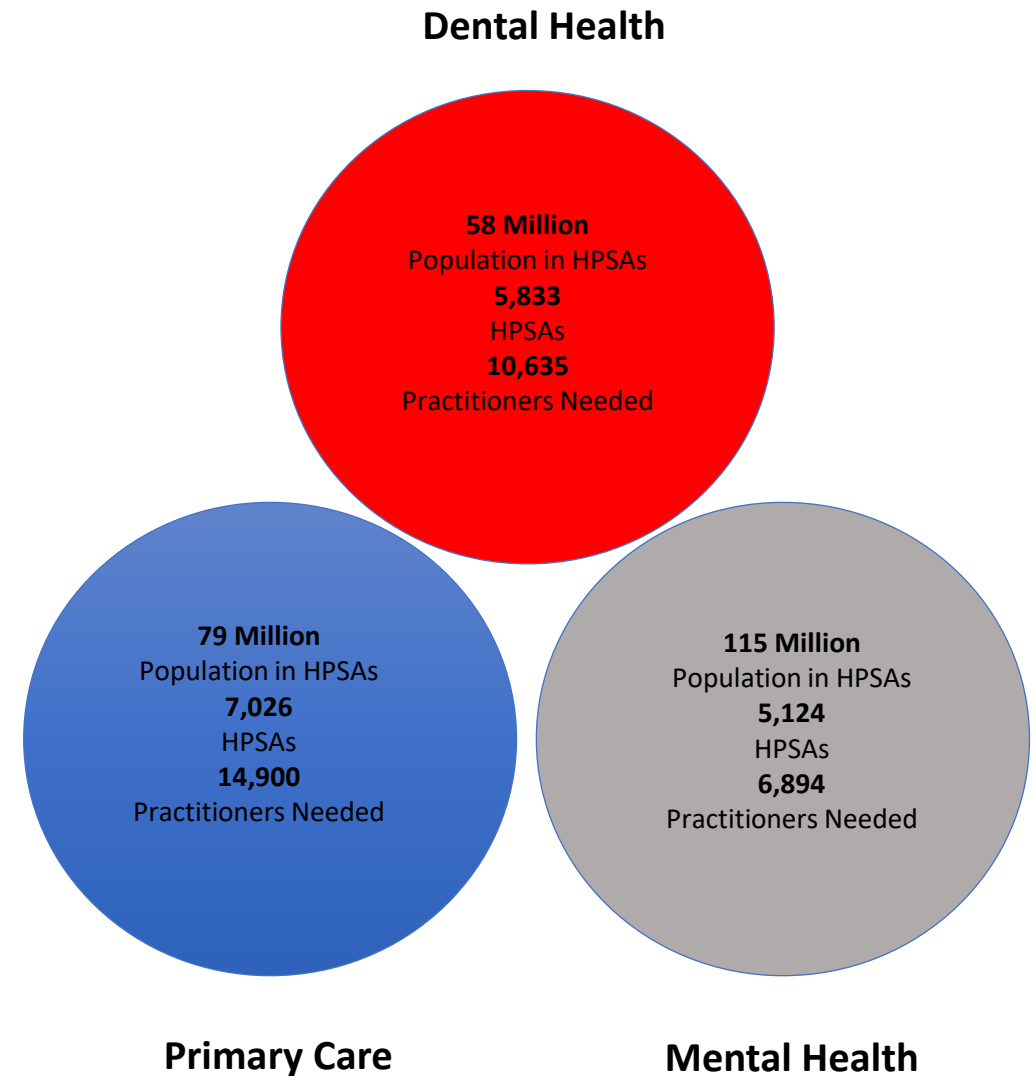
Among 50 largest U.S. cities.

City	
Chicago, IL	
Washington, DC	
New York, NY	
Jacksonville, FL	
San Francisco, CA	
Columbus, OH	
Baltimore, MD	
Atlanta, GA	
Houston, TX	
Louisville, KY	
Los Angeles, CA	
Phoenix, AZ	
Philadelphia, PA	
Dallas, TX	
Minneapolis, MN	
Fort Worth, TX	
Miami, FL	
Kansas City, MO	
Albuquerque, NM	
Indianapolis, IN	
Nashville, TN	
Detroit, MI	
Austin, TX	
Omaha, NE	
Las Vegas, NV	
San Diego, CA	
Tucson, AZ	
Charlotte, NC	
Sacramento, CA	
Mesa, AZ	
Wichita, KS	
Oklahoma City, OK	
Bakersfield, CA	
Memphis, TN	
Portland, OR	
Colorado Springs, CO	
San Antonio, TX	
Tulsa, OK	
Raleigh, NC	
Denver, CO	
Oakland, CA	
Seattle, WA	
Fresno, CA	
Boston, MA	
Cleveland, OH	
Long Beach, CA	
Virginia Beach, VA	
San Jose, CA	
El Paso, TX	
Arlington, TX	

Life expectancy gap in years

Source: NYU School of Medicine's Department of Population Health (David H. Montgomery / CityLab)

1. Large Life Expectancy Gaps in U.S. Cities Linked to Racial & Ethnic Segregation by Neighborhood | NYU Langone News

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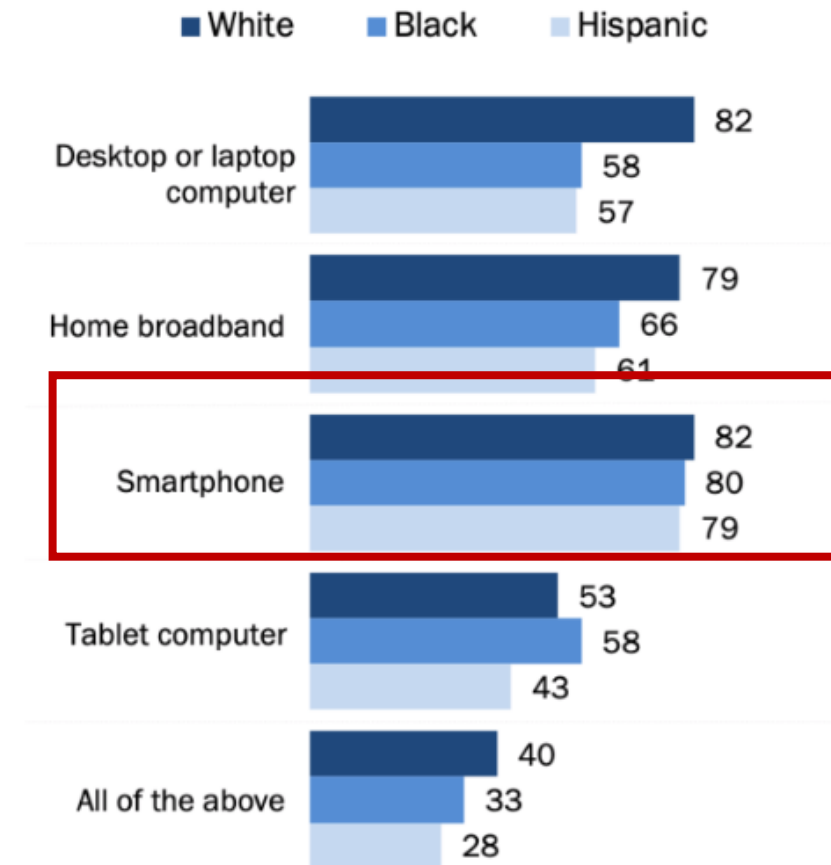
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Why Now?

- Individuals in urban and rural health professional shortage areas face a deficit of primary care providers in four areas: **general or family practice, general internal medicine, pediatrics, and obstetrics and gynecology**. [1]

- According to the Centers for Disease Control and Prevention (CDC), individuals living below the poverty level are nearly **2.5 times more likely** to have depression than those at or above the poverty level. [2]

- In the United States, individuals are more likely to have poor oral health if they **are low-income, uninsured, members of racial and ethnic minorities, immigrant, or rural populations**. [3]

Dental Health

58 Million
Population in HPSAs
5,833
HPSAs
10,635
Practitioners Needed

79 Million
Population in HPSAs
7,026
HPSAs
14,900
Practitioners Needed

115 Million
Population in HPSAs
5,124
HPSAs
6,894
Practitioners Needed

Primary Care   **Mental Health**

The Opportunity

- With the advent of COVID-19, telehealth claims **increased from 0.15%** in of April 2019 **to 13%** in April of 2020[1], and the percentage of doctors who say they used telehealth **increased from 26% pre-pandemic to 98% during the pandemic**[2]

- During the COVID-19 pandemic, the increased expansion of the use of technology in healthcare provides many opportunities to work with communities to reduce health disparities

- In particular, mobile technologies have a unique potential to reduce disparities because of their extensive use in racial and ethnic minority communities[3]

% of U.S. adults in each group who say they have the following

■ White ■ Black ▫ Hispanic

Device	White	Black	Hispanic
Desktop or laptop computer	82	58	57
Home broadband	79	66	61
Smartphone	82	80	79
Tablet computer	53	58	43
All of the above	40	33	28

1. Fair Health. Monthly Telehealth Regional Tracker, Apr.2020. https://www.fairhealth.org/article/fair-health-tracker-shows-continuing-growth-in-telehealth
2. Bulik B. Hey, pharma reps: Most docs still want contact amid COVID-19 pandemic, poll says. https://www.fiercepharma.com/marketing/physicians-and-pharma-reps-settle-into-a-new-normal-reconnect-via-video-and-phone-meet
3. *The Promises and Perils of Digital Strategies in Achieving Health Equity: Workshop Summary*. Washington, DC: The National Academies Press. https://doi.org/10.17226/23439
4. Pew Research Center (2019, April 19). https://www.pewresearch.org/fact-tank/2019/08/20/smartphones-help-blacks-hispanics-bridge-some-but-not-all-digital-gaps-with-whites/ft_19-08-20_digitaldivideraceethnicity_despite-lower-adoption-blacks-hispanics-own-sn

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The Opportunity?

- Address root causes of poor health and health disparities by improving **education, housing, and other social determinants of health**[1]

- Address **local social, economic, and environmental determinants of health** through place-based community coalitions[1]

- Leverage **digital health solutions** to increase access to primary, preventive, and sub-specialty care to enhance community health and wellness. [1]

GIVING **ALL GROUPS** THE SAME OPPORTUNITY FOR GOOD HEALTH WILL BE AN IMPORTANT COMPONENT OF BUILDING A **HEALTHIER COUNTRY.**

$135 BILLION
total economic gain per year if health disparities removed

$42 BILLION
untapped productivity due to health disparities

$93 BILLION
excess health care costs due to health disparities

$175 BILLION
economic impact of shortened life spans

3.5 MILLION
lost life years associated with premature deaths

$230 BILLION
projected economic gain per year if health disparities eliminated by 2050

Infant mortality rates are 11 deaths per 1,000 for Black children, 8 for Native American children, 5.2 for Hispanic/Latino children, and 4.8 for White children.

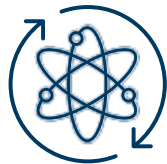Source: Business Case for Racial Equity - W.K. Kellogg Foundation (wkkf.org)

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1. BCRE-National-Report (2).pdf

Opportunities to Action?

Access to cutting edge digital health solutions

Access

Provide market knowledge to help inform innovator's care delivery, product development, and business models

Ecosystem Knowledge

Environment to validate and refine digital health solutions to better align tech with patient and provider needs

Validation

Patient and Provider Voice

Elevate patient and provider voices to enhance product development, adoption, and utility

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Collaborate with researchers, innovators, entrepreneurs, and corporate partners to tackle complex health challenges confronting medically underserved communities

Design programs that incent digital health innovation and adoption, while cultivating an environment to refine, test, validate, and scale new digital health solutions

PARTNER ALIGNMENT

DYNAMIC PROGRAM

PATIENT & PROVIDER VOICE

SCALABLE DIGITAL MODELS

Empower patients and users to participate in a process that aligns technology with their care needs, while facilitating enhanced tech adoption and digital literacy

Develop scalable digital health models that enhance access, affordability, outcomes, and patient experience

1867 Program Overview

## VISION

Better Care for All

MISSION

To cultivate an environment that supports innovative digital health ideas and empowers entrepreneurs to enhance the health and wellbeing of the medically underserved

GOAL

Develop digital health models that enhance: 1) **Access**, 2) **Affordability**, 3) **Inclusive Product Development**, 4) **Digital Literacy**, 5) **Patient/Family Engagement**, and 6) **Patient Experience**.
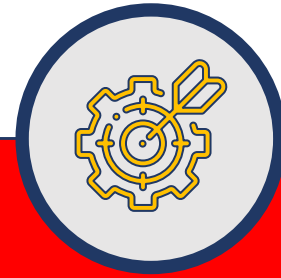
Program

The Digital Health Accelerator program is designed to develop scalable digital health models of care by cultivating an environment to validate and refine digital health solutions in a clinical environments
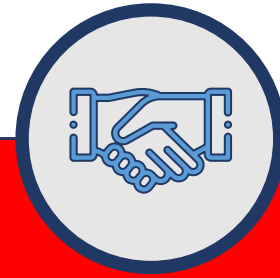
PARTNERSHIP

1) AARP Innovations Labs
2) Health and Human Services
3) DC Housing Authority
4) Stanley Healthcare

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Tech Priorities

Mhealth

- Mobile health (mHealth) solutions provide patients access to medical data to better manage their health and provide opportunities to participate in real-world, pragmatic research using digital devices.[1]

- Barriers to mhealth use, include fluency with digital solutions, limited health literacy, lack of agency, and historical mistrust of healthcare systems. [1]

- Funding for mhealth devices for the first half of 2021 was mHealth apps with **$1.6 billion**[2]

TELEHEALTH

- Telehealth is the distribution of health-related services and information via electronic information and telecommunication technologies.

- Digital and health literacy, along with access to broadband pose challenges for underserved communities.

- Telehealth companies raised the funds over **105 deals, a 147% increase in year-over-year** **$1.7 billion raised in 79 deals.** [2]

DATA ANALYTICS

- Health data analytics leverages various methods to analyze processing data, including artificial intelligence and machine learning.[3]

- Big data techniques such as machine learning and artificial intelligence may not reflect the diversity of perspectives and backgrounds. Further, datasets lack diversity, which might promote bias and incomplete insights[4]

- Funding for data analytics platforms for the first half of 2021 was **$1.5 billion**.[2]

VR

- VR is an artificial environment which is experienced through sensory stimuli (such as sights and sounds) provided by a computer and headset. The individual's actions partially determine what happens in the environment[5]

- VR has the potential to generate immersive community, cultural, and care experiences that promote empathy and better outcomes

- The global augmented reality & virtual reality in healthcare market size is expected to reach **USD 9.5 billion by 2028.**[6]

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1. Use of Mobile Health Applications in Low-Income Populations | Circulation: Cardiovascular Quality and Outcomes (ahajournals.org)
2. Digital health dollars hit $15B high driven by telehealth investment in 2021 | FierceHealthcare
3. Data Analytics and Informatics are Two Separate Disciplines (And Why This Matters to HIM). 2020. Accessed: July 05, 2020 http://bok.ahima.org/doc?oid=302313#.XwIjoucpA2
4. Big Data Analytics and the Struggle for Equity in Health Care: The Promise and Perils (nih.gov)
5. Virtual Reality | Definition of Virtual Reality by Merriam-Webster
6. Augmented Reality & Virtual Reality In Healthcare Market (globenewswire.com)

Health Priorities

ASTHMA	COPD	CANCER	DIABETES	COVID-19

ASTHMA

- Blacks are **1.5x** and Puerto Ricans are **2x** more likely to have asthma compared to whites[2]

- Blacks and Puerto Ricans are **3x** more likely to die from their asthma and blacks are **5x** more likely to seek emergency room care for their asthma than whites[2]

COPD

- Black women report having COPD at higher rates than white women[3]

- COPD prevalence has been shown to increase with decreasing levels of income and education[3]

CANCER

- Black people in the United States are around **2x** as likely to die of prostate or stomach cancer as their white counterparts

- Black and Hispanic people are diagnosed younger and with more aggressive types of breast cancer than white people

- Across most cancer types, death rates are higher for Black people than they are for other groups

DIABETES

- The risk of having a diabetes diagnosis is **77% higher** among African Americans, **66% higher** among Latinos/Hispanics, and **18% higher** among Asian Americans[6]

- **Minorities** experience lower quality of care and greater barriers to self-management compared with white patients[6]

- **American Indians and Alaska Natives** are more likely to have type 2 diabetes than any other US racial group

COVID-19

- COVID-19 cases in Blacks and Hispanics are **2.6x and 2.8x** higher than the rate of whites

- Rates of hospitalizations are **4x higher** in Blacks and Hispanics compared to whites

- The rate of death due to COVID-19 is **2x** higher among blacks than whites

1. Asthma and Allergy Foundation of America. https://www.aafa.org/asthma-disparities-burden-on-minorities.aspx
2. Fuller-Thompson, E., et al.. (2016). COPD in a Population-Based Sample of Never-Smokers: Interactions among Sex, Gender, and Race. *International Journal of Chronic Diseases.* https://doi.org/10.1155/2016/5862026
3. Stewart, W.F. et al. (1992). JAMA. 267(1):64-69. doi:10.1001/jama.1992.03480010072027
4. Nicholson R.A. et al. (2006). Headache;46(5):754-65. doi: 10.1111/j.1526-4610.2006.00453.x.
5. Centers for Disease Control and Prevention. (2020, Aug 18). COVID-19 Hospitalization and Death by Race/Ethnicity. https://www.cdc.gov/coronavirus/2019-ncov/covid-data/investigations-discovery/hospitalization-death-by-race-ethnicity.html
6. Centers for Disease Control and Prevention. 2011 National Diabetes Fact Sheet. Atlanta, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion Division of Diabetes Translation, 2011
7. Addressing Health Disparities in Diabetes | Diabetes | CDC
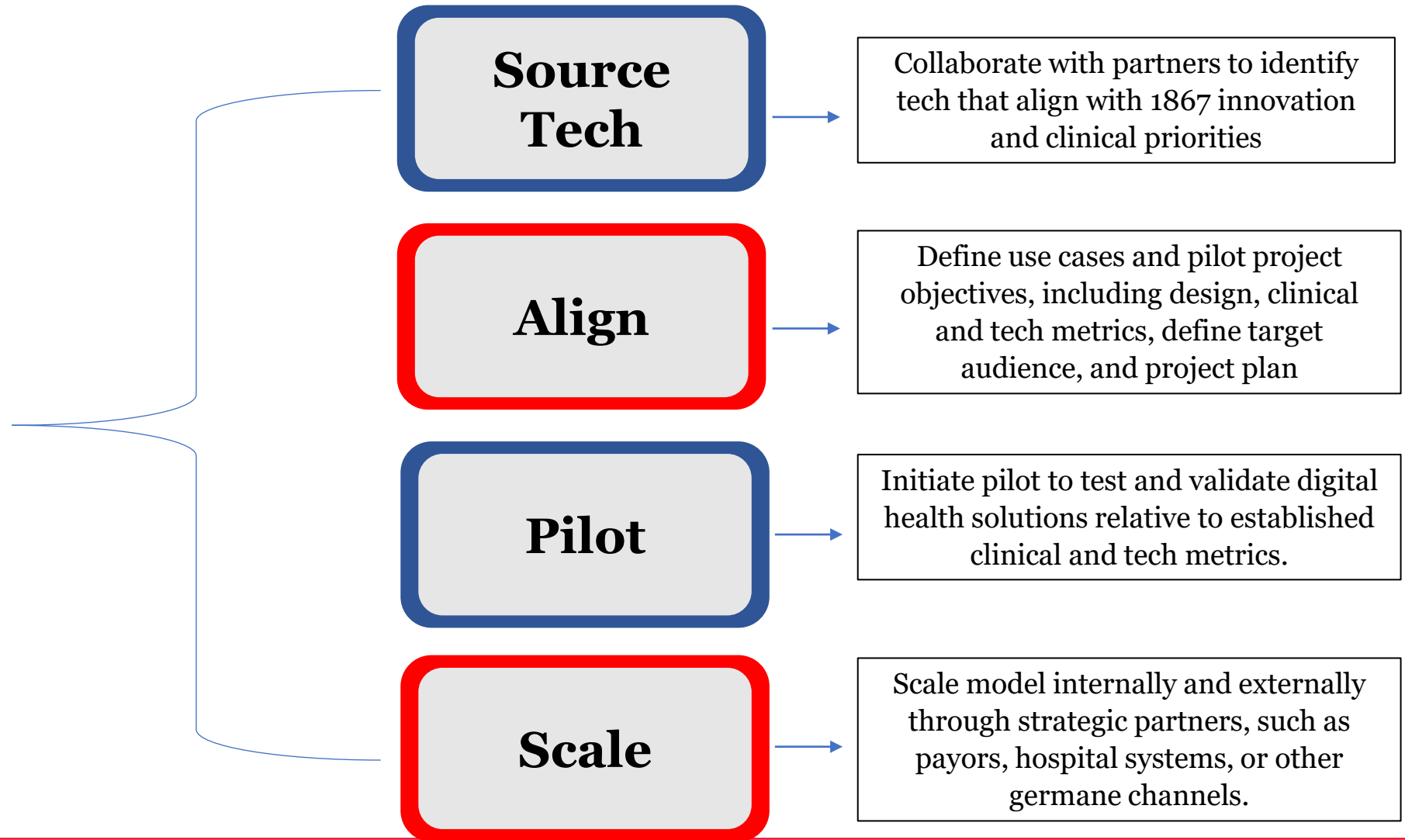
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Accelerator Program

- Collaborate with entrepreneurs, innovators, and researchers through a co-creation process to test and validate digital health solutions in a dynamic clinical environment

- Develop scalable clinical pilot projects to address chronic health conditions using cutting-edge digital health solutions

- Create new models of care supported by digital health technology and research frameworks that can be published and scaled to optimize care. Clinical Pilot research findings and insights will be disseminated to enhance the body of research related to digital health technologies in medically underserved communities

- Partner with payers, regulators, and policy makers to provide insights around what types of technologies have proven to be efficacious in a clinical setting

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Accelerator Process

Collaborative Approach

Source Tech — Collaborate with partners to identify tech that align with 1867 innovation and clinical priorities

Align — Define use cases and pilot project objectives, including design, clinical and tech metrics, define target audience, and project plan

Pilot — Initiate pilot to test and validate digital health solutions relative to established clinical and tech metrics.

Scale — Scale model internally and externally through strategic partners, such as payors, hospital systems, or other germane channels.

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HIE's Role In Catalyzing Innovation

Democratize Access to Data

Standardize Data Requirements

Diversify Governance and Community Engagement

Provide More Real-Time Data & Prospective Analysis

Health Information Fiduciaries

Thank you.

Michael R. Crawford, MBA, MHL
Associate Dean for Strategy, Outreach, and Innovation
Founding Executive Director of 1867 Health Innovations Project
Email: Michael.Crawford@howard.edu
Twitter: @MRC24

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