



**Smart Community
Health Coalition**

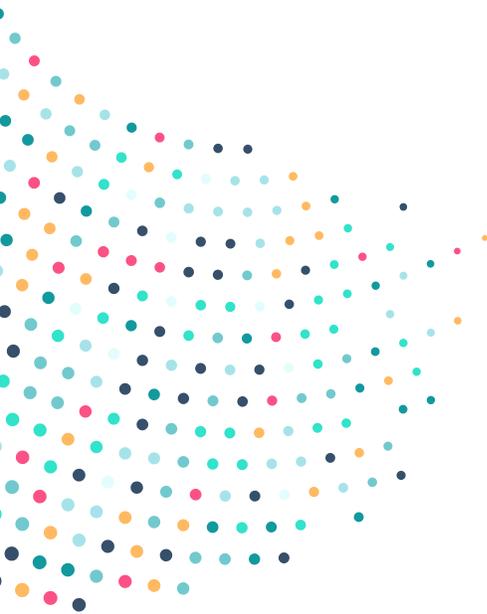
INTRODUCING
**The Smart
Community
Health System
Model**

A world without health inequities

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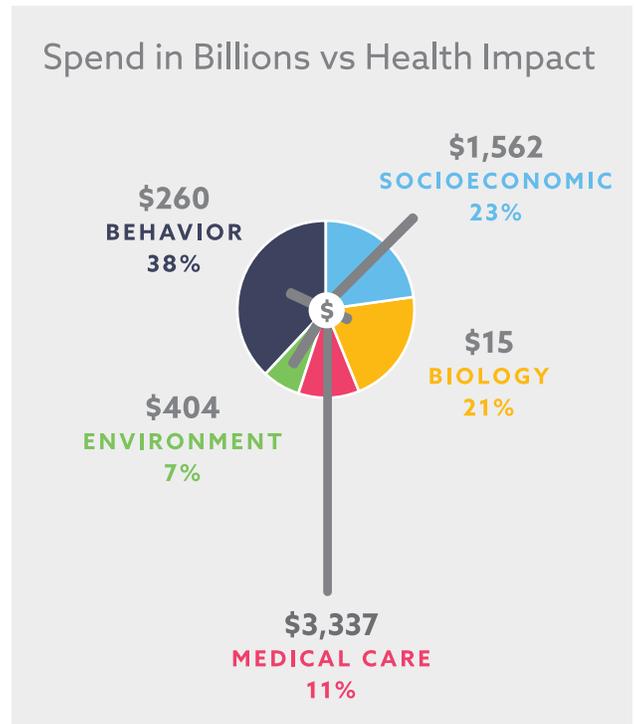
The World Health Organization estimates that only **11%** of a patient's health can be attributed to the healthcare services they receive.

The Problem

The \$3.2 trillion US healthcare system fails to provide an easy-to-understand, easy-to-use, and unbiased model to serve all people based on the attributes and characteristics of *who* they are and not *what* condition they have, as defined by the current commercially oriented payment system. The World Health Organization (WHO) estimates that only 11% of a patient's health can be attributed to the healthcare services they receive, but these services have been the primary focus of policy legislation, such as the Affordable Care Act, and recent payment changes by the Centers for Medicare-Medicaid Services, as the healthcare system has shifted from a volume-based payment model to incorporate value-based payments.

As indicated by the chart on the right, *who* a person is drives 89% of the determinants of their health, but focusing on *what* conditions they have can only drive 11% value to the individual. This means that we are spending our resources and our attention on a system that currently only impacts our lives in very limited ways, hence the common description of our healthcare system as a "sickness" system.

To truly transform the healthcare system and focus on improving all the determinants of an individual's health, we must establish an operating model that creates the necessary resources and systems around an individual to support them in living their best lives - to support their *who* and not their *what*.



Source: DeterminantsOfHealth.Org

<p>89% of health occurs outside of the clinical space through our genetics, behavior, environment and social circumstances.</p>	<p>The US spends over \$3 trillion annually on medical care, which is more than the other four categories combined (\$2 trillion) despite the fact that it only accounts for 11% of impact.</p>	<p>The US spends 12 times more to address medical care than we do to address individual behavior, even though it has only quarter of the impact.</p>
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INTRODUCING

The Smart Community Health System Model

Smart Community Health is a model of care focused on disease prevention and risk monitoring, where the ecosystem of stakeholders and available resources can collaborate and support shared decision making oriented around individual needs, preferences and determinants of health, delivering on the true promise of personalized health.

At DHIT, we define the Smart Community Health System as the next generation of health and care which is open access, interoperable, and powered by secure data sharing and advanced analytics.

Smart Community Health leverages a new generation of information technologies, such as the Internet of Things, big data, cloud computing, advanced biotech and artificial intelligence, as well as a new generation of community health workers called Health Architects to radically transform the traditional medical system and make healthcare more efficient, more convenient, more effective and more personalized.

For individual users, the Smart Community Health System promises a world where they are engaged, motivated and incentivized to self-manage their health through available technologies, with uniform standards and blockchain-enabled data security empowering them to share data in return for meaningful, actionable insights and guidance.

For medical institutions, Smart Community Health can reduce operating costs, improve efficiency, and relieve the pressure on overburdened staff by extending the reach of the available workforce.

For clinical research organizations, Smart Community Health can provide access to real-world data and evidence, driving a reduction in the cost of research, accelerating time to market, and improving the overall efficiency of R&D.

For public health and community leaders, Smart Community Health can reduce health inequalities among rural and underserved communities by providing access to global advancements in care, and reduce the burden of disease by promoting the implementation of more effective prevention strategies.

For technology providers, Smart Community Health promises a new open marketplace driven by "coopetition" where global supply is matched to local demand and innovative solution providers have the opportunity to test, validate and refine their offerings to maximize health and economic outcomes.

Central to Smart Community Health is the acknowledgement that technology alone is not the answer – rather what is required is a human-centered design approach to reimagine how healthcare can be better designed, delivered and experienced, with technology as an enabler. Its success ultimately depends on the joint efforts of patients, doctors, health institutions, researchers, technology providers, and communities to come together and realign incentives and motivations around a fit-for-purpose 21st century model of health and care.



Smart Community Health is a model of care focused on disease prevention and risk monitoring, where stakeholders and resources can collaborate around individual needs, preferences and determinants of health.

BUILDING THE INFRASTRUCTURE

10 Steps to Smart Community Health



Community Confidence

A scorecard and decision support tool

Problem – It's challenging for community leaders and decision makers to acquire the data they need to make informed decisions that will positively impact their community.

Solution – A county-level scorecard that delivers transparent, accurate, timely and actionable insights on the current and future wellbeing of the community across health, economic, environmental, and behavioral factors.

Value – Allows community leaders to make informed, evidence-based decisions for population health management that take into account community health status and sentiment.



VirtualMe

A community and individual simulator of health with 3D avatar

Problem – Patients are often treated by a reactive "sick care" system and lack personalized, actionable information to make proactive, healthy decisions.

Solution – An interactive 3D avatar powered by machine learning that provides a visual representation of current and future health status across communities and individuals and simulates the impact of public and personalized health interventions over time.

Value – Motivates individuals towards healthier behaviors by presenting cause and effect of current vs future health choices and interventions in an engaging format.



Health Architects

Professional resource to engage communities and assess needs

Problem – Although social workers and community health workers have recently been employed in healthcare services, their training does not include the use of digital health tools that take into account the full range of health determinants, beyond social and clinical drivers.

Solution – A new generation of specially trained healthcare professionals who engage individuals in health conversations and collect social, environmental, behavioral and genomic determinants of health data to create a blueprint for better health focused on disease prevention and management.

Value – Unlike conventional health coaches or care navigators, Health Architects represent a new model of personalized health that leverages machine learning to understand unmet needs and generate personalized recommendations while re-humanizing the healthcare experience to engage, motivate and inspire individuals towards better health decision making.



Health Utility Grid

Community infrastructure to support digital transformation

Problem – Data is disparate and not democratized. Users often require specialized training to know which data sources to pull, how to analyze them, and which indicators are most meaningful.

Solution – A Community Cloud “HUG” infrastructure that enables individuals and organizations to leverage the ecosystem of connected data for the community’s best interest, including clinical research and service design and delivery.

Value – Provides critical infrastructure to ensure all parties have the intelligence they need to make informed decisions for public health initiatives, service planning, etc. based on current and future community health needs.



Monitoring + Risk Stratification

Focusing on prevention first

Problem – The World Health Organization estimates that only 10% of an individual’s health status is attributed to health services, but the current system continues to focus on this 10% rather than the 90%, including social, environmental and behavioral factors which would optimize whole life health at an individual and community level.

Solution – Supported by AI-driven digital assistants, Health Architects will be able to track and analyze personal health history across diet, exercise, mind, sleep and other clinical, social, environmental, behavioral and genomic determinants of health to understand individual risk factors and provide support to patients and care providers for a wide variety of conditions and diseases.

Value – Aligning resources and preventative strategies and interventions to the greatest need will deliver immediate public health and economic benefits.



Clinical System Integration

Creating a complete health record

Problem – Regional/statewide Health Information Exchanges (HIEs) are often incomplete due to being regional. And while they do provide community health information to county and state-level decision makers, this data is often not incorporated at the point of care. There is no national HIE in the US.

Solution – Connect the HUG to Electronic Health Records across clinical specialties with two-way data exchange to create longitudinal health records regardless of location or provider.

Value – Transforms the capabilities of healthcare and life sciences enterprises to manage population health and conduct clinical research; empowers a collaborative model of care across community health providers to advance community health, care and well-being.



Data Democratization

Aligning incentives and motivations

Problem – The commercialization of personal data has historically been out of the control of the individuals and communities where the data originates.

Solution – Through the Health Utility Grid and powered by blockchain technology, individuals and communities will have the ability to control, share and sell their data with confidence.

Value – Incentivizes individuals and communities to fuel their Community HUG with more data over time because of the rising value of their data driving both health and economic benefits.



Living Learning Lab

Driving innovation and solution validation

Problem – Digital health innovations are popping up around the world, but we are lacking an efficient mechanism or framework for testing and validating potential solutions in a real-world context.

Solution – Leverage a standardized and facilitated Innovation Framework to test, validate, and evaluate new solutions according to individual and community needs.

Value – Accelerates product/user fit by building solutions against validated need and testing across an extended “Living Learning Lab” to minimize risk and maximize impact.



Global Solutions Marketplace

Matching global supply with local demand

Problem – There are 318,000 digital health apps, making it difficult for any one person to find the best match. There is an absence of concrete outcomes data to show which solutions are effective for which people in which use case.

Solution – Developing a digital health marketplace that sources, validates, and matches a global supply chain of products and solutions to service local health needs.

Value – Ensures accurate matching of supply to demand and provides equal access to global advancements in care.



Individualized Health Benefits

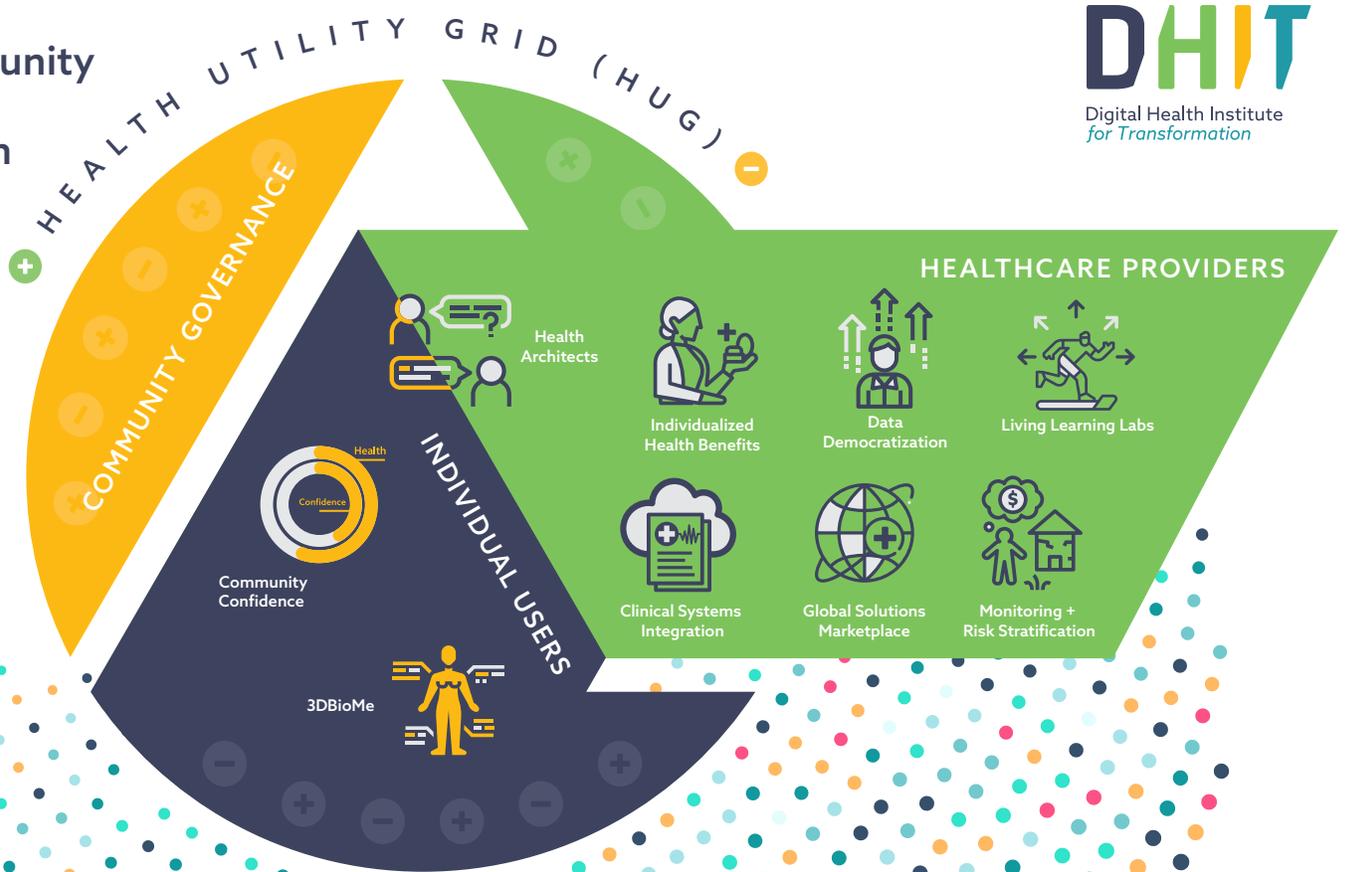
Solving for the person, not the disease

Problem – Health benefits packages are provided through employers and health insurance exchanges. Unlike any other form of insurance in the US, they are “one size fits all” packages that do not take into account individual needs, preferences and behaviors.

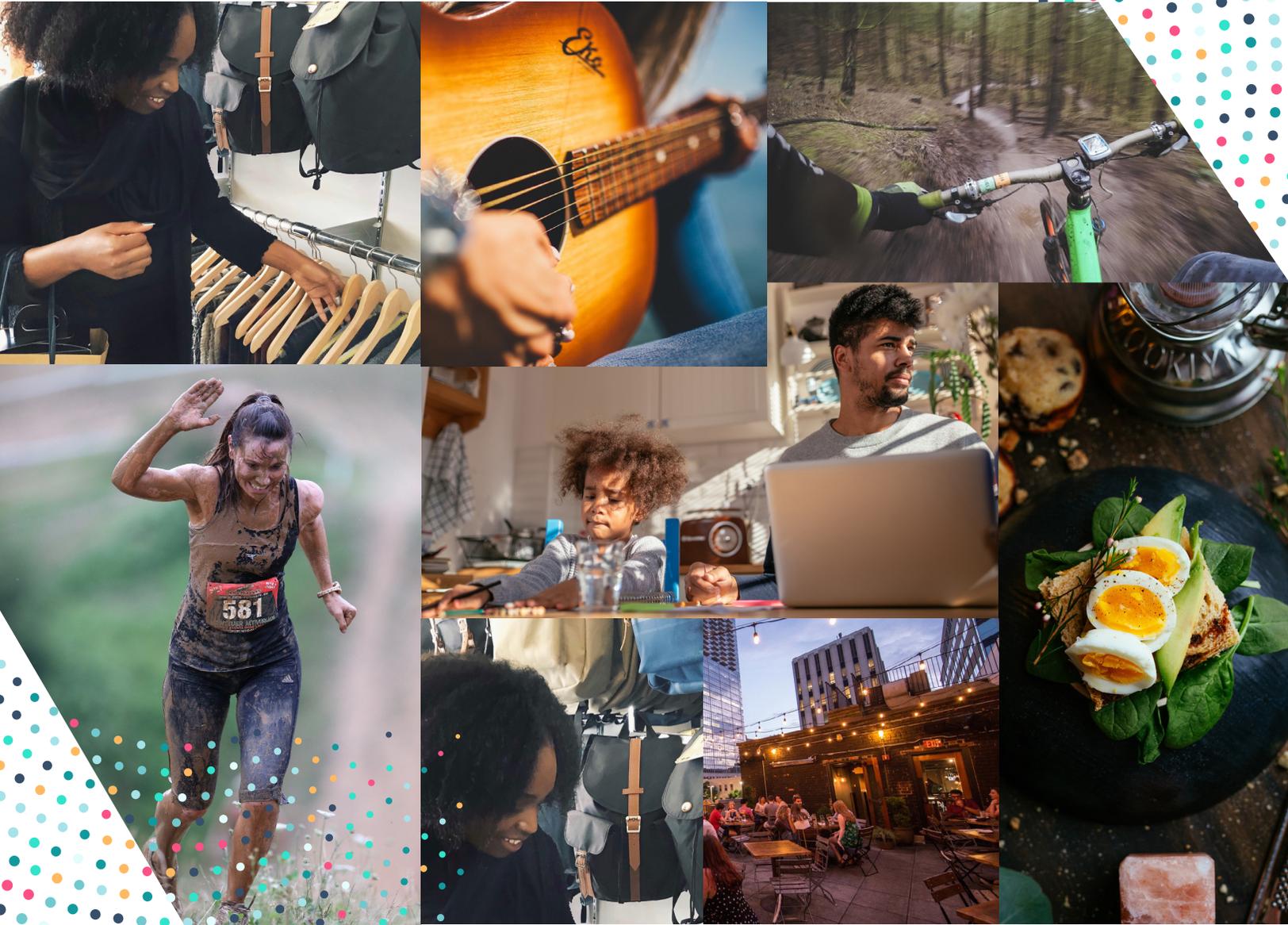
Solution – Individuals will be able to access the Smart Community Health Plan to build personalized systems of care and coverage.

Value – Enables individuals and community members to access a global supply of resources and solutions to design their own benefits package based on their individual determinants of health.

Smart Community Health System



The Smart Community Health System Model



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