Whole Health

PREVENTION IS THE CURE

Family Medicine & Public Health
Risk Management: 1990-2003

Det Norske Veritas
Founded: 1864
HQ: Høvik Norway
Offices: 100 countries
Customers: 100,000

Government - Industry services to regulate safety, improve processes & to protect natural resources

Advocates Social Responsibility

Maritime
Energy
Environment
Healthcare

Risk, Process & Regulatory Policy

Passion for modeling systems and their connection to other systems... outcomes & risk
Dynamic System Modeling

SYSTEM-SYSTEM MODELS

Scientist → Experts → Government

System Model → Process Model → Policy Model

Regulatory Policy & Industry Best Practice

Avoiding Chernobyl Disasters

April 25 1986
Control rods removed without safety system

April 26 1986
1:23AM Uncontrollable chain reaction occurred

Explosion
50-185 Metric Tones of Radioactive Material
3x more radioactive than Hiroshima
Expert in Healthcare Utilization

Broken Bones

Sea Creature Injuries
Various Projects: 2008-2015

Institutional Care

Community Care
Xerox Government Healthcare Services

Identify Health Risk
Recommend Policy Change
Administer Programs

Health Informatics

26 States
Health & Social Services and Medicaid

48 million
Medicaid & Medicare Beneficiaries

1.3 petabytes
Medical & Pharmacy Claims Data
Healthcare Policy Strategies

**Government Healthcare Strategy**

The Federal Government’s Plan for Healthcare is ???... No one knows

1. Behavioral Health
2. Care Delivery
3. Chronic Disease
4. Payment Reform

46 States Are Using Waiver Programs to Innovate Locally

Source: Osher Wheel of Health - https://www.oshercollaborative.org/clinical-care
BP 2 ½ Years Ago

Max 148 mm Hg
Systolic Pressure Under Stress

135 mm Hg
Systolic Pressure

BP Now

Max 128 mm Hg
Systolic Pressure Under Stress

112 mm Hg
Systolic Pressure

My Experience

Some Impact
Whole Food Diet
CrossFit Exercise

Big Impact
Downhill Bike
Surfing
Yoga & Meditation
Ashwagandha
Probiotic

Surf daily as needed
Back-to-Basics Community Health

Data Science
- Health Risk Identification
- Resources Utilization
- Optimize Treatments
- Options for Sustainability

What's Needed to Create a Better Community Health Delivery System

Treatments
- Community Sustainable Agriculture
- Integrative Community Wellness
- Integrative Medicine
- Environmental Toxin Reduction
Whole Health Project Begins: 2018

Holistic Screening & Diagnostics
Health Works
System Physiology
Behavioral
Environmental
...

Holistic Treatment Optimization
Primary Care
Enjoyable Activity
Missing Nutrients
Remove Toxins
Manage Stress
...

Healthcare Policy Simulation
Government
Better Utilization
Local Care Gaps
Policy Strategy
Cost Saving
...

Better Community Health Delivery System
Whole Health Partnerships
Kentucky Medicaid - Avoidable Hospital Admissions (5yr. prediction)

$1.06B Diabetics Med Costs
Modifiable Complications
Saving 5% = $53M yr.

Patients with +7 yr. history
~2M CMS diabetic patients
Survival Analysis
+25% Population

Depression – Top Predictor

Added Holistic Dimensions
Stress & Mood Disorders
Relationships & Community Environmental Conditions
Access to Nutrients & Food
...

University of Louisville
School of Medicine

UC San Diego
School of Medicine
The Whole Health Platform
Focused on Community Health Delivery Innovation

Integrated Datasets

Computing Platform

~$2.5 – $5.0 Million Cloud Platform
State Partnership Studies
University Innovate Partnerships

Counter-Offer
Technology Architecture

Meta Data

Database

Raw Data

Wife Approved
Research IT Help

- They helped us come up with a technology architecture
- helped us put in place the security approvals we needed for our datasets
- connected us to SGCI to help us manage the technology work and get CS resources to write code
- connected us to SDSC data center to host our servers for the project
- connected us to IT people and helped move the process along for network setup

And They did this all for FREE
Current Status

- Building the Platform SDSC Center
- AHRQ Grant Community + Behavioral Health
- Working on Industry Partnerships
- Planning to Approach State DHSS for POC
- Planning to Add University Collaborators

Creating new standards for Integrated Primary Care that connect community health to the primary care system. Partnered to develop distributed decision support models that improve community based screening & diagnostics.

Developed a community based public healthcare system that uses community health workers & clinics to deliver preventive care. Partnered to improve the technology available to CHW for better preventive delivery.
The simple idea of preventing chronic disease

“An ounce of prevention is worth a pound of cure.”

*Benjamin Franklin*

*Imagine such a simple concept in healthcare “keep people healthy so they use the high cost healthcare services less”*