

BIG IDEAS IN HEALTHCARE



TREEHOUSE
TECHNOLOGY GROUP



BIGGEST IDEAS IN HEALTHCARE

- › Security, Access and Control
- › Population Health
- › Cloud
- › Real-time Computing
- › Precision Medicine
- › Risk Management and the Value of Care
- › Value-Based and the Episode-of Care
- › Patient and Employer Centered Care
- › Financial Services and Risk Transfer

Conclusion: “Go Bigger or Go Home” — Healthcare costs are growing rapidly and R&D is too slow: e.g., cancer Rx failures (see BMJ review of cancer drugs 2009-2013)



BIG IDEAS IN POPULATION HEALTH & PRECISION MEDICINE

- › International Solutions
 - › Adding incremental value and cost without fear, uncertainty and doubt
 - › Continuous Quality Improvement drives innovation and reduces risk
- › Regional/Country Focus: we need to remember that people are everywhere and in need and the Cloud takes us there
- › Governments and Employers are the First Line of Influence and Defense in Healthcare and Economics and they measure “value”
- › Aging Populations in most of the world and all of the heavily industrialized world (China, Japan)
 - › Convert fatal disease to chronic disease, e.g., cancer
 - › You can only extend life by preventing death and injury: focus on quality of life and reducing transactional costs of care
 - › Integration of Behavioral/Physical Health to add value to populations
- › Real-time Intervention to prevent injury/illness/death
- › There are “lies, damned lies and statistics” and now Population Health (exempting the Framingham Study: real statistical “power” and length)
 - › Intervene carefully in my life with real value; don’t scare me, my family, employer or my physician (see #1 above)



WHAT ARE SOME OF THE CHALLENGES?

- **Need Predictive Model with Power sufficient at N=1**
- 3,000,000,000 genes
- 30,000 proteins
- 80,000 chemicals in the environment
- Environmental & genetic predispositions
- Cell activation — thorium with radon as byproduct
- Millions of high speed particles per second per meter²
- Single nucleotide polymorphisms (SNPs) as a result
- Inherited and “random” genetic behavior interaction
 - Schizophrenia, Bipolar Behavior
 - Hereditary angioedema (HAE)
- *Need Predictive Model with Power for Each Person*