Using Data to Improve Population Health

Task Force on Innovations in State Health Systems
October 13th 2017
Avera Quick Facts

Integrated Delivery Network

Coverage population of ~2,000,000 souls

~30 Hospitals & 1,100 Licensed Beds
~21 Skilled Nursing & LTC Facilities
~300 Ambulatory Clinics
~450 Providers
~10,000 Nurses
~25 Pilots, 33 Flight Nurses and Paramedics
~2500,000 Member Health Plans
~2.7 M Annual Outpatient and Clinic Visits
~147 patient spoken languages

Telemedicine Presence in 235 Locations

36 Specialty Sites
30 Long Term Care Sites
4 Prisons & Correctional Facilities
Avera’s Population

Age Distribution (M&F)
Inpatients 2007-2017

- Diabetes Type 2
- Hypertension
- Hyperlipidemia

.... Sugar, Salt, Cholesterol
Tomorrows Patient Population
and the Mechanics of behavioral feedback loops
Irrational Human Behaviors
Dopamine Manipulation

Fun = Challenge + Achievement + Reward
DIVERSION

Macro-economics
A Tale of Two Economies
Baumol’s Cost Disease & Hobson’s Choice.

1. High Productivity Growth
   - Dell, Toyota, Wal-Mart, Amazon, Tyson Foods, PepsiCo, Nestle, Kraft Heinz, InBev, General Mills

   - Consumers conditioned to pay less for more

2. Low Productivity Growth
   - Education, Healthcare, Law Enforcement, Arts & Culture, Government, Self-employed service industry

   - Consumers pay more for the same
The Gap

Mozart String Quartet No. 4 in G Minor (K.516) 1787.
The productivity of classical musicians has not improved over time.

The average college professor can’t grade papers or give lectures any faster today than he did in the early nineties.

A mechanic takes just as long to fix a radiator hose.

A doctor takes just as long to assess and diagnose a patient as they did in the 1990’s.
Designing Wellness Programs

- De: Demographics
- Ps: Psychographics
- Lo: Location
- Pr: Product
- Be: Behavioral
- In: Intention
- Re: Referrals
- Hi: History
Dopamine Manipulation Models
<table>
<thead>
<tr>
<th>Intrinsic Rewards for individual achievement.</th>
<th>Extrinsic Rewards for effort and accomplishment.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Fulfillment, Satisfaction, Enjoyment</td>
<td>• Tangible recognition of achievement</td>
</tr>
<tr>
<td>• Status, Praise, Recognition</td>
<td>• Fungible (exchangeable), Access</td>
</tr>
<tr>
<td>• Respect, Influence, Authority</td>
<td>• Certificates, Medals, Trophies</td>
</tr>
<tr>
<td>• Wellbeing, Happiness</td>
<td>• Cash, Gift Cards, Merchandise</td>
</tr>
<tr>
<td></td>
<td>• Candy, Stickers, Toys</td>
</tr>
</tbody>
</table>
Evolution of Extrinsic Rewards

- 1800’s: Point of Sale Tangible Goods (BoGo)
- 1930’s: Post Sale Engagement
- 1980’s: Loyalty Programs
- 2000’s: Virtual Rewards
The future of population healthcare is **not just being good at this**…

But being **REALLY good this**…
Clinical Intelligence

NextJump Inc. | Charlie Kim

To do the little things that allow others to do the great things they are meant to do

WINNER OF THE 2013 MCKINSEY/HBR LEADERSHIP AWARD
THE LEADERS EVERYWHERE CHALLENGE

Charlie Kim & David Marquart co-authored their stories on leadership as interwoven narratives. They each embedded leadership as a core organizational capacity in two very different settings—a nuclear-powered submarine and an internet startup.

LEARN MORE
What does this mean for Legislators?

Don’t let a good crisis go to waste.