Consumers Are Patients Too
Kirk Gillis, Vice President - Strategy

California Telehealth Resource Center & California Telehealth Network
6th Annual Telehealth Summit
May 16 – 18, 2018
San Diego, CA
Direct to Consumer…
Banking Industry

What's Missing?

Here's Why?
Travel Industry

What’s Missing?

Here’s Why?
Healthcare Industry

What's Missing?

Here’s Why?

Introducing MedWand™
The 21st Century House Call.
MedWand Sensor Features

MedWand™ allows your doctor to do the following remotely:

- Measure your heart rate, or pulse.
- Measure the oxygen level of your blood.
- Listen to your heart.
- Listen to your lungs.
- Look into your mouth and throat.
- Look into your eyes.
- Look into your ears.
- Examine your skin.
- Listen to your abdomen.
- Take your temperature.

Eye and Skin Examination
Virtual Care Model

Guiding Principle
Virtual care is more convenient for patients, a more cost effective use of finite resources, and may lead to improved population health outcomes (Access, Quality, Affordability)
Direct to Consumer Continuum...

Self Care
- Remote Monitoring
- Distance Learning
- Nurse Health Line
- Support Groups
- Patient Portal
- mHealth
Direct to Consumer Continuum...

Urgent Care
- Kids
- Adults
- Seniors
- On-Demand
- Centralized (Virtualists)
Direct to Consumer Continuum...

**Primary Care**
- Kids
- Adults
- Seniors
- Scheduled
- De-Centralized
Direct to Consumer Continuum...

Specialty Care
- Tertiary
- Quaternary
- Scheduled
- De-Centralized

Dr. Kennedy, Pediatric Urology
Stanford Children’s Health
Specialty Care - Tertiary

- Anti-Coagulation
- Bariatrics
- Behavioral Health
- Cardiology
- Endocrinology
- Gastroenterology
- Hematology
- Infectious Disease
- Nephrology
- Neurology
- Obstetrics
- OccHealth
- Oncology
- Pain Management
- Pediatrics
- Physiatry
- Pulmonology
- Sleep Medicine
- Surgery – Colorectal
- Surgery – General
- Surgery – Hand
- Surgery – Neuro
- Surgery – Orthopedic
- Surgery – Plastic
- Surgery - Thoracic
- Surgery – Vascular
- Urology
- Wound Care
Direct to Consumer Continuum...

**Disease Management**
- Social
- Medical
- Pharmacy
- Behavioral
- Scheduled / On-Demand
- Centralized / De-Centralized

Direct to Consumer Continuum:
- Disease Management
- Self Care
- Urgent Care
- Primary Care
- Specialty Care

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Personalized Medicine...
Our Vision is to Aggregate and Act on Health Determinants

- **Socioeconomics**: 40%
  - Education + Employment
  - Income + Employment
  - Support Networks
  - Community Safety

- **Behavior**: 30%
  - Diet/Exercise
  - Tobacco use
  - Alcohol/Drugs
  - Unsafe Sex

- **Healthcare**: 20%
  - Access + Quality

- **Environment**: 10%
The Problem: Health Disparities in the U.S.

<table>
<thead>
<tr>
<th>Top Three Causes of Death</th>
<th>Age-Adjusted Death Rate per 100,000 Population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Washoe County</td>
</tr>
<tr>
<td>Heart Disease</td>
<td>226.6</td>
</tr>
<tr>
<td>Cancer</td>
<td>174.5</td>
</tr>
<tr>
<td>Chronic Lower Respiratory Disease</td>
<td>51.8</td>
</tr>
</tbody>
</table>
From Bench to Bedside: Research Model Focal Points

• Genetics, health data science and environment
• Risk scoring for northern Nevadans
• Cardiovascular disease, pediatrics and cancer
• Integrate back into clinical care

Healthy NV Project™
The Desert Research Institute (DRI) is Nevada’s global environmental science laboratory. With more than 500 scientists and 400 projects, DRI offers environmental guidance to Nevada, the nation and the world.
Helix operates one of the world's largest Next Generation Sequencing (NGS) labs to sequence the exome and other information-rich regions of the human genome.
Your Genes are a “Heart” Risk Blueprint

Very High Risk of Heart Disease 4x

High Risk of Heart Disease 2x

Normal Risk of Heart Disease 1x

Healthy Lifestyle

Unhealthy Lifestyle

Genetic risk:
- Low
- High

From Khera et al. 2016
New England Journal of Medicine

Healthy NV Project™
Approximate risk of Breast/Ovarian Cancer (before age 80)

Risk factor

- Baseline
- Polygenic risk factors and first degree family history
- Top 1% polygenic risk factors
- BRCA1/2

From Movassaghi et al. 2015
Bad Air Days Result in Large Increases in Healthcare Utilization
Where From Here?

- Launch D2C Strategy
- Optimize Virtual Care Delivery
- Modernize Payer Agreements
- Optimize Triple Aim Outcomes
- Personalized Medicine Integration
- Disruptive Economic Model(s)
Discussion

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