WHAT IS THE BIGGEST HEALTH COST IN YOUR ORGANIZATION AND WHAT ARE YOU DOING ABOUT IT?

Many employers aren't aware that heart disease is the most expensive preventable health condition in their organization.

Annual Productivity and Medical Costs for an Average-Size Fortune 500 company*

* Mitchell Rebeca ‘Measuring Health-Related Productivity Loss’. Population Health Management. The costs are index to 2015 using the Milliman Medical Index.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Annual Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart Disease &amp; High Blood Pressure</td>
<td>$30M</td>
</tr>
<tr>
<td>Cancer</td>
<td>$22.5M</td>
</tr>
<tr>
<td>Back Pain</td>
<td>$15M</td>
</tr>
<tr>
<td>Depression</td>
<td>$7.5M</td>
</tr>
<tr>
<td>Diabetes</td>
<td>$5M</td>
</tr>
<tr>
<td>Overweight / Obesity</td>
<td>$5M</td>
</tr>
<tr>
<td>Arthritis</td>
<td>$5M</td>
</tr>
<tr>
<td>High Cholesterol</td>
<td>$5M</td>
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</tbody>
</table>

Preventable | Hard to prevent
What is the biggest health cost in your organization and what are you doing about it?

The numbers are sobering. 30% of Americans have high blood pressure (a.k.a. hypertension) and are at risk of heart disease.1 Uncontrolled hypertension results in end organ damage and confers increasing risk of neurovascular and cardiovascular events over time. Heart disease is the leading causes of death in the U.S. with over 600,000 Americans dying just last year.2 But with proper awareness and management it is almost completely preventable.

1 in 3 Americans suffer from hypertension.

The cost of doing nothing to reduce heart risk is $27M out of your benefits budget. Every year.

Annual Cost of Heart Disease and High Blood Pressure per industry according to recent studies.3 4

- $22M/year for a Banking company
  - Absenteeism 4%
  - Presenteeism 2%
  - Medical Care 94%

- $26M/year for a food & beverage company
  - 7% Absenteeism
  - 4% Presenteeism
  - 89% Medical Care
What is the biggest health cost in your organization and what are you doing about it?

**Medical Care and Increased Claims** – Large corporations that provide health coverage spend approximately $11,716 per employee each year. For an average large employer, this works out to around $585M per year. While this high cost may not be surprising, the source of the expenses may be. The American Heart Association estimates that 17% of the U.S. Health spending is directed to heart diseases.

**Absenteeism** – Employees with high blood pressure are likely to experience health issues that will keep them away from work. These paid sick days add to employers' costs. It costs in other ways too. Project deadlines are missed. Other staff are pulled away from their work to cover for missing employees.

**Presenteeism** – Employees with high blood pressure are more subject to fatigue. Blood flow is restricted and their prioritizes supplying blood to critical organs such as the brain. Muscles in the limbs are a lower priority. The result is that employees still make it to the office, but are not 100% fully present (a.k.a. presenteeism).

The actual financial cost of these factors has been documented by Goetzel R. in his study “The Relationship Between Modifiable Health Risk Factors and Medical Expenditures, Absenteeism, Short-Term Disability, and Presenteeism Among Employees at Novartis”. This study documents how reducing high blood pressure could represent more than $27 Million savings for big companies.

**Wellness programs to the rescue?**

A growing number of U.S. employers have implemented wellness programs with the goal of improving employee health and productivity and reducing healthcare costs. Cost reduction has gained special prominence, driven by employers' desire to lower the cost of their health plans and avoid the 40% excise tax starting in 2018 on high-cost plans under the health care reform law.

The typical wellness program offers a health-risk assessment provides health and nutrition education, fitness trackers and weight management support. Many companies offer discounted health insurance premiums and cash bonuses to try increase employee participation in programs.
What's the evidence that wellness programs are effective at improving health and reducing costs?

The very best lifestyle wellness programs may be reasonably effective in helping employees with smoking and weight reduction. What they don't do, at least based on validated data, is reduce healthcare costs. 9

A recent RAND Corp. study found that wellness programs that try to get employees to become healthier and reduce medical costs have no statistically significant effect overall. Lifestyle management programs, the most widely offered, that focused on tobacco cessation, weight loss and lowering stress were found to save only about $0.50 for every dollar spent. Similar conclusions have been reached in other studies. 9

In other words, despite employers' growing investment in wellness programs, the evidence does not support reduced healthcare costs or short-term return-on-investment.

The exception was for programs that manage chronic health conditions like heart disease. The Rand study reported a saving $3.80 for every dollar spent. So not all wellness programs are created equal. 9

Best practices in crafting workplace wellness programs that deliver ROI

Based on what we know from existing data on wellness programs health outcomes and positive ROI, what are best practices for employers who seek to attain measurable results?

- Focus on populations with chronic but preventable diseases, such as heart disease, diabetes and COPD.
- Make programs voluntary and positive to avoid employees losing trust.
What is the biggest health cost in your organization and what are you doing about it?

- Make the program easy to incorporate into an individual’s daily routine. The number one self-reported reason for not signing up for wellness programs is lack of free time.
- Define a clear way to measure and calculate ROI along with a time horizon for success.
- Best practices in crafting workplace wellness programs that deliver ROI

Types of wellness approaches that can move the needle for preventable, chronic diseases

**Self-Monitoring of Blood Pressure with Regular Doctor Visits**
Studies have been conducted to evaluate the improvements of patients that start monitoring their blood pressure without any additional support other than regular doctor visits. These studies found that patients that start self monitoring their blood pressure on a routinely basis decreased their blood pressure in 2mmHG in a six month period. \( ^{10} \)

**Self-Management of Blood Pressure with Clinician Supervision**
The same research examined the impact of telemonitoring, nurse video conferencing and behavioral management, on the effectiveness of self-monitoring. Patients with this level of clinical supervision and managed care decreased their blood pressure by an average of 4.4mmHG in a six-month period. \( ^{11} \)

**Digital Lifestyle Intervention Programs For Obesity-Related Chronic Diseases**
Several programs combine smart scales, virtual coaches, social networks and educational curriculum to help obese individuals at the tipping point for diabetes, establish new habits around weight management and diet. Omada has reported a study of 187 prediabetic individuals who completed a 16-week intensive plus 9-month maintenance lifestyle program. Participants averaged a 5% weight loss and an average 12-mo A1c reduction of .4%. Although the program is demanding and complex, positive ROI is projected within 4 years. The program has not been validated for heart disease risk reduction.

Continues
What is the biggest health cost in your organization and what are you doing about it?

Mobile Solution for Blood Pressure Management

Mobile solutions use cutting-edge technology, a clinical behavioral framework and UX design to support patient engagement and self-monitoring of blood pressure.

In Sept 2015, Hello Heart reported results for 1427 individuals with prehypertension and hypertension who used their mobile solution for blood pressure management and recorded 2 or more readings. After 6 weeks of using the app, 1 in 4 users reduced their average weekly blood pressure reading by 10 pts or more. The average drop was 24 pts. This effect remained stable even for individuals using the app for as long as 12 weeks and counting. This is particularly relevant because prior studies have reported that each 10 pt. drop in blood pressure is associated with a 50% decrease in risk of heart attack. This initial study is highly encouraging. The mobile solution increased patient engagement which helped support a clinically significant blood pressure reduction in a short period of time, that improved the longer the patient used the solution. The study is on-going and will report results at 6 months and 1 year on increasingly large cohort populations. ROI for an employer solution is projected under 1 year.

The mobile solution changed behavior which led to a clinically significant blood pressure reduction in a short period of time that improved the longer the patient used the app.

<table>
<thead>
<tr>
<th>Method</th>
<th>Change in Blood Pressure</th>
</tr>
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<tbody>
<tr>
<td>Self-monitor with regular doctors visits</td>
<td>2-4 mmHg</td>
</tr>
<tr>
<td>Self-monitor with clinician supervision</td>
<td>4-9 mmHg</td>
</tr>
<tr>
<td>Mobile solution</td>
<td>21-25 mmHg</td>
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</tbody>
</table>
It's time to adopt new technologies to deal with heart health risk management. Implementing mobile solution could save you over $6 million a year.

Mobile solutions such as Hello Heart are proving to deliver quick ROI and potentially save millions in health care costs for employers. A 35% reduction of high risk individuals as reported in the Hello Heart clinical research, equates to a significant reduction in health care costs for employers and significant improvement in the general health and well-being of their employees.  

Notes/Sources
8. Ed Emerman “Companies are Spending More on Corporate Wellness Programs but Employees are Leaving Millions on the Table’ (2015) National Business Group on Health.
12. All the savings projections are indexed using the Milliman Medical Index for 2015.
13. UCSF Medical Center “Understanding Your Risk for Heart Disease” (2015)