

Leveraging Health Risk Assessments for Maximum Effect

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Summary

A significant amount of money is spent in the United States for healthcare, without a lot of value for the expenditure. Health risk assessments that incorporate biometric measurements are one approach for improving value in the healthcare system. These assessments are a way to engage people in getting and staying healthy.

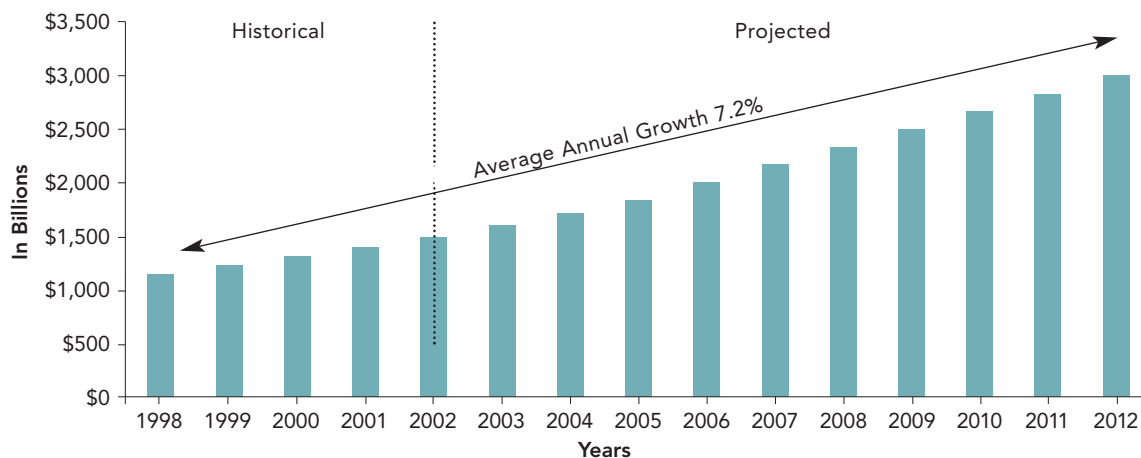
Key Points

- The contribution of behavior and lifestyle choices to society's chronic disease burden and healthcare costs is significant.
- Health risk assessments that incorporate self-reported information with biometrics provide the maximum benefit to patients.
- Health risk assessments that incorporate biometric measurements help engage people to improve their health and wellness.

THE COST OF HEALTHCARE IS CONTINUING TO RISE, which is impacting the ability of the United States to compete globally. As illustrated in Exhibit 1, this trajectory of increasing healthcare costs from a national economic perspective is not supportable.¹ For developed countries other than the U.S., the median per capita expenditure for healthcare is \$1,983.² The

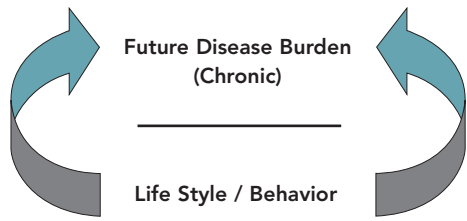
U.S. spends over \$4,631 per capita.² A lot of money is spent in this country for healthcare, but our return on investment is not optimal. As indicated by our ranking on important indicators of health, such as infant mortality, average life expectancy, gaps in disparities in life expectancy, and numbers of co-morbidities, we are not getting a lot of the value for our expenditures in healthcare.

Exhibit 1: An Unsustainable Trajectory: U.S. Spending on Healthcare



Source: CMS National Health Expenditures

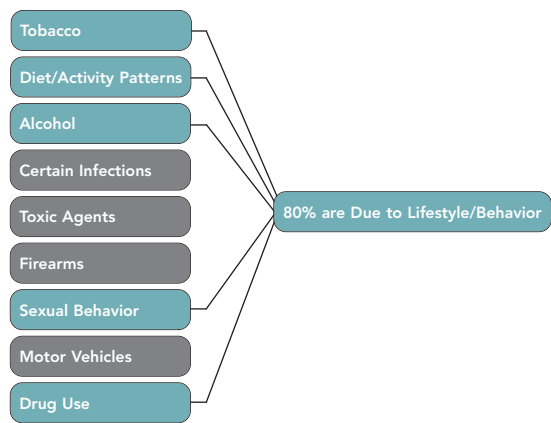
Exhibit 2



For many years, the main strategy for success in healthcare has been to reduce and shift costs. Many sources are now indicating that the system needs to focus more on outcomes to improve value. A focus on outcomes and value will cause the healthcare system to look across a whole continuum of healthcare and the inputs to healthcare including wellness, health choices, and health behaviors.

The contribution of behavior and lifestyle choices to society's chronic disease burden is significant (Exhibit 2). There is a strong correlation between the progression to chronic illness and lifestyle health choices. It is estimated that 80 percent of the actual causes of death are due to lifestyle or behavior choices (Exhibit 3).³ Additionally, the contributions of health behaviors to costs are significant. For every \$0.03 U.S. society spends on prevention, \$0.97 is spent on curative treatment.⁴ A significant portion of

Exhibit 3: Actual Causes of Death

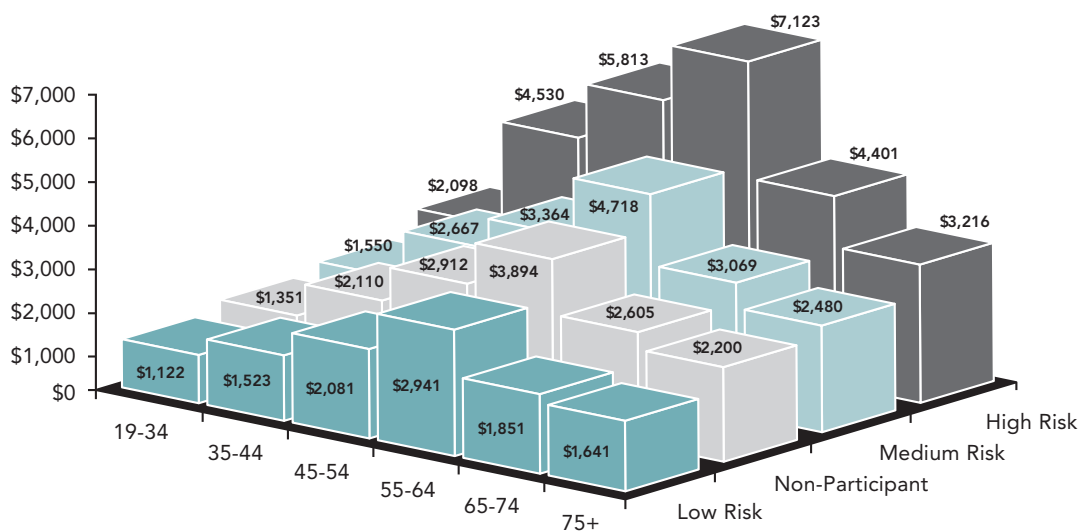


Source: JM McGinnis, et. al, Actual Causes of Death in the United States. JAMA, Vol. 270. 1993, AMA.

that \$0.97 goes to treatment of chronic diseases caused by or exacerbated by health behaviors.

Employers are beginning to understand the impact of lifestyle behaviors, such as smoking, on both their direct medical costs, as well as on their indirect costs, through absenteeism, presenteeism, and workers' compensation. Exhibit 4 illustrates costs associated with different age groups and the number of modifiable lifestyle- and health-behavior-related risk factors.⁵ Cost in every age group goes up with the number of risk factors.⁵

Exhibit 4: Costs Associated with Risks Medical Paid Amount x Age x Risk



Edington, DW Emerging Research. AJHP. 2001:15(5):341-349.

Eddington has demonstrated that the only way to really control costs is to keep people at a low level of health risk.⁵ His work also illustrates that risk factors predict future healthcare cost and a progression to illness. The amount of change to keep people at low risk for developing lifestyle- or behavioral-related disease has been shown to be very small.

Health risk assessments (HRA) became popular with employers in the '80s, but these early assessments only gathered self-reported information. The trend in HRAs is to collect self-reported information and biometric measurements, such as lipid panel and blood pressure. Assessments that incorporate biometrics give the consumer/employee an objective view of his/her risk compared to others and help link those risk factors with his/her lifestyle choices. This linkage helps the individual better understand the opportunities for reducing his/her health risks. Incorporating biometric data into an HRA provides participants with something very concrete on which to react. This has improved the effectiveness of doing an HRA.

To achieve the best value, HRAs must include biometric measurements and need to include incentives. These incentives need to be for both participation and risk reduction. People will not change without motivation. Motivation can be from any variety of sources including intrinsic, financial, and punitive. Positive incentives tend to work better than negative ones. Fear can be a motivator, but most people will engage in longer-term behavior change if there is a positive motivator. Financial incentives to get people to participate in an HRA are dependent on the social position of the population. Participation rates as high as 80 percent have been shown with incentive payments as low as \$30. Without incentive payments, the engagement rate is often between 40 and 50 percent.

Typical areas focused on for the self-report portion of an HRA are personal and immediate family medical history and lifestyle issues. The lifestyle or behavior areas have primarily been smoking, alcohol use, diet, exercise, seatbelt use, and home smoke detector use. More and more HRAs are including other factors such as stress, coping skills, sleep disorders, depression, and other behavioral conditions that have been shown to be significant predictors of future risks. Typical biometric measurements in an HRA include nicotine, blood pressure, body fat, lipid profile, liver function tests, and body mass index.

Information from HRAs is shared with the consumer/employee in the form of individual reports. This information can be used to impact the individual's health (i.e., detect a problem and correct it). There is the opportunity to indicate to people if they need to follow up with a primary care provider to

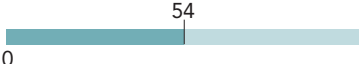
have something evaluated.

Exhibit 5 is an example of a personal report. In this example, the participant receives a score on a zero to 100 scale. In this particular assessment, the score is based just on biometric data and the higher the score the better. In this specific program, the target is to be at 71 or above. Participating employees were eligible for an incentive payment if they were at 71 or above or made a five point yearly improvement from baseline. Additionally, there was an associated premium reduction.

Most healthcare consumers do not have the right information (or enough information) to make the best choices related to their health. An example from an HRA program illustrates this point. In a random sample of 12,000 participants in an employer-sponsored, data-driven wellness program, 74 percent could not self-report their cholesterol, blood pressure, or body fat; 42 percent more participants tested positive for nicotine than self-reported they smoked; 33 percent self-reported "good or excellent" self-perception of health but unknowingly had 3+ clinical risk factors; and 28 percent self-reported "good eating habits" but had dangerous levels of fat in their blood. Before participation in this program, 60 percent of the participants did not have a primary care physician. After the program, almost 75 percent actually reviewed their report with a physician. At the end of one year, 90 percent had an improvement in three or more risk factors, and more than 50 percent had an improvement in six or more clinical risks. This program is an example of the empowerment that can occur when people know their numbers and are given tools and support for seeking medical care and making changes. Empowering consumers can make them satisfied customers and an integral part of the healthcare team (Exhibit 6).

Data from HRAs are also reported to the employer. Aggregate reporting of HRA data can be very valuable from a health plan and an employer perspective to see the prevalence of different risk factors within a population. Individual data is never shared with the employer. The only information that is shared with the employer is aggregate reports without individual identification. The Health Insurance Portability and Accountability Act (HIPAA) clearly precludes any service provider who is providing an HRA for an employee population base from sharing the personal health information or any information that does not have identification removed. Typical data reported to the employer includes the correlation between risk factors and diseases, participation rates, year-to-year comparisons, change in the risk profile of the pop-

Exhibit 5: Personal Health Report

myhealthIQ Score >  54

Personal Score (0 - 100)












- Objective data only
- Target score 71+

John Doe

Your myhealthIQ Score needs your immediate attention. You have “high risk” of developing lifestyle related disease, chronic illness or excess medical claims that could be preventable. Please review the vital indicators that were accessed with your personal physician and work toward a lifestyle plan that will improve your current risk score.

Biomedical Data

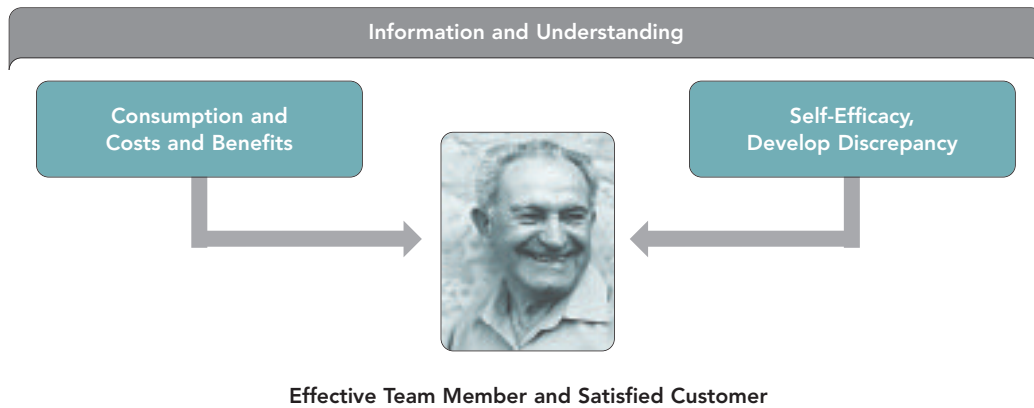
Only the eleven lifestyle biomarkers listed below have determined your myhealthIQ score.

| Test Results | Minimal Risk | Moderate Risk | Medium Risk | High Risk | Extreme Risk | Contact Your Doctor |
|---|--|---------------|-------------|-----------|--------------|-------------------------------------|
| Nicotine -Your test for nicotine was positive |  | | | | | <input checked="" type="checkbox"/> |
| Blood Pressure -Your blood pressure was 155/90 |  | | | | | <input type="checkbox"/> |
| Body Fat -Your body fat was 22.0% |  | | | | | <input type="checkbox"/> |
| Total Cholesterol -Your cholesterol reading was 222 mg/dL. |  | | | | | <input type="checkbox"/> |
| LDL (Bad) Cholesterol -Your LDL cholesterol was 119 mg/dL. |  | | | | | <input type="checkbox"/> |
| Total Cholesterol/ HDL Ratio -Your current ratio was 3.36 |  | | | | | <input type="checkbox"/> |
| GGT -Your GGT level was 33 U/L. |  | | | | | <input type="checkbox"/> |
| Glucose -Your glucose level was 88 mg/dL. |  | | | | | <input type="checkbox"/> |
| HDL (Good) Cholesterol -Your HDL cholesterol was 68 mg/dL. |  | | | | | <input type="checkbox"/> |
| Triglycerides -Your triglycerides level was 111 mg/dL. |  | | | | | <input type="checkbox"/> |
| Weight Control -Your BMI calculation was 24.4 |  | | | | | <input type="checkbox"/> |

Personal Health Report:

- Comprehensive explanation of measurements
- Nationally published healthy targets for each
- Embedded links to educational information
- Medline health search engine

Exhibit 6: Consumer Involvement



ulation over time, and medical and indirect costs associated with the risks present in the population. The benefit of HRAs for the health plan or employer is keeping the low risk part of the population at low risk and moving the high-risk people down into a lower risk category. Shifting more of the population to lower risk will translate over time into overall savings. The employer or health plan can use the population view of health behaviors and health risks to establish interventions through support tools, online coaching, care management, disease management, or case management to help build a healthier population.

Looking to the future, the healthcare system will continue to focus on wellness and disease prevention for people, regardless of where they are in the wellness continuum. People with chronic illnesses are often the most lacking in the receipt of preventive services because there is such a focus on managing their complex medical issues. The movement towards consumer-directed health plans is a nice

alignment of the focus on wellness and health promotion coupled with financial incentives.

Conclusion

Health risk factors predict future disease states and costs. Small lifestyle or behavior changes can have exponential improvement on health and costs. Most people have at least one modifiable health risk factor. An HRA with biometric data is an important source of not only helping keeping a low risk population low risk, but also identifying people who would be appropriate for disease and care management. **JMCM**

Virginia Gurley, MD, MPH, is vice president and senior medical director for Healthways. Since joining Healthways in October 2006, she had provided clinical leadership and market evaluation within the business development process.

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1. Centers for Medicare & Medicaid Services. National Health Expenditures. Available at www.cms.gov.
2. Organization for Economic Cooperation and Development. OECD Health Data 2002. Paris: OECD 2002.

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