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Health Risk Assessment as Trigger to Action for Wellness

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Background:

Health risk assessments (HRA) have been used as a population health profiling tool for at least 25 years. Recently, because of increased evidence of the impact lifestyle variables have on lifetime health costs, morbidity and mortality, there has been a surging interest in HRA responses

Currently, the responses are viewed not only as an assessment of personal health, but also as a logical springboard to wellness programs that offer evidence-based interventions which can prevent, delay or manage illness. Because HRA information is often a gateway for services, it can provide an important early indicator to help gauge respondents' willingness to change or participate in future interventions tailored to their unique needs.

Methods:

We performed a pilot study comprising HRA respondents for a state-sponsored health plan (N = 1440), in an attempt to measure the respondents' willingness to change in relation to their diabetes risk. We ran a logistic regression where the dependent variable was willingness to participate in future wellness programs and the independent variables were: 1) demographic variables; 2) self-reported risk factors; and 3) an HRA-derived diabetes risk score. Each HRA-derived diabetes risk score was grouped into one of four levels, ranging from low risk to severe risk.

Results:

When we controlled for age and gender characteristics, regression results indicated a statistically significant increase in the respondents' willingness to change as future diabetes risk increased from low to super high. That is, the higher the risk score the more likely an individual wanted to be contacted. For each level increase in diabetes risk, the ratio of those agreeing to be contacted for future follow up to those not agreeing decreased or improved by 24 percent ($p < .001$).

Conclusions or Significance:

Our conclusion, however simple, can have a profound implication: completing the HRA itself serves as a trigger to action. To be sure, the design of the HRA factors in as respondents see their derived diabetes risk score upon completion. So it follows that if the HRA derived diabetes risk score was super high, the individual was more interested in future intervention.



Abstract

Background: Health risk assessments (HRA) have been used as a population health profiling tool for at least 25 years. Recently, because of increased evidence of the impact lifestyle variables on lifetime health costs, morbidity and mortality, there has been an increased interest in HRA responses.

Currently, the responses are viewed not only as an assessment of personal health, but also as a logical springboard to wellness programs that offer evidence-based interventions which can prevent, delay or manage illness. Because HRA information is often a gateway for services, it can provide an important early indicator to help gauge respondents' willingness to change or participate in future interventions tailored to their unique needs.

Methods: We performed a pilot study comprising HRA respondents for a state-sponsored health plan (N = 1440), in an attempt to measure the respondents' willingness to change their behavior in relation to their diabetes risk. We used logistic regression with willingness to participate in future wellness programs as the dependent variable and:

- 1) Demographic variables
- 2) Self-reported risk factors
- 3) HRA-derived diabetes risk score (independent variable)

There are four risk score levels calculated by online logic, ranging from low to very high risk.

Results: When we controlled for age and gender characteristics, the results indicated a statistically significant increase in the respondents' willingness to change their behavior as future diabetes risk increased from low to super high. The higher the risk score the more likely an individual wanted to be contacted by a disease management enrollment team. For each level increase in diabetes risk, the ratio of those agreeing to be contacted for future follow up to those not agreeing increased by 25 percent, $p < .001$.

Conclusions: Our results suggest that completing the HRA serves as a trigger to action. It also provides feedback to the member about her current behavior and what she could do to improve her own management of her illness.

About HMC

HMC is one of the nation's largest, most experienced managers of integrated care and total health solutions. We help members navigate the complexity of health care – from the most difficult, costly and debilitating medical conditions that increase health care costs, to the wellness programs that help prevent them.

Founded in 1983, HMC is a pioneer and leader in providing health solutions for employers, insurance companies and government entities. We are a wholly owned subsidiary of WellPoint, serving as both partner and proprietor in the delivery of innovative health care programs and services nationwide.

Through our Life² total-health solution, we give people the tools they need to take control of their health and see positive results, whether they've just started careers, are planning families or are nearing retirement.

Our population-based yet individualized approach to health care encompasses prevention, lifestyle and condition management and complex care.

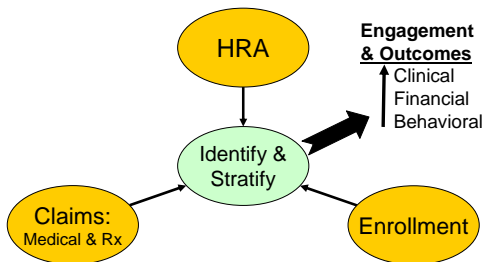
Nearly 24 million eligible members reside within HMC's scope of care.

Introduction

Disease Management (DM) in managed care (MCO) typically uses enrollment information along with administrative medical and pharmacy claims data to prospectively identify and funnel members into chronic disease management or lifestyle coaching programs.

The industry is now moving toward a more holistic approach where more detailed information about behavioral risk factors, is supplanted with biometric lab information such as lipid profiles and fasting blood glucose, which are collected at Wellness interventions.

This data enhances claims data and provides a more robust individual profile. Moreover, this individually tailored profile underscores the value and utility of Health Risk Assessment (HRA) information in DM and Wellness interventions.



MetGriselda Chapa, MPH,

An online HRA was offered to 38,000 members of a State sponsored health plan of a New England state with no incentive to participate. A total of 1,400 members took a widely used, well validated online HRA in 2006. The information was stored in a secure clinical data warehouse.

- The HRA collected
- Demographic information
 - Self-reported chronic disease risk factor information
 - Lifestyle and Behavioral information

At the end of the HRA, the respondent was assigned an HRA derived diabetes risk score and a final question indicating their willingness to be contacted by a DM enrollment specialist.

Binomial logistic regression was used to identify factors contributing to HRA respondents "Willing to be contacted by disease management personnel yes/no" as the dependent variable and demographic information and the HRA derived diabetes risk level as the independent variables.

The HRA derived risk had four risk levels, ranging from low to very high risk with each member receiving a risk level derived from predefined background logic.

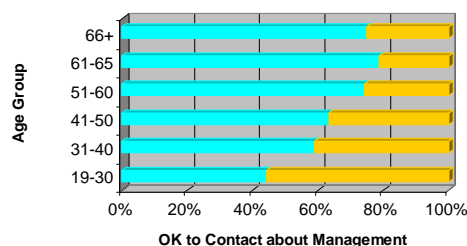
Results

Demographics

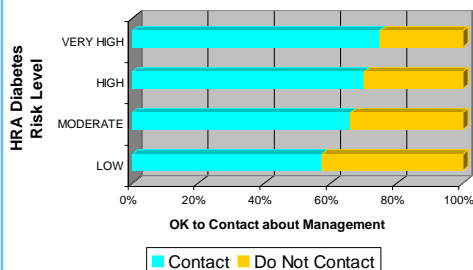
N=1440 Respondents
66.9% Female
Average age= 47.0 ± 10.3 STD

Age Group	F	M	Gender Total
19-30	7.0%	1.6%	8.6%
31-40	13.0%	4.7%	17.6%
41-50	20.3%	10.3%	30.6%
51-60	23.2%	13.2%	36.4%
61-65	3.1%	2.8%	5.9%
66+	0.4%	0.4%	0.8%
Age Group Total	66.9%	33.1%	100.0%

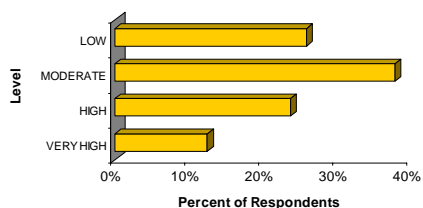
Age Group by Ok to Contact



HRA Derived Risk Level by Ok to Contact



HRA Logic Derived Diabetes Risk Level



Discussion

Evidence of the utility of HRA is valuable to the DM and Wellness industry because information about behavioral and attitudinal risk factors are not usually captured or utilized in the usual identification and stratification methodologies in disease state management processes.

While Medical and Rx claims contain information important to identifying chronic disease, HRA information can be appended to that information in a timely and cost effective manner. The result is a more thorough understanding of a members' health care needs.

Advantages of HRAs

- 1) Timely information
- 2) Contains information not found in claims
- 3) HRA may be validated with claims

Limitation of HRAs

- 1) Self reported
- 2) Fear of sharing sensitive information
- 3) Data integration issues with the use of multiple HRA

Throughout the DM industry processes are being redesigned to use early risk indicators like HRA. Timely HRA information may soon be the "canary in the mineshaft" of wholistic population DM.

Conclusions

Our results preliminarily indicate that the process of completing an online HRA and receiving immediate feedback from the HRA relating to diabetes risk may influence attitudes and behavior toward engaging in further disease state management.

We noticed a 25% increase ($p < .001$) in the odds that a member was open to further DM contact as HRA derived diabetes risk level increased from low to very high.

While the results are promising, much more work must be done before HRA information becomes commonplace in the system of interventions designed to identify, stratify, engage, and manage members in the DM industry.