



## The HealthMine Plus

- 120,000 People
- 3-Year Study
- 10-20%  in hospital admissions

Analysis of over 120,000 members for a 3-year period on HealthMine's Automatic Health Engine Finds Changed Behaviors and Decreased Hospital Utilization



# SUMMARY



*HealthMine promotes behavior change and incentivizes healthy behaviors, especially in members who do not traditionally undertake preventive health actions or manage chronic conditions. In a recent study of 120,000 employees over a 3-year period, results found:*

- 1** Close to 80% of the incentive program members earned points. Slightly increased and sustained engagement levels are observed as the program entered the second and third year.
- 2** During the 3-year period, there was an increase in wellness/preventive visits, compliance with obtaining healthy biometric measurements, and taking actions to control unhealthy biometric measurement results.
- 3** Hospital utilization showed a decreased trend averaging 10-20% in hospital admissions, bed days, and ER visits over year-1. Hospital readmission rates had a 50% reduction by year-3, while length of stay slightly decreased, reflecting that the right care was provided in the right setting.
- 4** During the three year period, 70% of the participants had an annual wellness visit/preventive exam. Among these participants, 7.4% (7,100) were identified as diabetic.

## INCENTIVE PROGRAM OVERVIEW

The incentive programs evaluated in this study utilize HealthMine' proprietary Automatic Health Engine. Using combined inputs from medical claims, pharmacy claims, lab results and health assessment information, the Engagement Platform promotes continuous engagement through identification of required preventive actions and untreated chronic conditions, provides actionable information and engagement tools, tracks compliance and incentivizes participants.

Each client has the flexibility to customize their incentivized engagement programs to the specifics of their population. The client populations evaluated in this study track and reward the following health actions:

- + Annual Preventive/Wellness Visit**
- + BMI: Achieve Target or Complete Related Wellness Courses**
- + LDL: Achieve Target or Complete Related Wellness Courses**
- + FBS or A1c: Achieve Target or Complete Related Wellness Courses**
- + BP: Achieve Target or Complete Related Wellness Courses**
- + Complete Breast Cancer Screening**
- + Complete Colorectal Cancer Screening**
- + Complete Cervical Cancer Screening**



The study evaluated a sample of approximately 120,000 members across three employers over a 3-year period (2010 – 2012). The three employers cover an array of industries including finance, car rental, and health insurance with a population size ranging from 15,000 to 100,000 members. The combined member population was 57% female and 43% male, with a median age of 43 years old. The detailed annual compliance reports were used to extract health action related results, e.g. engagement rates and compliance rates. Hospital and ER admissions were obtained from claims data by extracting claims with place of service for Inpatient and ER during the defined time period. Hospital bed days for each admission event were calculated using the discharge date minus the admission date and the length of stay was calculated using the total bed days divided by the total hospital admissions in the defined time period. Hospital readmission is defined as hospital inpatient claims that incurred within 30 days of the previous inpatient discharge date with matching first or second diagnosis codes. The results were standardized into the format of per thousand members per year using total member months in the defined time period. preventive visits, compliance with obtaining healthy biometric measurements, and taking actions to control unhealthy biometric measurement results.

## STUDY RESULTS

By the end of 2012, all three employers completed their third year of the incentive program. Among the members, close to 80% completed at least one action defined in the program, and approximately 42% completed more than 50% of all health actions in the program. In addition, approximately 12% of members completed all rewarded health actions based on age, gender and disease conditions by the end of the third plan year (Figure 1.).

**Figure 1.** Health incentive successfully encouraged participants towards healthy behaviors

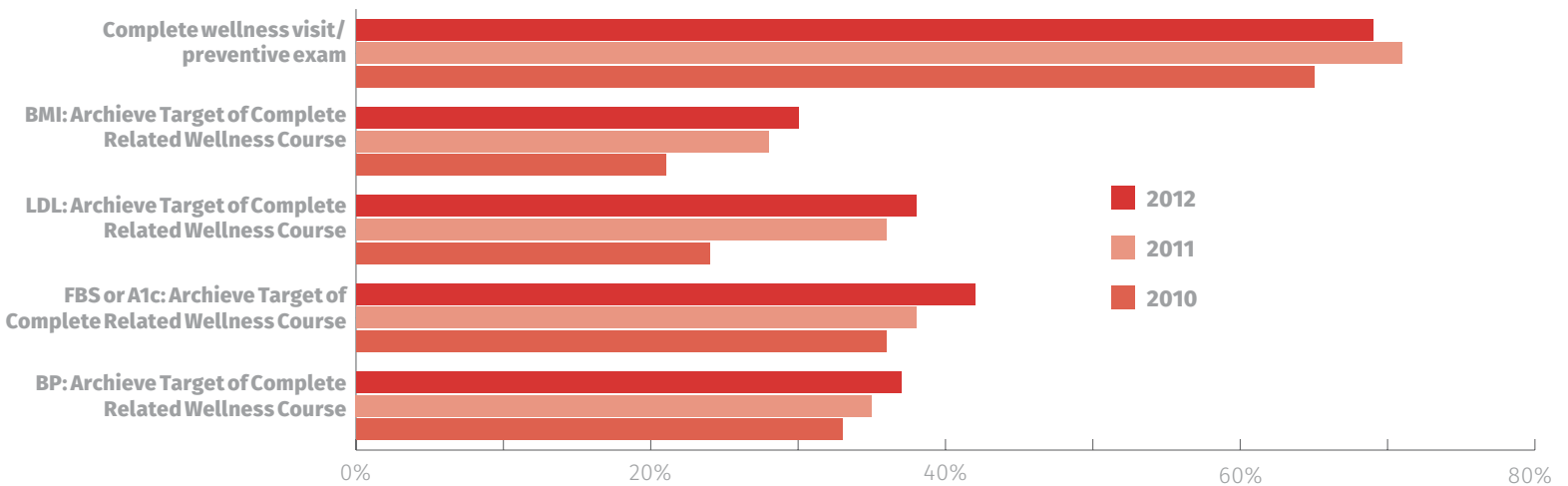




Annual wellness visit/preventive exam and biometric screenings capture unknown health problems, leading to the early detection of chronic conditions such as diabetes, pre-diabetes, hyperlipidemia and/or hypertension. During the three year period, 70% of the participants had an annual wellness visit/preventive exam (Figure 2). Among these participants, 7.4% (7,100) were identified as diabetic.

A participant can meet the individual biometric test requirement with in-range values or by completing related wellness programs. By the end of the third program year, there was a 15% to 61% increase in compliance rates on individual biometrics, including Body mass index (BMI), LDL cholesterol (LDL), fasting blood sugar (FBS) or hemoglobin A1c (A1C), and blood pressure (BP). As shown in Figure 2, the compliance rates for the health actions on BMI, LDL, FBS or A1c, and BP reached 28%, 38%, 41%, and 47%, respectively in 2012.

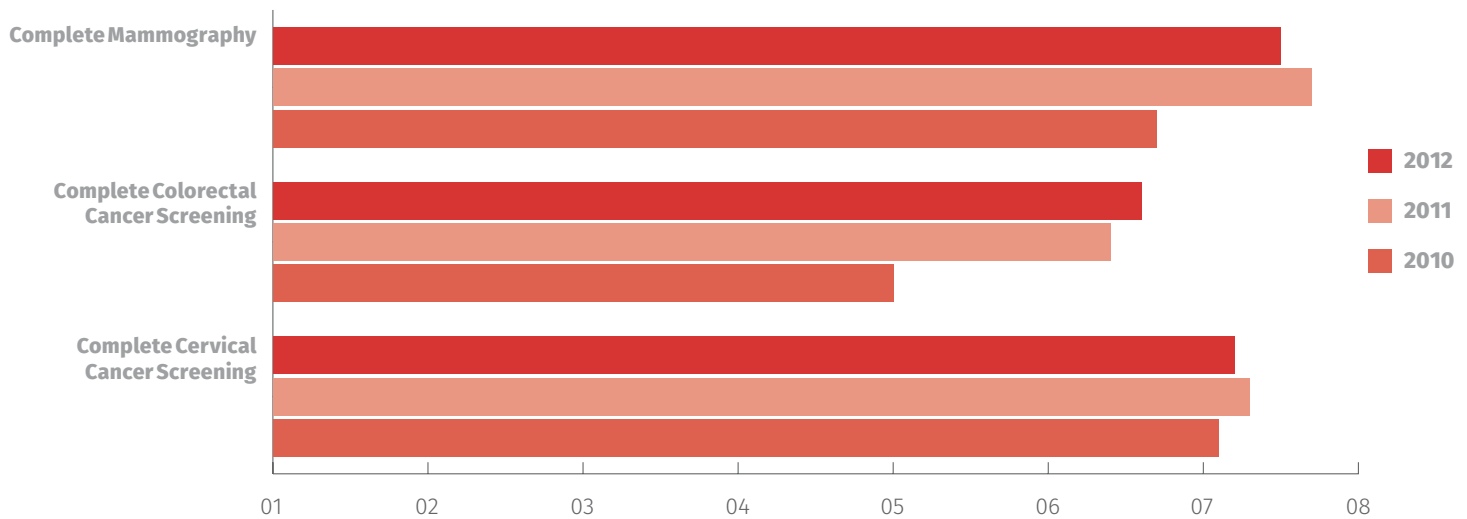
**Figure 2.** Improvements of completion rates on wellness visit/preventive exam and biometric test health incentive participants.





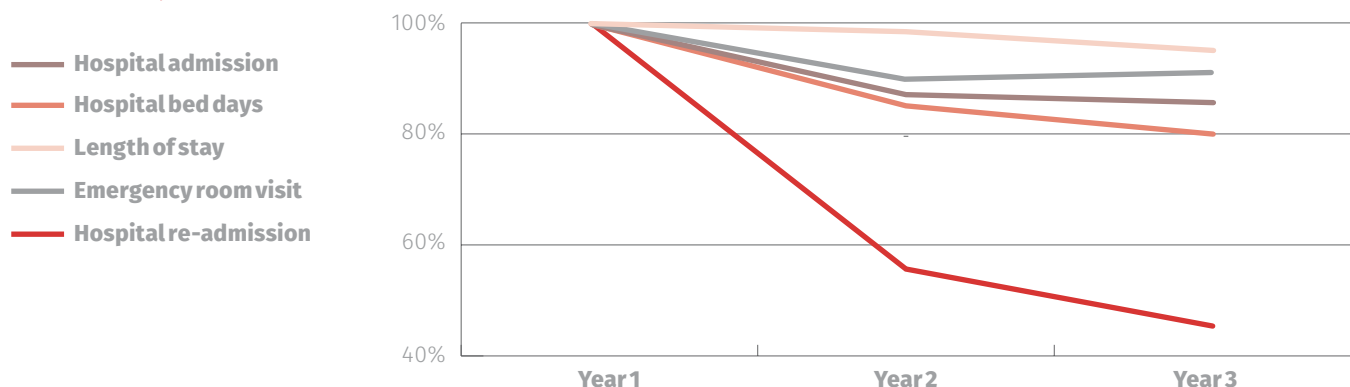
Early detection and screening of cancer greatly increases the chances for successful treatment and longer survival. The incentive program encourages members to complete cancer preventive health actions based on a member's age and gender. By the end of the third program year, the screening rates for cervical cancer, breast cancer and colon cancer were 65%, 67%, and 57%, respectively among eligible members. An increased trend in the completion rates occurred in cancer preventive health actions despite a growing population of eligible members (Figure 3.).

**Figure3.** Improvements of completion rates on cancer preventive health actions among health incentive participants



In addition to successfully promoting healthy behaviors, hospital utilization decreased over the three year period. By the third year, there was a 10% - 20% reduction in Hospital Admission, Bed Days, Length of Stay, and ER visits comparing to the first program year. Hospital readmission rates had a 50% reduction by the third program year (Figure 4.). The length of stay slightly decreased in comparison to the Admissions and Bed Days utilization metrics, reflecting utilization improvement through appropriate admits and care protocols.

**Figure4.** Reduced hospital utilization among program participants (Normalized; year 2010=100)





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