



KING COUNTY
Signature Report

1200 King County Courthouse
516 Third Avenue
Seattle, WA 98104

October 9, 2007

Motion 12597

Proposed No. 2007-0432.1

Sponsors Gossett

1 A MOTION approving the Second Annual King County
2 Health Reform Initiative Measurement and Evaluation
3 Report.

4
5 WHEREAS, the goals of the King County Health Reform Initiative are to
6 improve the long-term health of King County's employees and reduce the rate of growth
7 in King County's health care costs by one-third over the period of 2007 through 2009,
8 and

9 WHEREAS, Motion 12131 approved in May 2005 adopted a business case to
10 estimate the costs and benefits of various interventions to be provided through the
11 county's Healthy IncentivesSM program, and

12 WHEREAS, Motion 12131 requested the executive to provide a program
13 evaluation plan developed by a consultant to assess the effectiveness of each internal
14 Health Reform Initiative program and strategy, and

15 WHEREAS, on October 11, 2005, the labor, operations and technology
16 committee received a briefing on the consultant's Health Reform Initiative measurement
17 and evaluation design, and

18 WHEREAS, Motion 12353 adopted in September 2006 approved the First Annual
19 Health Reform Initiative Measurement and Evaluation Report and requested the
20 executive to transmit to council by January 15, 2007, a plan to conduct a cost-benefits
21 analysis of the entire health reform initiative, and

22 WHEREAS, Motion 12353 established the production and transmittal to council
23 by motion of an annual measurement and evaluation report by August 15 of each year of
24 the Health Reform Initiative program, and

25 WHEREAS, Motion 12479 approved in March 2007 adopted the King County
26 Health Reform Initiative Cost Benefit Analysis Plan containing three levels of
27 measurement: Level I—Original Business Case Programs; Level II—Programs to
28 Develop a Supportive Environment for Health; and Level III—Programs to Improve
29 Health Care Provider Quality and Accountability, and

30 WHEREAS, Motion 12479 requested seventeen specific measures for evaluating
31 the progress of the Health Reform Initiative, and

32 WHEREAS, the Second Annual King County Health Reform Initiative
33 Measurement and Evaluation Report has been presented to the council in conformance
34 with all applicable motions and direction;

35 NOW, THEREFORE, BE IT MOVED by the Council of King County:

36 The Second Annual King County Health Reform Initiative Measurement and
37 Evaluation Report, Attachment A to this motion, is hereby approved.
38


Motion 12597 was introduced on 8/27/2007 and passed by the Metropolitan King County Council on 10/8/2007, by the following vote:

Yes: 8 - Mr. Gossett, Ms. Patterson, Mr. von Reichbauer, Mr. Dunn, Mr. Ferguson, Mr. Phillips, Ms. Hague and Mr. Constantine
No: 0
Excused: 1 - Ms. Lambert

KING COUNTY COUNCIL
KING COUNTY, WASHINGTON


Larry Gossett, Chair

ATTEST:


Anne Noris, Clerk of the Council

Attachments A. Second Annual Measurement and Evaluation Report Health Reform Initiative

12597 1

2007-432

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August 5, 2007

Consultant Report on:

**SECOND ANNUAL MEASUREMENT AND EVALUATION REPORT
HEALTH REFORM INITIATIVE
Department of Executive Services
Human Resources Division
King County
August 2007 Draft**

Respectfully submitted by Carolyn A. Watts, Ph.D.



Summary of Major Findings:

- The report is very clearly written and directly addresses the 17 measures required by the Council.
- The report concludes that there has been progress on almost all 17 measures.
- The findings of the report are consistent with the data presented.
- The report identifies several appropriate next steps, both in terms of changes in activities and in terms of data collection and measurement.
- The focus on productivity measures for the future is appropriate, although the concern about neatly separating lost productivity resulting from employee health from that resulting from family leave to deal with health issues of a family member may be overstated.
- In the future, HRI staff might consider adding measures of maintenance of health goals to those aimed at their initial achievement.

The report addresses the 17 Council measures.

With minor exceptions (noted throughout this consultant report), the report is very clearly written. It makes good use of the substantial literature on employer-based health promotion activities and the benchmarks that can be gleaned from that literature. It also nicely incorporates the recommendations of the peer review panel.

Data on the 17 measures required by the Council are presented in the report. One aspect of the report that might be clarified is the relationship between the matrix in Figure 5 (page 20) and the Key Performance Measures in Table 2. The notation in Figure 5 of the costs and benefits of each of the three levels of the HRI is interesting – perhaps the matrix is also meant to motivate the specific 17 measures selected for inclusion in Table 2?

The inclusion of benefit measures beyond ROI, as recommended by the peer review panel, is very appropriate. Not only are the dollar benefits likely to be somewhat slow to materialize, they are also difficult to measure with any certainty because of the issues raised in the report such as paid vs. incurred claims, the aging of the workforce, regional cost trends, and occasional local events (e.g., a particularly bad flu season).

Another aspect of the report that could be clarified is the relationship between the 13.3% cost trend (representing paid claims) vs. 11% (representing incurred claims). The rationale behind using incurred claims is clear and appropriate. What is not clear is why the 13.3% figure continues to be used as the projected increase as in Figure 1 (page 7) and Figure 10 (page 39). The choice between 13.3% and 11% is significant because the actual 2006 increase is 10.7% -- a reasonable decrease from 13.3%, but only slightly lower than 11%.

There has been progress on almost all 17 measures.

With the exception of the percentage of employees getting flu shots at work, all the measures for which there are baseline figures showed improvement. The decrease in prescription drug costs is quite large. The County's rate of generic drug use, at 60.5% in 2006, compares favorably with that reported by the Centers for Medicare and Medicaid Services (CMS) for the new Medicare drug benefit (59.6% in the third quarter of 2006), and for private third party payers. The latter increased from 48.4% in 2005 to 52.6% in 2006, significantly below the King County figure (<http://www.cms.hhs.gov/apps/media/press/release.asp?Counter=2081>).

The decrease in medical costs (without drug costs) is smaller, but positive. Awareness, participation and satisfaction rates are high. Notable changes in health behavior and health outcomes are reported. The changes noted in risk status are quite impressive given the description of how changes are measured.

The findings of the report are consistent with the data.

The report describes the findings and concludes that progress has been made, and that HRI has achieved its 2006 goals even as expectations for 2007 are higher. This is an appropriate conclusion given the data. The modest decrease in medical costs is attributed accurately to the short time frame over which the results are measured relative to the implementation of the HRI.

The decrease in the number of employees getting flu shots at work is partially explained in the report by issues of supply distribution in 2006. That certainly may have

contributed, but it may also be the result of the easy access to flu shots from nearly every drug and grocery store, public health clinics, and elsewhere. Perhaps a more appropriate metric for success on this measure is the total number of employees who got a flu shot *anywhere* since the goal is complete immunization, not necessarily immunization at work.

The report does an excellent job of discussing the various individual Health Incentives program elements. It would likely be impossible to separate out the individual impact of the nursing lines versus coaching calls etc. They clearly work synergistically. The report also does an excellent job of examining the characteristics of the various program elements in the context of King County's workforce environment. The suggestions made for changes and improvement in these elements over the next year appear to be very sensible and should reduce program costs without compromising results. The partnership with Aetna appears to be very productive.

It might have been interesting to report the percent of employees who fell into each of the bronze, silver, and gold premium groups.

The report identifies appropriate next steps.

The next steps identified for the other aspects of the HRI are also appropriate. Clearly finding ways to make the incentives embedded in the employee benefits package consistent with HRI goals is very important. This is particularly true with the drug benefit. Altering co pays, deductibles, and other features of the drug benefit to encourage the use of generic drugs and therapeutically equivalent drugs would likely result in additional savings in drug costs without compromising access.

Measuring changes in productivity through changes in absenteeism and presenteeism is offered as a next data collection step. While there are few examples in other settings to guide this activity, it is an obvious and worthwhile next step. The concern about separating absenteeism and presenteeism related to the employee's own health status as opposed to the health status of family members may be too strong for several reasons. First of all, other aspects of the HRI have a family focus (appropriately since many dependents receive County-sponsored benefits). Second, the efforts to improve employee health status may easily have spillover effects on other family members. To the extent that this results in changes in absenteeism related to caring for other family members, this is a benefit attributable to the HRI.

Future measures might include maintenance as well as changes.

As noted by the peer review panel, a significant challenge for employee health promotion programs is not only motivating employees to make changes in their health behavior, but perhaps more importantly to maintain those changes over time. As the HRI matures, it would be useful to complement measures of change (e.g. pounds lost, risk factors eliminated) with measures of no change: How long did those pounds stay off? How long did the BMI stay in the lower category? How many months did the employee exercise three times per week?



King County

Executive Response to Quality Assurance Consultant Report on:

Second Annual Measurement and Evaluation Report

Health Reform Initiative

King County

Department of Executive Services

Human Resources Division

August 2007

The Executive supports the quality assurance consultant report of the Second Annual Measurement and Evaluation Report as prepared by Carolyn A. Watts, Ph.D. and provided by attachment. The following response covers the consultant's specific comments on the findings contained in that report:

Finding #1: The report addresses the 17 council measures.

Second Paragraph: HRI staff agree that the notations in the Figure 5 and Table 2 and text describing these graphics could be improved to clarify the relationship between the proposed cost-benefit analysis approach and the 17 measures approved by the council. Changes have been incorporated in the version of the report transmitted to the council.

Fourth Paragraph: HRI staff agree that the 13.3 percent figure from the original business case is no longer relevant to reporting on the progress of the HRI to contain future growth in health care costs. References to 13.3 percent were included in the Second Annual M&E Report to document the basis for the HRI's target to achieve an 8.9 percent trend increase for 2005-2009. There will be no need to continue referencing 13.3 percent in future M&E Reports.

Finding #2: The findings of the report are consistent with the data.

Second Paragraph: HRI staff agree that the number of flu shots administered to employees at work is probably too narrow a focus for the HRI. Counting the number of flu shots administered at work are important to the staff managing the scheduling of the onsite programs, but the total number of participants receiving annual flu immunization is a more appropriate metric for the HRI. Additional information about flu immunization,

which was available in the 2006 and 2007 wellness assessments, has been added to the report (see below)

Overall, looking at flu shots for the entire population, more than 48 percent of employees and family members reported through the wellness assessment that they received influenza immunization in 2005 (N=8,060). This number increased to 53 percent in 2006 (N=9,366).

Fourth Paragraph: HRI staff will report the percent of the participants that fall into the three out-of-pocket expense levels in the 3rd Annual M&E Report. The bronze, silver, and gold levels were awarded at the individual level upon completion of the individual action plans, but the out-of-pocket expense level for families was determined by taking the lower individual out-of-pocket expense level between an employee and his/her spouse or partner (i.e., employee=gold; spouse=silver; family=silver). Staff need to confirm the out of pocket level data following the completion of the administrative appeals process that continued into 2007.

2007-432



King County

**Second Annual
Measurement & Evaluation Report**

Health Reform Initiative

**Department of Executive Services
Human Resources Division**

August 2007



King County

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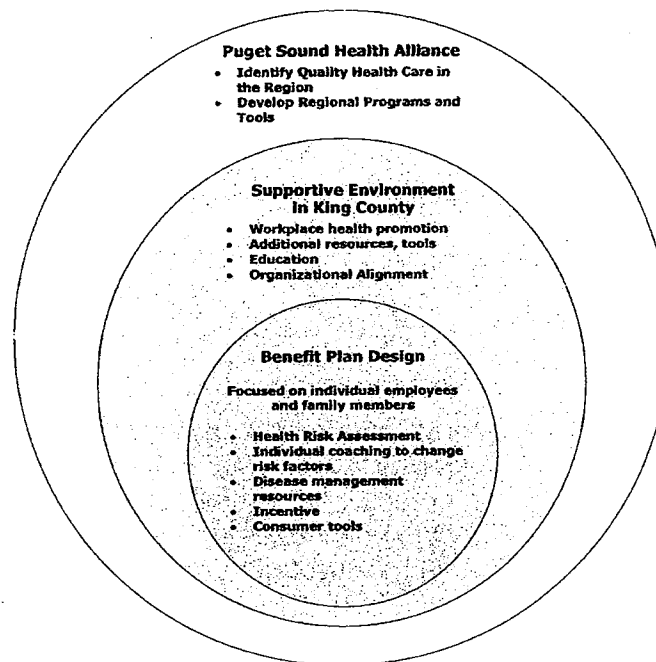
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Executive Summary

Background

This is the Second Annual Report for King County's Health Reform Initiative (HRI). The HRI is a comprehensive, integrated effort to tackle both the problems in the health care system and the ever-increasing utilization of health services by county employees and their families. The two key goals of the HRI are to 1) improve the health of employees and their families, and 2) reduce the rate of cost increase for health care.

King County Health Reform Initiative



The HRI provides resources and programs at three levels. At the center is the Healthy IncentivesSM benefits plan that is focused on helping employees and their families build good health behaviors and manage chronic conditions more effectively. Supporting the benefits plan is an organizational philosophy based on creating a healthy workplace including a set of programs to educate employees about health and the wise use of health care resources, as well as workplace activities to support physical wellness, healthy eating and preventive care (like annual flu shots). The third level of the HRI is the Puget Sound Health Alliance, created largely through the leadership of King County to address the cost and quality issues in health care across the Puget Sound region. Key programs of the Alliance focus on changes needed in the external marketplace to improve the quality of care and reduce health care costs. The Alliance promotes coordinating care across providers, encouraging the use of evidence-based treatment

guidelines and creating a system of quality measurement used by all providers, health plans and health plan sponsors in the region.

Start up of the HRI has been gradual, with specific program elements coming “on line” at different dates. In 2005 five “care management” programs were added to the benefits plan design—nurse line, disease management, an enhanced case management outreach, provider best practice, and a performance provider network. 2005 also marked the start of the supportive environment level with the implementation of the Health Promotion Leadership Committee, the annual Health Leadership Forum, and an intensive education and outreach campaign to prepare employees and their families to participate in the wellness assessment and individual action plans. Finally, in 2005 the Puget Sound Health Alliance partnership was formed.

By 2006 employees and their spouse/domestic partners were fully engaged in the wellness assessment and individual action plans; the Live Well Challenge, Weight Watchers[®], gym discounts, and other supportive environment programs were in full swing; and the Puget Sound Health Alliance produced clinical improvement reports on diabetes, heart disease, back pain and prescription drugs, and developed the framework for the integrated, region-wide medical and prescription drug database needed to create comparison reports on the quality of care provided by local clinics and hospitals.

Lessons Learned

In 2004 when the HRI was conceived and designed, there were very few examples of integrated health and productivity models in employer settings, and even fewer formal, published studies documenting best practices. Since that time the HRI has received valuable feedback on its programs from an independent Peer Review panel of health and productivity program experts, and has located several well-designed studies of employer-based programs similar to the HRI. Lessons learned from these sources include:

1. The approach and specific components of the HRI are consistent with “best practices” described in the literature.
2. Longitudinal studies of best practice health and productivity programs show savings ramp up over time.
3. There will be some increase in costs even with programs that successfully reduce the overall risk level of the target population because even low-risk individuals need more medical care as they age.
4. Research indicates that programs that address multiple risks (e.g., high blood pressure, high cholesterol, large waist measurement) may be more effective than programs directed at single risks (e.g. high cholesterol only.)

5. Productivity is a significant part of the cost-benefits equation and should be measured in the HRI.
6. Improvement in health is directly tied to increased employee productivity.

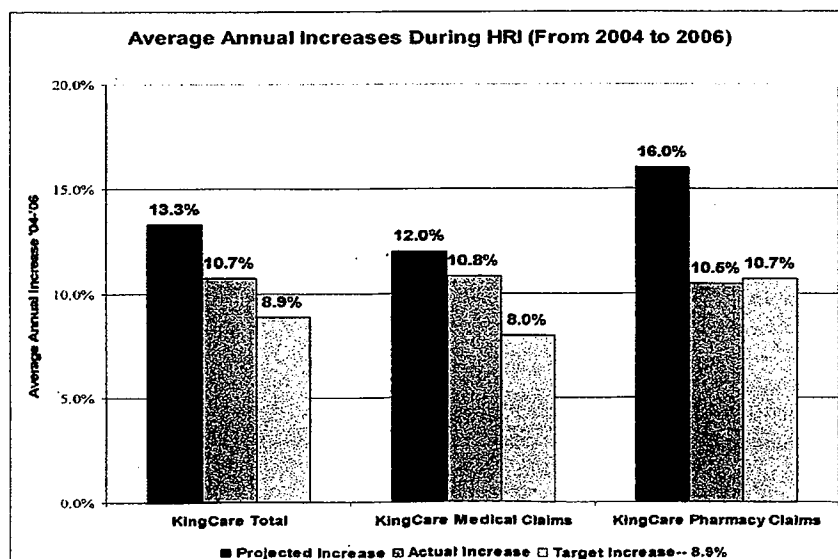
Key Findings

Based on claims data from the first quarter of 2007, the county is seeing an overall cost increase trend for 2004 to 2006 of 10.7 percent for the self-insured KingCareSM PPO medical and prescription drug claims, indicating significant progress towards the goal of 8.9 percent average growth rate target set in the original business case for the HRI. There is still, however, little evidence in the claims data that the five "care management" programs implemented on a pilot basis in 2005 (24/7 nurse line, disease management, case management, provider best practice, and performance provider network) are creating their expected return on investment. There is a discussion of short-term action plans to improve the performance of these programs on pages 44-48, and a discussion of longer-term action plans on pages 57-58.

Although claims savings attributable to the wellness assessment and individual action plans will not begin until 2007, the results of the wellness assessment in 2006 and 2007 show an improvement in indicators of individual health, including reduction in body mass index (BMI), improvement in nutrition patterns, and increase in physical activity. These early findings reinforce the expectation that these programs will contribute \$6.9 million in savings in 2007 – 2009.

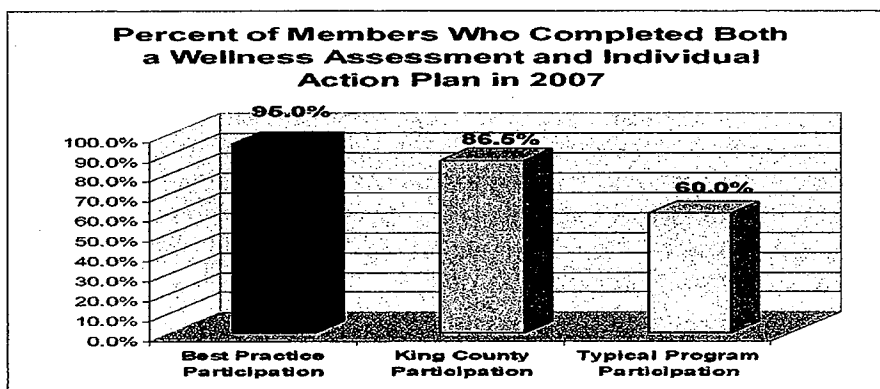
Figure 1 shows the change in trend for King County's overall incurred medical and prescription cost (10.7 percent 2004 to 2006) compared to 13.3 percent cost increase forecast from the 2002-2004 trends. The target for the period 2005 – 2009 is 8.9 percent.

Figure 1



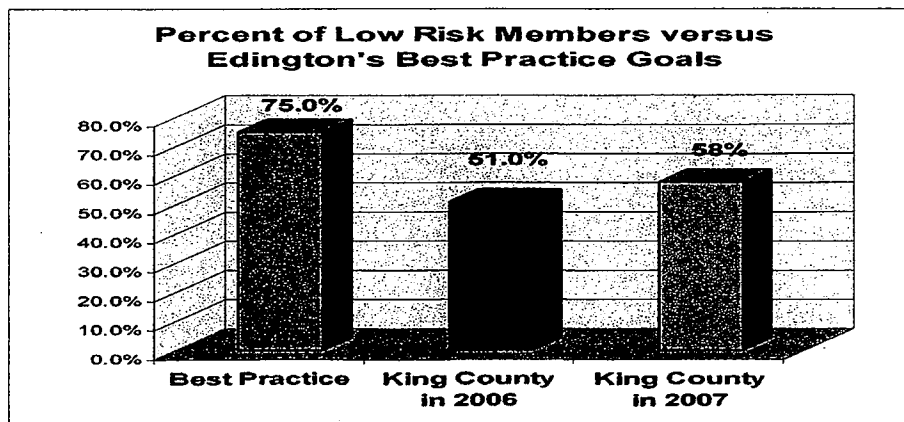
Although the main focus of the Second Annual Measurement and Evaluation Report is to report on specific measures of the costs and financial, organizational and health status benefits of the HRI adopted by the King County Council, there are two important measures not included in that matrix that are perhaps the best overall key indicators of the county's progress towards achieving a "best practice" health management program. The first is the combined participation in *both* the wellness assessment *and* individual action plan, and the second is the overall percentage of members at low risk compared to the "Champion Worksite" targets developed by D.W. Edington, Ph.D., Director of the Health Management Research Center at the University of Michigan. As Figure 2 shows, in both 2006 and 2007, more than 86 percent of all eligible King County members completed both the wellness assessment and an individual action plan to develop or maintain healthy behaviors—these results exceed industry standards and are close to the target recommended by Dr. Edington of 95 percent of members completing all parts of a comprehensive health management program.

Figure 2



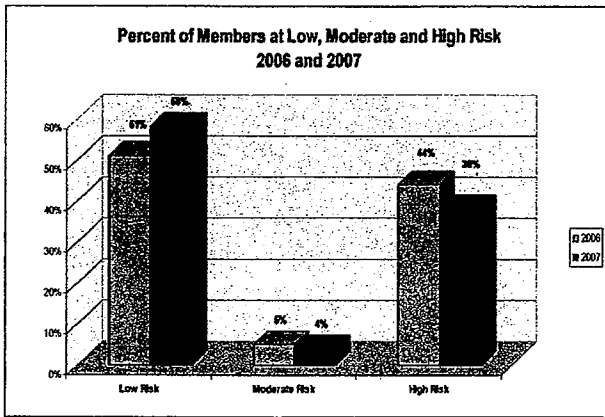
The second is the overall risk profile. As Figure 3 illustrates, the overall risk profile for the county moved from 51 percent at low risk in 2006 to 58 percent in 2007. Edington's research sets the goal for the percentage of people at low risk at 75 percent or more.

Figure 3



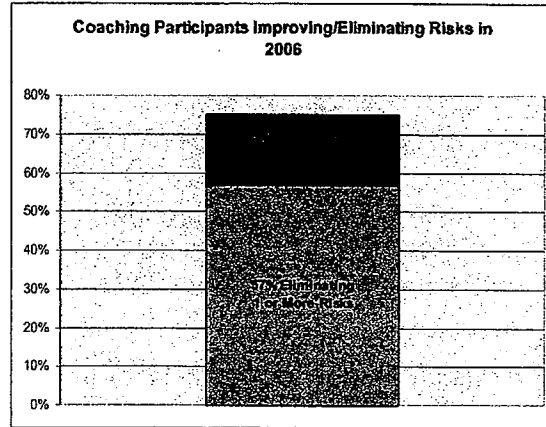
Figures illustrating the rest of the measures adopted in Council Motion 12479 are shown below.

- **Change in group risk profile for employees and spouse/domestic partners from 2006 to 2007 as measured by the wellness assessment.**



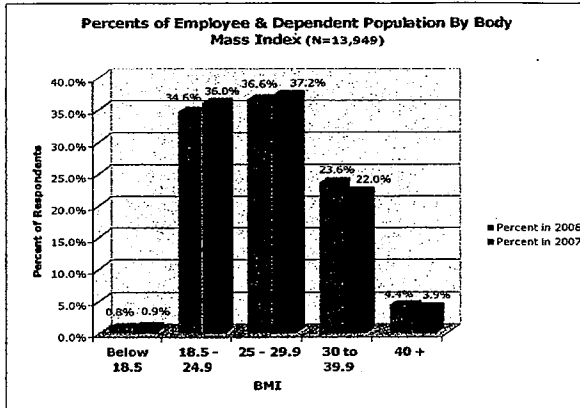
Between 2006 and 2007, there was a six percent drop in the number of members at high risk, a one percent drop in the number of members at moderate risk, and a seven percent increase in the number of members at low risk.

- **Change in the number of coaching participants reporting improvement in or elimination of one or more risks.**



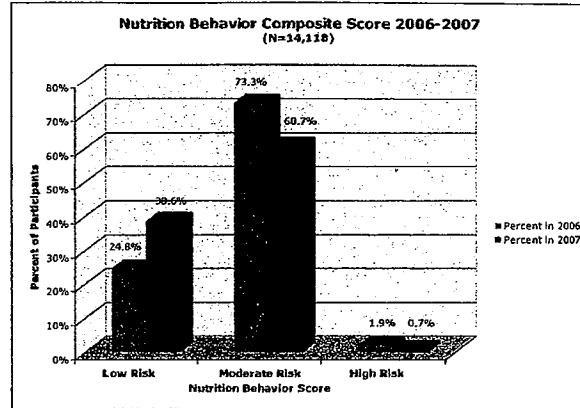
In 2006, 57 percent of high risk members participating in coaching calls reported eliminating at least one risk factor (e.g. high body mass index, cholesterol, etc.) and another 18 percent reported reducing at least one risk factor, for a total of 75 percent of participants improving on one or more risk factors.

- **Change in self-reported body mass index 2006 to 2007 for employees and spouse/domestic partners as measured by the wellness assessment.**



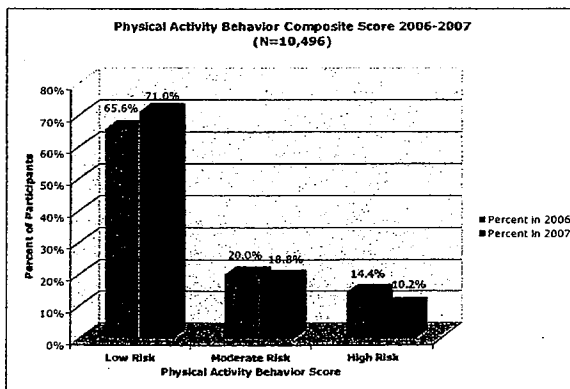
The recommended standard for body mass index (BMI) is between 18.5 and 25. In 2006, 34.6 percent of the people taking the wellness assessment were in this range and in 2007, 36.0 percent were in this range.

- **Change in self-reported nutrition patterns 2006 to 2007 for employees and spouse/domestic partners as measured by the wellness assessment.**



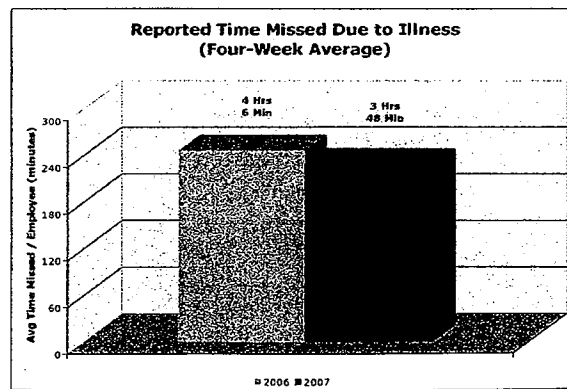
Between 2006 and 2007 the percent of people reporting a change in their nutrition patterns leading to low risk for nutrition rose from 25 percent to 39 percent.

- **Change in self-reported amount of exercise 2006 to 2007 for employees and spouse/domestic partners as measured by the wellness assessment.**



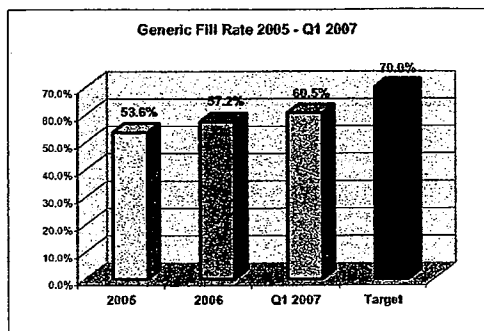
Between 2006 and 2007 the percent of people reporting an increase in their level of physical activity that puts them at low risk for exercise rose from 66 percent to 71 percent.

- **Change in self-reported absence for employees due to illness 2006 to 2007 as measured by the wellness assessment.**



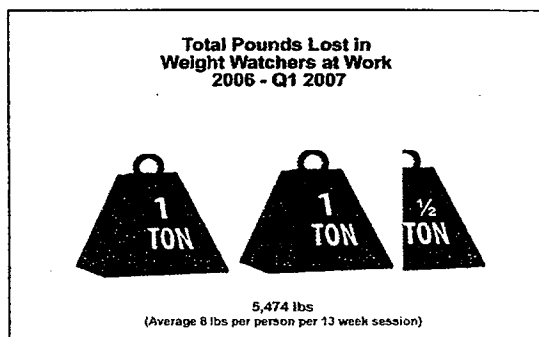
Among employees who reported health-related absences occurring during the four weeks immediately prior to taking the wellness assessment, there was on average a 20 minute drop in reported absences between 2006 and 2007.

- **Change in generic prescription rate 2005 and 2006**



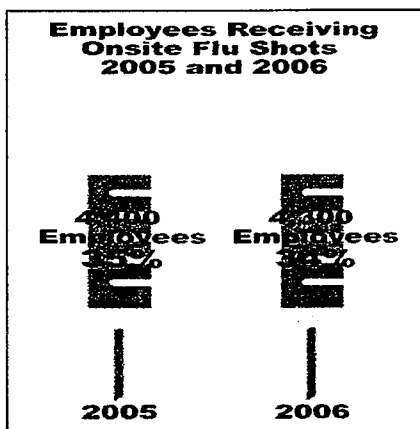
Between 2005 and the first quarter of 2007, the use of generics has increased from 53.6 percent to 60.5 percent.

- **Number of and total pounds lost by employees through Weight Watchers at Work[®] program 2006 and 2007.**



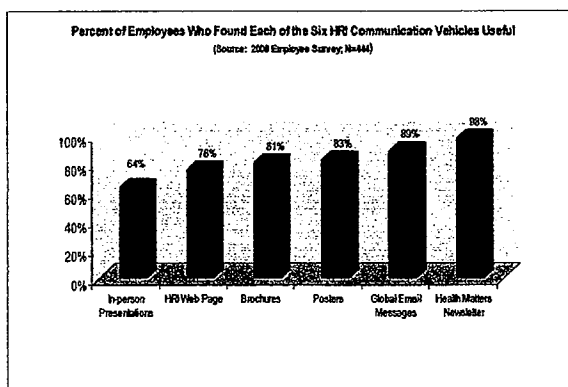
In 2006 through first quarter of 2007 almost 230 employees enrolled in the Weight Watchers at Work[®] program lost an average of 8 pound per 13-week session for a total of 5,754 pounds.

- **Number and percent of employees receiving flu shots at work 2005 and 2006.**



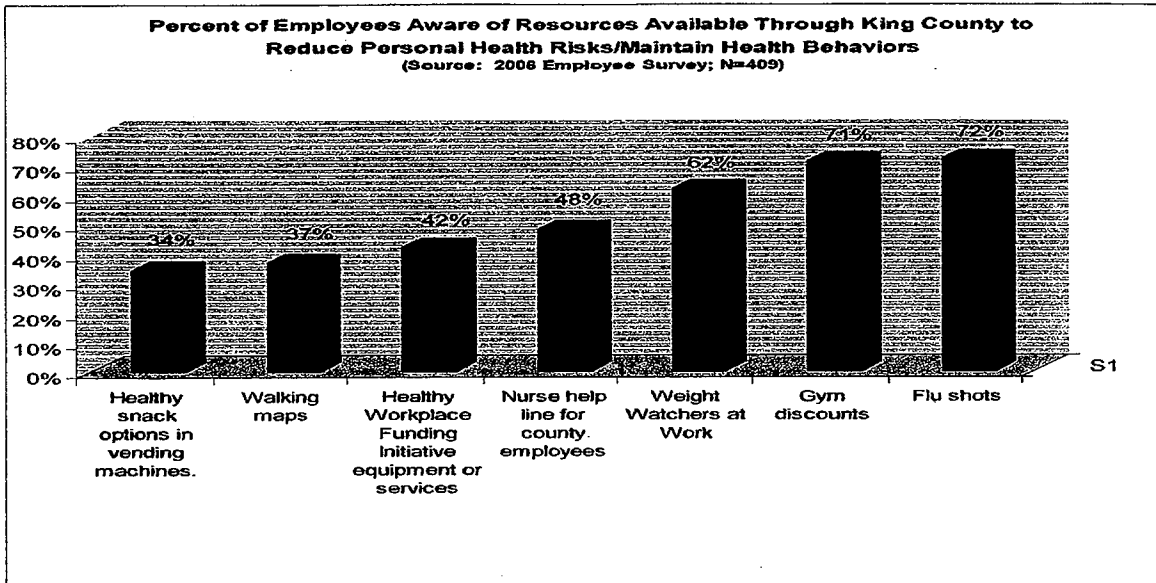
The county actively encourages all employees and family members to get annual flu shots. To make it easy for employees, flu shots are offered at worksites. More than a third of employees chose the on-site flu shots over going to their doctors or other locations to receive this benefit.

- **Self reported employee perception of usefulness and effectiveness of HRI communication tools in 2006.**



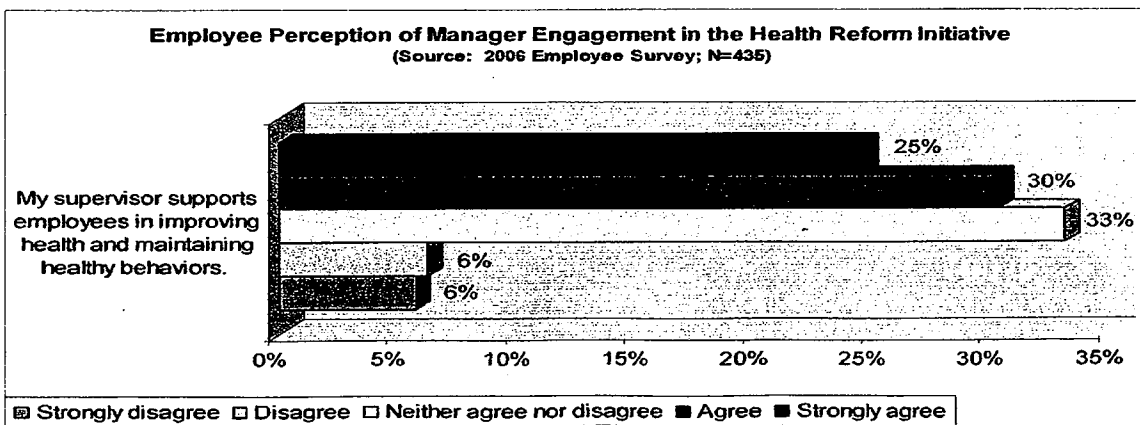
Employees surveyed reported high to very high satisfaction with each of the HRI communication tools, especially the *Health Matters* newsletter, which is sent to employees' homes. The newsletter scored a 98 percent satisfaction rating.

- Self-reported levels of employee awareness of resources available through King County to reduce personal health risks and maintain or increase health behaviors in 2006.



Employees responding to the HRI survey were very aware of the onsite flu shots, gym discount opportunities and Weight Watchers® programs. However, only about one third knew about walking maps and healthy snack options in vending machines.

- Self-reported levels of employee agreement that supervisor supports health and maintaining health behaviors.



Over 55 percent of employees responding to the HRI survey agree or strongly agree that their supervisor supports the Health Reform Initiative in the workplace.

Conclusions

As noted in the “Lessons Learned” section, the approach and components of the HRI are in line with “next generation” health and productivity programming. With over 86 percent of eligible members taking the wellness assessment and completing an individual action plan each year, and with 58 percent of members at low risk, the HRI is well on the way to achieving “best practice standards” for participation and percent of members at low risk. The experience in the HRI is also consistent with best practices in that longitudinal studies of health and productivity programs show that savings ramp up over time and often do not appear until the third year of the program. Data supporting these conclusions are discussed at length in the body of the report.

The one major aspect of best practice health and productivity program design that was not included in the original HRI business case or the measurement and evaluation scope is the impact of employee illness on absenteeism, presenteeism and general employee productivity. As noted in the “Lessons Learned” section of the report, the cost impact of illness can be as much as four times the direct medical costs when an employer considers absences, sick leave pay, the cost of replacement employees, and lowered productivity when employees at work but impaired by conditions such as headache, back pain, colds and flu (presenteeism). The county is exploring the best approach for measuring the impact of employee illness on productivity and tracking changes on productivity as the overall health of the employee population improves.

The results for each of the three program levels are as follows:

Level 1 (the benefit plan design)—2006 was the first year that all six Healthy IncentivesSM program elements were in place. Thus, it is too soon to see results for behavior/risk-level change as a reduction in claims costs. The HRI has, however, collected enough information to determine that adjustments are needed in the 24/7 nurse line, disease management, case management, provider best practice and performance network programs. The wellness assessment and individual action plan portions of the HRI are in place, and are showing good early indications of overall improvement in the health of employees and their families.

Level 2 (supportive environment)—Results from surveys of employees and managers and supervisors indicate that the tools and resources are well-known and regularly used, and the county is making progress towards creating a truly healthy workplace.

Level 3 (Puget Sound Health Alliance)—The Alliance has already been formally designated by Health and Human Services Secretary Mike Leavitt as a first in the nation “community leader” in value-driven health care, making the group eligible to receive Medicare performance data for local, public outcomes reporting.

Next Steps

- 1. Integrate claims and health behavior data:** “Next generation” programs are using comprehensive claims, health behavior and absence data to create a “whole person” approach to integrating health and care management programs. The county is working on adding health behavior data into the claims database in order to assess correlations between healthy behavior and management of health conditions at the group level. Integrated data analysis is essential for determining optimum strategies for improving the health of employees and their families.
- 2. Explore implementation of a valid survey tool to capture information about employee absenteeism and presenteeism directly related to health conditions:** Research cited in “Lessons Learned” in Chapter 1 shows that the cost impact of health on absenteeism and presenteeism (employees at work but performing at less than full capacity due to illness) is significantly greater than the dollar cost for medical and prescription drug claims and should be measured.

With the advent of the federal Family and Medical Leave Act (FMLA) and state regulations allowing employees to take sick leave time for family reasons, most employers have obstacles to obtaining accurate data about employee absences for their own personal health conditions. In addition, sick leave and disability leave data do not capture information about presenteeism. For these reasons several surveys have been developed and validated that capture detailed self-reported information about the effect of employee health on attendance and ability to perform work. The county will lay the ground work for selecting and implementing one of these validated survey instruments in order to measure the effect of health on productivity.

- 3. Determine best opportunities for “care intervention” programs:** Existing disease management programs focus on individuals who have a full-blown disease that can be “managed” but not actually “cured” (e.g. diabetes, heart disease.) Dr. Edington and other researchers advocate changing the focus from people who have “permanent” diseases like heart disease to those who are on the path to developing disease but have “pre-condition risk factors” that are reversible through health behavior changes. Examples of reversible “pre-condition risk clusters” include pre-metabolic syndrome (large waist circumference, hypertension, glucose intolerance, high triglycerides and high HDL cholesterol), and mental health (poor perception of current health, low level of life satisfaction, high stress both on and off the job, and illness days.) This is an emerging area of disease management with few fully operational program examples.
- 4. Pursue with the Joint Labor Management Insurance Committee¹ prescription drug plan options that increase the generic fill rate:** Although generic fill rate was not addressed in the original business case, encouraging members to use generic alternatives to brand name drugs (particularly very expensive - and heavily

¹ The Joint Labor Management Insurance Committee is comprised of eight union representatives selected by the King County Labor Coalition (representing approximately 25 unions with over 92 bargaining units) who meet with management representatives to negotiate the benefits packages that are offered to employees. The King County Police Officers’ Guild bargains a separate benefit package with the county through its collective bargaining agreement. Approximately 87 percent of the county’s workforce is represented.

advertised - "block buster" pharmaceuticals) *when medically appropriate* is an essential strategy for helping employees and their families become informed and conscientious consumers of health care. The county has set a target generic fill rate of 70 percent, and can achieve this through a combination of consumer education about the safety and effectiveness of generic drugs and changes in plan design that provide greater financial incentives to "Choose Generics."

5. **Conduct additional employee surveys:** In order to create broader consumer awareness of the programs and benefits of the Health Reform Initiative, surveys (to be conducted online and by telephone and during events such as the Health and Benefits Fair and the Live Well Challenge) will help identify and improve the vehicles for transmitting important health-related messages to employees (*i.e.* web, newsletter, direct mail, KCTV etc.)
6. **Implement the Employee Performance and Accountability System (EPAS):** The new performance and accountability system for both supervisors and employees is currently under development by the Human Resources Division. Through its design to engage employees and enhance communications between employees and supervisors about performance and organizational goals, this system should in turn contribute to a healthier workplace. EPAS is slated to begin implementation in 2008.
7. **Develop and implement a communications strategy for enhancing awareness of preventative screenings.** Research clearly demonstrates the cost and health benefits of preventative screenings for numerous medical and mental health conditions. King County HRI will examine the potential of coordinating with health plans, the Puget Sound Health Alliance and others to communicate more effectively with "at risk" individuals (*e.g.* by demographic grouping) and their care providers about the type, availability and benefits of preventative screenings. The strategy will be incorporated into the development of the 2008 HRI Communications Plan.

Chapter 1—Background

When King County prepared to negotiate a three-year health benefits package with its ninety-two union bargaining units in 2004, the picture was dismal. Health care costs were rising at rates three times the Consumer Price Index (CPI), threatening to double the cost of the benefits plan in less than seven years. The county recognized that efforts to control sharply increasing costs by limiting access to providers and health services through managed care, contracting with providers for reduced fees, and after-the-fact claims review were not enough. A more comprehensive approach was needed that 1) moderates the demand for health care services by making employees and their families healthier, and 2) improves the supply side of health care by increasing the quality and efficiency of health care delivery by providers.

An analysis of our employee health care expenditures showed that five percent of all people covered on the plan accounted for over 58 percent of our total costs. Low back pain, cancer, depression, diabetes, coronary artery disease and asthma were the most costly chronic conditions in the county's population; high cholesterol and high blood pressure were the most common. For each chronic condition a person had, the cost of claims approximately doubled, and 14 percent of the people covered on the plan had five or more chronic conditions.

A survey and focus groups of our employees showed that they were 1) aware of the cost issues in national health care crisis but unaware of the findings of the Institute of Medicine report on the high rate of patients receiving inappropriate, poor quality or unsafe care; 2) interested in having and using tools that would help them be more informed users of health care; 3) interested in preventive care and open to using disease management resources if they had a chronic health condition; and 4) motivated to maintain their health so that they could "be there" for their families and enjoy their retirement years.

In late 2004 King County launched the Health Reform Initiative (HRI), a comprehensive, integrated effort to tackle both the problems in the health care system itself and the ever-increasing utilization of health services by county employees and their families. The two key goals of the HRI are to 1) improve the health of employees and their families, and 2) reduce the rate of cost increase for health care.

The HRI provides programs at three levels. At the center is the Healthy IncentivesSM benefits plan that is focused on helping employees and their families build good health behaviors and manage chronic

Health Reform Initiative Mission Statement

The Health Reform Initiative seeks to reduce King County's rising health care cost trend through improved health of its employees and better quality health care in the region. We will do this by using market forces to change both the supply and demand side of the health care equation. King County will:

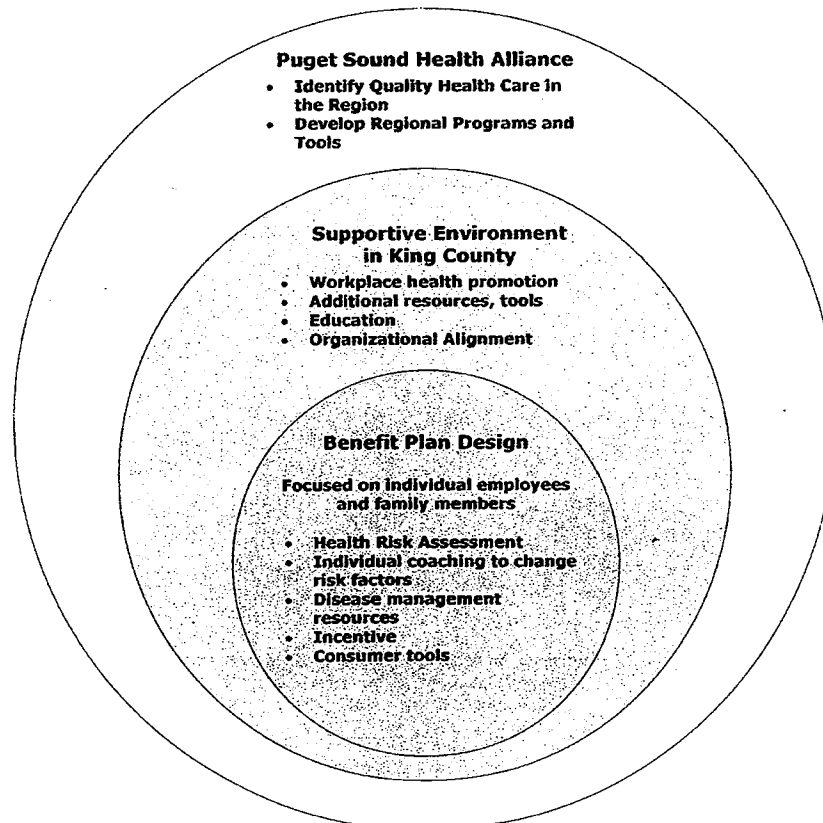
- Reduce by one-third the escalating trend of health care costs by easing demand for health care services through the **Healthy IncentivesSM benefits program** and supportive services, which provides employees and their families with effective tools for improving their health and accessing quality care.
- Work to reduce the cost of health care supplied in the region by collaborating with regional stakeholders through the **Puget Sound Health Alliance** to improve the quality of care available thereby reducing redundancies that drive up costs.

conditions more effectively. The benefits plan is supported by the programs at the second level, which include 1) an organizational philosophy of creating a healthy workplace, 2) a set of programs to educate employees about health and the wise use of health care resources, and 3) workplace activities to support physical activity, healthy eating and preventive care (like annual flu shots). The third level of the HRI is the Puget Sound Health Alliance, created largely through the leadership of King County to address the cost and quality issues in health care regionally. Key programs of the Alliance are focused on changes needed in the external marketplace to create a health care system designed to improve the quality of care and reduce health care costs by promoting coordination of care across providers, encouraging the use of evidence-based treatment guidelines, and creating a system of quality measurement used by all providers, health plans and health plan sponsors in the region.

The conceptual framework of the HRI is presented in Figure 4. A detailed description of each of these three levels is provided in Chapters 2 through 4 of this report.

Figure 4

Conceptual Framework of the Health Reform Initiative



Measurement and Evaluation

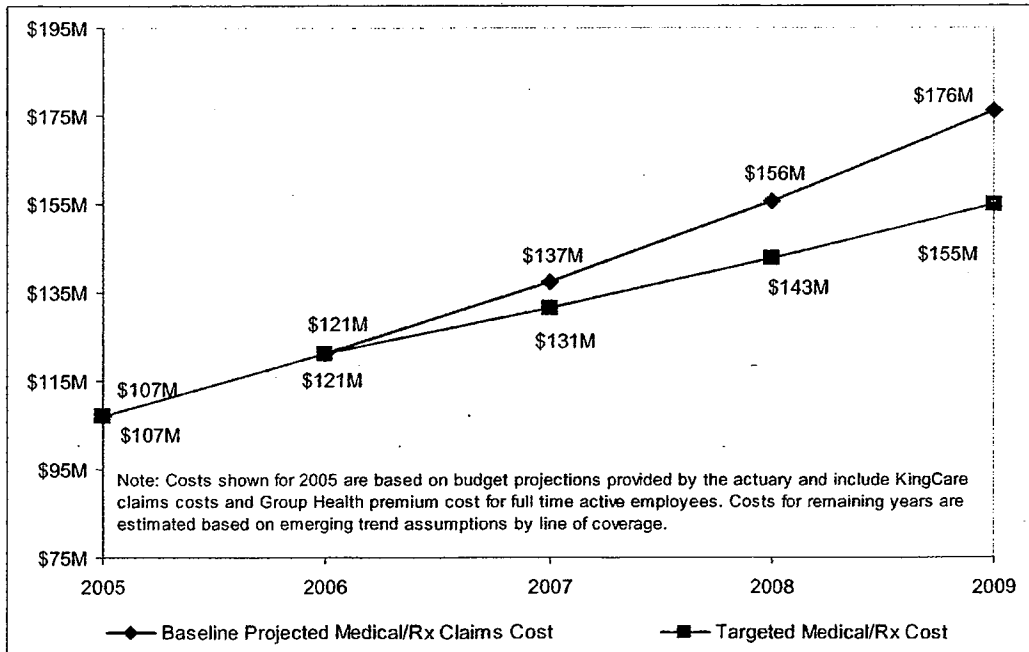
Original Business Case

An essential component of the HRI is the design and implementation of a comprehensive measurement and evaluation system. The process began with the development of a business case for the HRI in response to a 2005 budget proviso that directed the Executive to prepare "...a business case for the disease management, case management and health promotion programs. The disease management case shall include cost-benefits analysis and performance measures for each program and a description of their impacts on the flexible benefits rate. The business case for the disease management programs shall also include performance guarantees for the disease management vendors..." Thus the business case is focused entirely on the benefits plan design that is at the center of the HRI. The only measurements addressed are 1) a financial target—to reduce the increase in medical and prescription drug costs by one third from the expected 13.3 percent trend for the period 2005 – 2009—and 2) a demonstration of a positive return on investment for each of the programs implemented as a part of the benefits plan design.

Table 1 below shows the expected impact of the benefits plan design on the projected medical and prescription drug costs 2005 – 2009.

Table 1

Illustration of Medical/Rx Baseline and Targeted Costs from the HRI Business Case



Broadening the Business Case to a Cost-Benefit Measurement Plan

Both the original business case and first measurement report produced in August of 2006 focused only on the “center ring” of the HRI—the benefits plan design. Following the first Measurement and Evaluation Report describing the results achieved in 2005, the Executive convened a panel of five distinguished health care experts to review the strategies, policies and programs of the HRI and to make recommendations on program design, implementation, and adjustments needed to maximize results and sustainability of the program. Their report, *King County Health Reform Initiative Check-up: Report of the Peer Review Panel*, was delivered to the Council in October 2006.

The panel made five general recommendations on the HRI²:

- 1. Focus on Whole Program:** The Panel noted that in these early stages it will be difficult to determine which strategies are causing changes to cost and quality within the multi-pronged HRI approach. They recommended that the county focus on assessing the HRI as a comprehensive set of strategies while continuing to measure the specific programs individually.
- 2. Develop a Cost/Benefit Ledger:** The Panel strongly cautioned against reducing the program to one measure of cost/benefit. They suggested that the county consider developing a cost/benefit ledger that will recognize both quantifiable and non-quantifiable costs and benefits.
- 3. Include Intermediate Outcome Measures:** The Panel advocated development of a set of “intermediate outcome measures” that indicate improvement in healthy behaviors such as physical activity, flu shots and tobacco cessation. They suggested that the county evaluate success based on changes in the health risk levels of employees and their families.
- 4. Use a Comparison Group:** The Panel recommended that because there is no control group, the county should seek to identify a peer group that could be used for comparing rates of increasing costs.
- 5. Measure the Impact of Health on Productivity:** Finally, the Panel strongly recommended that the county implement a validated survey of employee absence and lowered self-reported productivity due to illness in order to capture the effect of improved health on staff capacity in the workplace.

As a result of the Peer Review Panel report, the Executive proposed that the measurement and evaluation plan be expanded to cover all three levels of the HRI (Benefits Plan Design, Supportive Environment and Puget Sound Health Alliance) and address two categories of costs (financial and organizational) and three categories of benefits (financial, organizational and health status). In January 2007, the Executive transmitted and the Council adopted Motion 12479 that includes the following new, comprehensive cost-benefits matrix. The motion also identified seventeen specific

² King County Health Reform Initiative Check-Up: Peer Review Panel Findings, Oct 2006.

measures covering all three levels of the HRI that the Council requested be included in the Second Annual Measurement & Evaluation Report.

The Measurement and Evaluation Report is organized around the cost-benefit matrix described in Motion 12479. The new matrix describing costs and benefits is shown in Figure 5.

Figure 5

Cost-Benefit Measurement Approach (Motion 12479)
Final Results August, 2010

Level	Expected Benefits			Costs	
	Financial	Organizational	Health Status	Financial	Organizational
Level 1 Benefit Plan Design 2005-2009	Less than expected medical and prescription drug costs Positive return on investment for individual programs included in the benefit design	Better informed, more involved health care consumers	Reduced number of individual member risk factors Increased member control of chronic conditions	Program costs and vendor fees	County management and labor partnership commitment
Level 2 Supportive Workplace Environment 2006-2009	Increased productivity (reduced absenteeism /presenteeism due to illness and injury)	Increased manager and supervisor support of healthy workplace	Increased percentage of employees and s/partners who are low risk Increased use of evidence-based preventive health screenings	Program costs and vendor fees	County management and labor partnership commitment
Level 3 Puget Sound Health Alliance 2008-2009	Decreased total cost for treatment of a condition	Increased quality and efficiency of health care in the region Development of appropriate external benchmarks	Increased use of appropriate preventive care Increased use of evidence-based treatment Reduction in number of avoidable adverse events	Alliance dues Database start up costs	County management and labor partnership commitment

In addition to the high-level benefits listed above, this report provides detailed information on seventeen specific measures included in Motion 12479 as shown in

Table 2. These measures are intended as a tool to monitor the financial, health status and organizational progress of the HRI. They are useful markers for specific program elements within the HRI, as well as organization-wide metrics.

Table 2

**Measurement and Evaluation Report Key Performance Measures
Second Annual Health Reform Initiative
Council-Adopted Measures**

Measure	Outcome/Target	Measure Type/ Page Number of Results Discussion
Benefits plan design (Level 1)		
1. Change in trend in King County's overall incurred medical and Rx costs compared to costs forecast from 2002-2004 trends.	Reduce the rate of increase in total claims costs over several years Target: $\leq 8.9\%$	Financial Pgs. 40-41
2. Year over year progress in achieving targeted reduction of 1/3 off trend in King County's medical and Rx cost per employee per month on an incurred basis.	Reduce the rate of increase in total claims costs over several years Target: $\leq 8.9\%$	Financial Pg. 42
3. Cost-benefit for each of the six program interventions in the business case: <ul style="list-style-type: none"> • Nurse advice line • Disease management • Case management • Provider best practice • High performance specialty network • Wellness assessment and individual action plan. 	Positive return on vendor programs	Financial Pgs. 42-48
4. Change in group risk profile for employees and spouse/domestic partners from 2006 to 2007 as measured by the wellness assessment.	Increase the number of low risk members; reduce the number of high and moderate risk members Target: $\geq 75\%$ of members at low risk	Health status Pg. 51
5. Change in the number of coaching participants reporting improvement in or eliminating one or more risks.	Increase the number of low risk members; reduce the number of high and moderate risk members Target: $\geq 75\%$ of members at low risk	Health status Pg. 52

6. Change in self-reported body mass index 2006 to 2007 for employees and spouse/domestic partners as measured by the wellness assessment.	Increase the number of low risk members; reduce the number of high and moderate risk members <i>Target: ≥50 % of members with BMI of 18.5 to 25</i>	Health status Pgs. 53-54
7. Change in self-reported nutrition patterns 2006 to 2007 for employees and spouse/domestic partners as measured by the wellness assessment.	Increase the number of low risk members; reduce the number of high and moderate risk members <i>Target: ≥50% of members achieve recommended standards for healthy eating</i>	Health status Pgs. 54-55
8. Change in self-reported amount of exercise 2006 to 2007 for employees and spouse/domestic partners as measured by the wellness assessment.	Increase the number of low risk members; reduce the number of high and moderate risk members <i>Target: ≥75% of members exercise ≥30 minutes 3 times per week</i>	Health status Pgs. 55-56
Supportive Environment (Level 2)		
9. Change in self-reported absence for employees due to illness 2006 to 2007 as measured by the wellness assessment.	TBD	Financial Pgs. 64-65
10. Change in generic prescription rate 2006 to 2007.	Reduce cost for prescription drugs <i>Target: ≥70% generic fill rate</i>	Financial Pgs. 65-66
11. Number and total of pounds lost by employees through Weight Watchers at Work [®] program 2006 and 2007.	TBD	Health status Pg. 66
12. Number and percent of employees receiving flu shots at work 2005 and 2006.	TBD	Health status Pg. 67
13. Self reported employee perception of usefulness and effectiveness of HRI communication tools in 2006.	Provide feedback to HRI staff about success in reaching employees with HRI messages so that adjustments can be made to maximize levels of awareness	Organizational Pg. 68
14. Self-reported levels of employee awareness of resources available through King County to reduce personal health risks and maintain or increase health behaviors in 2006.	Provide feedback to HRI staff about success in reaching employees with HRI messages so that adjustments can be made to maximize levels of awareness	Organizational Pg. 69
15. Self-reported levels of employee agreement that supervisor supports health and maintaining health behaviors.	Provide feedback to HRI staff about degree to which the HRI is changing manager behavior	Organizational Pg. 70

Puget Sound Health Alliance (Level 3)		
16. Summary of regional and national recognition for King County and the Puget Sound Health Alliance (measure starts in 2008)	Improved opportunity for major grants to support continuation of the Alliance; support for achieving desired improvements in the health care system	Organizational Pg. 75
17. Puget Sound Health Alliance Provider Quality Comparison Reports (measure starts in 2008)	Develop information that will help health plans and consumers select high quality, cost effective health care	Organizational Pg. 75

Evaluation Timeline

The steps used in implementing the HRI follow well established processes for quality and process improvement initiatives. The first step is diagnosing where the organization is at greatest risk—people-wise, program-wise, or expense-wise. The county conducted its initial analysis of these issues in 2004. The second step is to discuss and evaluate alternative intervention options and to develop strategic and tactical plans to implement a health, safety and productivity management solution. The third phase involves the actual implementation of a package or set of solutions that fall into four broad categories—care or disease management, health promotion or health management, workplace environment, and organizational climate or culture. Finally, the fourth phase requires measuring and evaluating whether the interventions worked or not, and determining why they worked or failed.³ Although the five “care intervention” programs (nurse advice line, disease management programs, case management, provider best practice and performance provider network) were implemented in 2005 on a *pilot* basis, the real first year for measurement purposes, as defined by researchers, like DW Edington, Ph.D. (Director of the Health Management Research Center of the University of Michigan) and Ron Z Goetzel, Ph. D. (founding Director of Cornell Institute for Health and Productivity Studies, and Vice President of Consulting and Applied Research at Medstat), is 2006 when the wellness assessment and individual action plan programs (that affected all employees) were implemented.

In spite of the programs’ varying start dates, the general timeline for measurement and evaluation for the HRI is described as shown in Table 3.

³ Goetzel RZ. 2005. *Examining the Value of Integrating Occupational Health and Safety and Health Promotion Programs in the Workplace*. Paper presented at the National Symposium (2004), Washington D.C. [Online] Available: [http://O-
www.cdc.gov/mill1.sjlibrary.org/niosh/worklife/steps/pdfs/BackgroundPaperGoetzelJan2005.pdf](http://O-www.cdc.gov/mill1.sjlibrary.org/niosh/worklife/steps/pdfs/BackgroundPaperGoetzelJan2005.pdf) [accessed May, 2007.]

**Table 3
Evaluation Timeline**

Results	Period	Comment	Report
Baseline	2005	Establishes reference point for measuring changes	August 2006
Indicative Findings	2006	Early point estimates too preliminary to signal directional change	August 2007
Directional Guidance	2007	Initial indications of serial results that could represent emerging trends	August 2008
Early Trends	2008	Likely emerging trends	August 2009
Program Trends	2009-2010	Statements of cumulative change, 2005-2009	August 2010

Lessons Learned from Research Since the Original Business Case Was Developed

In 2004 when the HRI was conceived and implemented, there were very few examples of integrated health and productivity models in employer settings, and even fewer formal, published studies documenting best practices. The county developed both the original business case, and eventually the three levels of the HRI based on case studies of individual program elements (*e.g.* disease management programs for specific conditions, worksite health promotion programs) and white papers on healthy workplace strategies found in the literature.

The county received valuable insight and information in the fall of 2006 from the Peer Review Panel (as noted above), and has since become aware of several well-designed studies of employer-based health and productivity programs similar to the HRI. Key lessons from this research fall into three categories—a description of “best practice” programs, fundamental challenges, and emerging trends for “next generation” programs. This new information shows that the design and implementation of the HRI are on track, and points to ways the HRI can be further improved.

Below is a summary of some of this research.

Best Practice Programs

1. The approach and specific components of the HRI are consistent with “best practices” described in the literature.

D.W. Edington, Ph.D., Director of the Health Management Research Center at the University of Michigan, has been conducting longitudinal studies of twenty corporate health promotion and wellness programs covering over two million persons for more than 30 years. Based on his research, Dr. Edington has developed a check list of “next generation” health management programs for employers. As noted in Appendix A, the HRI already incorporates a majority of the recommended program features on Dr. Edington’s list. Key recommendations from Dr. Edington for “Champion Worksites” include:

- Achieve 95 percent participation in the wellness assessment and individual action plan program for improving and maintaining healthy behaviors.
- Keep 75 percent or more of the population at low risk, and keep moderate and high risk members from getting worse.
- Provide incentives for members with disease conditions to follow their evidence-based treatment protocols.
- Target the whole person, not the condition.
- Measure absenteeism and presenteeism as well as direct health care claims.
- Look for total savings and changes in population risk, not just return on investment for individual programs.
- Typical investment for best in class programs is \$400 per employee per year (approximately \$33 per employee per month)⁴.

Another researcher, Ron Z Goetzel, Ph. D., founding Director of the Cornell Institute for Health and Productivity Studies, and Vice President of Consulting and Applied Research at Medstat, has spent more than 20 years focused on large-scale evaluations of health promotion, disease prevention, and demand and disease management programs. Dr. Goetzel’s summary of key elements of successful health and productivity management programs based on longitudinal studies of “best practice” programs in Fortune 100 Companies include⁵:

- High participation in wellness assessment and follow-up programs (achieved through use of meaningful incentives for participation)
- Use of a comprehensive health risk assessment – with or without biometric screenings

⁴ Edington, DW. 2006. *Towards Champion Worksites* checklist sent to the County by the author in May, 2007. Dr. Edington also covered these points in two presentations at the county—the Health Leadership Forum, May 17, 2007, and the Labor Summit, June 11, 2007.

⁵ Goetzel RZ. 2005. *Examining the Value of Integrating Occupational Health and Safety and Health Promotion Programs in the Workplace*. Paper presented at the National Symposium (2004), Washington D.C. [Online] Available: <http://0-www.cdc.gov.mill1.sjilib.org/niosh/worklife/steps/pdfs/BackgroundPaperGoetzelJan2005.pdf> [accessed May, 2007.]

- Triage into risk appropriate intervention program – based on member’s
 - Overall health risk
 - Specific risk factor(s)
 - Learning/engagement preference
 - Demographic characteristics
 - Readiness to change
 - Confidence in ability to change – self efficacy
- Use of tailored interventions based on behavior change theory
- Use of multiple “touch” modalities – mail, Internet, telephone, in-person
- Organizational support
- Referral to community resources
- Follow-up/maintenance

In addition, the National Business Group on Health conducts an annual survey on year to year health care cost increases for employers. Their research shows that companies that experience the lowest annual cost increase year after year do several things much more consistently than companies who experience the highest annual cost increase year after year. These differences are⁶:

- Low cost companies:
 - Have a clear focus and strategic framework for their benefit program;
 - Identify problems and opportunities by understanding the current state of their benefit program and the health care system overall; and
 - Pursue more extensive solutions, including those that address the underlying causes of health care cost increases.
- Furthermore, they:
 - Invest in health by providing programs and resources that encourage employees to understand and manage their health risks; and
 - Offer a variety of health management programs such as those focused on health improvement (83 percent of low cost versus 58 percent of high cost companies)

⁶ Source: National Business Group on Health – 9/29/2006

and disease management (84 percent of low cost versus 61 percent of high cost companies).

Finally, an analysis by Goetzel and others found four factors common among companies who have won the prestigious C Everett Koop Award for Health and Productivity programs. These are⁷:

- Senior management commitment and funding (79 percent)
- Excellent measurement reporting and evaluation systems (68 percent)
- High participation rates (61 percent)
- Effective triage of employees/community members into high-risk intervention programs (56 percent)

2. Longitudinal studies of best practice health and productivity programs show savings ramp up over time.

Both Goetzel⁸ and Edington⁹ have found the cost savings for medical claims and prescription drug costs start to appear in the third to fourth years after the implementation of a wellness assessment/individual action plan in conjunction with disease prevention and management strategies.

Fundamental Challenges

3. There will be some increase in costs even with programs that successfully reduce the overall risk level of the group because even low-risk individuals need more medical care as they age.

Edington has found that claims costs increase with age for all risk groups (low, moderate and high), however the rate of cost increases for moderate and high risk are significantly greater than those for low risk individuals¹⁰. That means employers with older populations like the county (average employee age is 48) will see some increase in costs above general CPI even if they achieve high program participation and high rates of keeping members at low risk. Analysis indicated that approximately 1.6 percent of the county's growth in health care costs is directly predictable from the increasingly older average age of its employees¹¹. Although the county has an older and higher risk

⁷ Goetzel, R.Z., Ozminkowski, R.J., Ascuitto, A.J., Chouinard, P., and Barrett, M. Survey of Koop Award Winners: Life-Cycle Insights. *The Art of Health Promotion*, May/June, 2001, 5:2. The Art of Health Promotion Newsletter

⁸ Goetzel RZ, Ozminkowski RJ, Bruno JA, Rutter KR, Isaac F, Wang S. 2002. Long-term impact of Johnson & Johnson's Health & Wellness Program on health care utilization and expenditures. *Journal of Occupational and Environmental Medicine* 4(5):417-424.

⁹ Edington DW. 2001. Emerging research: A view from one research center. *American Journal of Health Promotion* 15(5):341-349.

¹⁰ Ibid.

¹¹ Analysis of financial and per member trends calculated by Aetna, the medical claims vendor for the KingCare plan, March 2007.

population, its relatively high employment retention and workforce stability give the county an advantage in investing in health and healthy behaviors, since the benefits of such investment are more likely to accrue to the county in the future.

Next Generation Programs

Among the emerging trends for “next generation” programs are 1) a focus on the whole person (not just individual conditions/diseases or health behaviors) and 2) a growing emphasis on *productivity* and a realization that health and productivity are interrelated. Goetzel notes that for employers the focus on increasing worker productivity is fundamental to organizational success and includes

- Introducing new technology
- Making sure workers show up for work
- Making sure workers are mentally at work (presenteeism)
- Increasing motivation to achieve at peak performance

Research supporting these next generation program directions is described below:

4. Research indicates that programs that address multiple risks (e.g., high blood pressure, high cholesterol, large waist measurement) may be more effective than programs directed at single risks (e.g. high cholesterol only.)

In a major, longitudinal study, Edington and others¹² discovered that risks do not occur in isolation, and changes in one risk may have an effect on other risks. Specifically, Edington found four clusters of risk: Group 1—“risk taking behavior” (smoking, excess consumption of alcohol, low level of physical activity, non-seat belt use); Group 2—“low risk” (includes high BMI with no other conditions); Group 3—“Metabolic syndrome” (high blood pressure [systolic/diastolic], cholesterol, high HDL cholesterol); Group 4—“psychosocial”(self-perceived health problems, low life satisfaction, self-perceived high stress, high number of illness days). Based on these findings, Edington recommends that disease intervention efforts focus on “pre-condition risk factors” rather than full-blown diseases such as diabetes or heart disease. It is Edington’s contention that pre-condition factors are reversible, whereas full blown diseases like diabetes and heart disease cannot be reversed.

5. Productivity is a significant part of the cost-benefit equation and should be measured in the HRI.

Edington, Goetzel and others have found that the cost of absence, short- and long-term disability and presenteeism exceed direct medical costs^{13,14}. Edington further notes that although disease status is often the metric of choice as the “driver” of health care and lost productivity costs, the more important factor is actually health status. Monitoring

¹² Baustein A, Li Y, Hirschland, D, McDonald T, Edington, DW. 2001. Internal association among health-risk factors and risk prevalence. *American Journal of Health Behavior*24(4):407-417

¹³ Edington DW, Burton WN. *A Practical Approach to Occupational and Environmental Medicine* (McCunney). 140-152. 2003.

¹⁴ Goetzel RZ, Guindon AM, Turshen IJ, Ozminkowski RJ. 2001. Health and productivity management: Establishing key performance measures, benchmarks and best practices. *Journal of Occupational and Environmental Medicine* 43(1):10-17

the health status for a population of employees is the preferred metric to document improved health and productivity¹⁵. Pelletier and others found that reducing one health risk can reduce absenteeism by 2 percent and improve productivity by 9 percent¹⁶.

John E. Riedel, MBA, MPH, President, Riedel & Associates Consultants has compiled recent findings from the many studies designed to estimate the true costs of both absenteeism and presenteeism¹⁷.

- Data collected from almost 8,000 Dow Chemical employees using the Stanford Presenteeism Scale demonstrated that absenteeism associated with chronic conditions resulted in 1.35 to 8.85 days lost per year and that presenteeism associated with chronic conditions resulted in 44.5 to 91 days lost per year.¹⁸
- Goetzel and colleagues used a combination of five surveys to estimate that absenteeism associated with chronic conditions resulted in greater than ten days lost per year and the presenteeism resulted in 30 days lost per year¹⁹.
- Stewart and associates estimated 4 to 8.4 days lost per year for absenteeism, and 17.9 to 34 days lost per year for presenteeism using the American Productivity Audit involving almost 30,000 people.²⁰
- Boles and colleagues found 4.2 days lost per year for absenteeism and 15.5 days lost per year for presenteeism using the Work Productivity and Activity Impairment Questionnaire.²¹

6. Improvement in health is directly tied to increased employee productivity.

Burton and colleagues found that ten of twelve health risk factors were significantly associated with self-reported work limitations. As the number of self-reported health risk factors increased, so did the percentage of employees reporting work limitations. Each additional risk factor was associated with a 2.4 percent productivity reduction. Medium and high risk individuals were 6.2 percent and 12.2 percent less productive than low-risk individuals, respectively. The annual cost of lost productivity in this corporation (Bank One) was estimated at between \$99 million and \$185 million (\$1,392

¹⁵ Edington DW. 2001. Emerging research: A view from one research center. *American Journal of Health Promotion* 15(5):341-349.

¹⁶ Pelletier B, Boles M, Lynch W. 2004. Change in health risks and work productivity over time. *Journal of Occupational and Environmental Medicine*.

¹⁷ Riedel J. The cost of lost productivity. Program abstracts of the *American Occupational Health Conference*; May 5-10, 2006; Los Angeles, California. Module 2.

¹⁸ Collins JJ, Baase CM, Sharda CE, et al. The assessment of chronic health conditions on work performance, absence, and total economic impact for employers. *Journal of Occupational and Environmental Medicine*. 2005;47:547-557.

¹⁹ Goetzel RZ, Long SR, Ozminkowski RJ, Hawkins K, Wang S, Lynch W. Health, absence, disability and presenteeism cost estimates of certain physical and mental health conditions affecting U.S. employers. *Journal of Occupational and Environmental Medicine*. 2004;46:398-412.

²⁰ Stewart WF, Ricci JA, Chee E, Morganstein D. Lost productive work time costs from health conditions in the United States: results from the American Productivity Audit. *Journal of Occupational and Environmental Medicine*. 2004;46:373-745.

²¹ Boles M, Pelletier B, Lynch W. The relationship between health risks and work productivity. *Journal of Occupational and Environmental Medicine*. 2005;47:769-777.

and \$2,592 per employee per year.) The authors concluded that health risk factors represent additional causes of lost productivity²².

Aldana found there is a strong correlation between high levels of stress, excessive body weight, and multiple risk factors, and increased health care costs and illness-related absenteeism²³ and Edington has shown that reductions on health risk factors, including stress, result in decreased medical care costs²⁴.

Finally, a full-cost benchmarking survey of 88 major employers conducted by the Integrated Benefits Institute in June of 2004 found²⁵:

- The full costs of absence (productivity lost plus wage replacement payments for absent employees) are more than four times the total medical payment.
- Two-thirds of the full cost of benefits in the study came from incidental absence and short-term disability—two programs that are frequently unmanaged.
- Full costs of health- and absence-related benefits amount to 129 percent of net income and 30 percent of payroll for study participants.
- Absence-related costs alone amount to 76 percent of net income when full costs (including lost productivity from absence and wage replacement benefits) are considered.

²² Burton WN, Chen CY, Conti, DJ, Schultz AB, Pransky, G, Edington DW. The association of health risks with on-the-job productivity. *Journal of Occupational and Environmental Medicine*. 2005;47:769-777.

²³ Aldana SG, Pronk NP. 2001. Health promotion programs, modifiable health risks, and employee absenteeism. *Journal of Occupational and Environmental Medicine* 43(1):36-46.

²⁴ Edington DW. 2001. Emerging research: A view from one research center. *American Journal of Health Promotion* 15(5):341-349.

²⁵ The Business Case for Managing Health and Productivity: Results from IBI's Full-Cost Benchmark Program. Integrated Benefits Institute. June 2004.

Chapter 2—Benefits Design and the Original Business Case

As noted in Chapter 1, 2006 is the year when the county expects to see early point estimates that are yet too preliminary to signal the direction and potential success of the HRI. It is also the first year when all components of the health management approach of the Healthy IncentivesSM program were in place—the five “care intervention” programs (24/7 nurse advice line, disease management programs, case management, provider best practice and performance provider network) and the wellness assessment and individual action plan programs.

The five “care intervention” programs of the HRI aimed at improving health and health care quality and managing costs were launched on a pilot basis in the county’s self-insured KingCareSM PPO plan in January 2005. (The Group Health Cooperative HMO plan has features similar to these built into its basic service delivery model). These programs include:

- Nurse advice line (Informed Health Line[®])—Provides current, reliable information on health-related issues 24-hours a day.
- Disease management—Provides ongoing support and education to members with specific chronic conditions—chronic heart failure, coronary artery disease and diabetes.
- Case management (Enhanced Member OutreachSM)—Provides telephone outreach to members needing hospital or other specialized care.
- Provider best practice (MedQuery[®])—Provides evidence-based treatment information to providers.
- Performance provider network (Aexcel[®])—Identifies efficient physicians in defined specialty practices.

The nurse advice line was implemented based on the results of an in-depth employee survey and focus groups conducted in May of 2004. Participants consistently listed access to a 24/7 nurse advice line as their preferred resource for self-care.

The three disease management programs were selected because the Health and Productivity analysis conducted in July of 2004 found these conditions are prevalent in the employees and dependents covered by health plans, and are significant factors in the health care expenses of the 5 percent of claimants in the health plans that accounted for 58 percent of the medical and pharmacy costs.

The case management, provider best practice, and performance provider network programs use medical and pharmacy claims, lab results, and special modeling technology to identify opportunities to improve the health care the member is receiving.

In 2006, the Healthy IncentivesSM program started to focus on both “healthy” and “at risk” employees and their spouse/domestic partners. All benefit-eligible employees and their spouses/domestic partners became eligible to take a wellness assessment that focuses on health behaviors such as nutrition, physical activity, perception of stress, use of tobacco and alcohol, safety habits (such as wearing seat belts when traveling in an automobile) and healthy consumer habits (such as getting age and gender-appropriate preventive screenings.) This wellness assessment measures the member’s level of risk²⁶, openness to making behavior changes in each area, and the member’s confidence in his/her ability to make a change.

Based on the level of “risk” reported in the wellness assessment, each member then participates in an individual action plan designed to improve or eliminate one or more risk factors. Low risk members log either physical activity or nutrition habits for two months; moderate and high risk individuals work with a telephone coach to design and implement a program that meets their personal needs and goals. These members “meet” with their coach in a telephone interview at least three times to earn “gold”; the lowest out of pocket expense level offered under the benefits plan; coaching services are available for up to twelve months.

Participation in the wellness assessment and individual action plans is voluntary, however there are financial incentives attached to participation. Members who took the assessment and participated in an individual action plan in 2006 were eligible for the gold out-of-pocket expense level in the health plan in 2007. Members who took the wellness assessment but did not participate in an individual action plan were eligible for the silver level, and members who did not take the wellness assessment were only eligible for the bronze out-of-pocket expense level. The program repeats yearly, so that participation in the wellness assessment and individual action plan in 2007 determines the member’s out of pocket expenses in 2008. A detailed description of the Healthy IncentivesSM program appears in Appendix B.

Important Operational Definitions and Notes for Measurement

Terminology

Several terms are used in this section whose differentiation needs to be clear in the reader’s mind. “Trend” is used to describe changes in health benefits costs that are stable enough over time to support projections of future changes. Changes in costs from one year to the next are referred to as “year over year change”.

²⁶ High risk is defined by Harris HealthTrends, the vendor administering the wellness assessment, as self-reporting any current tobacco use or three or more of the following conditions: high blood pressure, high cholesterol, physical activity less than 3 times per week, poor nutrition, high stress/poor well-being, high alcohol use or a body mass index greater than 26. Moderate risk is defined as self-reporting two of these factors, and low risk is defined as reporting zero or one risk factor.

Unless otherwise noted, claims costs in this report are reported in terms of “incurred claims,” meaning claims data have been organized and used on the basis of the date on which the member received the service. There is always some lag between the date of service and the date the billing is processed and finally paid by the county. This lag time is often a month or more, and in extreme cases might be up to 36 months. That means the claims that are actually paid in a particular budget year are not exactly the same as the claims that are incurred in that year—some of the bills paid will be from previous years, and some will not be submitted to the county until the next (or on rare occasions a later) budget year.

In contrast, the county’s appropriated budget is based on claims actually paid by the county for active employees, COBRA participants and retirees during the calendar year plus additions to the Incurred But Not Reported (IBNR) reserve, program administration fees, and in-house administrative expenses. The claims that are paid may be for services rendered in that plan year or prior years; some claims incurred in the current budget year may not come to the county to be paid until the next budget year. Therefore *on an annual basis* “paid claims” in the county’s budget will never exactly equal the incurred claims discussed in this report. Over a longer term—for example, five years—incurred and paid claims will eventually match up.

Costs in this section are generally shown in terms of per employee per month (PEPM.) That amount is derived by dividing the total cost for all employees and all dependents by the number of covered employees.

Data Sources and King County Health Care Database

In order to accurately measure the results of the HRI, King County is collecting and storing insurance claims for medical and pharmacy in both the KingCareSM and Group Health plans, although to date, only claims from the KingCareSM plan have been analyzed. Slightly more than 80 percent of all employees (and their families) are covered by the KingCareSM plan, with the remaining 20 percent being covered by the Group Health plan.

In addition to claims data, the county is collecting individual responses for each question in the wellness assessment. In 2006 there were 17,844 employees and spouse/domestic partners who completed the wellness assessment out of 19,702 eligible to participate for a 90.56 percent response rate. In 2007, 17,772 employees and spouse/domestic partners out of 19,377 eligible completed the assessment for a 91.72 percent response rate. Individuals were able to complete the assessment online or on paper. Not every participant answered every question; therefore counts of respondents vary by assessment question.

In both 2006 and 2007, employees and spouse/partners were aware that their answers would be treated as confidential medical information so that staff at HMI (the vendor administering the wellness assessment) and Harris HealthTrends (the vendor providing individual action plan coaching to high and moderate risk participants) would be able to see how they answered, and that staff at King County would not be able to see how any

specific person answered the questions. Employees and spouse/partners were also aware that their individual action plan and coaching would be determined by their answers on the wellness assessment.

The claims data and responses to the wellness assessment are de-identified and integrated as described in the next section. This data collection is the foundation of the analyses reported here, and will support future analyses to determine which current and future interventions can improve employee health and health care, and provide savings.

Other data sources for the HRI include 1) summary information from Harris HealthTrends (the vendor providing individual action plan services) about progress in reducing or eliminating risk factors reported by participants during the course of their individual action plan activities; 2) results of an employee survey conducted in August, 2006 and a survey of insured spouse/domestic partners conducted in September, 2006 by a consultant on behalf of King County; and 3) the results of member satisfaction surveys for the Informed Health Line[®] (24/7 nurse line) and Enhanced Member OutreachSM program conducted in late 2006 by Aetna, the medical claims administration vendor providing those programs.

A total of 444 employees and 500 spouses/partners participated in the general surveys. Employees were surveyed online or through interoffice mail, and spouses/partners were interviewed by telephone. As in the wellness assessment, not every person who was surveyed answered every question.

The member satisfaction surveys provided by Aetna were conducted by telephone and were specific to King County employees and family members covered by the KingCareSM health plan.

De-Identification & Integration

The county strictly adheres to the Health Insurance Portability and Accountability Act of 1996 (HIPAA) to ensure confidentiality of individual employee and dependent information. The county uses an external data integrator service to de-identify individual records and assign a new, random identifier that cannot be traced back to the original employee/dependent. This process allows all of an employee's household's medical and pharmacy claims to be summed without identifying which employee or dependent is involved.

Some analyses are not possible with HIPAA de-identified data. For this reason, some of the data used in this report were collected from online reports of aggregated data from the external third party claims administrators for the county's medical and prescription drug benefits.

Caveats for the claims data analysis

Savings can only be estimated, and the estimates do not have the reliability that would be obtained from a randomized controlled experiment.

- The five pilot programs begun in 2005 were not instituted in an experimental design created to reveal the savings from those programs. All five programs and the Benefits newsletter, *Health Matters*, were inaugurated simultaneously.
- Because the programs were introduced simultaneously and made available to all benefits-eligible persons, it is not possible to sort out which program should receive the “credit” for any specific change in the claims data.
- Claims data analysis has been completed only for the KingCareSM plan. Data for the Group Health plan are available but have not yet been analyzed.

Original Business Case

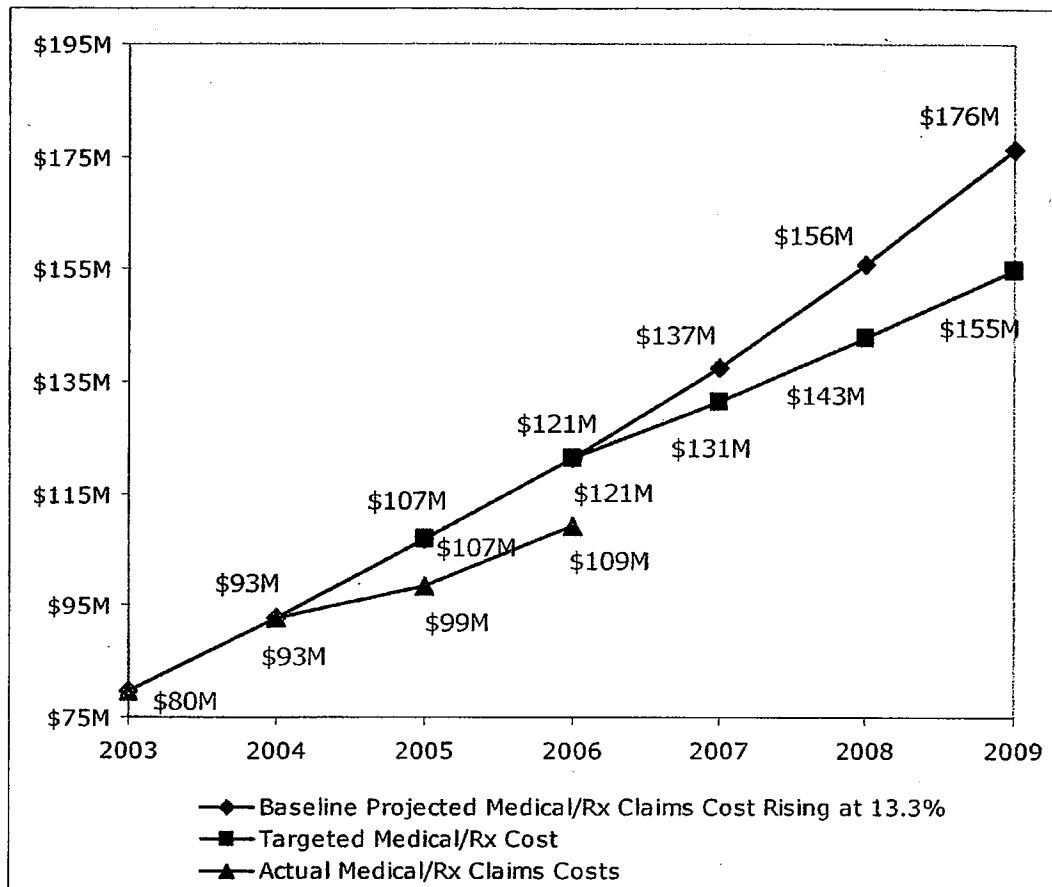
As noted in Chapter 1, the original business case was developed on the basis of marketplace conditions and trends (current and expected in the future) as of 2004. Although the projection of costs appears as a long-term trend, it was actually a year-over-year analysis repeated over a five-year period. Costs were expressed on a “paid claims” basis, included both KingCareSM and Group Health data, showed only the county’s share of paid claims, and did not include the portion of claims paid by members in the form of deductibles and copays.

The policy direction outlined in the original business case called for a one-third reduction of the 13.3 percent year-over-year increase projected for paid claims for KingCareSM and Group Health medical and pharmacy costs. The resulting target year-over-year change averages 8.9 percent and over the 5-year period (2005 – 2009) this reduction in cost increase could amount to a \$40 million savings to the county. Figure 6 below shows actual paid medical and pharmacy costs through 2006 compared to the targeted savings for 2005-2009 as shown in the HRI business case.

As indicated in Figure 6, the amount of actual *paid* claims is significantly lower than the paid claims projected in the business case. While this may appear at first to be a very positive outcome for the HRI, this would not be a valid conclusion. Paid claims data include a lag due to bill processing. This lag can impact the level of claims attributed to a particular year. Analysis conducted as part of the HRI measurement effort has revealed that the 13.3 percent increase in paid claims projected for 2004 that was used to develop the original business case was high. It should have been 11.0 percent. The impact of this finding and other key analytical findings that have come to light this past year have led to serious discussions about on how best to evaluate the success of the HRI in meeting its overall goal of reducing the rate of health care cost increases below projected rates. The issues involved and the conclusion of these discussions are summarized in the following section.

Figure 6

**Original HRI Business Case with Actual Paid Claims for 2003-2006
(Medical/Rx, KingCareSM & Group Health, F/T active employees)**



Business Case with KingCareSM-Only Data on Incurred Claims Basis

As the HRI measurement effort has progressed, five issues have emerged that make reporting on the program's success in achieving the original business case difficult:

1. It has become clear that in order to see the actual return across all programs and for investment in individual programs the measurement and evaluation effort needs to focus on showing costs based on the actual date of service rather than the date they were paid (see the section on Terminology for a detailed discussion of the differences in these approaches).
2. As also noted above, the original business case needs to be adjusted to show only the KingCareSM claims costs because Group Health data have not yet been analyzed. (Please note: analysis of the Group Health data has not yet been a

priority because Group Health costs would not be affected by the five “care management” programs added to the KingCareSM program in 2005 and 2006.)

3. Deductibles, co-pays, and maximum levels are based on fixed dollar amounts, thus over time the employee share of covered expenses is a shrinking percentage of the total costs, and the county’s share is getting larger. In order to keep the measurement criteria comparable over time, the cost-benefit analyses need to use the total claims cost (employee plus county share.)
4. The total number of employees covered changes from year to year, causing changes in the total dollar cost that are not the result of changes in cost or utilization.
5. Finally, the actual trend from year-to-year will differ from the projected trend so that achieving a one-third reduction in cost increases each year becomes a moving target.

Because of the potential for confusion and debate associated with focusing on a dollar-denominated target that could continue to change during the 5-year period for evaluating the HRI, policy makers directed staff to move the focus away from dollars to the concept of a target reduction percentage, a concept that was the key driver when the original business case was conceived. The targeted reduction of one-third off the medical/prescription drug cost trend for 2005 – 2009 to achieve the 8.9 percent level was viewed as an aggressive target at the time the business case was originally developed. The committee took the position that this original 8.9 percent target should be maintained, rather than changing the level of targeted reduction to 7.3 percent, which is one-third off of the 11.0 percent projected rate of increase on an incurred cost basis.

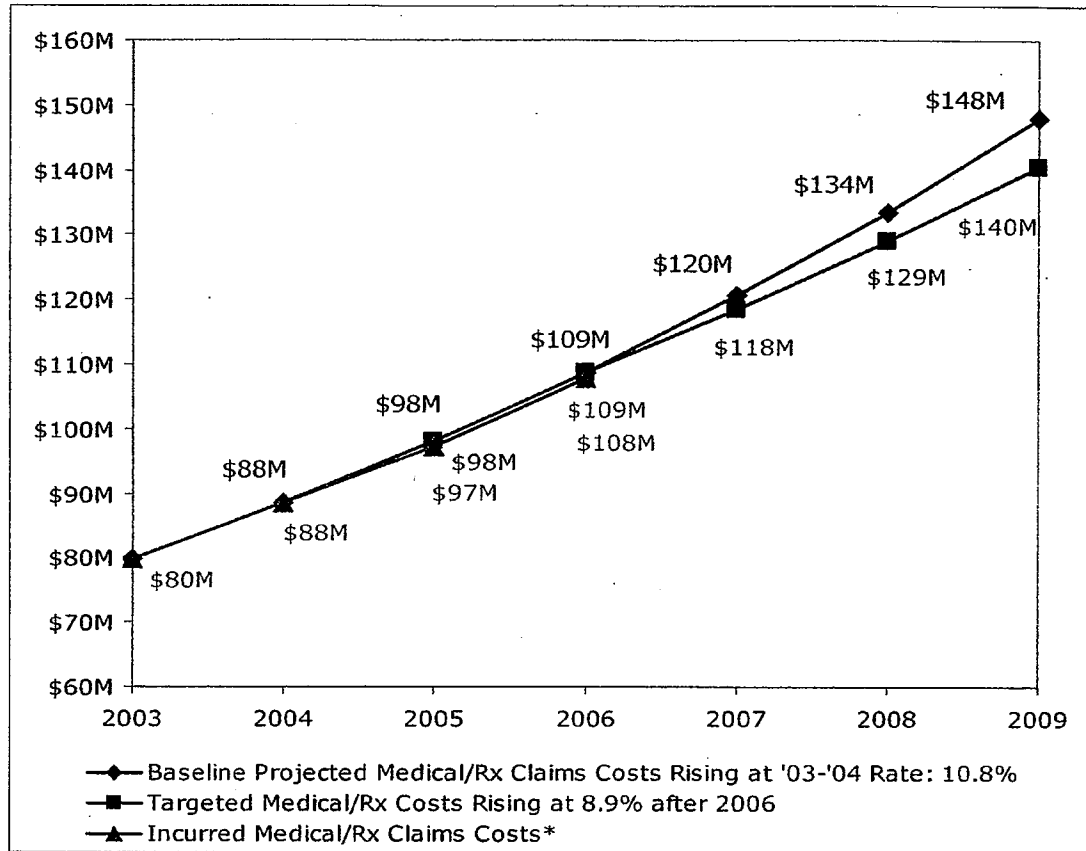
The county’s success or failure to achieve and maintain cost increases at 8.9 percent for the long-term is a reasonable and straightforward yardstick for evaluating the HRI’s financial performance. This target reduction captures the direct link between the HRI and financial sustainability and avoids the tracking complexities inherent in maintaining a dollar-denominated target. For this reason, this report and future reports will focus on progress of the HRI to achieve this percentage rate of increase.

Figure 7 below provides a crosswalk from the original business case to this new focus on the 8.9 percent sustainability target. The chart revises the original business case by 1) using incurred claims data; 2) reflecting only KingCareSM claims for active, full-time employees, 3) using the total claims cost (King County plus employee share) and 4) showing the goal of the HRI as reducing the rate of growth to 8.9 percent for the long-term. Group Health data are not reflected in this chart for this report for two reasons: 1) the five pilot programs do not apply to the Group Health plan, and 2) the county has not yet analyzed the Group Health data on an incurred basis.

As shown in the table, conceptually the HRI would be expected to begin “bending the trend” in 2006. As described below under key findings, there is some indication that this has begun to occur.

Figure 7

**Revised HRI Business Case and Actual Incurred Claims for 2003-2006
(Medical/Rx, KingCareSM Only, Full-Time, Active employees)**



Note: 2006 incurred claims are adjusted by a completion factor method for claims that will be reported in coming months.

Key Findings

The Cost-Benefit measurement approach adopted in Motion 12479 includes a list of 17 specific measures that are grouped by program level (Benefits Plan Design, Supportive Environment, and Puget Sound Health Alliance) and by benefit category (financial, organizational and health status.) The results of the eight measures related to the Benefits Plan Design are discussed below.

Based on claims data for all of 2006, the county is seeing an overall cost increase trend for 2004 to 2006 of 10.7 percent for the KingCareSM medical and prescription drug claims, indicating significant progress towards the goal of 8.9 percent average growth rate target set in the original business case. There is still little evidence in the claims data that the five "care management" programs implemented on a pilot basis in 2005 (24/7 nurse line, disease management, case management, provider best practice, and performance provider network) are creating a positive return on investment.

Although claims savings attributable to the wellness assessment and individual action plans will not begin until 2007, the results of the wellness assessment in 2006 and 2007 show an improvement in indicators of individual health, including reduction in body mass index, improvement in nutrition patterns, and increase in physical activity. These early findings reinforce the expectation that these programs will contribute \$6.9 million in savings in 2007 – 2009.

Figures 8-18 illustrate the findings for each of the eight measures for Level 1 Benefit Plan Design adopted in Motion 12479.

1. Change in trend in King County's overall incurred medical and prescription costs compared to costs forecast from 2002-2004 trends.

Figure 8 illustrates the overall progress made so far in achieving the 8.9 percent target growth rate. The original business case projected a trend of 13.3 percent for the time period of the HRI for both the Group Health and KingCareSM plans. The actual trend measured for KingCareSM -only for the period 1996-2004 was 11.3 percent. The actual increase measured for KingCareSM -only for 2004 – 2006 was 10.7 percent, substantial progress towards the 8.9 percent target.

Figure 8

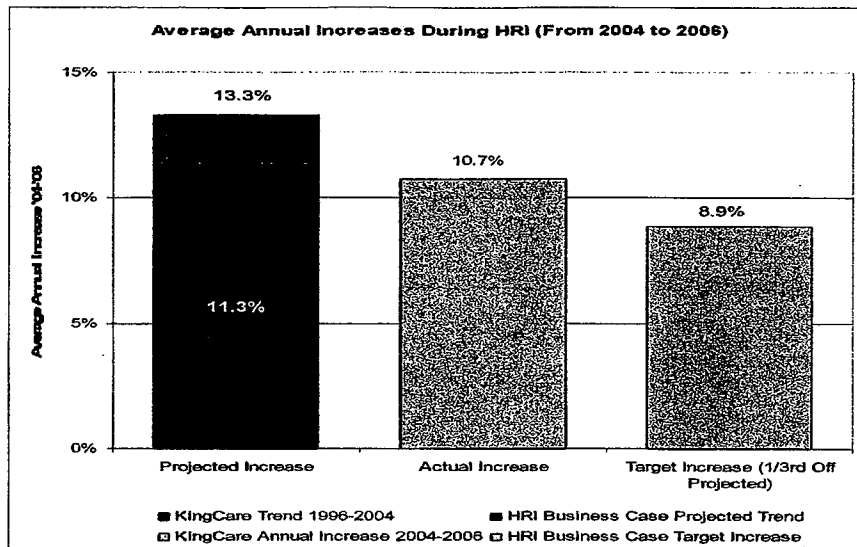
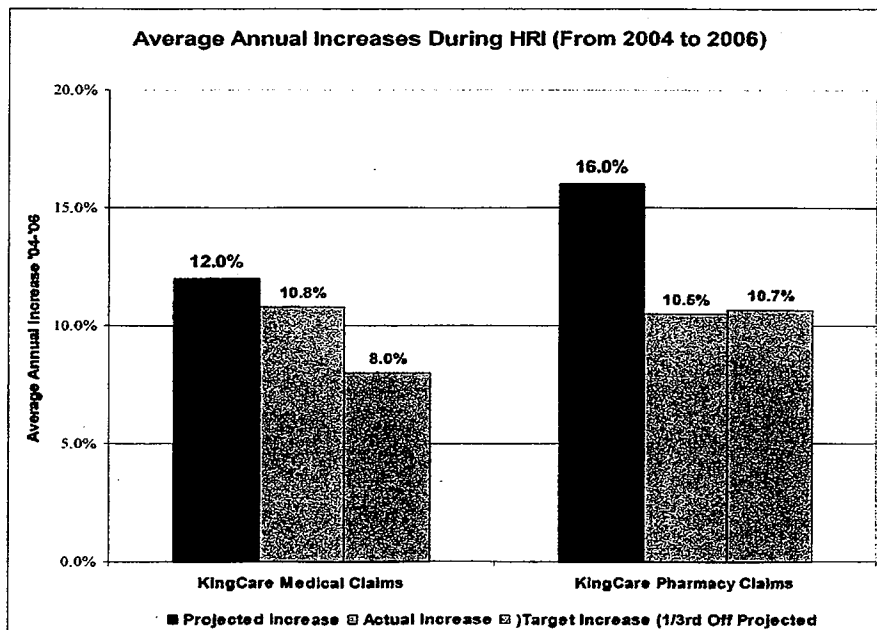


Figure 9 shows the expected changes in medical claims and prescription drug claims that underlie the combined information shown in Figure 8 above. Medical claims are still above target at 10.8 percent, while pharmacy claims are slightly below the target.

Figure 9



2. Year over year progress in achieving targeted reduction of 1/3 off trend in King County's medical and prescription drug cost per employee per month on a paid basis.

Figure 10

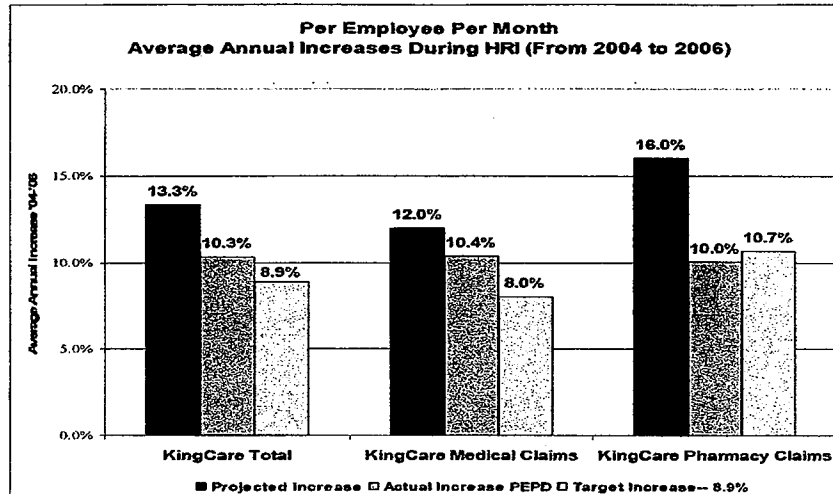


Figure 10 shows the growth in KingCareSM claims on a per employee basis. The slight differences in actual increases shown between this chart and the chart in measure number one are the result of a 0.5 percent increase in the number of employees covered in the KingCareSM plan. Showing cost trends on a per employee per month (PEPM) basis is a slightly more accurate way to show changes in cost over time because it removes changes that are due strictly to changes in the number of people covered under the plan.

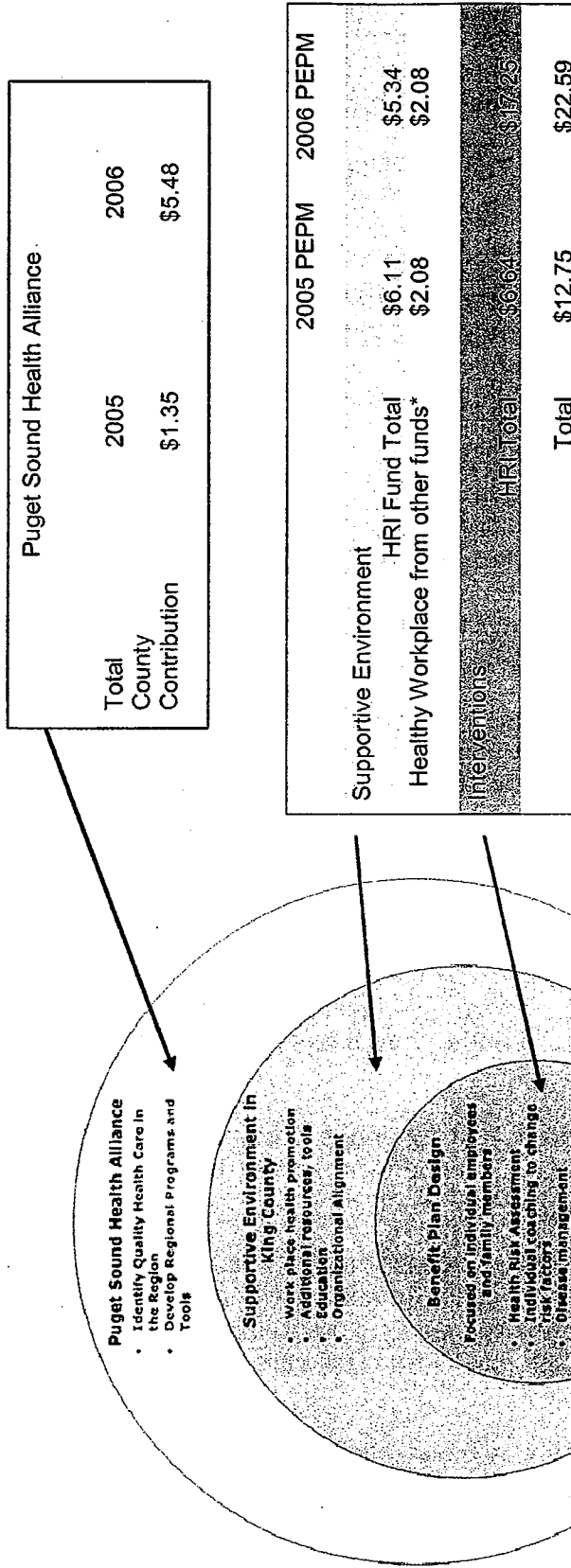
3. Cost-benefit for each of the six program interventions in the business case

As noted in the research findings, the typical investment for "best practices" health and productivity programs is approximately \$33 per employee per year²⁷. As Figure 11 shows, the cost of the HRI effort internal to the county (Level 1 and Level 2) of \$12.75 PEPM in 2005 and \$29.59 PEPM in 2006 compares favorably to that typical amount.

²⁷ Edington, DW. 2006. *Towards Champion Worksites* checklist sent to the County by the author in May, 2007. Dr. Edington also covered these points in two presentations at the County—the Health Leadership Forum, May 17, 2007, and the Labor Summit June 11, 2007.

Figure 11

King County Health Reform Initiative Annual Budgeted Costs of the Health Reform Initiative Per Employee Per Month (PEPM) 2005-2006



Please note:

1. These costs do not include the baseline administrative costs of providing the general benefits programs.
2. *Healthy Workplace Funding Initiative. Under this program, work teams (manager and employees working together in a collaborative process) can use an amount from their regular department budget equal to \$25 per year for each benefits-eligible employee to purchase goods and services (e.g. yoga classes, exercise equipment, stress management classes) the team believes would improve healthy behavior in their workplace.

Overall results: A review of claims data through the first quarter of 2007 shows net savings for the five “care management” programs (24/7 nurse advice line, disease management programs, case management, provider best practice and performance provider network) have not yet materialized. This raises the question of whether these programs should be continued. The results and immediate action plan for each program are discussed in detail below, and the longer-term action plan is discussed on pages 57-58.

Harris HealthTrends, the vendor that administers the wellness assessment and individual action plan program, projects that cost savings for the wellness assessment and individual action plan programs will begin in 2007 and will total \$6.9 million in 2007-2009. In 2008, it will be possible to evaluate whether this program is yielding its promised savings.

The 2007 – 2009 impact of the enrollment shift (cost savings to the county for members who are silver or bronze and thus paying more of the claims cost), the benefit access fee (a charge of \$35 per month to cover a spouse/domestic partner who has access to health coverage from their own employer) and the \$100 emergency room copay is expected to further reduce county costs by little over \$8.6 million. These benefits plan design changes all began in 2007.

Program by program analysis: A review of the “best practice” health and productivity management programs and advice from the Peer Review Panel indicate that although “care management” programs may not easily show a positive return on investment (ROI), they are an important element in overall health management strategies^{28,29}. In addition, a Spring, 2007 survey of major U.S. employers commissioned by IncentOne points out that

“[A]most two-thirds of companies (62 percent) do not measure ROI for programs. Among the remainder, about a third of those employers attempting to measure ROI were not successful and just over half have not completed their analysis. The results suggest that measurement of ROI has not proceeded very far, even among large employers...”³⁰

Measuring program by program ROI continues to be an issue for both the HRI and employer programs in general. The county is actively looking for effective approaches to determining ROI.

There are a number of important program metrics in addition to ROI that indicate program effectiveness and provide information for program improvement. HRI staff has conducted a thorough review of the existing programs and have a number of recommendations to boost the results from the care management programs.

²⁸ Goetzel RZ, Ozminkowski RJ, Bruno JA, Rutter KR, Isaac F, Wang S. 2002. Long-term impact of Johnson & Johnson's Health & Wellness Program on health care utilization and expenditures. *Journal of Occupational and Environmental Medicine* 4(5):417-424.

²⁹ Edington DW. 2001. Emerging research: A view from one research center. *American Journal of Health Promotion* 15(5):341-349.

³⁰ Capps K, Harkley, JB. *Employee Health & Productivity Management Programs: The Use of Incentives*. Spring, 2007. Available at http://www.incentone.com/skin.cfm?page=survey_results_form

- **Informed Health Line® (Nurse line):** King County employees and their families use the nurse line at nearly three times the rate of other employers who subscribe to Aetna's Informed Health Line®; in 2006 there were more than 12.5 calls for every 100 eligible households. Survey results indicate that 86 percent of callers felt that the Informed Health Line® nurse had increased their knowledge about their health problem or questions; 88 percent of callers reported that the Informed Health Line® Handbook had increased their knowledge about a health problem or question; and 70 percent of callers reported that the program helped them improve in all seven medical consumer behaviors measured. Overall caller satisfaction with the program was very high—89 percent felt that having the program available improved their satisfaction with their overall health benefit plan. Among non-users surveyed, 78 percent felt that having the program available to them “in reserve” had improved their satisfaction with the overall health plan.

There were two main reasons for including a nurse line in the benefit plan—the first was that the employee survey conducted in 2004 indicated a strong demand for this service; the second was the hope that a consultation with a Health Line nurse might reduce the number of members making emergency room visits because they could get information about other appropriate (and lower cost) treatment options. However, only 6 percent of all callers to the nurse line called because they were considering an emergency room visit, and thus the impact on health care costs (as measured by changes in emergency use and cost) is minimal.

Although there are no measurable savings from this program, it does fill an important role in providing health information to county employees and their families. The current program includes the actual nurse line service, plus quarterly postcards sent to employee's homes to remind them of the program, and an annual survey of employee satisfaction with this specific program. The cost of this program can be reduced by more than 70 percent by replacing the quarterly postcards with reminders about the nurse line benefit in the *Health Matters* newsletter, and foregoing the annual user satisfaction survey.

Therefore, effective September 1, 2007, the county will discontinue purchasing the members survey and the quarterly communication of the nurse line from Aetna, and will cover these aspects of the program through in-house communication efforts and employee surveys.

Cost-Benefit Analysis: The 2005-2009 cost for the nurse line is now projected to be \$390,411, a \$56,979 reduction from the estimate included in the business case due to negotiations for a reduced program starting in 2008. The nurse line has not yet yielded any reductions in medical care claims costs that would justify concluding that it is contributing to reducing King County health care claims cost trend.

- **Disease management:** The current disease management program focuses on only three conditions (diabetes, coronary artery disease and chronic health failure). Overall, slightly less than 6.7 percent of all KingCareSM members have one or more of these conditions. The current Aetna disease management program stratifies

members with these conditions into five levels of risk—members with the lowest two risk levels receive written materials about their condition in the mail, while members in the three highest levels receive outreach calls from a disease management nurse. More than 90 percent of members contacted by the program agreed to participate. However, the number of members in the three highest risk groups who are eligible for the most effective program component—outreach calls from the nurse—ranged from 2 percent to 10 percent (depending on the disease) for a total of 62 members. Thus too few members were “touched” to create enough changes in health status to have a measurable impact on claims cost.

Aetna recognizes that this version of disease management program is not performing, and has recently created a new program, Aetna Health Connections Disease Management. This program addresses more than 36 disease and chronic conditions (all of which are prevalent in our KingCareSM population) and provides Nurse Care Manager “personal health coach” services to a far greater percentage of members with these conditions. The new program has evidence-based clinical rules that identify a wide range of opportunities for improvement of the member’s care that will increase member self-responsibility for self care and adherence to the treatment prescribed by their provider. Aetna is willing to provide this upgraded program to the county for the same cost as the existing disease management package.

Therefore, effective September 1, 2007, the county will transition to the Aetna Health Connections Disease Management program on an interim basis during the time the county is investigating other disease/condition management options that are best suited to King County’s specific needs.

Cost-Benefit Analysis: The new projected 2005-2009 cost for the disease management programs is \$1,070,704, which is \$63,126 less than the cost projected in the business case. As discussed above, the current program has not yet yielded any reductions in medical care claims costs that would justify concluding that it is contributing to reducing King County health care claims cost trend. The county will be working with Aetna to improve program performance and will also be investigating other options.

- **MedQuery[®]:** This is a patient-safety program that uses evidence-based clinical rules to identify gaps in care and sends information to the provider. MedQuery[®] identified 3,143 instances in 2006 of “care consideration” events and notified the member’s provider. Aetna has a methodology for determining the cost impact of these care considerations if they were not addressed, however the methodology is proprietary making it difficult for the county to reproduce the calculations to ascertain the effects of events that did not happen.

Aetna has offered to add a “member messaging” feature to MedQuery[®] for no additional cost. The new service is a letter that is sent to the member when a care consideration has been flagged that includes specific information about the potential issue regarding their health and encouraging the member to speak with their provider about the care consideration. The new service will also include sending age

and gender-specific preventive care reminders (e.g. mammograms for women over 40, colonoscopies for men and women over 50) to individual members as appropriate.

Effective September 1, 2007 the county will add the member messaging feature to MedQuery[®] on an interim basis during the time the county is investigating other care management options that are best suited to King County's specific needs.

Cost-Benefit Analysis: The new projected 2005-2009 cost for MedQuery[®] is \$1,001,856 which is \$59,065 less than the cost projected in the business case. As discussed above, the current program has not yet yielded any reductions in medical care claims costs that would justify concluding that it is contributing to reducing King County health care claims cost trend. The county will be working with Aetna to improve program performance and will also be investigating other options.

- **Enhanced Member OutreachSM:** Member response to the Enhanced Member OutreachSM (EMO) program is positive, as it appears to reduce the number of members who are re-admitted to the hospital within three months of a previous hospital stay. The program identifies members who are at greater risk because they are scheduled for in-patient hospital care, are preparing for discharge from in-patient hospital care, or have a claims history that indicates presence of an uncontrolled chronic condition or other risk factors. A specially trained EMO nurse calls these members to encourage them to work closely with their health care providers and to follow up on treatment plans.

Effective September 1, 2007, Aetna will expand this program (at no additional cost) to include EMO nurse outreach calls to members who are 1) frequent users of emergency room services in order to help them find more appropriate alternatives; 2) using multiple providers (primary and specialist physicians) to help members make sure their providers are coordinating information and care; or 3) not following up on prescription regimens for chronic conditions (e.g. maintenance prescriptions for chronic conditions that are not regularly refilled on time).

The Enhanced Member OutreachSM is a good example of member-specific, "high touch" programs consistent with next generation health and productivity programs. A 2006 survey of KingCareSM members who had received Enhanced Member OutreachSM Services showed 100 percent satisfaction with the Aetna nurse making the outreach and 96 percent satisfaction with the program:

Cost-Benefit Analysis: The new projected 2005-2009 cost for Enhanced Member OutreachSM is \$939,240 which is \$55,374 less than the cost projected in the business case. As discussed above, the current program has not yet yielded any reductions in medical care claims costs that would justify concluding that it is contributing to reducing King County health care claims cost trend. The county will be working with Aetna to improve program performance and will also be investigating other options.

- **Aexcel[®]:** Aexcel[®] is a designation within Aetna's preferred provider network that includes specialists who have demonstrated effectiveness in the delivery of care based on a balance of measures of clinical performance and cost-efficiency. There are significant savings to the plan when members choose Aexcel[®]-designated over non-Aexcel[®] designated specialists. However Aexcel[®] was designed to be used in a three-tier network plan that has, for instance, a 30 percent member copay for using a specialist who is not in any Aetna network, a 20 percent copay for using a specialist who is in the regular Preferred Provider Network, and a 10 percent copay for using an Aexcel[®]-designated specialist. Because the county's plan does not have this structure, there is no motivation for members to select the Aexcel[®] specialist, and thus it is impossible to say that the Aexcel[®] program changed the utilization pattern.

The county will discontinue participation in the Aexcel[®] program effective January 1, 2008, saving on program fees as of that date.

Cost-Benefit Analysis: The new projected 2005-2009 cost for Aexcel[®] is \$563,544 which is \$980,283 less than the cost projected in the business case. As discussed above, the current program has not yet yielded any reductions in medical care claims costs that would justify concluding that it is contributing to reducing King County health care claims cost trend.

- **Wellness assessment and individual action plan:** These two programs are administered for the county by Harris HealthTrends. The original business case assumed that these programs would start in 2007. However, in negotiating the Healthy IncentivesSM program with the unions the start was moved to 2006. In addition, the county and the unions decided to add telephone coaching for members at high and moderate risk to increase the potential effectiveness of the individual action plan for these members. Telephonic coaching is consistent with best practice health and productivity programs.

As the health status measures described below indicate, these programs are showing early results in reducing the overall health risk status of employees and their spouse/domestic partners. It was not anticipated the changes in health status would translate in savings on medical and prescription drug claims in the first year.

Cost-Benefit Analysis: Because of the earlier than expected start of these programs and the addition of telephone coaching for high and moderate risk individuals, the projected 2005 – 2009 cost of these two programs is \$3,390,00 higher than projected in the business case. Harris HealthTrends projects that cost savings will begin in 2007 and will total \$6.9 million in 2007-2009. In 2008, it will be possible to evaluate whether this program is yielding its promised savings.

There is a discussion of additional program recommendations at the end of this chapter.

Health Status Measures for the Benefit Plan Design Level

Although the main focus of the Second Annual Measurement and Evaluation Report is on the Council-adopted measures of the costs and financial, organizational and health status benefits of the HRI, there are, however, two important measures not included in that matrix that are perhaps the best overall key indicators of the county's progress towards achieving a "best practice" health management program. The first is the combined participation in *both* the wellness assessment *and* individual action plan, and the second is the overall percentage of members at low risk compared to the "Champion Worksite" targets developed by Edington. In both 2006 and 2007, more than 86 percent of all eligible King County members completed both the wellness assessment and an individual action plan—these results exceed industry standards and are close to the target recommended by Dr. Edington of 95 percent of members completing all parts of a comprehensive health management program.

The overall risk profile shows positive change from 51 percent of members at low risk in 2006 to 58 percent in 2007. Furthermore, of members participating in coaching calls in 2006, more than 57 percent reported eliminating one risk, with 75 percent reporting reducing or eliminating at least one risk.

As Figures 12 and 13 show, the county is very close to the participation target, and moving up on the target for the percent of members at low risk.

Figure 12

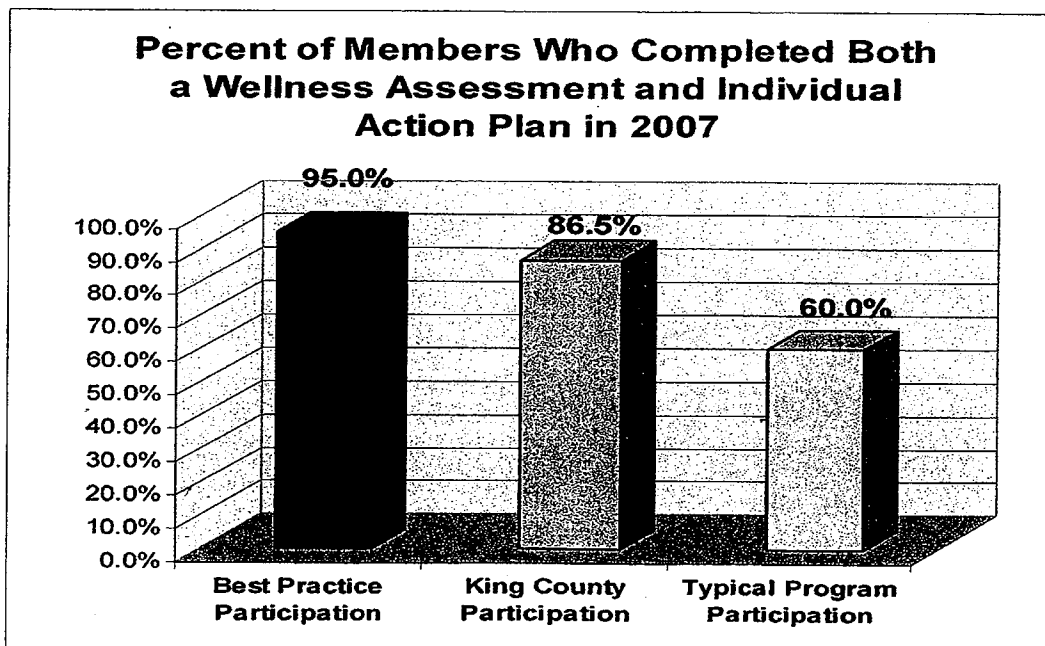
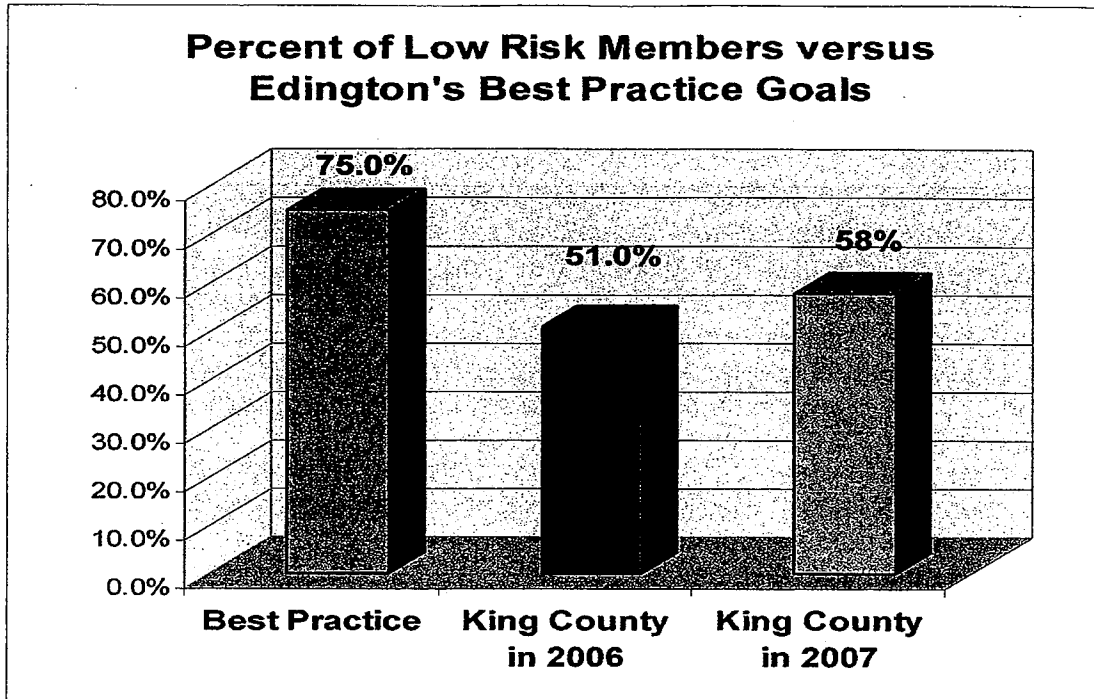


Figure 13



The next five measures address specific health behaviors that contribute to the increase in the number and percent of low-risk individuals. The data for these measures come from responses on the wellness assessment. Although the wellness assessment data are self-reported, studies done by Dr Wayne Burton³¹ of JP Morgan Chase, Dr. Debra Learner³² of Tufts University and Dr. Ronald Kessler³³ show results between self-reported health information and objective clinical data are sufficiently correlated to make self-reported data a usable proxy for clinically-based health risk assessments.

³¹ Wayne Burton, MD, et al. The Role of Health Risk Factors and Disease on Worker Productivity. *Journal of Occupational and Environmental Medicine*. Volume 41, No 10, October 1999.

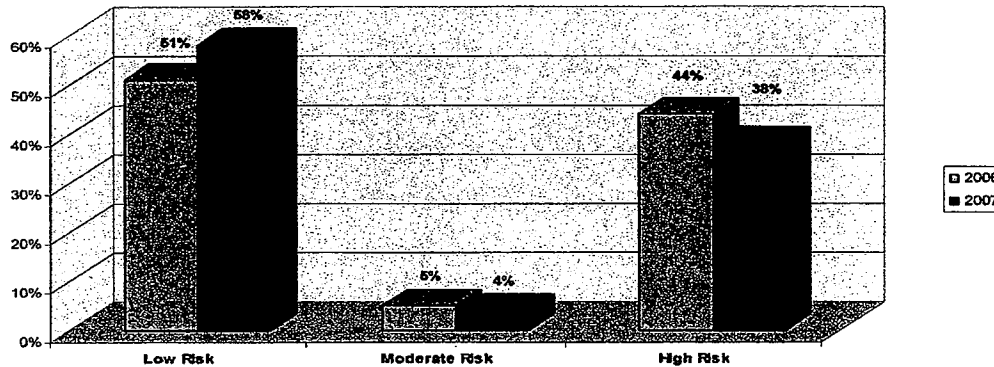
³² Debra Learner, PhD, et al., Relationship of Employee-Self-Reported Work Limitations to Work Productivity. *Medical Care*, Vol. 41, No. 5, 2003.

³³ Ronald Kessler, PhD., et al., The World Health Organization Health and Work Performance Questionnaire (HPQ), *Journal of Occupational and Environmental Medicine*. Vol. 45, No 2, February 2003.

4. Change in group risk profile for employees and spouse/domestic partners from 2006 to 2007 as measured by the wellness assessment.

Figure 14

Percent of Members at Low, Moderate and High Risk 2006 and 2007



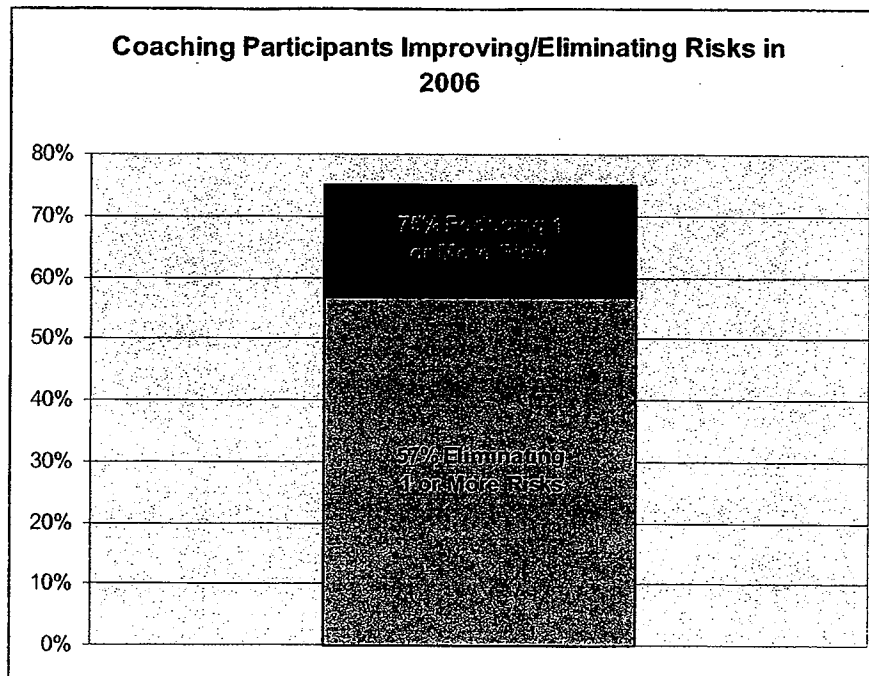
	Low Risk Members		Moderate Risk Members		High Risk Members	
2006	8,983	51%	867	5%	7,887	44%
2007	10,202	58%	635	4%	6,649	38%

Between 2006 and 2007, there was a six percent drop in the number of members at high risk, a one percent drop in the number of members reporting moderate risk, and a seven percent increase in the number of members reporting low risk. In all, there were 1,219 more members at low risk in 2007 than in 2006. This change represents significant progress towards achieving Edington’s recommended target of 75 percent or more members at low risk.

High risk is defined by Harris HealthTrends (the vendor that administers the individual action plans) as having at least *one* of the following conditions (diastolic blood pressure over 100, systolic blood pressure over 160, body mass index over 33, total cholesterol over 240, non-exerciser or current tobacco user) *or any three* of the following (more than two alcoholic drinks per day, diastolic blood pressure 90– 100, systolic blood pressure 140 – 160, body mass index 26 – 33, total cholesterol 200 – 240, HDL cholesterol less than 40, poor nutrition, high stress and/or quit tobacco use less than six months ago). Moderate risk is defined as *any two* of the following (more than two alcoholic drinks per day, diastolic blood pressure 90 – 100, systolic blood pressure 140 – 160, body mass index 26 – 33, total cholesterol 200 – 240, HDL cholesterol less than 40, poor nutrition, high stress and/or quit tobacco use less than six months ago). Low risk is defined as having zero to one of these risk factors.

5. Change in the number of coaching participants reporting improvement in or eliminating one or more risks.

Figure 15

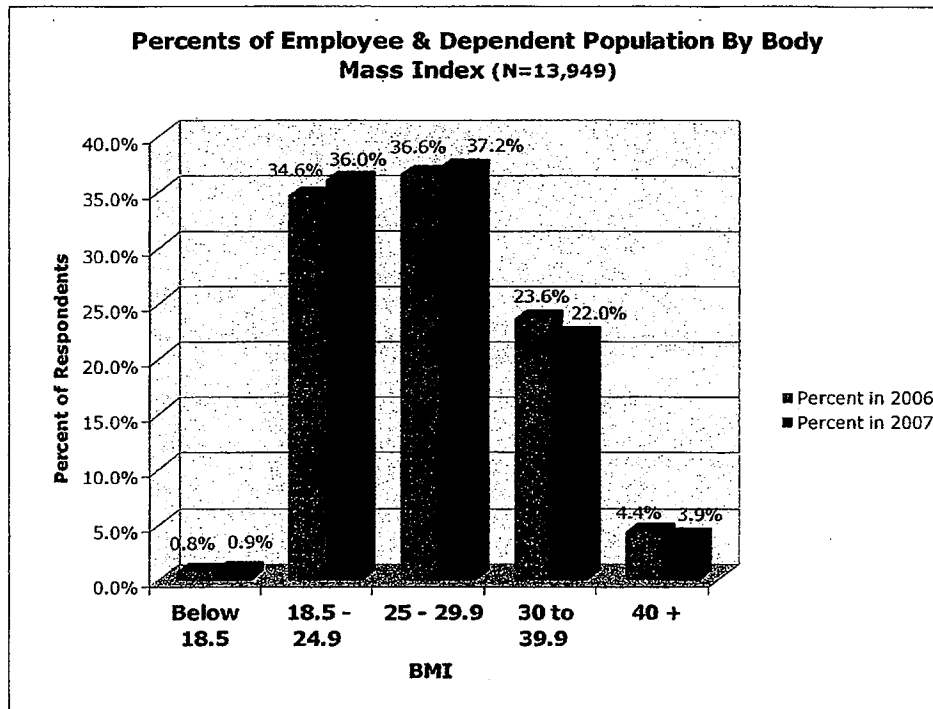


Another indication of the lowering of overall risk in the member population comes from results for members participating in coaching calls. In 2006, slightly more than 57 percent of high risk participants reported *eliminating* at least one risk factor, and another 18 percent of coaching call participants reported a reduction of one or more risk factors (body mass index, cholesterol, hypertension, *etc.*) This brings the total number of participants who reported improvement in their risk factors to just over 75 percent for 2006.

This trend appears to be continuing—at the end of the first quarter of 2007 slightly more than 60 percent of members taking coaching calls have reported reducing or eliminating at least one risk (i.e. nutrition, weight, *etc.*)

6. Change in self-reported body mass index 2006 to 2007 for employees and spouse/domestic partners as measured by the wellness assessment.

Figure 16



Body Mass Index (BMI) is calculated from height and weight. The U.S. Centers for Disease Control and the World Health Organization agree in recommending that, in the absence of high muscle mass, most adults should maintain their weight so that BMI falls between 18.5 and 25.

Figure 16 shows the BMI distribution for the 13,949 employees and dependents who took the wellness assessment and provided heights and weights that allowed their BMI values to be calculated. Among those 13,949, 34.6 percent of the respondents fell within this recommended range in 2006 and 36.0 percent fell within this recommended range in 2007.

A similar pattern is seen when considering everyone who has taken a wellness assessment. In 2006, 34.57 percent of the employees and dependents had BMI values between 18.5 and 25. In 2007, the proportion had risen to 34.6 percent.

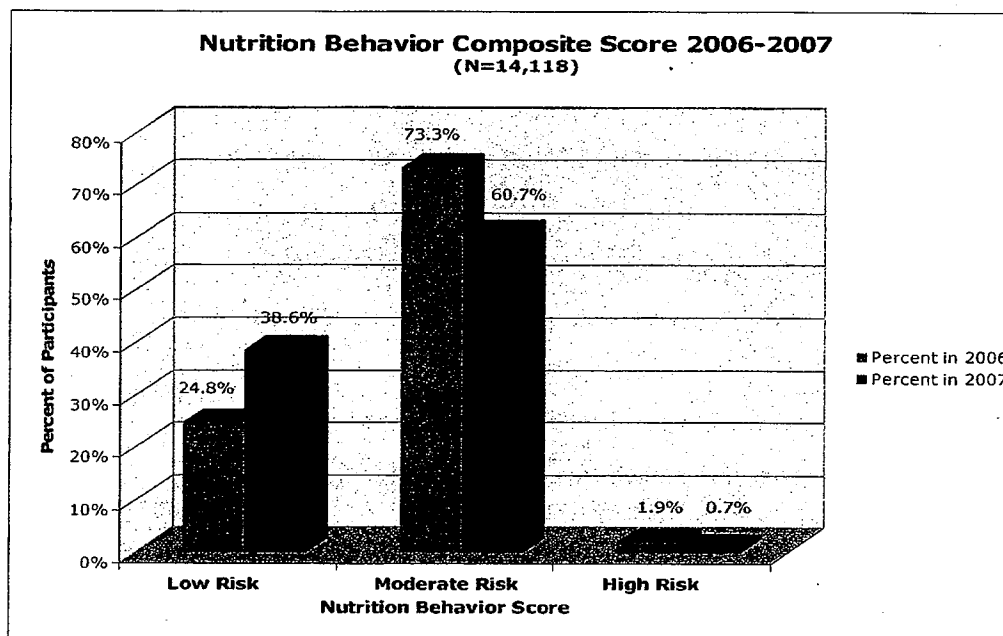
The accuracy of risk assessments is improved by considering waist circumference along with BMI. Guidelines from the National Institute of Health (NIH) suggest that men's waists should not exceed 40 inches and women's should not exceed 35 inches.

From 2006 to 2007 the portion of respondents who exceeded the waist circumference guidelines dropped from 27 percent to 24 percent.

Harris HealthTrends defines a BMI of 27.50 or less as "low risk." The county's goal is to have at least 50 percent of all employees and their spouse/domestic partners achieve BMI scores between 18.5 and 25 as recommended by recognized authorities.

7. Change in self-reported nutrition patterns 2006 to 2007 for employees and spouse/domestic partners as measured by the wellness assessment.

Figure 17

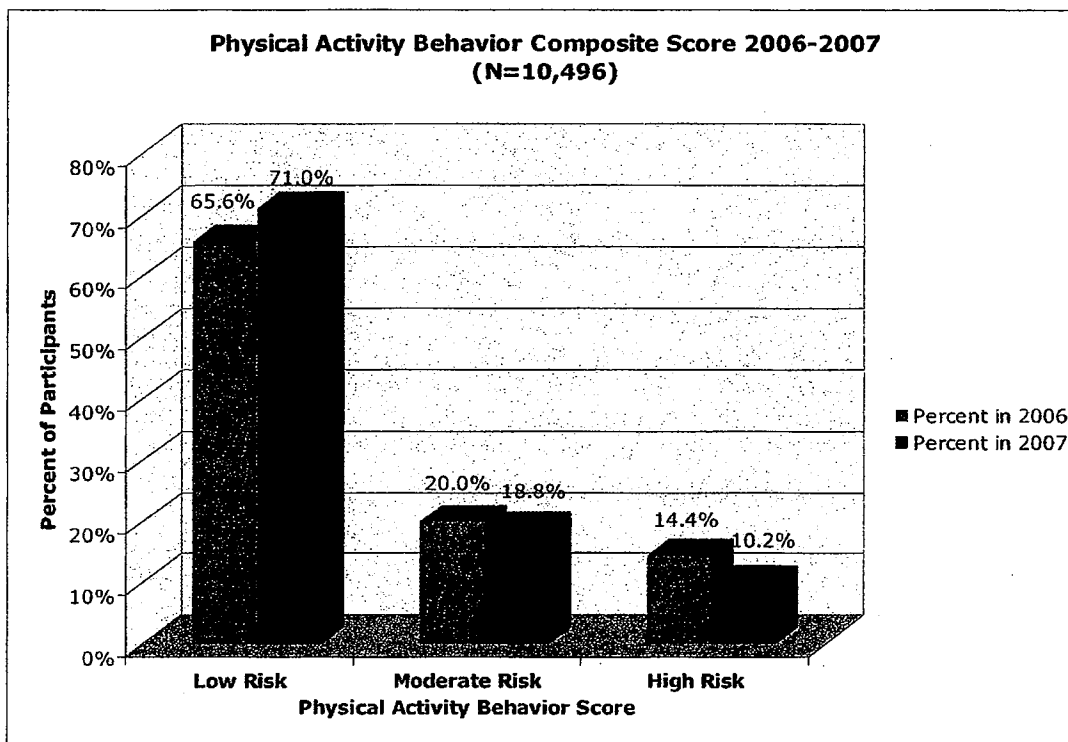


The nutrition behavior scores are composites calculated by HealthMedia Inc. (a subcontractor to Harris HealthTrends provides the wellness assessment) using a proprietary algorithm. The scores are based on responses to multiple questions on the wellness assessment. Low risk is defined by HealthMedia as achieving recommended nutrition guidelines regarding portions and balance of fruits and vegetables, whole grains and other foods in a person's daily diet. Behavior scores predict health risks from respondents' reports of their behaviors. The chart above shows how the nutrition behavior scores change for the 14,118 respondents who provided enough answers about nutrition to be scored in both 2006 and 2007. The percent of people reporting a change in their nutrition patterns leading to low risk for nutrition between 2006 and 2007 rose from 25 percent to 39 percent.

The same pattern was seen in the total population. In the total population, the portion at moderate risk dropped from 68 percent to 57 percent and the portion at low risk rose from 30 percent to 43 percent. The county's goal is to have at least 50 percent of all employees and their spouse/domestic partners at low risk on the nutrition behavior measure,

8. Change in self-reported amount of exercise 2006 to 2007 for employees and spouse/domestic partners as measured by the wellness assessment.

Figure 18



The physical activity score are also composites calculated by HealthMedia Inc. using a proprietary algorithm that is derived from answers to multiple questions on the wellness assessment. The chart above shows how physical activity behavior scores changed for the 10,496 respondents who received physical activity behavior scores in both 2006 and 2007. The percent of people reporting a change in their physical activity pattern leading to low risk between 2006 and 2007 rose from 66 percent to 71 percent. The same pattern of results was seen in the total population. In the total population, the percent at low risk rose from 66 percent to 70 percent and the percent at high risk fell from 13 percent to 10 percent. The county's goal is to have at least 75 percent of all employees

and their spouse/domestic partners engage in aerobic activity at least 30 minutes per day at least three times per week.

Conclusions, Opportunities, Challenges and Next Steps

Conclusions

2006 was the first year that all six Healthy IncentivesSM program elements were in place and thus it is too soon to see the results of behavior/risk-level change as a reduction in claims costs. The HRI has, however, collected enough information to determine adjustments needed in the 24/7 nurse line, disease management, case management, provider best practice and performance network programs as described in the section of Council-adopted measure number three above. The wellness assessment and individual action plan portions of the HRI are in place, and are showing good early indications of overall improvement in the health of employees and their families. The components of the HRI are in line with "next generation" health and productivity programming, and with over 86 percent of eligible members taking the wellness assessment and completing an individual action plan each year, and 58 percent of members at low risk, the HRI is well on the way to achieving "best practice standards" for participation and percent of members at low risk.

The results from 2006, along with the lessons learned from the Peer Review Panel and additional research will be used to develop the framework for negotiating the 2010-2012 benefits package with the Joint Labor Management Insurance Committee. Those negotiations are expected to take place starting in 2008.

Challenges and Opportunities

The county is still in the early stages of assembling and learning how to use the comprehensive HRI database for analyzing the health and health behavior patterns in the employee population, and identifying interventions that will most improve overall health and have the greatest material effect on both short and long term costs. At this point the county has not yet completed analysis of the claims trends for the Group Health plan, much less integrated claims and wellness assessment data to see correlations at the group level between health behaviors and chronic health conditions. Analysis of Group Health data and integration of claims and wellness assessment data will be key work program items for the HRI during the next year.

The county has not been successful in finding another employer group (public or private) sufficiently similar to the county to use as a comparison group to help demonstrate the impact of the HRI programs. Employers who have been contacted generally do not collect and analyze data at the level of detail needed.

Yet another layer of data to be collected and added to the database is information on absenteeism and presenteeism. As noted in the "Lessons Learned" section in Chapter 1, research conducted by Dr. Burton at Bank One, Dr. Collins at Dow Chemical and other studies have found that lost productivity due to illness costs employers two to three times the direct medical costs for illness and health conditions; research conducted by the Integrated Benefits Institute found the full costs of lost productivity (cost of absences due to illness, lowered productivity when employees at work are impaired by conditions such as headache, back pain, allergies, plus wage replacement payments for absent employees) are more than four times the total medical payment.

Finally, as noted in the text, measuring program by program ROI continues to be an issue for both the HRI and employer programs in general. The county is actively looking for effective approaches to determining ROI.

Next Steps for the Benefits Plan

The HRI has developed an action plan for both adjusting existing programs to maximize results and exploring additional programs that address "gaps" in the HRI noted by the Peer Review Panel and indicated by the review of "best practice" programs. These steps for the benefits plan design level include:

- 1. Integrate claims and health behavior data:** "Next generation" programs are using comprehensive claims, health behavior and absence data to create a "whole person" approach to integrating health and care management programs. The county is working on adding health behavior data into the claims database in order to assess correlations between healthy behavior and management of health conditions at the group level. This integrated data are essential for determining optimum strategies for improving the health of employees and their families.
- 2. Determine best opportunities for "care intervention" programs:** Existing disease management programs focus on individuals who have a full-blown disease that can be "managed" but not actually "cured" (e.g. diabetes, heart disease.) Dr. Edington and other researchers advocate changing the focus from people who have "permanent" conditions like heart disease to those who are on the path to developing these diseases but who are still at the level of "pre-condition risk factors" that are reversible through health behavior changes. Examples of reversible "pre-condition risk clusters" include pre-metabolic syndrome (large waist circumference, hypertension, glucose intolerance, high triglycerides and high HDL cholesterol), and mental health (poor perception of current health, low level of life satisfaction, high

stress both on and off the job, and illness days.) This is an emerging area of disease management with few fully operational program examples.

Chapter 3—Supportive Environment

In the workplace, the road to better health, longer lifespan and reduced cost is a two-way street. Both employee and manager/supervisor play an important and interdependent role in bringing about the desired outcome of a healthier, vibrant, and—as a consequence—optimally productive workplace. The preponderance of research shows that the behavior change required to produce lasting savings and improved health cannot happen without a comprehensive organizational realignment in support of a workplace that fosters and supports healthy actions on an ongoing basis.^{34,35,36} Through its programs and services, the King County Health Reform Initiative provides the tools integral for both management and employee to make the required environmental and behavioral changes.

The role of the employee

With the support of the Healthy IncentivesSM benefits plan backed by a robust communications effort, King County employees (and their families) are encouraged to take on a much higher level of personal responsibility for their own health, as well as a greater role in the wise use of health care resources.

The role of manager and supervisor

As leaders of a dynamic 21st century organization, King County managers and supervisors are responsible for removing barriers to participation in worksite health promotions. More important, they are responsible for using their skills to create a healthy workplace environment—one that is participative, engaging, allows for work-life balance, and is built on appropriate job design. The result of this shared responsibility is improved employee health, which

World Health Organization Definition of Healthy Workforce

The World Health Organization defines a healthy workforce as characterized by four key attributes to achieve optimal performance. Individuals and organizations must be:

1. **Healthy:** demonstrating optimal health status as defined by positive health behaviors, minimal modifiable health risks and minimal illnesses, diseases and injuries.
2. **Productive:** functioning to produce the maximum contribution to achievement of personal goals and the organization's mission.
3. **Ready:** possessing an ability to respond to changing demands given the increasing pace and unpredictable nature of work.
4. **Resilient:** adjusting to setbacks, increased demands or unusual challenges, and returning to optimal "well-being" and performance without severe functional decrement.

³⁴ Goetzel RZ, Ozminkowski RJ, Bruno JA, Rutter KR, Isaac F, Wang S. 2002. Long-term impact of Johnson & Johnson's Health & Wellness Program on health care utilization and expenditures. *Journal of Occupational and Environmental Medicine* 4(5):417-424

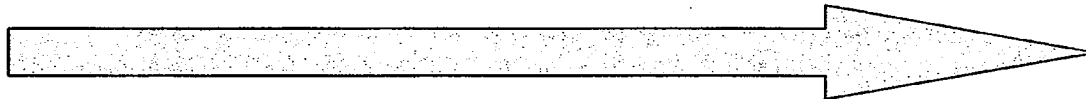
³⁵ Edington DW. 2001. Emerging research: A view from one research center. *American Journal of Health Promotion* 15(5):341-349

³⁶ Lowe, Graham S. *Healthy Workplace Strategies: Creating Change and Achieving Results*. Report prepared for the Workplace Health Strategy Bureau, Health Canada, 2004 (www.grahamlowe.ca)

becomes improved organizational vitality, which in turn becomes improved productivity and delivery of more, higher quality services to the community.

Figure 19

Health is Connected to Service Delivery in the Community



Health→Vitality→Productivity→Performance→High Quality/Cost Service

The role of the Health Reform Initiative

The HRI is responsible for creating a comprehensive infrastructure (including health plan design, programs and communications) that 1) supports and enables the adoption of healthy practices by county employees and their families, and 2) works with managers and supervisors to foster awareness of, and action towards a healthier workplace. Table 4 lists tools and resources provided by the HRI.

Table 4

HRI Tools and Resources			
Health Promotion	Education	Outreach	Organizational Alignment
Healthy Workplace Funding Initiative	Eat Smart Campaign	Focus on Employees website—and specialized web pages for	Health Promotion Leadership Committee
Gym Discounts	Move More Campaign	Choose Generics	Manager Training
Healthy Vending Machine Pilot Program	Quit Tobacco Campaign	Healthy Workplace Funding Initiative	Health Leadership Forum
Weight Watchers at Work®	Choose Well—Choose Generics	Managers	
Worksite Flu Shot	Health & Benefits Fair	Joint Labor Management Insurance Committee	
Live Well Challenge		Health Matters Newsletter	

A description of each of these programs and a listing of training resources for managers appear in Appendix C.

Health Promotion Leadership Committee

Maintaining clear lines of communication between lead managers and the Health Reform Initiative is the purpose behind the creation of the King County Health Promotion Leadership Committee. The committee is made up of key deputy directors, administrators and managers from each of the county's departments and separately elected offices. The Health Promotion Leadership Committee provides direction on the overall execution of the HRI education and outreach strategy and assists in the conveyance of key messages concerning health and well being to the workplace.

One of the most important roles of the Health Promotion Leadership Committee is to plan the annual Health Leadership Forum. The Forum convenes more than 200 lead managers each spring to review the progress of the Health Reform Initiative, provide feedback to HRI staff on how programs are working and to brainstorm additions and revisions to programs for the coming year.

Guiding Principles for a Healthy Workplace¹

1. **Supportive culture and values:** Creating and maintaining a healthy workplace requires a supportive culture that clearly values employees and is based on trust.
2. **Leadership:** Commitment from top management is critical, and must take the form of visible leadership on health issues. Employees judge commitment by the actions of the Executive team. Leadership must also be exercised throughout the organization, especially by line supervisors.
3. **Use a broad definition of health:** Good mental and physical health means more than the absence of illness, injury and disease. It also means leading a balanced life, developing one's potential, making a meaningful contribution to the organization, and having a say in workplace decisions.
4. **Participative team approach:** Implementing a healthy workplace strategy requires an integrated approach, guided by teams that include representatives from management, health and safety, human resources, employees and unions. Direct employee involvement in all stages is especially critical to success.
5. **Customized plan:** Collaboratively develop a workplace health policy and action plan with clear goals. The policy and plan must be tailored to the business context, workforce characteristics, and documented gaps in the work environment. Learn from each change introduced and refine the plan accordingly.
6. **Link to strategic goals:** Clearly link health issues and outcomes to the organizations strategic goals. Integrate health and well-being objectives into the organizations business planning process, so that over time, all management decisions take health into account.
7. **Ongoing support:** Allocate resources that ensure continuity to healthy workplace activities. Provide training, especially to managers at all levels, to sustain the initiative and embed health into how the organization operates.
8. **Evaluate and communicate:** Open and continuous communication is a key success factor in any organizational change initiative. Consistently evaluate outcomes and keep top management informed about the impact of the healthy workplace issues on business results.

¹ Source: Lowe, Graham S. *Healthy Workplace Strategies: Creating Change and Achieving Results*. Report prepared for the Workplace Health Strategy Bureau, Health Canada, 2004 (www.grahamlowe.ca)

Accomplishments

The Supportive Environment programs of the HRI have a long list of accomplishments in 2006-2007, including:

Weight Watchers at Work[®]: Since the program began in 2006, more than 5,754 pounds have been shed by participants who dropped an average of 8 pounds per 13-week session. According to the Partnership for Healthy Weight Management, a weight loss of as little as five to 10 percent can measurably improve health outcomes.

Gym Discounts: Twenty-three fitness organizations now offer employees an average 20 percent discount at 124 locations throughout the Puget Sound region.

Healthy Workplace Funding Initiative: Using a \$25 per employee credit, departments purchased goods and services based on the input of employees for activities including yoga and other fitness training, exercise videos, nutrition information and more.

Live Well Challenge: Almost 1,200 participants on 172 teams competed for fun and prizes in the first annual Live Well Challenge in 2006; a highly successful effort to raise awareness and build communities of health throughout King County. Over 75 percent of participants surveyed said that they improved nutrition and physical activity behaviors as a result of the Live Well Challenge.

Health and Benefits Fair: Organizers reported a 20 percent increase in attendance at this year's King County Health and Benefits Fair, which drew thousands of employees and featured many new health vendors. Ninety-six percent of survey respondents rated the fair either a "4" or "5" on a five-point scale. Sixty-three percent plan to make changes to their lifestyle because of something they learned at the fair.

Worksite Flu Shots: In 2006 more than 4,200 employees -- 34 percent of our targeted workforce -- turned out at worksites across King County to receive no-charge flu shots.

Healthy Vending Machine Pilot Program: Partnerships with vendors helped to stock vending machines with healthy snack options in the King County Administration Building, the Exchange Building, the Regional Justice Center, the Wells Fargo Building, and a number of smaller worksites.

Health Matters Newsletter: Sixty-eight percent of KC beneficiaries responding to survey questions included with the wellness assessment said they read the *Health Matters* monthly newsletter.

Choose Generics Education Campaign: Launched in January of 2007, the visibility of our "Choose Well/Choose Generics" campaign for prescription drugs contributed to a 7 percent increase in the rate of beneficiaries choosing the lower cost -- but equally effective -- generic equivalent prescriptions.

Awards and Honors

The King County Health Reform Initiative is being recognized nationally for its innovative approach and positive affect on employee health including:

NACo Achievement Award for innovation and promotion of effective, responsible county government.

American Heart Association “Start!” Award platinum designation as a fit-friendly work environment is awarded “for employers who champion the health of their employees and work to create a culture of physical activity.” King County is the only county in the US and only employer in the region with the top-tier “platinum” status.

Marcom Media Award gold medal for writing given for the September issue of *Health Matters*. This is an international competition recognizing outstanding achievement in communications.

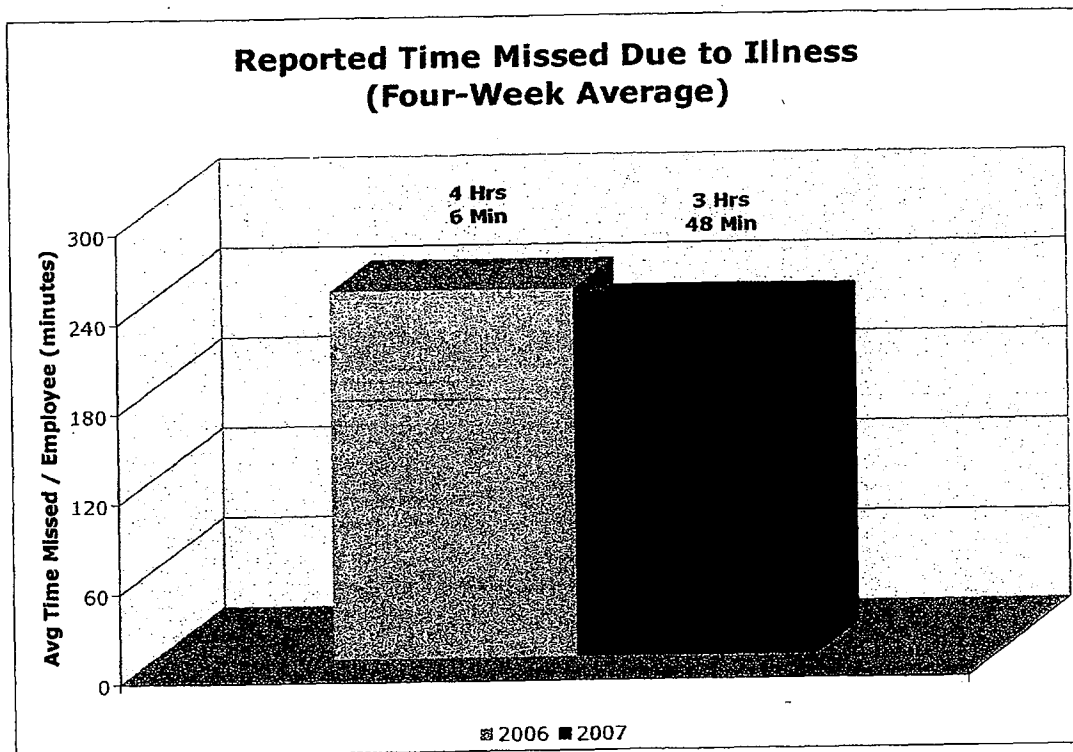
Governing Magazine *Public Official of the Year*: Executive Sims’ leadership and personal involvement in health (including a 40-pound weight drop) won this mark of distinction “for transforming King County into a national leader in promoting healthy lifestyles for public employees.”

Key Findings

There are seven Supportive Environment measures that were adopted in Motion 12479. The results of those seven measures are shown below. The information on absences comes from the wellness assessment; the data on Weight Watchers at Work[®] and on-site flu shot programs come from program coordinators; and the information on employees' perception of the HRI come from a survey conducted on the county's behalf by an outside consultant in August and September of 2006.

1. Change in self-reported absence for employees due to illness 2006 to 2007 as measured by the wellness assessment.

Figure 20

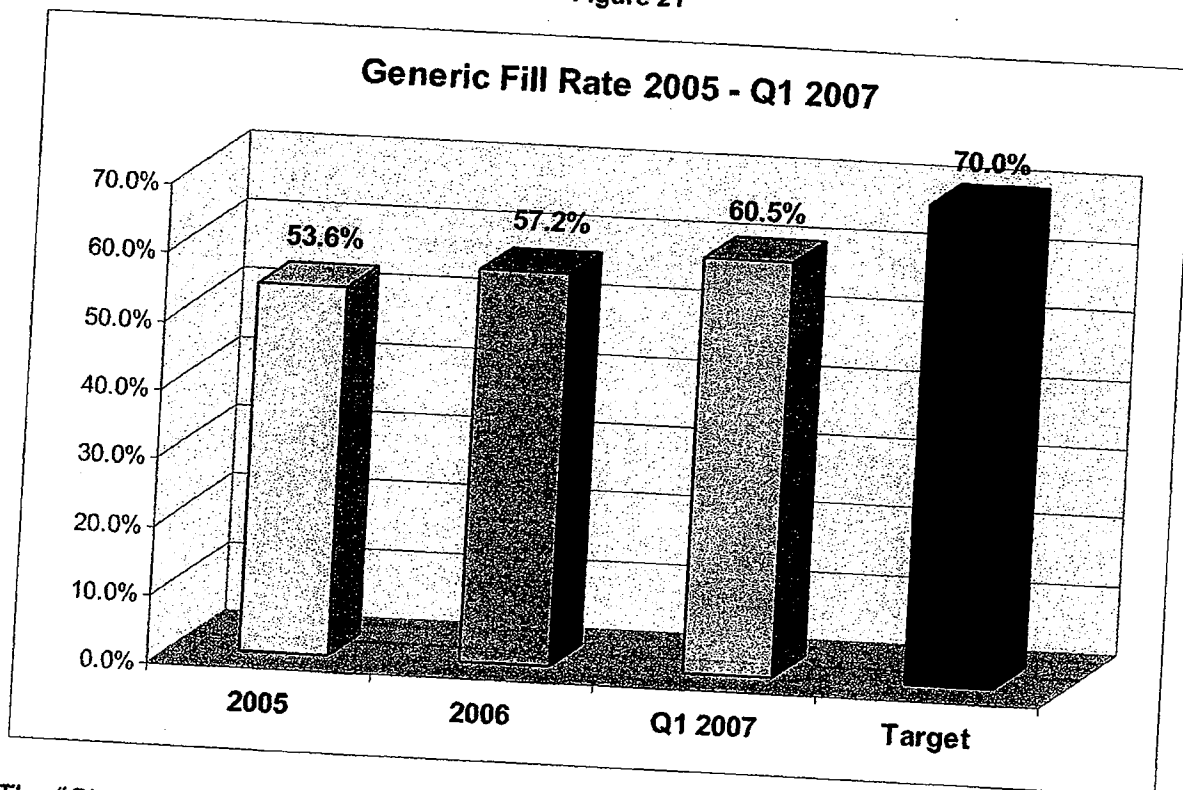


There was one question on the wellness assessment asking respondents to report on health-related absences in the four weeks immediately prior to their taking the wellness assessment. This question represents at best a very rough snap shot of one aspect of the effect of health conditions on time lost from work due to employee illness. Analysis of the responses shows that while over two-thirds of employees report they were not absent at all in the four weeks before they took the wellness assessment, among employees who did report absences there was a very small but statistically significant twenty minute drop from 2006 to 2007.

More work is needed to confirm this outcome, since the measure is based on responses to one question on the wellness assessment. The county is investigating more effective tools for obtaining more meaningful information about the effect of health conditions on absenteeism, presenteeism³⁷ and productivity.

2. Change in generic prescription rate 2006 to 2007.

Figure 21



The "Choose Well/Choose Generics" consumer education campaign is an on-going program. Between 2005 and the first quarter of 2007 the use of generic has increased from 53.6 percent to 60.5 percent. The increase in use of generics during 2006 alone resulted in an estimated \$1.8 million reduction in prescription drug costs over what costs would have been without this change. The goal, recommended by the county's pharmacy benefit manager vendor, is to achieve at least 70 percent generic fill rate. Every 1 percent increase in generic fill rate decreases the prescription drug costs by approximately 1 percent.

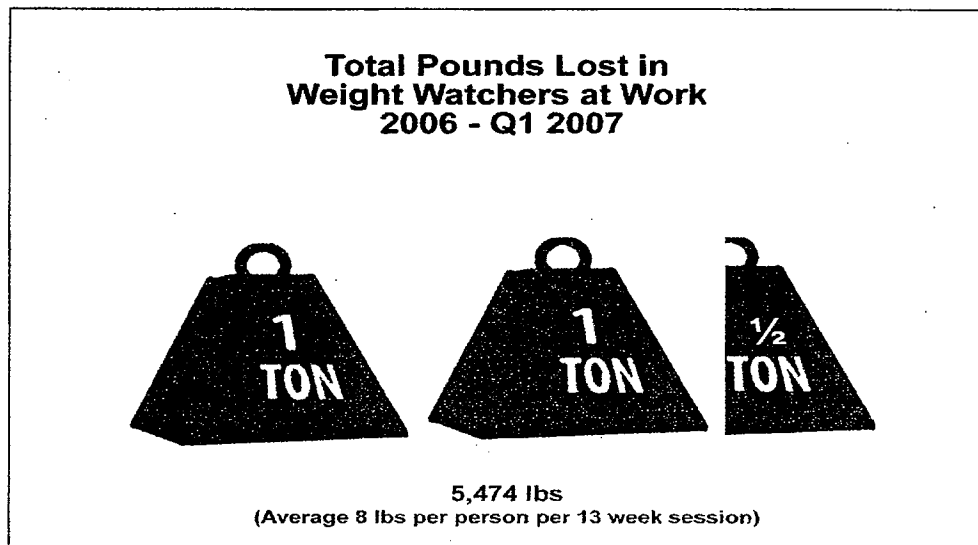
In addition, employees and family members are actively embracing the new "Personal Pharmacist" program that started January 1, 2007. The goal of the program is to reduce "medication waste". To participate, members meet one-on-one with a specially-

³⁷ "Presenteeism" is a term to describe a person being at work but because of health conditions is not fully functional.

trained, local pharmacist to review all the prescription drugs, vitamins, over-the-counter medications, herbal products and nutritional supplements they are taking. This allows the pharmacist to identify any duplications, conflicts or complications with medications. The pharmacist works with the member and the member's physician to resolve any issue with the medications. In addition, the pharmacist will assist the member to create a master medication list for their records. In the first quarter of 2007 almost 300 members consulted with a pharmacist, and nearly 600 services have been provided.

3. Number and total of pounds lost by employees through Weight Watchers at Work[®] program 2006 and 2007.

Figure 22

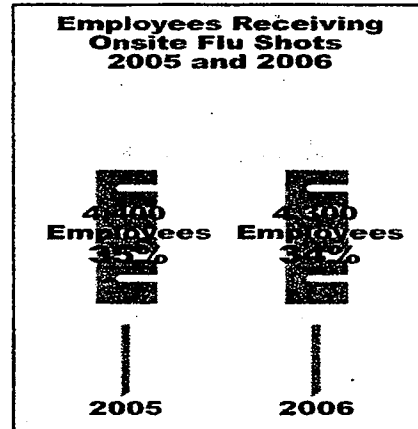


In 2007 Weight Watchers at Work[®] held regular sessions at eight workplace locations in King County. Since January of 2006 almost 700 enrollees (approximately 230 individual participants) have lost an average of 8 pounds per 13-week Weight Watchers session, translating to 5,754 total pounds of weight loss.

4. Number and percent of employees receiving flu shots at work 2005 and 2006.

Figure 23

The county actively encourages members to get annual flu shots, which are covered in full by the health plans for all employees and family members. In order to make it very easy for employees to get flu shots, the county offers flu shots at no cost to employees in the worksite. In 2006, 4,300 employees -- 34 percent of our targeted workforce -- chose to receive flu shots at work, and 4,400 participated in 2005.



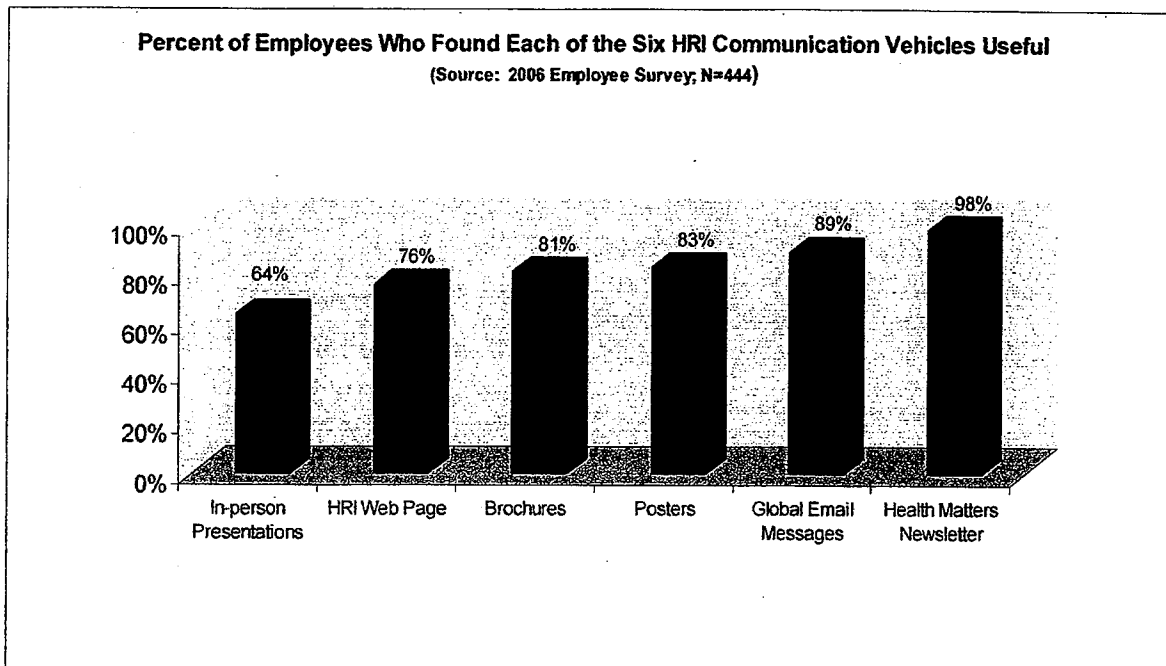
The onsite flu shot program is well received, and clinic slots fill up quickly. The small decline in the number of employees participating may be related to difficulties encountered in the two county departments that conduct their own immunization programs. The Department of Adult and Juvenile Detention scheduled fewer clinics due to a staff shortage and the Department of Public Health received their order of serum for their patients and their employees a little later than the HRI onsite program, which used an outside vendor.

One limitation to expanding the number of employees participating is the difficulty of holding clinics at over 156 separate county worksites at times to accommodate 24-hour shifts.

Overall, looking at flu shots for the entire population, more than 48 percent of employees and spouse/domestic partners reported in the wellness assessment that they received a flu shot in 2005 (N=8,060). This number increases to 53 percent in 2006 (N=9,366.)

5. Self reported employee perception of usefulness and effectiveness of HRI communication tools in 2006.

Figure 24

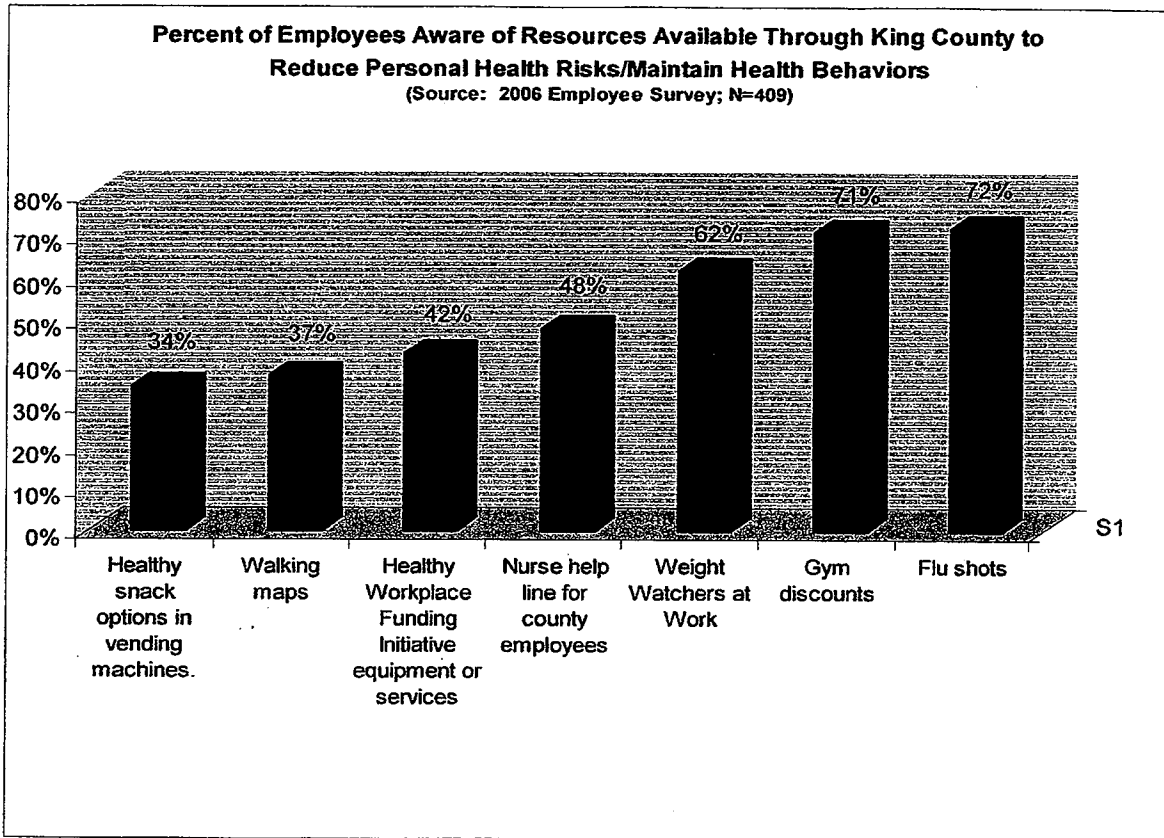


An important success factor for the HRI is effective communication with employees about the various programs. Annual communications plans are developed to ensure messages are timed and coordinated to support all three levels of the HRI effort.

Employees responding to the HRI survey conducted in August and September, 2006 found all six HRI communication vehicles (in-person presentations, HRI webpage, brochures, posters, global email, *Health Matters* newsletter) useful, with the *Health Matters* newsletter that is sent to the employee's homes scoring a resounding 98 percent on a scale of 0 to 100 percent.

6. Self-reported levels of employee awareness of resources available through King County to reduce personal health risks and maintain or increase health behaviors in 2006.

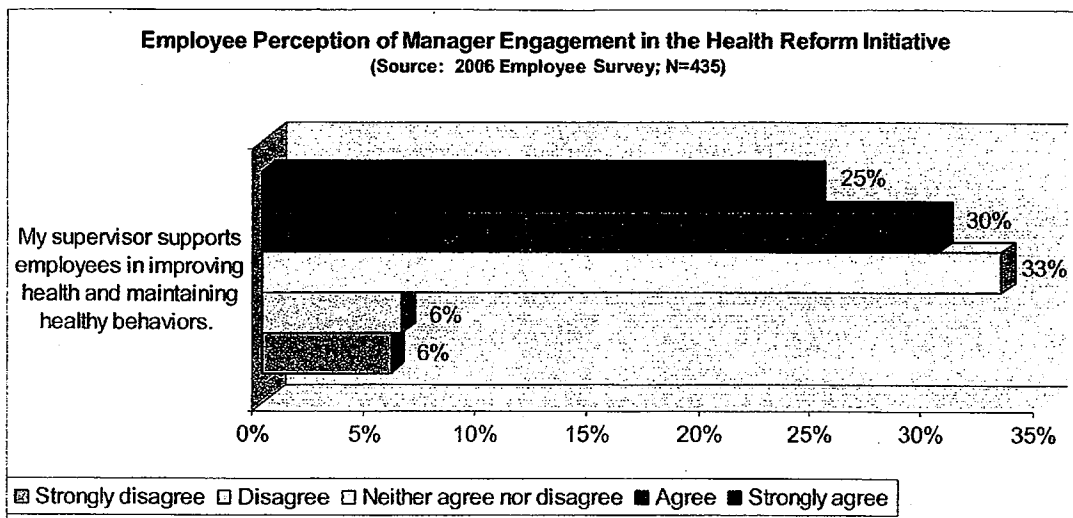
Figure 25



Employees responding to the HRI survey were very aware of the onsite flu shot program, gym discount opportunities and Weight Watchers® programs. Only about one third of employee knew about the walking maps and healthy snack options in vending machines—the lower level of awareness of these resources is likely due in large part to the fact that there are not maps yet for all work locations, and not all work locations have vending machines and/or the healthy snack program has not yet been implemented at all worksites.

7. Self-reported levels of employee agreement that supervisor supports health and maintaining health behaviors.

Figure 26



Over 55 percent of employees responding to the HRI survey agree or strongly agree that their supervisor supports the Health Reform Initiative in the workplace.

Conclusions

Key measurements and independent evaluation of the HRI demonstrate that the program is in compliance with the accepted best practices as defined by the leading authorities in health and productivity research. Though a direct cause-and-effect relationship cannot be proven outright, achievement of near “best practice” participation in the wellness assessment and individual action plan portion of the Healthy IncentivesSM benefit program even in the first year is likely attributable in large part to the extensive education and outreach aspects of the Supportive Environment program. (For example, HRI staff conducted education sessions about the purpose of the wellness assessment and individual action plan programs for a full year before the program started to make sure employees and their spouse/domestic partners were ready to participate.) The results from surveys of employees and managers and supervisors indicate that the tools and resources are well-known and regularly used, and the county is making progress towards creating a truly healthy workplace.

Challenges and Opportunities

While most of the measured indicators show that the resources and tools provided employees and managers are largely useful and appropriate, challenges and opportunities remain.

Measurement of lost productivity due to employee illness: The single biggest opportunity is to begin measuring the impact of health on productivity. As noted in the “Lessons Learned” section, estimates of direct and indirect cost to an employer from time lost due to illness and presenteeism is on the order of three to four times the cost of medical and prescription drug claims.

Employee Performance and Accountability System (EPAS): Promoting a healthy workplace, which, in turn boosts morale and productivity, is a key element in this new system under development by King County Human Resources Division. EPAS is an employee performance and accountability system designed to encourage and reward optimal performance; where employees and their supervisors are individually and collaboratively responsible for actively communicating about performance, reaching work goals, and supporting department and county goals.

Healthy Workplace Funding Initiative: The 46 percent utilization rate for the 2006 Healthy Workplace Funding Initiative – which requires self-organization among co-workers and supervisors in the workplace (and thus a good indicator of organizational alignment) – is an area of particular focus. The Healthy Workplace Funding Initiative outreach plan has been modified, qualified services (such as stress management classes) have been expanded, and the resources of the newly re-formed Health Promotion Leadership Committee are being called on to more effectively transmit the benefits of this workplace program.

Choose Generics: By first quarter of 2007, the HRI had achieved a 60.5 percent generic fill rate, which represents a substantial positive shift in employees choosing chemically equivalent generics over brand name, in just one year. However, reaching the 70 percent generic fill rate target recommended by the county’s pharmacy benefit manager vendor may be hampered by the limits of our current benefit plan. Devising a strategy for encouraging employees and their families to examine the benefits of *therapeutically* equivalent generics (as opposed to *chemically* equivalent generics) will be essential to meeting the target generic fill rate.

Puget Sound Health Alliance: Development of “wise consumer” education programs and tools are expected from the Alliance in the near future and will be integrated as needed into the KCHRI, including products from their health consumer education program, health provider comparison reports, and electronic personal health records, all of which hold promise for improving health outcomes and controlling costs.

Education on evidence-based preventive screenings: Research clearly demonstrates the cost and health benefits of preventative screenings for numerous medical and psychiatric conditions. King County HRI will examine the potential of

coordinating with health plans, vendors, the Puget Sound Health Alliance and others to communicate more effectively with “at risk” members (e.g. by demographic grouping) and their care providers about the type, availability and benefits of preventative screenings.

Organizational alignment: Opportunities also exist to improve coordination of efforts by worker’s compensation, disability services, the Employee Assistance and Making Life Easier programs to maximize results.

Next Steps for Supportive Environment

- 1. Pursue with the Joint Labor Management Insurance Committee prescription drug plan options that increase the generic fill rate:** Although generic fill rate was not addressed in the original business case, encouraging members to use generic alternatives to brand name drugs (particularly very expensive “block buster” drugs advertised directly to the public) *as appropriate* is an essential strategy for helping employees and their families become informed and conscientious consumers of health care. The county has set a target generic fill rate of 70 percent, and can achieve this target through a combination of consumer education about the safety and effectiveness of generic drugs and changes in plan design that provide greater financial incentives to “Choose Generics.”
- 2. Explore implementation of a valid survey tool to capture information about employee absenteeism and presenteeism directly related to health conditions:** With the advent of the federal Family Medical Leave Act (FMLA) and other state regulations allowing employees to take sick leave time for family reasons, most employers have the same issues with obtaining accurate data about employee absences for their own personal health conditions. In addition, sick leave and disability leave data do not capture information about “presenteeism.” For these reasons several surveys have been developed and validated that capture detailed self-reported information about the effect employee health on attendance and ability to perform work. The county will lay the ground work for selecting an implementing one of these validated survey instruments in order to measure the effect of health on productivity.
- 3. Implement the Employee Performance and Accountability System (EPAS):** Promoting a high performing workforce is a strategic goal driving this new system under development by King County Human Resources Division in collaboration with all departments. EPAS is an employee performance management system designed to encourage and recognize optimal performance. The system promotes communication between employees and supervisors about performance with a focus on individual work goals that contribute to work unit goals, clear county and department standards and expectations, planning for employee development, communicating throughout the performance cycle on goals, progress and

development, recognizing successful and improved performance, and resolving performance issues. By its design to engage employees and enhance communications between employees and supervisors about performance and organizational goals, this system should in turn contribute to the development of a healthier workplace.

- 4. Develop and implement a communications strategy for enhancing awareness of preventative screenings.** Research clearly demonstrates the cost and health benefits of preventative screenings for numerous medical and mental health conditions. HRI staff will examine the potential of coordinating with health plans, vendors, the Puget Sound Health Alliance and others to communicate more effectively with "at risk" members (e.g. by demographic grouping) and their care providers about the type, availability and benefits of preventative screenings. The strategy will be incorporated into the development of the 2008 HRI Communications Plan.
- 5. Conduct additional employee surveys** in order to create broader consumer awareness of the programs and benefits of the Health Reform Initiative. The surveys (to be conducted by telephone and during events such as the Health and Benefits Fair and the Live Well Challenge) will help identify and improve the vehicles for transmitting important health-related messages to employees (i.e. web, newsletter, direct mail, KCTV etc.)

Chapter 4—Puget Sound Health Alliance

The non-profit Puget Sound Health Alliance (Alliance) constitutes “Level 3” of the King County Health Reform Initiative, which seeks to influence the external (or supply side) factors affecting the health care economy of Puget Sound region.

Formed in 2004 under the leadership of Executive Sims, the Alliance is a direct result of the recommendations of the King County Health Advisory Task Force which recognized that sustainable reform is only possible by addressing factors influencing the entirety of the region’s inter-dependent health care economy. Alliance membership today includes more than 150

organizations from business, government, health providers and plans administrators, representing more than 1.3 million insured people. Member organizations range in size from single-practice physician offices to major hospitals and clinics to Starbucks, REI, Washington Mutual, Boeing and the State of Washington.

In 2006 the Alliance began implementing the major pieces of a broad-based strategy to improve the quality of our region’s health care providers, including clinical protocols for doctors and health organizations, as well as tools to help health care consumers understand and make use of a the highest level quality care.

Puget Sound Health Alliance

Vision

A state of the art health care system in our region that consistently achieves healthier people, high quality health care and affordable costs.

Mission

To forge a sustainable leadership alliance among patients, providers, purchasers, and health plans to design and implement an innovative, high quality, and affordable health care system in the Puget Sound region.

Goals

1. Improve the quality of health care provided throughout the five-county region (King, Pierce, Kitsap, Snohomish, and Thurston Counties).
2. Improve the health outcomes for people living and working in the region.
3. Slow the rate of increase in health care expenditures experienced by consumers and purchasers of health care throughout the region.
4. Improve the ability of the region’s consumers and health care professionals to become partners in managing health.
5. Promote and support evidence-based decision-making as the norm throughout the region.
6. Develop a regional ethic that incorporates collaborative approaches into quality improvement

Studies and Reports Produced by the Alliance

The Alliance is currently in the process of developing the following deliverables:

- **Comparison report on the quality of care provided by local clinics and hospitals.** This report will be available to the public in 2008, to help consumers

make informed health care decisions and to promote high quality care among providers. An internal performance report based on analysis of initial data will be available in late 2007.

- **Evidence-based treatment recommendations and guidelines** for health care professionals to use in treating patients. Developed by physicians and medical experts, these clinical improvement reports are consistent with evidence-based standards of care.
- In 2006 the Alliance produced **clinical improvement reports on Diabetes, Heart Disease and Prescription drugs**. Further clinical improvement reports covering back pain and depression are due in 2007 and 2008.
- **Information to help guide health care decision-making** for patients as they work with their doctors to prevent and manage illness and take better care of themselves; and for employers and union trusts to support these efforts.
- **Incentives to break down barriers and reward quality care**. This includes recommendations on health benefit design to promote more effective treatment, as well as ways to reward doctors, clinics and hospitals for providing high quality care. For patients, this includes encouragement to improve personal health and manage chronic conditions. For medical practices and hospitals, it also involves support for increased use of electronic medical records and other technologies.

Key Findings

There were two measures for the Puget Sound Health alliance included in Motion 12479.

1. Summary of regional and national recognition for King County and the Puget Sound Health Alliance.

There were two major national awards/recognitions for the Alliance in 2006:

Value-driven health care: Federal Health and Human Services Secretary Mike Leavitt in January 2006 designated the Puget Sound Health Alliance as first in the nation to be recognized as a "community leader" in value-driven health care, making the group eligible to receive Medicare performance data for local, public outcomes reporting.

Case Study on Innovation: The Progressive Policy Institute Senior Fellow David Kendall placed a national spotlight on the work of the Alliance when he made the organization the centerpiece of a major conference on health care and the subject of one of his case studies on innovation.

2. Puget Sound Health Alliance Provider Quality Comparison Reports:

This measurement will begin in 2008.

