

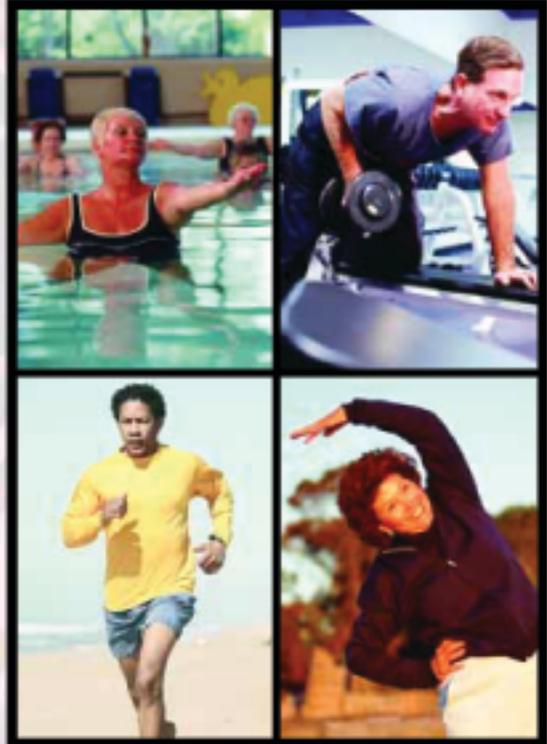
preventive care

Disease prevention

health promotion

Evidence-Based Approaches

to Worksite Wellness
and Employee
Health Promotion &
Disease Prevention



worksite wellness



Final Report of an Analysis Conducted for the North Carolina Teachers' and State Employees' Comprehensive Major Medical Plan by the North Carolina Institute of Medicine and the Center for Health Improvement, April 2005.

preventive care
Disease prevention
health promotion

Final Report
Evidence-Based
Approaches
to Worksite Wellness
and Employee
Health Promotion &
Disease Prevention

Prepared for the
**North Carolina Teachers’
and State Employees’
Comprehensive Major Medical Plan**

By **North Carolina Institute
of Medicine (NC IOM)**

and **Center for Health Improvement (CHI)**
Sacramento, California

April 2005

worksite wellness

Suggested citation:

North Carolina Institute of Medicine and Center for Health Improvement. Evidence-Based Approaches to Worksite Wellness and Employee Health Promotion & Disease Prevention. North Carolina Teachers’ and State Employees’ Comprehensive Major Medical Plan. Durham, NC and Sacramento, CA, April 2005.

acknowledgements **Acknowledgements**

The North Carolina Institute of Medicine and the Center for Health Improvement are very pleased to have had the opportunity to assist the North Carolina Teachers' and State Employees' Comprehensive Major Medical Plan in this analysis of policy options with regard to a proposed worksite wellness and health promotion initiative for the benefit of Plan members. Throughout our work, we enjoyed a close working relationship with several key staff members of the State Health Plan whose contributions to this project we would like to recognize. The Executive Administrator of the State Health Plan, Dr. Jack Walker, was especially committed to this effort and encouraged its completion in a timely way. His participation in each of the three meetings described in this report was an important reason that the meetings were so successful. We also benefited from the technical expertise and insightful criticism of Lisa Bultman, RN, MPH, Disease and Care Management Program Administrator, and Casey Herget, MPH, MSW, Health Promotion and Disease Prevention Consultant.

Most of all, we wish to express our appreciation to the members of the State Teacher and Employee Wellness Advisory Committee (STEWAC), who attended these meetings, participated in the extensive, day-long discussions, and offered helpful advice and constructive criticism of various policy options under consideration.

Members of the North Carolina Institute of Medicine staff who assisted in this process were Pam C. Silberman, JD, DrPH, Vice President; Kristie Weisner Thompson, MA, Assistant Vice President; Kristen Dubay, MPP, Project Director; Adrienne Parker, Director of Administrative Operations; and Thalia Fuller, Administrative Assistant. Each of these staff members played critical roles in making these three meetings possible.

We also appreciate the North Carolina Association of Educators and the North Carolina Hospital Association for making space available for STEWAC members to gather for these sessions.

Gordon H. DeFriese, PhD
President and CEO
North Carolina Institute of Medicine

Patricia E. Powers
President and CEO
Center for Health Improvement

North Carolina Teachers' and State Employees' Comprehensive Major Medical Plan

executive summary Executive Summary

This report summarizes the work, begun in June of 2004, of the North Carolina Institute of Medicine¹ and the Center for Health Improvement (Sacramento, California)² to:

- 1 Assemble two national panels of experts to advise the North Carolina Teachers' and State Employees' Comprehensive Major Medical Plan (the State Health Plan) with regard to evidence-based worksite wellness interventions. The first of these panels focused on worksite *programs and interventions*, while the second focused on efforts to increase employee *participation and acceptance* of health promotion and disease prevention interventions.
- 2 Evaluate the information presented by the two expert panels and to recommend a strategy considered feasible for implementation by the State Health Plan.
- 3 Summarize the work of the three meetings as a framework to guide subsequent investment of resources by the State Health Plan in either targeted or more generally available health promotion and disease prevention initiatives for NC teachers and state employees.

An advisory group convened by the State Health Plan (the State Teacher and Employee Wellness Advisory Committee – STEWAC) served to provide insight as to the feasibility of implementation of specific health promotion/wellness initiatives among Plan members, as well as the acceptability of various incentives for participation that might be considered.

This report summarizes the information derived from the presentations of the two panels of experts, as well as the deliberations of STEWAC members at the third meeting, and offers a number of specific recommendations for how the State Health Plan might use these findings and observations in shaping its planned initiative in this area.

background

Over the past couple of years, evidence has been accumulating to demonstrate an alarming trend toward a greater prevalence of chronic health conditions among beneficiaries of the State Health Plan. At the same time, the rates of expenditure for personal healthcare services among Plan beneficiaries have been rising at a rapid rate.

It was out of a concern for these trends, and the consequences for the financial stability of the State Health Plan, that the Administrators and the Board of the Plan undertook to address the problems associated with the rate of increase in chronic health conditions among those insured by the Plan.

The NC Health Smart Initiative

The State Health Plan has embarked on a multi-component strategy for addressing these disease and cost-of-care patterns now evident among teachers and state employees insured by The Plan. The State Health Plan's new vision and mission is to provide its members with the tools and education through multiple channels, including the healthcare provider, community, family, the Health Plan itself, and the worksite, to empower them to make smart health and healthcare decisions. The State Health Plan envisions worksite wellness and health promotion as a crucial component supporting individual and environmental behavior change, which will reduce healthcare costs to the member and the Plan, improve health, and increase productivity.

Basically, the *NC HealthSmart Program* strategy includes six broad components (each explained in the body of the full report):

1 The NC Institute of Medicine is an independent, not-for-profit agency created by the North Carolina General Assembly (in 1983) to provide advice to agencies of state government concerning some of the state's most complex health and healthcare issues.
2 The Center for Health Improvement is a national health policy organization with a primary focus on health promotion and disease prevention.

North Carolina Teachers' and State Employees' Comprehensive Major Medical Plan

- 1 Targeted **disease management** interventions for Plan members with specific chronic disease diagnoses.
- 2 A set of centrally designed **health promotion** interventions to be available to all Plan members (e.g., newsletters, Web sites, a 1-800 nurse call line, health fairs, and walk-a-thon events).
- 3 **Health tracking** initiatives to include health risk assessments (HRAs), clinical screening, and other data-gathering activities (including stage of change assessments).
- 4 Contractual relationships with a number of local health service provider organizations capable of offering one or more **risk-reduction programs** in a local area for the benefit of qualifying teachers and state employees.
- 5 Decentralized **worksite wellness programs** organized at specific places of employment for teachers and state employees with the objective of health risk factor reduction.
- 6 The State Health Plan is also planning to better coordinate **primary healthcare and pharmacy services** provided to Plan members with health promotion, disease management and risk-reduction goals of the NC HealthSmart program.

Technical assistance effort **The NC IOM and CHI Technical Assistance Effort**

The three STEWAC meetings organized by the NC Institute of Medicine and the Center for Health Improvement proposed to develop a framework for undertaking the review of existing experience and knowledge in the broad field of worksite wellness program development.

In the first of the three meetings, four experts were invited as speakers: Ron Z. Goetzel, PhD, Vice President, Consulting and Applied Research, The Medstat Group, and Director, Cornell University Institute for Health and Productivity Studies; Joyce M. Young, MD, MPH, Regional Wellbeing Director, IBM Global Wellbeing Services and Health Benefits; William L. Beery, MPH, Vice President for Programs, Group Health of Cooperative Community Foundation; and Allen Feezor, Chief Planning Officer, University Health Systems of Eastern North Carolina (former Executive Officer for Health Benefit Services, CalPERS, the California Public Employees' Retirement System).

In the second meeting, STEWAC members heard from four additional speakers: Eric Finkelstein, PhD, Health Economist, Division for Health Services and Social Policy Research, Research Triangle Institute, Research Triangle Park, NC; Dee W. Edington, PhD, Director, Health Management Research Center, Professor and Research Scientist, Division of Kinesiology, School of Public Health, University of Michigan, Ann Arbor; Larry S. Chapman, MPH, Chairman, Summex Corporation, Seattle, Washington; and Ray E. Fabius, MD, Global Medical Director, General Electric Corporation, Fairfield, Connecticut.

In the third of these sessions, emphasis shifted to a synthesis of lessons learned from worksite wellness efforts elsewhere and a consideration of a proposed set of recommendations for how the overall wellness component within the overall *NC HealthSmart* initiative should/could take shape.

Lessons to be learned **Lessons to Be Learned from Previous Experience in Worksite Wellness Intervention Programs**

With regard to specific health promotion *interventions* at the worksite, experience gained in other workforce populations leads to the following observations (each of which is explained in detail in the body of the report):

- 1 *Health behavioral change is difficult to influence in others and even more difficult to achieve and maintain as an individual.*
- 2 *A large number of the diseases and disorders from which typical workforce populations (and NC teachers and state employees) suffer are preventable.*
- 3 *Poor health costs money.*
- 4 *In the design of worksite health promotion/wellness initiatives, it is just as important to reduce the number of people who move from low/moderate-risk status to high-risk as it is to promote programs designed to target the current high-risk behaviors of persons currently in the high-use and high-cost categories.*

- 5 *Worksite health promotion/disease prevention programs vary in their comprehensiveness, intensity, and duration.*
- 6 *It is important that worksite health promotion programs have as a foundation a defined “logic model” through which it is possible to describe the purpose of each element of an overall program.*
- 7 *It is now widely accepted that an HRA instrument of some form is an essential entry point to a well-organized worksite wellness program.*
- 8 *It is very important to have some form of ongoing program evaluation.*
- 9 *There are some paradoxical observations from worksite wellness and health promotion programs as well. Some insurance provisions thought to provide incentives to worksite wellness participation do not have the presumed effect.*

Observations Regarding the Incentives for Participation of Employees in Worksite Wellness Programs

Regardless of how elaborate and extensively publicized a health promotion/wellness program may be, an overarching concern of those responsible for such programs is the extent to which employees will voluntarily participate. From the presentations on this topic, the following observations emerged:

- 1 *Solid evidence of the effect of particular types and amounts of incentives on worksite wellness program participation are rarely available in the published reports of such interventions.*
- 2 *Though the types and amounts of incentives vary considerably, it is a widely held view among experts in the field that financial incentives are the most effective as the primary incentives.*
- 3 *Financial incentives are allowable under current HIPAA rules and regulations, but incentives cannot be targeted to people based on their personal health status.*
- 4 *Participation rates are generally far too low in most worksite health promotion programs.*
- 5 *A key consideration in the design of worksite health promotion programs, and their participation incentives, should be on keeping currently low/moderate-risk individuals from moving to the higher-risk category.*
- 6 *Four key factors appear to be important in assuring the success of a worksite wellness program:*
 - a *Driving the program from the top through leadership performance objectives and healthy work environment objectives.*
 - b *Driving the program from the bottom by allowing employees to self-monitor their own progress through an HRA.*
 - c *Workplaces providing resources for maintaining low-risk status and taking advantage of risk-reduction opportunities in the local community.*
 - d *Key indicators of health status and health behavioral patterns should be periodically measured and collectively summarized.*

Synthesizing the Perspectives of Technical Experts:

An Approach to the Design of a Worksite Wellness Intervention for NC State Health Plan Members

The State Health Plan will, over the coming few months, consider a number of policy options with regard to its investment in worksite wellness program components of the *NC HealthSmart* initiative. Although the State Health Plan in partnership with local state agency wellness coordinators will have primary responsibility for the promotion of employee participation in health tracking components of *NC HealthSmart* (e.g., HRA, clinical screenings, and risk-reduction interventions), and although demonstration programs have already begun in certain local communities and are being offered to teacher and state employee Plan members (e.g., public schools, community colleges, the UNC System, Department of Justice, Department of Health and Human Services, Department of Revenue), several components of the *NC HealthSmart* worksite wellness initiative will be standardized statewide. It is to the policy decisions regarding statewide standards for program implementation that these three sessions with STEWAC members were oriented.

North Carolina Teachers' and State Employees' Comprehensive Major Medical Plan

Three broad principles guide the recommendations emerging from this process through which decision options have been considered:

- 1 The overarching goals of the *NC HealthSmart* worksite wellness initiative should be to achieve a “healthier” state employee and public school workforce through health risk reduction and to reduce the rate of increase of overall expenditures (costs) of healthcare services provided to the workforce population insured by the State Health Plan.
- 2 All Plan members should be invited to participate. Although the largest impact of a health promotion program for Plan members can be obtained from a focus on those Plan members at highest health risk (if it were possible to bring about such change), it is the recommendation of STEWAC members involved in this process that low- and moderate-risk employees should also be invited to participate, and there should be explicit program components relevant to the needs and interests of these employees as well.
- 3 Participation in the worksite wellness initiative should be voluntary, with no financial or other penalty (or negative incentive) associated with lack of participation. However, positive incentives can and should be offered both for participation and, where possible, for the achievement of personal health promotion goals.

With these three principles in mind, the following aspects of a proposed worksite wellness initiative have been addressed by STEWAC members:

Target Groups

It is recommended that Plan members be defined confidentially (using aggregate HRA results and other available claims data) in two categories: *Group A: Low- and Moderate-Risk; and Group B: High-Risk.*

Anticipated Outcomes (Target Goals)

For all eligible Plan members, the HRA participation rate goal should be 80%.

Goals for Group A: Maintain low or moderate health risk.

Goals for Group B: Reduce high health risk.

The longer-range goal for the program in general: 70% of Plan members will be classified as either low- or moderate-risk based on HRA aggregated results.

Target Population Initial Program Contact

All Plan members will be offered an opportunity to complete a Health Risk Assessment (HRA), with a goal of a completion/participation rate of 80% or greater. Participation for current Plan members should be completely voluntary, but incentives (described below) should be offered. New employees who elect to become Plan members might be required to complete an HRA.

HRA Follow-up Options

Risk factor-related follow-up options should be available for all Plan members completing the HRA, but these may differ somewhat depending on the individual's risk status category determined through the HRA process.

Incentives for Participation

STEWAC members considered the matter of financial incentives for participation, both for completion of the HRA and for participation in post-HRA follow-up risk factor interventions. STEWAC members are aware of the difficulty of offering financial incentives for either of these types of participation in a situation where no state employee pays for his/her health insurance basic premium. However, it is recommended that the State Health Plan give serious consideration to the possibility of offering some form of financial incentive for program participation. Several options in this regard are offered in the body of the report.

One non-financial incentive (at least for HRA completion) could be making completion of the HRA a contingency for participation in other *NC HealthSmart* program components.

Interventions for Risk Factor Reduction

Risk factor interventions will be made available to Plan members statewide through the services of a contract “care management company,” and others will be identified either locally through collaborating arrangements

with healthcare provider organizations (e.g., hospitals, public health departments, or clinics). It is not possible to specify which types of interventions will/could be offered to Plan members statewide. It is anticipated that it will be important to offer every Plan member who completes an HRA the option of participating in or accessing the risk factor-relevant services of a program (either in-person or on-line through Web-based interventions) pertinent to his/her HRA results. It is anticipated that every Plan member will be assured some level of access to risk factor interventions addressing at least four basic wellness program components:

- smoking cessation;
- diet and weight management;
- physical activity; and
- stress reduction.

Incentives for *Outcomes Achievement*

Although some level of incentive is usually considered essential for encouraging participation in health promotion programs, it is less common for incentives to be associated with the achievement of specific health outcomes. Yet, the ultimate goal should be to maintain good health behaviors or to modify health risk behaviors (and, consequently, health outcomes), not just to achieve certain program participation levels. Providing incentives for participation is easier to measure and to implement, but will not necessarily achieve the greater goal of changing the health risk profile of Plan members. The State Health Plan is encouraged to explore performance/outcome incentives.

Evaluation

Program evaluation is considered an essential component of the NC HealthSmart initiative. It is strongly urged that the State Health Plan, and not the HRA or risk factor intervention vendor, engage an independent (outside) evaluator and ask that this organization (with input from the State Health Plan and STEWAC members) establish measurable criteria for evaluation for all program components.

Extending the Benefits of the Wellness Program to Retirees and Dependents Covered by The Plan

Throughout the three sessions conducted by the NC Institute of Medicine and the Center for Health Improvement for the information of STEWAC members, the focus of attention was on wellness and health promotion programming for the benefit of actively employed Plan members. Yet, at the outset of these discussions, the Executive Administrator of the State Health Plan asked that the situation pertaining to dependents and retirees also be considered. Time in these three meetings did not allow for a detailed discussion of how these same considerations would pertain to dependents and retirees, but all considered these issues important. Staff of the State Health Plan advised that STEWAC members' time in these meetings not be devoted to extensive discussion of dependents and retirees because the near-term activities in building out the various components of the *NC HealthSmart* program were not intended to be focused on these populations.

Summary

It is the recommendation of the North Carolina Institute of Medicine, in partnership with the Center for Health Improvement (Sacramento), that the North Carolina Teachers' and State Employees' Comprehensive Medical Plan, as part of its *NC HealthSmart* Program, develop an initiative to promote worksite wellness activities for the benefit of Plan members that will have the following characteristics:

- 1 The *NC HealthSmart* worksite wellness initiative should be open to all Plan members, not just those at highest health risk.
- 2 In its contract with a proposed "care management company," the State Health Plan should include a provision for: the vendor to administer a Health Risk Assessment (HRA) instrument that meets current industry standards of coverage of appropriate risk factors, the vendor to arrange for the confidential reporting of risk-related information to

North Carolina Teachers' and State Employees' Comprehensive Major Medical Plan

Plan members who complete the HRA, and the vendor to provide the State Health Plan with aggregated summary information on the risk profiles of Plan members completing the HRA.

- 3 The State Health Plan should have the responsibility through its vendors to ensure that ALL members of the Plan receive ample education on the benefit of health behavior changes and an understanding of how access to *NC HealthSmart* programs can be achieved. Additional resources and personnel may be needed to encourage the participation of hard-to-reach workforce populations.
- 4 Prior to the invitation to Plan members to participate in the HRA process, the State Health Plan is encouraged to create a committee of Plan members (and others with relevant knowledge and expertise) to act as an Institutional Review Board (IRB).³ The IRB should review the content of the proposed HRA, the process through which it will be disseminated to Plan members, the procedures to be used in assuring the confidentiality of personal information, and the way in which personal information will be used to channel Plan members into various risk-reduction interventions. It is recommended that the observations or conclusions of the IRB include a privacy statement and be made an integral part of the HRA (perhaps summarized as part of the consent form to accompany the HRA) as it is disseminated to Plan members and that the IRB annually update its observations and issue assurances to Plan members about the process and use of these data.
- 5 The State Health Plan is encouraged to develop procedures for offering meaningful (preferably financial) incentives for both *HRA completion* and for *post-HRA participation* in risk-reduction interventions.
- 6 The State Health Plan should establish program participation and outcome goals for the worksite wellness component of *NC HealthSmart*.
 - It is recommended that 80% of all Plan members should participate in HRA completion. Outcome goals for Group A (low- and moderate-risk) and Group B (high-risk) are recommended as follows:
 - Goals for Group A: Fewer than 20% of low-risk Plan members (as measured by HRA at baseline) will be classified as “moderate-risk” and fewer than 5% of baseline “low-risk” employees will be classified as “high-risk” at the end of year 02 and every year thereafter. Fewer than 10% of baseline “moderate-risk” employees will be classified as “high-risk” at the end of year 02 and every year thereafter.
 - Goals for Group B: The overall proportion of baseline “high-risk” employees will be reduced by 5% by the end of year 02 and every year thereafter.
 - The longer-range goal for the program in general: 70% of Plan members will be classified as either low- or moderate-risk based on HRA aggregated results.
- 7 Post-HRA risk-reduction intervention options are an essential element of a comprehensive worksite wellness initiative where HRA completion serves as a personal benchmark and baseline measure of workforce health status. A variety of arrangements for ensuring access to such options are under development by the State Health Plan. It is recommended that every Plan member be offered options for HRA follow-up through risk-reduction interventions that minimally include: smoking cessation counseling and medical assistance, diet and weight management counseling, physical activity interventions, and stress reduction counseling and other related interventions.
- 8 Prior to the program’s initiation, the State Health Plan is encouraged to develop a plan for program evaluation that will provide both process and summative information by which to assess the impact of the program in general, as well as subcomponents of the program whether operating under the aegis of the State Health Plan or other community-based agencies or vendors.
- 9 The State Health Plan is encouraged to continue to explore ways in which both populations (Group A and Group B) can be included in further elaborations of the *NC HealthSmart* initiative.

³ As an alternative, the State Health Plan could approach an existing IRB at one of the public universities, or within another agency of state government, to perform this function. In that way, a group experienced in the review of subject/participant rights and interests will be involved.

preventive care

Disease prevention

health promotion

Final Report **Evidence-Based Approaches** to Worksite Wellness and Employee Health Promotion & Disease Prevention

Prepared for the
**North Carolina Teachers'
and State Employees'
Comprehensive Major Medical Plan**

By **North Carolina Institute
of Medicine (NC IOM)**

and **Center for Health Improvement (CHI)**
Sacramento, California

April 2005

worksite wellness

In June of 2004, the North Carolina Institute of Medicine⁴ undertook to provide the North Carolina Teachers' and State Employees' Comprehensive Major Medical Plan (the State Health Plan) with advice and access to technical experts who might be helpful in making decisions regarding the investment of resources in a new health promotion and worksite wellness initiative for the benefit of State Health Plan members in a variety of settings. Specifically, the NC Institute of Medicine contracted with the State Health Plan to do the following:

- 1 Assemble two national panels of experts to come to North Carolina for the purpose of educating the State Teacher and Employee Wellness Advisory Committee (STEWAC) members about evidence-based worksite wellness interventions. The first of these panels was asked to describe *programs and interventions* for which evaluative data have been collected sufficient to demonstrate positive and sustainable health outcomes. The second of these panels was asked to describe programs that have been shown to be effective in gaining the widespread *participation and acceptance* of health promotion and disease prevention interventions among employee, dependent, and retiree populations.
- 2 Following these two panel presentations, STEWAC members were convened to weigh the information presented by the two expert panels and to recommend a strategy considered feasible for implementation by the State Health Plan (SHP).
- 3 Summarize the work of the three meetings as a framework to guide subsequent investment of resources by the SHP in targeted or more generally available health promotion and disease prevention initiatives for State Health Plan members.

⁴ The NC Institute of Medicine is an independent, not-for-profit agency created by the North Carolina General Assembly (in 1983) to provide advice to agencies of state government concerning some of the state's most complex health and healthcare issues.

North Carolina Teachers' and State Employees' Comprehensive Major Medical Plan

The NC Institute of Medicine (NC IOM) engaged the Center for Health Improvement (CHI) in Sacramento, California,⁵ as a partner in this effort. CHI is a national health policy organization actively engaged in a broad spectrum of efforts in the field of health promotion and disease prevention, including efforts in regard to worksite wellness. The President and CEO of the Center for Health Improvement is Patricia E. Powers, the former CEO of the Pacific Business Group on Health and an individual with vast experience in the evaluation of worksite wellness corporate investment by a number of companies of varying workforce sizes in the Bay Area of California.

This report is intended to meet the third of these objectives. It will summarize the various messages gleaned from the presentations of the two panels of experts, as well as the deliberations of STEWAC members at the third meeting, and offer a number of specific recommendations for how the State Health Plan might use these findings and observations in shaping its planned initiative in this area.

Background

Over the past couple of years, evidence has been accumulating to demonstrate an alarming trend toward a greater prevalence of chronic health conditions among beneficiaries of the State Health Plan. At the same time, the rates of expenditure for personal healthcare services among Plan beneficiaries have been rising at a rapid pace. Jack Walker, PhD, Executive Administrator of the State Health Plan, offered substantial evidence of these trends at both the *Investing in Teachers and State Employees Health: First Leadership Summit* in June 2004, and again at the first of the NC IOM/CHI expert panel meetings.

The State Health Plan currently offers a modified indemnity healthcare insurance plan to over 560,000 teachers and state employees, their dependents, and retirees. The average age of the covered population is 47 years. The Plan spent more than \$1.6 billion in claims payments in the last year for which figures are available.

If one defines a "healthy Plan member" as someone who is currently not diagnosed or being treated for a chronic illness (including diabetes, asthma, hypertension, or high cholesterol), the proportion of Plan members in "apparently good health" has been steadily declining, from 64% in 2000, to 58% in 2003, with projections of still further declines to approximately 51% in 2008. These trends are even more dramatic for Plan members who are retirees in the pre-Medicare coverage group (i.e., those less than 65 years of age), only 45% of whom were in "apparently good health" in 2000, and only 32% in 2003. There are now more than 164,000 retirees covered by the Plan who have at least one chronic condition. In other words, the percentage of "healthy" Plan members has been decreasing by more than 1% per year.

Whereas the medical care costs for Plan members who *do not have* a chronic condition average about \$800 annually, comparable costs for those *with* such conditions average \$7,400 per year, a figure more than 10 times higher. The 43% of State Health Plan members who are defined as "not healthy" (because of having one or more chronic conditions) account for 83% of total healthcare dollars spent by the State Health Plan on an annual basis. It is estimated that 5,627 additional members and dependents were identified with one or more chronic conditions between 2002 and 2003 (each of whom had at least \$2,500 in paid claims in this one-year period), and these additional newly-identified and "not healthy" plan members were responsible for an increase in paid claims of \$95.4 million over this one-year period. By any definition, the incidence and/or prevalence of chronic conditions associated with the increasing expenses for medical care among Plan members, retirees, and their dependents is cause for alarm.

It was out of a concern for these trends, and the consequences for the financial stability of the State Health Plan, that the Executive Administrator and the Plan Board of Trustees undertook to address the problems associated with the rate of increase in chronic health conditions among those insured by the Plan. Not only are such efforts essential to the security and stability of the State Health Plan, but they are essential to the long-run stability and productivity of those employees who work in public service for the benefit of all North Carolinians. The health of our State Health Plan members is endemic to the health and vitality of our state to the broadest possible extent.

⁵ The Center for Health Improvement is a national health policy organization with a primary focus on health promotion and disease prevention.

health smart initiative **The NC HealthSmart Initiative**

The State Health Plan has embarked on a multi-component strategy for addressing these disease and cost-of-care patterns now evident among Plan members. The State Health Plan's new vision and mission is to provide its members the tools and education through multiple channels (including the healthcare provider, community, the families of Plan members, the Health Plan itself, and the worksites where Plan members are employed) to empower them to make smart health and healthcare decisions. The State Health Plan envisions worksite wellness and health promotion as a crucial component supporting individual and environmental behavior change that will reduce healthcare costs to the member and the Plan, improve health, and increase productivity. The State Health Plan alone cannot guide and implement worksite wellness and health promotion programs; worksite leadership has to invest in the effort to improve the health of employees. Some components of the *NC HealthSmart* initiative have already begun, but others are still in the design stage. Basically, the *NC HealthSmart* Program strategy includes six broad components:

- 1 Targeted **disease management** interventions for Plan members with specific chronic disease diagnoses. At present, disease management programs are operational statewide for members with asthma, coronary artery disease, end-stage renal disease and chronic kidney disease, and diabetes. Additional future interventions are to include members with chronic obstructive lung disease, cancer, hypertension, depression, and migraines.
- 2 A set of **health promotion** interventions to be available to all Plan members (e.g., newsletters, Web sites, a 1-800 number nurse call line, health fairs, and walk-a-thon events).
- 3 **Health tracking** initiatives to include health risk assessments (HRAs), clinical screening, and other data-gathering activities, which will both help motivate employees to seek additional health promotional information and assistance as well as provide epidemiological data by which to monitor the collective state of employee health and the impact of the NC HealthSmart program.
- 4 Contractual relationships with a number of local health service provider organizations capable of offering one or more **risk-reduction programs** in a local area for the benefit of Plan members. For example, Rex Wellness Centers in the Wake County area are available to actively working, eligible Plan members, and WakeMed provides wellness programs and facilities to employees in the NC Department of Revenue. Other programs, including "Healthy Living in Cumberland County," are underway or in negotiation in other communities throughout the state.
- 5 **Worksite wellness programs** organized at specific places of employment for Plan members with the objective of health risk factor reduction. Statewide leadership of this effort will be the responsibility of the State Health Plan with guidance from the STEWAC membership. Legislative, administrative, and financial support will be provided for worksite policy and programmatic changes that reinforce individual and organizational health and create a more productive workforce. To support this effort, it is essential that state agencies and school systems organize site-based wellness advisory committees to meet the needs of employees by: promoting NC HealthSmart initiatives; planning, implementing, and monitoring employee involvement in local lifestyle modification activities; changing environmental policies and worksite cultures to ones that support healthy behaviors; and promoting participation in biometric health screenings and completion of HRAs. Worksite wellness initiatives are expected to be organized in community colleges, state universities, the public schools, and various agencies of state government. The specific structure, content, and level of activity in these local on-site wellness initiatives may vary, though certain minimal content expectations will be advanced by the State Health Plan and the STEWAC. Although the State Health Plan is the most convenient and natural vehicle (in partnership with others) for providing leadership at the workplace, only employees who are Plan members may technically participate and benefit from these programs. This is a concern for consideration as it becomes more and more apparent that wellness at work is essential to changing behavior, and, ultimately, undesirable healthcare financial trends.
- 6 The State Health Plan also intends to better coordinate **primary healthcare and pharmacy** services for Plan members, especially those in remote service areas with fewer healthcare providers and in need of chronic care management. Special effort will be made to incentivize the provision of clinical preventive services and effective pharmaceutical advice to State Health Plan members, either in existing primary care clinics and pharmacies or in new clinics and pharmacies (such as in Canton, NC, which became operational on February 1, 2005) to be operated by the State Health Plan.

expert panels
The NC Institute of Medicine/Center for Health Improvement Expert Panels

As the *NC HealthSmart* initiative was taking shape and as the general outline and scope of these activities were being described, the NC Institute of Medicine approached the State Health Plan about lending its support to these efforts. The NC Institute of Medicine was created by the NC General Assembly in 1983 as a means of providing non-political advice and expertise to the Governor, the General Assembly, and to agencies of state government on issues related to health and healthcare affecting all North Carolinians. The Governor appoints 100 active members to the Institute for five-year terms. The Institute goes about its work primarily through the mechanism of multi-disciplinary task forces whose members bring a variety of skills, perspectives, and experiences to bear on a set of issues and problems. One-third of most task forces are members of the Institute, and the other two-thirds are drawn from the pool of persons statewide with special expertise related to a given topic. Most task forces meet for full-day meetings once each month and meet for as many months as it takes to render a full and complete analysis and set of recommendations.

In the case of the State Health Plan's initiative in worksite wellness (component Number 5 of the *NC HealthSmart* initiative described above), the State Health Plan had already appointed and begun to meet regularly with members of the State Teachers and Employees Wellness Advisory Committee (STEWAC). Hence, it was decided that this existing group would serve well as the task force for undertaking the kind of analytical task envisioned as an important element of the planning process.

The three STEWAC meetings described at the outset of this report were proposed as a framework for undertaking the review of existing experience and knowledge in the broad field of worksite wellness program development.

In the first of the three meetings, four experts were invited as speakers:

Ron Z. Goetzel, PhD, Vice President, Consulting and Applied Research, The Medstat Group, and Director, Cornell University Institute for Health and Productivity Studies.

At both Cornell and Medstat, Dr. Goetzel is responsible for leading innovative research projects and consulting services for healthcare purchaser, managed care, government, and pharmaceutical clients interested in conducting cutting edge research focused on the relationship between health and well-being and work-related productivity. He has published extensively on health and productivity management, return-on-investment (ROI) analysis, health promotion program evaluation, and outcomes research. His work has focused on large-scale evaluations of health promotion, disease prevention, demand, and disease management programs.

Joyce M. Young, MD, MPH, Regional Wellbeing Director, IBM Global Wellbeing Services and Health Benefits.

Dr. Young is responsible for IBM's U.S. Wellness Programs for 140,000 employees, as well as the leader of IBM's program for Improving Patient Safety in Health Care. She is board-certified in Public Health and General Preventive Medicine and is a fellow of the American College of Preventive Medicine and the American College of Occupational and Environmental Medicine.

William L. Beery, MPH, Vice President for Programs, Group Health of Cooperative Community Foundation.

Mr. Beery has served as Vice President of Programs for the Group Health Cooperative Community Foundation since 1997. In this position he oversees the Foundation's extensive program, grant making, and evaluation/research activities. Previously, he directed the Disease Prevention and Community Services Group, as well as the Center for Health Promotion at the Group Health Cooperative of Puget Sound. His evaluation and research interests are in community-based health promotion and prevention programs for low-income/high-risk populations. He is an affiliate professor at the University of Washington School of Public Health and Community Medicine.

Allen Feezor, Chief Planning Officer, University Health Systems of Eastern North Carolina (former Executive Officer for Health Benefit Services, CalPERS, the California Public Employees' Retirement System).

Before taking his position in California, Mr. Feezor was Vice President for Planning and Marketing and Managed Care for University Health Systems of Eastern Carolina. He is the former Chief Deputy Commissioner for the NC Department of Insurance. He has served as the head of the NC Teachers, State Employees' and Retirees Health Plan. He has extensive experience in arranging for worksite wellness activities and programs for public sector employees in North Carolina and California as well as extensive experience in the regulation and management of healthcare systems and services.

In the second meeting, STEWAC members heard from four additional speakers:

Eric Finkelstein, PhD, Health Economist, Division for Health Services and Social Policy Research, Research Triangle Institute, Research Triangle Park, NC.

Dr. Finkelstein conducts research at RTI on the economic causes and consequences of health behaviors, with a primary emphasis on behaviors related to obesity. At RTI he leads several projects concerning the causes and consequences of obesity and evaluates several obesity prevention programs for the Centers for Disease Control and Prevention (CDC) and other public and private sector agencies.

Dee W. Edington, PhD, Director, Health Management Research Center, Professor and Research Scientist, Division of Kinesiology, School of Public Health, University of Michigan, Ann Arbor.

Dr. Edington is one of the best known scientists in the field of health promotion and disease prevention. His research focuses on the precursors of disease and vitality and has given much attention to the relationship between healthy lifestyles, vitality, and quality of life as they benefit both individuals and organizations. He is especially well known for his work on how individual health promotion behaviors, worksite wellness activities, and programs within managed care organizations impact healthcare cost containment, productivity, and human resource development.

Larry S. Chapman, MPH, Chairman, Summex Corporation, Seattle, Washington.

Mr. Chapman has published 13 books and over 170 professional articles in the field of employee wellness, demand management, and health cost management. He has managed health promotion and health cost management programs in a variety of worksite settings and has been involved in the design and/or evaluation of more than 430 health promotion and disease prevention programs over the past 20 years. He is one of the best known experts on the use of incentives to assure high levels of individual participation in health promotion and disease prevention programs offered at the worksite.

Ray E. Fabius, MD, Global Medical Director, General Electric Corporation, Fairfield, Connecticut.

Dr. Fabius is the former medical director with Aetna, U.S. Healthcare, U.S. Healthcare, and CIGNA Health Plans. He has been extensively involved in efforts to assure the quality of Internet-based health information through his role as chief medical officer of IntelliHealth, a wholly owned subsidiary of Aetna which won national recognition as “the best health site on the Internet.” At GE, he has been responsible for the design and implementation of the increasingly well-known “Zero-5-10-25” Program of health promotion among employees of that large international corporation.

In the third of these sessions, emphasis shifted to a synthesis of lessons learned from worksite wellness efforts elsewhere and a consideration of a proposed set of recommendations for how the overall wellness component within the overall *NC HealthSmart* initiative should/could take shape.

Lessons to be Learned
Lessons to Be Learned from Previous Experience in Worksite Wellness Intervention Programs

With regard to specific health promotion *interventions* at the worksite, experience gained in other workforce populations leads to the following observations:

- 1 *Health behavioral change is difficult to influence in others and even more difficult to achieve and maintain as an individual.* Not only are the personal choices to be made often counteracted by one’s everyday social and cultural environment, but the opportunities for change are not always present or affordable. Readiness to change is a first, but often overlooked, step which must be matched with realistic options for behavioral change.
- 2 *A large number of the diseases and disorders from which typical workforce populations (and NC teachers and state employees) suffer are preventable.* Many have identifiable and modifiable risk factors. For example, heart disease and some forms of cancer have been shown to be related to diet, physical activity and tobacco use. Each of these factors involves personal lifestyle choices and environmental influences which, if counteracted through systematic interventions, can have a positive impact on health status.

North Carolina Teachers' and State Employees' Comprehensive Major Medical Plan

- 3 *Poor health costs money.* Persons at high risk with regard to multiple health indicators have healthcare expenditures 70% greater than those not at high risk with regard to any health indicators. Persons who work in highly stressful job situations, who may also be depressed, who also use tobacco, who perhaps are overweight and engaging in only limited physical activity on a routine basis, are persons likely to experience frequent and often serious health consequences that tend to be associated with higher healthcare costs.
- 4 *In the design of worksite health promotion/wellness initiatives, it is just as important to reduce the number of people who move from low/moderate-risk status to high-risk as it is to promote programs designed to target the current high-risk behaviors of persons currently in the high-use and high-cost categories.* Despite the fact that the fastest economic returns from program investments may be realized from getting persons in the high-risk category to reduce their risk status, Dee Edington pointed out that a program does not want to lose the interest of low-risk people by targeting activities exclusively to high-risk groups. There is some evidence that programs targeting only high-risk employees have not been shown to be successful. It is important to keep in mind that a "high-risk" person may be presently "healthy," if one uses as a definition the presence or absence of a diagnosis of chronic disease as the criterion by which health status is determined.

Having programs target people at lower risk as well as those with higher risks serves multiple purposes. First, lower-risk programs can serve as "champions" in a larger health promotion effort, encouraging others to participate. This is particularly important because experience has shown that it is more difficult to reach and maintain the involvement of people at higher risk through these types of programs.

Second, by opening up programs to all participants (including those at both lower and higher risk), it removes any potential stigma attached to program participation. Third, the overall risk profile of a workforce is the critical indicator. For example, Citibank was able to change its overall risk profile by reducing the average risk category for many of its employees and realized a healthcare saving of approximately \$147 per employee per month.

- 5 *Worksite health promotion/disease prevention programs vary in their comprehensiveness, intensity, and duration.* The range of targeted health risk factors has a lot to do with a program's overall cost, as well as the logistical complexity of implementation. Most organizers of worksite health promotion programs argue that something should be available for every employee, regardless of risk status, although the most dramatic cost savings are achievable through program elements targeted to those at highest risk. In order to extend the benefits of worksite health promotion programs to all employees, some companies have invested in interventions that depend on electronic access (e.g., "virtual fitness centers," etc.) which can offer personalized or tailored information and personal health choice coaching. Individualized coaching for low/moderate-risk employees can be unaffordable because so many employees are in these categories, but these employees can benefit greatly from continued reinforcement of positive health behaviors. Efforts to keep low/moderate-risk individuals from moving into the higher-risk category have long-run economic benefit.
- 6 *It is important that worksite health promotion programs have as a foundation a defined "logic model" through which it is possible to describe the purpose of each element of an overall program.* One such model involves the following hypothetical phases of personal behavioral modification and incorporation of a wellness perspective into one's general lifestyle:
 - a awareness
 - b participation
 - c increased knowledge
 - d improved attitudes (and readiness to change)
 - e behavioral change
 - f risk reduction
 - g reduced healthcare utilization

Such a logic model for a worksite health promotion program can drive expectations, more clearly define program goals, make data and participant feedback more useful, and lead to program improvement.

- 7 *It is now widely accepted that an HRA instrument of some form is an essential entry point to a well-organized worksite wellness program.* In order for some HRA calculations to take place, it is important to couple conventional questionnaire completion re. lifestyle habits with a limited array of biomedical measurements (e.g., height, weight, blood pressure, screening for tobacco use, blood cholesterol, etc.). Calculations such as the Body Mass Index (BMI) can only be done once height and weight are measured. Such instruments (including lifestyle questionnaires and simple biomedical measures) offer an opportunity for individualized data collection and focused attention to critical aspects of one's personal approach to health and wellness issues, as well as a convenient and non-threatening way of calling attention to those health risk factors of greatest implication for long-term personal health. There are a multitude of options available commercially, and these vary a great deal in terms of their technical complexity, ease and cost of administration, and interpretability.

Despite the broad consensus of leaders in the field of worksite health promotion that an HRA is an essential starting point for such programs, there are a number of issues and concerns that should be taken into account in any effort to incorporate an HRA in a worksite wellness program. Some of these concerns are:

- a *Incentives for completion/participation.* Experience with incentives for HRA completion varies considerably, from the use of simple personal appeals to material inducement to direct payment of cash. Citibank, for example, found that an incentive for HRA completion of \$10 yielded a 54% participation rate. Johnson & Johnson (J&J) took a more aggressive approach and raised employee health insurance premiums by \$300, then excused the \$300 additional premium if employees completed an HRA and participated in one of several available risk-factor interventions. This approach yielded a participation rate of approximately 90% of J&J employees in the HRA. Questions any health promotion initiative should consider with regard to HRA use are: when to introduce the HRA, what kind of HRA instrument to use, and how much (or what type) of an incentive to offer. Larry Chapman, one of the second session consultants, shared his experience which suggested that an incentive of at least \$150 was necessary to motivate a high level of HRA participation. Dee Edington, another second session consultant, expressed the view that a participation rate of less than 80% was not acceptable or worth the time and financial investment as a program element. Joyce Young, of IBM, shared her own company's concern over the potential negative impact of an HRA on employee readiness to address personal health issues in that these instruments can lead to depression over the seemingly impossible task of addressing serious health risk factors. IBM offered a \$150 rebate toward employee health insurance premiums for the voluntary completion of the HRA and for participation in minimal physical activity (i.e., the self-report of physical activity 20 minutes per day, 3 days per week, for 10-12 weeks). With this approach, IBM had an initial participation in its U.S. facilities of some 37,000 employees. Currently, participation rates are up to 77,000 out of 146,000 (53%) for HRA completion. Initially, 34,000 employees qualified for the \$150 insurance rebate; it is expected that this number will reach 55,000 in the current year.

One way of increasing participation in the completion of an HRA is to make it a prerequisite of participation in other health promotion or disease management components of the overall worksite wellness program.

Another approach, used in several companies and employee groups, is to mandate completion of an HRA in order to maintain enrollment in an employer-sponsored health insurance benefit program. One example is the program offered to employees of the City of Birmingham, Alabama between 1985 and 1990 during which an annual medical screen and HRA was required (resulting in a 98% HRA participation rate), followed by the offering of optional intervention programs for weight loss, stress management, smoking cessation, blood pressure control, cholesterol reduction, fitness testing and training, and back care. Over the five-year demonstration period, medical expenses for municipal employees dropped from a level that was \$400 above the state average for employed populations to a level that was \$922 below the state average.⁶

Another example of the use of mandated HRA participation comes from a demonstration project conducted by the North Carolina Teachers' and State Employees' Comprehensive Major Medical Plan in Cumberland County since 2003. In this multi-faceted program, Plan members were required to complete an HRA in order to be eligible for participation in health promotion and disease management components of the overall program. In this demonstration program it was clear that if post-HRA risk-factor reduction programs were offered, Plan

6 Stead BA, *Worksite health programs: a significant cost-cutting approach.* *Business Horizons*, Nov-Dec, 1994.

North Carolina Teachers’ and State Employees’ Comprehensive Major Medical Plan

members with these HRA-identified risk factors would participate. There is anecdotal evidence that individuals who took the HRA but did not participate in the risk-reduction intervention also were motivated by the HRA results alone to become involved in health improvement activities.

In summary, it is the opinion of our consultants that the most useful and effective incentive for voluntary HRA completion is a cash rebate tied to health insurance premiums or deductibles. Mandated participation does appear to produce the highest levels of HRA completion, although some would object to any effort to mandate participation in a health promotion or wellness program.

- b *Confidentiality.* Throughout the history of HRA use in worksite health promotion programs there has been a concern about the confidentiality of personal health data. This is especially true when the HRA instrument includes questions about the extent of personal health risk behaviors (viz., alcohol and tobacco, drug use, dietary behaviors, depression and stress). Fears that such information could end up in the hands of employers who might use such information in making employment (or career advancement) decisions have discouraged some current and prospective employees to resist participation (or complete honesty) in HRA completion.

Two suggestions have been offered for dealing with this important matter: First, it has been recommended that an HRA vendor be hired with explicit contractual obligations to maintain the personal confidentiality of HRA data, with the expectation that only aggregated data summaries (without personal identifiers) would be provided to the Health Plan or the employer organization (i.e., agency, university, school system, etc.). Smaller employer organizations should receive *only* statewide aggregate data to ensure confidentiality of its Plan members. In small workgroup situations, no data summaries would be provided except as part of broader aggregated summaries. There is a need to separate the employer and the vendor with regard to HRA administration, scoring and results dissemination. Second, it has been suggested that an Institutional Review Board (IRB), such as used to examine the consent forms and study designs of pharmaceutical and other medical research, of Plan members be appointed to examine the process through which the HRA vendor will facilitate the participation of Plan members and how the data will be analyzed and made available both to the individual HRA participants and, in summary form, to the State Health Plan. The IRB should determine that verifiable “firewalls” exist between the vendor and the employer with regard to the HRA process. The IRB could annually review the process used by the HRA vendor to reassure Plan members that these instruments are being used in the way in which they were intended.

- c *Health risk measures and criteria included in the HRA.* Many HRA instruments are extensive documents which address a wide range of health status measures and health risk criteria. Others focus on a few key indicators for which there are available risk factor modification options to be offered to employees. Likewise, there are both simple and complex scoring algorithms, each with special instructions for how the results should be interpreted and used. Dee Edington, in his second session presentation, described the HRA promulgated by the Health Management Research Center at the University of Michigan. That approach identified 13 health risk measures, with associated “high-risk” criteria.

Health Risk Measure	High-Risk Criteria
Alcohol	More than 14 drinks/week
Blood Pressure	Systolic >139 mmHg or Diastolic >89 mmHg
Body Weight	BMI >27.5
Cholesterol	Greater than 239 mg/dl
Existing medical problem	Heart, Cancer, Diabetes, Stroke
HDL	Less than 35 mg/dl
Illness days	>5 days last year
Life satisfaction	Partly or not satisfied
Perception of own health	Fair or poor
Physical activity	Less than one time/week
Safety belt usage	Less than 100% of time
Smoking	Current smoker
Stress	High

Scoring of Overall Risk Levels:	
Low Risk	0 to 2 high risks
Medium Risk	3 or 4 high risks
High Risk	5 or more high risks

It should be pointed out that some employers have reduced the number of health risk measures to six or eight indicators, even though there is no systematic evidence that any particular number is optimal. The rationale for using fewer indicators is based on both ease of completion, as well as the view that indicators should be ones for which there are available follow-up options (see below).

- d *Follow-up risk factor modification options.* It is important that the HRA not be defined as an “intervention” inasmuch as several years of data and experience with these instruments have consistently failed to show any real impact from simply completing an HRA by itself. Only when an HRA is followed by the opportunity for participants to take advantage of risk-reduction or behavior modification interventions (or health maintenance interventions in the case of persons at low-risk who need or would choose to have their good health practices further enhanced or reinforced) can measurable impact be found. Hence, HRA only makes sense as a component of a worksite health promotion program if it is embedded within a larger framework of behavioral change options keyed to personal data derived from the HRA.
- 8 *It is very important to have some form of ongoing program evaluation.* The expectation that both participation and end results will be monitored can keep a program focused on critical elements and provide useful incentives for worksite-based leaders to continue in their support of program goals. Evaluation should be done independently of program administration, but with the input at the design stage from a variety of stakeholders (viz., participants, program leadership, management). Evaluation can be an expensive, but useful, part of wellness program implementation. The key evaluation question for the State Health Plan is: “Did the intervention save money that otherwise would have been spent in paying for avoidable healthcare costs for plan members?” To address this question, a carefully designed and executed evaluation carried out under conventional circumstances among Plan members would be necessary, but could be operationalized on a more limited basis.
- 9 *There are some paradoxical observations from worksite wellness and health promotion programs as well.* For example, it may first appear that as co-pays, co-insurance and deductibles increase, employees would be motivated to learn more about health promotion and wellness in their own personal self-interest. But, as co-pays, co-insurance and deductibles increase, individuals may be far less willing to schedule and pay out-of-pocket for routine clinical preventive services, which should be an important element of any comprehensive approach to worksite wellness and health promotion as well. This is as yet an untested hypothesis, but entirely possible as an outcome.

observations

Observations Regarding the Incentives for Participation of Employees in Worksite Wellness Programs

Regardless of how elaborate and extensively publicized a health promotion/wellness program may be, an overarching concern of those responsible for such programs is the extent to which employees will voluntarily participate. Incentives for employee completion of an HRA have already been discussed at some length. These issues are equally important for other aspects of the program as well. From the presentations on this topic, the following observations emerged:

- 1 Solid evidence of the effect of particular types and amounts of incentives on worksite wellness program participation are rarely available in the published reports of such interventions. Almost all of these reports are anecdotal and not based on systematic data collection and analysis.
- 2 Though the types and amounts of incentives vary considerably, it is a widely held view among experts in the field that financial incentives are the most effective as the primary incentives. It is important when any type of incentive is used (especially for financial incentives) that the “pay values” for these incentives are made clear; a program participant should not be confused about what level of participation would yield an incentive payment. Although financial incentives (e.g., cash payments, credits toward health insurance deductibles, days/hours of time off) are thought to be most effective, they may be supplemented by secondary incentives (such as self-esteem, team competitions, tokens of accomplishment or participation). Larry Chapman offered a list of both “primary” and “secondary” incentives that might be considered, such as:

North Carolina Teachers' and State Employees' Comprehensive Major Medical Plan

3 Financial incentives are allowable under current HIPAA rules and regulations, but incentives cannot be targeted to people based on their personal health status. In the same way, HRAs are allowable so long as they are offered to all employees and no employee group is excluded from receiving the incentives for participation.

4 Participation rates are generally far too low in most worksite health promotion programs. Some of the experts addressing STEWAC members advanced the view that participation rates in the range of 10-30% were not worthwhile. It was their view that the workforce health benefit was likely to be negligible with this level of participation, and also not cost-effective. Others who addressed STEWAC members took the view that 30-40% participation rates, where the interventions were shown to be "effective," might be just as worthwhile, perhaps even more so, than a program with 80% participation where the intervention was far less effective. The point may be that interventions that are considered part of the *NC HealthSmart* initiative should be selected because they have been shown to be effective under carefully conducted evaluations, and then implemented as they were evaluated elsewhere.

5 A key consideration in the design of worksite health promotion programs, and their participation incentives, should be on keeping currently low/moderate-risk individuals from moving to the higher-risk category. Hence, incentives for participation should be equally meaningful to those in all risk categories. It is for this reason that HRA completion could be a contingency for participation in all other health promotion and disease management components of the overall worksite wellness program.

6 Four key factors (identified by Dr. Dee Edington) appear to be important in assuring the success of a worksite wellness (or, using Edington's term, "health management") program:

- a Driving the program from the *top* through leadership performance objectives and healthy work environment objectives. Managers and CEOs of corporate units (agencies or schools) should become involved in setting organizational objectives for worksite wellness initiatives and in leading the effort to change workplace environmental conditions to make them more conducive for and supportive of worksite wellness program objectives.
- b Driving the program from the *bottom* by allowing employees to self-monitor their own progress through an HRA. For example, individual employees may be encouraged to monitor their own HRA results and periodic measures of progress, to participate in intra-workgroup competitions and other promotional activities designed to encourage higher overall rates of employee participation in the worksite wellness program initiative.
- c Workplaces providing resources for maintaining low-risk status and taking advantage of risk-reduction opportunities in the local community.
- d Key indicators of health status and health behavioral patterns should be periodically measured and collectively summarized. The two key indicators recommended by Dr. Edington are: level of program participation (e.g., HRA completion and involvement in follow-up risk-reduction or health maintenance activities) and changes in the percentage of low-risk employees over time (as measured by HRA results).

One of the other consultants to this process, Eric Finkelstein, points out that a fifth consideration has to be "cost-benefit" or "return on investment" if it is the high costs of employee healthcare coverage that is driving the *NC HealthSmart* investment on the part of the State Health Plan.

Primary Rewards	Secondary Rewards
Ease of access	Acceptance or approval
Newness	Ability to contribute
Material goods	Creative outlet
Financial reward	Opportunity to be good exemplars
Avoid financial penalty	Meet personal challenge
Time reward	High visibility
Special work privileges	Avoiding personal discomfort
Group competition	Opportunity for humor
Gambling urge	Fun and lightness
Belonging	Feeling of self-mastery
Recognition	Opportunity to mix with managers

Source: Larry Chapman, Summex Corporation, 2004

Synthesizing the Perspectives of Technical Experts:

An Approach to the Design of a Worksite Wellness Intervention for NC State Health Plan Members

The State Health Plan will, over the coming few months, consider a number of policy options with regard to its investment in worksite wellness program components of the *NC HealthSmart* initiative. Although the State Health Plan in partnership with local state agency wellness coordinators will have primary responsibility for the promotion of employee participation in health tracking components of *NC HealthSmart* (e.g., HRA, clinical screenings, and risk-reduction interventions), and although demonstration programs have already begun in certain local communities and certain State Health Plan member groups (e.g., public schools, community colleges, the UNC System, Department of Justice, Department of Health and Human Services, Department of Revenue), the majority of the *NC HealthSmart* worksite wellness initiative will be standardized statewide. It is to these policy decisions regarding statewide standards for program implementation that these three sessions with STEWAC members have been oriented.

Three broad principles guide the recommendations emerging from this process through which decision options have been considered:

- 1 The overarching goals of the *NC HealthSmart* worksite wellness initiative should be to achieve “healthier” state employee and school workforces and to reduce the rate of increase of overall expenditures (costs) of healthcare services provided to these workforce populations insured by the State Health Plan.
- 2 All Plan members should be invited to participate. Although the largest impact of a health promotion program for Plan members can be obtained from a focus on those members at highest health risk (if it were possible to bring about such change), it is the recommendation of STEWAC members involved in this process that low- and moderate-risk employees should also be invited to participate and there should be explicit program components relevant to the needs and interests of these employees as well.
- 3 Participation in the worksite wellness initiative should be voluntary, with no financial or other penalty (or negative incentive) associated with lack of participation. However, positive incentives can and should be offered both for participation and, where possible, for the achievement of personal health promotion goals.

Efforts to keep employees who are presently at low health risk in the low-risk category should be a major goal of the program, but such efforts may not show the kind of short-term savings that would come from a “disease management” effort focused on those already diagnosed with a chronic disease. What this sort of emphasis will do is potentially provide a longer-term financial benefit as fewer persons move into the higher-risk and higher-cost categories of Plan members. This approach is truly an “investment,” but short-term cost-benefit analyses may not reveal these positive outcomes. The goal is not so much to “reduce costs” as it is to keep them from escalating.

With these three principles in mind, the following aspects of a proposed worksite wellness initiative have been addressed by STEWAC members and lead to the following recommendations:

Target Groups

It is recommended that Plan members be defined confidentially (using aggregate HRA results and other available claims data) in two categories:

Group A: Low- and Moderate-Risk

Group B: High-Risk

Anticipated Outcomes (Target Goals)

For all eligible Plan members, the HRA participation rate goal should be 80%. (Note: this is an ambitious goal and one that will be difficult to reach. Few worksite health promotion programs achieve this level of participation. Yet, having a goal that expresses the intent to have a majority of Plan members involved is an important aspect of the program’s intent and visibility within the target population.)

Goals for Group A: Fewer than 20% of low-risk Plan members (as measured by HRA at baseline) will be classified as “moderate risk” and fewer than 5% of baseline “low-risk” members will be classified as “high-risk” at the end

North Carolina Teachers' and State Employees' Comprehensive Major Medical Plan

of year 02 and every year thereafter. Fewer than 10% of baseline “moderate-risk” employees will be classified as “high-risk” at the end of year 02 and every year thereafter.⁷

Goals for Group B: The overall proportion of baseline “high-risk” employees will be reduced by 5% by the end of year 02 and every year thereafter.

The longer-range goal for the program in general: 70% of Plan members will be classified as either low- or moderate-risk based on HRA aggregated results.

Target Population Initial Program Contact

All Plan members will be offered an opportunity to complete a Health Risk Assessment (HRA), with a goal of a completion/participation rate of 80% or greater. Participation for Plan members should be voluntary with incentives such as described below or may be a prerequisite to enrollment in the Plan or access to health promotion program opportunities.

It has already been decided that the HRA instrument will be a uniform document arranged under contract by the State Health Plan with a private vendor. Prior to administration of the HRA, the State Health Plan is encouraged to arrange for an independent review by a group constituted much as an Institutional Review Board (IRB) consisting mainly of Plan members who will ascertain the appropriateness of the questions (or measures) included, the manner in which the HRA will be administered and the results tabulated, and the way in which information from an individual's HRA will be communicated to the individual employee and aggregated for program evaluation and monitoring purposes. A written affirmation of the committee's judgment about these aspects of the HRA process should be appended to the HRA as it will be distributed to Plan members. The committee (or one like it) should annually review the HRA process and its use by Plan members and, in aggregate form by the State Health Plan, and make a similar report of its findings. Further, the State Health Plan should create a communications strategy with their vendors and state employee worksites to ensure all Plan members receive ample education about *NC HealthSmart* and the HRA through a variety of communication channels. Outreach priority should be given to hard-to-reach member populations.

HRA Follow-up Options

Risk factor-related follow-up options should be available for all Plan members completing the HRA, but these may differ somewhat depending on the individual's risk status category determined through the HRA process.

Upon completion of the HRA, it is assumed that the HRA vendor will notify in a confidential manner each member completing this instrument with the results of their health risk assessment. Easy-to-understand narrative interpretation of results and the methods by which individuals have been identified by risk category (i.e., low-, moderate- or high-risk) should be included with the reported results. At this point, participants should be informed about available risk-factor interventions or sources of health maintenance support available either through the State Health Plan or one of its vendors. Participants should then be offered the option of becoming involved in one of these follow-up risk factor modifications or health maintenance activities.

Group A participants at “low-risk” should be offered reinforcement of their positive health behaviors and health status and encouraged to continue present levels and types of positive health activity. If the State Health Plan makes available the option of participating in one or more health promotion initiatives, such as physical activity options at local fitness centers, etc., these low-risk employees should also be invited to participate. This is especially true if participation is offered in any risk category without financial cost to the employee.

⁷ Note: At present we do not have risk category data for all active employee Plan Members or retirees covered by the Plan, but available data suggest that the number of State Health Plan members with no chronic disease-related expenses (and presumably with no chronic disease diagnoses, and therefore defined by the State Health Plan as apparently “healthy”) is going down by 2-5% per year, depending on which group of employees or pre-Medicare retirees are of interest. The risk category classifications derived from a conventional HRA are not equivalent to State Health Plan definitions of “healthy” and “not healthy” (based on the presence or absence of diagnosed chronic illness), but it may be presumed that changes in the presence of reportable “risk factors” (or precursors of disease) would be highly relevant to the epidemiological trends thus far documented by the State Health Plan among the Plan membership.

Group A participants at “moderate-risk” should be offered congratulations for their positive health behaviors, but also counseling regarding ways in which their existing moderate-risk factors may be addressed. Once again, if any Plan members in the immediate area are offered the option of participating in risk factor reduction or health maintenance activities at little or no cost, then these moderate-risk employees should be offered access to these programs as well.

Group B participants at “high-risk” should receive guidance in seeking behavioral change options in their own communities and opportunities for follow-up counseling for adherence encouragement. If the State Health Plan offers opportunities for risk factor intervention program participation at little or no cost, then these high-risk Plan members should benefit from this program option.

There is a problem of maintaining the confidentiality of HRA results if Plan members are asked to provide their HRA risk category results in order to verify the appropriateness of State Health Plan payment for intervention enrollment. This problem might be attenuated if no follow-up program components are identified specifically for the benefit of high-risk members and all are invited to participate regardless of risk status. There are substantial cost implications of this approach, but it offers the advantage of universal availability and the ability to maintain the confidentiality of HRA results.

Incentives for Participation

STEWAC members considered the matter of financial incentives for participation, both for completion of the HRA and for participation in post-HRA follow-up risk factor interventions. STEWAC members are aware of the difficulty of offering financial incentives for either of these types of participation in a situation where no state employee pays for his/her health insurance basic premium. However, it is recommended that the State Health Plan give serious consideration to the possibility of offsetting (or dismissing) at least some part of the deductible now required of state employees annually before State Health Plan benefits would apply. A modest deductible credit, however, may never come to the benefit of low-risk (“healthy”) employees who often do not meet their deductible in a given year.

As mentioned earlier, one non-financial incentive (at least for HRA completion) could be making completion of the HRA a contingency for participation in other *NC HealthSmart* program components or enrollment in the State Health Plan.

One other option discussed by STEWAC members would be to give “first dollar” coverage, irrespective of meeting one’s deductible threshold, for services authorized by the State Health Plan if one meets minimal HRA completion and health promotion program participation criteria.

It is recommended (without specifying a dollar amount) that three levels of financial incentives be considered for both Group A and Group B as follows:

- a \$XX deductible credit for completion of the HRA
- b \$XX deductible credit for completion of the annual monitoring QQ (which could be a second administration of the HRA)
- c \$XXX deductible credit for participation in health promotion program activities, either as health maintenance and reinforcement (for Group A, low-risk employees) or for risk factor modification activities (for Group A, moderate-risk and Group B employees).

Other incentives which might be considered include reduced co-pays, waiving of co-insurance, increasing the number of deductible-free preventive services that are covered (e.g., nutrition counseling for overweight members or for tobacco use cessation counseling).

Interventions for Risk Factor Reduction

Risk factor interventions should be made available to Plan members statewide. It is the intention of the State Health Plan to provide these through the services of a contract “care management company,” and others will be identified either locally through collaborating arrangements with healthcare provider organizations (e.g., hospitals, public health departments, or clinics) or worksites. While it is not possible at this time for the State Health Plan to specify which types of interventions will be offered to Plan members locally, it is the intention of the Plan that all members statewide will have access to HRAs, 1-800-nurse call lines, Internet resources, health education and

North Carolina Teachers' and State Employees' Comprehensive Major Medical Plan

promotion activities, and, depending, on health risk status, members may also receive intensive health coaching, structured disease and case management programs, and in-person interventions. The Plan proposes that members will be stratified into needed services by analysis of confidential HRA and claims data by the contract care management company. Members who complete an HRA will be provided with the opportunity to access high quality and risk-relevant services and materials. Risk factor interventions will be extensive and varied, however, the bulk of these will focus on the four lifestyle behaviors that have the greatest potential impact on future health:

- smoking cessation;
- diet and weight management
- physical activity; and
- stress reduction.

Local variations of health promotion intervention programs for Plan members could involve multiple components, with each of several components offered to all employees in the manner of the General Electric 0-5-10-25 program. Under such a program, individual employees would be encouraged to achieve certain health promotion goals in several categories, with or without formal interventions. The GE program gives emphasis to the notions of “0 tobacco use, 5 fruits and vegetables per day, 10,000 steps per day, and a BMI of 25 or less.” A program of this kind, although organized centrally, could depend on individual employee adherence and motivation, but capitalize on group competitions and worksite-based incentives and efforts to facilitate the accomplishment of these personal health promotion goals.

STEWAC members pointed out that it is possible that *participants* in risk-reduction interventions could be seen as having been given an unfair advantage in terms of State Health Plan benefits by those who were classified by HRA results as having low/moderate levels of health risk and therefore ineligible to participate in these programs. Hence, it is useful to view the proposed approach as essentially a two-step incentive program, one step for completion of the HRA and another for risk-factor intervention participation, which would tend to offset the appearance of differential advantage from the program. Another way of achieving balance between low/moderate and high-risk participants would be to offer opportunities for low/moderate risk members to participate in “health maintenance” activities after completion of the HRA.

Incentives for *Outcomes Achievement*

Although some level of incentive is usually considered essential for encouraging participation in health promotion programs, it is less common for incentives to be associated with the achievement of specific health outcomes. Yet, the ultimate goal should be to change health risk behaviors (and, consequently, health outcomes), not just to achieve certain program participation levels. Providing incentives for participation is easier to measure and to implement, but will not necessarily achieve the greater goal of changing the health risk profile of Plan members.

STEWAC members offered two suggestions to the State Health Plan with regard to outcome incentives: First, Plan members who are at baseline classified in the low- or moderate-risk category (Group A) could be considered for a financial reward (or deductible credit) if they exhibit no weight gain (or no risk category change elevation) and if they maintain a pattern of no tobacco use.⁸

Second, Plan members in Group B (high-risk) at baseline present a number of more complex issues related to the offering of incentives for risk-related outcomes. The morbidly obese, for example, pose a problem in that persons in this situation who *do not gain weight* may merit some form of reward or recognition. Moving high-risk individuals to the moderate-risk category may be too high an expectation and should receive further policy (and perhaps medical) consideration. Persons in the high-risk category who, in fact, do move to a lower category of risk should be offered a financial reward. Persons in the high-risk category could achieve this goal by addressing their risk profile in only one or two dimensions, e.g., smoking behavior, and still remain at relatively high-risk on other dimensions, e.g., weight.⁹

8 Although smoking status can be verified through biochemical markers, it is more likely that smoking status will be measured (at least initially) by self-report.

9 It should be acknowledged that weight loss may not always be a positive health indicator in the case of persons who are “underweight” for any reason. Hence, some modification of these criteria to allow for individual differences should be allowed.

Evaluation

Program evaluation is considered an essential component of the *NC HealthSmart* initiative. Two kinds of evaluative information are seen as useful: (1) Data from local school buildings and districts and from individual state agencies reflecting policy changes that have taken place to facilitate or encourage health-oriented and health-promotion behavior on the part of teachers and state employees. New York State has recently implemented such an approach and the instrument¹⁰ for measuring state agency policy changes could be imported with some modification for use in North Carolina for this purpose. (2) Individual-level measures of HRA-derived health risk status, organized by state agency/school district and by baseline risk group (A or B) would be a very valuable way of displaying the results and trends among Plan members in relation to key health behavioral indicators. For this latter purpose, a “data warehouse” should be established by the vendor of HRA services and the data elements of periodic/yearly reports should be made part of the vendor’s contract.

It is strongly urged that the State Health Plan, and not the HRA or risk factor intervention vendor, engage an independent (outside) evaluator and ask that this organization (with input from the State Health Plan and STEWAC members) establish measurable criteria for evaluation of all program components.

Extending the Benefits of the Wellness Program to Retirees and Dependents Covered by The Plan

Throughout the three sessions conducted by the NC Institute of Medicine and the Center for Health Improvement for the information of STEWAC members, the focus of attention was on wellness and health promotion programming for the benefit of active employees. Yet, at the outset of these discussions, the Executive Administrator of the State Health Plan asked that the situation pertaining to dependents and retirees also be considered. Time in these three meetings did not allow for a detailed discussion of how these same considerations would pertain to dependents and retirees, but all considered these issues important. Staff of the State Health Plan advised that STEWAC members’ time in these meetings not be devoted to extensive discussion of dependents and retirees because the near-term activities in building out the various components of the *NC HealthSmart* program were not intended to be focused on these populations.

There are many ways in which the activities within the various components of *NC HealthSmart* could have secondary impact among dependents, and possibly among retirees as well. Moreover, because dependent health insurance coverage is paid for by employees, and not covered by the State Health Plan, there are avenues through which the incentives for participation by dependents could be influenced in ways that would not be the case with employees. But, the overarching considerations at the moment have more to do with the fact that the logistical, administrative, policy and financial considerations associated with the launch of the many separate components of *NC HealthSmart* in the coming year for Health Plan members precludes a major focus on dependents and retirees at the present time. The State Health Plan is encouraged to continue to explore ways in which both populations can be included in further elaborations of the *NC HealthSmart* initiative.

Summary

It is the recommendation of the North Carolina Institute of Medicine, in partnership with the Center for Health Improvement (Sacramento), that the North Carolina Teachers’ and State Employees’ Comprehensive Major Medical Plan, as part of its *NC HealthSmart* Program, develop an initiative to promote worksite wellness activities for the benefit of Plan members that will have the following characteristics:

- 1 The *NC HealthSmart* worksite wellness initiative should be open to all Plan members, not just those at highest health risk.
- 2 In its contract with a proposed “care management company,” the State Health Plan should include a provision for: the vendor to administer a Health Risk Assessment (HRA) instrument that meets current industry standards of

¹⁰ New York State Department of Health. *Healthy Heart Program. Heart Check: Assessing Worksite Support for a Heart Healthy Lifestyle, Version 4.1.* Albany, New York.

North Carolina Teachers' and State Employees' Comprehensive Major Medical Plan

coverage of appropriate risk factors, the vendor to arrange for the confidential reporting of risk-related information to Plan members who complete the HRA, and the vendor to provide the State Health Plan with aggregated summary information on the risk profiles of Plan members completing the HRA.

- 3 The State Health Plan should have the responsibility through its vendors to ensure that ALL members of the Plan receive ample education on the benefit of health behavior changes and an understanding of how access to *NC HealthSmart* programs can be achieved. Additional resources and personnel may be needed to encourage the participation of hard-to-reach workforce populations.
- 4 Prior to the invitation to Plan members to participate in the HRA process, the State Health Plan is encouraged to create a committee of Plan members (and others with relevant knowledge and expertise) to act as an Institutional Review Board (IRB).¹¹ The IRB should review the content of the proposed HRA, the process through which it will be disseminated to Plan members, the procedures to be used in assuring the confidentiality of personal information, and the way in which personal information will be used to channel Plan members into various risk-reduction interventions. It is recommended that the observations or conclusions of the IRB be made an integral part of the HRA (perhaps summarized as part of the consent form to accompany the HRA) as it is disseminated to Plan members and that the IRB annually update its observations and issue assurances to Plan members about the process and use of these data.
- 5 The State Health Plan is encouraged to develop procedures for offering meaningful (preferably financial) incentives for both *HRA completion* and for *post-HRA participation* in risk-reduction interventions. HRA completion may be incentivized by making it a contingency for other health promotion and disease management program participation. These incentives should be equally applicable to Plan members in all health risk categories. In addition, the State Health Plan should give serious consideration to offering similar incentives for the achievement of HRA-related health risk factor reduction or health maintenance goals. The latter, even though more complex, is seen as the ultimate criterion of program success, both for individual participants and for the State Health Plan itself. One option recommended by STEWAC members is the offering of “first-dollar” coverage up to a certain amount for services authorized by the State Health Plan for those employees meeting HRA completion and health promotion program participation criteria. Other incentives that might be considered include reduced co-pays, waiving of co-insurance, or increasing deductible-free preventive services.
- 6 The State Health Plan should establish program participation and outcome goals for the worksite wellness component of *NC HealthSmart*.
 - It is recommended that 80% of all Plan members should participate in HRA completion. Outcome goals for Group A (low- and moderate-risk) and Group B (high-risk) are recommended as follows:
 - Goals for Group A: Fewer than 20% of low-risk Plan members (as measured by HRA at baseline) will be classified as “moderate-risk” and fewer than 5% of baseline “low-risk” employees will be classified as “high-risk” at the end of year 02 and every year thereafter. Fewer than 10% of baseline “moderate-risk” employees will be classified as “high-risk” at the end of year 02 and every year thereafter.
 - Goals for Group B: The overall proportion of baseline “high-risk” employees will be reduced by 5% by the end of year 02 and every year thereafter.
 - The longer-range goal for the program in general: 70% of teachers and Plan members will be classified as either low- or moderate-risk based on HRA aggregated results.
- 7 Post-HRA risk-reduction intervention options are an essential element of a comprehensive worksite wellness initiative where HRA completion serves as a personal benchmark and baseline measure of workforce health status. A variety of arrangements for ensuring access to such options are under development by the State Health Plan. It is recommended that every Plan member be offered options for HRA follow-up through risk-reduction interventions that minimally include: smoking cessation counseling and medical assistance, diet and weight management counseling, physical activity interventions, and stress reduction counseling and other related interventions.

¹¹ As an alternative, the State Health Plan could approach an existing IRB at one of the public universities, or within another agency of state government, to perform this function. In that way, a group experienced in the review of subject/participant rights and interests will be involved.

Evidence-Based Approaches to Worksite Wellness and Employee Health Promotion & Disease Prevention

- 8 Prior to the program's initiation, the State Health Plan is encouraged to develop a plan for program evaluation that will provide both process and summative information by which to assess the impact of the program in general, as well as subcomponents of the program whether operating under the aegis of the State Health Plan or other community-based agencies or vendors.
- 9 The State Health Plan is encouraged to continue to explore ways in which both populations (Group A and Group B) can be included in further elaborations of the *NC HealthSmart* initiative.

North Carolina Teachers' and State Employees' Comprehensive Major Medical Plan