



HealthPartners[®] Institute

How Well Do Healthy Workplace Programs Work?—The Evidence

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GLOBAL Summit for Healthy Workplaces

Melbourne, Australia

October 31, 2019



Health Plan

More than 1.8 million members

Care System

More than 1.2 million medical & dental patients

Care Group

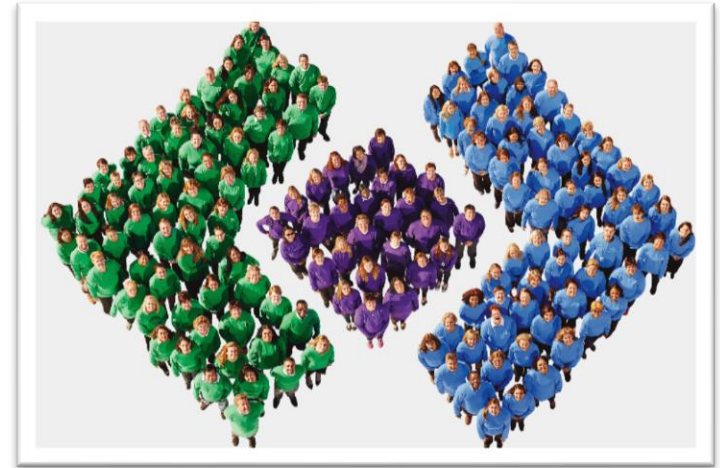
55+ Medical Clinics
1,800 physicians
900 clinicians
55 specialties

Dental Group

25 Dental Clinics
77 dentists

8 Hospitals

Twin Cities
Western Wisconsin



Research & Education

The HealthPartners Institute conducts hundreds of research studies annually while providing education and training for medical students, clinicians and patients.

Agenda

- How well do Healthy Workplace programs work?
- What does effectiveness depend on?
 - A look at the evidence
 - Systematic reviews
 - Randomized trials
 - Quasi-experimental studies
 - Case studies in business
- Best practice design principles
- Take-away's

How well do Healthy Workplace programs work?

- “***How well*** do healthy workplace programs work?” is a different question than “***do*** healthy workplace programs work?”

Question 1: “*do they work?*”

Question 2: “If they do, *how well do they work?*”

Answer: “it depends!”

What does “it depend” on?

Program Design

- Comprehensive
- Long-term, multi-year program
- Reflecting best practice design principles

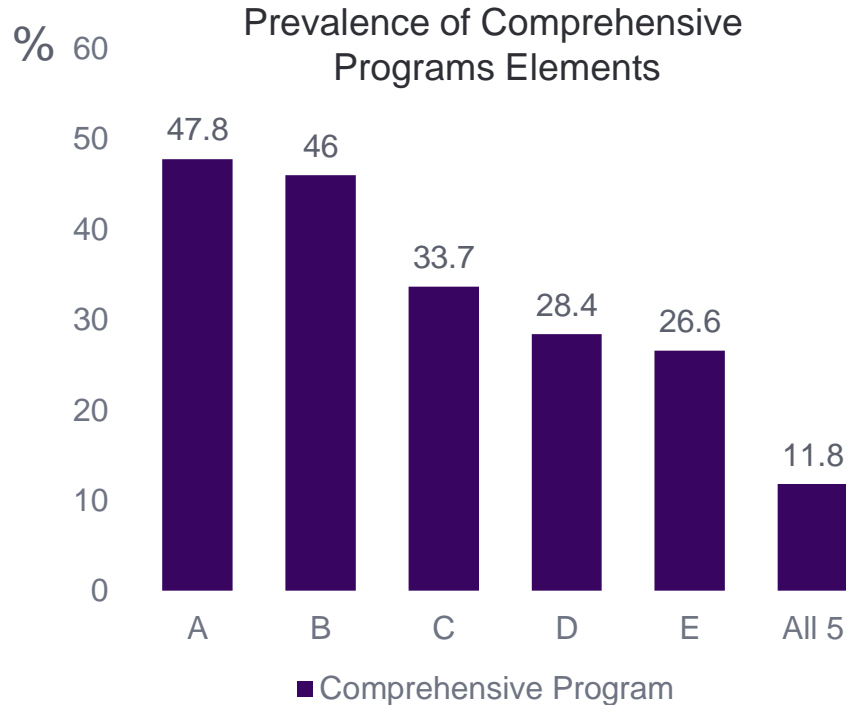
- Comprehensive
- Short-term, single-year program
- Lacking best practice design

- Not comprehensive
- Lacking best practice design

- Single program
- Lacking best practice design

Note: “**comprehensive**” is defined by Healthy People 2010 as including health education, supportive physical and social environments, integration of the worksite program into the organization's structure, and worksite screening programs. “**Best practice design principles**” include leadership, relevance, partnership, comprehensiveness, implementation, engagement, communications, data-driven, and compliance.

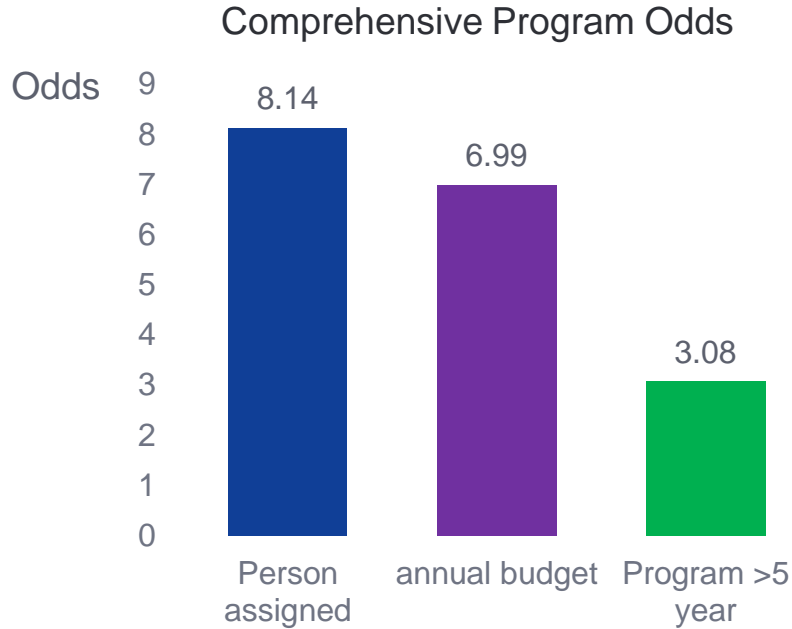
Workplace Health in America Survey 2017



After adjustment to compare 2004 to 2017, comprehensive program were noted in **6.9% vs. 17.1%**

Note: A = supportive physical and social environments, B = linkages to related programs, C = health education, D = integration of the worksite program into the organization's structure, and E = worksite screening programs.

Workplace Health in America Survey 2017



What else does “it depend” on?

Outcomes of Choice

- Health promotion and disease prevention
- Participation

- **Workability**

Current work ability compared with lifetime best;
Work ability in relation to the demands of the job;
Number of diagnosed illnesses or limiting conditions from which they suffer;
Estimated impairment owing to diseases/illnesses or limiting conditions;
Amount of sick leave they have taken during the last year;
Own prognosis of work ability in 2 years' time.

- **Productivity and performance**

Absenteeism
Presenteeism
Overall

- **Retention, attraction of talent**

- **Return on investment**

- Outcomes that reflect health and well-being at the personal and social level*

Broad set of outcomes that go far beyond the walls of the workplace itself

Evidence of Effectiveness

Systematic reviews

A comprehensive review of all the evidence on a specific topic

Randomized trials

A scientific experiment that tests the effectiveness of treatments by randomly allocating subjects to two or more groups, treating them differently, and then comparing them with respect to a measured response

Quasi-experimental studies

A study without the random assignment of participants to conditions. Among the important types are nonequivalent groups designs, pretest-posttest, and interrupted time-series designs.

Case studies

A case study is a research strategy and an empirical inquiry that investigates a phenomenon within its real-life context

Systematic Reviews

- Community Preventive Services Task Force, 2010
 - CDC supported review with Task Force recommendations, Atlanta, USA*
 - Well-designed programs work—positive outcomes for activity, smoking, alcohol, seat belt use, blood pressure, cholesterol, health care use, and productivity
- Economic impact of wellness programs, 2010
 - Harvard University School of Public Health, Boston, USA*
 - Medical costs fall by about \$3.27 for every dollar spent on wellness programs and absenteeism costs fall by about \$2.73 for every dollar spent

Systematic Reviews

- Economic impact of wellness programs, 2013
Tufts Medical Center, Boston, USA
 - Of 10 studies identified, only 3 analyzed direct and indirect costs—
Evidence regarding economic impact is limited and inconsistent
- Evidence on impact of programs to address musculoskeletal, psychological, and behavioral disorders, and economic evaluations, 2019
Institute for medical Informatics, Biometry, and Epidemiology, University Hospital of Essen, Germany
 - CBT programs, job-stress management, and stretching programs work—multi-component programs are preferred. Employers should expand organizational level programs

Randomized Trials

- Generally considered the “gold standard” of causal inference scientific studies
- Notoriously difficult to conduct in the workplace setting
- High degree of internal validity, but low generalizability
- However, well-designed RCTs continue to generate evidence that supports the influence of (public) health on workplace-relevant outcomes

Public health and the workplace: a new era dawns



The relationship between work and health is complex. It is one that has changed substantially over past centuries and it is permanently evolving as societies themselves evolve. While unemployment is now generally recognised as linked to poor health outcomes (especially for mental health), employment can be both good and bad for health, depending on the nature and quality of work. Conversely, poor health has been shown to be associated with risk of job loss, a potentially devastating predicament for individuals and their families. Poor health has also been associated with increased sickness absence from work, a serious issue for a country's economy. Health and work are therefore intrinsically intertwined. What can a public health perspective offer?

attention and innovative approaches are burgeoning in many companies. But do these interventions work and are they cost-effective?

Two randomised trials published in this issue investigate interventions in the workplace targeting unhealthy behaviours. Floor van den Brand and colleagues' trial found that financial incentives (relatively modest, totalling €350), in addition to a smoking cessation group training programme, increased smoking abstinence at 12 months compared with training alone.

By contrast, Frida Bergman and colleagues' trial, investigating whether treadmill workstations in offices could increase daily walking time in overweight workers, did not meet its primary endpoint of a 30-min increase

See [Comment](#) pages e509, e511 and e513

See [Correspondence](#) page e515

See [Articles](#) pages e523, e536 and e545

Randomized Trials

For example, recent RCTs, published in 2018 and 2019 in the Lancet Public Health, show:

- Treadmill workstations result in a statistically significant but smaller-than-expected increase in daily walking time [Sweden]
- Financial incentives in addition to a smoking cessation group training program can significantly increase long-term smoking abstinence [The Netherlands]
- 6-month exercise-focused intervention using telemonitoring systems reduced metabolic syndrome and cardiovascular and metabolic disease [Germany]

Articles

Telemonitoring-supported exercise training, metabolic syndrome severity, and work ability in company employees: a randomised controlled trial

Open Access

Open Access Research Article published: 07 February 2019

DOI: 10.1038/s41598-019-41818-2

View Article | Article Metrics | PubMed | ResearchGate | Scopus | Crossref | ISI | Scopus | ISI | Scopus | ISI

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View Article | Article Metrics | PubMed | ResearchGate | Scopus | Crossref | ISI | Scopus | ISI | Scopus | ISI

Articles

Effect of a workplace-based group training programme combined with financial incentives on smoking cessation: a cluster-randomised controlled trial

Open Access

Open Access Research Article published: 07 February 2019

DOI: 10.1038/s41598-019-41818-2

View Article | Article Metrics | PubMed | ResearchGate | Scopus | Crossref | ISI | Scopus | ISI | Scopus | ISI

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Articles

Treadmill workstations in office workers who are overweight or obese: a randomised controlled trial

Open Access

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DOI: 10.1038/s41598-019-41818-2

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Randomized Trials

In addition:

- Exercise intervention improves work ability in office workers [\[Australia\]](#)
- Total Worker Health intervention for construction workers impacts safety, health and well-being outcomes [\[USA\]](#)
 - Exercise frequency
 - Healthy diet improvement/sugary snack reduction
 - Team cohesion
 - Sleep duration
 - Blood pressure reduction

Randomized Trials

But also:

Multicomponent workplace wellness program resembling programs offered by US employers [\[USA\]](#)

However, this was not a comprehensive program designed according to best practice design principles!

- Large US warehouse retail company
- Intervention of 8 modules for healthy lifestyles
- Observation period of 1 year
- Improvements in exercise and weight management behaviors,
- No impact on clinical measures of health, health care expenditures, or employment outcomes

Research

JAMA | Original Investigation

Effect of a Workplace Wellness Program on Employee Health and Economic Outcomes

A Randomized Clinical Trial

Ziwei Song, MD, PhD; Katherine Baicker, PhD

IMPORTANCE Employees have increasingly invested in workplace wellness programs to improve employee health and decrease health care costs. However, there is little experimental evidence on the effects of these programs.

OBJECTIVE To evaluate a multicomponent workplace wellness program resembling programs offered by US employers.

DESIGN, SETTING, AND PARTICIPANTS This clustered randomized trial was implemented at 160 worksites from January 2015 through June 2016. Administrative claims and employment data were gathered continuously through June 30, 2016; data from surveys and biometrics were collected from July 1, 2016, through August 31, 2016.

INTERVENTIONS There were 20 randomly selected treatment worksites (4037 employees) and 140 randomly selected control worksites (28 937 employees, including 20 primary control worksites [4106 employees]). Control worksites received no wellness programming. The program comprised 8 modules focused on nutrition, physical activity, stress reduction, and related topics implemented by registered dietitians at the treatment worksites.

MAIN OUTCOMES AND MEASURES Four outcome domains were assessed. Self-reported health and behaviors via surveys (29 outcomes) and clinical measures of health via screenings (10 outcomes) were compared among 20 intervention and 20 primary control sites; health care spending and utilization (38 outcomes) and employment outcomes (3 outcomes) from administrative data were compared among 20 intervention and 140 control sites.

Editorial page 1462
Supplemental content
CME Quiz at jamanetwork.com/learning and CME Questions page 1529

Quasi-experimental studies

- Many reports in the literature
- Useful as supporting evidence, but difficult to use for causal inference
- Helpful in exploring relationships and new lines of inquiry
- These studies tend to be largely supportive of positive impact

Case Studies and Best Practices

- In-depth investigations of a single person, group, event, or community
- Data gathered from variety of sources and using several different methods (quantitative, qualitative)
- Helps gather information on context and rationale
- Supports understanding of complex social phenomena

Best Practice Design Principles

Dimension	Definition
Leadership	Elements that reflect program vision, organizational policy, resources, and implementation support
Relevance	Elements that address factors critical to program participation and connecting to the intrinsic motivation of workers
Partnership	Elements that relate to integration of efforts with other groups or entities, such as unions, other internal departments, external vendors, and community organizations, among others
Comprehensiveness	Programming that includes health education, supportive physical and social environments, integration of the worksite program into the organization's structure, linkage to related programs, and worksite screening programs (based on Healthy People 2010)
Implementation	Elements that ensure a planned, coordinated, and fully executed work plan and process-tracking system
Engagement	Elements that promote ongoing connections between employees and the program through activities and behaviors that build trust, respect, and an overall culture of health and well-being
Communications	Elements that reflect a strategic communications plan that maintains high visibility and recognition
Being data-driven	Elements that ensure program measurement, reporting, evaluation, and continuous improvement
Compliance	Elements that ensure the program meets regulatory requirements and protects the personal information of employees and participants

- Based on review of evidence, 41 best practices identified and categorized into 9 principles of design
- Best practice principles for program design:
 - Leadership
 - Relevance
 - Partnership
 - Comprehensiveness
 - Implementation
 - Engagement
 - Communications
 - Being data-driven
 - Compliance



Best Practice Design Principles

- Adopted and adapted by the American Heart Association's Life Simple 7 initiative
- Applied as a best practice model with proven, published outcomes
 - TURCK
 - Slippery Rock University
 - Indiana University
 - HealthPartners (Regions Hospital)

Workplace Wellness Recognition for Optimizing Workplace Health
A Presidential Advisory From the American Heart Association

Gregg C. Fonarow, MD, FAHA, Chair; Chris Celitz, MPH, Ross Arora, PhD, PT, FAHA, Catherine Basam, MD, FRCY W. Isaac, MD, MPH, FAHA; Donald Lloyd-Jones, MD, ScM, FAHA; Eric D. Peterson, MD, MPH, FAHA; Nancy Parsons, PhD, Edith Sanchez, MD, MPH; Paul E. Terry, PhD, PhD, Edith M. Annun, MD, FAHA, on behalf of the American Heart Association

Aim:—The workplace is an essential setting for promoting cardiovascular health and cardiovascular disease and stroke prevention in the United States. Well-designed, comprehensive workplace wellness programs have the potential to improve cardiovascular health and to reduce mortality, morbidity, and disability resulting from cardiovascular disease and stroke. Nevertheless, widespread implementation of comprehensive workplace wellness programs is lacking, and program composition and quality vary. Several organizations provide workplace wellness recognition programs; however, there is variation in recognition criteria, and there are specific focus on cardiovascular disease and stroke prevention. Although there is limited evidence to suggest that company performance or employer health management is associated with cardiovascular health care costs, these data are not currently of sufficient quality to inform a goal.

As a recognized national leader in evidence-based guidelines, care systems, and quality programs, the American Heart Association/American Stroke Association is uniquely positioned and committed to promoting the adoption of comprehensive workplace wellness programs, as well as improving program quality and workforce health outcomes. As part of its commitment to improve the cardiovascular health of all Americans, the American Heart Association/American Stroke Association will promote science-based best practices for comprehensive workplace wellness programs and publish best practices for a national workplace wellness recognition program to assist employers in optimizing their work sites and workplaces for optimal programming. The recognition program will integrate identification of a workforce best practice and evidence-based workplace wellness programs to create a "Best Practice" award. In addition, the American Heart Association/American Stroke Association will publish a comprehensive report on promoting workplace wellness programs, including best practices for program design, implementation, and evaluation, and a list of evidence-based workplace wellness programs for employers and employers, and fostering innovation and additional research. (Circulation. 2015;131:XXXX-XXX. DOI: 10.1161/XXXX.XXXXXX)

Key Words: AHA Scientific Statements • cardiovascular system • exercise • health • nutritional status • prevention and control • quality assurance, health care • smoking cessation • weight loss

There are an estimated 155 million working-age, largely employed, adults in the United States,¹ which constitutes a large, active population that can potentially improve engagement with respect to health and wellness. The workplace is an important setting for promoting cardiovascular health and cardiovascular disease and stroke prevention. Well-designed, comprehensive workplace wellness programs have the potential to improve cardiovascular health and to reduce mortality, morbidity, and disability resulting from cardiovascular disease and stroke. Nevertheless, widespread implementation of comprehensive workplace wellness programs is lacking, and program composition and quality vary. Several organizations provide workplace wellness recognition programs; however, there is variation in recognition criteria, and there are specific focus on cardiovascular disease and stroke prevention. Although there is limited evidence to suggest that company performance or employer health management is associated with cardiovascular health care costs, these data are not currently of sufficient quality to inform a goal.

CDC Centers for Disease Control and Prevention
Preventing Chronic Disease
Public Health Research, Practice, and Policy
66544
Volume 11 | July 2014

Placing Workplace Wellness in Proper Context: Value Beyond Money

Wendell F. Franks, PhD, MEd

Statement of interest for this article: Franks, PhD, "Placing Workplace Wellness in Proper Context: Value Beyond Money" (Franks 2014) is available at: <http://dx.doi.org/10.1093/aje/kwt029>

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Employees receiving the best workplace wellness programs have the highest rates of cardiovascular health and cardiovascular disease and stroke prevention in the United States. Well-designed, comprehensive workplace wellness programs have the potential to improve cardiovascular health and to reduce mortality, morbidity, and disability resulting from cardiovascular disease and stroke. Nevertheless, widespread implementation of comprehensive workplace wellness programs is lacking, and program composition and quality vary. Several organizations provide workplace wellness recognition programs; however, there is variation in recognition criteria, and there are specific focus on cardiovascular disease and stroke prevention. Although there is limited evidence to suggest that company performance or employer health management is associated with cardiovascular health care costs, these data are not currently of sufficient quality to inform a goal.

Worksite Health Promotion

LifeWorks@TURCK
A Best Practice Case Study on Workplace Well-being Program Design

Highly effective workplace wellness programs are designed to meet the needs of individuals and populations at risk for cardiovascular disease and stroke. The best workplace wellness programs are designed to meet the needs of individuals and populations at risk for cardiovascular disease and stroke. The best workplace wellness programs are designed to meet the needs of individuals and populations at risk for cardiovascular disease and stroke. The best workplace wellness programs are designed to meet the needs of individuals and populations at risk for cardiovascular disease and stroke.

CASE STUDY USING BEST PRACTICE DESIGN PRINCIPLES FOR WORKSITE WELLNESS PROGRAMS

LEARNING OBJECTIVES

Apply the AHA/ASA Best Practice Design Principles for Worksite Health and Wellness Programs in a case study.

Identify the best practice design principles used in a workplace wellness program.

Identify the best practice design principles used in a workplace wellness program.

INTRODUCTION

Worksite wellness programs are designed to meet the needs of individuals and populations at risk for cardiovascular disease and stroke. The best workplace wellness programs are designed to meet the needs of individuals and populations at risk for cardiovascular disease and stroke. The best workplace wellness programs are designed to meet the needs of individuals and populations at risk for cardiovascular disease and stroke.

Fitness of the US Workforce

Nevadan P. Prasad, MD, PhD

United States Population, Demographics, Mortality, and Morbidity

United States Population, Demographics, Mortality, and Morbidity

United States Population, Demographics, Mortality, and Morbidity

Abstract

Physical fitness is an important determinant of cardiovascular health and cardiovascular disease and stroke prevention. Well-designed, comprehensive workplace wellness programs have the potential to improve cardiovascular health and to reduce mortality, morbidity, and disability resulting from cardiovascular disease and stroke.

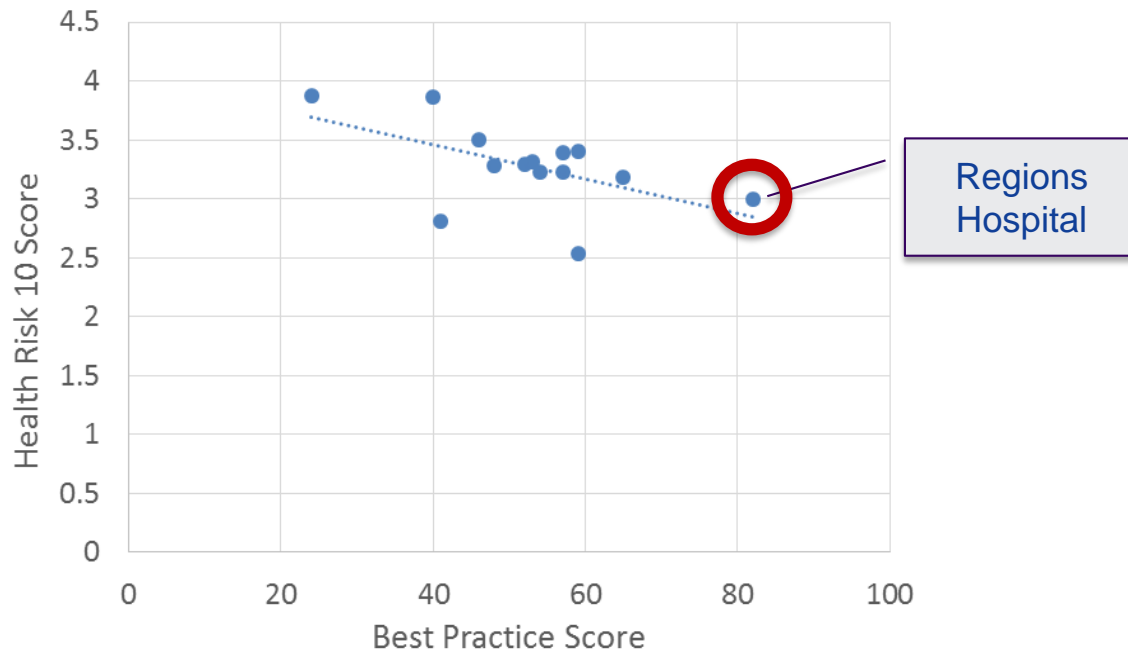
Volume 2 Health: our business



Design Principles and Health Risks

Assessment Results Across 14 HealthPartners Major Business Divisions

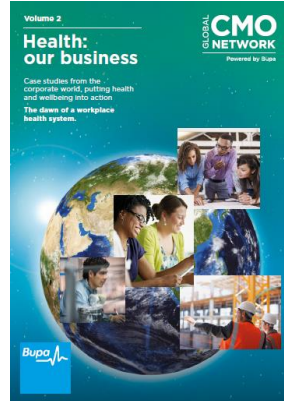
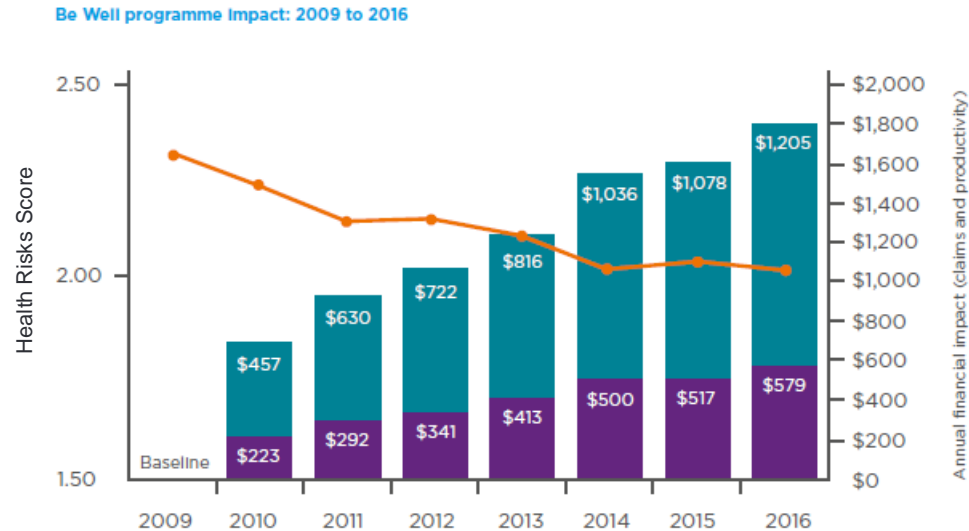
The higher the Best Practice Program Design Assessment score, the fewer health risks in the population



Regions Hospital “Be Well”

“The big idea was to start small, listen with intent for expressed needs of people, engage employees from the beginning, and making them the power behind a healthy, productive and high-performing workplace.”


These data reflect financial cumulative medical and pharmacy savings of \$9.3 million and productivity-related savings of \$19.2 million (total of \$28.5 million) over 7 years



TURCK experience

Following an analysis of a 10-year healthy workplace program experience for this manufacturing company:

- 93% of employees indicate they give their best effort each day
- <1% turnover compared to an industry average of 13%
- 69% reduction in behavioral health visits
- Sustained decrease in FMLA claims since 2003
- \$4.7 million in health care costs avoided between 2008 and 2013
- Increased employee volunteerism and donations to a personally meaningful cause

Worksite Health Promotion 

by Nico Pronk, Ph.D., FACSM, FAWHP; David Lagerstrom; and Jane Hawe, B.A., D.S.M., R.N., M.B.A.

LifeWorks@TURCK

A Best Practice Case Study on Workplace Well-being Program Design

Health and education are the most important factors related to human capital. They form the basis of an individual's and a population's productivity and associate population health as a key ingredient to poverty reduction, economic growth, and long-term economic development of a region or entire societies (9,15). As such, both factors are extremely important to business and industry because they prepare the future workforce and (a) optimize the performance of current

survey points out that only 6.9% of companies have programs that may be considered comprehensive in design (8). Program design matters in producing results, and programs designed according to best practice principles tend to produce better outcomes (5,12). Therefore, a differentiation should be made between well-designed programs and those that do not adhere to well-established known practices related to successful programs.

BACKGROUND

TURCK, Inc., founded in 1975, develops, designs, and manufactures technology products such as sensors, interfaces, and connectors that serve the manufacturing and process automation industries. TURCK is the North American headquarter

PRINCIPLES OF BEST PRACTICE

“strong and sustained financial performance of the program has moved from a breakeven trend between 2003-2008 to approximately 7% to 8% income from operations during each of the past 5 years.”

-Dave Lagerstrom, CEO, TURCK

come from? Why do conflicting results emerge from systematic reviews conducted by highly credible sources?

Arguably, not all programs are designed to produce results. Whereas workplace wellness programs have become quite common with the vast majority of companies (77%) in the United States (3), the most recent National Worksite Health Promotion

TURCK corporation in Minneapolis, MN (4,7), and applied these principles to confirm this assumption. The data used in this case study come from a well-documented

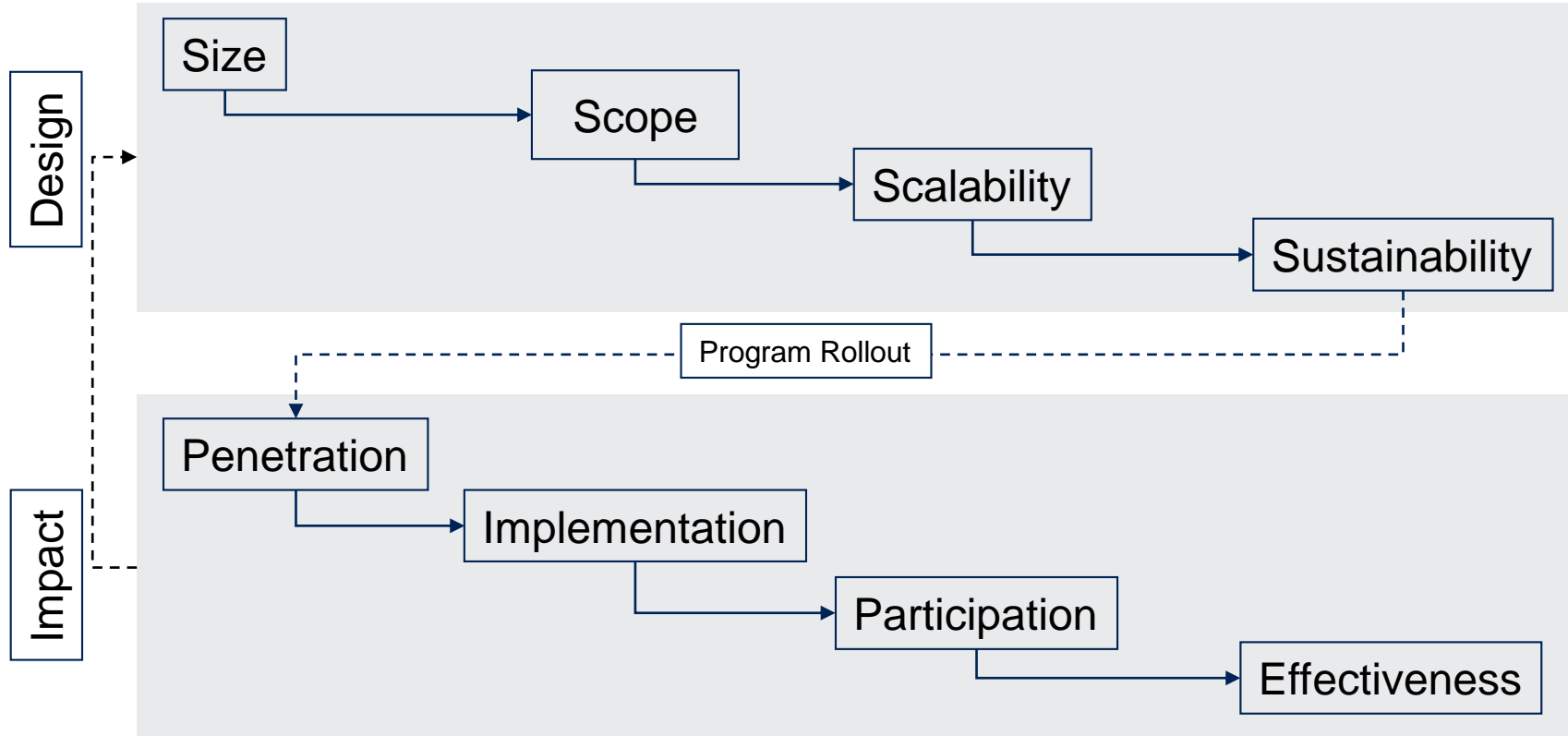
ACSM's HEALTH & FITNESS JOURNAL 43

What to Measure?

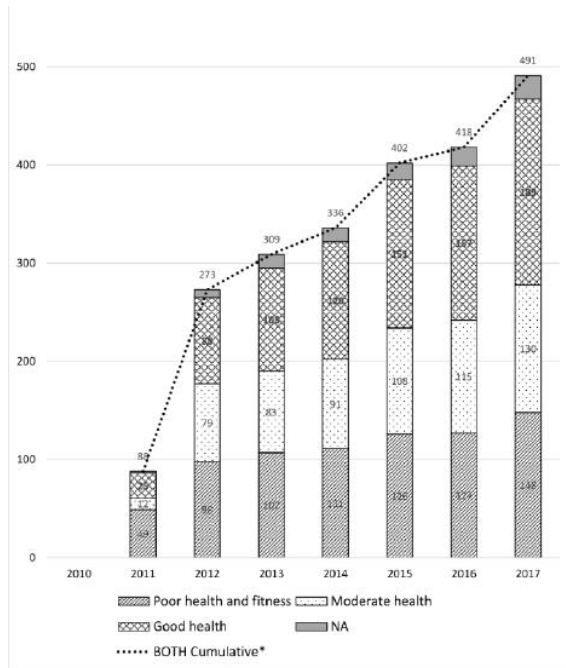
4Ss and PIPE Impact Metric

- A practice-based impact monitoring approach
- Successfully used in evaluation of diabetes prevention programs in the real-world [Finland, Australia]
- Recently applied to the workplace health setting [Finland]
 - Stora Enso Metsä wood supply company
 - Comprehensive program
 - 8 year implementation
 - 4Ss and PIPE Impact metric iteratively applied

4Ss and PIPE Impact Metric



Stora Enso Metsä Wood Supply Company



- 86% employee HRA completion rate
- 80% biometric screening completion
- 58% participation (2 HRA + biometrics) rate
- **Successful** participant rate: 21% (23% in 2010-2014 and 18% in 2014-2017)
 - Success reflects having made a lifestyle change AND improved biometric data
- PIPE Impact scores:
 - 2010-2014 = 18%
 - 2014-2017 = 14%

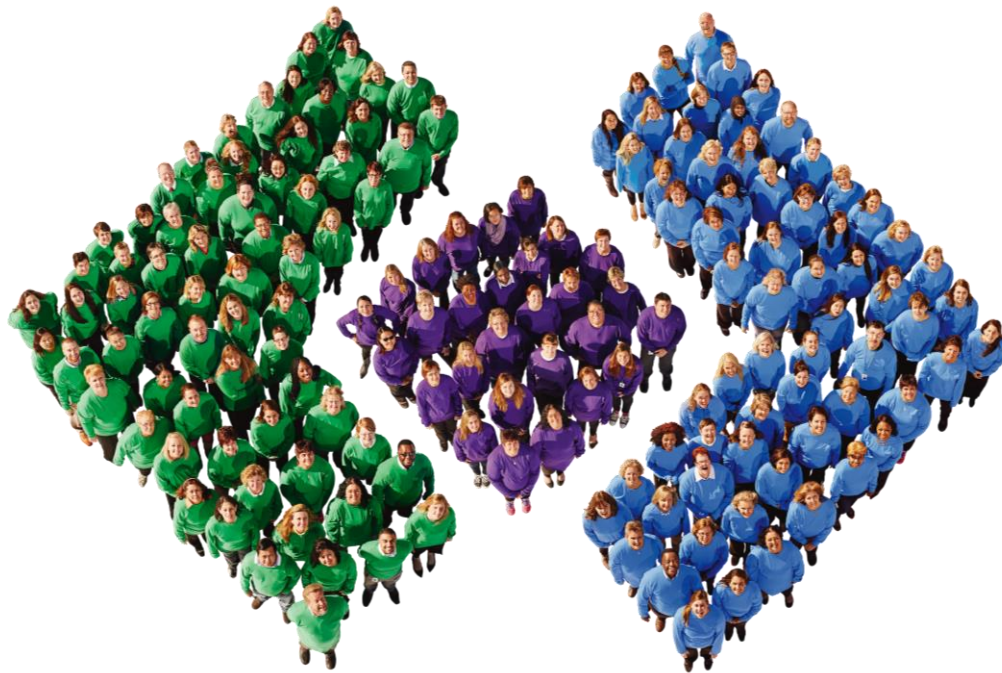
Take-Away's

- Favorable approaches include:
 - multicomponent interventions
 - Comprehensive interventions
 - Balanced targeting of working conditions and behaviors addressing both safety and health (i.e., Total Worker Health approach)
 - Application of best practice design principles
 - Measurement of a few, carefully selected metrics easily implemented in practice

So, to answer the questions...

- Do healthy workplace program work?
 - Yes, but it depends on how they are designed
- How well do they work?
 - Depends again, but in general, well-designed comprehensive programs can improve health and well-being, save money, generate a positive culture at the workplace, and be an important element in improving community health and vitality

Thank you



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