Looking good!

Wellness initiatives in the workplace

A Harvard University Study,
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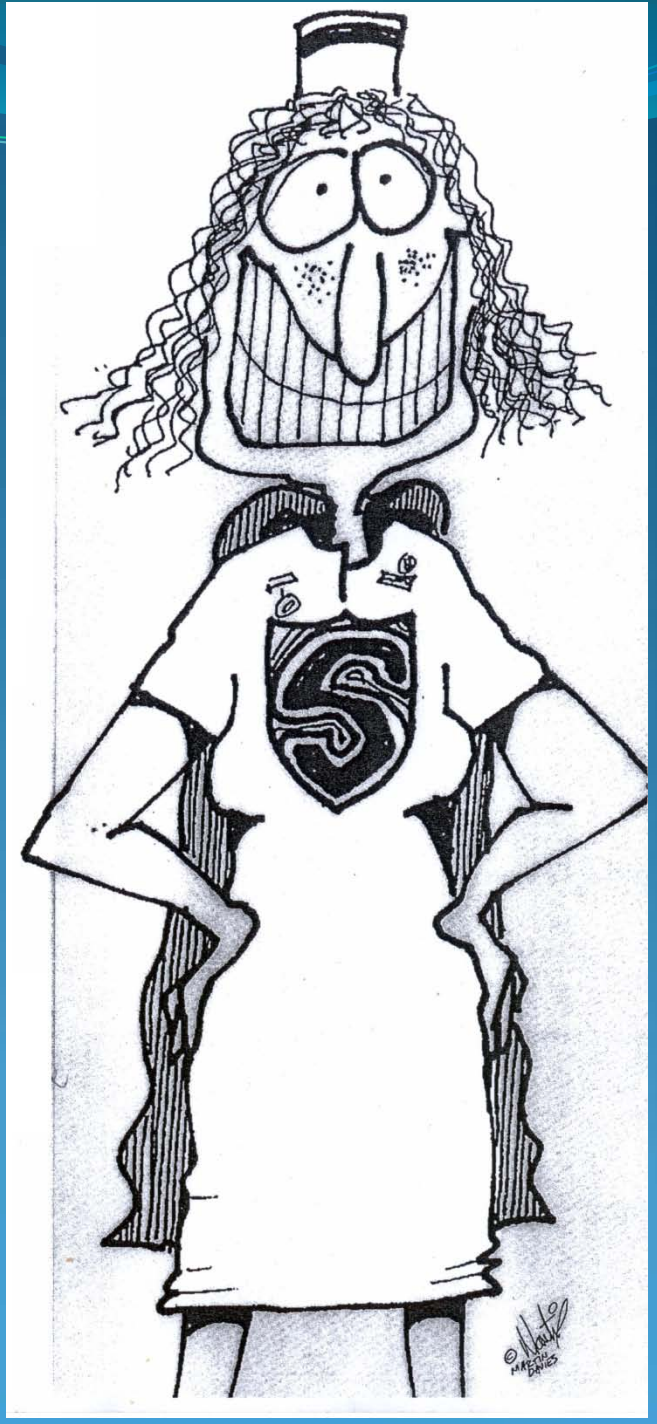

Do workplace wellness initiatives improve the health of employees and generate savings??

Lets examine the meta-analysis paper by Baicker, Cutler & Song of Harvard University, School of Public Health, Department of Economics and the Medical School.

But first some background.

THE DOW CHEMICAL COMPANY 1988-1995

Occupational Health Practice in the USA for Dow was a 'wellness and fitness programme', with health passports, blood pressure and cholesterol checks, urine analysis, and an enormous HQ gym and attached running track.

President Barack Obama has highlighted prevention as a central component of health reform. Workplace based wellness programmes have been showcased in the reform proposals, the press and congregational hearings.

60% of Americans get their health insurance cover through a comprehensive employment-based plan.

- Dow was self-funding.

Ultraism or Pragmatism?

WHAT IS GOING ON IN THE UK, EU AND OXFORD?

- 'Health, Work and Wellbeing' – free online tool designed to help you to improve the health and well-being of people in the workplace. A Department for Work and Pensions, Department of Health and Health and Health and Safety Executive Initiative.
- Improving performance through wellbeing and engagement – project funded by the Higher Education Funding Council for England.
- Workplace Health Promotion (WHP) project – the European Agency for Safety and Health at Work has launched a WHP project, designed to encourage better health, reduced absenteeism, enhanced motivation and improved productivity in workplaces.
- Oxford University presently does not have an employee wellness programme but does have a well sourced Occupational Health Service. We have never participated in wellness programmes-so far.

STUDY DATA AND METHODS OF THE BAICKER, CUTLER AND SONG PAPER

Systematic review of 100 peer-reviewed studies of employee wellness programs spanning the past 30 years.

CRITERIA

1) They had a well defined *intervention*
2) They had a well-defined *treatment and comparison group.*
3) They represent analysis of a *distinct new intervention*, rather than further analysis of an intervention already examined in one of the other studies.

Applying these criteria narrowed the sample to 32 original publications and 36 interventional studies.

Twenty-two studies looked at employee health care costs.

Twenty-two studies looked at employee absenteeism.

Eight Studies looked at both.

All studies were finally converted to dollar cost units using a uniform wage rate to construct comparable estimates of ‘return on investment’ (ROI).

STUDY RESULTS and CHARACTERISTICS

More than 90% of the employee wellness programs in this sample were implemented by large firms (more than 1000 employees), 25% had more than 10,000 employees.

INDUSTRIES REPRESENTED

25% - Financial Services
22% - Manufacturing
16% Schools and Higher Education

CHARACTERISTICS OF WELLNESS PROGRAMMES

TWO DIMENSIONAL STUDY (fig 1)

By;

1) Method of delivery

2) Focus of intervention

(fig 1)

Summary of Characteristics of Worksite Wellness Programs Studied

Method of delivery	**Percent of firms**
Health risk assessment	81
Self-help education materials	42
Individual counselling	39
Classes, seminars, group activities,	36
Added incentives for participation	31
Focus of intervention	
Weight loss and fitness	66
Smoking cessation	50
Multiple risk factors	75

- Participation is almost always voluntary among employees, so bias is a major concern.
- Assessments are commonly used in conjunction with clinical screening for risk factors, including blood pressure, cholesterol and body mass index (BMI).
- Information is provided on risk factors and this motivates participation.
- Many of the programs featured an on-site gymnasium or workout facility.
- Wellness *'interventions'* included the provision of self-help education material, counselling with health care professionals and on-site group activities led by trained personnel.

INCENTIVES

- 30% of the programmes used incentive.
- Most commonly they were financial bonuses and reimbursement for participation.
- Some employers withheld a small portion of employee compensation until programme participation occurs.

FOCUS

- The most common focus of all the programmes were obesity and smoking; (the two top causes of preventable death in the US).
- 60% focused on weight loss and fitness and 50% on smoking. Most focused on more than one risk factor, including stress management, back care, nutrition, alcohol consumption and blood pressure.

These studies were in three types;

Fig (2)

Group A – Randomised controlled trial or matched control group.

Group B – Non-randomised or unmatched comparison group.

Group C – Post-intervention data only.

Summary Of Findings From Studies Of Employee Health Care Costs, Pre- And Post-Intervention

Study number	Years	Sample size		Health care costs ($), treatment group (T)		Health care costs ($), control group (C)		Change in health care costs ($), T–C	
		Treat	Control	Pre	Post	Pre	Post	Change, pre	Change, post
Group A									
1	4.0	1,890	1,890	1,531	2,907	1,427	3,429	-522	-626
2	2.0	340	340	1,739	1,459	1,198	1,107	351	-189
3	3.2	11,194	11,644	2,736	3,411	2,896	4,136	-724	-563
4	5.0	8,451	2,955	247	655	253	1,234	-579	-573
5	1.0	919	867	2,171	1,695	1,881	1,995	-300	-590
6	1.0	21,170	719	2,336	2,937	2,048	2,905	32	-255
7	1.5	301	412	1,891	1,621	1,970	1,710	-89	-11
8	1.5	180	412	2,036	1,283	1,970	1,710	-427	-493
9	1.5	295	412	1,986	1,485	1,970	1,710	-225	-242
Group B									
10	1.0	392	142	294	296	295	396	-100	-99
11	0.5	2,586	50,576	1,616	1,185	500	419	766	-351
12	6.0	1,272	244	2,140	2,337	1,825	2,908	-571	-886
13	3.0	3,993	4,341	1,620	2,008	1,647	2,596	-588	-561
14	5.0	388	355	1,159	2,397	825	1,701	696	363
15	5.0	667	892	695	1,687	605	1,977	-290	-380
Group C									
16	4.0	1,275	2,687		3,222		3,909		-687
17	5.0	13,048	13,363		4,176		4,454		-278
18	4.0	337	321		2,078		1,672		406
19	4.0	367	343		1,772		1,346		426
20	4.0	183	184		1,128		979		149
21	2.0	221	296		1,256		2,424		-1,168
22	2.5	950	6,640		1,413		1,396		17

Fig (3)

Summary Of Findings From Studies Of Employee Absenteeism

Study number	Years	Sample size		Absentee days, treatment (T)		Absentee days, control (C)		Difference in absentee days, T–C		Savings in wages ($)[a]
		Treat	Control	Pre	Post	Pre	Post	Difference, pre	Difference, post	
Group A										
1	1.0	919	867	36.0	34.4	36.0	38.8	0.0	−4.4	721
2	1.5	301	412	5.0	4.7	5.1	4.8	−0.1	−0.1	0
3	1.5	180	412	5.2	3.2	5.1	4.8	0.2	−1.5	280
4	1.5	295	412	5.2	4.1	5.1	4.8	0.1	−0.7	131
5	1.0	266	1,242	4.6	4.2	7.0	9.1	−2.4	−4.9	413
6	2.0	597	645	18.0	13.5	19.1	18.2	−1.1	−4.7	590
7	2.0	1,406	487	5.9	5.6	5.3	6.0	0.6	−0.4	173
8	2.0	29,315	14,573	5.7	4.9	5.2	4.9	0.5	0.0	82
9	1.0	2,546	7,143	5.6	5.5	6.0	6.2	−0.4	−0.8	70
Group B										
10	1.0	392	142	0.3	0.1	0.1	0.5	0.1	−0.4	92
11	0.5	2,586	50,576	3.9	3.0	1.6	1.5	2.3	1.5	123
12	4.0	1,275	2,687	3.1	2.3	3.1	3.3	0.0	−1.0	167
13	2.0	221	296	8.7	9.0	10.0	12.4	−1.3	−3.4	342
14	6.0	2,596	1,593	6.6	17.2	6.6	23.3	0.0	−6.1	1,000
15	2.0	450	1,178	29.2	27.8	33.2	38.1	−4.0	−10.3	1,033
16	1.0	469	415	12.4	11.0	14.3	14.2	−2.0	−3.2	203
17	4.0	3,122	1,850	9.1	10.2	9.1	10.8	0.0	−0.6	88
18	2.0	7,178	7,101	3.2	3.0	2.9	2.9	0.3	0.1	33
19	2.0	2,232	5,863	4.4	3.7	5.6	5.5	−1.2	−1.8	102
20	2.0	688	387	2.5	2.6	2.9	4.3	−0.4	−1.7	225
Group C										
21	3.0	727	1,950							115
22	2.0	1264	4,982							492

SOURCE: Authors' calculations based on studies described in Appendix Table 1, available online at http://content.healthaffairs.org/cgi/content/full/29/2/hlthaff.2009.0626/DC2 **NOTES** Table has been abridged because of space constraints. The full exhibit is available as Supplemental Exhibit 4 in the online Appendix. Absenteeism figures denote absenteeism days per employee per year. Group A: Randomized controlled trial or matched control group. Group B: Nonrandomized or unmatched comparison group. Group C: Missing group-level data. [a]Using uniform wage rate of $20.49 per hour, Bureau of Labor Statistics, 2009 (assuming eight hours per day).

Summary Of Employee Wellness Studies Analysed

Fig (4)

		Average Sample Size					
Study Focus	**Number of Studies**	**Treatment**	**Comparison**	**Average Duration (years)**	**Average Savings[a]**	**Average Costs[a]**	**Average ROI[b]**
Health Care Costs	22	3,201	4,547	3.0	$358	$144	3.27
Absenteeism	22	2,683	4,782	2.0	$294	$132	2.73

SOURCE Authors' calculations based on studies described in Appendix Table 1, available online at http://content.healthaffairs.org/cgi/content/full/29/2/hlthaff.2009.0626/DC2

[a]Per employee per year, costs in 2009 dollars. [b]Average of the individual return-on-investment (ROI) figures for each study.

DISCUSSION

- The review of the evidence suggests that large employers adopting wellness programmes achieve substantial positive returns, even within the first few years of adoption.
- Medical costs fall about $3.27 for every dollar spent on wellness programmes.
- Absentee day costs fall by about $2.73 for every dollar spent.
- Additional benefits (unquantified) may also be present such as reduced turnover and lower costs for disability or health care insurance.
- Prior meta-analysis (Chapman 2005 and Aldana 2001) also showed significant returns on investment ($3.48 to $5.82) but the inclusion criteria were more lenient and less systematic.

Limitations (1)

- The organisations implementing these programmes are most likely those with the highest expected returns.
- It is difficult to gauge the extent of publication bias, with programmes demonstrating a high return on investment most likely to be published.
- Almost all the studies were conducted by large employers, which are more likely to have the resources and economies of scale to implement and achieve broad savings through wellness programs.
- The studies are cost 'front loaded' and the longer they run the more cost effective they might be.

Limitations (2)

- The analysis does not address the question of which attributes of wellness programmes are most important and what is the best programme design.
- Programme designs may need to differ for different organisations where the health risks are different.
- Further study is required to more properly understand the time path of return-on-investment. This is unlikely to be linear.

CONCLUSIONS

- Health insurance in the United States is mainly employer provided and many organisations are self insured – an obvious incentive to reduce health costs – employer based wellness programmes seem to do this.
- My rather cynical view of this welfare driven soft medicine health programme has been fairly, but robustly, challenged by the systematic meta-analysis undertaken by Baicker, Cutler and Song. The benefits appear clear.
- Is this paper relevant and translatable to the HEFCE 'Improving Performance through wellbeing and engagement' project?