

Prevention of Coronary Heart Disease Case Study – Network Rail

Contact: Cliff Moody. GRAD IOSH, AIEMA

Infrastructure Maintenance Workforce Health, Safety & Environment Advisor

Background

At Network Rail, an Infrastructure Maintenance Workforce Health, Safety and Environment Manager became aware of one of his staff having a heart attack on site during a night shift. The employee was admitted to his local hospital in April 2009 at 2am where the heart attack was confirmed. After visiting the employee in hospital the following day and witnessing the devastating effect it was having on both the employee and his family it inspired the Manager to look at ways of promoting health and wellbeing for all his infrastructure workers in an effort to reduce the risk of this happening to another worker and their families.

The employee who suffered the heart attack was overweight, smoked 30 cigarettes per day and took little exercise. He was only 48 years old. The employee was off work for 132 days and this left the Wakefield track team short of a resource for over 4½ months. This resulted in additional cost to the company through covering his shifts with overtime for staff.

The employee has now been successfully rehabilitated back in to his normal role as a track worker. With the support of the workplace health promotion initiative he has successfully lost weight, stopped smoking and is now empowered to make healthy lifestyle choices.

Helping to prevent cardiovascular disease (CVD)

The manager didn't know where to start to begin to improve employee health, and so contacted Network Rail's Occupational Health Specialist and Human Resources to assist him in the development and running of a health fair in Wakefield, Knottingley and Leeds Infrastructure Depots.

Health Means Business

In the development of the health fairs the manager contacted and partnered up with "Health Means Business" organisation, a lottery funded project in Wakefield aimed at improving employee health through provision and delivering of an integrated range of workplace interventions to improve diet, physical activity and mental health. Health Means Business work alongside other health promotion partners, where their initiatives have been proven to increase productivity, reduce absenteeism and boost staff morale.

Health Means Business target audience in communities where health is at its poorest in order to tackle health inequalities. Research suggests that people living in deprived areas may have more difficulty adopting and maintaining healthier lifestyles. In Wakefield 45 per cent of the population live in such areas. Smaller companies are said to be less likely to have health promotion resources and also draw their workforce from the local area. For this reason they are focusing on small and medium-sized enterprises (SMEs), employing 5-250 employees although they are also responding to organisations of all sizes where health promotion and the need to manage stress has been identified as a particular priority.

The Network Rail Manager, who was so engaged in the project decided to become a health champion. This meant he was the main co-ordinator for the events, the key contact for Health Means Business and project co-ordinator for future delivery of health fairs in 2011 across Infrastructure Maintenance.

Health Questionnaire

In order to focus on the key risk factors towards coronary heart disease and include topics the employees would enjoy and find interesting the workforce were asked to complete a questionnaire.. From 105 questionnaires distributed 48 were returned and analysed (Appendix 1). This identified the key areas for the health fair to address.

Health Fairs

In 2010 the health fairs were publicised with posters (Appendix 2) at each depot to notify staff of their forthcoming health fair.

Cliff Moody, of Network Rail says that *“Promoting good health is something we are passionate about at Leeds Maintenance Delivery Unit. If we can reach out to our staff through the health fair and with the help of Health Means Business that’s got to be beneficial for our staff, their families and our organisation.”*

The health fairs last around 5 hours, where employees are given time to attend in their work time and each includes:

- A health questionnaire completed by the employee covering lifestyle behaviours that are assessed confidentially by Health Means Business nursing teams;
- An employee mini health check where blood pressure readings, weight and BMI (Body Mass Index) is taken;
- A “goody bag” is provided to each attendee. The bags include a water bottle, a Frisbee, a stress ball, pedometer and a selection of health literature from the British Heart Foundation, Network Rail Haynes Manual and Drinkwise);
- Five 20 minute workshops providing advice on healthy eating by our resident Westwood Food and Beverage Team, exercise and injury prevention by Westwood Leisure Team , cancer awareness and prevention by Cancer Research UK and local Primary Care Trust; stress management and awareness of access to Care First counselling services by Care First , our Employee Assistance Programme,
- Indian Head Massage ,
- Health Shield healthcare costs and benefits of health cover with complimentary onsite back massage
- Individual follow up advice and information following their health checks, with a referral letter to an employee’ General Practitioner where required.

The average approximate cost per health fair ranges from £3000 to £7000, based on a 150 employees attending. This is an investment of around £20 per person for the cheapest event, through to £33 per person for the most expensive event held.

This initial health fair was followed up with “World Spirometry Day” again at each depot. Spirometry is the most common method for testing lung function. It is simple, quick and non invasive. The test specifically measures the amount (volume) and/or speed (flow) of air that can be inhaled and exhaled by the lungs. Spirometry is an important tool and is helpful in assessing conditions such as asthma, pulmonary fibrosis, cystic fibrosis and perhaps most importantly Chronic Obstructive Pulmonary disease (COPD).

Repeat Health Fairs 2011

Further health fairs were arranged in April 2011 throughout Yorkshire. This was an opportunity for the employees to have a follow up mini health check and further health education. By having their blood pressure and BMI re-taken and a further revaluation of health behaviours , the company were able to evaluate whether there had been any health

improvements and lifestyle changes made over the last year. The results demonstrated significant successes and was very well received by the workforce.

Evaluation of the health fairs

The success of the health fair programme is currently being measured by the following:

- Health improvements and positive changes in lifestyle behaviour measured through completion of a health questionnaire by staff on the day; this is collected and reported to us by Health Means Business. A further anonymised evaluation report delivered in 12 months post a second visit;
- The actual reduction in frequency and length of sickness absence for the Route, before and after the health fair. Absence data is collected for the 12 months prior to and after the health fair;
- An improvement in annual employee engagement scores.

Following the return of the health fair to Wakefield Kirkgate we have been able to evaluate the success of the health fair against our criteria. When comparing employee engagement scores and long and short term sickness absence data for Wakefield pre and post the health fair a significant improvement has been noted already, with a positive improvement in engagement scores (Gallup Score 3.66 in 2010 and 3.79 in 2011) and reduced absenteeism through ill health of minus 601 days (Total sickness days in 2010 was 4655 and 4054 in 2011).

The Future

In order to keep the momentum going constant reinforcement is required. Other initiatives are being planned within the company around health and fitness. Employees are now involved with the Cinnamon Trust, the only specialist national charity where individuals are empowered to walk more in their own neighbourhoods, through a Dog Walking initiative, which provides opportunity for individuals to dog walk for other owners. A network of 15,000 volunteers "hold hands" with owners to provide vital loving care for their pets. For example, Cinnamon Trust volunteers once vetted will for example walk a dog every day for a house bound owner. This is a continuation of the lifestyle change and ongoing rehabilitation for the employee who had the heart attack and serves to motivate other employees to maintain their exercise levels.

Other successes include successful weight lost amongst the teams and improved overall fitness through joining local activity and weight management groups.

The health fairs are now being cascaded to all other depots within Infrastructure Maintenance, with a rolling two year programme to ensure employees are given health and wellbeing advice for the future and that health remains high on the agenda of Network Rail. For this continued success local links and relationships will need to be forged further with the Routes and external stakeholders, so that further health champions are identified to optimize further positive changes in health behaviours by our workforce.

Appendix 1- Health Questionnaire Circulated to Network Rail Infrastructure employees

Health Fair Questionnaire

HR in conjunction with your local workforce health and safety team is going to be running a health fair early next year. To help us find out what sort of health topics would be of most interest to you. I would be grateful if you could take a couple of minutes to fill in the below questionnaire.

Location: Wakefield Kirkgate

Job role: Track, Off Track, Signals and Office based employees

Age (Please circle) (48 out of 105 questionnaires returned)

16-24	25-34	35-44	45-54	55-65
<u>7</u>	<u>10</u>	<u>8</u>	<u>17</u>	<u>6</u>

Gender (Please circle)

Male	Female
<u>44</u>	<u>4</u>

Please tick which health topics that would be of the most interest to you.

Healthier Eating: 34

Weight control: 23

Physical activity. How to get fitter: 23

Smoking: 10

Cancer prevention: 20

Men's health: 30

Women's health: 3

Looking after your heart: 29

Stress: 31

Looking after your back: 34

Other (Please specify): 3

- 1. Diabetes information**
- 2. Reynaud's Disease**
- 3. Mental Health**

Thank-you for completing this questionnaire. Please return your questionnaire to



You are invited to a
HEALTH FAIR!

Wakefield Kirkgate Maintenance Depot
Thursday 11th February 09:30 -1500 hours

**Get yourself down to THE health event of the year and make
2010 THE HEALTHIEST YEAR EVER!!!!**

Following feedback from the recent questionnaire that was sent regarding what health issues are of most interest to you, a health fair has been arranged by your Workforce HSE Advisor and HR department. Internal resources have been utilised as well as various outside companies and charities to provide a health fair tailored to your needs!!

There will be a range of activities going on throughout the day which will include various workshops and demonstrations on subjects such as:

- Healthy eating and cooking demonstration
- Promoting mental health and wellbeing
- Core strength workshops

Other events include:

- Mini MOT with a nurse
- Tailored health advice
- Indian head massage

There will be a range of literature available to takeaway on a whole range of health issues. These will be provided by a range of sources such as the British Heart foundation, Cancer Research and the NHS.

As well as all these giveaways there will be a chance to **WIN** a Wii Fit console!!!

For further information regarding the health fair please contact:



Annex 1

The Cost of Coronary Heart Disease in the UK

According to the British Heart Foundation (2010), cardiovascular disease (CVD) costs the UK economy in excess of £30 billion per year. This included £3.2 billion spent directly on health care for heart disease. Heart and circulatory disease account for 191,000 deaths each year, with 26,000 of those known to be under the age of 75. Almost 1 in 5 men and 1 in 8 women die of CVD. There are said to be 2.7 million people living in the UK with heart disease.

In 2006, all CVD cost the healthcare system in the UK around £14.4 billion. This represents a cost per capita of just under £250. The cost of hospital care for people who have CVD accounts for about 72% of these costs, whereas 20% of the cost is due to drugs. In 2006, production losses due to mortality and morbidity associated with CVD cost the UK over £8.2 billion, with around 55% of this cost due to death and 45% due to illness in those of working age.

Death rates from CVD are said to be highest in Scotland, and the North of England, and lowest in the South of England.

According to Hawken et al (2004) More than 90% of the risk of having a first heart attack is attributable to risk factors associated with lifestyle choices that are within the control of the individual.

Hawken et al (2004) go on to say that CVD is caused mainly by obesity and smoking – major current public health challenges around the developed world. The UK Government and the World Health Organisation both describe obesity as an epidemic requiring urgent action, and smoking prevalence levels persist despite it being the largest single cause of avoidable death. There are however a number of other known risk factors that are affected by personal lifestyle choices. These are broken down in to:

- Lifestyle risk factors that can be prevented or changed:
 - Smoking.
 - Lack of physical activity (a sedentary lifestyle).
 - Obesity.
 - An unhealthy diet and eating too much salt.
 - Excess alcohol.
- Treatable or partly treatable risk factors:
 - Hypertension (high blood pressure).
 - High cholesterol blood level.
 - High triglyceride (fat) blood level.
 - Diabetes.
 - Kidney diseases causing diminished kidney function.

Health Promotion Programmes are known to be crucial to improving health and wellbeing. Most adults spend more of their waking hours at work than anywhere else, making it an excellent venue for promoting healthy lifestyle choices. The benefits to any organization are suggested to be;

- Enhanced recruitment and retention of healthy employees

- Lowered health costs
- Reduced rates of disease and injuries
- Decreased worker absenteeism
- Improved employee relations and morale
- Increased productivity

Further evidence demonstrates the need for targeted health promotion programmes in the workplace that will have financial benefits to both employees and employers. Waddell and Burton (2004), Say that lifestyle factors, such as smoking, drinking and obesity, have a significant impact on health conditions experienced by the working age population. Poor health outcomes related to these factors can include high blood pressure, diabetes, coronary heart disease and respiratory diseases such as chronic obstructive pulmonary disease (COPD). Other common conditions affecting the working age population are mental illness and musculoskeletal disorders (MSDs) which, along with cardio-respiratory conditions, account for two-thirds of sickness absence, long-term incapacity and early retirement which also have adverse financial implications for employers and employees.

References:

British Heart Foundation.

Patient.co.uk.

Yusuf S, Hawken S, Ôunpuu T et al, *Effect of potentially modifiable risk factors associated with myocardial infarction in 52 countries (the INTERHEART study): case-control study*, The Lancet 364: 937–952, September 2004.

Waddell and Burton (2004); *Concepts of Rehabilitation for the Management of Common Health Problems*. London: TSO.