Liverpool
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Interventions to reduce emergency admissions for heart failure

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KEY RECOMMENDATIONS - EFFECTIVE INTERVENTIONS

EFFECTIVE POLICY INTERVENTIONS

- The 1999 Public Service Agreement to reduce diseases including heart disease by 40% by 2010 was met five years ahead of target.

EFFECTIVE COMMUNITY INTERVENTIONS

- Mass media campaigns are one of the most effective ways of reducing the risk factors for heart failure, such as obesity, excessive use of alcohol, physical activity and smoking.

EFFECTIVE HEALTH SERVICE INTERVENTIONS

- Help enable the population to reduce the risk factors for heart failure, such as delivery of brief interventions to reduce smoking rates and monitoring of those with diabetes.
- Refer for genetic testing where appropriate.
- Develop primary angioplasty services, if appropriate for local need.
- Develop cardiac networks to deliver integrated care across primary, secondary and tertiary organisations.

INTRODUCTION

According to NICE, heart failure can be defined as a;
“syndrome that can result from any structural or functional cardiac disorder that impairs the ability of the heart to function as a pump to support a physiological circulation” (NICE, 2003).

1. POLICY INTERVENTIONS FOR CORONARY HEART DISEASE

The Public Service Agreement to reduce mortality from heart disease and stroke and related circulatory diseases, in people under 75, by at least 40% by 2010, was set in the White Paper ‘Saving Lives: Our Healthier Nation’ in 1999. This target was met 5 years ahead of schedule (Department of Health, 2008).

2. COMMUNITY INTERVENTIONS FOR CORONARY HEART DISEASE

2.1 MASS MEDIA CAMPAIGNS

According to HELP, the Health England Leading Prioritisation online tool, mass media campaigns are the most cost-effective intervention in reducing population levels of obesity (HELP website http://help.matrixknowledge.com/interventions/: last accessed December 2009). According to HELP, a BBC campaign involving use of a website, Ceefax pages and telephone lines, cost £73.60 per person, resulted in an additional 0.736 QALYs per person, and cost savings of £2,494 per person, based on net costs, for Liverpool for 2007/8. Savings were similar in Knowsley, Sefton, the Wirral and both Cheshire PCTs.

3. HEALTH SERVICE INTERVENTIONS FOR CORONARY HEART DISEASE

3.1 PRIMARY HEALTH SERVICE INTERVENTIONS

3.1.1 AVOIDANCE OF RISK FACTORS

Key risk factors for coronary heart disease, according to the Department of Health, include smoking, physical inactivity and being overweight or obese, poor diet, excess salt, alcohol, diabetes and family history of heart disease, according to the Department of Health (2004, 2008).

- **Physical inactivity, diet and obesity**

According to HELP, the second most cost-effective intervention for increasing levels of physical activity and reducing obesity is brief interventions delivered in GP surgeries to improve uptake of physical activity, for all Cheshire and Merseyside PCTs. For all PCTs, for 2007/8, brief interventions consisting of brief advice and one motivational interview with a health visitor cost £31 per person more than brief advice. Interventions were associated with 1.42 additional QALYs per person, and cost savings of £3,301 per person. School based group education was the third most cost-effective intervention (after mass media campaigns and brief interventions in GP surgeries) in reducing obesity, according to HELP. Nationally, for 2007/8, this cost around £24 per person more than usual curricula. It was associated with an additional 0.013 QALYs per person, and cost savings of £16.20 per person.

There is very little economic evidence on the cost effectiveness of exercise training, according to NICE (2003), as costs and benefits are specific to the particular programme adopted. The evidence base for diet and nutrition for patients who already have heart failure is also limited, according to NICE (2003). There is no evidence from observational or controlled trials on the use of supplements, such as enzyme Q10 or hawthorn extract, to show evidence of benefit in terms of hospitalisation and mortality, although reducing salt in the diet is important, as excess salt is an important risk factor for heart disease. Salt reduction is also commonly recommended by physicians for those who already have heart failure, in order to help control fluid status, according to NICE (2003).

- **Smoking**

Increases in taxation are the most cost-effective means of increasing smoking quit rates, according to HELP, followed by mass media campaigns and brief interventions delivered in GP surgeries (http://help.matrixknowledge.com: last accessed December 2009).

- **Alcohol**

Chronic excessive alcohol consumption may damage cardiac muscle and lead to heart failure, so this is an important risk factor. For patients who already have heart failure, cardiac function may improve, or completely recover, in such patients if they abstain from alcohol. For patients for whom alcohol is not the cause of their heart failure, alcohol may still have clinically important effects, such as prevention of arrhythmias, according to NICE (2003).

Taxation is the most effective policy intervention to tackle alcohol use, according to HELP. Changing pricing policies also has an impact on alcohol use, particularly price promotions such as two for one offers, and heavily discounted alcohol in supermarkets, as well as availability of alcohol, and illegal alcohol sales.

Community interventions include using measures that have been used to tackle night-time economy violence, such as replacing glass drinking utensils with plastic, improvement of late night transport options, and enforcement of measures to reduce drink driving. Effective health service interventions to tackle alcohol use include screening and delivery of brief interventions, and use of self-help materials.

- **Having diabetes**

Risk factors for diabetes again include physical inactivity, obesity and smoking.

- **Family history of heart disease**

The British Heart Foundation Genetic Information Service was set up in 2008, to refer relatives of those who have died from sudden cardiac death to specialist inherited cardiac conditions services where appropriate (Department of Health, 2008).

- **Stress**

There is evidence that stress at work can contribute to coronary heart disease in some people, but it is not the biggest risk factor, according to the Health and Safety Executive (HSE). Research suggests that people are more likely to feel stressed when they feel they have little control over their work, but have a lot of demands placed on them, or are in manual jobs. Stress combined with other risk factors are more likely to lead to someone developing coronary heart disease.

3.2 SECONDARY AND TERTIARY HEALTH SERVICE INTERVENTIONS

3.2.1 PRIMARY ANGIOPLASTY SERVICES

National roll-out of angioplasty is feasible, and likely to be cost-effective, according to the Department of Health (2008), but may be logistically challenging in some parts of the country. Implementation of a primary angioplasty programme will depend on local priorities.

3.2.2 THROMBOLYSIS

The proportion of eligible people receiving thrombolysis (clot-busting drug treatment) within 60 minutes exceeded the national target of 68% during 2008. The number of people treated with thrombolysis reduced during 2008, as primary angioplasty services have been developing.

3.2.3 NEW TECHNOLOGIES

Lord Darzi's final report, High Quality Care for All, included a commitment to ensure cost-effective innovation in medical technologies. Emerging minimally invasive surgical techniques that have proved effective include mitral valve leaflet repair or 'mitral clips' (Department of Health, 2008).

3.2.4 CARDIAC NETWORKS

Cardiac networks support and facilitate the delivery of integrated care across primary, secondary and tertiary organisations. Networks are increasingly involved in commissioning, and provide support to commissioners. They are well-placed to promote prevention and the public health agenda (Department of Health, 2008).

3.2.5 CARDIAC REHABILITATION

Cardiac rehabilitation is a treatment programme to help heart patients manage their condition, improve their health and recover their quality of life after a cardiac event, according to the British Heart Foundation (http://www.bhf.org.uk/living_with_a_Heart_condition/recovery/cardiac_rehabilitation.aspx: last accessed December 2009). Programmes that combine exercise, psychological support,

and education, can be of greater benefit than programmes that provide only one of these components.

3.2.6 VACCINATIONS

Influenza vaccine – including swine flu - and pneumococcal vaccines are effective in reducing death rates and reducing hospitalisation in those with heart failure (Sharma, 2009).

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