A secondary prevention tool for use by primary care organisations

Competing clinical priorities mean that the benefits that occur in secondary prevention of coronary heart disease are overlooked. Dr Chris Harris describes a useful tool that charts levels of uptake of a therapeutic approach against cardiovascular events prevented.

Abstract

Though the evidence for secondary prevention of cardiovascular disease is strong, the substantial benefits in terms of outcomes are often lost at practice level with competing clinical priorities and, at primary care group/trust level, with competing commissioning priorities. Our primary care trust has developed a secondary prevention tool that gives a clear picture of the benefits achievable with effective secondary prevention.

Key words: secondary prevention, primary care organisations, numbers needed to treat.

Introduction

Bradford South and West primary care trust (PCT) comprises approximately 150 000 patients across 24 practices. We have been actively planning for and implementing the National Service Framework for Coronary Heart Disease (NSF for CHD) for the past two years. The PCT provides significant funding of nurse time in practice to provide the 'systematic and structured care' model suggested in the NSF. Each nurse undertaking CHD prevention in practice is diploma trained; quarterly meetings across the PCT provide the opportunity for feedback, support and ongoing training.

Within the enormous NSF document the impact of secondary prevention is often lost against the more visible pressures of chest pain clinics, acute myocardial infarction (MI) management and the number of coronary artery bypass grafts.

'It is possible to chart current levels of uptake against reduction of events/deaths with improvements in secondary prevention'

Chris Harris

Based on secondary prevention trials and reasonable estimates from primary prevention trials, it is possible to chart current levels of uptake against reduction of events/deaths with improvements in secondary prevention.

Use of the secondary prevention tool

Table 1 shows the chart discussed above. The following points should be considered when compiling such a chart.

- The level of CHD across our PCT is based on our recent audit. Alternative levels can be taken from National Health Surveys.
- Numbers needed to treat (NNT) are based on randomised controlled trials for aspirin, beta blockers, statins and ACE inhibitors.
- Blood pressure control is based on NNT for high-risk primary prevention,[4] with 15% CHD equating to 20% cardiovascular risk with a 25% relative risk reduction in cardiovascular events with intervention.
- ACE inhibitor calculations are based on a 50% MI rate with 43% incidence in left ventricular dysfunction and failure post-MI.[6]
- The estimated uptake level is based on accurate data from the PCT and EUROASPIRE II[10] data. The latter is probably an optimistic base level as the data were based on patients attending secondary care. In our PCT (and I would expect nationally) we are aware of significant numbers of patients with CHD who attend primary care only and about whom we have had very little information until recently.
- Estimates of achievable levels are reasonable levels based on individual practice achievements within the PCT, smoking cessation rates across the PCT and NSF 'achievable' targets.

Limitations to its use

There are some limitations with this chart. Assumptions need to be made about beta blockers, blood pressure management in this context and smoking cessation. No estimates have been added based on lifestyle intervention (such as oily fish post-MI), effective cardiac rehabilitation or the expanding role

Table 1. A chart of 3,679 patients with CHD in the Bradford South and West PCT. These patients were aged between 35 and 74 years as at December 2000

Approach	Event prevented	Numbers needed to treat	Current uptake level (%)	Population	Population receiving intervention	Target achieveable (%)	Numbers receiving intervention target achieved	Additional events prevented
Aspirin post-MI[1]	CV death/event	12	70	3,679	2,575	95	3,495	77
Beta blocker post-MI[2]	MI death	20	46	3,679	1,692	80	2,943	63
Statins post-MI[3]	Death/CV event	11	41	3,679	1,508	80	2,943	130
BP control[4,5]	CV event/death	40	46	3,679	1,692	75	2,759	27
ACE inhibitors[6-8]	CV death/hospitalisation	10	27	3,679	214	80	633	42
Smoking cessation[9]	Death/reinfarction	3	80	3,679	2,943	85	3,127	61
Total								400

Key messages

- Motivating change in general practice is a key element to the success of implementing the NSF in primary care
- Translating policy into clear patient benefit helps to motivate key individuals in practice
- Outcome data help to support primary care in commissioning issues across all 12 of the NSF standards

of ACE inhibitors (since the HOPE study, for example).[11]

Uses of the secondary prevention tool

We have found that this tool has many uses.

- The enormity of the benefit to be gained from straightforward effective management in practice is clear to see. Year-on-year benefits, for instance the estimated number of events prevented following the previous year's activity, can be mapped out as progress is made.
- These potential benefits support the role of the nurse specialist and nurse-led clinics in this field.
- The wider issue of practising evidence-based medicine in primary care and discharging non-evidence-based work is supported by this tool.
- As data accuracy improves, the tool can be mapped against hospital admission and readmission rates.
- Emerging evidence from trials such as HOPE can be 'bolted on'.
- It is possible to cost out benefits against the resourcing of time in practice, PCG/PCT support and increased prescribing costs.
- This brings in the wider issue of prioritisation of limited resources: funding for CHD prevention is supported by these outcome benefits.

References

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