Improving cardiovascular disease through networks of general practices

An observational study in London found that grouping general practices into managed networks and emphasising clinical engagement and education was associated with small improvements in outcomes related to cardiovascular disease, although it was not clear which elements of the networks were most important.

**Overview:** Cardiovascular disease is a leading cause of preventable mortality in the UK. Various risk factors and clinical conditions increase a person’s risk of developing cardiovascular disease ([NICE 2014](#)). Modifiable risk factors include high blood level of cholesterol, and hypertension is one of the conditions linked to cardiovascular disease.

The Quality and Outcomes Framework (QOF) offers financial incentives to general practices in England for achieving clinical, public health and quality targets. Individual practices receive payments for meeting various targets, including achieving target levels of blood pressure and cholesterol in people with hypertension, coronary heart disease and stroke. Evidence suggests that quality of care could be improved by grouping general practices into networks and providing incentives for the networks rather than for individual practices ([Hull et al. 2013](#)).

**Current advice:** The NICE guideline on [hypertension](#) recommends initially offering lifestyle advice to people with raised blood pressure. Antihypertensive drugs should be offered to people aged under 80 years who have a blood pressure of 140/90 mmHg or higher and who meet 1 or more criteria, such as established cardiovascular disease.

Clinic blood pressure measurements should be used to monitor the response to antihypertensive treatment with lifestyle modifications or drugs. Healthcare professionals should aim for a target clinic blood pressure below 140/90 mmHg in people aged under 80 years with treated hypertension.

The NICE Pathway on [hypertension](#) brings together all related NICE guidance and associated products on the condition in a set of interactive topic-based diagrams.

**New evidence:** An observational study in east London by [Robson et al. (2014)](#) assessed how grouping general practices into collaborative networks affected outcomes related to cardiovascular disease. A total of 34 general practices in the former Tower Hamlets Primary Care Trust (PCT) were grouped by geographical area into networks of 4–5 practices.
Practices in each network worked together to target 3 elements of cardiovascular disease: hypertension, coronary heart disease and stroke. The networks collectively received financial incentives for hitting targets – such as for blood pressure (less than 150/90 mg/Hg) and cholesterol (less than 5 mmol/l) – in people with these disorders. Patients who did not meet these targets were recalled more frequently.

To help them meet the specified targets, networks were provided with clinical guidelines, ran education meetings and clinical case discussion meetings, and set up peer education support. Each network also had a network manager, who provided IT support and monthly reporting of network performance and incentives received.

Once the networks had been set up, blood pressure and cholesterol control in people with hypertension, coronary heart disease and stroke improved considerably faster in Tower Hamlets than in London as a whole or in England.

In the 3 years after the networks were in place, the proportion of people with hypertension, coronary heart disease and stroke who met the blood pressure target increased by 1.24% a year in Tower Hamlets. The proportion of people with these disorders who hit the blood pressure target increased more slowly each year in London (0.22% a year) and in England as a whole (0.28% a year; p<0.001 for both).

The proportion of people with coronary heart disease who met the serum cholesterol target increased by 0.61% a year in Tower Hamlets after introduction of the networks. Over the same 3 year period, the proportion of people with coronary heart disease who met the cholesterol target decreased each year in London (−0.40% a year) and in England (−0.67% a year; p<0.05).

In the 3 years after the networks were introduced, mortality from myocardial infarction declined by 43% in Tower Hamlets, a greater drop than the average decrease of 25% for the top 10 ranked PCTs in England.

This analysis did not appear to account for factors that may have changed during the follow-up period and affected the study results, such as demographics, affluence of people registered at the network practices, and patient behaviour. The study took place in an inner-city area, so the results may not apply to less urban areas. The results cannot prove that improvements in care as a result of the networks definitively affected outcomes such as mortality from cardiovascular disease.

**Commentary:** “This study by Robson et al. (2014) demonstrates the value and impact of primary care adopting a collaborative approach towards optimising the management of cardiovascular disease.

“Within a relatively short time frame, the project led to significant improvements in risk factor modification in the local population, including blood pressure and lipid profiles. Reassuringly, these benefits appeared to translate into improved clinical outcomes, including mortality from myocardial infarction.

“The key intervention within the managed practice networks appeared to be clinical engagement and leadership within each network, supported by peer-to-peer education, clear, concise guidelines and reliable, intuitive IT infrastructure to manage data and recall systems.

“Another significant aspect of the intervention was the focus on the more challenging ‘off target’ patients, who were not achieving the thresholds for blood pressure and cholesterol control. These people are often ‘exempted’ in QOF and not included in practice performance statistics. By providing additional nurse specialist support for these patients, the networks might reduce exemption rates and improve outcomes in these often hard to reach and inherently higher risk cohorts.

“It is worth noting that significant resource was required to establish and support the networks during the programme, which may be a limiting factor in replicating this intervention elsewhere. In addition, it is difficult to define precisely from the study which particular intervention (educational support, financial incentives, adherence to guidelines, peer learning or specialist CVD nurse support) had the
greatest impact. It would have been helpful to define this in order to identify which intervention(s) could potentially be adopted by other localities, who may find themselves more constrained in terms of expertise and resource.

“The results of this study are encouraging however, not only in terms of their impact on risk factor modification and clinical outcomes, but also in respect of the positive aspects of collaborative working between practices. The study design suggests that, with appropriate leadership and resource, the network model could prove to be a valuable template for Clinical Commissioning Groups and primary care colleagues nationally who may be considering developing similar models of care.” – **Dr Chris Arden, GP, Chandlers Ford; GPSI Cardiology, Southampton; and Cardiovascular Lead, West Hampshire Clinical Commissioning Group**

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