Regional Development of a Population Based Collaborative CVD Prevention Strategy: The Experience of NHS West Midlands

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The National Health Service (NHS) has ambitiously set out a plan to reduce health inequalities in England within its Next Stage review.[1] Pivotal is a key drive to move from illness management to health preservation. The benefits of a paradigm shift from reactive to predictive healthcare are apparent not only from the perspective of the individual and society, but also illustrates potential benefits to the wider healthcare economy.

In the West Midlands, a series of strategic initiatives under an umbrella termed Investing for Health (IFH)[2] was developed in 2007 to address the following:-

1. Inequalities widening
2. Variable quality and safety of services
3. Lack of upstream investment
4. Buying things that don't work
5. Costs increasing faster than income
6. Lack of public confidence in services
7. Complex systems difficult to navigate

Alignment of the IFH programme with the NHS Next Stage review has culminated in focussed development of Clinical Pathway group activities, one of which is termed 'Staying Healthy' and accommodates the strategic development of Cardiovascular prevention. This strategy seeks to address the entire patient journey, with integration of primordial prevention, primary prevention and downstream access to more specialised services.

Cardiovascular disease (CVD) is the leading cause of death in England and Wales. 2005 statistics reveal CVD as accounting for 124,000 deaths (a third of all deaths); 39,000 of those who died prematurely before 75 years of age.[3] Morbidity from CVD is also significant, with twice as many non fatal events as fatal events. Any prevention strategy must target modifiable risk factors such as smoking, raised blood pressure and raised cholesterol, focussing not simply on therapeutic interventions but also lifestyle change and social determinants of these risk factors. Successfully addressing these should significantly reduce premature coronary heart disease (CHD).[4]

In 2000, primary prevention of CVD was covered by Chapters 1 and 2 of the National Service Framework (NSF) for CHD.[5] However, the NSF did not specify or prioritise which public health measures which would be required to achieve this aim. Almost 10 years on, having achieved great success in implementation of the other chapters of the NSF, attention has now moved to focus on prevention and public health level interventions. The National Screening Committee[6] has advised in detail on CVD prevention.

In April 2008, the Department of Health (DH) launched a consultation on a national Vascular Risk Checks initiative.[7] The major components of this have since been integrated within an NHS West Midlands (NHSWM) CVD Prevention Strategy. Allocating funds of £250m as a one-off investment nationally, the VRC programme has estimated the cost per QALY at £3000, to

include both CV assessment as well as provision of lifestyle risk management services.

Wider Benefits of CVD Prevention

The NHSWM strategy acknowledges that although CVD is responsible for a significant proportion of health inequalities, identification of CV risk factors and behaviours and subsequent provision of lifestyle risk management services will also prevent many other long term conditions e.g. cancer, respiratory disease etc. contributing to a further amelioration of Health Inequalities. Indeed, identification of risk factors for death from any cause globally illustrates that the top 7 risk factors are also CV risk factors.

Prevention is Everybody's Business

Coordination of a multi-agency approach is essential to effectively facilitate CVD prevention. Reduction of the prevalence and/or severity of CVD risk factors at population level would have a significant impact on CV events, since the majority of events occur in individuals at low CV risk. Therefore, public health level interventions to reduce tobacco consumption, increase physical activity and improve diet would demonstrate significant benefits.

Services require leadership and collaboration between PCTs, acute trusts, hard to reach groups, voluntary sector agencies (both national and local), local authorities, and other relevant stakeholders. Mapping exercises within NHSWM have identified excellent initiatives at primary care level, often not achieving full potential due to fragmentation and lack of integration into upstream and downstream pathways. The development of a market for lifestyle risk management services (LRMS) and uniform tariffs for such services aims to develop robust mechanisms to provide widescale upstream services for individuals deemed to be at CV risk. Provision and uptake of these services must be monitored in order to ensure health inequalities and PSA targets are being targeted.

Historically, traditional risk factors such as physical inactivity, hypertension, tobacco consumption, diabetes and dyslipidaemia have often been managed in isolation across the spectrum of primary and secondary care, using the skills of a variety of healthcare professionals. Access to specific services for lifestyle and risk factor management e.g. exercise on prescription, is often restricted to 'gatekeepers' such as primary care clinicians. A strategy to enable access to LRMS from multiple portals and steer towards overall CV risk management rather than single risk factors is to be encouraged. The evidence for efficacy and cost efficacy of LRMS is derived largely from observational, often natural experiment literature as it is difficult to fund, organise and execute large enough randomised trials to assess the definitive impact of lifestyle change.

Screening or not Screening

Whilst the VRC programme has many characteristics which are consistent with a screening programme, the DH maintains that it aims to assess risk and not screen for disease. Additionally, the failure to fulfil Wilson-Junger criteria ensures by definition that VRC is not a screening programme. However, at a

practical level, implementation would be eased by utilisation of many of the mechanisms and frameworks adopted by screening programmes to ensure a systematic process of assessment. Targeted assessment of high risk groups e.g. patients with hypertension, known dyslipidaemia, mental health populations, long term conditions, areas of deprivation, would appear to be a prudent first step towards eventually ensuring systematic assessment of CV risk in the age group 40-74 years advocated by VRC. The workplace also offers an opportunity to implement strategies to improve workforce physical and mental health and should be considered.

Prevention is not of equal benefit to everyone. Although a useful guide, assessment might not be exclusively limited to those 40-74 years of age, since addressing inequalities requires disproportionate emphasis on higher risk population e.g. south Asian men are more likely to develop CVD at a younger age and family history of premature CHD identifies an important group within which there are individuals with familial hyperlipidaemia. Therefore, scope within a strategy to address such high risk populations is essential in the quest to address inequalities.

NHSWM has identified added value to an overall CV prevention strategy by encompassing the following areas:-

1. Risk assessment of first degree relatives of those with premature CVD or a family history of sudden cardiac death.
2. Screening for atrial fibrillation which the VRC offers an opportunity for, in order to reduce rates of cerebrovascular disease.
3. Screening at an earlier age for diabetes in high risk south Asian populations, in response to data suggesting an earlier onset of diabetes by approximately 10 years in this group.
4. Alcohol intake assessment.

Call- recall systems

Similar to screening strategies, a robust call-recall system is required for CVD prevention, to ensure all individuals, particularly those from hard to reach groups, are invited for assessment and also to avoid duplicity of invitation. CVD assessment within NHSWM is recommended to be undertaken annually for those at high risk and 5 yearly for those at low risk. Opportunistic assessment, possible both by commercial and NHS providers, should be integrated into an overall strategy whereby it should only be undertaken by accredited providers who are able to communicate outcomes to NHS systems and also refer into LRMS.

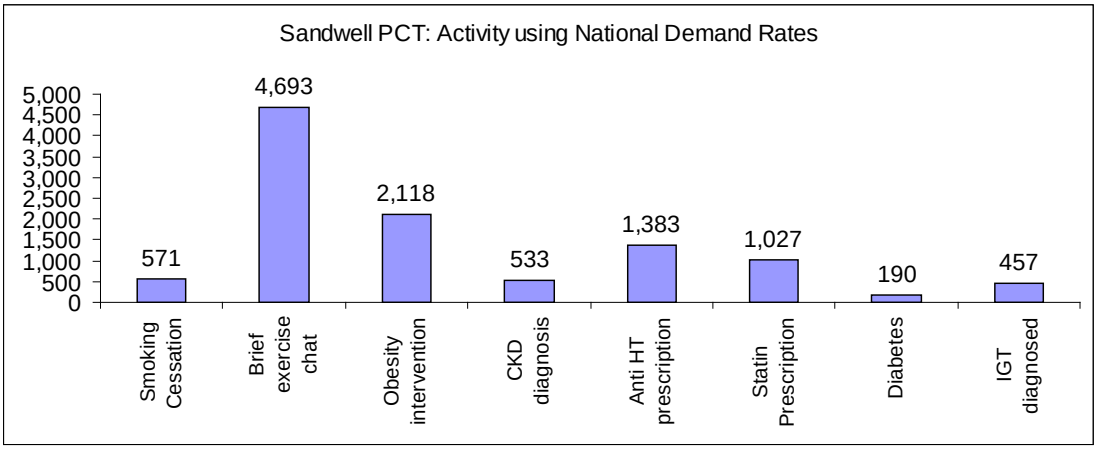
Service provision

The magnitude of LRMS provision requires costing in order to realistically prevent CVD. Risk assessment alone is insufficient unless coupled to both public health policy to drive behavioural change e.g. transport policies, food policy, education etc. and individualised lifestyle interventions. The former requires cross agency working at government and local authority level, whilst the latter services may be commissioned and provided by the NHS.

DH estimates of demand rates for LRMS are as follows:-

Smoking cessation	4.5%
Brief exercise chat	37%
Obesity intervention	16.7%
CKD diagnosis	4.2%
Antihypertensive prescription	10.9%
Statin prescription	8.1%
New diabetes detection	1.5%
IGT diagnosis	3.6%

At PCT level, the DH has produced a tool to enable calculation of the levels of LRMS required to guide commissioning. However, these numbers are a guide and are inevitably higher in areas of greater disease burden.



Compared to estimated needs from the national calculator, needs estimated from a primary care pilot project based upon targeted screening in Sandwell (Marshall et al, personal communication) showed the following: 5% of Sandwell PCT population were identified at significant CV risk (15,000), 3% attended for screening (9,000), 2% were medically treated (6,750), 0.5% referred to LRMS (1,800) and 0.2% were referred for specialist secondary care opinion. Local needs assessments are therefore vital to guide local commissioning, adding to modelling.

Opportunities for further Public Health Interventions

In addition to reducing Health Inequalities (PSA 18.2) by reducing circulatory disease mortality (PSA 1.1 and 6.1) and improving life expectancy (PSA 18.1), a CVD prevention strategy enables

- Patient empowerment: Individuals identified charged with strategies to self- manage and self-refer to lifestyle interventions.
- Community empowerment: a tailored rolling programme of health promotion could identify specific areas of population based intervention e.g. tobacco chewing advice to Bangladeshi communities.[8]

Gaps and Challenges

One appreciates that there is a paucity of evidence and cost effectiveness data for many of the concepts and strategies covered in either the VRC or

NHSWM CVD Prevention strategies, but evaluation would complete the gaps identified.

Further challenges prevail in avoiding duplicity of risk assessment and potential cost disbenefit. Commercial and professional interests both exist in this newly developed market. Whilst several providers of CV risk assessment exist, one must ensure providers are recognised, deliver a defined quality of service and are also able to provide or refer into LRMS.

Research and Development

A further objective of the NHSWM approach is to ensure an evidence base is developed alongside this natural experiment. The implementation of a population based CVD strategy offers itself to long term research, essentially of a cohort of individuals who will at baseline, undergo CV risk assessment. In addition, continuous assessment of cohort data and linkage to actual CV events will enable one to assess the impact of a CVD prevention strategy and contribute to the assessment of cost effectiveness analysis in due course. Any inequalities in access and provision of prevention services will also be discernable via a robust feedback mechanism.

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