Cost effectiveness of options for diagnosis of high blood pressure in primary care: a modelling study

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Summary

Hypertension (high blood pressure (BP)) is a key risk factor for developing cardiovascular disease. Hypertension is a common cause of primary care consultation and 25% of the adult population have hypertension.

In this study they use a Markov model-based probabilistic cost-effective analysis. The Markov model is probability theory that is used in decision analysis. In this study it is used to work out the events when a patient presents with possible hypertension and allows an analysis of the best management for diagnosis of hypertension. The options are clinic base BP, home BP monitoring or ambulatory monitoring. It also allows the research team to look at Quality of life years and cost effectiveness of the interventions. The model was run for ten aged stratified and sex stratified groups: men and women aged 40, 50, 60, 70 and 75 years old.

This study showed that ambulatory monitoring was the most cost effective intervention for both men and women. Interesting the cost savings related the accuracy of the intervention and therefore lower prescribing of hypertensive medications.

Impact

This research study was clinically important as it led to a change in the NICE hypertension guidance to favour ambulatory monitor of BP before diagnosis within a primary care setting.

News   Clinical News

GP wins award for hypertension research

By Stephen Robinson on the 18 June 2012

Researchers led by a GP academic who showed how the NHS could more effectively diagnose hypertension while saving millions of pounds have won a national award.

Discuss on Doctors.net.uk

From left to right: researcher Kate Lovibond, RCGP President Dr Iona Heath, Professor Richard McManus

https://www.gponline.com/gp-wins-award-hypertension-research/article/1136914

Research team

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Thinking points

1. Discuss the pros and cons of ambulatory BP monitoring vs home BP monitoring in primary care
2. Look at the British Hypertension Guidelines for the up to date pharmacological guidance on prescribing in Hypertension
3. What other investigations would you do when diagnosing a patient with Hypertension?
4. Are there any other primary care research studies which use the Markov model for decision analysis?