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Posted on Thursday 1st September 2011

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High blood pressure should be diagnosed using ambulatory blood pressure monitoring (repeated measurements throughout a 24-hour period), which is not only more clinically accurate than clinic-based measurements but is better value for money, according to University research published online in The Lancet.

The research has helped to shape brand new guidelines announced today by NICE which radically alter how hypertension is diagnosed and treated. These recommend that a diagnosis of high blood pressure should be confirmed using 24-hour ambulatory blood pressure monitoring (ABPM) or home monitoring (HBPM) rather than solely on measurements taken in a clinical setting.

High blood pressure is a leading risk factor for heart disease and stroke worldwide and is the most common reason for a primary care consultation for a chronic disorder in the UK, with at least a quarter of adults suffering from hypertension.

The study, which was funded by the National Institute for Health Research (NIHR) and the National Institute for Health and Clinical Excellence (NICE), was a collaborative project involving institutions from across the UK, including researchers from NICE, Barts, the University of London and the Universities of Birmingham, Oxford, Cambridge and Leicester

Using a hypothetical primary care population aged 40-plus, with a screening blood pressure measurement of greater than 140/90 mm Hg, the researchers compared three diagnostic strategies – further blood pressure monitoring in a clinic, monitoring at home and measurements using a mobile monitor – to assess lifetime costs, quality-adjusted life years and cost effectiveness.

The results showed that ambulatory monitoring was the most cost effective option to diagnose high blood pressure in men and women of all ages. It saved money in all groups and resulted in more quality-adjusted life years for both sexes in the 50-plus age group.

The team concludes: ‘Ambulatory monitoring as a diagnostic strategy for hypertension after an initial raised reading in the clinic would reduce misdiagnosis and save costs. Additional costs from ambulatory monitoring are counter-balanced by cost savings from better targeted treatments. Ambulatory monitoring is recommended for most patients before the start of hypertensive drugs.’

Professor Richard McManus, of the University’s Department of Primary Care Clinical Sciences, who co-authored the paper with Dr Sue Jowett, of the Health Economics Unit at the University, comments: ‘This research shows that ambulatory blood pressure monitoring at the time of diagnosis of high blood pressure would allow better targeting of treatment and is cost saving. Ambulatory monitoring is already available in some general practices and we have shown that its widespread use would be better for both patients and the clinicians looking after them. Treatment with blood pressure lowering medication is usually lifelong and so it is worth getting the decision to start right in the first place.’

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