

Major journals

LANCET

Enhanced care improves blood pressure and cholesterol in South Asian patients

Readability	✓✓✓✓
Applicability to practice	✓✓✓✓
WOW! factor	✓✓✓✓

1 Prevalence of type 2 diabetes is significantly higher in patients originating from South Asian regions compared with Caucasian Europeans; those in this population are also at increased risk of cardiovascular and renal complications.

2 Management of type 2 diabetes in this population is thus particularly important, but complicated further by challenges in communication, culture and general understanding; this study aimed to overcome these issues by investigating an enhanced care package in general practices.

3 A total of 21 medical practices participated in the study and changes in blood pressure, total cholesterol and glycaemic control were compared between patients receiving enhanced care and those receiving normal treatment.

4 After 2 years, small but significant benefits were observed in patients in the enhanced treatment group; both systolic and diastolic blood pressure was significantly decreased by 4.9mmHg and 3.8mmHg, respectively, and cholesterol levels were also lower by 0.45mmol/L.

5 Although the enhanced care intervention was not cost effective, it did demonstrate benefits in the South Asian population.

Bellary S, O'Hare JP, Raymond NT et al (2008) Enhanced diabetes care to patients of south Asian ethnic origin (the United Kingdom Asian Diabetes Study): a cluster randomised controlled trial. *Lancet* **371**: 1769–76

Importance of enhanced care for patients of South Asian origin with type 2 diabetes



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This cluster, randomised, controlled trial (summarised alongside) examined the effect of a culturally sensitive, enhanced care package aiming to improve cardiovascular risk factors in people with type 2 diabetes. The study focused

particularly on patients of south Asian origin with type 2 diabetes, and included those attending general medical practices in 21 different inner-city locations; practices were randomly allocated to provide one of two interventions – enhanced or standard care. The enhanced intervention included providing participants with a combination of additional time allocation from practice nurses and extra support from both a link worker and a diabetes specialist nurse. All participating practices were provided with guidelines and definitive treatment pathways and prescribing algorithms for both enhanced and normal interventions.

Overall, the enhanced care intervention demonstrated small, but significant reductions

in diastolic blood pressure and mean arterial pressure. No significant differences were observed between the enhanced and standard treatment groups with regards to total cholesterol, systolic blood pressure or HbA_{1c} levels. In addition, the enhanced, nurse-led intervention was deemed not cost effective, as the incremental cost effectiveness ratio was estimated to be £28 933 per QALY). The economic shortcomings of this intervention were, however, bolstered by the overall effect of the enhanced care provided: after 2 years, significant improvements in both systolic and diastolic blood pressure, as well as cholesterol levels were observed in patients receiving this intervention.

Consequently, these findings demonstrate the small but significant benefits that can be gained from a culturally tailored care package, particularly in patients of a south Asian origin. As is highlighted by the study authors, the observed effects of this study can be even further improved by additional interventions aiming to increase motivation in patients to improve the outcome of their diabetes.

ARCHIVES OF INTERNAL MEDICINE

Obesity epidemic can lead to increased rates of heart disease

Readability	✓✓✓
Applicability to practice	✓✓
WOW! factor	✓✓✓

1 The alarming increase in rates of obesity indicated a world-wide epidemic; this study aimed to investigate the effect of obesity on incidence of cardiovascular disease.

2 This observational cohort study included a total of 6814 participants, aged 45–84 years, who did not have cardiovascular disease at study entry. Body weight, risk factors for cardiovascular disease,

medication use and subclinical vascular disease were assessed in all participants.

3 Obesity or overweight was observed in a higher percentage of patients from Caucasian European, African–American and Hispanic backgrounds (30–50% and 60–85%, respectively); however, Chinese–American patients had the lowest rates of both overweight and obesity (33% and 5%, respectively).

4 Obese patients had higher prevalence of hypertension and diabetes; obesity was also associated with increased risk of cardiovascular disease, indicating that risk of future vascular diseases can be linked to the prevalence of obesity in most of the population.

Burke GL, Bertoni AG, Shea S et al (2008) The impact of obesity on cardiovascular disease risk factors and subclinical vascular disease: the Multi-Ethnic Study of Atherosclerosis. *Archives of Internal Medicine* **168**: 928–35

JAMA

Pioglitazone better at slowing atherosclerosis than sulphonylurea

Readability	✓✓✓✓
Applicability to practice	✓✓✓✓
WOW! factor	✓✓✓✓

1 The comparative effect of glucose lowering agents on slowing the progression of coronary atherosclerosis have not been investigated.

2 This study compared pioglitazone and glimepiride, and assessed their efficacy in slowing atherosclerosis in patients with type 2 diabetes.

3 Participants were randomly assigned to either treatment and underwent repeat intravascular ultrasonography examinations;

4 Overall, percentages of atheroma volume had decreased by 0.73% in the pioglitazone group, compared with 0.16% in the glimepiride group ($P=0.002$); high-density lipoprotein levels and median triglyceride levels were both decreased in the pioglitazone group.

5 Pioglitazone was thus more effective at reducing the rate of atherosclerosis compared with glimepiride.

Nissen SE, Nicholls SJ, Wolski K et al (2008) Comparison of pioglitazone vs glimepiride on progression of coronary atherosclerosis in patients with type 2 diabetes: the PERISCOPE randomized controlled trial. *JAMA* **299**: 1561–73

THE LANCET

FPG thresholds not reliable indicator for retinopathy diagnosis

Readability	✓✓✓✓
Applicability to practice	✓✓✓✓
WOW! factor	✓✓✓✓

1 This study aimed to determine whether or not exact fasting plasma glucose (FPG) thresholds are reliable for the diagnosis of retinopathy.

2 Patient data from three cross-sectional studies were analysed and diagnosis of retinopathy based on uniform glycaemic thresholds was deemed inconsistent; the common cutoff of $FPG > 7.0$ mmol/L was found to have a low specificity ($< 40\%$) for detecting retinopathy.

3 The authors conclude that FPG levels are not reliable indicators of retinopathy diagnosis, indicating that current criteria should be revised.

Wong TY, Liew G, Tapp RJ et al (2008) Relation between fasting glucose and retinopathy for diagnosis of diabetes: three population-based cross-sectional studies. *The Lancet* **371**: 736–43

ARCHIVES OF INTERNAL MEDICINE

UAE and eGFR levels combined to estimate risk of CVD

Readability	✓✓✓✓
Applicability to practice	✓✓✓
WOW! factor	✓✓✓

1 Risk of cardiovascular disease (CVD) has been estimated using individual measurements of urinary albumin excretion (UAE) or estimated glomerular filtration rate (eGFR); the combined use of these measurements, however, has not been established.

2 This study evaluated the diagnostic effect of both UAE and eGFR in 1665 patients; diagnosis of kidney dysfunction with both markers was increased compared with diagnoses based on a single marker ($P < 0.001$).

3 Risk of CVD, defined by an increased hazard ratio, was higher using both markers, particularly in patients with increased UAE and low eGFR.

4 Consequently, kidney disease diagnosed using both UAE and eGFR is a good indicator of risk of CVD.

Cirillo M, Lanti MP, Menotti A et al (2008) Definition of kidney dysfunction as a cardiovascular risk factor. Use of urinary albumin excretion and estimated glomerular filtration rate. *Archives of Internal Medicine* **168**: 617–24

NEW ENGLAND JOURNAL OF MEDICINE

Either telmisartan or ramipril for cardiovascular disease in high-risk patients

Readability	✓✓✓✓
Applicability to practice	✓✓✓✓
WOW! factor	✓✓✓✓

1 Angiotensin converting enzyme (ACE) inhibitors are recommended for the treatment of patients with vascular disease or for those with high-risk diabetes; this study investigated the efficacy of the ACE inhibitor ramipril compared with that of telmisartan, an angiotensin-receptor blocker (ARB), as well as combination treatment of both drug types.

2 Participants were randomly allocated to receive one of the three treatment regimens; 8576 patients received treatment with ramipril 10mg/day, 8542 received telmisartan 80mg/day, and 8502 received combination therapy.

3 After a 56-month follow-up period, 16.5% of patients receiving ramipril, 16.7% on telmisartan group, and 16.3% in the combination group died of cardiovascular causes; patients in the telmisartan treatment group had lower rates of cough and angioedema compared with the ramipril group ($P < 0.001$ and $P = 0.01$, respectively), but higher rates of hypotensive symptoms ($P < 0.001$).

4 Patients in the combination therapy group had increased rates of adverse events, including hypotensive symptoms, syncope, and renal dysfunction.

The ONTARGET Investigators (2008) Telmisartan, ramipril, or both in patients at high risk for vascular events. *New England Journal of Medicine* **358**: 1547–59

‘Patients in the combination therapy group had increased rates of adverse events, including hypotensive symptoms, syncope, and renal dysfunction.’