

Cost effectiveness analysis of improved blood pressure control in hypertensive patients with type 2 diabetes: UKPDS 40.

UK Prospective Diabetes Study Group.

BMJ. 1998 Sep 12; 317(7160): 720–6.

OBJECTIVES: To estimate the economic efficiency of tight blood pressure control, with angiotensin converting enzyme inhibitors or beta blockers, compared with less tight control in hypertensive patients with type 2 diabetes. **DESIGN:** Cost effectiveness analysis incorporating within trial analysis and estimation of impact on life expectancy through use of the within trial hazards of reaching a defined clinical end point. Use of resources driven by trial protocol and use of resources in standard clinical practice were both considered. **SETTING:** 20 hospital based clinics in England, Scotland, and Northern Ireland. **SUBJECTS:** 1148 hypertensive patients with type 2 diabetes from UK prospective diabetes study randomised to tight control of blood pressure (n=758) or less tight control (n=390). **MAIN OUTCOME MEASURE:** Cost effectiveness ratios based on (a) use of healthcare resources associated with tight control and less tight control and treatment of complications and (b) within trial time free from diabetes related end points, and life years gained. **RESULTS:** Based on use of resources driven by trial protocol, the incremental cost effectiveness of tight control compared with less tight control was cost saving. Based on use of resources in standard clinical practice, incremental cost per extra year free from end points amounted to pound1049 (costs and effects discounted at 6% per year) and pound434 (costs discounted at 6% per year and effects not discounted). The incremental cost per life year gained was pound720 (costs and effects discounted at 6% per year) and pound291 (costs discounted at 6% per year and effects not discounted). **CONCLUSIONS:** Tight control of blood pressure in hypertensive patients with type 2 diabetes substantially reduced the cost of complications, increased the interval without complications and survival, and had a cost effectiveness ratio that compares favourably with many accepted healthcare programmes.