RESEARCH HIGHLIGHTS

HYPERTENSION COST-EFFECTIVENESS OF 2014 GUIDELINES

In 2014, the ACC and the AHA called for cost-effectiveness studies to be included in clinical practice guidelines. In a new report published in *The New England Journal of Medicine*, the full implementation of the 2014 hypertension guidelines for US adults was projected to be cost-effective and to prevent ~56,000 cardiovascular events and ~13,000 deaths per year.

The Cardiovascular Disease Policy Model, a computer simulation that forecasts cardiovascular disease trends in the USA, was used to evaluate public health outcomes (quality-adjusted lifevears [OALYs] added, and reductions in coronary heart disease and stroke events) and economic value (costeffective if <US\$50,000 per QALY added) of implementing the 2014 hypertension treatment guidelines. The model predicted that treatment of men aged 35–74 years and women aged 45-74 years with cardiovascular disease or stage 2 hypertension (systolic blood pressure ≥160 mmHg) between 2014 and 2024 would reduce mortality and costs associated with cardiovascular events, even if spending on strategies to improve adherence to therapies doubled. The treatment for stage 1 hypertension (systolic blood pressure 140–159 mmHg) was also cost-effective in all adults aged 45–74 years, but of intermediate (\$50,000-\$150,000 per QALY) or low (>\$150,000 per QALY) cost-effectiveness in women aged 35-44 years with diabetes mellitus or chronic kidney disease, or with none of these diseases, respectively,

Andrew Moran, the lead author of the study report, hopes that "producing these best estimates will lower the threshold for health organizations to implement more hypertension control programmes", and argues that "health organizations could double or triple the resources invested in hypertension control in the highest risk patients and still save costs". Similar costeffectiveness analysis that include patients aged >74 years and focus on major US ethnic groups are currently underway, and a new study will assess the advantage of using baseline global cardiovascular disease risk prediction to guide hypertension treatment—an approach already used in other countries and recommended in cardiovascular disease prevention guidelines from the WHO.

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Original article Moran, A. E. *et al.* Cost-effectiveness of hypertension therapy according to 2014 guidelines. *N. Engl. J. Med.* **372**, 447–455 (2015)