

AUTHORS' REPLY

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Dear Sir,

Thank you for your interest in and comments on our article.⁽¹⁾ The Practice Integration & Lifelong Learning series consists of short Continuing Medical Education articles designed with the intention of updating our current practices through simple cases centred on specific topics.

Although we recognise that there are other authorities and organisations with similar guidelines, we have deliberately selected those that are most applicable to our local primary care practice.

Thank you for introducing another reputable guideline for our readers' consideration. As these local guidelines often take into account common evidence-based information, local epidemiology, life expectancies, and the socioeconomic and health statuses of their member countries when determining their stratifications and final recommendations, we do expect some variations.

The difference in the diastolic blood pressure (BP) recommendations may have arisen from the differences in the Eighth Joint National Committee's (i.e. JNC 8) approach for formulating their guideline.⁽²⁾ There are at least three striking differences: (a) utilisation of a focused approach to clinical management questions; (b) inclusion of only robust study designs and studies less subjected to bias; and (c) taking into account practical considerations to facilitate guideline implementations.

Appreciating their unique approach, the panel did not find sufficient evidence to support the existing recommendations that adult patients with diabetes mellitus and hypertension should aim for a target diastolic BP < 80 mmHg. They also pointed out that the Hypertension Optimal Treatment (i.e. HOT) trial,⁽³⁾ which showed that the target of ≤ 80 mmHg is associated with an improved composite cardiovascular disease outcome, was a post hoc analysis of 8% of their study population, which was not pre-specified before the conduct of the study, and thus graded as low-quality evidence. Another well-known study that is often cited is the UK Prospective Diabetes Study,⁽⁴⁾ which showed that the group with target BP < 150/85 mmHg was associated with a significantly lower rate of stroke, heart failure, and diabetes-related endpoints and deaths, compared to the group with target BP < 180/105 mmHg. As part of the study design, it is not possible to know whether the contributory benefits were attributable to systolic, diastolic or mixed goals. There was also no clear evidence supporting the recommendation that a target diastolic BP just 5 mmHg below that of the general population will improve the outcomes for patients with diabetes mellitus and hypertension.

For patients at risk for or with overt nephropathy, three trials were considered: the African American Study of Kidney Disease and Hypertension (AASK); Modification of Diet in Renal Disease (MDRD); and BP control for renoprotection in patients with nondiabetic chronic renal disease (REIN-2).⁽⁵⁻⁷⁾ Only one of them addressed cardiovascular disease endpoints. Two of the trials (i.e. AASK and MDRD) used the mean arterial pressure and had different targets by age; REIN-2 used only diastolic BP goals. None of the trials showed that treatment to achieve a lower target BP (e.g. < 130/80 mmHg) significantly lowered kidney or cardiovascular disease endpoints, compared to a target BP of < 140/90 mmHg. For patients with proteinuria (> 3 g/24 hr), post hoc analysis from one study (i.e. MDRD) showed that the only benefit of treatment with a lower target BP goal (< 130/80 mmHg) was improved kidney outcome. This result was, however, not seen in the primary analyses, nor was it reported in the other two studies (i.e. AASK and REIN-2).

In the opening vignette, it was stated only once that Mr and Mrs Wolfgang are "in their seventies".⁽¹⁾ We apologise that the ages were not repeated beyond the case vignette, which may have affected our readers' clinical correlation and application of the information shared in the article. Thank you for highlighting the difference between home- and office-based blood pressure readings. There is a lot of renewed interest surrounding this area and we may consider working on another article to address this topic.

Yours sincerely,

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