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It's Time to Overcome Clinical Inertia

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Hypertension is the most important health problem that clinicians don't manage well. Blood pressure control is particularly important for patients with diabetes (1), but providers may be less likely to intensify therapy for hypertension than for hyperglycemia (2), and antihypertensive therapy in patients with diabetes is sometimes less intensive than in patients without diabetes (3)—the opposite of what it should be. In many patients, blood pressure levels remain above goal because providers do not initiate or intensify therapy when clinically indicated. We have characterized this problem as “clinical inertia” (4).

Despite recognition that suboptimal management of hypertension often reflects inadequate intensification of therapy, overcoming clinical inertia to improve blood pressure has been difficult; in 1 study, feedback on performance improved hemoglobin A_{1c} but had no effect on blood pressure (5). To overcome clinical inertia, we must understand its causes. Clinical inertia is not linked to patient sex or race (6), but it has been associated with a history of medication nonadherence (7), providers claiming satisfaction with blood pressure control (8), and the number of comorbid diseases (9). Such observations suggest that clinical inertia may reflect uncertainty about the level of blood pressure that merits intensification and preoccupation with the patient's other problems.

Two recent *Annals* papers (10, 11), 1 in this issue, provide information about the factors that contribute to clinical inertia in hypertension management. In this issue, Kerr and colleagues (10) used chart abstraction and provider questionnaires to assess the management of 1169 diabetic patients in a Veterans Affairs facility who had an initial clinic blood pressure reading of 140/90 mm Hg or greater. Despite an average systolic blood pressure (SBP) of 154 mm Hg and previous year SBP of 145 mm Hg, only 49% of patients overall had intensification of therapy at that visit. Intensification was less likely if the repeated clinic or home blood pressure was less than 140/90 mm Hg or if the clinic blood pressure was only slightly greater than 140/90 mm Hg, suggesting clinical uncertainty about the need for intensified treatment. Intensification was also less likely if the provider's SBP treatment goal was greater than 130 mm Hg. However, failure to intensify was not associated with competing demands (unrelated comorbid conditions), the number of medications, or time available for the visit. Because all of the patients had diabetes, the rate of intensification would have been even lower if the authors had used the American Diabetes Association SBP goal of less than 130 mm Hg as their measure of quality care. Moreover, the rate of intensification was often barely above 50%, even when SBP was consistently greater than 140 mm Hg.

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In a previous issue of *Annals*, Turner and colleagues (11) utilized an administrative database to examine the management of 15 459 patients in primary care practices. Overall, only 31% of patients received intensification of therapy when blood pressure was above goal, but the actual blood pressures were not described. Intensification was increased to 40% to 65% of patients if both systolic and diastolic pressures were elevated, if blood pressure was elevated at previous visits, or if a previous SBP was 160 mm Hg or greater, which is consistent with the hypothesis that intensification is associated with greater clinical certainty that action is needed. Intensification was less likely if patients were already receiving blood pressure medications or had unrelated comorbid conditions but was more likely if they had related vascular comorbid conditions. The authors claim that intensification was less likely if patients had diabetes. However, it is not possible to determine the specific impact of diabetes on provider behavior because the authors did not use a uniform blood pressure goal to judge intensification of therapy. They used less than 130 mm Hg for diabetic patients and less than 140 mm Hg for nondiabetic patients.

Turner and colleagues used more stringent blood pressure goals than Kerr and colleagues but did not assess the impact of repeated blood pressure measurements or measurements at home. Turner and colleagues included comorbid conditions listed by providers at each visit rather than taking them systematically from problem lists; if providers were more likely to list comorbid conditions for visits at which they failed to intensify therapy, the authors could have overestimated the association of these comorbid conditions with clinical inertia. Moreover, higher workload was associated with decreased propensity to intensify treatment, but the authors expressed workload as visits per year instead of visits per half-day clinic session. Visits per year might be more sensitive to differences between full-time and part-time providers, whereas visits per half-day should be more sensitive to competing demands in patients with several comorbid conditions. The impact of competing demands might also have been greater in the study by Turner and colleagues because it took place in primary care sites, in which providers may have been working under considerable time constraints, compared with the Veterans Affairs–based study by Kerr and colleagues, in which the median visit time was nearly 30 minutes—much longer than in a typical U.S. office practice.

Taken together, the studies suggest that competing demands contribute less consistently to clinical inertia than clinical uncertainty. Providers often act as if they don't need to respond to an SBP above goal if it has been lower in the past, is lower at home, is only slightly elevated, or is lower on a repeated measurement—in other words, if it's not clear that the patient's usual blood pressure is high and that a provider needs to take action. In support of reluctance to intensify therapy, Kerr and colleagues (12) have argued that it's particularly important to intensify therapy if blood pressure is greater than 140/90 mm Hg on 2 occasions, and Turner and colleagues note that treating slightly elevated blood pressure is likely to yield only minor reductions in cardiovascular disease (13). However, strong evidence supports intensifying therapy whenever blood pressure is above goal. The Framingham Heart Study found that cardiovascular risk was increased 1.6-fold in men and 2.5-fold in women who have an SBP of 130 to 139 mm Hg (14). The Seventh Report of the Joint National Committee emphasized that risk begins at SBPs greater than 120 mm Hg (15), and the National Health and Nutrition Examination Survey 2003–2004 found that only 33% of Americans with hypertension are treated adequately (16). In short, mildly elevated blood pressure below the Seventh Report of the Joint National Committee and the American Diabetes Association goals still confers risk and current management needs to improve.

The studies also show that clinical inertia is still common more than 6 years after our initial expression of concern (4), even with patients who clearly need treatment intensification (that is, who are consistently hypertensive over a series of visits). Because clinical inertia is a

major contributor to blood pressure control, reducing it may be critical to attaining the hypertension control goals of Healthy People 2010 (17).

If clinical uncertainty and competing demands contribute to clinical inertia, clinical inertia impedes improvement in blood pressure control, and management needs to improve, clinicians will need a new paradigm to guide them in treating high blood pressure. We have been using the following paradigm: 1) *hypertension should be diagnosed only if blood pressure is consistently high*, but 2) *once hypertension is diagnosed, every occurrence of blood pressure above goal should prompt intensification of therapy unless contraindicated by problems, such as hypotension* (18). This paradigm will lessen potential clinical uncertainty because it recommends intensification for SBP above goal in the clinic even if pressures are lower at home. Responding to office SBP is a sound strategy because these measurements are widely available and were used in most studies of the effect of treatment on cardiovascular outcomes and in most treatment guidelines. Because competing demands can make it difficult to find time for treatment of diabetes and hypertension (9), the paradigm also recommends that physicians restructure many patient visits as follows: 3) *“run the numbers” first and deal with blood pressure and glucose before asking about other problems* (19). This strategy would lessen the impact of competing demands.

Because intensification of hypertension therapy is a process of care that is actionable, is closely linked to outcomes, and is an ideal quality-improvement target (12, 20), we also need to change our research focus. Now that we have a better understanding of the basis for clinical inertia, we need to target improving provider behavior. We have found that feedback on provider performance led to statistically significantly better blood pressure control (18). However, we need far more research to develop the evidence base for hypertension management strategies, such as the one we recommend.

It's time to overcome clinical inertia.

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