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## Guidelines, Inertia and Judgment

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There is a general agreement among health care providers that hypertension should be controlled, by either lifestyle improvement or antihypertensive drug treatment for prevention of cardiovascular and renal disease. This agreement has been articulated in published guidelines and widely disseminated in other formats. Control has been defined as reduction of pressure below thresholds of 140/90 mm Hg and, for those with diabetes or chronic renal disease, 130/80 mm Hg (1). Population surveys in the United States estimate that control of hypertension remains suboptimal with nearly 50% continuing to have uncontrolled hypertension(2).

In the late 1990's, Berlowitz et al evaluated the pattern of physician behavior for increasing antihypertensive treatment in relation to the current US hypertension guideline, JNC-6 (3). The authors described a low incidence of intensification and identified several factors that predisposed clinicians to fail to intensify treatment: blood pressures minimally elevated above goal, previous change in treatment, lack of coronary artery disease, and competing demands from other more active medical issues(4). Subsequently, a survey of primary care physicians revealed that likelihood of either initiation of antihypertensive treatment or intensification was correlated with lack of awareness or agreement with blood pressure goals expressed in US guidelines and evidence based studies (5). These observations provide the background for the concept of "physician inertia" in treatment of hypertension, defined as a failure to begin or intensify treatment when the guideline says "Do it!" (6;7). Recent estimates for lack of treatment intensification for hypertension vary from 50-80%, in various retrospective surveys. This phenomenon together with lack of intensification of treatment for the other cardiovascular risk factors, hyperlipidemia and diabetes, might account for a substantial loss of opportunity (as much as 80%) for prevention of future cardiovascular disease(8). In this context, 'clinical inertia' defined as failure to intensify treatment when a guideline seems to require it, is one kind of medical error. This formulation articulates a rigid requirement for management of hypertension and the other risk factors, omitting any role for judgment in applying the guideline; no cognitive decision is allowed.

Decisions in clinical medicine may be cynically viewed as choices made in ignorance. Reduced ignorance may be due to awareness of relevant evidence and guidelines, but it is also informed by past experience, and knowledge of patient characteristics and choices. In this context, the best decisions may result from integration of several factors as a cognitive action, good clinical judgment. The high degree of agreement among physicians in

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supporting clinical judgment as an alternative to inertia for decisions in management of cardiovascular risk factors supports this concept (9). Evaluating the outcomes from decisions require a downstream look at results: what happened as a result of the decision? The report by Crowley et al in this issue of Hypertension provides a thoughtful approach to this problem (10).

Crowley et al assessed decisions in a clinical trial setting when potential causes of clinical inertia were minimized as compared to typical patient-doctor encounters. Notably, study physicians agreed upon blood pressure guidelines prior to the start of the trial such that ignorance to guidelines was not a factor. In addition, uncertainty about true BP was reduced via multiple home blood pressure monitoring measurements. Other clinical factors such as time constraints on the clinician were reduced by virtue of study physicians' ability to make blood pressure treatment decisions outside of the confines of busy patient care sessions. Despite these efforts, study physicians did not intensify treatment nearly 60% of the time, and the most common reason cited for failing to intensify treatment was that BP was considered to be acceptable despite being above the predetermined goal.

These results exemplify the ambiguity inherent in applying clinical guidelines to patient care. Even though study physicians were expected to intensify medications regardless of the degree of blood pressure elevation, they often failed to intensify treatment in those with minimum blood pressure elevation. Crowley questioned whether this pattern reflects inertia or good judgment by looking at the effect on subsequent events. Their results were reassuring as they demonstrated that the majority of patients in whom treatment intensification was deferred did not have subsequent alerts requiring intensification, suggesting that intensification was not required to keep these patients at goal. In other words, these appear to be correct or highly justifiable decisions - i.e. good judgment. When physicians are systematically queried with regard to various reasons for lack of intensification, "inaction", there is remarkable consistency in their views that such decisions are not poor quality of care so that a model of inaction can be explored and analyzed with inertia being only one component for consideration(9). A recent review and analysis of the ACCORD trial (11) suggests that clinical inertia or inaction may actually act as a safeguard for some patients when overzealous guidelines require treatment before definitive trials are available (12).

Of note, Crowley et al did not identify other actions that clinicians may appropriately take in response to patients with minimally elevated BP. For example, physicians might seek to evaluate and optimize medication adherence or might provide counseling on lifestyle factors that may be sufficient for getting patients to goal without increasing medication. In some cases, these interactions might have taken place, but were not documented.

The authors correctly acknowledge some important limitations of their data. They assessed treatment decisions performed by two study physicians and hence, their results may not pertain to physicians in other settings. Further, their study was limited to the Veterans Administration system with few women enrolled. The mean blood pressures of the sample were at goal. Future studies might assess the impact of programs that seek to reduce clinical inertia amongst patients with more severely uncontrolled hypertension. Such a targeted

approach may yet have a meaningful impact on improving rates of blood pressure control and may be a more cost-effective use of supportive hypertension resources.

Most important, the results of this study justify consideration that inertia may not always apply to decisions for not intensifying drug treatment in those with hypertension, near to guideline based goals. Before concluding that inertia is the only issue, more outcome studies, such as this one, are needed to categorize inaction and its consequences in long term management of the cardiovascular risk factors for primary prevention.

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