



EDITORIAL

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SPRINTing Toward a Systolic Answer

Faithful readers may recall from previous editorials that I'm not particularly happy with the new hypertension guidelines issued recently by the JNC 8 authors. I am especially concerned that the new recommendations of a blood pressure goal of < 150/90 mm Hg for people aged > 60 years, like myself, could lead to a real deterioration in blood pressure control. We know that adherence to the previous goal of < 140/90 mm Hg for this age group has hardly been optimal, so why in the world would we want to relax our targets even further? I have confronted several of the JNC 8 writers with my concerns, and they have reluctantly acknowledged that I am hardly alone in my worries.

But one thing I never saw coming was that the new guidelines would confound one of the important clinical trials I've been participating in over the past 4 years. I'm referring to the National Institutes of Health-funded Systolic Blood Pressure Intervention Trial (SPRINT), which was designed to compare 2 systolic blood pressure goals, the traditional 140 mm Hg goal and a more aggressive 120 mm Hg goal.

One thing that is particularly confounding in the context of the new guidelines for those aged > 60 years is that we SPRINT investigators were instructed specifically to recruit as many patients as possible aged > 75 years, so that we could get a clear sense of what the systolic goal should be in this particularly high-risk population. The study architects didn't even consider testing a goal of 150 mm Hg systolic.

In a similar vein, we also worked very hard to over-recruit 2 other groups of high-risk patients, those who had already had a cardiovascular event and those with mild renal insufficiency.

The new guidelines wound up impacting my conduct of the SPRINT trial. An intellectually curious trial subject in his late 70s took a keen interest in the question: What is the optimal systolic blood pressure goal? As it turns out, he was among those who had been randomized to the more aggressive systolic goal of 120 mm Hg. At his most recent visit, he caught me off guard by asking why we were testing a blood pressure goal of 120 mm Hg in someone of his age. He had read that people aged > 60 years needed a blood pressure goal of only 150 mm Hg, according to the latest expert recommendations.

Initially I was flummoxed by his question. Perhaps I should have anticipated that some of our subjects might have questions, but I have to admit that the thought had not occurred to me. I was pleased to see that he was not at all agitated at the apparent disconnect. He was merely curious as to how there could be such a discrepancy between guidelines intended for the general public and the study goal of 120 mm Hg. This proved to be an important teachable moment. After gathering my wits, I was able to explain the difference between guidelines and hypotheses that are carefully tested in clinical trials. I was especially eager to let him know that the true science of a clinical trial trumps the value of clinical guide-

lines, which are based on the best clinical judgments and guesstimates of leaders in the field.

The key to understanding the role of clinical guidelines is to recognize that they simply represent the most informed opinions available, given the sum total of clinical information that is available at that time. Clinical guidelines are based on evidence as much as is humanly possible, but there are often gaps in what we have learned from published clinical trials. Such trials are inherently limited with respect to the insights they can provide, because funding limitations invariably dictate that hard choices must be made in terms of the hypotheses that can be tested and the populations that can be studied. So the total amount of available data from clinical trials is almost invariably insufficient to answer a significant number of clinical questions definitively.

And that's why a well-designed clinical trial trumps whatever expert guidelines may seem pertinent to the clinical question at stake. Yes, the JNC 8 authors may have determined (albeit with a significant contrarian minority report) that their best reading of the available literature was that there was no definitive evidence supporting a blood pressure goal of < 150/90 mm Hg in those aged > 60 years. But it must be recognized that the absence of such definitive evidence to date does not at all mean that a lower goal might one day be shown to be superior to the JNC 8 recommendations. And that's where the SPRINT trial comes in: It's

specifically designed to test the hypothesis that a lower systolic goal of 120 mm Hg might be superior in terms of clinical outcomes to the higher goal of 140 mm Hg. Well-designed clinical trials are the mechanism through which meaningful clinical data are accrued; those data can then inform clinical guidelines.

I am happy to report that my alert SPRINT subject grasped the point rather quickly. As a retired engineer, he understood the importance of obtaining definitive data rather than relying forevermore upon the best guesses of well-meaning experts in the field. Clinical guide-

lines are useful as far as they go, but they are heavily dependent upon the generation of clinically valid data from randomized clinical trials. My SPRINT subject left the clinic with a renewed commitment to getting his systolic blood pressure down to the assigned goal of 120 mm Hg. All of us should follow his example and try mightily to keep in mind the distinction between clinical guidelines and actual data generated from randomized clinical trials. ●

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tial conflicts of interest with regard to this article.

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