

What Are They Doing? Provider Variation in Treatment Intensification for Elevated Blood Pressure Events.

Hofer TP, Hogan MM, Klamerus ML, Kerr EA.

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BACKGROUND:

We sought to define how providers vary in their likelihood of changing blood pressure (BP) treatment when faced with a patient with an unmet treatment threshold.

METHODS:

We enrolled 1175 diabetic patients of 92 primary care providers (PCPs) in nine Midwest VA facilities if their lowest triage BP prior to their PCP visit was $\geq 140/90$. Treatment change (defined as medication change or scheduled follow-up for BP within 4 weeks) was determined by a post visit provider survey and chart review. Providers completed a baseline survey before enrollment including a scenario question about how long they would wait to recheck a blood pressure for a patient with an elevated BP. We also tracked whether providers chose to repeat blood pressure measurements done by nurses at triage. Using three level models of patients within PCP and site, we examined the variability in provider rates of treatment change (N=1100 with complete data).

RESULTS:

559 (51%) patients with elevated BP at triage did not receive a treatment change. Controlling for the visit triage BP, prior SBP, patient age, number of chronic problems, and the total HTN medication burden, 12% of the variance in treatment change is due to the individual provider and 2% to the clinic. Providers varied in both their overall rate of treatment change (O.R. 0.49 for providers 1 s.d. below the median provider) and their probability of treatment change as a function of the triage SBP (an additional O.R. of 1.3 per 10 mm Hg increase in SBP for providers 1 s.d. above the median provider). A 25% reduction in odds of treatment change was seen for higher BP goals (per 10 mm Hg) and longer periods of times that providers were willing to wait to recheck an elevated BP (for each 2 weeks) and together these variables accounted for about 25% of the provider variability (likelihood ratio chi-squared 20.84, $p=.008$). However, at the same time, the provider likelihood of repeating the triage blood pressure of a patient, and the blood pressure measured on repeat, varied by site, provider and organizational attributes such as the number of patients per clinic session (controlling for the triage blood pressure and mean prior blood pressure). Controlling for the covariates described above, repeating a BP measurement was associated with substantially decreased likelihood of intensification.

CONCLUSIONS:

Provider variation in treatment change is substantial, not affected by controlling for multiple patient measures of treatment complexity and is located at the provider rather than clinic level. The provider variability was at least partly associated with variables that suggest clinical inertia. However, the use of intensification rates as a performance measure is precluded at present by the complete absence of the standardized BP measurement protocols that would be essential to prevent gaming.