Improving Guideline-Based Antihypertensive Medication Prescribing Through Academic Detailing


Study Overview

Objective. To compare group versus individual academic detailing on diuretic or β-blocker use in hypertensive patients.

Design. A 3-arm cluster-randomized controlled trial with an intention-to-treat analysis.

Setting and participants. All providers and patients were members of a single, large, mixed-model HMO comprised of 57 separate medical practices throughout the New England area. Nine separate practices of similar size were recruited. Patients with a diagnosis of hypertension and receiving primary care at 1 of the practices were eligible for inclusion. Hypertensive patients were further grouped as those with hypertension diagnosed prior to the beginning of the study period and those newly diagnosed during the study period.

Intervention. Three practices were allocated to group detailing, 3 to individual detailing, and 3 to usual care. The group academic detailing arm received a single 45-minute group educational session that all practice providers were invited to attend; 55% attended. The individual academic detailing group received one-to-one education from a trained academic detailer regarding hypertension prescribing guidelines, with meetings lasting between 15 to 30 minutes. Over 80% of providers in the individual detailing arm attended a session. Providers in practices randomized to usual care received a mailing describing the current guidelines for antihypertensive medication use. The intervention period of the study lasted approximately 2 months.

Main outcome measures. Proportion of patients with incident hypertension receiving either a diuretic or β blocker. A secondary outcome was the proportion of patients with prevalent hypertension not receiving a diuretic or β blocker but subsequently started on one of these agents during the study.

Main results. 1619 patients of 319 providers were included in the usual care arm, 1066 patients of 235 providers were included in the individual academic detailing arm, and 1007 patients of 227 providers were randomized to the group detailing arm. Baseline characteristics for both patients and providers were similar for all 3 groups. At baseline, over half of all patients were already receiving either a diuretic or β blocker. In the first year following the intervention, rates of use of diuretics or β blockers in patients with incident hypertension increased by 13% in the group detailing arm, 12% in the individual detailing group, and 6% in the usual care group. Compared with the usual care group, patients in the group detailing arm had an odds ratio of 1.40 (95% confidence interval [CI], 1.11–1.76) of being prescribed diuretics or β blockers. Patients of providers in the individual detailing group had an odds ratio of 1.30 (95% CI, 0.95–1.79) of using diuretics or β blockers. There was no statistically significant difference between the 3 arms in the second year following the intervention. For patients with prevalent hypertension, there were no significant differences between the intervention and usual care arms in use of diuretics or β blockers.

Conclusion. Both group and individual academic detailing appeared to increase prescription rates of diuretics and β blockers in patients with incident hypertension.

Commentary

Many studies have demonstrated that providers frequently are noncompliant with published clinical guidelines. Although data supporting the use of diuretics and β blockers as first-line therapy in hypertension are numerous [1], prescribing rates for these medications are suboptimal [2]. One method that has been explored as a means to change provider prescribing behavior is educational outreach programs, also referred to as academic detailing [3]. Academic detailing is grounded in social marketing theories and face-to-face visits with providers to encourage behavioral changes. Prior studies have suggested that this method may be effective at changing provider antihypertensive prescribing habits [4]. The purpose of this study by Simon et al was twofold: to compare different strategies of academic detailing (group versus individual) and determine long-term outcomes of academic detailing.

Although the overall results of this study were less than
impressive, there are several explanations for the nonsignificant findings. Two years after the study intervention, no differences were seen in the 3 arms. This is not surprising, as previous studies have suggested that the impact of a single detailing session wanes over time. Second, the interventions had no impact on rates of diuretic and β blocker use for prevalent cases. Baseline rates of diuretic and β blocker use in this population were very high, and many of the prevalent cases likely had valid reasons why they were not on these medications. As such, the intervention would appear less effective. Finally, turnout was very poor in the group detailing arm, with slightly over half of providers actually receiving the intervention.

Applications for Clinical Practice
Academic detailing may improve antihypertensive prescribing in the short term. Neither method resulted in sustained improvements or impacted pharmaceutical management in prevalent hypertensive cases. Further studies are necessary to determine if this educational approach is an effective and efficient means of changing provider behavior.

—Review by Harvey J. Murff, MD, MPH

References