Patient Education and Counseling 98 (2015) 191–198

Contents lists available at ScienceDirect

Patient Education and Counseling

journal homepage: www.elsevier.com/locate/pateducou

Intervention

Brief provider communication skills training fails to impact patient hypertension outcomes

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ARTICLE INFO

Article history:
Received 18 February 2014
Received in revised form 16 October 2014
Accepted 18 October 2014

Keywords:
Hypertension
Blood pressure
Patient-provider communication
Medication adherence
Patient-centered care

ABSTRACT

Objectives: Hypertension remains a prevalent risk factor for cardiovascular disease, and improved medication adherence leads to better blood pressure (BP) control. We sought to improve medication adherence and hypertension outcomes among patients with uncontrolled BP through communication skills training targeting providers.
Methods: We conducted a randomized controlled trial to assess the effects of a communication skills intervention for primary care doctors compared to usual care controls, on the outcomes of BP (systolic, diastolic), patient self-reported medication adherence, and provider counseling, assessed at baseline and post-intervention. We enrolled 379 patients with uncontrolled BP; 203 (54%) with follow-up data comprised our final sample. We performed random effects least squares regression analyses to examine whether the provider training improved outcomes, using clinics as the unit of randomization.
Results: In neither unadjusted nor multivariate analyses were significant differences in change detected from baseline to follow-up in provider counseling, medication adherence or BP, for the intervention versus control groups.
Conclusion: The intervention did not improve the outcomes; it may have been too brief and lacked sufficient practice level changes to impact counseling, adherence or BP.
Practice Implications: Future intervention efforts may require more extensive provider training, along with broader systematic changes, to improve patient outcomes.

1. Introduction

Hypertension remains a prevalent risk factor for cardiovascular disease and related mortality [1]. In 2010, approximately 29% of Americans aged 18 or older had been diagnosed with hypertension [2]. Data from the 2003–2010 National Health and Nutrition Examination Surveys reveal that an estimated 53.5% (35.8 million) of those diagnosed with hypertension had uncontrolled blood pressure (BP) [3]. Of those, 44.8% were pharmacologically treated for their hypertension and 39.4% were not even aware of this diagnosis [3].

The overwhelming majority of those with uncontrolled hypertension report having a usual source of care (89.4%), underscoring the opportunity for health care providers to counsel patients about pharmacologic treatment and lifestyle behaviors to improve BP [3]. Patient-provider communication is an important determinant of medication adherence [4–6]. Effective communication also can impact intermediate outcomes, such as patients' understanding of their health, trust and commitment to treatment, which in turn can improve health behaviors and outcomes [5–9].

Patient-centered, culturally competent care and counseling have the potential to improve patients' hypertension control [10]. One approach to training in such care is the "5 A's", in which health care providers are trained to: ask the patient about a certain health issue or behavior, assess their motivation in making a

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http://dx.doi.org/10.1016/j.pec.2014.10.014
0738-3991/

behavior change to address this issue, advise the patient about addressing the issue, assist them in overcoming barriers to treatment and arrange for follow-up [11]. The 5 A's model is an evidence-based approach for behavior change counseling for a broad range of behaviors and health conditions with prior effects on smoking [12], physical activity [13], weight loss [14], and chronic illness care [15], but it has not yet been applied in the context of hypertension care.

It can be argued that patient-centered counseling is inherently culturally sensitive because it requires clinicians to understand the issues and factors surrounding medication adherence that are most meaningful to individual patients in their own cultural context. Insofar as individuals vary in their adoption of cultural beliefs or approaches to illness, the individual remains important to understand. However, it can also be argued that without an understanding of the patient's broad cultural context (e.g. norms and beliefs of one's cultural group), it may not be possible to fully understand the individual.

Patient-centered counseling can focus on a single behavior (e.g. antihypertensive medication adherence), and is designed to enhance a patients' self-efficacy for that specific behavior by addressing logistical and practical barriers to adherence. In contrast, cultural competency enhances a clinician's ability to view the patient in his/her socio-cultural context, improving the understanding of the patient's background. Culturally competent views of patients happen when a clinician's understanding of a patient in context, and the patient's world view (regarding illness generally and hypertension specifically), are clearly understood. We posit that a better and more complete understanding of patients occur when physicians are both skilled in patient-centered counseling and are culturally competent.

We examined whether comprehensive training for clinicians to improve communication about hypertension would improve such communication, affect antihypertensive medication adherence, or BP outcomes.

2. Methods

2.1. Overview

We conducted a randomized controlled trial to evaluate whether a communication skills training intervention would affect physician counseling about hypertension, patient adherence to antihypertensive medications, or improve patient BP among adult men and women diagnosed with hypertension and prescribed at least one antihypertensive medication, compared to a usual care control condition. This training, implemented with two separate workshops related to patient-centered counseling and cultural competency, was provided to clinicians in randomly assigned clinics within an outpatient general internal medicine practice at a large urban safety net institution. To assess provider counseling and patient medication adherence, we conducted patient interviews before and after the provider training, approaching patients during regularly scheduled visits. Study staff assessed patients' BP at baseline. BP data from regular clinic visits, recorded in the electronic medical record (EMR) was then used for the follow-up BP reading.

2.2. Sample

2.2.1. Providers

Fifty eight providers in seven primary care clinics comprised our sample. Clinics were randomly assigned to either the communication skills training intervention ($N = 4$) or usual care control condition ($N = 3$). The communication skills training entailed two intervention workshops, one on patient-centered counseling (PCC) and the other on cultural competency (CC). In the four intervention clinics, sixteen out of 31 providers (52%) attended at least one intervention workshop; all 16 providers attended the PCC and 11 of those also attended the CC training. We analyzed outcomes using providers in clinics assigned to the intervention condition, and separately those providers in clinics assigned to the intervention condition who received the training. The 27 providers in the three control clinics did not receive any training and thus provided usual care.

2.2.2. Patients

At baseline, prior to conducting the provider training, we identified patients in all clinics with a diagnosis of hypertension, who were prescribed at least one antihypertensive medication, self-identified as white or black race, and were age 21 or older. Recruitment and data collection are described in detail elsewhere [16]; briefly, we enrolled 869 patients for the initial survey. After the provider training was conducted, research assistants (RAs) approached enrolled patients as they returned to the clinic (both intervention and control) for follow-up office visits, and asked them to complete a survey. Of the 869 who completed the baseline survey, 379 had uncontrolled BP (systolic BP above 140 mm/Hg or diastolic BP exceeded 90 mm/Hg (or BP above 130/80 for patients with diabetes or renal insufficiency [1])); to detect improvements in BP outcomes we only analyzed this subset. Of those, 203 (54%) had complete follow-up data and comprised our final sample. Because each patient served as his/her own control from baseline to follow-up, data for the 176 subjects who did not complete follow-up were not analyzed (see Appendix). We assessed the change from baseline to follow-up in each outcome. The study was approved by the Institutional Review Board of Boston University Medical Center.

2.3. Measures

2.3.1. Patient characteristics

Patient sociodemographic characteristics including race (assessed using the US Census categories), education in years, income, marital status and employment status were obtained through self-report at baseline. Patients' clinical data were extracted from the EMR at baseline, including age, gender, height, weight, and hypertension diagnosis, as well as diagnoses of comorbid conditions which might affect the management of hypertension or contribute to difficulty controlling it [1], including renal insufficiency, coronary artery disease, peripheral vascular disease, nicotine dependence, hyperlipidemia, diabetes, congestive heart failure, cerebral vascular disease and obesity. Obesity was considered a diagnosis for any patient who had either a diagnosis in the EMR or a calculated body mass index of 30 and above [17].

2.3.2. Outcome assessments

2.3.2.1. Provider counseling behavior. We developed an assessment of the patient-provider discussion regarding hypertension care and management, following prior studies, which showed that such assessments are a valid measure of the provider-patient interaction, when compared to audiotapes of such interactions [18,19]. This series of 12 dichotomous items (0 = no, 1 = yes) asked the patient to report whether or not the provider asked or advised them about various issues related to antihypertensive medication adherence, including patient concerns about medications, and barriers and facilitators to medication taking. We summed the scores from these items to create a scale score (range: 0–12), where higher scores indicate that more hypertension-related issues were discussed. This scale was completed by patients following