



Original Research

# Impact of a community pharmacists' hypertension-care service on medication adherence. The AFenPA study

Narjis Fikri-Benbrahim, Pharm.D.<sup>\*</sup>, María José Faus, Pharm.D.<sup>a</sup>,  
Fernando Martínez-Martínez, Pharm.D.<sup>a</sup>,  
Daniel Sabater-Hernández, Pharm.D.<sup>a</sup>

*Pharmaceutical Care Research Group, Faculty of Pharmacy, University of Granada, Spain*

---

## Abstract

**Background:** One of the main factors associated with the inadequacy of blood pressure control is patients' non-adherence to antihypertensive drug therapy.

**Objectives:** To determine the effect of an intervention program on antihypertensive medication adherence in the community pharmacy setting.

**Methods:** Treated hypertensive patients were enrolled in a 6-month controlled study involving thirteen Spanish community pharmacies. A pharmacist intervention program which consisted of specific education on issues related to medication adherence and hypertension was provided. Additionally, patients were provided with a home blood pressure monitoring device and instructed to measure their blood pressure. The control group received usual pharmacy care. Antihypertensive medication adherence was evaluated by pill counts at baseline and at the end of the study.

**Results:** Data from 176 patients were included in and analyzed in the study: 89 in the control group and 87 in the intervention group. The percentage of adherence for intervention group patients increased between baseline and the end of the study (86.0% vs. 96.5%), while it didn't change in the control group (86.5% vs. 85.4%). The proportion of patient adherence at the end of the study was higher in the intervention group compared to the control group (96.5% vs. 85.4%;  $P = .011$ ). The odds of adherence to antihypertensive drug therapy in the intervention group was 4.07 (95% CI: 1.04–15.95;  $P = .044$ ) times higher than the control group.

**Conclusions:** In this sample of treated hypertensive patients, the pharmacist intervention was associated with significant improvement in antihypertensive medications adherence, compared to usual care.

© 2013 Elsevier Inc. All rights reserved.

---

The project was partially funded by Almirall S.A. and Roche Diagnostics, S.L. Financial support was provided by Almirall S.A. in the form of an unrestricted grant for a project researcher, Narjis Fikri Benbrahim and the translation of the articles. Financial support was provided by Roche Diagnostics Laboratories, S.L. through the supply at no cost of half of the blood pressure monitors used in the study and funding of the statistical analysis of the data.

**Conflicts of interests.** The authors state that they have no competing interests.

\* Corresponding author. Grupo de Investigación en Atención Farmacéutica, Facultad de Farmacia, Campus Universitario Cartuja S/N, 18071 Granada, Spain. Tel.: +34 616 041 086, +34 958 24 95 86 (Work); fax: +34 958 241 932.

<sup>a</sup> Grupo de Investigación en Atención Farmacéutica, Facultad de Farmacia, Campus Universitario Cartuja S/N, 18071 Granada, Spain.

E-mail address: [narjifikri@yahoo.es](mailto:narjifikri@yahoo.es) (N. Fikri-Benbrahim).

**Keywords:** Spain; Medication adherence; Hypertension; Pharmacist intervention; Community pharmacies

---

## Background

Hypertension is a major public health problem and, therefore, its control is a key objective for the healthcare system.<sup>1,2</sup> In Spain, half of the deaths per year in population over 50 years of age are related to high blood pressure (BP).<sup>3</sup> Several studies have demonstrated that decreasing BP through drug treatment can reduce the cardiovascular morbidity and mortality.<sup>4</sup> In Spain, hypertension is controlled in less than 55% of the affected adult population.<sup>5,6</sup> One of the main factors associated with the inadequate control of BP is patients' non-adherence to antihypertensive drug therapy.<sup>7</sup> The World Health Organization estimates that 50–70% of people do not take their antihypertensive medication as prescribed.<sup>8</sup>

Factors such as the symptomless nature of the disease, patient's inadequate understanding of the disease and importance of the treatment, the chronic nature of the hypertension and therefore the long therapy of therapy, adverse drug effects, etc have been associated with the lack of adherence to antihypertensive drugs.<sup>9</sup>

Community pharmacists are uniquely positioned in the healthcare system to overcome this problem. Additionally, when introducing pharmaceutical care<sup>10</sup> into their usual practice, community pharmacists are suitable qualified healthcare professionals that can contribute to the improvement of patients' adherence.

Two recently published systematic literature reviews<sup>11,12</sup> demonstrated the effectiveness of pharmacist intervention in improving either adherence to antihypertensive drug therapy, control of BP or both, especially upon collaboration with physicians. Among the studies included in these reviews, six were performed in a community pharmacy setting,<sup>13–18</sup> and four of these showed a positive impact of pharmacist intervention on adherence.<sup>13,14,16,19</sup> However, only one study used a reliable method to measure this outcome; that is, pill counts.<sup>16</sup> As an indirect measure, the pill count is an objective method and is often used as a reference method to validate and assess other indirect methods, such as the Morisky–Green test. This latter test showed a low sensitivity and positive predictive value.<sup>20,21</sup> Usually, the questionnaires for assessing adherence are subject to measurement bias such as social desirability, recall bias, and

response bias. Additionally, these studies do not provide enough evidence, as they present several methodological and statistical analysis limitations, such as (1) use of unreliable/non-validated methods to measure adherence (only one study used a reliable method to measure the adherence,<sup>16</sup>) (2) crude statistical analysis (unadjusted for other variables),<sup>13,19</sup> (3) lack of control group<sup>19</sup> or (4) lack of a description of the pharmacist's intervention. Moreover, in Spain, there is scarce literature proving the involvement of community pharmacists in activities related to the improvement of adherence<sup>22</sup> and, in particular, regarding antihypertensive drug therapy.<sup>23–26</sup>

Therefore, more evidence is needed to demonstrate the effectiveness of community pharmacist interventions on antihypertensive medication adherence in hypertensive patients.

## Aim of the study

In 2009 the AFenPA study was carried out to assess the effect of a protocol-based pharmacist intervention on BP control among treated hypertensive patients who attended to community pharmacies.<sup>27,28</sup> As part of this study, data on the patient's adherence using a manual pill counting method were collected. Thus, the aim of this manuscript is to determine the effect of this intervention program on antihypertensive medication adherence.

## Methods

### *Participants and setting*

Methods of the AFenPA study are well described in previous publications.<sup>27,28</sup> Briefly, it was a quasi-experimental study with a control group conducted in thirteen community pharmacies in the Spanish provinces of Jaen and Granada and included pharmacologically treated hypertensive patients who attended to these pharmacies.

### *Patient selection and assignment*

Each participant pharmacist included 10 subjects (5 subjects were assigned to a control group: CG and 5 to an intervention group: IG). Patients assigned to the IG were integrated into a pharmacist

Download English Version:

<https://daneshyari.com/en/article/2508528>

Download Persian Version:

<https://daneshyari.com/article/2508528>

[Daneshyari.com](https://daneshyari.com)