



Original Research

Process- and patient-reported outcomes
of a multifaceted medication adherence intervention
for hypertensive patients in secondary care

Ulla Hedegaard, M.Sc.(Pharm.)^{a,b,*}, Jesper Hallas, M.D., D.M.Sc.^{a,c},
Lene Vestergaard Ravn-Nielsen, M.Sc.(Pharm.)^b,
Lene Juel Kjeldsen, M.Sc.(Pharm.), Ph.D.^d

^aClinical Pharmacology and Pharmacy, Department of Public Health, University of Southern Denmark, J.B. Winslows Vej 19.2, DK-5000 Odense C, Denmark

^bHospital Pharmacy of Funen, Clinical Pharmacy Department, Odense University Hospital, J.B. Winslows Vej 13, DK-5000 Odense C, Denmark

^cDepartment of Clinical Biochemistry and Pharmacology, Odense University Hospital, Klovervænget 29, DK-5000, Odense C, Denmark

^dThe Danish Research Unit for Hospital Pharmacy, Amgros I/S, Dampfærgevej 22, DK-2100 Copenhagen Ø, Denmark

Abstract

Background: Adherence to antihypertensive medications is suboptimal. Hospital pharmacist interventions including motivational interviewing (MI) might assist in improving adherence in patients with hypertension. For an intervention to be useful, it is important to have tools that can easily identify potential adherence problems.

Objectives: To evaluate process outcomes and patient- and pharmacist-reported outcomes of a pharmacist adherence intervention for hypertensive patients treated in hospital outpatient clinics. Secondly, to determine the agreement between two different adherence metrics: an adherence questionnaire used in the intervention and a prescription-based measure.

Methods: The development of the intervention was based on adherence and behavioral theories and evidence of effective interventions. This included a focused medication review, a patient interview, and follow-up telephone calls. Two tools were used to identify adherence problems: The Drug Adherence Work-up (DRAW) tool and an adherence questionnaire. Process data included drug-related problems (DRPs) with recommendations to the physicians, medication- and lifestyle problems identified at the patient interview, actions taken and time spent on the intervention.

Results: In total, 91 DRPs in 8 categories generated recommendations to the physicians; 56 recommendations were generated at the medication review and 35 at the patient interview. At the interview, 421 problems were identified, of which 60% were medication-related and 40% lifestyle-related. In connection with the interview, 528 actions were taken within 8 different categories. MI was a central technique applicable for most problems and was employed in nearly all patients (94%). About half of the patients reported increased focus on lifestyle change, and 21–39% reported increased knowledge, confidence and skills in relation to their medication as well as better quality of life. The pharmacists found that the

* Corresponding author. Clinical Pharmacology and Pharmacy, Department of Public Health, University of Southern Denmark, J.B. Winslows Vej 19.2, DK-5000 Odense C, Denmark. Tel.: +45 6550 3082.

E-mail address: uhedegaard@health.sdu.dk (U. Hedegaard).

intervention elements were meaningful pharmacist tasks, and that the DRAW tool was easy to use and helped them focus on addressing reasons for non-adherence. The mean total time spent by the pharmacist per patient was 2 h 14 min (SD 40 min).

Conclusions: A pharmacist-led, multifaceted, tailored adherence intervention was feasible for identifying and addressing a wide range of potential adherence and lifestyle problems. Among the intervention procedures, MI was a central technique, applicable in most types of problems. The questionnaire showed relatively little value for identifying non-adherence. The intervention was well accepted both by the pharmacists and the patients, thereby increasing the likeliness of successful implementation in routine practice.

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Introduction

Treatment of hypertension significantly reduces the risk of cardiovascular event and stroke.¹ In clinical practice, however, hypertension can be difficult to control, and poor adherence to treatment is the most important cause of uncontrolled blood pressure (BP).² In patients with hypertension, a high level of adherence is associated with lower risk of hospitalization, and medical costs tend to be lower.³ Given that only 50–60% of patients treated for hypertension are considered “good compliers”,^{4,5} there is a potential for substantial health gains through improved adherence.

The problem of non-adherence is multidimensional, driven by myriad practical and behavioral factors.⁶ Interventions to improve adherence to antihypertensive agents therefore need to adopt multiple approaches, including technical, behavioral, cognitive and emotional elements in combination to address the reasons for non-adherence.^{7–9} Still, even the most effective interventions have shown only modest effect on adherence.^{7,8}

Due to the paucity of effective interventions, novel, cognitive-based behavioral change techniques have emerged. Among these, motivational interviewing (MI) is the most widely recognized one for improving long-term medication adherence.¹⁰ MI is a non-judgmental, patient-centered counseling style to address behavioral, medical and psychosocial issues.¹¹ MI is designed to explore and resolve ambivalence to health behavioral change by mobilizing the patients’ intrinsic values (autonomy) and helping them to discover their own resources and solution (self-efficacy). For hypertensive patients, a limited number of studies mostly focusing on primary care have shown promising results for MI in enhancing medication adherence.^{12–18}

Another approach, with growing evidence of effect, is to supplement the traditional team of

doctors and nurses with a clinical pharmacist particularly focusing on patients’ drug-related problems and adherence behavior.^{19–22}

A critical step for a clinical intervention to be useful is that potential adherence problems can be easily and validly identified. Asking the patient about adherence or using adherence questionnaires are feasible instruments.^{23,24} However, the questionnaire chosen²⁵ and the manner in which patients are asked²⁴ are of decisive importance for the response. A recently developed tool, the DRug Adherence Work-up (DRAW©) tool, with questions based on current evidence of determinants of non-adherence, has shown promising results for identifying and addressing multiple reasons for non-adherence.^{26,27}

So far, no pharmacist intervention using MI has targeted patients with hypertension treated in specialty care clinics in hospital settings. Accordingly, an adherence intervention was designed for this novel setting combining pharmacists integrated in team-based care, MI and interventions that had separately been shown to be effective in improving medication adherence. In an attempt to identify adherence problems, use of an adherence questionnaire validated in the target group, Danish patients with hypertension,²⁸ was combined with a modified version of the DRAW tool. When a new pharmacist intervention like this is developed, it is important to evaluate process and implementation variables such as acceptability, adoption and feasibility.²⁹ These variables can reveal valuable information of possible modification that may optimize and smoothen successful implementation.

The current study had two aims:

- 1) To evaluate process outcomes and patient- and pharmacist-reported outcomes of a pharmacist adherence intervention for hypertensive patients treated in hospital outpatient clinics.

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