

ASSESSMENT OF COMPLIANCE DEVICES BY PATIENTS

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Introduction

There are several physical devices commercially available which are considered to assist patient compliance with prescribed regimens. A detailed assessment of these devices by patients has not been previously reported. In the present study 7 compliance devices were selected to undergo patient assessment for ease of use, preference and perceived value.

Methods

Seven compliance devices (Medidos, Redidose, Pill Mill, Mediwheel, Dosett, Dispensatab and Medsystem) commercially available in the UK and designed to hold a weeks supply of medication were selected for patient assessment.

Patients aged over 55 years and receiving at least once prescribed solid oral dosage form were invited to participate in the open study. All patients were recruited from one of two outpatient clinics (Elderly Medicine and Rheumatology) at Sunderland District General Hospital. Each patient was interviewed (RW) for approximately 25 minutes using a structured verbal questionnaire based on the health belief model¹. A drug history was compiled and the health motivation of each individual assessed. At the end of the interview patients were requested to remove a tablet (Slow K) from one compartment of each device in a group of four compliance devices. This procedure was scored on a five point scale according to whether the tablet could be removed quickly with ease (score=1), to the patient being unable to access the container (score=5). Patients who did not achieve a score of 1 were classified as having dexterity problems with the device in question. Patients were initially randomly allocated to assess a combination of either the Medidos, Dosett, Dispensatab and Medsystem (Group I) or Redidose, Pill Mill, Mediwheel and Dosett (Group II). The last 51 patients recruited to the study were asked to assess a combination of the Medidos, Redidose, Dosett and Dispensatab (Group III). On completion of the dexterity test patients ranked, in order of preference, each device in the group. This permitted the calculation of a mean rank score for each device in the group. Patients were also asked if they would like to use the device of their choice at home and were supplied with one if they so wished.

Results

Two hundred and twenty two patients (140 females) of mean age 69 ± 9 years (mean \pm SD) participated in the study. The patients who took part in the study were taking between 1 and 10 prescribed oral dosage forms. The majority of patients were taking two (n=41), three (n=44), four (n=40) or five (n=31) different prescribed oral dosage forms. The principal categories of medication prescribed for the patients in the study were for the treatment of cardiovascular (n=317), central nervous system (n=156), musculoskeletal (n=115), endocrine (n=67) and respiratory (n=53) disorders.

The mean rank score, as an indicator of patient preference for each device, in Group I (86 patients), Group II (85 patients) and Group III (51 patients)

together with the number of patients having dexterity problems with each device are shown in Table 1.

Device	Mean Rank Score	Patient Preference	Patients (n) having Dexterity Problems
Group I			
Medidos	1.84	1	30
Dosett	2.16	2	12
Dispensatab	2.42	3	14
Medsystem	3.58	4	15
Group II			
Redidose	1.45	1	43
Dosett	1.83	2	29
Mediwheel	2.85	3	53
Pill Mill	3.86	4	68
Group III			
Medidos	1.96	1	14
Dispensatab	2.52	2	12
Redidose	2.58	3	23
Dosett	2.92	4	12

Table 1. Summary of results from Groups I, II and III.

At the end of the interview 125 patients (56.3%) took a compliance device to use at home. The devices selected included the Medidos (n=42), Dosett (n=35), Redidose (n=35) and the Dispensatab (n=7). No patient wanted to use a Pill Mill, Medsystem or seven day Mediwheel system. Three patients elected to use single day units from a Mediwheel system.

Discussion

The results of the study show that the patients recruited had a variety of medical problems with most receiving several preparations at the time of interview. Analysis of the mean rank score for each Group revealed that the Medsystem, Pill Mill and Mediwheel were unpopular amongst patients. The Pill Mill, in particular, caused dexterity problems for the majority of patients who tested it. The results suggest that the Medidos was the most popular compliance device of the 7 tested.

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1. Rosenstock, I. Why people use health services. Milbank Meml Fund Q. 1966; 44:94-127.