

# A COMMUNITY PHARMACY BASED STUDY TO ASSESS DEMAND FOR COMPLIANCE DEVICES

R. Walker, L. Bellis\*, F Jumani\*. Medicines Research Unit, Welsh School of Pharmacy, PO Box 13, Cardiff, and \*Pharmacy Practice Unit, Sunderland Polytechnic.

## Introduction

There are several physical devices commercially available which health care staff consider may assist compliance with prescribed regimens. Whether patients or their carers perceive these devices to be of value is unclear. The present study was undertaken to assess, following appropriate promotion in a number of community pharmacies, the demand for compliance devices, the compliance devices selected and the factors which may influence the perceived need for such devices.

## Methods

Seven community pharmacies were invited to participate in the study. A poster board (70cm x 89cm) was displayed in each pharmacy for a 30 day period. Eight compliance devices (Medidos, Redidose, Mediwheel, Dosett, Daily Pill Minder, Dispensatab, Medsystem and Pill Mill) were displayed on each board.

A customer, on deciding to purchase a compliance device, was informed that they could receive it without charge if the intended user would be willing to be interviewed in their home at a later date. Alternatively the device was sold to individuals who did not wish to participate further in the study.

Four to 8 weeks after obtaining a compliance device each patient was interviewed in their own home. Patients were interviewed using a structured verbal questionnaire comprising 30 questions. Each interview lasted approximately 20 min. Questions were asked which related to the personal, clinical, health motivation and social background of each patient.

## Results

The pharmacies that participated in the study were either single owner managed businesses or branches of small (not more than 3 shops) multiples dispensing between 1400 and 7000 items per month. Two compliance devices had been sold between the pharmacies in the 24 months preceding the study. During the 30 day study period 45 compliance devices were supplied, of which 15 were purchased by individuals who did not wish to participate further in the study. The compliance devices sold and supplied free are shown in Table 1.

Device	supplied "free"	Purchased	Total
	13	4	17
Medidos	1	8	9
Daily pill minder	5	3	8
Dispensatab	5	0	5
Daily Mediwheel	3	0	3
Redidose	3	0	3
Dosett	0	0	0
Medsystem	0	0	0
Pill Mill			

Table 1. Compliance devices purchased or supplied "free" to patients willing to be interviewed.

Twenty two patients were eventually interviewed from the 30 supplied with a device free of charge. Of the 8 who were not interviewed, one moved house some 400 miles before the planned interview, three patients died before the follow-up interview, 2 were in hospital throughout the period of the interviews and 2 devices obtained by relatives were promptly returned by the patients because they considered them useless!

The majority (n=15) of the 22 patients (15 females) interviewed were aged over 70 years. The youngest individual in the study was a 38 year old mentally handicapped male. Only 5 devices had been directly obtained by patients with relatives, wardens, social workers and helpers requesting 9,5,2 and 1 respectively. Thirteen devices were regularly filled by the patient whilst 6 were filled by immediate family and 3 by helpers. Patients were asked if they would like a pharmacist to visit them each week to fill their device; 17 patients claimed they would not agree to such visits. Although 20 patients considered their device to be useful, and were happy to continue using it, only two had previously seen a compliance device.

The patients interviewed were consuming between 2 and 10 different prescribed medications each (mean=5). Nine of the patients considered their medication regimen to be straightforward or very straightforward whilst 12 considered it to be complicated. Sixteen of the patients felt there was very little or nothing at all they could do to help themselves to stop getting worse other than take their medication. When asked to indicate what would happen if they did not keep to their treatment regimen, 18 felt they would get very much worse, 1 considered they would get worse and 3 thought it would have no effect.

## Discussion

Advertising the availability of compliance devices in 7 community pharmacies resulted in 45 devices being supplied during the study period. The most popular devices were the Medidos, Daily Pill Minder and Dispensatab. The Daily Pill Minder was particularly popular amongst those who purchased a device. After the end of the study several of the pharmacies reported a sustained interest in the availability of the devices.

The results show that the majority of patients interviewed had been previously unaware of the availability of compliance devices. However, having acquired a device the majority thought they were useful and were happy to fill them themselves. It is of obvious concern to pharmacists that patients, or their carers, should transfer medication from the original container to a compliance device. It is salutary to note that the involvement of a pharmacist was not immediately welcomed on this account.

The patients who were interviewed and found a compliance device useful were generally aged over 70 years, considered their medication to be the only way to stop them getting worse and had a complex treatment regimen. Whilst compliance devices are not the only answer to poor compliance with prescribed medicines, the increasing emphasis on care in the community would suggest that there is a small group of patients who would benefit from such a device.

**Acknowledgement:** This study was supported by the Department of Health and undertaken by RW whilst based at Sunderland Polytechnic.