

Original Article

Evaluating a prescription clinic at a primary health centre

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Abstract

Introduction: One of the pillars of a good primary health system is the establishment of a good doctor-patients relation. Amongst other things, this will result in mutually accepted treatment plans, which are understood by all parties involved. This study aimed to describe and analyze one particular aspect of this care delivery, namely the repeat prescription clinic. In this clinic, which is run on an appointment basis, prescriptions are issued on a regular basis to patients and their relatives.

Method: A piloted questionnaire describing patients' demographics, diseases and treatment knowledge, was filled in during three randomly chosen clinics in November 2011.

Results: The clinic is attended by a relative majority of male clients, but both genders showed a peak attendance in the 60-69 age group. An average of 4 medications per person were prescribed and treatment in each patients was aimed at an average of 3 co-existent disease states. 56% of female attendees knew the complete list of their respective treatment as opposed to 45% of males attendees. Unfortunately, 73% of patients did not know the treatment they were on and did not have an up-to-date treatment list.

Conclusion: This study highlights the lack of knowledge of patients with respect to their treatment. However it can also be argued that this is a reflection of inadequate care being provided by doctors in the various fields. The clinic takes care of a significant number of patients whose treatment is not accounted for. This raises issues of safe prescribing. There is a need that all patients have an up-to-date treatment card, and a need for improvement in communication between all health care workers is noted, so as to improve the safety of all prescription practices in the island. This will lead to better disease control, less treatment interactions, and prescription errors.

Background

Family medicine is a speciality where the patient-doctor relationship is crucial in the establishment of trust and therefore good clinical management. The crux in allowing the patient to attend with any complaint is the establishment of a mutual trust and agreement to liaise a negotiated treatment plan.

In the primary health care department, this is present to a lesser extent, since no patient registration is yet available, and doctors work on a shift system, even rotating health centres, and so the patient will not always find the same doctor when he / she attends the clinic. Health centres offer a vast number of services, including a GP (General Practitioner) walk in and treatment clinic, and appointment based clinics for repeat prescriptions, result explanation, ECG services, Diabetes clinic, Medical consultants' clinic, well baby clinic and gynae clinic. The primary care prescription clinic is a daily 3 hour clinic, held by appointment, where patients can renew their repeat prescriptions. Patients make an appointment for prescription clinic, where a specific time and date are given to the patient. They then attend the clinic and get their repeat prescription re-issued for a 1 or 2 month time span, depending on the drug prescribed. Nowadays, 3 sets of 2 monthly prescriptions are being handed to the patient, allowing 6 monthly appointments for repeat prescriptions. At prescription clinics, the GP is expected to see one patient every 4 minutes. Each person coming for his appointment can have a maximum of 3 sets of prescriptions to be renewed, further decreasing the time spent analysing each set of prescriptions. The yearly prescription clinic

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patient turnover at Floriana Health Centre (FHC) for 2011 was 6623. In November 2011, the month of our study, there was a turnover of 925 patients.

Prescription clinics are seen as a convenient way with which patients can get their repeat prescriptions every 2-6 months in an organised way, without wasting too much time thanks to an organised appointment system. However numerous studies in recent literature questioning various aspects of this method of prescribing led to the analysis of the local situation and the elucidation of the pros and cons of such a system.¹⁻³

Many times, it might be argued that a substantial number of patients are not fully aware of the medicines they are taking. At the health centres, some might bring out entitlement cards, even less patients might have a list of treatment. Albeit this, the impression is that patients go to their GP or health centres with no precise knowledge of what treatment they are taking.

In the work up for this study, a literature review was undertaken with respect to prescription clinics and patient knowledge of treatment.⁴⁻⁶ Prescription clinics have been studied in numerous countries and many common problems were found. To date, there is no knowledge of a similar study in a local prescription study and literature review described no picture similar to the Maltese Islands.

Aim

The study performed was aimed at getting a snapshot of the local situation with respect to the people attending prescription clinics, the diseases for which the prescription is being issued, the number of medications that the patient is on (thus analysis polypharmacy) and the patients' knowledge of treatment – be it through an up to date list or through memory retention of the list. The issue of communication between primary and secondary care physicians was also analysed through the checking of any available documentation of the treatment list and its place of issue.

Method

A piloted questionnaire, created by the researchers, was filled in by the actual researchers during 3 randomly selected clinics in the month of November 2011. 99 patients were found to fit the criteria for filling in the questionnaire. To be able to fill in the questionnaire, one had to have the actual drug consumer in the clinic to be able to ask the relevant questions specifically to him / her. Thus, any attendees coming for friends' or relatives' prescriptions were excluded from the study. The patients were randomly selected according to the day of their appointment. The topics discussed in the questionnaire included the demographic information of the attendee ie: age, sex and locality, diseases being treated as listed on the front of the entitlement card, patient knowledge of all the names of the drugs and doses, identity of who

prepares medication for the attendee to take and the availability of an up to date treatment list and who set it up.

The questionnaire and study were approved by the University of Malta Research Ethics committee.

Results

Demographic data

Attendees were grouped in seven age groups, from 20-29 years, on to 80-89 year old attendees. More males attended the clinic, but the distribution of ages varied similarly for both genders, with a peak in the 60-69 year age group. There was a gradual increase in number of attendees up to the 60-69 year age group. From there onwards, there was a gradual decrease in number of attendees, with no attendees in the over 90 group.

Spectrum of Disease and number of drugs used

Analysis of the epidemiological features of the attendees with regards to specific diseases, as seen in figure 1 (where epil refers to epilepsy, ra refers to rheumatoid arthritis, copd refers to chronic obstructive pulmonary disease, hf refers to heart failure, dm refers to diabetes mellitus, htn refers to hypertension, and psy refers to psychiatric conditions.), showed that male patients showed a higher prevalence of psychiatric disease and diabetes, than females, where a 2:1 male to female ratio was seen. A higher incidence of disease was noted in males, despite taking into consideration the male predominance of attendees. (see figure 1).

A range of 1 to 11 medications per person was noted, with an average of 4 drugs per person and 3 diseases being treated simultaneously. The largest number of patients were being treated for hypertension. The people with the largest number of medication, ie: the largest number of drugs per disease were noted to be the hypertensive group, followed closely by the diabetic patient group and then, by the patients with psychiatric conditions. The patients with the largest number of medication (11) was being treated for Diabetes Mellitus (DM), hypertension and asthma.

Patients' knowledge of treatment

Looking at Fig 2, 56% of the female attendees knew their treatment list, whereas only 45% of their male counterparts did.

96% of the attendees prepared their own medication whereas three attendees had their children organising the medication into daily quantities.

Availability of up to date treatment list

Figure 3 shows the availability of treatment lists in the separate sexes. Of the patients who knew the names to their medication, 4 had an up-to-date treatment card. Only 26% of the people who did not know their treatment list had an up to date card. The rest relied on the entitlement card itself as a treatment list.

Figure 1: Disease Spectrum

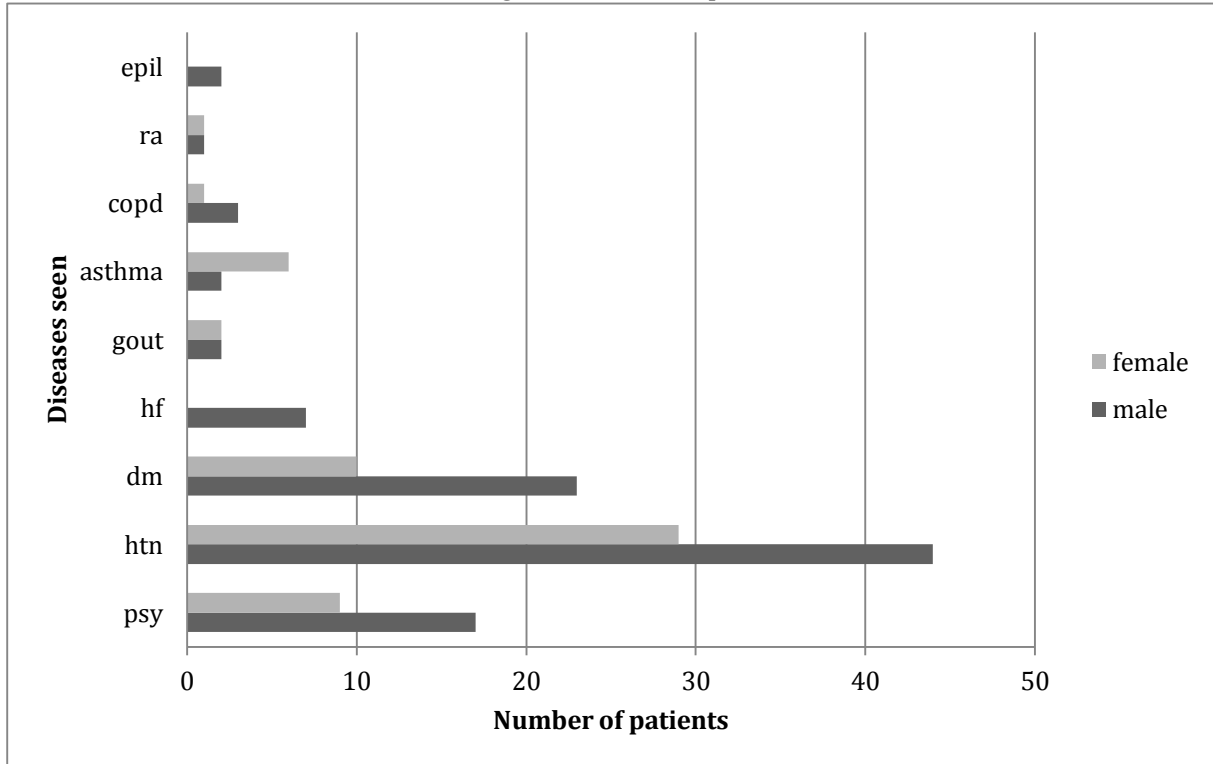


Figure 2: Patient knowledge of treatment

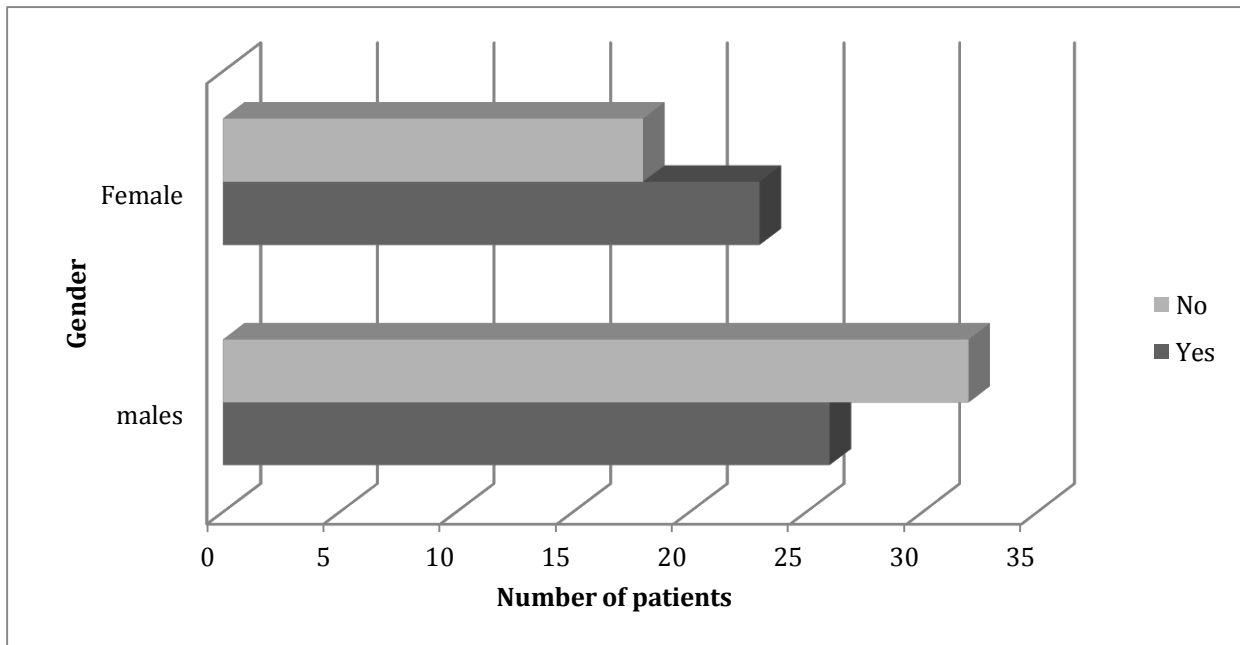
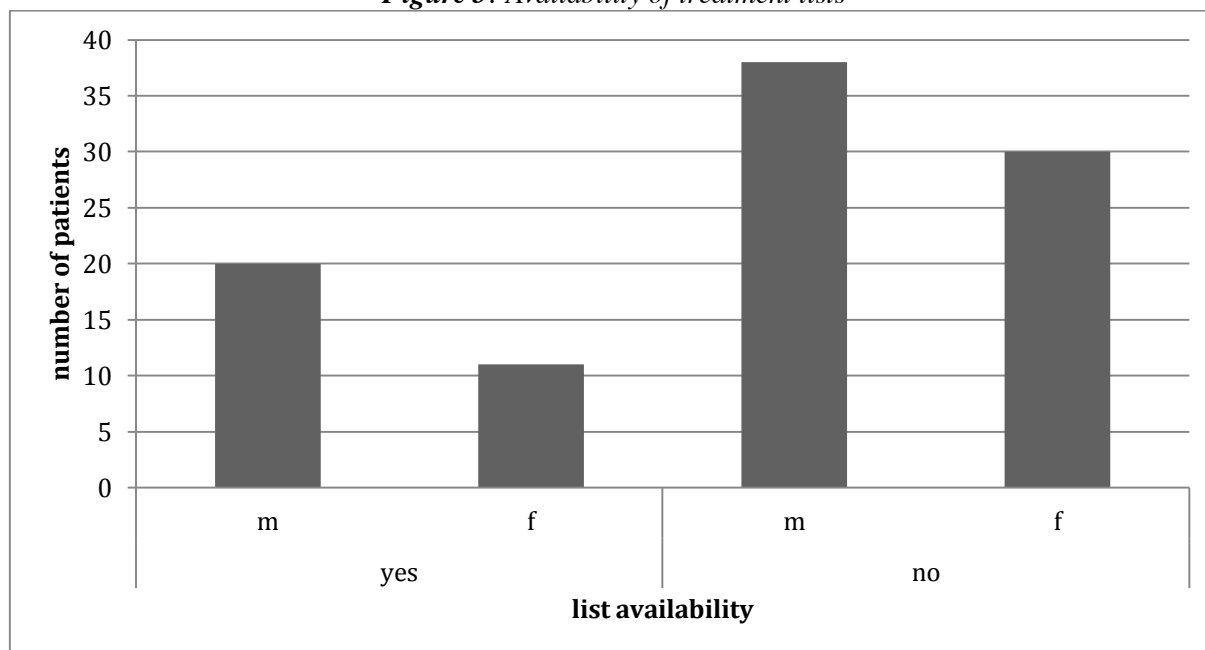


Figure 3: Availability of treatment lists



Who prepared the treatment list

46% of treatment cards were compiled by the patients' GP, compared to 26% of cards compiled by hospital staff. It was interesting to notice that 16% of attendees had compiled a treatment list themselves, highlighting the fact that they tried to establish some order in their daily treatment routine. The importance of the GP in the daily running of a patient's treatment routine was highlighted here.

Discussion

Demographics

The age and sex distribution demonstrated in our study is very similar to international literature.⁷⁻¹¹ In this study, on average, each person took 4 drugs. In addition, there was an average of 3 diseases being treated simultaneously, showing the largest number of people being treated for hypertension. Literature shows that overseas, an average of 3 drugs per patient are the average norm in repeat prescribing and the average number of diseases being treated is similar.^{1,3,12,13}

Safe Prescribing

This discrepancy in the increased use of drugs in the local group studied could be due to the fact that locally, no drug combinations was provided on the schedule V system. The fact that the largest number of drugs was seen in the attendees on anti-hypertensive medication further supports this thought. Improvement with regards to the number of different drugs used, with the introduction of drug combinations¹²⁻¹⁵ has been seen in literature. The issue of patient confusion with large drug numbers decreases compliance and drug effectiveness,¹⁶⁻¹⁸ and increases drug wastage and risk of

interactions.¹⁹ Increased functional health literacy is known to improve control of chronic disease like Diabetes Mellitus,²⁰ thus, investing in patient education during prescription clinic encounters might improve chronic disease management in the long term. Being able to interact regularly with the patient is known to increase patient trust in the caregiver and this, is known to improve compliance and thus, disease control.²¹

An increased occurrence of drug interactions with commonly used medications like Non steroidal anti inflammatory (NSAIDs) and over the counter (OTC) analgesia was documented in numerous studies.²²⁻²⁵ Such interactions were documented with the use of very common drugs like low dose Aspirin and the patient's self administration of NSAIDs like Ibuprofen.²³ The figures of the average number of drugs noted in the attendees of the local prescription clinics highlights the risk of such interactions, especially if the patients are not asked about the purchase and usage of OTC medication, and they are also unaware of the risks of self administering drugs like NSAIDs in the case of the elderly.^{24,26} This need further supports the importance of a drug review clinic more than a prescription clinic.

The average time spent with each patient at the clinic also highlights the issue of drug review and the facilitation of patient-doctor concordance with respect to the treatment.^{21,27,28} Doctor-patient concordance implies an agreement reached by the doctor and the patient about the latter's need for treatment and agreement to compliance from the patient. The doctor however agrees to review the patient, answer queries and change treatment according to patient needs or side effects.

Lack of concordance decreases compliance, thereby increasing drug wastage and decreases drug and cost

effectiveness.^{21,29,30} Having enough time to look at psychological, illness related or practical tangible problems which can lead to non adherence is essential.³¹⁻³³ Numerous studies highlight the importance of a low repeat: consultation ratio to increase overall efficacy and efficiency of these clinics.¹⁵

The issue of safe prescribing in such circumstances has many aspects including, patient knowledge of treatment, availability of up to date treatment lists and proper communication between health care professionals, (especially primary and secondary care physicians) by means of notes describing changes in treatment, or reasons for treatment withdrawal, All these were highlighted in studies as modes of increasing treatment compliance and concordance, thereby increasing treatment safety and clinic efficiency.^{12-15, 18, 19}

With 50% of patients not knowing their treatment list, and less than half of these patients having an up to date treatment card, the need for a means of keeping up to date records of all the treatment prescribed and dispensed and the reasons for the initiation and withdrawal of treatment is imperative. This will be the first stepping stone towards the motivation and facilitation of regular treatment review with safe treatment modification by GPs. It is very frustrating and dangerous to be faced by a patient with a badly controlled chronic condition and not being able to improve control at the first consultation because the patient does not know what treatment he is on and has no up to date list. This decreases the efficiency of GP consultations since a second consultation is needed, thereby also decreasing opportunistic intervention and at times leads to complete lack of disease control since patients are not always willing to visit clinics again at such short intervals.

The main function of primary care clinics, that is, prevention, be it primary or secondary prevention, is being jeopardised through the lack of proper communication between health centre physicians, hospital based physicians and dispensing pharmacists. Having real time communication or record keeping would facilitate a multidisciplinary approach to treatment review, increasing the chance that dosage, medication errors and treatment interactions are identified and corrected.³⁴

Such systems would also aid auditing of the pharmaceutical dispensing system, increasing the chance of identifying drug abuse or non compliance, thereby increasing drug efficacy and decreasing drug and financial wastage.³⁵ This might also serve as a means of stock keeping, decreasing the problem of out of stock medication.

Studies show increased safety with such measures and also increased patient satisfaction.³⁴ However, such systems carry their own disadvantages. These mainly

are the need for regular doctor-patient consultation, and increasing the time needed per patient appointment and at GP clinic, to allow time for updating of lists and medication review. Previous government dispensing pharmacies used to dispense 3 monthly supplies of drugs thereby necessitating 3 monthly appointments at the prescription clinic. At the time of study, the Pharmacy of your choice (POYC) system, where patients could choose a pharmacy close to home from where to collect their medications, necessitated 2 monthly appointments as 2 monthly supplies of drugs are dispensed. This had increased the burden on the prescription clinics. Today, 3 sets of two monthly prescriptions are being issued at each visit, thereby allowing for 6 monthly appointments. It can be argued, that in view of all of the above, the safety for such practice might be questioned. A major improvement with the computerisation of patient drug records, where all pharmacies involved in the POYC system have electronic records of the treatment list of their registered clients has already been seen. An improvement on this system would be, giving computer access to all registered doctors so that any change in treatment can be introduced into the system and a computerised prescription being routinely issued without the need of prescription clinic attendance. The drug would be issued under the signature of the last doctor prescribing it. Treatment duration, reason for initiation and any recommended interim measures (ex: renal function checks or review of prescription) would be highlighted on inputting the drug into the system. Prescription clinic would then be utilised as a review clinic with longer appointments every 6-8 months. Here one would review treatment lists and discuss follow up of the chronic conditions. Computerised systems were found to be efficient and safe ways of issuing repeat prescriptions without increasing the need for more doctors to be employed so as to cope with extra clinic times.³⁵⁻³⁸

The role of the GP

Currently, the role of the GP in the repeat prescription clinic is that of issuing the prescriptions. Fortunately, seeing that 49% of the patients having up to date treatment lists had these issued by their GP, shows that GPs are willing to try and instil structure into an otherwise haphazard clinic. It is encouraging to see that some doctors take the extra time to fill up treatment cards to facilitate compliance. It is also encouraging to see that some patients themselves try and organise their drug lists to feel safer. This highlights the point that there is motivation to improve and that GPs play a major if not crucial role in safe prescribing and in the empowerment of patients towards compliance.³

Strengths and Limitations of the study

The questionnaire was only filled in after

questioning the patient taking the medication himself / herself. In the study, no questionnaire was lost and all data was accounted for. The questionnaires were adequately filled in by the researchers.

Unfortunately the small number of patients involved detracts from the robustness of findings. Similarly, the fact that the study was carried out on few days in autumn might have affected the results. The fact that questionnaires were filled in only by the researchers, might have unknowingly introduced a form of bias, despite ensuring more reliable data input.

Conclusion

This study aimed at reviewing an otherwise uncharted territory in the provision of primary health care ie repeat prescription clinics. The results show that a large percentage of the population studied does not know the medication they were on. In line with literature reviewed, there is an urgent need to improve upon the safety of the repeat prescription clinics and maximise the efficiency of such a system, exploiting the clinic to further empower and educate patients, with the global aim of improving drug compliance, treatment safety, condition control, and overall efficiency of the system.

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