

## Original Article

# Continuity of Information and Care – a Pilot Study in a Health Centre

Michelle Bugeja, Jurgen Abela

**Abstract**

**Introduction:** Family medicine is the first level of contact of individuals, the family and the community with the national health.<sup>1</sup> Quality of continuity is the degree of which a series of discrete encounters with health care professionals is coherent, connected, and consistent with the patient's medical needs and personal context.<sup>2</sup>

**Objective:** The aim of this study was to assess continuity of care in patients attending for General Practitioner consultations in Floriana Health Centre (FHC).

**Method:** The study focused on all the physician-patient encounters occurring in the GP consultation rooms between 8 a.m. and 5 p.m, which accounts for the overall majority of patient contacts in health centres over a 24 hour period. This was a pilot study and consequently the study was carried out in only one health centre. The field work was carried out on five working days, including a Sunday. The number of medical records which were given to patients was noted together with the total number of patients attending for a consultation. This data was then divided in morning (8a.m. – noon) and afternoon (noon – 5p.m) sessions. Medical records given to GPs were assessed to see whether an entry was actually made and the quality of the entry.

**Results:** A total of 529 patient encounters were included in the study. There were 411 patients attending the FHC for a GP consultation between 8a.m. and 5p.m. in four weekdays and 118 patients attending a consultation on Sunday. 23% of patients attending for a GP consultation during weekdays were given a file while 77% were not. A higher percentage of medical records were not given in the afternoons. 75% of GPs wrote a note in the patient's file when it was provided to them.

**Conclusion:** Continuity of care is an important and essential element in delivering good quality healthcare service to the patient. Continuity of care is not occurring to the desired degree in FHC and is possibly leading to sub-optimal care being provided to our patients. The intention is that in the future, this pilot study will be implemented on a larger scale in other health centres for a greater representation of the work being done at primary care level.

**Keywords**

Records, Family Medicine, Health centres, Continuity of care

**Objective**

The aim of this study was to assess continuity of care in patients attending for General Practitioner (GP) consultations in Floriana Health Centre (FHC).

**Introduction****1. Family medicine and Continuity of Care**

Family medicine is the first level of contact for individuals, their family and the community with the national healthcare system and constitutes the first element of a continuing health care process.<sup>1</sup> It is a specialty in breadth that integrates the biological, clinical and behavioural sciences. The scope of family medicine encompasses all ages, sexes, each organ and disease entity.<sup>3</sup>

The quality of continuity of care is determined by the degree with which a series of discrete encounters with health care professionals are coherent, connected, and consistent with the patient's medical needs and personal context.<sup>2</sup> Patient's medical records are basic clinical tools that should be used in every consultation<sup>4</sup> since they guide providers to the delivery of consistent care tailored for the individual patient. Apart from

**Michelle Bugeja** M.D.\*

Mater Dei Hospital  
Msida, Malta  
michelle.c.bugeja@gmail.com

**Jurgen Abela** (M.D., D.C.H.(Lond.), M.Sc.(Warw.), F.R.C.G.P.(U.K.), F.L.C.M.)

Department of Primary Health,  
Floriana,  
Department of Family Medicine,  
University of Malta,  
Msida, Malta.

\*Corresponding Author

medical facts, medical records hold carers' considerations for future management and treatment of patients.<sup>5</sup> According to Saultz<sup>6</sup> continuity of care is one of the five pillars on which the specialty of family medicine is based. In fact, when continuity of care is present in healthcare, better outcomes are obtained<sup>7</sup> such as, higher patient satisfaction, improved delivery of medical services and lower hospitalisation rates. In addition to this, clinical records are the clinician's main defence if assessments, diagnosis and medical decisions are questioned.<sup>4</sup>

The Royal College of Physicians gives a detailed description of how good quality clinical records should be done and maintained. Some of the most relevant standards mentioned by the Royal College are listed below.<sup>8-9</sup>

- All contacts with the patient should be recorded
- Records should be made in an appropriate structure under the general headings: reason of contact, findings, action taken, conclusion and who was informed
- Every entry should be legible, dated, timed and signed
- Access to the medical records should be clearly defined and easy to obtain

## 2. *Family Medicine in Malta*

The beginning of primary health in Malta dates back to the 16<sup>th</sup> century when a system of provision of financial relief, food and free medicine to those in need was set up by the Order of St John. Primary health then continued to develop under the British rule and the first government dispensary was opened in 1832. Other dispensaries continued to open usually attached to the Local Police station. The current primary health care system started to shape itself in 1980 when free emergency polyclinic service was developed.<sup>10</sup>

Primary health care in Malta is provided by the private and the state sectors which operate independently of each other. The state offers services that include general practice in a number of Health Centres found throughout Malta (Floriana, Mosta, Birkirkara, Gzira, Paola, Bormla, Rabat, Qormi, Rabat – Gozo) and also provides services within the community at the local clinics (bereg) which are spread around forty different localities.<sup>11</sup>

The Health Centres mentioned above provide GP consultations within the clinic itself and as house visits, daily nursing care and emergency treatments/minor procedures. In these Centres one can also find various multidisciplinary and specialisation clinics being held such as physiotherapy services, well-baby clinic, medical consultant clinic, gynaecology services etc. In 2013 a total of 60,045 patients attended FHC for a GP consultation; during the month in which the study was

carried out, that is September 4,576 patients presented for a GP consultation.

## Methodology

The aim of the study was to assess the quality of continuity of care within FHC by assessing the percentage of patients that are given their medical records, by Healthcare Assistants, to be used during the GP consultation and the information that is documented in these records by the GP. The relevant institutional approval from the Primary Health Care Department was sought and granted. No Research Ethics Committee approval was required since the study did not involve individual patients.

Due to constraints related to time and resources, the study was carried out in only one health centre and a decision was taken to carry out the fieldwork on four separate weekdays and one Saturday or Sunday. The month of September 2013 was chosen and this month had four Saturdays, five Sundays and twenty-one weekdays. To minimise selection bias, the four weekdays were chosen at random by numbering twenty-one tickets according to the dates of the weekdays in September, placing the tickets in a paper bag and drawing four numbers at random. These numbers represented the weekdays dates when the data collection would be taking place. The same thing was done to select at random a weekend day out of the four Saturdays and five Sundays. The researcher ensured that there would be different Healthcare Assistants working during the different days of the study to ensure that any results were not linked to the practice of one Healthcare Assistant only.

In all, the medical records of 529 patients were reviewed by two doctors. The study focused on all the physician-patient encounters occurring in the GP consultation rooms between 8 a.m. and 5 p.m. This timeframe was chosen because it includes the majority of patient encounters occurring at the health centre during any one given day. The number of medical records which were given to patients was noted together with the total number of patients attending for a consultation. Patients who did not fall within the FHC catchment area should have been given a continuation sheet to document the encounter, which sheet is then posted to the appropriate Health centre. Such continuation sheets were also included in this study. The data was then divided in morning (8a.m. – noon) and afternoon (noon – 5p.m) so that the researchers could analyse the data and check for any trends in continuity of care during this eight hour period.

All the medical records given to GPs were then collected and assessed for quality of documentation by two different physicians independently, using a specific checklist which was compiled by the authors. The

checklist was informed by the guidance provided by the Royal College of Physicians and was structured to address a basic record keeping system. Any inconsistencies in quality of documentation in specific medical records were then brought into discussion. All data collected was inserted and analysed in a spread sheet using Microsoft Excel 2010.

## Results

There were 411 patients attending the FHC for a GP consultation between 8a.m. and 5p.m. in four weekdays with an average of 102.75 patients per day (95% Confidence Interval (CI): 97.92 – 107.58 patients per day). On Sunday 118 patients attended for a consultation.

The number of medical records that were given to patients was recorded and illustrated in Figure 1. Overall only 23% of patients attending for a GP consultation during weekdays were given a file (Figure 2).

In addition to this, an average of the weekdays' performance was compared to a Sunday (Figure 3).

When comparing the number of medical records given in the morning (8a.m – noon) to those given in the afternoon (noon – 5p.m), a higher proportion of medical records were given during the morning 36.21% (95% CI: 31.38% – 41.04%) than during the afternoon 8.34% (95% CI: 3.51% – 13.17%) for both weekdays and Sunday (Figure 4). In two of the weekdays no medical records were given in the afternoon.

When the researchers reviewed the medical records which were given to patients, it emerged that the majority of GPs (75%) wrote a note in the patient's medical record (Figure 5).

The data which was present in the medical records was compared with the guidelines for good medical record keeping established by the Royal College of Physicians (Figure 6). There was a high percentage of GPs who inputted the date of the consultation, brief history, possible diagnosis, management plan/ treatment prescribed and signed their entrance. On the other hand, 36.9% (95% CI: 32.64% - 41.16%) of GPs who were given the patient's medical record did not insert a legible printed name in the documentation which might make it difficult to identify the physician for future reference. Time at which the consultation took place was not inserted by any of the GPs.

## Discussion

Patients' records are there to contribute a clear and concise picture of the management and treatment of patients and to help in providing the best possible clinical service.<sup>8</sup>

The Maltese Healthcare system does not yet allow patients to register with their own GP in the Health

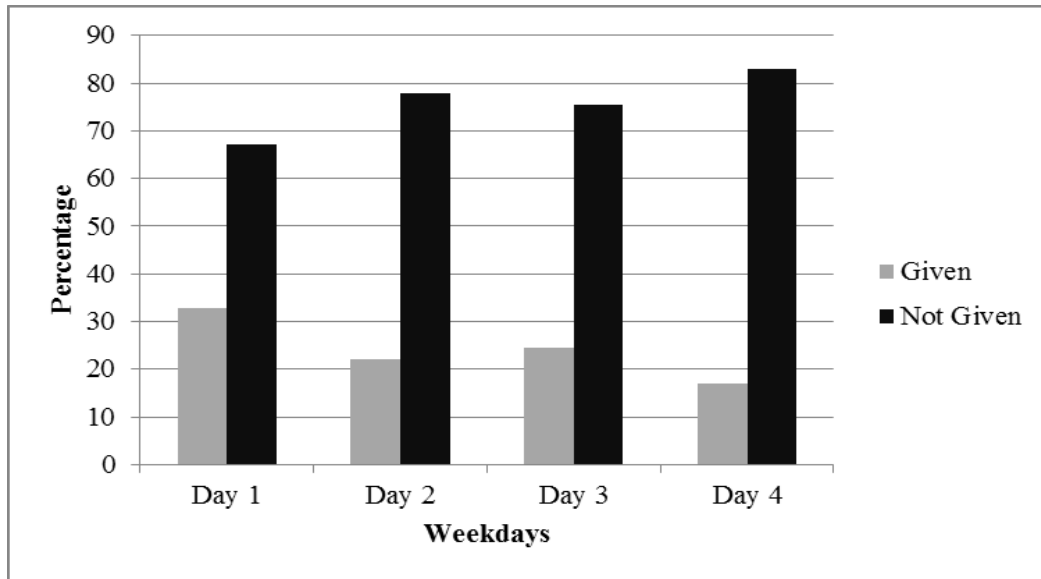
Centre. Therefore, patients are seen each time by a different doctor, and this emphasises the importance of keeping good patients' medical records in order to ensure proper continuity of care between one doctor and another.<sup>12</sup> In the absence of continuity of care, which refers to a developing relation between a GP and the patient, the next possible scenario is to have continuity of information, where despite the absence of a developing relation between a GP and patient, the necessary information is passed on between professionals and recorded.

One of the recommendations listed by the Royal College of Physicians is that "access to the folder should be clearly defined in local policies and procedures, but free access by the relevant user should be the usual practice"<sup>8</sup>; thus in our study we assessed whether medical records were being given to GPs during the consultation with the patient. In FHC, the common practice is that as soon as a patient enters the Health Centre s/he is registered at the reception after providing an Identification Card. The file is then retrieved by Healthcare assistants in the records, and the patient is provided with a file which s/he then presents to the GP during the consultation.

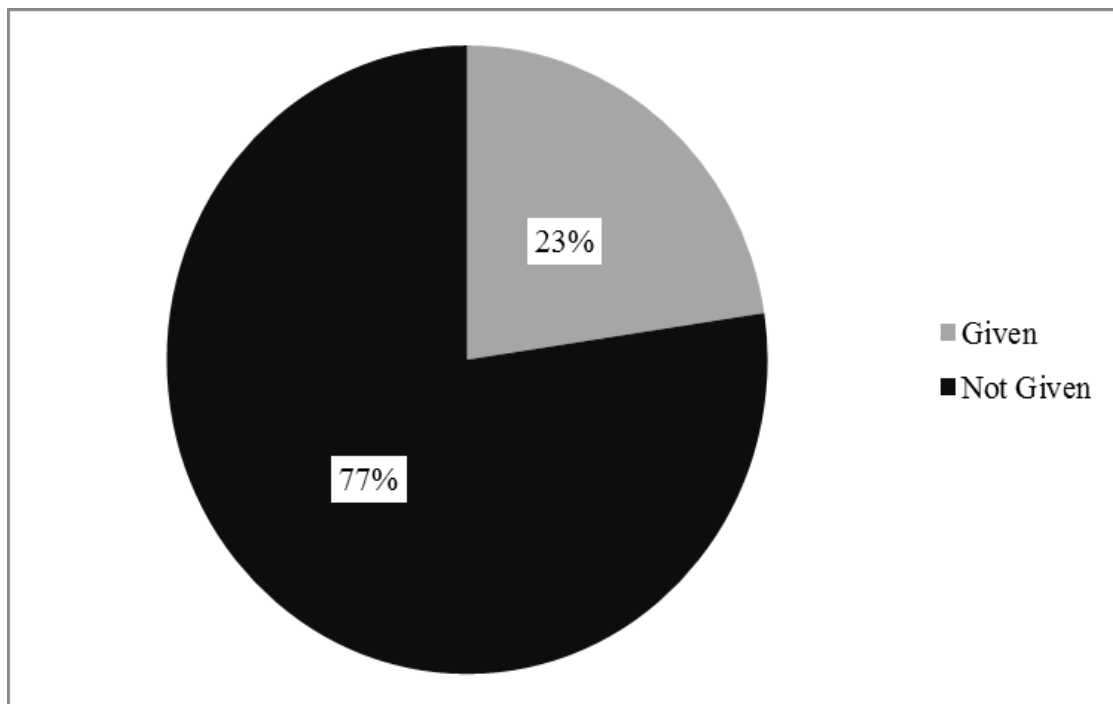
During the five days (8a.m – 5p.m) in which the study was carried out, 77% of the patients attending FHC did not receive their medical records and therefore the process of continuity of information did not even initiate. Additionally, there is a noticeable difference in the percentage of medical records which were given to patients in the morning (8a.m – noon) and in the afternoon (noon – 5p.m). This difference between morning and afternoon might be attributed to the start of recreational breaks of the healthcare assistants in the afternoon which leads to less staff on the shop floor to register patients, retrieve and distribute medical records.

We also assessed whether GPs wrote notes when medical records were provided. The Irish Ombudsman expressed his concern about the state of record-keeping and emphasised the importance of keeping clear and updated notes to improve patients' care and also to protect the doctor from medico-legal issues.<sup>13</sup> A positive result was registered when assessing percentage entrance of notes in medical records, with the majority of GPs inserting a note in the file when it was provided to them. Possible reasons for not inputting records might include pressure of work; lack of motivation to enter notes given the erratic nature of file availability, lack of appreciation of the importance of keeping good medical records; insufficient space in the file where to write down notes (continuation sheets are designed so that multiple entries are done on the same continuation sheet); and last but not least fatigue.

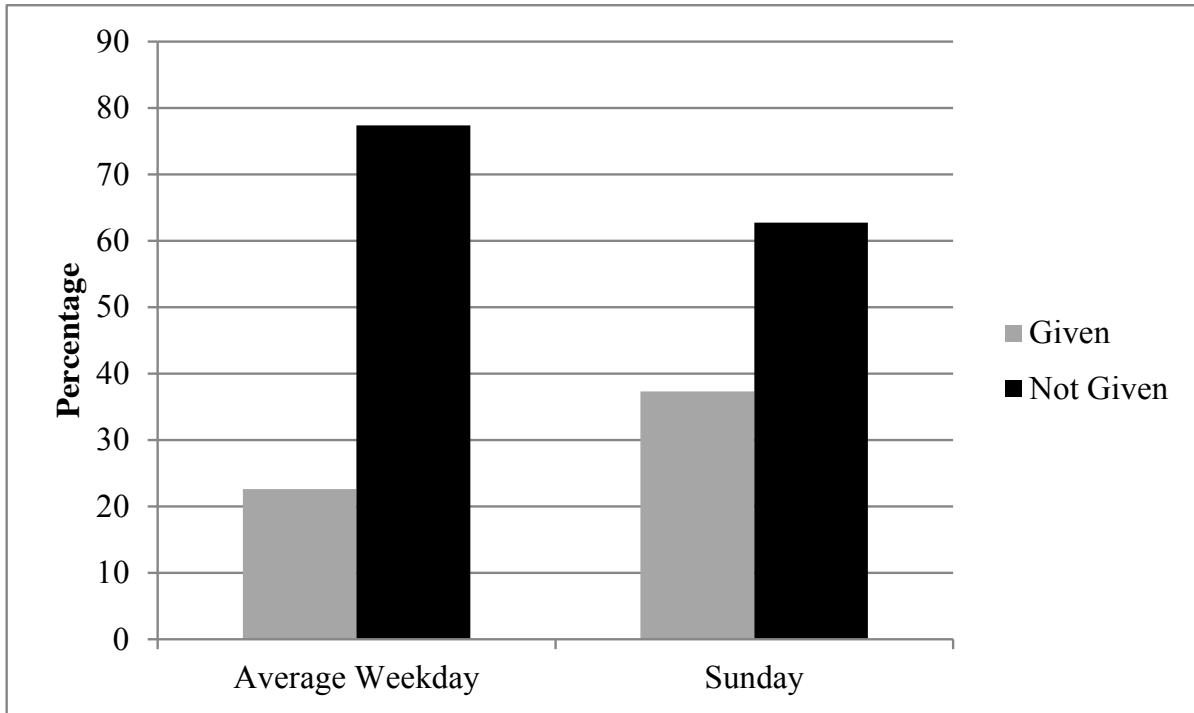
**Figure 1:** Percentage of total number of files which were given and not given to patients attending for a GP Consultation at FHC during weekdays



**Figure 2:** Average of the percentage number of files given and not given to patients



**Figure 3:** Comparison between the percentage number of files given and not given during weekdays and Sunday



**Figure 4:** Percentage of the total number of files given and not given in the morning and the afternoon in five different days at FHC

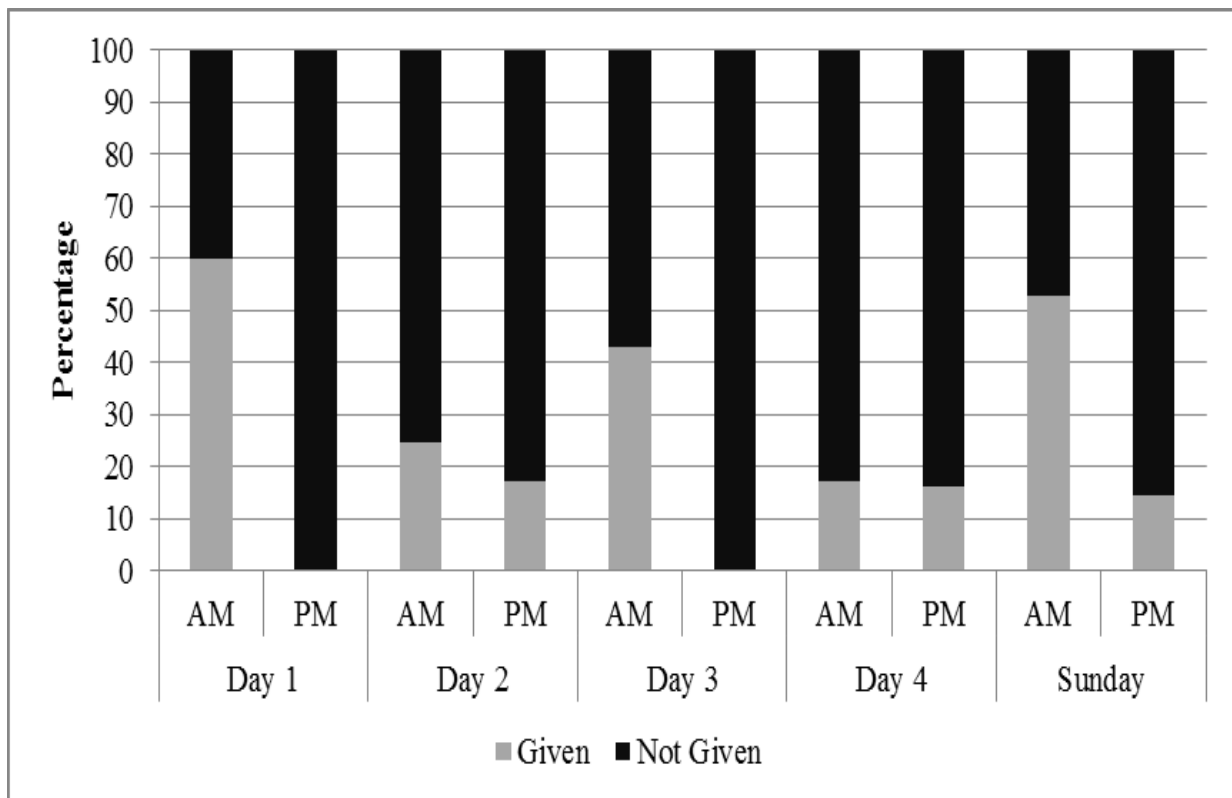


Figure 5: Percentage of documentation which was written or not written by the General Practitioner when a file was provided

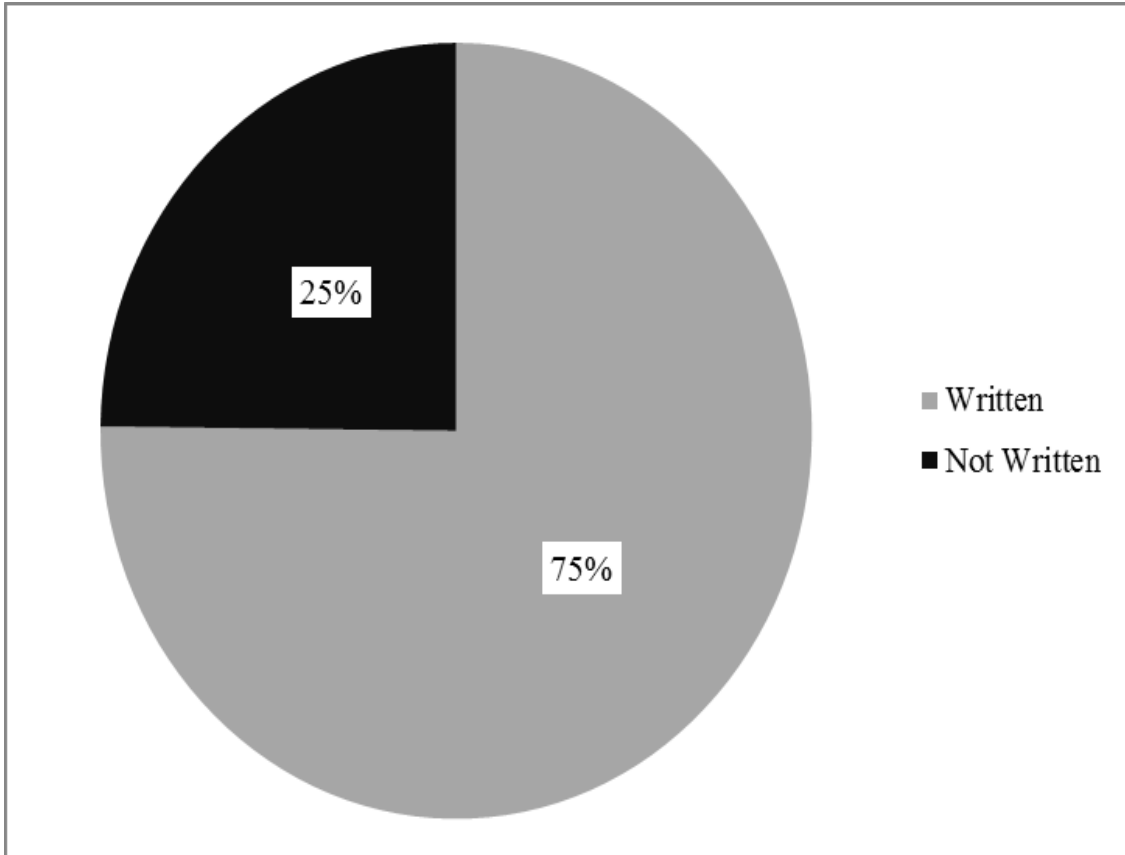
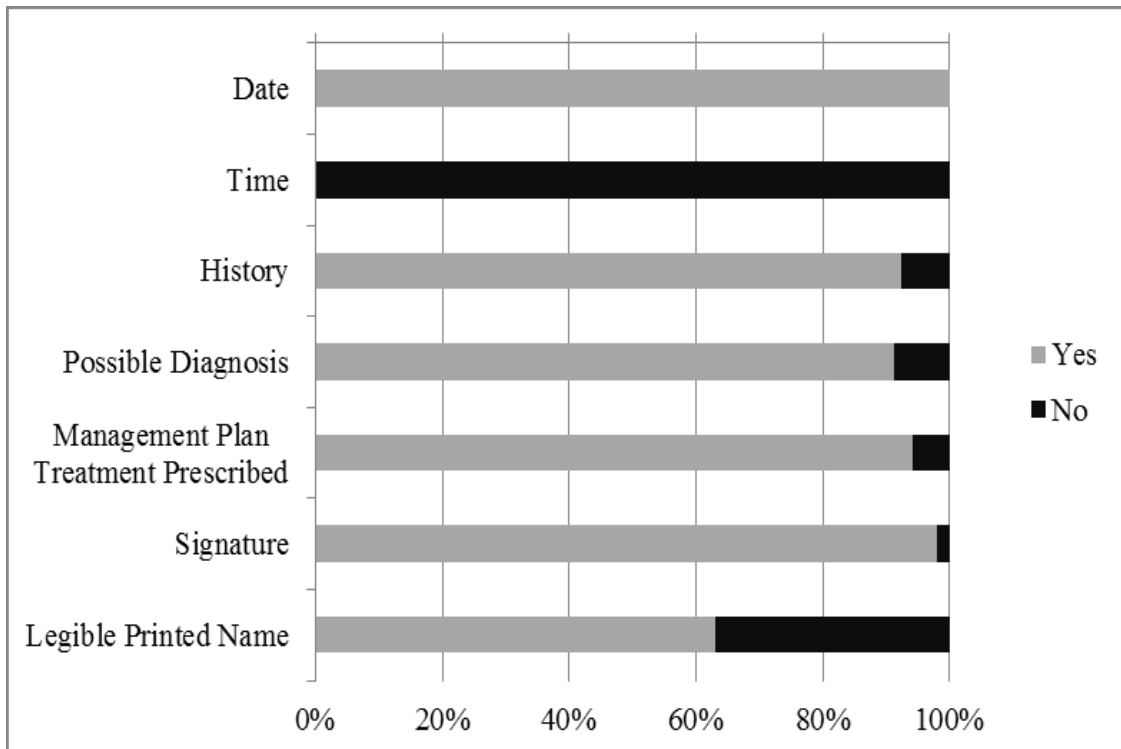


Figure 6: Quality of documentation inserted by the General practitioner in patients' files



The quality of the note written was also assessed and compared to record-keeping guidelines stipulated by the Royal College of Physicians. The majority of GPs inputted most of the fields found on the checklist but only a low percentage inserted a legible printed name in the documentation which might make it difficult to identify the physician for future reference. Time at which the consultation took place was not inserted by any of the GPs. Time is an important fact of documentation when medico-legal issues arise and also if the patient presents to the same Health Centre more than once within the same day with progression of his original complaint.

### Recommendations

The importance of maintaining continuity of care to optimise the quality of healthcare service given to patients and also to avoid medico-legal disputes should be explained to all healthcare professionals. If this concept is well understood arrangements can be done, for example when planning afternoon breaks, to increase compliance of distribution of medical records to the patient. Patient may also be educated in view of the importance of medical records so that they themselves ask for their medical records to be given to them at the reception.

In 'Guidelines of medical records in GP hospitals', Shaw states that each healthcare system should have an efficient system for finding and filing records so that they can be identified when needed. It also emphasises the need for sufficient space where medical records can be located easily.<sup>14</sup> Therefore, increasing space where medical records are stored and improving on the filing system so that medical records can be retrieved with greater ease, might also improve continuity of care.

Additionally, if the format of record keeping (the continuation sheet) is changed, the quality of the GP note might improve. Currently GPs have to document the consultation in a very limited space which restricts the amount of information on presentation of symptoms and future management plan inserted. Having to summarise and abbreviate information sometimes makes the documentation difficult to understand and to build upon in future consultations which are usually done by a different GP.

The necessity and benefits of electronic records has been highlighted in the literature. Electronic records are complete, integrated, and easily legible records, which can be accessed from multiple sites by different health care providers. This type of record-keeping can be used to generate risk alerts and reminders indicating that new information about the particular patient is available.<sup>8</sup> The Maltese Primary

Healthcare System might benefit from exploring and possibly investing in this area.<sup>5</sup>

In the absence of such development, another possible option to enhance continuity of care is to increase the number of visits by appointment. GPs could start having a regular appointment schedule, in addition to seeing walk-in-cases. This setting which is similar to the typical out-patient clinic scenario, will allow all visits to be planned and records made available beforehand. Presently at health centres this is done only for the speciality clinics.

One might also consider carrying out a study to analyse what are the attitudes of healthcare professionals towards medical record keeping, why they are not using them and what could be done to encourage them to use them. Carrying out consultations with healthcare professionals to assess their point of view is beneficial, since they are the ones using the system and if the system is something they want and agree with, there would be more cooperation with its implementation.

### Strengths and Limitation

The study was done over four days and a Sunday during which different Health Assistants' were operating, thus giving a good general overview of the overall picture and eliminating shift bias. The time frame chosen (8.am – 5p.m) allowed the researchers to focus their limited resources on the busiest part of the day at FHC. In addition, the quality of documentation inserted by the GP was reviewed by the researchers independently and consultation amongst the authors was done when there were inconsistencies thus eliminating personal opinion bias from the study.

One of the limitations of the study was lack of man-power. The medical records assessed were from 8a.m to 5p.m; the period of time in which the bulk of the GP-patient encounters occurs. This does not give any indication of quality continuity of care in the evening and at night. The study also focused on continuity of care during GP consultations in GP rooms which eliminated the assessment of continuity of care within the Treatment room and also within the Speciality clinics.

This study focused only on FHC which is one of the main health centres in Malta. Such study could be also carried out in the other two main health centres (Mosta and Paola) to get a more holistic picture of continuity of care in Primary Health in Malta.

### Conclusion

In conclusion, continuity of care is an important and essential element in delivering good quality

healthcare service to the patient. Continuity of care is not occurring to the desired level in FHC. With the increasing national and international emphasis on patient safety and patient rights, lack of appropriate documentation of patient visits is no longer tolerable and all efforts should be done to try to rectify the issue.

### Acknowledgements

The authors would like to thank the Primary Health Care department and staff at FHC for allowing and supporting this study.

We would also like to thank Dr Amanda Saliba M.D., MSc, PgCert, a Higher Specialist Trainee in Public Health for proof reading and correcting this study.

### Conflicts of Interest

The authors are medical officers within the Healthcare Department. Permission was granted by the Primary Health Care department to carry out this study. No additional funding was provided.

### References

1. Declaration of Alma-Ata.; 6-12 September 1978; Alma-Ata, USSR: International Conference on Primary Health Care; 1978.
2. Haggerty JL, Reid RJ, Freeman GK, et al. Continuity of care: a multidisciplinary review. *BMJ*. 2003;327:1219-1221
3. American Academy of Family Physicians. Family Medicine, Definition of. 2014; Available at: <http://www.aafp.org/about/policies/all/family-medicine-definition.html>. Accessed January, 2014.
4. Waibel S, Henao D, Aller M, Vargas I, Vázquez M. What Do We Know About Patients' Perceptions of Continuity of Care? *Int J Qual Health Care* 2012;24(1):39-48.
5. Schers H, van den Hoogen H, Grol R, van den Bosch W. Continuity of care through medical records—an explorative study on GPs' management considerations. *Fam Pract* 2006 Mar 7;23(3):349-352.
6. Saultz JW. *A Textbook of Family Medicine Companion Handbook*. 1st ed. USA: McGraw-Hill Professional; 2000.
7. Cabana MD, Jee SH. Does continuity of care improve patient outcomes? *J Fam Pract* 2004 Dec;53(12):974-980.
8. Pullen I, Loudon J. Improving standards in clinical record-keeping. *Adv Psychiatr Treat* 2006 Jul;12(4):280-286.
9. Health Informatics Unit. An Audit Tool for the RCP Generic Medical Record Keeping Standards. 2009 Apr:1-12.
10. Sammut MR. Primary Health Care Services in Malta: Provision, Utilisation and Reform. *JMCFD* 2000;19:4-11.
11. Cuschieri S, Sammut MR. A study of general practice consultations at Mosta Health Centre, Malta. *JMCFD* 2013 Apr;2(1):8-13.
12. Azzopardi Muscat N. Health Care Systems in Transition - Malta. *European Observatory on Health Care Systems* 1999:1-84.
13. Birchard K. Irish Ombudsman finds medical records "atrocious". *Lancet* 2001 Jul 7;358(9275):48.
14. Shaw CD. Guidelines for medical records in general practitioner hospitals. *J R Coll Gen Pract* 1982 Oct;32(243):632-633.