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JOURNAL OF THE MALTA COLLEGE OF FAMILY DOCTORS

Journal of the Malta College of Family Doctors

The mission of the Journal of the Malta College of Family Doctors (JMCFD) is to deliver accurate, relevant and inspiring research, continued medical education and debate in family medicine with the aim of encouraging improved patient care through academic development of the discipline. As the new main official publication of the Malta College of Family Doctors, the JMCFD strives to achieve its role to disseminate information on the objectives and activities of the College.

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Why a new journal?

Prof. Pierre MALLIA

Welcome to the new issue of the Journal of the Malta College of Family Doctors (JMCFD). Council has decided that it is time for the journal of the college to start afresh. The old journal has been serving the college since the beginning and indeed it was a difficult decision to digest for some members of the new editorial board. But things do change and colleges abroad have also had to make such difficult decisions. Indeed sometimes a journal loses image. Whatever happened, the new editorial board wishes to thank all those who worked on the previous journal (It-Tabib tal-Familja) on whose infrastructure we shall start our new endeavour.

Why a new journal? Whilst council has its own reason, the new editorial board has started to rethink the structure of the new journal. This will be reflected over the first few journals. We hope not only to attract studies in local and foreign general practice, but hope that the journal becomes informative and helpful to the practice of family physicians. Interesting articles make interesting reading, but should also leave some 'take home' points which help in our day to day practice. We will be on the lookout, and indeed commissioning articles which are helpful to local family medicine. Why not, for example, articles on local fauna and flora which may be poisonous and which may require simply but immediate intervention? Sometimes treatment is easy when one is stung by a fish spine, but if you do not know it you will be at a loss. In this regard we welcome suggestions on topics which readers feel that they need more information on.

May I take this opportunity to thank the council of the MCFD to appoint me as editor of the journal? I offered only to help but was flattered to be chosen as editor

following the call for application. I hope I am up to the job. As editor one has to decide and look forward and not allow things to happen on their own. I am pleased that we have a hard-working editorial board and the enthusiasm shown over the past few months was incredible. My responsibility is also to attract adverts, as these make the journal possible without pay. Here we had to make a key decision. Advertisers do not have money to throw around and indeed we have a lot of competition. Some journals seem to me to be making a lot of money by adverts. And yet advertisers placing an advert in a journal which has twenty adverts will have their message diluted. We need to give better value for money in this regard.

Therefore we decided that it was time to make an honest contribution to family medicine and make the journal a not-for-profit one. The effect of this will be twofold. On the one hand advertisers will have adverts on the cover and therefore be more effective. The journal, on the other hand, will benefit by being able to publish more. This of course depends on having good articles. But good articles mean relevance and valid to the GP. The backbone of a good journal is not only in the quality of articles it accepts for publication but also in the courage to refuse good articles which are not relevant and valid to its audience and objectives. Having said that we welcome readers to discuss with any of the editorial team any topic they have in mind.

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Patient centredness

Dr Jürgen ABELA

Patient centredness and communication - hallmarks of Family Medicine

It is indeed with pleasure that I accepted to contribute to this first issue of the Journal of the Malta College of Family Doctors in my capacity as President of the Malta College of Family Doctors. Family medicine, as indeed any other specialty, needs to keep up with the various challenges that are offered by the present and foreseeable future of medical practice. These challenges are myriad, and include clinical issues, innovative methods of service delivery, care of professionals and professional burnout, sustainability, research, continuing professional development and also training of doctors in the specialty.

All of these issues must be considered and placed within the context of patient centredness. Indeed, this concept can be challenging and in the case of family medicine, where the number of patient contacts is indeed high, this challenge is even more present. However, I argue that patient centredness is a hallmark of family medicine – a distinguishing feature that other specialties have learnt to recognize and subsequently incorporate in their own specialty.

Family medicine is the specialty of being a generalist; of managing uncertainty; of reaching out to the patient; of team working; and also of referring patients to the more appropriate specialty in the case of diagnostic uncertainty and/or particularly specialised treatment. Referrals to other specialties have always been a 'hot issue' in that it has been argued – and I must admit that at times this is indeed right – the information provided falls below acceptable standards. This flagging of concern by other specialties needs to be seen in the correct manner – namely, as a way of how our specialty can improve and evolve. However, and in line with this argumentation, communication with the patient's GP is still at undesirable levels. Much as referrals from community need to be improved, this is also true – if not more – of the need that secondary care professionals provide patients' GPs with a proper feedback which is not uniquely limited to the discharge letter. Indeed this covers only patients who are admitted to hospital. With regards to patients attending outpatient clinics, I venture to suggest that it is time that joint management planning is introduced, at least for

the more complex medical/surgical issues. It is through this fine tuning of communication between primary and secondary care that we can take medical care for our patients to a different level.

Appropriate interaction allows networking and at the same time also provides for double/triple checking on the care provided to patients. One may argue that this is time consuming, and indeed it might be in the initial phase. However, I would like to draw a parallel with a frequently raised issue by trainees. The use of silence/listening during a consultation to facilitate history taking from patients – as opposed to a barrage of close-ended questions – paradoxically shortens the consultation time! Hence with some effort and availability from both sides, more efficient care can be provided and this will certainly translate in better health outcomes in the long run.

These are but some of my thoughts on family medicine. The Journal of the Malta College of Family Doctors is part of the present council's second year of work and vision for family medicine. Randall and Downie (2006) argue that a specialty is defined by three concepts – a knowledge base, a distinct area of practice and an associated skills base. A journal certainly contributes positively to the first point and hence has a pivotal role in supporting the development of family medicine. I truly believe that a journal is indeed important for an academic institution such as the Malta College of Family Doctors. It also provides a good quality platform where local research is showcased, particularly since our small size is a challenge for researching and publishing.

I would like to thank the editorial board and wish them all the best in their work.

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Strengthening the speciality

Dr Myriam FARRUGIA

Strengthening the Speciality of Family Medicine in Malta

It was with pleasure that I accepted the invitation from the new editorial team of the College Journal to write a short article in this first issue of the Journal of the Malta College of Family Doctors as Honorary Secretary of Council. One of the commitments of the present MCFD council was to revitalize the College Journal. This is why a call for applications for a new editorial team was issued. I take this opportunity to congratulate all members of the editorial team and wish them all the best in their work.

The present MCFD council was elected on 30th April 2011. The following members constitute the Council: Dr Jurgen Abela, President; Dr Renzo De Gabriele, Vice-President and Honorary Treasurer; Dr Myriam Farrugia, Honorary Secretary; Dr Adrian Micallef, College Registrar; Dr Doreen Cassar, Education Secretary - Training Affairs; Dr Philip Sciortino, Education Secretary - Continuous Professional Development; Dr Patricia De Gabriele, Secretary for Quality Assurance; Dr Dominic Agius, Research Secretary; Dr Jean Pierre Cauchi, Member in charge of Revision of Statute; Dr Kenneth Vassallo, Communication Secretary and in charge of website; Dr Tania van Avendonk, Member in charge of Logistics and Dr Dorothy Zammit, Member in the CPD team.

Members of the MCFD Council represent it on national committees and other entities. Thus, Dr Dominic Agius is on the National Antibiotic Committee, whilst Dr Dorothy Zammit is the official link person for the MCFD with regards to the screening programmes in Malta. The President, Dr Jurgen Abela represents the MCFD on the Specialist Accreditation Committee, whilst he, along with Dr Doreen Cassar represents the MCFD on the Specialist Training Committee in Family Medicine.

One of the main achievements of last year for the MCFD was that the MMCFD examination was accredited MRCGP(Int) status. Also as part of the College's commitment with education of established and future family doctors two boards were set up: The Management Committee for Curriculum Review and Planning and the Specialist Assessment and Training Board in Family Medicine (SATBFM).

It was obvious from the start, that in order for work to be carried out professionally, there was the need of an office secretary. Thus, in November 2011, after a call for application through ETC followed by interviews, Ms Lorraine Mallia was selected for the post. Ms Mallia helps at CPD meetings and in the organisation of documentation at the Professional Centre. She also helps the Registrar and Treasurer with membership matters.

One of the ongoing and fruitful activities of the College is the Continuous Professional Development meetings which attract a good number of family doctors. The CPD team, made up of Dr Philip Sciortino, Dr Tania van Avendonk and Dr Dorothy Zammit, have so far organised six CPD meetings: Use of Hormonal Contraception in Primary Care (October 2011); Geriatrics – a multispecialty view (December 2011); Respiratory Medicine – an Update (February 2012); Pathology CPD (April/May 2012); Diabetes CPD (June 2012) and Rheumatology CPD (July 2012).

Two important projects which were given priority by the present council were the College website and the College Statute. The College website has undergone a revamp thanks to the work done by Dr Kenneth Vassallo. I invite you to visit the website on www.mcfid.org.mt where you can be updated with the news and events of the MCFD. The College Statute needed revision and thus a subcommittee was set up last year led by Dr Jean Pierre Cauchi to take care of the revision of the College Statute.

The AGM held on 13th April 2012 was quite a positive experience, where the members showed their support of the MCFD council. The way forward is to continue working so that the College becomes more relevant to all its members.

I hope that the information in this short article, gives an overview of the work being carried out by the MCFD Council to strengthen the Speciality of Family Medicine in Malta.

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A concept analysis of 'GP trainer' - a misnomer?

Dr Daniel SAMMUT

Abstract

Background: This article analyses the concept of the GP trainer. The framework developed by Walker and Avant (2005) is used. The aims were: 1) to clarify the concept and its fundamental qualities; and 2) to question whether the term *trainer* is apposite to the concept it represents.

Method: a literature search was performed in three databases and a search engine for the keywords [GP OR *general practitioner*] AND [*trainer* OR *educational supervisor*]. An online dictionary was used to define the noun *trainer* and the verb *train*. In addition, three colleagues were interviewed about how they conceptualised the GP trainer.

Results: only six articles were found that address the desirable characteristics of the GP trainer. However, a large list of qualities was obtained from these studies and the other methods mentioned. The characteristics of the GP trainer were grouped using phenomenological tools into the three main categories of personal, professional and teaching attributes. Each category was further subdivided into the domains of knowledge, skills and attitudes.

Conclusions: the *GP trainer* incorporates the three facets of 'wise person', 'accomplished GP' and 'gifted teacher'. It is shown that the term *educational supervisor* describes the complex educational role of a teacher of GPs better than *trainer*.

Introduction

Most European countries have now recognised the value of general practice and have introduced general practitioner (GP) training programmes in compliance with the European Council Directive 86/457 (European Council, 1986). These courses last up to five years, with a significant proportion of this time being spent in community practice (EURACT, 2012). Here, the trainee is

assigned with an experienced GP trainer who is responsible for guiding the novice doctor during his/her formative journey in general practice.

It is important that a concept chosen for analysis has personal relevance to the investigator (Walker and Avant, 2005). The concept *GP trainer* has been selected for analysis because the author wanted to understand the ontology of this phenomenon better in order to develop it further in his personal position as a trainer. Concept analysis is a formal and rigorous process whereby an abstract concept is identified, explored, clarified and differentiated from similar concepts (Morse *et al.*, 1996; McKenna, 1997). The process developed by Walker and Avant (2005) is being utilised for analysis because it is prescribed, systematic and user-friendly.

Aims

The concept of *GP trainer* is not being regarded here as a building block for theory construction (Walker and Avant, 2005), but rather as a direct derivative of the educational theory of apprenticeship (Neighbour, 2004; Brandt *et al.*, 1993; Collins *et al.*, 1991). Kaplan (1964, p.53) called this the "paradox of conceptualisation", whereby "the proper concepts are needed to formulate a good theory, but we need a good theory to arrive at the proper concepts." The educational theory of apprenticeship assumes that GPs should be trained, can be trained by experienced colleagues, and can themselves eventually train others (Neighbour, 2004). This leads us to a pragmatic objective of this concept analysis – to inform how to train GP trainers to teach and subsequently how to assess their teaching abilities.

Furthermore, the author feels that the term *trainer* does not do justice to the extent and scope of educational activities expected from a specialist teacher of GPs. This term has been adopted automatically by Malta's Specialist Training Programme for Family Medicine when it was launched in 2007 (Malta College of Family Doctors, 2011) and it is time to replace it. This essay will elaborate the reasons for this proposal and suggest an alternative term.

Key Words

General Practice; medical education, graduate

Identification of the uses of the concept

Walker and Avant (2005) encourage the use of dictionaries, thesauruses and any available literature, as well as consultation with colleagues, to identify multiple uses of the concept. Furthermore, all uses of the term must be considered in order to validate the ultimate choice of defining attributes (Walker and Avant, 2005).

The Collins English dictionary (2003) defines *trainer* as:

- 1 a person who trains athletes in a sport
- 2 a piece of equipment employed in training, such as a simulated aircraft cockpit
- 3 a person who schools racehorses and prepares them for racing

The verb *train* is defined by the same dictionary as:

- 1 to guide or teach (to do something), as by subjecting to various exercises or experiences: *to train a man to fight*
- 2 to control or guide towards a specific goal: *to train a plant up a wall*
- 3 to do exercises and prepare for a specific purpose: *the athlete trained for the Olympics*
- 4 to improve or curb by subjecting to discipline: *to train the mind*
- 5 to focus or bring to bear (on something): *to train a telescope on the moon*

The noun *trainer* has been borrowed from terminology associated with competitive athletic training (Knight and Ingersoll, 1998) and the training of animals. This type of trainer teaches the subject to excel in certain physical skills in order to perform a feat or win a competition. All trainers, irrespective whether they train animals, athletes or health professionals, share a special one-to-one relationship with their trainee. They provide the latter with motivation, support, guidance, teaching and discipline.

However, the term *training* is limited in scope, especially when applied to the vast agenda of GP education. According to Hilliard (2005, p.10), "today's health care professionals are being done a great disservice whenever their educational preparation is referred to as 'training'". Technicians are trained, whereas professionals are educated (Knight and Ingersoll, 1998). Training is typically unscientific and involves mainly the teaching of practical skills. As Hilliard (2005, p.10) states, "education is more than gaining knowledge, it is gaining the ability to utilise and apply that knowledge". Education guides the learner to develop critical thinking, decision-making, and knowledge application, with integration of essential knowledge from various disciplines (Hilliard, 2005).

In GP specialist training in the UK, the teacher in general practice is termed a *trainer* (Royal College of General Practitioners, 2012) and the name of the learner has recently been changed from *registrar* to *trainee* (Spencer-Jones, 2010). The Royal Australian College of General Practitioners has recently replaced the term *GP supervisor* with *GP trainer* (Morgan, 2005). Nevertheless, the author thinks that *educational supervisor*, which embraces the functions of both education and supervision, is the term that best describes the role of the GP teacher.

Method

A literature search for articles in the English language published after 1976 was undertaken in the databases Embase, CINAHL and Medline for the keywords [GP OR general practitioner] AND [trainer OR educational supervisor]. The search engine Google Scholar was also consulted. Surprisingly, only forty articles were found, and only four of these explored the desirable qualities of the GP trainer. Another two articles were obtained by cross-referencing. No formal concept analysis of the term *GP trainer* was identified. Three colleagues were interviewed to solicit their views of what makes a good GP trainer. The phenomenological tools of open and axial coding (Corbin and Strauss, 2008) were then used to group these attributes of the GP trainer into categories.

Results

Many characteristics of the GP trainer have been identified in the literature. However, the essential qualities of the GP trainer should not be confused with the roles played by them (Morgan, 2005). Reviewing earlier research, Irby (1995) stated that clinical teachers share a passion for teaching, are clear and organised, accessible, supportive, compassionate, and able to establish rapport, provide direction and feedback, exhibit integrity and respect for others and demonstrate clinical competence. They also utilise planning and orienting strategies, possess a broad repertoire of teaching methods, draw on multiple forms of knowledge and target their teaching to the level of the learners (Irby, 1995). Munro *et al.* (1998) described the key attributes of the good GP trainer to include honesty, availability, good communication, clinical soundness and commitment to teaching and learning. Using a modified Delphi study, Boendermaker *et al.* (2003) found that the core characteristics of GP trainer competency are the capacity and willingness to give feedback, good communication, respect, and the ability to be critical of both the registrar and the learning process. Ferenchick *et al.* (1997) and Irby (1995) have both stressed that reflection is a vital component of the

trainer. In a recent review, Spencer-Jones (2010) summarised the competencies of a good GP educational supervisor into the following twelve categories, namely:

- 1 Communication and consultation skills
- 2 Teaching holistically
- 3 Educational data gathering and interpretation
- 4 Making an educational diagnosis and making decisions
- 5 Teaching (facilitation of learning)
- 6 Managing complex educational situations
- 7 Educational administration and information technology
- 8 Working with colleagues and in teams
- 9 Community orientation
- 10 Maintaining performance, learning and teaching
- 11 Maintaining an ethical approach to teaching
- 12 Fitness to teach.

Defining Attributes of 'GP trainer'

The author combined all the above-listed characteristics of the ideal GP trainer with others obtained from personal experience and from colleagues. Three main categories (personal, professional and teaching) emerged, each subdividable further into three domains (knowledge, skills and attitudes) as follows:

1. **Wise person (personal attributes):**
 - **knowledge:** self-awareness, knowledge of human nature.
 - **skills:** reflection, sharp observer, self-control, stress management, time management, resourcefulness.
 - **attitudes:** integrity, honesty, patience, humility, openness to feedback, respect, empathy, diligence, availability, takes care of own health, lifelong learning.
2. **Accomplished GP (professional attributes):**
 - **knowledge:** extensive up-to-date knowledge base, clinical experience.
 - **skills:** expertise in diagnosing and managing all acute and chronic health problems, health promotion, disease prevention and screening, leadership, management skills, skilled use of information technology, teamwork.
 - **attitudes:** enthusiasm for general practice, holistic approach, interdisciplinary, professional ethics, patient-centredness, evidence-based approach, community orientation, continuous professional development.
3. **Gifted teacher (teaching attributes):**
 - **knowledge:** knowledge about teaching.
 - **skills:** making an educational diagnosis, able

to plan and tailor teaching, listening and communication, giving feedback, constructive criticism, conflict management, counselling, assessment skills.

- **attitudes:** passion for teaching, motivator, holistic educational approach, ethical teaching, trainee-centredness, safely challenging, supportive, continuous training in teaching.

Hence, a GP trainer is a wise person, an accomplished GP and a gifted teacher all rolled up into one. There is naturally a certain degree of overlap between these three facets of the trainer.

Model and additional cases

According to McKenna (1997), describing model and additional cases helps to clarify and contextualise abstract concepts. Four cases will be presented here: a model case, a contrary case, a borderline case, and a related case - to illustrate what a *GP trainer* is and is not. A model case is a paradigmatic example of the use of the concept that includes all of the defining attributes; a contrary case is a clear example of what the concept is not; a borderline case has most of the defining attributes and may be difficult to distinguish from the model case; and a related case is a parallel but somewhat different instance of the concept (Walker & Avant, 2005). Illegitimate and invented cases have been omitted as they would not have enriched this analysis.

1. Model Case

The model case for *GP trainer* is made up by the confluence of personal, professional and teaching attributes (see Figure 1). Such a case would be a trainer who is a conscientious, approachable and organised person, who provides the best possible service to patients, and who is able to identify the trainee's educational needs and address them with appropriate and timely teaching interventions. This GP trainer would be able to accompany their trainee with a supportive relationship throughout the duration of the training programme, while at the same time providing constructive feedback and formative assessment as required.

2. Contrary Case

One can visualise a GP who is engaged as a trainer but whose sole interest is to shirk work, pocket a salary, and make the trainee work for him. He is always on vacation or sickness leave, and hardly meets his trainee. This 'trainer' has no interest whatsoever in teaching and ignores his trainee's needs. Whenever the trainee tries to approach his trainer, he is verbally abused. Such a 'trainer' would surely not be worthy of his title.

3. Borderline Case

A borderline case can be found in a GP trainer who has excellent listening, counselling and supportive skills but then has no idea how to assess her trainee's educational progress and is unable to draw up an educational plan. This doctor would make a good counsellor but an incomplete trainer.

4. Related Case

A case related to a GP trainer would be a nurse preceptor, who is involved in teaching nurses in a one-to-one relationship. Just like in GP training, teaching is practice-based (Benner, 1984).

Antecedents of the concept

Before Maltese GPs become trainers, they must have at least five years of clinical experience and be actively practising for at least twenty hours per week. They must also undergo training as teachers in family medicine, with formal accreditation by the Malta College of Family Doctors (Malta College of Family Doctors, 2011). The other variable in the equation is supplied by graduate doctors who wish to undergo GP training.

Consequences of the concept

The direct consequence of the GP trainer is the provision of expert teaching to the trainee. The GP would be able to act as a role model, mentor, clinical educator, and assessor as necessary for the trainee's educational development (Morgan, 2005). In addition, the sterling contribution of the ideal trainer in GP education cannot but have a wider positive impact on other trainees, colleagues, patients and society in general. A faculty of excellent trainers would definitely promote quality in the field of family medicine and elevate the standing of the profession.

Empirical referents

The final step in a concept analysis is to identify empirical referents for the defining attributes (Walker and Avant, 2005). Empirical referents are instances that by their existence demonstrate the occurrence of the concept and can be very useful in measuring the concept and validating its existence (McKenna, 1997; Walker and Avant, 2005). There is no doubt that the GP trainer exists - it is an important position in the higher education of GPs.

One of the reasons that led to investigation of the competencies of the GP trainer in the literature was to find ways to measure the teaching expertise of GPs (Spencer-Jones, 2010). Schol (2001) developed a validated

tool to measure teaching effectiveness which she called a Multiple-station Teaching Assessment Test. This test is analogous to the well-known objective structured clinical examination (OSCE) and consists of seven stations in which simulated teaching situations are portrayed. In each station two observers independently score the trainers on a five-point scale.

The stations developed by Schol (2001) consist of:

- 1 drawing up a learning agenda
- 2 leading an advisory conversation
- 3 exchanging information about practice visits
- 4 having a case-related discussion
- 5 giving feedback
- 6 demonstrating a particular skill or technique
- 7 having an intermediate evaluation conversation.

Another method to measure the teaching competencies of GP trainers is to gather periodic evaluations from their own trainees. This may be done using a number of questions for specific teaching criteria, graded on a scale. The Yorkshire Deanery Logbook (Yorkshire Deanery Department for NHS Medical and Dental Education, 2003) contains an evaluation sheet that questions trainees about the teaching effectiveness of their trainer and whether sufficient time was allocated to formal and clinical teaching, and to the teaching of eight specific topics. It would be interesting to investigate why these criteria and not others were chosen for periodic evaluation.

To gather data on the personal and professional attributes of GP trainers, valuable multi-source feedback could be obtained from questionnaires distributed to their patients, trainees, colleagues and other staff at the workplace. This 360° feedback is similar to that obtained on GP trainees during the course of their training (Yorkshire Deanery Department for NHS Medical and Dental Education, 2003). In this way, the domains of knowledge, skills and attitudes could be explored for both the personal and the professional facets of the trainer.

Conclusion

This concept analysis was based on the method described by Walker and Avant (2005). Although there are eight stages within the method, the mental process of concept analysis does not occur sequentially, but iteratively. Nevertheless, the method provides a checklist to help the beginner perform a thorough analysis of a particular concept with relative ease.

The concept *GP trainer* has been clearly defined here as an amalgam of many personal, professional and teaching attributes. The GP trainer incorporates three

complementary aspects: a wise person, an accomplished GP and a gifted teacher. Each category can be further subdivided into the domains of knowledge, skills and attitudes. The model trainer integrates all these qualities in equal measure - absence of any ingredient would make them imperfect. Therefore, trainers should endeavour to develop their personal, professional and teaching aspects throughout their career so that they can exert a positive influence on young doctors. After all, the passionate learner makes the best teacher.

Defining and clarifying the attributes of the GP trainer has practical offshoots. It enables GP colleges to draw up tailored train-the-trainer courses and provides empirical tools to measure the effectiveness of this training. Similar criteria may also be assessed for the purpose of GP trainer revalidation.

The other objective of this analysis was to question the adequacy of the term *trainer* in *GP trainer*. Indeed, it has been shown that GPs are not trained, but educated. The ultimate aim of teaching GPs is to endow them with the same personal and professional attributes of the ideal trainer so that they excel in their field (see Figure 1). Thus, they will be equipped with the proper knowledge, skills and attitudes to safely navigate the often deep, vast and uncharted waters of general practice with their patients.

Figure 1 Desirable attitudes of the GP trainer



Since GP trainers shoulder the huge responsibility of facilitating such a holistic education of their trainees, they should be more appropriately called *GP educational supervisors*.

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A training needs analysis of health care providers within Malta's Primary Health Department - a boon or a bane?

Dr Mario R SAMMUT, Ms Mariella BOMBAGI, Ms Rebecca CACHIA FEARNE

Abstract

Aim: In 2009, the Practice Development Unit and the Specialist Training Programme in Family Medicine within Malta's Primary Health Department carried out a training needs analysis of health care providers working in government primary health centres and clinics so as to investigate their educational requirements.

Method: After a questionnaire was developed as a tool, a pilot study was conducted in a particular health centre to test its validity. The amended version of the questionnaire was then mailed individually to all health providers working at that time in the various health centres and peripheral clinics.

Results: Out of the 498 questionnaires sent, 215 were completed and returned, with a resulting response rate of 43%. One main finding was that, irrespective of one's discipline, the programme topic and the lecturer were the important decisive factors of whether one attended a training course or not. On the other hand, specific obstacles to training emerged that are directly related to one's profession: these included shortage of staff, lack of time and other commitments.

Conclusion: From the information revealed by the training needs analysis, the department revamped its training strategy to consist of three-monthly Saturday seminars dealing with topics relevant to primary health care, with such activities being oversubscribed and well-received. In this manner a thriving continuing professional development programme was designed and

delivered for health care professionals within Malta's Primary Health Department

Introduction

In Malta, primary health care is provided by the public and the private sectors. The state Primary Health Department (PHD) offers access to comprehensive primary health care services to all citizens through 9 main health centres (8 in Malta and 1 in Gozo) and 46 peripheral local clinics. Besides general practitioner and nursing care (offered on a 24-hour basis in three of the health centres), other services offered during the day include immunisation, pharmacy, physiotherapy, podiatry, speech therapy, antenatal and postnatal clinics, well baby and paediatric clinics, diabetes clinics, medical consultant clinics, orthopaedic clinics and wound clinics (Health, Elderly and Community Care, 2011a).

The Practice Development Unit (PDU) (Health, Elderly and Community Care, 2011b) and the Specialist Training Programme in Family Medicine (Health, Elderly and Community Care, 2011c) are responsible for the education of primary health professionals within the department. In 2008 the PDU launched a monthly series of continuing professional development (CPD) lectures for staff. After a well-attended first talk by the Director of Primary Health, attendance for the following lectures plummeted. The lecture programme was thus suspended and a decision was taken to undertake a training needs analysis of primary health providers. Training needs analysis (TNA) is the first step in a cyclical process that contributes to the overall training and education strategy of staff in an organisation or professional group (Barbazette, 2006). Following the initial analysis, training is determined and designed, delivered and supported, and finally evaluated and validated to close the loop.

Key Words

Educational needs assesment; health personnel; primary healthcare; Malta

TNA has been found to assist in the development of relevant education courses which are so important for health care professionals to improve their skills according to the latest developments in clinical practice (Hicks and Hennessy, 1997). The provision of CPD has been recommended as a source of job satisfaction among Maltese government general practitioners and thus as one way to tackle medical manpower needs in state primary care (Sammut, 2007). A literature review and reappraisal of needs analysis for training of nurses showed that training needs initiatives within single organisations were more likely to have a positive effect on the rest of the training cycle and on service delivery and quality of patient care (Gould, Kelly, White and Chidgey, 2004).

The objectives of this TNA of state health care providers (HCPs) included the identification of specific topics/subjects of interest, factors that encourage attendance for training, barriers to attendance and ways to eliminate them, and preferred learning formats and methods. It was anticipated that the results of the local TNA would be a boon not a bane, not only to the CPD programme but also to job satisfaction, service delivery and quality of care.

Method

A questionnaire composed of 13 questions was formulated after reviewing relevant literature, and a covering letter was prepared. A pilot study was conducted in one health centre with a range of HCPs to check if the questions were clear and meant the same to them, if they correctly followed directions and if their replies were appropriate and provided the intended information. After necessary changes to the tool were implemented, the questionnaire and covering letter were mailed to all the other 498 HCPs within the PHD in January 2009. After being completed anonymously and on an informed-approach basis, the questionnaire was to be returned by internal mail. A prize raffle was used as an incentive to encourage participation in this survey, with entries mailed separately from the questionnaire to maintain confidentiality. Analysis was performed using Microsoft Excel ® and Microsoft Word ® software programmes.

Ethical considerations

Authorisation to conduct the TNA was given by the Director of Primary Health. No ethical approval was needed since sensitive personal data were not gathered. Participants were informed that the information

gathered would be used to ensure that HCPs are offered the required training in order to enhance the delivery of professional care, and also help to build a case to invite external lecturers and to organise workshops/seminars as necessary. Participants were assured that the questionnaire was entirely confidential, rendering it impossible to identify them from their replies, and that by returning the completed questionnaire they would have given their consent to participate in the survey.

Results

Two hundred and fifteen questionnaires were returned out of 498 that were mailed, giving an overall response rate of 43%. The response rate by profession is illustrated in Table 1, with Figure 1 showing the length of time respondents have worked in primary health care.

The main obstacles to attending lectures listed by respondents (Figure 2) were staff shortages, lack of time and other commitments. On the other hand, lack of staff was not considered a problem for physiotherapists and speech language pathologists, while the former and podiatrists reported that they were not pressed for time.

As regards factors favouring registration for training (Figure 3), the HCPs gave most importance to the topic and the lecturer, followed by the provision of course material, a certificate of attendance and compensation through time-in-lieu. Comfortable premises and a central area were the factors mentioned most often as encouraging attendance (Figure 4), with the provision of teaching on relevant and interesting topics most popular among the ideas for further improving development and training efforts (Figure 5).

The learning topics preferred by doctors, nurses and nursing aides may be seen in Figure 6, with other requested topics categorised by professions as follows: immunisation (nurses and midwives), topics relevant to pharmacy (4 requests from pharmacy staff), topics related to dentistry (2 requests from dental staff), autism (2 requests from speech language pathologists) and biomechanics (2 requests from podiatrists).

Regarding the delivery of training (Figure 7), the most favoured methods were 1-2 hour lectures, practical sessions and half-day workshops, given by multidisciplinary speakers to a mixed audience (Figures 8 and 9). Respondents identified weekdays as the best days of the week (Figure 10) and 10am-12MD as the most convenient time (Figure 11) to attend training programmes.

Table 1: Response rate by profession

Health Care Providers	No.	Respondents No.	Respondents %
Nurses & Midwives	178	99	56
Medical Practitioners	98	28	29
Nursing Aides & Health Assistants	71	31	44
Speech Language Pathologists	66	11	17
Pharmacists & Pharmacy Technicians	42	21	50
Podiatrists	16	6	38
Dentists & Dental Hygienists	15	9	60
Physiotherapists	12	10	83
TOTAL	498	215	43

Figure 1: Length of time participants have worked in primary health care

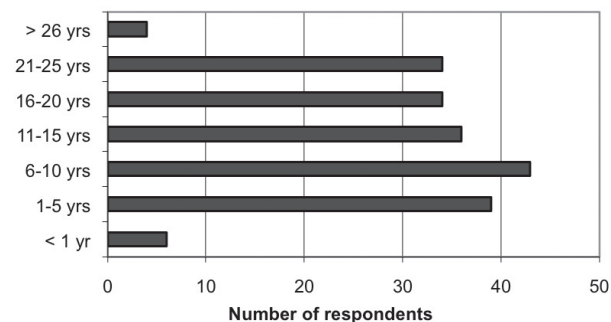


Figure 2: Respondents' obstacles to attending lectures

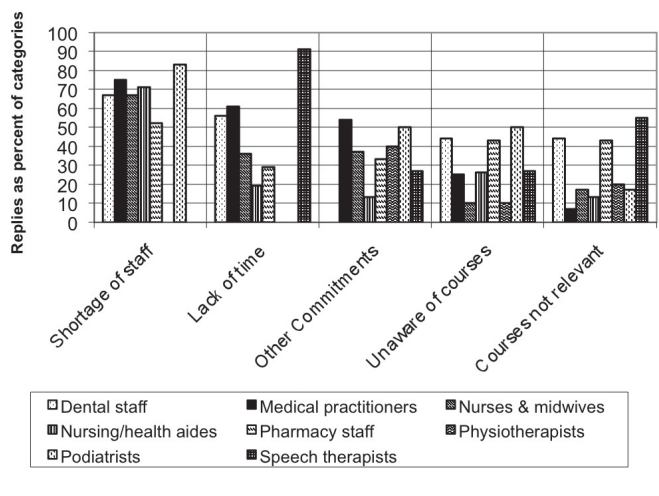


Figure 3: Factors favouring participants' registration for a training programme

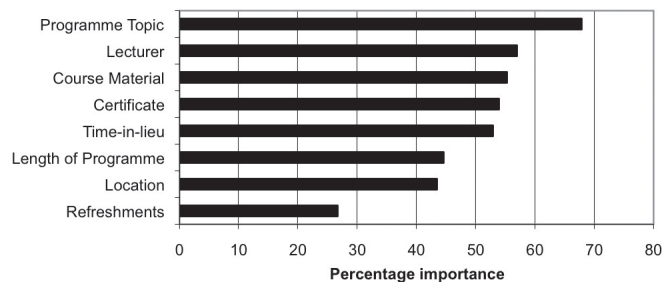


Figure 4: Other factors encouraging attendance of lectures



Figure 5: Ideas for further improving development and training efforts

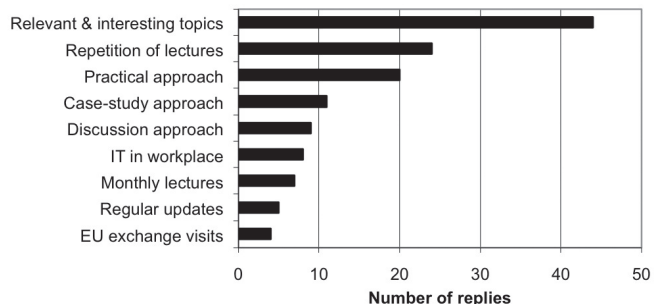


Figure 6: Learning topics preferred by doctors, nurses and nursing aides

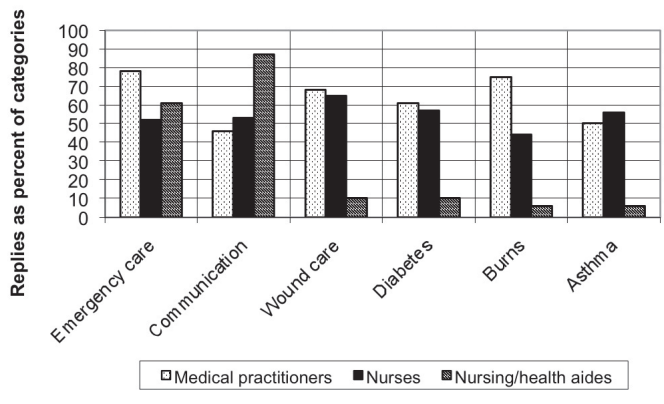


Figure 7: Participants' preferred learning methods

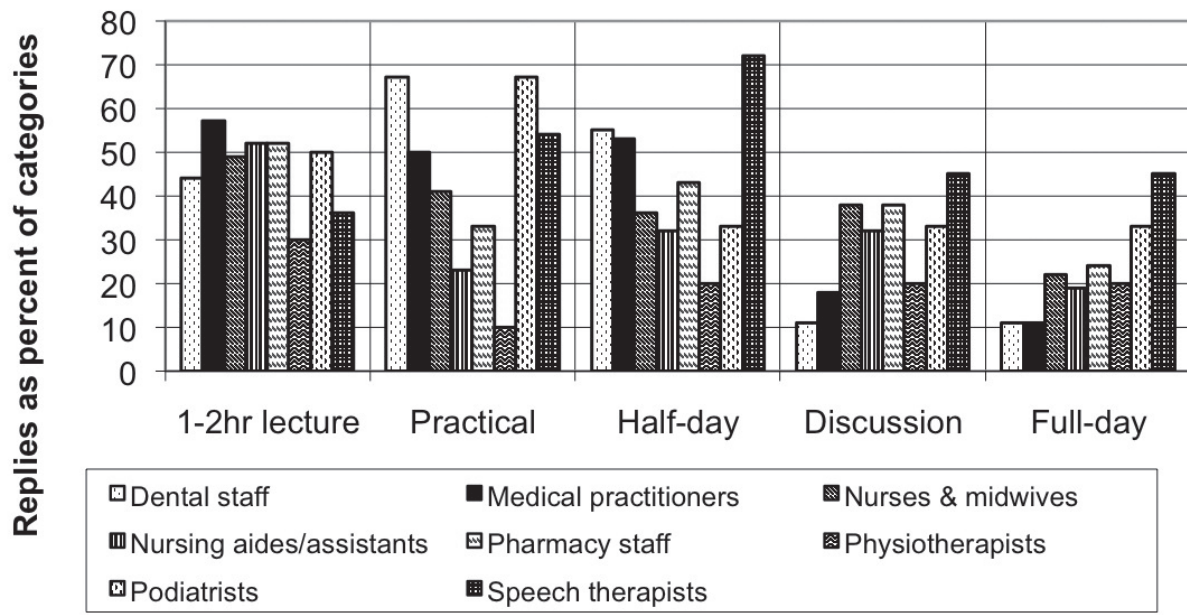


Figure 8: Respondents' preferred type of speakers

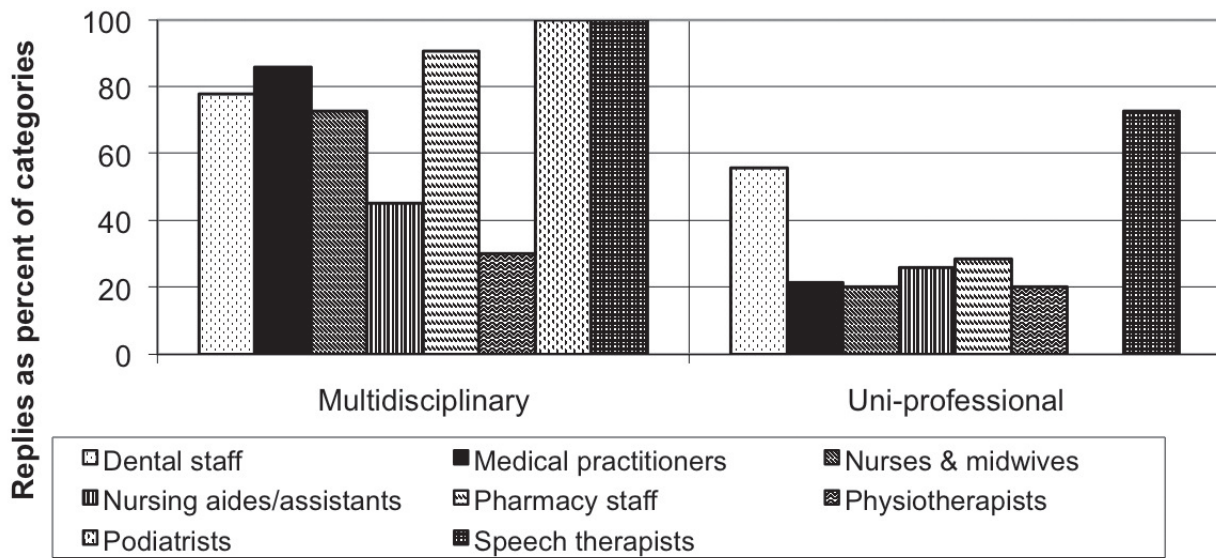


Figure 9: Participants' preferred type of audience

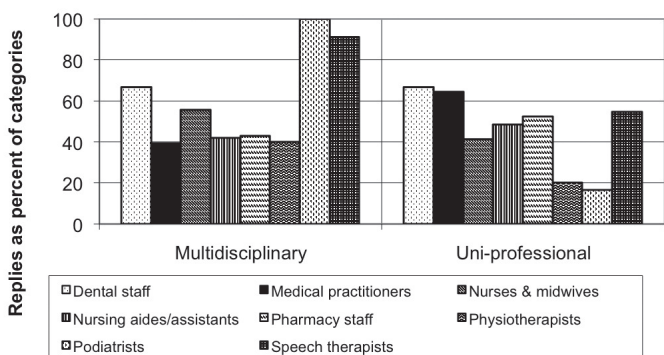


Figure 10: Best day of the week for respondents to attend training programmes

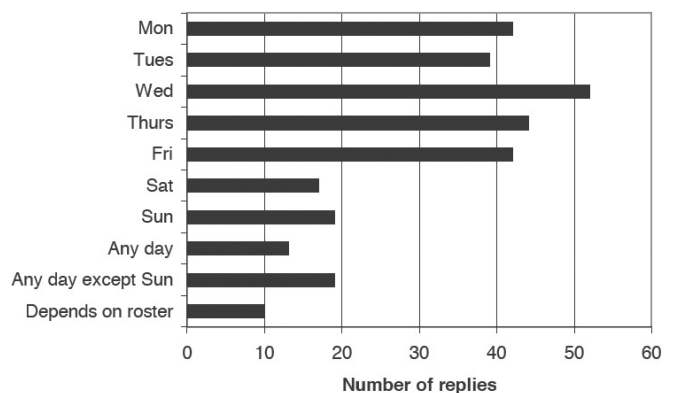
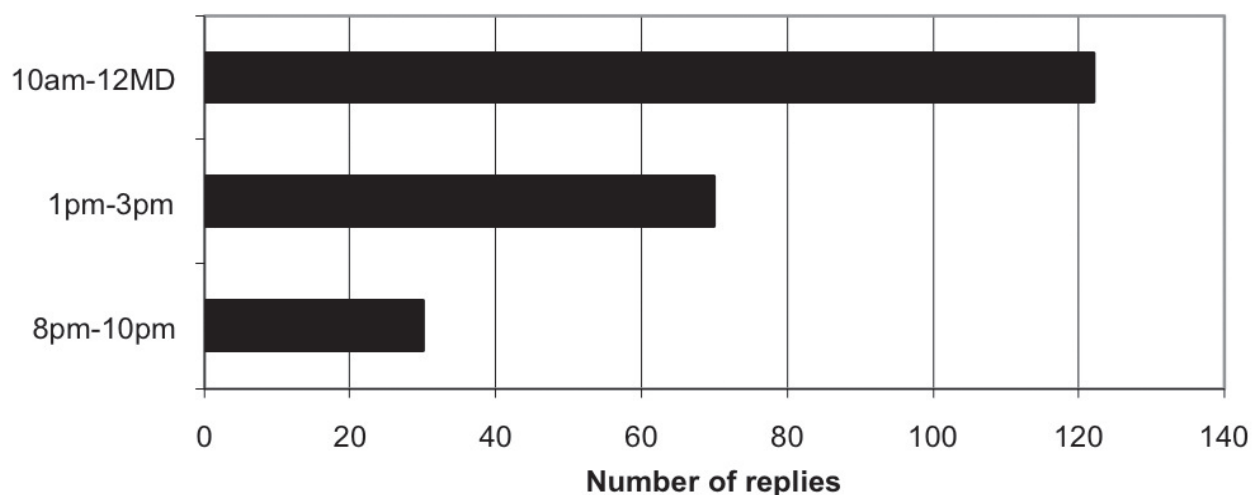


Figure 11: Most convenient time for participants to attend training programmes



Discussion

The barriers to undertaking training cited by local health care providers are similar to those in the UK. While Maltese HCPs listed shortage of staff, lack of time and other commitments (in that order), UK professionals mentioned time, cover for people to attend, costs and access or locality (Health Promotion Agency for Northern Ireland, 2008).

UK health professionals also specified factors (other than time and cost) that positively influenced them to attend training; these included relevance to current priorities, locality or access, professional development needs and current patient needs (Health Promotion Agency for Northern Ireland, 2008). Such positive features were similar to the factors encouraging Maltese HCPs to register and attend training activities, namely the topic/lecturer, comfortable premises and a central area, and the provision of teaching on relevant and interesting topics.

Regarding preferred learning methods, Maltese health care providers favoured lectures, practical sessions and half-day workshops, while UK professionals similarly preferred courses/workshops and seminars/conferences (Health Promotion Agency for Northern Ireland, 2008). One modality of learning that was not mentioned in Malta but was given some importance in the UK survey was that of distance/electronic learning, where two-thirds of those who had experienced this format deemed it to be a positive experience as they could study at their own pace and during their preferred time of day (Health Promotion Agency for Northern Ireland, 2008). In view of the busy timetables of Maltese HCPs, electronic learning merits consideration as an alternative method of CPD (Department of Health, 2001). Such an innovative

method would require investment in time and manpower so that the required learning material is prepared. Another challenge may be the difficulty experienced by staff in using information technology systems (Health Promotion Agency for Northern Ireland, 2008).

While certain health care providers (doctors, nursing assistants and pharmacy staff) preferred to receive training only with members of their category, there was an overall predilection by survey participants for undergoing training as part of a mixed audience. All categories were unanimous in preferring multidisciplinary speakers. Receiving interprofessional education is a means of preparing health care providers to take on a more collaborative approach in continuing professional development programmes, and working in collaborative environments is especially important in primary health care in order to enhance patient care (Currant, Sergent and Hollett, 2007).

Design, delivery and evaluation of training

As a result of the findings from the local TNA, the PDU started organising well-publicised CPD seminars on a 3-monthly basis. To avoid problems of staff not being released from work during busy weekdays, such seminars are held on Saturday morning till early afternoon. The schedule consists of 90-minute sessions interspersed with coffee and lunch breaks. A central venue with adequate parking was selected, and certificates of attendance together with copies of speakers' presentations are provided for participants.

In view of the benefits of interprofessional education cited in the literature, all the health profession groups in public primary care are invited to talks delivered by

a range of health professionals. The topics selected are based on recommendations made during the survey and through post-seminar evaluation forms. So far these have included asthma, diabetes management, motivational interviewing, community support services, vascular disease, and child & adolescent health. The majority of the seminars were over-subscribed and feedback from participants has confirmed that their expectations were met (98% of replies) and that the environment was conducive to learning (93%).

Limitations of study method

Due to a lack of time and resources, the authors were not in a position to further establish the questionnaire's validity during piloting by statistically analysing its reliability. Postal surveys of samples of primary care professionals are known to have a low response rate (Sibbald, Addington-Hall, Brenneman and Freeling, 1994; McAvoy and Kaner, 1996). As the questionnaire was sent to the whole population of state health care providers and not just a sample, the TNA's response

rate of just below 50% can be considered as acceptable. A bias may have been introduced from non-response by disinterested health care providers. While non-respondents ideally should be contacted to inquire as to the reason for their non-response, this was not possible due to the anonymity of the questionnaires. A statistical analysis of the results of the survey could not be carried out, again due to time and resource restrictions.

Conclusion

The results of the TNA were found to be of help rather than of hindrance to the organisation of CPD activities by the Primary Health Department. From lectures attended by just a handful of people, the programme was transformed into a series of seminars which were over-subscribed and well-received. In this way the TNA resulted in the design and delivery of a thriving CPD programme for health care professionals within Malta's Primary Health Department. Future analyses could target the possibility of introducing distance/electronic learning methods.

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Complementary and alternative medicine - facts and figures (Part I)

Dr Odette PACE

Abstract

Background: Complementary and alternative medical practices are flourishing despite the current fast pace of scientific research and discovery. Traditional practices combine with newer philosophies to make up the vast spectrum that constitute this phenomenon.

Objectives: To describe homeopathy and acupuncture, proposed mechanisms of action, present scientific research to prove or disprove their efficacy and discuss safety issues.

Method: Studies, reviews and meta-analyses dealing with this subject were researched from various publications to present evidence for or against the efficacy of complementary and alternative medicine.

Results: Recent rigorous studies on acupuncture and homeopathy show no results beyond what is attributable to placebo effect.

Conclusion: Complementary and alternative medical practices should be researched for efficacy and safety by the same standards used in conventional medicine.

Introduction

Complementary and alternative medicine (CAM) constitutes a broad spectrum of therapeutic and diagnostic disciplines that exist largely outside conventional health care institutions. Common to most CAM systems is a focus on individualizing treatment and being holistic, whilst recognizing the spiritual nature of each individual. However, claims about efficacy often lack scientific evidence and have often been disproved during testing. The United States National Science Foundation has defined CAM as “all treatments that have not been proven effective using scientific methods” (National Science Foundation, 2001). Many practices form part of historical

or cultural traditions rather than being based on scientific principles, e.g. Chinese and herbal medicine.

Definition

Complementary medicine refers to practices which are used together with conventional medicine e.g. acupuncture used with conventional pain relief. **Alternative** medicine includes practices used in place of conventional practices, while **integrated** medicine is defined as conventional medicine combined with CAM practices that are safe and show some evidence of efficacy (National Centre for Complementary and Alternative Medicine, 2011). CAM practitioners refer to conventional medicine as **allopathic** medicine.

Prevalence of Use

CAM is very popular in both developed and less developed countries and use seems to be increasing: in 1997, CAM practitioners were visited by 627 million Americans, 200 million more than in 1990. Use of conventional medicine remained unchanged (Eisenberg et al, 1993, 1998).

In 2002, the most common therapies used by Americans were herbal medicines (19%), deep breathing (12%), meditation (8%), chiropractic (8%), yoga (5%), massage (5%) and diet-based therapies (4%). Use was more common in the more educated sector, women and higher income groups (Barnes, 2004). Users also tended to be more obese, to suffer from depression or chronic illness and to be a member of a religious organisation. A study carried out in England during 2005 gave similar results (Hunt, 2010).

CAM is also often incorporated into palliative care, where its use has always been more acceptable than in other fields of medicine as long as the treatments were safe and provided additional support. It “took for granted the necessity of placing patient values and lifestyle habits at the core of any design and delivery of quality care at the end of life”. (Kellehear, 2003)

Key Words

Complementary and alternative medicine, homeopathy, acupuncture, research, evidence-based, placebo effect

Use in developing countries is mainly driven by tradition and a lack of resources to buy more expensive conventional medicine; traditional or alternative remedies make up 80% of therapies used. Overall, over one third of the population in developing nations has no access to conventional drugs. (WHO, 2005)

The popularity of alternative therapy in Malta has not been assessed, but articles in the press, slots on television programs and advertising show that there is no lack of interest in the subject.

Classification

Complementary and alternative medicine methods can be very different in their origins and practice, being variously based on traditional medicine, spiritual beliefs or novel approaches to healing.

The National Centre for Complementary and Alternative Medicine (NCCAM) in America has classified CAM into five major groups (National Centre for Complementary and Alternative Medicine, 2008), with some overlap:

- 1 **Whole medical systems:** overlaps more than one group; e.g. Traditional Chinese medicine, Naturopathy and Homeopathy.
- 2 **Mind-body medicine:** explores the interconnection between the mind, body, and spirit e.g. meditation, yoga, hypnotherapy, tai chi and even prayer.
- 3 **Biology-based practices:** are based on natural products such as herbs and food.
- 4 **Manipulative and body-based practices:** consist of therapies involving manipulation and movement of body parts e.g. chiropractic and osteopathic manipulation, and massage therapy.
- 5 **Energy medicine:** a domain that deals with putative and verifiable energy fields:
 - **Biofield therapies** are based on supposed energy fields surrounding and penetrating the body. No evidence supports their existence.
 - **Bioelectromagnetic-based therapies** use electromagnetic fields such as pulsed fields, alternating-current, or direct-current in an unconventional way.

Objectives

In this article two branches of CAM, acupuncture and homeopathy, will be described and scientific research presented to provide evidence, if any, for their efficacy. Possible mechanisms for apparent effect and safety issues will be discussed.

Method

Articles, studies and meta-analyses regarding acupuncture and homeopathy were researched in various medical publications to present relevant evidence for or against their efficacy. Other studies researched related to safety issues and prevalence of use.

Acupuncture

Acupuncture is a 2000 year old branch of Traditional Chinese Medicine (TCM) in which different types of needles are inserted into specific points in the body to promote general health or treat various conditions, with an emphasis on pain relief. Diseases are attributed to disturbances in the metaphysical force known as qi (“vital energy”), imbalance of yin and yang, and the five elements: earth, water, fire, wood and metal (Wiseman and Ellis, 1996). No force corresponding to qi (or yin and yang) has been found in physical science or human physiology (Singh and Ernst, 2008). Dissection was forbidden and knowledge of internal anatomy was very limited. The location of the 12 meridians were probably based on the number of rivers flowing through the ancient Chinese empire, and the 365 acupuncture points were originally derived from Chinese astrological calculations and do not correspond to any anatomical structure (Lu, Needham and Lo, 2002).

In TCM, there are four diagnostic methods: inspection, auscultation and olfaction, inquiring, and palpation (Cheng, Deng and Cheng, 1987)

- **Inspection** focuses on the face and tongue.
- **Auscultation and olfaction:** listening for particular sounds (such as wheezing) and noting body odor.
- **Inquiring** focuses on: chills and fever, perspiration, appetite, thirst and taste, defecation and urination, pain, sleep and menses.
- **Palpation** includes feeling the body for tender points, and palpation of radial pulses.

Diagnosis relies primarily on examination of the tongue and pulse. The surface of the tongue is believed to contain a map of the entire body, and while teeth marks on one part of the tongue might indicate a problem with the heart, teeth marks on another part might indicate a problem with the liver (Maciocia, 1995). Three superficial and three deep pulses at different locations on the radial artery of each arm are postulated to correspond to twelve internal organs (Wright and Eisenberg, 1995).

Evidence for Acupuncture

Several indications for acupuncture have been reviewed:

A. Pain

The British Medical Journal published a review in 2009 of the highest quality clinical trials of acupuncture in the treatment of pain, which reported “a small analgesic effect of acupuncture was found, which seems to lack clinical relevance and cannot be clearly distinguished from bias” (Madsen, Gotzsche and Hrobjartsson, 2009). In 2011, a review of fifty seven systematic reviews of the topic, published in the journal of the International Association for the Study of Pain found that there is “little truly convincing evidence that acupuncture is effective in reducing pain” (Ernst, Lee and Choi, 2011).

Isolated studies have shown moderately favourable results when acupuncture is used alone or in combination with conventional therapies for neck and back pain. However, conducting research on low back pain is unusually problematic because of the **nocebo** effect. Many patients may have become disillusioned by conventional care – which in itself can be relatively ineffective – and have low expectations for it. Therefore, conventional care groups may not be an adequate scientific control, further inflating the apparent effectiveness of acupuncture (O’Connell, 2009).

A study done in 2005 showed that patients with chronic daily headache treated with acupuncture in addition to conventional therapy, responded 3.7 times better than controls (Coeytaux et al., 2005). Limitations included lack of blinding and of sham control. Several other trials have indicated that migraine patients benefit from acupuncture, although the correct placement of needles seems to be less relevant than supposed (Linde et al., 2009).

B. Nausea and vomiting

Stimulation of acupuncture point P6 (located on the underside of the forearm, several finger-widths from the wrist) is believed to relieve nausea. A Cochrane Review published in 2009 concluded that both penetrative and non-penetrative stimulation of the P6 acupuncture point had an effect approximately equal to that of preventive antiemetic drugs for postoperative nausea and vomiting (PONV), although only 10% of the studies had adequate information on patient blinding (Lee and Fan, 2009). An earlier Cochrane Review had concluded that electroacupuncture can be helpful in the treatment

of chemotherapy-induced vomiting, but more trials were needed to test their effectiveness versus modern antiemetic medication (Ezzo et al., 2006).

A review of studies about prevention of PONV in the first 24 hours, done in 2008, concluded that despite three of the ten studies found to have statistically significant evidence that acupuncture could prevent PONV, comparison was limited by the use of varied methodologies (different patient groups, different ways of stimulating the P6 point, timing of application of pressure and whether a general anaesthetic was used). It was concluded that “due to the lack of robust studies, [this review] found that neither acupressure nor acupuncture was effective in preventing or managing PONV in adults” (Abraham, 2008). Further study was warranted as more recent, better quality studies, offered more negative results.

C. Fertility and childbirth

In TCM, problems with fertility, pregnancy and childbirth are attributed to difficulty with the flow of qi through various meridians (Singh and Ernst, 2008).

While a 2008 Cochrane review of randomized controlled trials (RCT) of in vitro fertilisation and acupuncture showed an increase in live birth rate (Cheong, Hung Yu Ng and Ledger, 2007), a different review article published in 2010 found that there was no evidence acupuncture improved pregnancy rates (El-Toukhy and Khalaf, 2009). One of the limitations of earlier trials was the small number of women included.

D. Other conditions

The Danish Knowledge and Research Center for Alternative Medicines has evaluated the results of reviews by the Cochrane Collaboration regarding acupuncture and found that “...no solid evidence exists to determine the effectiveness of the treatments. The reviews point out that many of the studies suffer from methodological defects and shortcomings ... thus most of the overall conclusions are uncertain.” (Danish Knowledge and Research Center for Alternative Medicines, 2011)

This applies to the following conditions, among others: chronic asthma, Bell’s palsy, cocaine dependence, depression, drug detoxification, primary dysmenorrhea, menopausal symptoms, epilepsy, fibromyalgia, glaucoma, insomnia, irritable bowel syndrome, induction of childbirth, rheumatoid arthritis, schizophrenia, smoking cessation, acute stroke and vascular dementia.

Possible mechanisms for apparent effect

The placebo effect is thought to play a major role in the mechanism of action of acupuncture (Singh and Ernst, 2008). It is defined as a “physiological effect caused by a substance or procedure that is objectively without specific activity for the condition being treated”. No difference to clinical effect is demonstrated whether needles are inserted at acupuncture points or elsewhere. “Sham” acupuncture controls include insertion of needles at nonacupuncture points and the use of telescoping needles (Marcus and McCullough, 2009).

Sham and conventional acupuncture both provided significant analgesia compared with no treatment. However, there was little or no difference in the relief experienced by the two acupuncture groups where most participants could not distinguish between them (Assefi et al., 2005). The roles of belief in the procedure and expectations of relief were demonstrated in several trials.

When the skin is actually punctured, endorphin release, stimulation of the peripheral nervous system, and pain mediation through the effects of other neuropeptides are postulated to be the most likely explanations for the effects of acupuncture (Sun, Gan, Dubose and Habib, 2008).

Safety Issues

Acupuncture is considered to be safe when administered by well-trained practitioners using sterile needles. However it is an invasive procedure and rare adverse effects have been reported, the majority of which were minor e.g. slight haemorrhage, haematoma and dizziness (Ernst, Strzyz and Hagmeister, 2003; Ernst, Lee and Choi, 2011). More serious consequences included bacterial infections, nerve injuries and hepatitis B (Woo, Lin, Lau and Yuen, 2010), kidney damage, haemopericardium and even reports of pneumothorax leading to fatality (Ernst, 2010).

As with other types of CAM, the use of acupuncture may delay diagnosis or treatment of conditions for which conventional medicine has a better treatment record, potentially worsening patient outcomes; this is defined as opportunity cost. Patients’ resources may also be used up on ineffective procedures.

Homeopathy

Classical homeopathy is defined as a system of medical treatment based on the use of minute quantities of remedies that in larger doses produce effects similar to those of the disease being treated (“law of similars”). This

alternative therapy was conceived by a German physician called Samuel Hahnemann in 1796 in response to the highly dangerous practices performed by conventional doctors at that time, including administering mercury emetics, applying leeches and bloodletting. He came up with the theory that “like is cured by like” after he discovered that cinchona, a tree bark used for treating malaria, gave him chills and fever similar to that produced by the illness. He proceeded to test many substances on himself and on his friends and family (“provings”), ascribing solutions of the substances to different diseases and conditions according to the side-effects produced. He also theorised that highly diluted preparations should cure these diseases, the more dilute the solution, the stronger the resulting remedy – “Law of Infinitesimals”. This is an unproven assertion and not a true law of nature based on the scientific method (Maddox, Randi and Stewart, 1998).

Homeopathic remedies are prepared by serial dilution of substances, followed by **succussion** or forceful shaking. Substances used include Arsenicum album (arsenic oxide), Natrum muriaticum (table salt), Lachesis muta (the venom of the bushmaster snake) and Thyroidinum (thyroid hormone). Nosodes (Greek *nosos*, disease) are made from diseased or pathological products such as fecal, urinary, and respiratory discharges, blood, and tissue (Bellavite, Conforti, Piasere and Ortolani, 2005). Each dilution followed by succussion is assumed to increase the effectiveness, a process called **potentisation** or **dynamisation**. Dilution often continues until none of the original substance remains, being carried out by factors of ten or a hundred (Ernst, 2005). In fact at 12C or 12 serial dilutions by 1:100, only one molecule of substance may be present in solution. Hahnemann himself preferred to use 30C remedies. The presumed effect of the various dilute remedies is ascribed to “**water memory**”. It is asserted that the water molecules retain a “memory or vibration” of the substances that have been in contact with it even when no more molecules of substance are present, another claim unsupported by scientific evidence (Teixeira, 2007).

Hahnemann believed that disease was caused by **miasms** (e.g. psora or “itch”). If symptoms are suppressed by conventional medication, the cause supposedly goes deeper and begins to manifest itself as diseases of the internal organs. Homeopaths maintain that conventional medicine is ineffective as it treats diseases by directly opposing their symptoms (Ward, 1937).

During a long consultation, homeopaths generally take a detailed history, including questions regarding their patients' physical, mental and emotional states. The complex formula of mental and physical symptoms, including likes, dislikes, innate predispositions and even body type, enables the homeopath to treat the patient by consulting the homeopathic repertory, which is an index of symptoms and associated remedies.

Evidence for Homeopathy

There is a total lack of scientific evidence to support any of the theories of homeopathy, in fact the *Law of Infinitesimals* runs counter to the laws of chemistry and physics (Teixeira, 2007). This idea is inconsistent with the observed dose-response relationships of conventional drugs, confirmed by countless experiments on both animals and humans. Abstract concepts such as quantum entanglement, the theory of relativity and chaos theory have been used to explain how remedies might work, however these speculations often apply concepts incorrectly and are not supported by actual experiments (Shelton, 2004).

The theory of "water memory" is inconsistent with the fact that water molecules would actually have been in contact with millions of different substances throughout their existence, making water an extreme dilution of almost any conceivable substance. According to this interpretation, every imaginable medical condition can be treated by simply drinking water (Milgrom, 2007).

A widely cited 1997 publication concluded that the results of a meta-analysis were not compatible with the hypothesis that "the clinical effects of homeopathy are completely due to placebo" (Linde et al., 1997). After critics pointed out that 68 of the 89 trials included in the meta-analysis were of poor quality, the authors re-examined the same data two years later and concluded that "studies with better methodological quality tended to yield less positive results" (Linde et al., 1999).

In 2002, a review of systematic reviews found that there was no convincing evidence that any homeopathic remedy had better effects than placebo, and usage was not recommended in clinical management (Ernst, 2002). A later meta-analysis, which identified only eight trials that met higher standards for quality, concluded that "homeopathy was only very marginally more effective than placebo" (Shang, 2005). That report was accompanied by an editorial in *The Lancet* entitled "The end of homeopathy" (Lancet, 2005). Despite these analyses demonstrating no clear benefit for homeopathy

beyond a placebo effect (Ernst, 2006), advocates continue to cite the 1997 publication as evidence for homeopathy's efficacy.

Possible mechanisms for apparent effect

The placebo effect is the most widely quoted mechanism by which homeopathy is thought to exert an influence (Ernst, 2007). Belief in the efficacy of homeopathy and confidence and trust in the practitioner would enhance this effect. Veterinary use may seem to contradict the role of the placebo effect but there has been little scientific investigation and current research in the field is generally not of a high enough standard to provide reliable data (Hektoen, 2005). One well-designed study found no effect of homeopathic nosodes in preventing mastitis in cows (Holmes, Cockcroft, Booth and Heath, 2005). Other studies have found that giving animals placebos can play active roles in influencing pet owners to believe in the effectiveness of the treatment when none exists (Hektoen, 2005).

Other reasons for apparent efficacy could include natural healing, concurrent treatment with conventional medicine and adherence to life-style changes prescribed by the homeopath. Many diseases are cyclical, which would make any improvement attributable to the remedy taken, despite a natural regression towards the mean. Resolution of psychological and psychosomatic disorders can follow a lengthy, caring consultation (Shelton, 2004).

Safety Issues

Whilst most homeopathic remedies have an excellent safety profile, inherent in the fact that they are basically water, there have been instances of unwanted side-effects, secondary to improper preparation or intentional low dilution. Cases of arsenic poisoning have been documented (Chakraborti et al., 2003), as well as instances of anosmia following the use of zinc-containing cold remedies (Barrett, 2003).

Homeopathic drugs are regulated differently by the Food and Drug Administration (FDA) from conventional medications or dietary supplements. Under the provisions of the Food, Drug, and Cosmetic Act of 1938, all homeopathic remedies listed in the homeopathic pharmacopoeia of that time were exempted from tests for efficacy or safety. Remedies can be purchased over the counter and on the Internet as long as they do not claim to treat a serious illness (White Junod, 2001).

Of more concern is the fact that homeopathy users may delay or fail to utilize proper treatment for conditions that are easily cured by conventional medicine. Fatalities have been documented, among them a case of a 3 year-old Italian boy who died of pneumonia in October 2011 after being treated by his homeopath father (The Telegraph, 2011). The resistance of some homeopaths to the use of allopathic medicine can put patients off immunisation (Ernst, 2001) or the use of prophylactic drugs like anti-malarials (Jones 2006), exposing them to serious, often deadly infections. The argument that conventional medicine would “suppress” a disease and drive it deeper into the tissues and organs was used by George Vithoulkas in 1978 to convince his clients to discontinue treatment for syphilis (Birnbaum, Goldschmidt and Buffett, 1999), when it has been proven that treatment with penicillin effects a complete cure in 90% of patients.

Another issue is proper client information. It has been proposed that pharmacists should provide customers with the necessary information about the true nature of homeopathic products, making it obligatory for pharmacy curricula to teach students where unproven systems such as homeopathy depart from evidence-based medicine (Pray, 2006).

Discussion

Despite great advances in science, CAM practices are increasing in popularity. What is the attraction of alternative medicine? Different studies have come up with various reasons. One has cited the low scientific literacy and anti-scientific attitudes prevalent today (Beyerstein, 1999), with a resurgence of new age mysticism. Many people committed to environmentalism and feminism find CAM to be more congruent with their values and beliefs. Chronic illness can create a dissatisfaction with conventional medicine making the more personalized care provided by CAM look more attractive. Unpleasant side-effects caused by pharmaceuticals such as anti-cancer agents can be avoided by using CAM. Financial considerations are an additional factor especially in societies where a lack of a health insurance may mean unattainable conventional healthcare (Astin 1998).

The two CAM practices described in this article have very different origins and postulated mechanisms of action. There is no scientific evidence supporting either system’s philosophy, which is unsurprising considering that acupuncture originated in an ancient unscientific

culture mired in mysticism, while the workings of homeopathy were proposed when science was still in its infancy.

Evidence for efficacy in acupuncture is slightly stronger than for homeopathy. However, several reviews concluded that the placebo effect plays a major role, demonstrated by the fact that sham and actual needling obtained similar results, while varying the position of needle insertion produced no difference in effect. Further research has been recommended because the use of different methodologies makes comparison during reviews difficult.

There are less favourable results for homeopathy. Although earlier poorly designed studies showed some positive findings, later more rigorous trials were markedly less positive.

Safety issues are always important in medical care. Direct serious side-effects are very rare in both practices, although there have been recorded fatalities with acupuncture. A more important issue is **opportunity cost**, when conventional care is replaced by ineffective CAM practices, causing a delay in diagnosis and/or failure to treat serious conditions with proven methods. This may adversely affect outcomes and even cause fatalities.

Conclusion

“The systematic synthesis of evidence is the foundation of all medical discoveries and of good clinical practice.”(Dickersin, Straus and Bero, 2007)

Efficacy and safety of CAM practices should be evaluated by the same standards used to analyse conventional therapies; reliance on anecdotal evidence is not acceptable. Rejection of evidence in favor of traditional beliefs and clinical anecdotes compromises educational standards and clinical practice. Further evidence-based research will determine possible efficacy where controversy still exists.

More education of the general public and the medical profession is required to create more awareness of what really constitutes CAM practices so that informed choices can be made.

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Documentary sources for the history of the Maltese general practitioner

Dr Anton BUGEJA

Abstract

Background: The history of the Maltese General Practitioner (GP) remains to be written. Such history will enhance the identity of the family doctor and prove indispensable to characterise the Maltese context of practice.

Objectives: To list some of the resources available for the study of the history of the Maltese GP and use it to provide an overview of relevant material for the pre-seventeenth-century period.

Methods: Over the past ten years, note was made of the material and literature encountered that could be of relevance to Maltese medical history in general and that of the Maltese GP in particular. Further information was obtained by consulting the references and other information provided by these works. These sources were categorized. As a case study, information on community medical services preceding 1600 AD was collected to come up with an account that goes beyond a strictly chronological overview, giving particular attention to other details such as training, remuneration, political involvement as well as gender and social issues.

Results: Evidence has been presented for fifteenth century community health services in Gozo and Mdina. In the following century, such service spread to a number of villages in Malta, financed by institutions or private individuals.

Introduction

In recent years significant milestones have been registered in the practice of Family Medicine in Malta. After the foundation of the Malta College of Family

Doctors in 1989, general practice has been recognised as a speciality since 2004 with a functioning training programme, the latter initially directed by the document 'Specialist Training Programme in Family Medicine – Malta' (Sammut et al, 2006) and later by a purposely made curriculum (Falzon Camilleri and Sammut, 2009). There is no doubt that many of these achievements were inspired by foreign institutions particularly the Royal College of General Practitioners in the UK and other European organisations (such as the European Academy of Teachers in General Practice/Family Medicine).

Nonetheless, Family Medicine in Malta has a centennial history which not only imparts its effect on the organisation of practice but also fashions its particular identity. Putting this history in writing can become the lifetime project of a committed individual but this may also be adequately gathered by contributions from a dedicated group of persons, namely historians as well as general practitioners and other interested individuals. The purpose of the present paper is to outline the sources of information from which such history may be reconstructed. A review of the documents concerning the early history, particularly from prehistory to the end of the sixteenth century, will be attempted as a case study in such exercise.

Determining the core characteristics of the speciality remains central to this research. Time and progress often change the profession radically and what is assumed as central to practice today might have been unthought-of a few decades back. Indeed, in a survey of medical practitioners of medieval England, Getz (1998, pp.3-19) has revealed how those who 'practiced medicine' were a heterogeneous group that can hardly be considered to have belonged to a profession. Furthermore, modern core competencies of the profession, such as holistic approach and person-centred care (WONCA Europe, 2005) appear to have a more recent origin making them of little use as criteria for reconstructing the earlier history. In the

Key Words

History, Early Modern 1451 - 1600, Community Health Services

present study, practice in the community and outside hospital was found to be a more constant feature and was used as a criterion to identify the precursor of the Maltese General Practitioner.

A chapter on the Maltese District Medical service in the well-known *Medical History of Malta* by Paul Cassar (1965) and the relevant pages in a series of books on Maltese Medical history authored by Charles Savona-Ventura (2004, pp.99-106; 2005, pp.157-164) reveal that this approach has been used with success. In the absence of a dedicated book on the Maltese General Practitioner, various authors have felt the need to provide their own historical summaries as an introduction to their works (e.g. Azzopardi Muscat and Dixon 1999, p.4-5; Falzon Camilleri and Sammut 2009, pp.2-9). Together they provide an overview of key moments in the history of the Maltese GP. Nonetheless beyond acquiring information on the subject, what is also desirable is a holistic understanding of the persona of the general practitioner. It is hoped that a critical appraisal of the available documents will allow us to better comprehend the role of the GP in society, his/her training, the role played in politics, as well as the nature of the relationship with patients. Gender issues, the role of women in the profession, relationship between Maltese and foreign doctors as well as affordability and use of the doctor's service in relation to social status and wealth are additional themes that need to be explored.

The sources of information

The potential range of documentary sources for reconstructing the history of Maltese General Practice is considerable. Without attempting to provide a complete inventory, a number are highlighted here.

1. Published sources and dissertations

The relevant pages in the works by Cassar and Savona-Ventura quoted above are useful introductions to the subject. Although applicable to medicine in general and in need of an update, an article by Cassar (1974) provides a very useful bibliography. More detailed accounts require more specialised sources. For the medieval and early modern Malta articles by Stanley Fiorini (2008, pp.193-206) and Roger Ellul-Micallef (1999, pp.103-120) reveal what can be achieved by dedicated research. A book on the 1676 plague provides insight on the contribution of community-based physicians during the calamity (Micallef, 1985). For the British period, the Malta Blue Books are a useful reference for the administration and

for a list of doctors working as Police Physicians or in later times as District Medical Officers. For more recent times, Mario Sammut (2003) outlines the early history of the Malta College of Family Doctors while Lino German's (1991) book on medical unionism remains indispensable in providing information on how politics has shaped twentieth century and modern GP practice.

Newspapers and the Malta Government Gazette are useful as sources of information. Equally scattered is the information on GPs that can be obtained from the two volumes of the *Dictionary of Maltese Biographies* by Michael Schiavone (2009). The lack of a distinguishable qualification for the GP (such as that now provided by the M.M.C.F.D.) emerges as problematic and requires a careful reading of all medical entries to identify all the relevant persons. Furthermore Schiavone's publication mostly concerns individuals living in the twentieth century but reference to earlier individuals is also provided. A sizable number of books on the villages of the Maltese Islands are also likely to be helpful considering the community orientation of the speciality. Their individual value varies and it is only rarely that an overview of the subject can be reconstructed (as in Micallef, 1975). Nonetheless relevant pages in other works, such as in the books by Paul Aquilina (2004, p.32) as well as that by Emanuel Benjamin Vella and others (1972, pp.540-541), remain useful to capture attitudes towards health services and other details of local significance.

An M.A. dissertation submitted to the University of Malta on the Maltese nineteenth-century civil charitable institutions (Calleja, 2008) explores the role played by District Medical Officers as gatekeepers to institutions in secondary care. With further research being undertaken by the author at Warwick University Department of History (2012), one looks forward to the results of the doctorate thesis on the subject to place such phenomenon in a Mediterranean context.

2. Archival Sources

A number of archival holdings emerge as potentially useful for our history, with primary sources found in state, ecclesiastical and private archives. Documentary sources of a legal nature are held at the Notarial Archives and are particularly useful for the earlier history. The volumes of the original acts are housed at M. A. Vassalli Street (Valletta) and date back to 1467 while registered copies are kept separately for safety at St Christopher Street (Valletta). Names of physicians, their wills and

payments by patients are examples of information that may be found in these holdings.

Administrative documents pertaining to the British Period are part of the National Archives, currently located at the former Santo Spirito Hospital in Rabat. The departmental files (CSG-01), particularly the section on health, and petitions to government (CSG-02) are the most useful documents here, the former probably containing more detailed information than that available at the Ministry of Health for the nineteenth century. Reports issued by the health department are conveniently stored in the GMR 'Fond' (or record group) while the HI 'Fond' is useful as it contains details on clinics in Żebbuġ, Nadur, Ghajnsielem, and Qala from 1841 onwards. The Banca Giuratale in Mdina houses the Court records for the period 1530 up to 1899, with the court cases and property lists (particularly the *Magna Curia Castellaniae*) likely to prove useful to reconstruct the social life of the medical profession. Useful for consulting this archive is the inventory of documents related to the Maltese Tribunals published by Portelli-Carbone (1932).

Cassar (1974) had already highlighted the value of the archives of the Knights of St John preserved at the National Library of Malta, which consist of a diverse range of volumes. Although the information is scattered, it can be consulted with much benefit as has been revealed through an article by Giovanni Bonello (2006, pp.40-45).

The department of Special Collections at the University of Malta holds records that are useful to detail the educational development of the medical school. A CD-ROM of the manuscript registers of the *Acta Academiae Melitensis* covering the administration of the University for the period 1800-1945 exists through which the only extant source for a roll of 19th century graduates can be consulted. The Archives of the Roman Inquisition in Malta may be consulted at the Mdina Cathedral Museum, but authoritative publications such as Ciappara (2001) have already made readily available any useful information. The private diary of Dr Joe Bugeja (1940-1944) provides an indispensable insight on the work of a District Medical Officer during World War II.

Although much of the relevant information is preserved in Maltese archives, one should not lose sight of foreign archives and the potential these reserve for further information. The National Archives in Kew (London) holds information on medical officers. Evidence of an outbreak of measles in 1934 and its effect in restricting the pastimes of a private GP has been found in the Natural

History Archives in London (Bugeja 2006, p.26).

3. Beyond written or published documents

A holistic appreciation of the practice of Family medicine necessitates consideration of evidence that goes beyond that allowed by the available written or published material. Words cannot completely describe the GP's clinic, or the various details of the environment to the patient-doctor consultation. To this objective, the preservation of a GP clinics or their documentation through photography goes a long way to record the setting where the profession has been practiced in the past. Medical instruments were a necessary tool to the physician not working in hospital and inventorization or presentation as a museum display can provide an insight into the scope of past medical practice. Older colleagues in the speciality remain indispensable to reconstruct through oral history the evolution of the profession in recent decades. Undoubtedly a few monuments in the corners or squares of Maltese villages remain a tangible record to the villages' esteem for the dedication and contribution provided by the GP to the community (Plate 1).

Furthermore, one must not overlook a number of medical ex-votos which provide an indispensable visual record of the practicing GP during the seventeenth through the nineteenth centuries. Canopied beds in these paintings betray a domestic environment and their relevance to the subject-matter of the present study. Other details provide clues as to the social status of the patients, personal wealth, as well as illustrating the inseparable appeal of the religious and medical fields in the search for a personal cure (Buhagiar 1983, pp.71-77) (Plate 2).

The early history of the Maltese General Practitioner

Very little information can be obtained on Maltese community health practices for the period preceding the High Middle Ages. A group of six tombs, predominantly in use during the Ġgantija phase (3600-3000 BC), and a trefoil temple at ix-Xagħra ta' Żminka (Vella 2002, pp.29-31) testify to the activities of a small prehistoric community on one of the hills at Xemxija. A well-healed oblique tibial fracture, which must have necessitated immobilisation for at least two months (Pike 1971, p.236), reveals that at least medical interventions reached this community at such an early period, if not practised within the community itself.



Plate 1 Street monuments to General Practitioners: Dr Robert Farrugia Randon (B’Kara), Dr Albert Fenech (Siggiewi) and Dr John Borg (Żejtun)

Turning to the Roman period, St Luke was a well-known doctor (Bible, Colossians. 4:14) who visited Malta but he is not recorded as having practiced in Malta. Indeed the healing of the sick particularly that of the *protos* of the island, was done by St Paul (Bible, Acts. 28,7-10). The fact that many of the islanders flocked to St Paul to be cured says much on the medical service then provided. It also hints that such medical service, if it existed, was not always considered effective. More evidence comes through a later well-known tombstone from Rabat engraved with surgical instruments, datable to the 4th/5th centuries, which has been taken to suggest the existence of a doctor’s guild. Nonetheless, while the practice of medicine in extra-urban contexts is known for contemporary Sicily (Cassia, 2008), with Rabat being the main burial site to the main city in Malta it is practically impossible to conclude whether the local doctors practised from centralised buildings or offered their services directly in the community.

Evidence becomes more copious for the late Middle Ages. In the Kingdom of Sicily, the *Constitutiones* of Melfi (1231) and later legislation regulated the practice of medicine according to skill or creed. As part of this kingdom, these regulations were followed in the Maltese Islands but in view of lack of supervision and local conditions they were adapted to the local circumstances, as evidenced by the *Capituli* of 1427. The latter regulated the years needed for training, the need for approval to

practice, fee structure and distinguished the *barbitonsores* from the *fisici* by the drugs they could prescribe (Fiorini 2002, pp.70-74). These rules were timely as a number of doctors were already practicing in Gozo (Fiorini 2008, pp.193-194) with the lands *Di Lu Berbri* (Gozo) used to provide a salary for the *barbitonsore* of Gozo. This employment, which is known to have been passed from father to son, seems to have been attractive as evident from litigations arising through attempts in gaining such post (Fiorini 2004, pp.560-568). Even though ‘hospitals’ are known in Gozo during the century (Fiorini 2005, p.214), the *cirurgici* were very much like family-doctors who supported indigent members of the community, mostly paupers and pilgrims, rather than catered for the curing of patients as in the modern concept of ‘hospital’ (personal communication S. Fiorini).

The distinction between hospital and community-practice emerges clearly in Malta later in the fifteenth century. A hospital in Mdina existed before 1434 (Aquilina and Fiorini 1996, pp.12-13) while a *Hospitale Sancti Francisci* outside the walls of the city is already recorded by 1372 (Fiorini, 2008 p.193). The later transfer from Gozo to Malta, of a Jewish *doctor medicus* by the name of Abraham Safaradi (Fiorini, 2008 p.194) to be paid from the Mdina *Universitas*, has been considered to represent the initiation of a District Medical Service in Malta (Cassar, 1965 p.13). The suppression of the Mdina hospital in 1455 (Aquilina and Fiorini 1996,

pp.17-19) supports the notion that Safaradi worked in the community rather than exclusively from a hospital setting, a fact that is further supported by the documentation of another doctor, namely Gaspar de Monbron, being paid from the other known hospital in Malta (Wettinger 1985, p.109). Safaradi's employment spanned for over thirty years and was not without troubles. Already in 1453 there were discussions about his pay and ten years later attempts were made to have him replaced by a Christian doctor (Wettinger 1985, pp.109-110). This was unsuccessful for in the 1470s he is documented as receiving his pay despite being on occasions away to attend to personal legal matters (Wettinger 1985, pp.110, 174). In the 1480s Safaradi's post was challenged by other members of the Jewish community but he is still recorded in office in 1485 (Wettinger 1985, p.111.). Safaradi is known to have been the main spokesmen and head of the contemporary Jewish community in Malta (Wettinger 1985, pp.104, 108-109) but this was probably not exclusively secondary to being a physician but also through his role as Jurat and Rabbi.

Contemporary to Safaradi's activities, the details documented for a case of litigation in 1476 between Gasparis de Monbron and friar Johannes Zurki reveals that private practice within the community was already being practiced at this time (Wettinger, 1985 pp.114 fn. 28).

The expulsion of the Jews in 1492 meant that Jews could no longer provide medical services in Malta, leading to problems in the recruitment of doctors early in the sixteenth century. Thus in the beginning of the sixteenth century, there was no community physician in Mdina, a situation temporarily solved by the Sicilian Johanni Beniveni and later by Bartolomeo de Assaldo. The latter two physicians did not hold their post for long probably because of the poor remuneration offered. From around 1521, Bernardo de Munda, who in 1529 became *protomedico* of the island (Fiorini 2003, p.49 fn. 46), was paid to give such service and this continued until his death in 1541 (Borg 1982, p.83; Ellul-Micallef 1999, p.104; Fiorini 2003, p.21). From November 1536, De Munda was helped by Joseph Callus who retained such post up to 1560 (Fiorini 2003, pp.20-21)(Plate 3). Like Safaradi, Callus negotiated property and involved himself in treasure hunting (Fiorini 2003, pp.21-22; Wettinger. 1985, pp.109, 147), activities undoubtedly ensuing from their well-paid salaries and their higher social status. As an entrusted doctor, Callus was held in high esteem and was frequently sought as godfather in

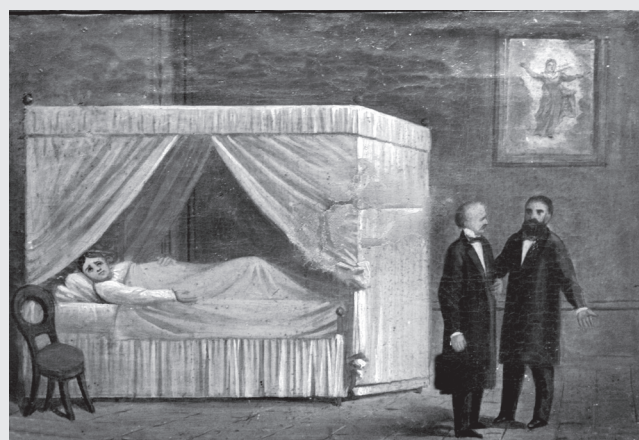


Plate 2 Nineteenth century health-care provided in a domestic environment (courtesy Santa Maria tal-Herba sanctuary, B'Kara)

baptisms and as curator to orphans (Fiorini 2003, p.21). Already active in the Mdina council early on arrival in Malta and with Sicilian connections, Callus was entrusted with the mission of voicing the complaints of the broken privileges experienced by the Mdina Univesitas under the Knights of St John. This is claimed to have landed Callus in trouble with grandmaster De Valette and Callus was subsequently punished by hanging. In 1561, the Rhodiot Joannes Raymundus Calamia became the paid salary of Mdina instead of Callus, clearly revealing that provision of community medical service had by now become an indispensable service (Fiorini 2003, pp.27-32).

Meanwhile, the arrival of the Knights of St John in 1530 had already shifted activity away from Mdina to Birgu, and Calamia was one of the Rhodiot physicians coming with the Order (Fiorini, 2008 p.196). With a centuries-old tradition of helping the sick, the Order soon embarked on building a hospital but already at the time, and continuing after the establishment of the Sacra Infermeria in Valletta forty years later, arrangements were in place to take care of the sick in their homes outside hospital premises (Ellul-Micallef 1999, pp.104-108). While this home care obviously concerned the sick knights, it is still unclear whether such service was also being provided to the general population. Nonetheless by the end of the sixteenth century, a doctor by the name of Giovanni Domenico Mangion is already known to have been working amongst the population in Birgu for a number of years (Ellul-Micallef, 1989 p.237). By claiming to be one of the salaried physicians (Leopardi 1963, p.42), it is evident that such medical service was being provided by a number of doctors, revealing the expansion of service and a larger doctor population.

In 1596, Mangion applied for a similar post in Mdina and Rabat previously held by Dr Rosario Saura. Such post appears to have been contested by a number of applicants, Mangion attempting to gain advantage by specifically mentioning that he could communicate with patients because he knew how to speak Maltese (Leopardi 1963, p.42).

The sixteenth century saw an increase in the number of doctors in Malta. With formalised medical training in Malta only appearing in the late seventeenth century (Savona-Ventura 2004, p.140) those who received training in the previous century did so in foreign universities such as Salerno, Naples, Rome and Montpellier (Borg 1982, p.83; Ellul-Micallef, 1999 p.115). One of the benefits of this increase in medical practitioners was the appearance of doctors working in their village of residence (Ellul-Micallef 1999, p.114). It appears that this village-work was provided by 'barber-surgeons', known to have had less training than physicians (Cassar 2008, pp.44-45), a situation that may have resulted through competition for work in the main towns.

The names of these rural doctors have been published (Table 1) and it is evident (possibly with the exception of Gudja) that these doctors were working in the villages with relatively larger number of inhabitants (Fiorini, 1983 Table 2). Mention of two doctors working in Birkirkara reveals that this service was appreciated and needed, and that it soon became established as had occurred in Mdina and Birgu.

The biographical information known about Antonius Perurelio (d.1553) provides us with a unique window on how contemporary general practice developed from the activities of a surgeon (Fiorini, 2008 pp.193-206). Hailing from Chiaramonte in Sicily (Fiorini, 2008, p.196), Perurelio is known to have settled with his wife at Birkirkara and after starting his practice there expanded

Table 1 Medical personnel working in villages (after Ellul-Micallef, 1999 p.114)

Cassia Mattheo	Qormi
Mangion Mariano	Żebbuġ
Mangion Valerio	Rabat
de Perurelio Antonius	Birkirkara
Schembri Andrea	Naxxar
Vasco Dionisius	Gudja
Zirenzo Antonius	Birkirkara

to provide services in other parts of the island. The manner in which this occurred is interesting; while early clients from Birkirkara were to be expected, he soon was visiting patients from the nearby villages of Balzan, Lija and Attard (Fiorini, 2008 pp.198-200), villages that were then probably still without a medical service (see Table 1). Further widening of his clientele to more distant villages such as Għadir il-Bordi, Qormi and Rabat occurred later, with the recurrence of surnames probably indicating such expansion benefitted from family connections (Fiorini, 2008, p.197). Being a surgeon, most visits concerned cases of wounding but management of a case of syphilis is also recorded. In view of the payments received by doctors at the time, the cost of a visit was considerable. This included compensation for medical treatment as well as travelling expenses. As many could not pay such fees, on many occasions Perurelio was paid in kind, and contracts where the surgeon received building material or fields from individuals in exchange of his service are recorded (Fiorini, 2008 pp.201-205). While the influence of this payment in kind on later practice remains to be established, it comes as no surprise that in view of the cost people often attempted home-remedies or consulted 'healers' involved in witchcraft (Cassar 2008, p.45).

Conclusions

A variety of written and non-written sources are available to study the historical development of community healthcare in the Maltese islands. Medical service provided in fifteenth century Gozo and Mdina remains the earliest secure evidence for health care akin to that given by a modern general practitioner. Once established, such service soon proved to be essential, and with the increasing number of doctors, practice in

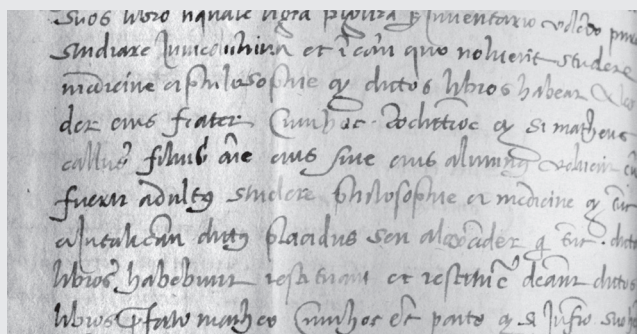


Plate 3 Mention of medical books in the 1548 will of Dr Joseph Callus (courtesy Notarial Archives, Valletta)

the various Maltese villages appeared by the sixteenth century. This paper also highlights the well-paid, relatively high social status enjoyed by the exclusively male general practitioner, who early on commences to play an important role in the non-medical aspects of community life.

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