
Creating a Service Delivery Model for Providing and Managing Primary Health Care by Family Doctors and Family Health Centres

Support to the Health Reform Programme of Cyprus Government

Alexandre Lourenço – 7th January 2015

Executive Summary

The Memorandum of Understanding measure 3.2 (c) states that: ‘...by mid-2015, a first stage of NHS, e.g. primary care, will be put into place. The development of a service delivery model for providing and managing primary care through ‘Family Health Centres must consider the current provision of care in Cyprus, the necessary developments to assure the application of the National Health System (NHS) Law of 2001 L.89(I)/2001, and the commitments between Ministry of Health (MoH), Health Insurance Organizations (HIO) and other stakeholders.

Primary health care in Cyprus is currently delivered through a network of public Primary Health Care Centres (PHCCs) and private general practitioners and specialist doctors of several disciplines, with private practitioners mainly operating in solo practices. One of the main aspects that became evident is the low prestige and motivation of family doctors/general practitioners when compared with other specialists. The strong traditional hospital and specialized care model creates a culture of Primary Health Care as a minor specialty among health care professionals and citizens. The majority of the PHCCs don’t have any information and communication technology (ICT) solutions. This fact may undermine the design of a quality management system and a performance based remuneration scheme.

In PHCCs, despite the existence of different services as General Practitioners (GPs) consultations and Regular Nursing Services, Pharmacy (93% of PHCC), Health Visitors (84% of PHCC), Community Nursing (32% of PHCC) and Community Mental Health (53% of PHCC), care is not coordinated between the different units nor it is expected that someone coordinates care. In PHCC we find physicians with different backgrounds who provide PHC. Despite their background, in PHCCs, GPs don’t practice family medicine in the sense that genuine general practitioners/family doctors are personal doctors, primarily responsible for the provision of comprehensive and continued care to every individual seeking medical care irrespective of age, gender and illness.

Several misconceptions about Primary Health Care persist in the delivery model developed by the HIO and is due to start the 1st July 2015 . As the timeframe is tight, does not allow revisions of the delivery model previously design and negotiated with the stakeholders. Therefore, it is required that an experimental delivery model is developed within the public sector to assure quality of care. This experimental delivery model could work as a pilot that can be compared with the generalized model designed by HIO. This experimental delivery model is characterized as Family Health Centres (FHC): small multi-professional unit (doctor, nurses and clinical assistances), with functional and technical autonomy, which provides personalized primary care to a defined population within a framework of contracting, involving objectives of accessibility, effectiveness, efficiency and quality, guaranteeing to the citizens enrolled a basic portfolio of services.

It is recommended that the MoH create a central Unit that supports, coordinates and monitors the development of PHC.

List of Abbreviations

AFD	Adult Family Doctor
AO	Autonomous Organizations
EC	European Commission
EHR	Electronic Health Record (EHR)
EU	European Union
FD	Family Doctor
FHC	Family Health Centres
FM	Family Medicine
GDP	Gross domestic product
HIO	Health Insurance Organization
HiT	Health systems in Transition series of the European Observatory
ICT	Information and communication technology
IMF	International Monetary Fund
MoH	Ministry of Health
MoU	Memorandum of Understanding
OECD	Organization of Economic Cooperation and Development
OOP	Out-Of-Pocket
OS	Outpatient Services
PHC	Primary healthcare
PFD	Paediatric Family Doctor
WB	World Bank
WHO	World Health Organization

Preface

This report was prepared as a part of the World Health Organization support to the Health Reform Programme of Cyprus Government.

The objectives of the report are to provide the MoH with a quality assurance model and system designs for performance based contracting and remuneration of Family Doctors in both the public and private sectors, a service delivery model for providing and managing primary care through 'Family Health Centres', restructuring the current public sector primary care facility network, and creating a network of 'Family Health Centres' across the public and private sectors.

The author is grateful for suggestions and advices received during consultations with government officials of the Republic of Cyprus, primarily representatives of the Ministry of Health.

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Terms of Reference

The Ministry of Health has begun implementation of reform of Cyprus's health sector, aiming to achieve Universal Health Coverage, equity and solidarity in access and financial contributions, while ensuring free choice of medical providers for all beneficiaries and financial viability. While plans for the reform partly date back to the early nineties, it has gained momentum through the Memorandum of Understanding (MoU) agreed with the European Union, the European Central Bank and the International Monetary Fund ('the Troika') in November 2012 and its subsequent revisions, in which ambitious deadlines for important milestones and final results were fixed.

A Reform Plan stating the actions to be undertaken to fulfil these obligations has been drafted by the Ministry. According to this plan, legislative changes necessary for the reform have to be approved by the House of Representatives by end-November 2014; and legislative changes relating to implementation have to be approved by end December 2014. In addition, several preparatory activities, studies, costing and budgeting exercises have to be conducted in the short term.

The Minister of Health has nominated a Core Reform Implementation Team (CRIT) within the Ministry. The CRIT will have overall responsibility for the reform. It will be complemented by a Broader Reform Implementation Team consisting of all Directors of Departments and Directorates within the Ministry of Health with their respective teams, as well as of representatives from other related Organizations and Departments of the Government, including the Health Insurance Organization, the Legal Service of the Republic, the Accountant General, the Department of Public Administration and Human Resources, the Commissioner for the Reforms in the Public Sector and the Directorate General for European Programmes, Coordination and Development.

In order to provide support to these teams, the Ministry of Health has made an agreement with the World Health Organization to set up and lead an Implementation Support Team (IST) in order to provide expert guidance and technical support to maintain the momentum of the reform. The Implementation Support Team will provide capacity building support to the Core Reform Implementation Team on implementation modalities, including advice, coaching, training, technical assistance, troubleshooting and assistance in overcoming obstacles to implementation. While expert advice will be provided on the formulation of specific decisions, this advice is expected to be aligned with the framework of government decisions and agreements with the Troika, and consistent with the policies of the World Health Organization as directed by its Member States.

One of the objectives of the reform is to ensure access to a mix of high quality public and private care – hospital care, specialized ambulatory care, primary care and public health. In this context, the public sector service providers will transition towards autonomous organizations, operating as public legal entities, organized into five regions, bringing together the public hospitals and primary healthcare centres for each region under one management structure.

One of the main pillars of the reform is the introduction of a national health insurance system (NHS). Through the NHS the Ministry of Health is aiming to achieve universal health coverage, equity and solidarity in access and financial contributions, while ensuring free choice of medical providers for all beneficiaries and financial viability. The NHS will be based on the Family Doctor (FD) concept. The FD will be the first point of access into the system and act as the gatekeeper for access to further levels of treatment and other health care services. All citizens and permanent residents of Cyprus will be registered with an FD.

Primary health care in Cyprus is currently delivered through a network of public Primary Health Care Centres (PHCCs) and private general practitioners and specialist doctors of several disciplines, with private practitioners mainly operating in solo practices.

The public PHCCs also deliver dental services and a broad spectrum of public health services including mother and child health, and vaccinations delivered by Health Visitors; community nursing and mental health nursing. PHCCs in Rural Areas also provide School Health Services. The majority of these services will not, however, be reimbursed by the Health Insurance Organization under NHS.

In the reform the current network of public health centers and private practitioners will be transformed into an integrated network of family health units where primary care teams, including specialized family doctors, will take active responsibility for managing the overall health care needs of the people that choose to register with them.

According to the 'Basic Principles for the Family Doctor' issued by the Health Insurance Organization the remuneration of the FD will consist of the following components:

- "Capitation fee. The capitation fee will be age adjusted and refer to Category 1 activities as they are listed in the document

- Category 2: Fee for service for certain services including management of chronic diseases according to guidelines, home visits, on call duties, screening programs, issue of death certificates

- Category 3: Payment according to measurable criteria including the rate of entering data into the IT system, number of referrals, prescription behaviour, and expenditure for laboratory tests ordered etc. During the first phase of the introduction of NHS the payment for Category 3 activities will include only the rate of data entered into the system"

The Ministry of Health required short-term expertise in addressing the following issues:

(i) Designing a service delivery model for the public PHCCs to operate as 'Family Health Care Centres'

(ii) Designing a management structure for the public PHCCs to operate as 'Family Health Care Centres'

(iii) Designing a Quality Management System, including a performance based remuneration scheme for Family Doctors in the public sector

(v) Creating an integrated network of 'Family Health Care Centres' across the public and private sectors

(vi) Rationalizing the current network of the public PHCCs

Other consultants will be working concurrently on the issues of creating autonomous health organizations, operating as public legal entities, from the current public sector provider network; and the consultant will be expected to interact with them in regard to the specifics of organizing the provision of primary health care and remunerating its providers.

Work undertaken (most relevant)

Monday 17 November:

1st day at the Ministry, informed about delivery of Primary Health Care by Dr Mary Avraamidou

Tuesday 18 November

Visited Primary Health Care Centers of Evrychou, Akaki and Lakatamia.

Wednesday 19 November

Meeting with the Director of Mental Health Services and his team at 11:00.

Meeting with the Director of Pharmaceutical Services at 13:00

Thursday 20 November

Seminar on Primary Health Care reform in Portugal

Opening: Professor Philippos Patsalis Minister of Health

Welcome Address:

Dr Mary Avraamidou (Lead on Primary Health Care Reform in Cyprus)

The Portuguese experience: capitation formulas, performance links & payment modalities (appendix 1)

The Portuguese experience: Key Performance Indicators in service delivery (Quality management system and Pay for Performance system with the use of KPIs) (appendix 2)

Participants (appendix 3)



Friday 21 November

Meeting with Director of Nursing Services

Meeting with the Dep. Director of Medical and Public Health Services

Tuesday 25 November

Meeting with the Senior Medical Officer for Primary Health Care at Paphos General Hospital

Wednesday 26 November:

Meeting with the Senior Medical Officer for Primary Health Care at Limassol General Hospital

Thursday 27 November

Brainstorming Meeting regarding Primary Health Care Pending issues with several senior officials and the presidents of the two GPs Associations

Tuesday 2 December

Meeting with the Board of the Cyprus Medical Association

Wednesday 3 December

Meeting with the Health Insurance Organization (HIO)

Situation analysis and findings

Primary health care in Cyprus is currently delivered through a network of public Primary Health Care Centers (PHCCs) and private general practitioners and specialist doctors of several disciplines, with private practitioners mainly operating in solo practices. 43 PHCCs are disseminated all over the country. PHCCs are open continuously from 7h30 to 15h00. 4 urban



Figure 1. Primary Health Care Centers and subcentres locations.

PHHC operate until 20h00 and on Saturday mornings. .

Additionally, 13 of the 43 PHCCs are open door for nursing and medical services 24hours/day: 1 PHHC with shift nurse plus doctor on call, 4 PHHC with on call doctor and nurse, and 8 PHHC with on call doctor. The number of “out of hours” consultations does not justify the 24hours coverage (Table 1). A restructuring is needed, according to the location, the population covered, the PHCC infrastructure and articulation with emergency network.

Table 1. Out of hours cases per month and per day.

	Average number of consultations per month	Average consultations per day
Evrychou	404	13.4
Pedoulas	44	1.5
Palaichori	76	2.5
Platres	84	2.8
Agros	54	1.8
Omodos	17	0.55
Avdimou	1.6	0.05

	Average number of consultations per month	Average consultations per day
Kamos		
Lefkara	71	2
Athienou		
Panagia	2	0.09
Fyti		
Salamiou	3.25	0.11
Kato Pyrgos		
Total	787	0.26

PHCCs facilities accommodate different healthcare services and functions. All PHCCs offer General Practitioners consultations and Regular Nursing Services. Some PHCCs offer additional services such as: Pharmacy (93% of PHCC), Health Visitors (84% of PHCC), Community Nursing (32% of PHCC) and Community Mental Health (53% of PHCC).

Paediatric care is in some cases provided at PHCCs, but it is common perception that most parents consult private paediatricians. On a regular basis, PHCCs can also offer dental services (32% of PHCC), gynaecologist, paediatrician or other specialties (11% of PHCC). **Despite the existence of all these different services, it seems that care is not coordinated between the different units nor it is expected that someone coordinate care.**

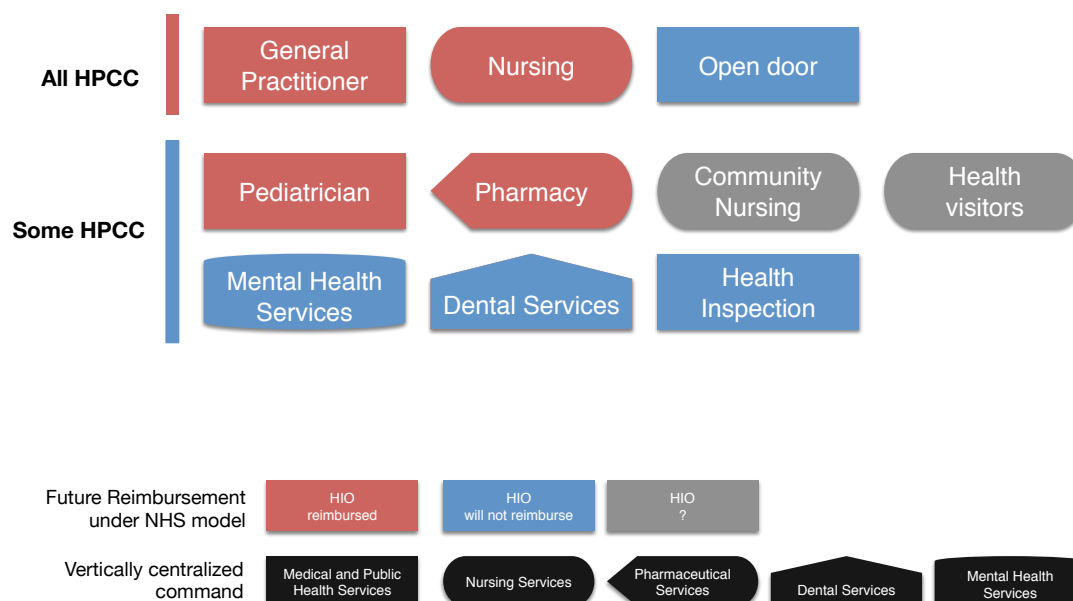


Figure 2. Healthcare provision in Primary Health Care Centers, future reimbursement model and vertical line of command.

PHCCs are complemented with 235 subcenters (≤ 30 min drive from the PHCC) that currently serve healthcare needs in remote areas at interval of between twice a week and once every two weeks for 1-2 hours. The team of healthcare providers is composed usually of a General Practitioner, Nurse and Pharmacist visiting 1 to 6 subcenters per day. According to MoH data, more than 70% of the medical consultations are for prescription renewals for patients with chronic conditions. Generally, subcenter infrastructure is inadequate and does not fulfil basic mandatory minimum requirements to provide care (e.g. lack of heating, telephone line, ECG machine, no blood testing facilities, improper drug storage). According to the MoH data, up to 32% of the team's working time is consumed (wasted) traveling representing an opportunity cost of around 1 million euros per year.

The majority of the PHCCs don't have any information and communication technology (ICT) solutions. This fact may undermine the design of a quality management system and a performance based remuneration scheme. In most of PHCCs, the only professionals that use ICT are pharmacists, for stock management. Medical records and activity data registries are paper-based and aren't standardized to all PHCCs. Urban PHCC in Nicosia use an IT system shared with Nicosia General Hospital, allowing GPs to prescribe medicines with the aid of a personal computer and access laboratory and radiology results/reports performed within this hospital.

One of the main aspects that became evident is the low prestige and motivation of family doctors/general practitioners when compared with other specialists. The strong traditional hospital and specialized care model creates a culture of PHC as a minor specialty among health care professionals and citizens. In PHCC we find physicians with different backgrounds that provide PHC. We can group them in four categories according to their trainings and skills: A) physician with Family Medicine specialization done abroad (mainly in Greece) B) physicians without specialization but with a specific training in family medicine from the University of Surrey (1998); C) physicians without any relevant training that started practicing before 2004 (year that Cyprus entered the European Union); D) physicians without any relevant training that started practicing after 2004. Despite their background, in PHCCs, GPs only provide care to patients older than 18 years old and they don't follow-up pregnant women. Additionally, GPs don't assume a predefined Patient Panel. So, they are available to all patients that arrive to the PHCCs. Patients or GPs are not allowed to schedule care (appointments), and patients are seen in the order that they arrive at the office, without any type of triage or possibility of elective care. If we also consider that PHCC opening hours (7:30-15:00) are coincident to typical business hours, there exists a strong barrier to access these services by workers and their families, reducing the attractiveness of service and pushing patients to A&E departments and the private sector. Additionally, generally, there isn't any formal gatekeeping mechanism or standardized referral system between health centres and hospitals. In some medical specialties, like Cardiology, Neurosurgery, Orthopaedics, Ophthalmology and some other specialties the referral to some hospitals from a GP is mandatory. So, PHCCs aren't the first contact of access to care. A survey conducted by the

Statistical Service of Cyprus in 2008 found that 59.3% of the population had visited a specialist during a 12-month period, while only 11% had visited a GP (Statistical Service of Cyprus 2010). We can assume that currently patients don't feel any advantage to seek care in PHCCs in comparison with specialized outpatient services.

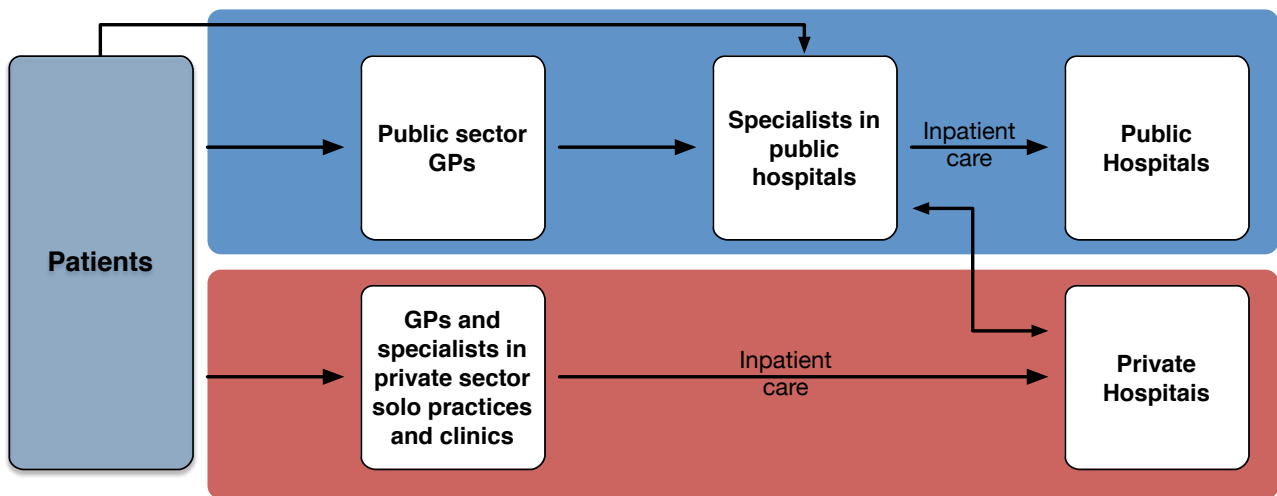


Figure 3. Patient pathway in public and private sector.

There is still another fact that is problematic in terms of access to care and perceived quality. The average number of public sector primary/ambulatory visits is 2,1 per person per year (Theodorou et al. 2012). This fact shows the low attractiveness of the public sector, mainly for the PHCCs.

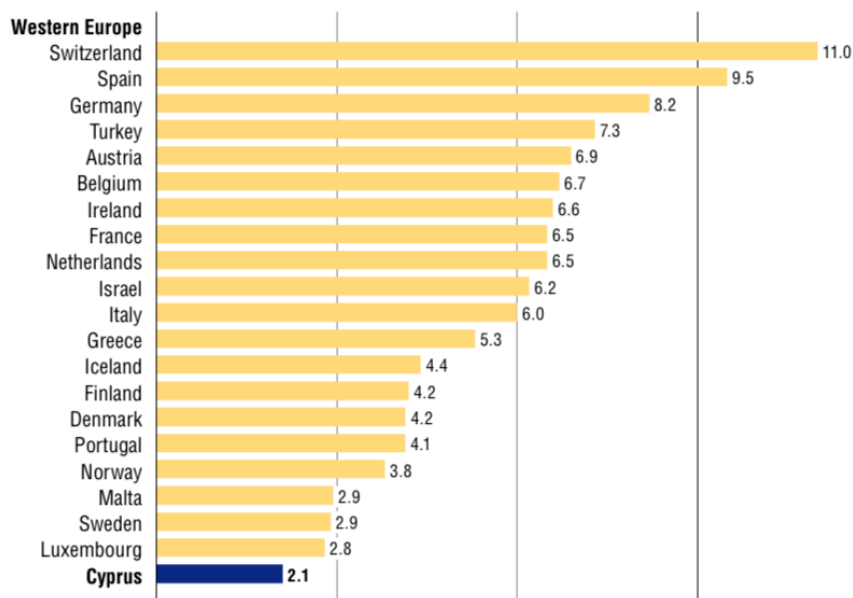


Figure 4. Average number of medical visits per person per year in several European countries.

In fact, **GPs don't practice family medicine in the sense that genuine general practitioners/family doctors are personal doctors, primarily responsible for the provision of comprehensive and continued care to every individual seeking medical care irrespective of age, gender and illness.**

Nurses led provision of care is organized into four different types of units: (1) regular nursing services; (2) health visitors; (3) community nursing and (4) mental health (in this case, nurses are included in a multiprofessional team with doctors, psychologists and occupational therapists). The first three units depend from the National Nursing Services Director. The regular nursing services unit (1) has similar characteristics to the delivery care model implemented for the GPs. Health visitors unit (2) is based on specialized nurses responsible to deliver maternal and child health care), immunization coverage, health education and school health care. Community nursing units (3) are resumed to visits to dependent patients without being associated to a comprehensive and structured long-term network.

Almost all PHCCs have pharmacies. These pharmacies are managed and drugs are supplied by the Pharmaceutical Services. They have in place an IT system that helps the management of stocks and communication with the central services. Generics and generic substitutions are common in these pharmacies: The patient pays a low fee (0,50€) per item on the prescription issued by a public GP. If the patient has a prescription from a private physician or wants a medicine not available in the public community pharmacy he needs to go to a private pharmacy and pay the full retail price.

National Health System (NHS) Implementation

The NHS Law establishes that all primary healthcare will be provided by contracted Family Doctors (FD), determining that there are two types of FD: the FD for Adults (AFD) and the FD for children, (the Paediatric FD - PFD). The FD will provide primary healthcare services to the beneficiaries that are registered to their list. FD will be the first point of contact to the NHS and the navigators of the beneficiaries through the Healthcare System. The FD will diagnose and treat acute and chronic illnesses and provide preventive care and health education to beneficiaries of all ages and genders. Though, it is important to stress that the accurate translation from the Greek it is not Family Doctor but a Personal Doctor¹. So, it is reasonable to assume that the legislator assumed a limited concept of primary healthcare, not considering family medicine. In this context, it is being implemented a personalized gatekeeping system, without the benefits of family medicine. After discussing with HIO officials, namely the artificial barrier created between paediatric aged beneficiaries and adult beneficiaries, this approach is due to the excess of paediatricians and internists, and the lack of trained Family Doctors.

The main characteristics of this personalized medicine concept are: (1) Every beneficiary will register with a FD in order to be eligible to benefit from the NHS services;(2) Beneficiaries will be allowed to change their FD every 6 months; (3) The FD can enrol up to 2.500 beneficiaries on their lists (the minimum number of beneficiaries that need to be enrolled with a particular FD is 300²,

¹ We will continue to use the Family Doctor (FD) terminology according to the official translated documents.

² These numbers may change through the new legislation

two years after the initial contract signing with the HIO), (4) Children up to the 16 years old have to enrol with a PFD (average of 800 beneficiaries), or an AFD where a PFD is not available. Individuals between the ages of 16 to 18 are allowed to choose to enrol either with a PFD or an AFD. Adults over the age of 18 will enrol with an AFD. **International studies estimations suggest that a primary care physician would spend 21,7 hours per day to provide all recommended acute, chronic, and preventive care for a panel of 2,500 patients** (Yarnall et al. 2009). The creation of primary care teams that include other health professionals besides the FD are important to meeting patients' primary care needs (Ostbye et al. 2005; Yarnall et al. 2009; Yarnall et al. 2003). If portions of preventive and chronic care services are delegated to nonphysician team members, primary care practices can provide recommended preventive and chronic care with panel sizes with 1.947 beneficiaries (Altschuler et al. 2012). The contract proposed by HIO with FD does not compel the provider to assure nursing care or other services. **Assuming a maximum number of 2.500 beneficiaries per FD, we can conclude that it is not possible to assure accessibility and quality of care with this delivery model.**

HIO will contract with each private FD separately (individual or legal entity), the public health services that provide primary health care through FD and FD group practices (individual if partnership or legal entity). To contract or renew a contract with HIO a doctor should satisfy a set of minimum requirements, which relate to their qualifications and the infrastructure of their offices. **The minimum requirements must be revised considering a reduction of the maximum number of beneficiaries per physician or, preferably, the revision of the model of care proposed, namely with the mandatory inclusion of nurses.** The role of family nurses has been recognized as pivot within a multidisciplinary team and co-responsible entity for continuous care, from conception to death and critical life events, involving the promotion and protection of health, disease prevention, rehabilitation and care of the sick individuals or terminal stages of life (World Health Organization 2000).

FD will be reimbursed via capitation based on the number of beneficiaries on their list (Tier1) as well as reimbursement for some specific activities (Tier 2). According to HIO, the reimbursement of public providers will have the same characteristics. The MoH will decide which institution/ provider will be contracted (e.g MoH, AO, PHCC, physicians, team of professionals) by HIO. **This openness constitutes an opportunity to develop an alternative model of delivery within the public sector.**

Under an initial phase of NHS, the HIO will not reimburse the activities resulting from FD referrals to other provider segments except the outpatient specialist. In the following table an analysis is shown for the operation of FD and the activities to be reimbursed by HIO during the first phase as opposed to full implementation of NHS:

Table 2. Activities to be reimbursed by HIO during the first phase as opposed to full implementation of NHS.

Full implementation of NHS	First Phase
Activity catalogue services: Provision of primary health care, health promotion and disease prevention and general management of chronic conditions *	Fully applicable

Full implementation of NHS	First Phase
FD referral: Refer patients to other provider segments (e.g. Outpatient Specialist, Allied Health Care Professional). Issue lab orders and prescriptions as needed.*	Only services to Outpatient Specialist will be reimbursed.
Management of specific chronic conditions by AFD according to specific guidelines: Diabetes, Hypertension, Hyperlipidaemia, Chronic Heart Failure (CHF) and Asthma/ Chronic Obstructive Pulmonary Disease (COPD).**	This part will not be introduced
Management of specific chronic conditions by PFD according to specific guidelines: Asthma and Obesity.**	This part will not be introduced
Home visits: FD will perform home visits to the housebound beneficiaries.	Applicable with a different way of reimbursement
Prevention programs: FD will be involved in the implementation of prevention programs including immunizations defined by MoH and adopted by HIO.**	This part will not be introduced
Work during out-of-hour: FD working during out-of-office hours.***	Fully applicable
Issue of death certificates: FD will be issuing death certificates.***	This part will not be introduced
New-born's first and second examination by PFD: PFD will be reimbursed for each birth of a child enrolled in their catalogue.**	Fully applicable
Performance on measurable criteria: Introduction of KPIs.**	This part will not be introduced

* FD will be reimbursed by capitation fee

** FD will be reimbursed additional to capitation fee based on a fee for service (point system mechanism).

*** FD will be reimbursed additional to capitation fee for the extra services they provide, at fixed fee per hour.

The FD referral to another provider will be valid for a specific time period. The referral will clearly indicate which provider segment the patient should visit and will contain all necessary information for the provider to understand the patient's condition. Each FD will be able to set his/her own office hours according to his/her workload. It is expected that the office hours will be proportionate to the beneficiaries enrolled to its catalogue and the associated workload. It is anticipated that due to competition, FD will be encouraged to adopt working hours that best serve their beneficiaries' needs.

The introduction of FD and OS at the initial phase of NHS implementation will result in the following patient flow for which services will be reimbursed by HIO:

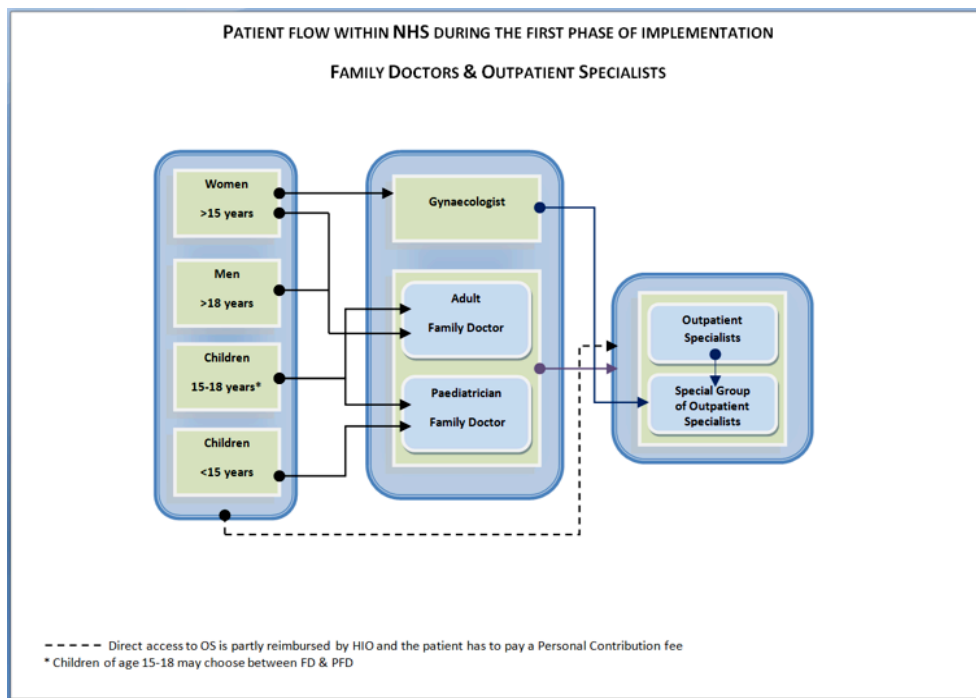


Figure 5. Patient flow within NHS during the first phase of implementation of NHS.

It is noted that during this initial phase, the HIO will not reimburse any lab tests, drugs, visits to allied health professionals or inpatient care to which the beneficiary may be referred to by the FD or the OS. Beneficiaries will be able however to use these referrals to receive healthcare services from any of the providers mentioned above but the cost of these services will be borne by themselves. For beneficiaries of public sector healthcare, the cost of these services will continue to be covered by the public sector as is done today assuming that the referrals made from private sector FD and OS registered under NHS are accepted by the public sector.

The Cyprus Medical Association in collaboration with the Ministry of Health and the HIO will offer training to a number of doctors that currently do not meet the minimum qualification requirements to enrol as FD in the system. This training will not be completed before the initial phase but before full NHS implementation.

Proposals/recommendations

Delivery model

1. The evolution of health care, characterized by the ageing population, increasing technical complexity and the need for multidisciplinary approach, for citizen-centred provision of care and oriented to obtain health gains, made the restructuring of healthcare centres inevitable, with special emphasis being given on assuring “good” primary care.

2. It is generally accepted that “good” primary care assures (1) **First-contact** access for each new need; (2) **Long-term person** - (not disease) focused care; (3) **Comprehensive** care for most health needs; (4) **Coordinated** care when it must be sought elsewhere; as well as the three related aspects of **community orientation, family-centeredness, and cultural competence**.

3. To assure that primary care providers serve as the usual entry point into the health care system for each new need for health services (except in the case of serious emergencies) the availability of FD must be guaranteed. Solo practices preclude inter substitution and inhibit extended working hours, reducing access to care. Additionally, group practice might be a successful organizational requirement to improve the quality of clinical practice in Primary Health Care. Additionally, group practices have the following potential advantages: economies of scale, combined interests and talents, enhanced negotiating position, greater market access, pooled capital, risk sharing, enhanced peer consultation, control, strategic and innovative advantages.

4. The fact the type of family doctor depends on the age of the patient (AFD and PFD) constitutes a breach of the continuity of care and the comprehensiveness and family centred care. *Continuous care over time is intended to help the provider and the patient build a long-term relationship in order to foster mutual understanding and knowledge of each other's expectations and needs. Thus, it requires identification of a population for whom the service or provider is responsible (a population registry), and it requires an on-going person-focused (not disease-focused) relationship over time between providers and patients (reference). Besides, family-centred care recognizes that the family is a major participant in the assessment and treatment of a patient. Family-centred care reflects an understanding of the nature, role, and impact of family members' health, illness, disability, or injury on the entire family and the impact of family structure, function, and dynamics, as well as family history of illnesses on both the risks of ill health and promotion of health of family members.*

5. Acknowledging the current skills of Cypriot GPs, the MoH, GPs Associations and Cyprus Medical Association must develop a training program and a certification program for family medicine that assures that every family doctor has acquired the adequate skills to practice “good” primary care, following the standards of other European countries, within a timeframe of five years. After the 5 years transitional period, family medicine will be only practiced by certified family doctors.

6. The role of family nurses has been recognized as pivot within a multidisciplinary team and co-responsible entity for continuous care, from conception to death and critical life events, involving the promotion and protection of health, disease prevention, rehabilitation and care of the sick individuals or terminal stages of life. In the next five years, the MoH, nurses associations must assure the certification of Family Nurses.

7. The timeframe to implement NHS (starts 1st July) does not allow revisions of the delivery model previously designed and negotiated with the stakeholders. Therefore, it is required that it be developed an experimental delivery model at the public sector to assure quality of care. This experimental delivery model (i.e. Family Health Centre) could work as a pilot that can be compared with the generalized model designed by HIO.

8. It is recommended that primary care provision is assured by Family Health Centres (FHC): small multi-professional unit (doctor, nurses and clinical assistances), with functional and technical autonomy, which provides personalized primary care to a defined population within a framework of contracting, involving objectives of accessibility, effectiveness, efficiency and quality, guaranteeing to the citizens enrolled a basic portfolio of services. FHC will be coordinated by a FD. Despite PHC provision is integrated in AO, their functional and technical autonomy can be achieved by contracting with the AO respective structure.

9. In a first phase, until is assured that GPs have the adequate skills to provide continuity of care, PFD will be a component of the FHC team. The average number of beneficiaries per FD must be around 1950, considering that care is provided within a FHC team.

10. The FHC are ideally constituted by: 3 FD; 1 PFD, at least 3 nurses, and 2 clinical assistants. The FHC evolve in this proportion.

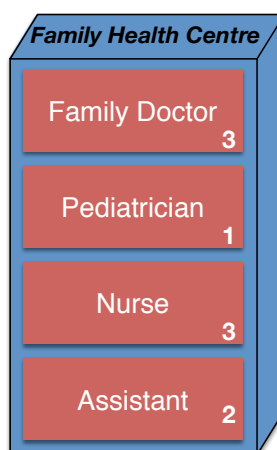


Figure 6. FHC structure.

11. In rural areas with less than 4.000 inhabitants, the creation of FHC with less than 3 FD can be acceptable. Nevertheless, FHC must have a family nurse and assistant and some other predefined requirements.

12. The basket of services of FHC must include several items such as clinical services (surveillance, health promotion and disease prevention protocols, acute/chronic disease management, home care, continuity and coordination of care), administrative assistance,

prolonged opening hours, defined patients list per doctor, continuous education and additional services; the surveillance, health promotion and disease prevention activities must follow health strategic objectives (vaccination and screening targets) and include women’s health, as well adult care and elderly care.

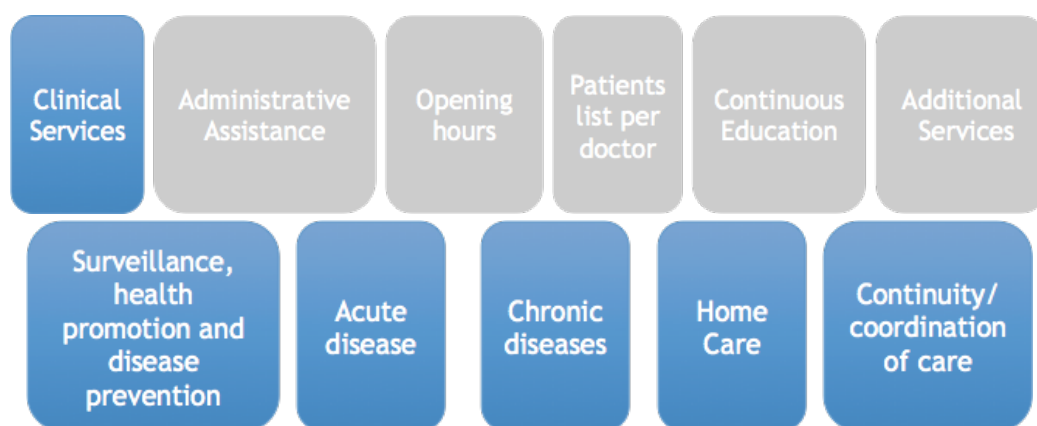


Figure 7. FHC Basket of services.

13. Some of the current Health Visitors and Community Nursing responsibilities can be assumed by FHC, namely delivering of maternal and child health care, immunization coverage, health education and elective and non long term home visits (i.e. long term care visits can be performed by specialized teams – Community Nursing).

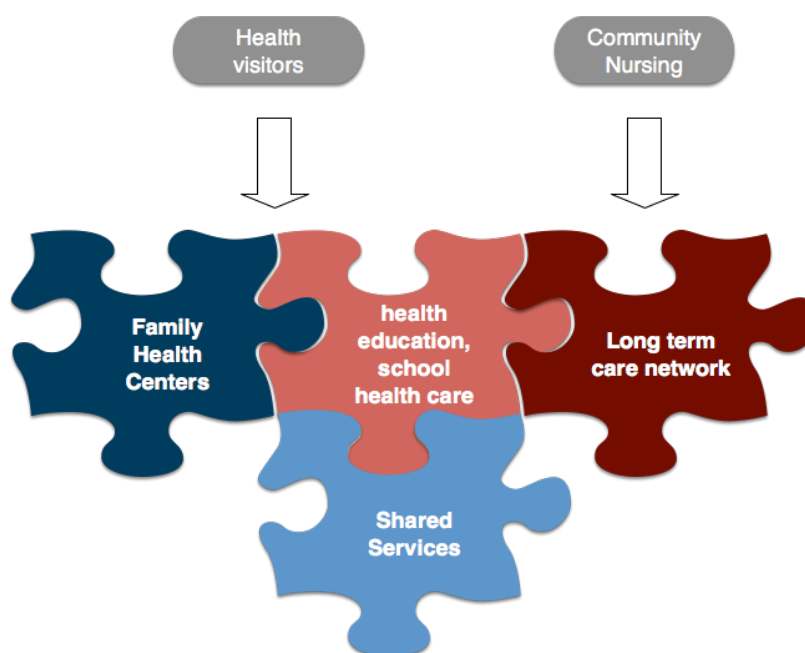


Figure 8. Proposal for primary health care provision of services.

14. Nevertheless, the provision of PHC is not restricted to FHC activities. It must be assured that health education and school health continues to be provided by nursing community-based units. The current community nursing units can evolve as a part of a comprehensive and structured long-term network.

15. Additional services provided by midwives, clinical dietician, physiotherapists, occupational therapists, speech language pathologists and dental services can coexist in the new PHC model through a **shared services unit**, available to the whole community.

16. These activities (health education, school health, long term care network and shared services) are not going to be financed by NHS, therefore the Ministry of Health must assure their funding. Preferably, it must be developed a process of internal contracting with these units.

Management structure for the PHCCs to operate as ‘Family Health Care Centres’

17. The MoH must have a central Unit that supports, coordinates and monitors the development of PHC. The different services of MoH should be represented in this unit: namely, Medical and Public Health Services and Nursing Services.

18. It is defined that 5 autonomous organizations (AO) will manage PHCC. PHC provision must be faced as an independent pillar of the Autonomous Organizations. It is important to understand that primary care and secondary care can have conflicting missions (e.g. primary care providers’ main role is to prevent disease, and secondary care is to treat disease). The role of PHC is to act as a gatekeeper to secondary care. In the competitive and decentralized environment that is envisaged in Cyprus, the vertical integration between primary care and secondary must be closely monitored and regulated.

19. Still, primary care and secondary providers can develop relevant and innovative process toward integration and patient centred healthcare.

20. Each group of PHCC in an AO should have its own budget and be managed by an Operations Director that is advised by a Primary Care Clinical Advice Council (one in each AO). The operations director hierarchically reports to the Chief Operations Officer or on the Chief Executive Officer of the AO. The clinical advice council is coordinated by a FD, and is composed by the FHC coordinators, community services unit, and shared services unit.

21. The expansion of FHC across all PHCCs, implies closing subcenters in a phased and negotiated approach with the communities and municipalities. MoH must also consider closing small PHCCs that are located less than 30 minutes journey time from larger PHCCs, assuming public transportation exists.

22. Additionally, the development of the new PHC network implies the gradually elimination of PHCCs that operate on a 24hour basis. The phase-out plan should consider the availability of an integrated ambulance emergency service.

Contracting process

23. The development of FHC in PHCC must be based in a voluntary bottom-up process based on voluntary applications. MoH should establish a support unit to enhance the development of new FHC. A Family Health Centre application should include:

- a) Identification of all elements, indicating the coordinator;

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- b) Population enrolled;
 - c) Commitments and development goals:
 - Portfolio of services;
 - Business plan with definition and quantification of goals and objectives, particularly in the areas of accessibility, effectiveness and productivity;
 - Continuous training plan for all professionals;
 - Opening hours;
 - d) Internal rules of procedure;
 - e) Quality charter;
 - f) Coordination with other PHC units;
 - g) Information systems (hardware and software);
 - h) Facilities and equipment (including investment project, if necessary).

24. The MoH should assure the certification of each FHC.

25. MoH must prepare a follow up plan to improve and adapt the current public facilities into the new delivery model. The functional reorganization of the current PHCC, with implementation of FHC, implies that the adaptation, acquisition, rental or construction of new facilities for FHC, should take into account accessibility principles, comfort, humanization and functionality, and a suitability for team work; it should also take into account areas for training professionals, and technical and general support areas, not only for the multidisciplinary team, but mainly to the served population.

26. The contracting process between HIO and public FHC will be similar to the one made between HIO and the private providers. Nevertheless, private FHC remuneration should recognize the assumption of risk, investment amortization, and overhead costs that are not borne directly by public sector facilities.

27. The contracting process with the private and public sector must proactively promote the constitution of FHC, as a group practice arrangement, over solo or dual practices.

28. The remuneration of FHC professionals must be in line with their responsibilities for a defined population within a framework of contracting, involving objectives of accessibility, effectiveness, efficiency and quality. It must include: salary, capitation (using an adjusted patient formula), fee for services (such as home care visits), Pay for Performance (according to a set of contracted indicators), other components (such as coordination roles and training activities) and other activities outside the basket of services (for example, smoking cessation consultations)

29. Services that will be provided outside the NHS must be identified and costing should be undertaken with the objective of funding the activities through contracting with the MoH.

30. There are no official statistics on quality of care in PHC. The lack of adequate data and analysis is a major bottleneck for the reform and the low level of development of ICT solutions may undermine the urgent implementation of a nationwide FHC network.

Quality Management System

31. A thorough process of Key Performance Indicators definition and monitoring should be implemented as a priority using a stepwise approach with several sets of indicators being introduced according to a strict timeline. Funding for PHC providers should be geared to population needs and contain incentives to a quality and patient centred system.

32. The implementation of a nationwide robust health information system that will serve as basis for medical records and can also be used as a management decision tool was identified as critical for the success of the reform. The Electronic Health Record (EHR) must be the basis for the contracting process, for the monitoring and also for planning future health needs (on FHCs level, on local/regional/national level and also for specific population groups).

33. The implementation of systematically developed information systems into primary care level, will allow the provision of integrated and coordinated care, quality improvement and focusing on the healthcare user. Health data easily accessible at the point of care, will establish solid grounds for improving professional performance and quality of the provided care. Availability of complete patient health information at the point of care delivery will reduce medical errors and adverse events.

34. Information and technology systems must be designed to incorporate clinical processes, workflows and guidelines. Lack of skilled resources for implementation and support can compromise the success of this stage undermining motivation and commitment of healthcare professionals.

35. Interoperability between systems from different levels of care should be ensured; the IT solution should be tailored according to the level of care (PHC, secondary care, etc.) but the platform should allow the information flow just in time. Communication between all healthcare providers involved in care of patients will be via electronic means. A fully operational data interchange between different levels of health care delivery by using standard communication protocols must be deployed on an early stage.

36. Other databases may co-exist such as patient hospital records and a national e-prescribing system. Information must be made available to both primary care physicians through their EHR software and hospital--based ones and interoperability will be the key for ensuring the information flow.

37. Information must be available for consultation (within the IT solution) for all healthcare professionals according to different profiles of access ensuring confidentiality. An access authorization must be issued for each user and each one should be assigned strictly-defined privileges to access specific parts of the electronic data entry system. The persons entitled to access the data, and the rules to be obeyed, should be clearly defined.

38. Clinical guidelines should be integrated in the EHR system and in the e-prescription system and expanded to different and more prevalent conditions in order to aid physicians prescribing medications and at the same time avoiding undesirable interactions and allowing warnings of drug allergies.

39. On-going training on informatics targeted at healthcare professionals should be guaranteed. The EHRs can be used for this purpose allowing e-learning modules for new functionalities or training in complex tasks like data analysis.

40. All relevant data for the decision-making process must be available at the point of care to all physicians allowing the transparency of adapting health policies to actual needs, engaging healthcare professionals in the process.

41. The data standard selected to be used with the EHR in PHC should be the International Classification of Primary Care, version 2 (ICPC-2), which offers a possibility of using unique codes to report on the reason for encounter, morbidity and medical procedure³. To start quality coding, it's needed to begin educating physicians and to insert specific training in Medical Schools for future physicians. Strictly defined standards should be observed while entering data and regular audit should be performed for quality and safety purposes. ICPC-2 can be mapped to ICD-10 or ICD-9 assuring data interoperability (usually used in DRGs).

42. The implementation of an EHR will also allow the implementation of prevention programs based on population needs and local/national targets; a definition of a patients list will leverage personal continuity as well as the coordination of care by allowing referral and information exchange between specialists.

43. A rapid clinical acceptance of EMRs can have a major impact on the on-going reforms of the health system. Although they should be mandatory, they must be developed in close consultation with physicians and medical associations to ensure their utility, rather than imposed as a top- down strict measure. It should be considered the possibility of financial incentives, as well as the MoH paying for technical support, including sending data--consulting teams to medical practices.

³ Please visit: <http://www.who.int/classifications/icd/adaptations/icpc2/en/> or <http://www.ph3c.org/>

Professional task force

The success of the PHC reform depends on the leadership and the political support to the overall process. That's why, the MoH needs to create a flexible structure (professional task force) dependant hierarchically from the Minister that steers and supports the reconfiguration of PHC.

This special support unit should have following objectives:

- a) Coordinate the overall process of launching and implementation of family health centres (FHC), as well as other aspects of reconfiguration of PHCC;
- b) Define clearly the concept of Family Health Centre (FHC) and the standard rules of the reconfigured PHHC;
- c) Define a communication strategy and develop the information tools and materials to help professionals constitute a family health centre;
- d) Define the information and technology action plan for the development of the PHC reform;
- e) Define clearly the criteria and methodology for the FHC applications process;
- f) Evaluate the proposals for FHC, supporting the applications process;
- g) Propose to the Minister of Health strategic and technical guidance for human resources policy, continuous training and incentives to performance and quality to be applied in family health centres;
- h) Prepare the contractual terms of reference with family health centres;
- i) Further develop innovative ways of improving coordination care with other units, particularly with the hospital and long term care;
- j) Cooperate with different structures of the Ministry of Health;
- k) Promote participation of stakeholders in the reform process;
- l) Perform other functions assigned by the Minister of Health.

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