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THE VIEWS OF STAKEHOLDERS IN THE CYPRIOT HEALTH CARE SYSTEM ON THE PROVISIONS IN THE MEMORANDUM ON HEALTH SERVICES IN CYPRUS

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ABSTRACT

Background: The economic crisis of 2013 obliged Cyprus to sign a Memorandum of Understanding (MoU) with the Euro group, European Commission (EC), European Central Bank (ECB) and International Monetary Fund (IMF). The MoU included provisions that affected the health sector. Regarding health and the expenditure of health care, the Republic of Cyprus undertook inter alia structural changes in the health sector, ultimately introducing the National Health System (GeSY). The purpose of this study was to investigate the views of Cypriot health stakeholders (HSH) on the provisions and the expected implications of the MoU on health services.

Methods: Representatives from five groups of Cypriot HSH were invited to participate in the study.
A questionnaire with 20 structured and 3 semi- structured questions was given to participants. The questions referred to the content of the MoU and the views of the different health stakeholders on its provisions and its implications. Each structured question was marked on a scale from -10 (very negative) to +10 (very positive). All answers were presented by descriptive analysis.

Results and conclusion: All groups were highly sceptical of most of the MoU provisions despite the groups' apparent realisation that the present health services system must be restructured. The groups' expressed their general views on which health indicators may be positively or negatively affected by the MoU provisions (health expenditures, effectiveness, chronic diseases, depression and others). The majority affirmed their belief that the MoU would promote the implementation of the National Health System.

Introduction

After Cyprus became an independent state in 1960, the existing health services system was restructured to follow the British colonial system. This reorganization was based on a report prepared by the British Middle East Office in Cairo in response to a request made by the government of Cyprus (Cylus J et al., 2013, Petrou P., 2009). The healthcare delivery system was founded on Beveridge principles, was funded by taxes and provided health services free of charge to civil servants and the poor. After the introduction of this system, various groups began to request changes to health services. In response to these requests, several studies were conducted to determine how to develop health services (Ioannou N., 2010). During the economic crisis of 2007–2008, not only the healthcare in Cyprus, but the systems of different European countries faced significant threats (Karanikolos M et al., 2013).

Various measures to strengthen the sustainability of the funding of healthcare systems and the efficiency of public healthcare provision were implemented, including the introduction of strict fiscal austerity and health spending cuts. However, in some countries, these actions have escalated health problems and have reduced access to healthcare (Kentikelenis A. et al., 2013, Economou Ch. Et al., 2014, Simou E. et al., 2014). In contrast, Iceland rejected austerity through a popular vote, and the financial crisis seems to have had little or no visible effect on health (Olafsdottir A. et al., 2013). The interaction between fiscal austerity, the economic crisis and weak social protection has escalated health problems in Europe (Economou Ch. et al.,2014).

Political decisions regarding how to respond to the crisis have a significant impact on public health (Stuckler D. et al., 2011). Mladovsky, Srivastava and Cylus (2012) analysed how different European countries responded to the financial crisis. Some protected (Belgium and Denmark) or froze (United Kingdom) their health budgets and reduced budgets in other sectors. Others (Austria, Latvia, Poland and Slovenia) strengthened their position in price negotiations with pharmaceutical companies. The restructuring of hospitals was accelerated in Denmark, Greece, Latvia, Portugal and Slovenia. Cyprus, Greece, Ireland, Lithuania, Portugal and Romania reduced and England and Slovenia froze the salaries of health professionals while Denmark minimised increases. Certain services were removed from benefit packages in the Netherlands while those for low-income groups were expanded in Moldova. Others reduced the extent of health service coverage by introducing or increasing user charges (Mladovsky P. et al., 2012).

The prolonged recession and health spending cuts in many countries in Europe likely impacts the health and economic welfare of these populations. Already, the prevalence of mental disorders has increased in Greece (Mpouras G. & Lykouras L., 2011) and Spain, self-reported general health has deteriorated and access to health services has declined (Gili M. et al., 2013) Since 2007, an increase in the number of suicides in people ≤ 65 years old has been observed in the European Union (EU), reversing the steady decline previously noted in many countries (Stuckler D. et al., 2011, Stuckler D et al.,2009). It was demonstrated that unmet essential needs have increased in numerous countries because of limited access to health services (Rodrigues R. et al., 2013). Greece, Portugal, Ireland and Cyprus should receive special consideration, and should focus to the need for a fair distribution of limited financial resources in the light of the principles of social justice and solidarity (Karaiskou A. et al., 2012) as they were obliged to comply with the MoU provisions.

In March 2013, the economic crisis obliged Cyprus to sign a Memorandum of Understanding (MoU) that included provisions that affected the health sector. The Memorandum sets clear timelines for the implementation of the National Health System (GeSY) in a sustainable manner. The healthcare system in Cyprus is unusual compared to that of other member states of the EU in that Cyprus has no national health insurance.

The MoU includes fiscal measures in many areas of health expenditure and the delivery of healthcare services. Because this study investigates the reaction of HSH to the introduction of these measures, it is appropriate to briefly review these areas of the MoU and the corresponding policies that were applied, for instance, the MoU addressed the issue of pharmaceutical expenditures by proposing the development of clinical guidelines to ensure rational prescribing practice (Woolf S. et al., 1999, Grimshaw J. & Hutchinson AM., 1995), direct access to specialist should be limited making practitioners the gatekeepers of the healthcare

system according to the English NHS (Starfield B. 1994), cost-effectiveness analysis for the 10 most expensive drugs and for certain conditions with expensive treatments should be performed and a co-payment of 0.50 per prescription was introduced to address over-prescribing and the moral hazards that lead to aggressive prescribing behaviours. Although user charges are not a preferred option during a recession because they provide limit access to healthcare, the 0.50 per prescription charge is low, and, in any case, much lower than in other EU countries (Petrou P, Vandoros S., 2015).

The price of medicines in the private sector is relatively high (Merkur S, Mossialos E., 2007) and various interested parties are urging the introduction of measures to reduce prices. Nevertheless, this should be done with caution because the public sector already supplies drugs at very low prices and an excessive reduction of prices in the private sector may make Cyprus a less attractive pharmaceutical market (Petrou P., 2014).

The first measure dealt with by the Ministry of Health (MoH) was the regulation of demand, specifically addressing the co-payment applied to out-patient visits. User fees at the point-of-care were also introduced in the form of 3 for family doctors and 6 for specialists, combined with the introduction of an annual fee of 1.5% to all beneficiaries (some exceptions applied to vulnerable groups). A study in Cyprus (Theodorou M., 2014) found that co-payments target mostly low-income earners and those of poor health; hence, access to healthcare should in no way be related to patients' ability to pay but rather with patients' health needs.

Emergency rooms in Cyprus are characterised by overuse, misuse and even abuse, just as overall hospital admissions and use are; as the MoU-2013 states, these issues apply to the whole health sector (Asplin BR. & Knopp RK., 2001). To address this issue fixed fee co-payment of 10 for visits that could be addressed in primary health services, including the ER, was introduced. Although the fixed co-payment has not yet shown an effect on the emerging trend of the increasing number of visits to the ER (Petrou P., 2015), the introduction of a co-payment can be regarded as an appropriate measure in a cross-sectional study of patients (Stuckler D. et al., 2009).

Another area that was reviewed by the MoH was the ordering of laboratory tests. Although laboratory tests have achieved a leading position in the diagnosis and monitoring of disease, it is estimated that 20% of all laboratory testing is unnecessary, meaning that laboratory tests are highly unlikely to help verify or generate a diagnosis (Kim JY. 2011). Apart from the economic cost of excessive testing and the wasting of scarce resources, the unnecessary ordering of lab tests burdens the patient physically and psychologically.

The MoU proposed new income criteria for public healthcare beneficiaries, further reducing health insurance coverage. This negative trend has prompted 150,000 people to seek care in the private market, where they must pay for their healthcare entirely out of pocket (Petrou P., 2014). Moreover, to reduce tax evasion, eligibility requirements were introduced for public healthcare; namely, people who had not contributed to the Social Insurance Fund for three years were not entitled to public healthcare coverage (Petrou P., 2014). Moreover, Category B insurance, whose beneficiaries got 50% of the costs reimbursed, was removed. As a result, the total health budget for 2014 was reduced by approximately 20% (Petrou P., 2014). In 2013, total expenditure on public health was 598.000.000 while the budget for 2014 was set at 542.000.000, assuming that the MoU measures would regulate unnecessary healthcare delivery and cost (Petrou P., 2014).

Moreover, the public-sector costs for non-beneficiaries were not reflective of the actual costs of healthcare. Consequently, the MoU required an increase of medical service fees for non-beneficiaries by 30% in order to cover the actual costs of the system (Petrou P., 2014).
To date, 20 clinical protocols for primary and secondary care have been introduced by the MoH, some of which are still being processed. The economic evaluation of pharmaceuticals and a health technology assessment (HTA) are included in these protocols and are being pursued by pharmaceutical services and Organisation Health Insurance (OHI) (Panavos P. & Wouters O., 2014). The MoH, together with the OHI, is developing a medical check-up approach that will evaluate the impact of clinical pathways on health indicators. This includes the implementation of a large-scale IT system in the healthcare sector that requires the coding of inpatient cases by homogeneous patient groups (DRGs) designed to replace the current out-dated hospital payment system. The HTA also introduced measures specifically for four costly pharmaceuticals and for medical equipment. This marks the introduction of HTA in Cyprus, which is especially significant considering that Cyprus has largely ignored HTA in previous years. The Memorandum also recommends a restructuring plan for public hospitals to improve quality and optimise cost control (Petrou P., 2014, Ministry of Finance, 2013).

One of the most important reforms of the MoU was the mandatory introduction of the GeSY in Cyprus by 2015. Implementation is projected to occur in several stages, starting from primary care in mid-2015, and is an important step for the consolidation of the health sector in Cyprus. The MoH aimed to implement the first phase of the GeSY and the fulfilment of the MoU proposals in July 2015. Drafts of the two laws governing the operation of the system were published to spur a public debate and reach common consensus before the lows were submitted to the Ministerial Council and the House of Representatives for enactment.

The two bills are the 'Law Amending the General System of Health Laws of 2001 to 2005' and the 'Law Amending the Governing Bodies of General Hospital Foundation, Law of 2014'.

In tandem, these two bills will ensure health coverage for all citizens based on principles of equality and solidarity. However, the public debate between stakeholders especially health professional and the MoH elevated serious disagreements regarding the autonomy of hospitals (PASYNO, 2016) (self-governing under government ownership or private ownership) and the occupational status (contractual employment status, benefits and remunerations) of health professionals. Thus, the laws passed after a serious delay of 2 years. At this stage, the healthcare situation is fluid and is still characterized by the insufficient recruitment of nursing and medical staff, long waiting lists, overloading of the healthcare system, and failure to directly implement GeSy (Petrou P.,2014).

The purpose of this study is to investigate the views of Cypriot health stakeholders (HSH) on the provisions and the expected implications of the MoU on health services.

Material and Methods

Study population

Members of the sample groups were chosen if they were existing health stakeholders and could influence health policy. The population of potential participants for the feasibility sample group was drawn from a broad range of demographics in order to have a more representative sample. The sample was chosen deliberately, not randomly, as the researchers were aware of what characteristics were necessary and therefore selected a sample that would provide more comprehensive and thorough answers to the research question—in other words, the sample had to be able to provide adequate information on the investigated phenomenon.

After contacting 83 eligible health stakeholders per email, 51 gave their consent to participate in the study.

The study was carried out in March 2016 and each HSH was asked to complete a structured questionnaire followed by a semi-structured interview which is briefly described below.

The Process and the Tool

In order to create a tool that could provide the necessary information for analyses, a questionnaire comprised of two parts

were developed: a fully structured and a semi-structured section. The first part of the questionnaire included 20 items, which referred to the various aspects of the Memorandum, such as the respondents' knowledge of its content or their opinions regarding the measures for optimizing different aspects (organizational, structural, financial, human resources, quality of and access to care) of the health sector. Moreover, the questions tried to deduce whether the Memorandum could be characterised as just and human-centred. The HSH were asked to mark each structured question on a scale from -10 (very negative) to +10 (very positive), to express the intensity of both their positive or negative feelings and reactions regarding the MoU. Only question 1 (knowledge of the content of the MoU) was ranked from 0–10.

The second part of the questionnaire consisted of three semi-structured questions that focused on outlining the negative and positive aspects of the Memorandum by listing those under four subheadings: Strengths, Weaknesses, Opportunities and Threats (similar to a SWOT analysis). Moreover, the interviewees were asked to state which health indicators were expected to be either positively or negatively affected by the MoU provisions. These questions helped to ensure the reliability of the first part of the questionnaire. (Appendix I).

Invitations for participation were sent via e-mail. During the first meeting, the purpose of the study was discussed, and the issues of confidentiality and protection of personal data were explained. All relevant approvals for the study were issued by the MoH, and ethical approval was given by the National Bioethics Committee and the Commissioner of Personal Data Protection of Cyprus. Additionally, all participants provided their written informed consent.

During the meetings, the verbal Question & Answer (Q&A) process was recorded. The interviewer could also pose additional questions, and the interviewee could express concerns not covered by the questionnaire. The content of those verbal comments was qualitative analysed by identifying and coding thematic units (Table 4).

The Q&A process lasted between 30 and 60 minutes. The answers were tabulated and depicted in graphs and additional tables, allowing the researcher to proceed with both quantitative and qualitative analysis and subsequently extract conclusions. For all analyses, Microsoft Excel was used.

Pre-testing of the questionnaire,

Before accepting and distributing the final questionnaire, the questions were given as a pilot questionnaire. It is important to note that 5 persons, one from each group, accepted the task of completing the pilot questionnaire (average time of completion was 20 minutes). They indicated that there was no difficulty in understanding the instructions, there were no unclear or vague questions, and they were well aware of the terminologies used in the questionnaire, and almost all respondents had a clear understanding of the contents of the Memorandum on Health (MoH). Respondents did not express concern regarding anonymity, and everyone answered all of the questions without objection. As for the appearance of the questionnaire, everyone answered that it was acceptable.

To test the reliability and content validity of the questionnaire, the degree of agreement and understanding of the questions were obtained by comparing the responses for each question. The results of the pilot questionnaire did not indicate the need for changes to the design or the content of the questionnaire.

The analysis of the results

The replies were compiled into tables, in order to compare the single groups. The method with positive and negative numbers was chosen to give the respondents the chance to express the intensity of both their positive or negative feelings and reactions regarding the MoU. The data from part one (20 structured questions) were quantitatively analysed, and the results were presented as average scores on the basis of the total scores recorded between -10 to +10.

The answers from part two (3 semi-structured questions) were also compiled into tables showing their ranking from the most frequently to the less frequently mentioned issue to be considered. The first question was analysed using a SWOT Analysis format. Each member of each HSH group was asked about what he/she perceived to be the negative or positive aspect of the memorandum and was asked to identify and list the strengths, opportunities, threats and weaknesses related to the levels of health and the health system itself.

Results

Analysis of scores for each health stakeholder group

51 Health Stakeholders (HSH) were divided in 5 groups. Each group of HSH was formed with 7–12 members. a) 11 officials of the Ministry of Health (OoMoH) (Minister, department managers), b) 12 Hospital managers or directors of both public and private hospitals (MDoPPH), c) 7 representatives of political parties, unions and employers' organisations (RPPUEO), d) 10 representatives of health professionals' associations (RHPA), including medical practitioners, pharmacists, nurses and medical insurance companies and e) 11 representatives of various Cypriot Patient Organisations (RCPO), such as Cyprus Anticancer Association, Cyprus Antirheumatic Association, Cyprus Multiple Sclerosis Association, Cyprus Diabetes Association, Cyprus Heart Association, HIV/AIDS Support Centre etc. The maximum positive score of each representative of any HSH group was 200 (20 questions multiplied by 10); the lowest negative score was -190 (19 questions multiplied by -10).

Table 1. Scores per HSH group per Question

Range of score for each HSH per question/ Average score	OoMoH n=11	MDoPPH n=12	RPPUEO n=7	RHPA n=10	RCPO n=11	Average n=51
Q1 Knowledge of MoU	(4-10) 7.9	(6-10) 7.8	(1-9) 6	(3-7) 5.1	(5-9) 6.3	6.62
Q2 Agree with MoU	(2-8) 5.5	((-5)-9) 6	((-10)-9) 4	((-5)-8) 3	((-10)-9) 0.5	3.8
Q3 MoU will correct incongruities	(4-10) 6.2	(4-9) 7.1	(5-10) 7	((-10)-10) 4	((-10)-8) 1.9	5.24
Q4 MoU will accelerate the implementation of the GeSY	(6-10) 8.3	((-6)-10) 6	((-10)-10) 6	(1-10) 6	(0-8) 5.5	6.36
Q5 MoU has a human-centred focus	((-5)-8) 2.4	((-7)-9) 4	((-10)-8) 1.7	((-10)-8) 0.9	((-10)-9) -3	1.2
Q6 MoU will reduce public health expenditures	((-10)-9) 3.9	((-8)-9) 5	((-10)-10) 6	((-10)-7) 3	((-3)-9) 4.3	4.44
Q7 MoU will promote the rational redistribution of health expenditures	((-10)-9) 4.6	((-7)-10) 6	(0-10) 7	((-6)-10) 3	((-8)-8) 1.7	4.46
Q8 MoU will promote better organisation of public hospitals	(3-10) 7.2	(3-10) 8	(3-10) 7	(0-10) 5	((-9)-9) 3.5	6.14
Q9 MoU will help reduce the wait in queues in public hospitals	((-10)-10) 5.2	((-2)-10) 5	((-10)-9) 4	((-8)-10) 3	((-10)-8) -0.1	3.42
Q10 MoU will promote collaboration between the private and public health sectors	((-5)-10) 5.6	((-1)-10) 4.4	(3-10) 6	((-5)-10) 2.9	((-8)-7) 3.2	4.42
Q11 Believe MoU is fair	((-10)-8) 2.1	((-2)-9) 5	((-10)-10) 3	((-10)-10) 2	((-10)-8) -3.6	1.7
Q12 MoU will affect the health status of citizens	((-10)-8) 2	((-5)-9) 4	((-10)-9) 1.1	((-5)-10) 2.9	((-10)-5) -4.8	1.04
Q13 MoU will affect the public health	((-5)-9) 2.3	(0-8) 5	((-6)-10) 3	((-10)-5) 0	((-9)-7) 0.5	2.16

Q14 MoU will influence the supply of medicines	((-5)-9) 3.1	((-2)-8) 3	((-6)-10) 3	((-5)-8) -0.1	((-10)-5) -4.5	0.9
Q15 MoU will influence the adequate staffing of hospital units	((-10)-9) 1.3	((-7)-8) 3	((-10)-9) 1	((-10)-8) -1	((-10)-5) -4.5	-0.04
Q16 MoU will affect the quality of health care services	((-10)-9) 2.1	((-3)-9) 4	((-6)-9) 2	((-5)-8) 1.1	((-9)-5) -2.7	1.3
Q17 MoU will influence the reformation of the health care system and services	((-5)-9) 5.2	((-1)-9) 5	(3-10) 7	(0-9) 4	(3-8) 5.8	5.4
Q18 MoU will influence the satisfaction of patients	((-5)-9) 2	((-5)-9) 3	((-6)-9) 1	((-10)-9) 0.6	((-10)-7) -2.6	0.8
Q19 MoU will reduce the incidence of medical errors	((-10)-10) 2.3	((-3)-7) 2	((-8)-9)2	((-5)-9) 1	((-10)-7) 1.6	1.78
Q20 MoU will promote the transparency in health sector	(0-10) 4.9	(0-9) 6	(0-10) 5	((-5)-8) 2	((-10)-8) 3.1	4.2
Average HSH group score	**4.2**	**4.9**	**4.1**	**2.4**	**0.6**	3.24
Summary score (range of summary scores responses within each group)	**84.1 ((-66)-182)**	**99.3 (1-158)**	**82.8 ((-15)-173)**	**48.4 ((-68)-148)**	**12.1 ((-114)-132)**	

Table 1 shows that the most positive views of the Memorandum were expressed by the health stakeholder group MDoPPH , which scored an average of 4.9 for each question and obtained an average summary score of 98 points (out of 200). The lowest scores were given by RCPO, revealing an average of 0.5, (i.e., 10/200 points), followed by RHPA with an average of 2.4 or 48/200 points. Taking into account all groups, the average score for each question was 3.2.

Analysing the scores of the HSH

All HSH claimed to have knowledge to some extent of the MoH (Q1), with an average score of 6.6 and a ranking from 5.1 to 7.9. This was the highest score regarding all questions. However, the HSH rated with a lower average score (3.6) regarding whether they agreed with the Memorandum (Q2). As to whether the Memorandum can help promote the implementation of a National Health Service (Q4), the HSH scored an average of 6.4 points. When asked whether the Memorandum will have a human-centred focus (Q5), the interviewees reported very low average scores that ranked from -3 to 4.

The re-organisation of public hospitals (Q8) scored with an average of 6.1 positively by the HSH. A score of 3.4 indicates that the HSH were not so convinced that long queues would be avoided (Q9). The interviewees stated that the Memorandum is not just (Q11) and therefore gave a very low average score of 1.7. The RCPO believe that the health of the citizens will be adversely affected (Q12), giving an average score of -2.7; HSH gave a low positive score of 2.2 for the positive impact of the policy changes on the present Health System (Q13). Furthermore, the RCPO and RHPA indicated that problems in the medicine supply will arise (Q14, scores -4.5 and -0.1, respectively); citizens' health will be very low (Q15, scores -4.5 and -1, respectively); RCPO believe that the quality of health services will be low (Q16, score -2.7); patients' satisfaction with health services will not be sufficiently improved (Q18, score, -2.6); HSH believe that medical errors will not be significantly reduced (Q19 score, 1.8).

Analysing the evaluation views of the HSH

The first question of part two requested the health stakeholders to express their negative or positive perceptions of the memorandum to identify the strengths and opportunities as well as the threats and weaknesses (SWOT-Analysis) concerning the health care delivery system.

Table 2. Arising themes and their frequencies per HSH group according to SWOT Analysis (in %)

Strengths	**OoMoH (n=11) (%)**	**MDoPPH (n=12) (%)**	**RPPUEO (n=7) (%)**	**RHPA (n=10) (%)**	**RCPO (n=11) (%)**	**Total (n=51) (%)**
Reorganisation, hospital autonomy	7 (63.6)	9 (75.0)	3 (42.9)	4 (40.0)	7 (63.6)	**30 (58.8)**
Computerisation	6 (54.5)	5 (41.7)	5 (71.4)	4 (40.0)	8 (72.7)	**28 (54.9)**
Expenditure control	11 (100.0)	5 (41.7)	3 (42.9)	5 (50.0)	4 (36.4)	**28 (54.9)**
Capacity utilisation	3 (27.3)	4 (33.3)	1 (14.3)	5 (50.0)	0 (0.0)	**13 (25.5)**
Better management	5 (45.5)	4 (33.3)	1(14.3)	2 (20.0)	1 (9.1)	**13 (25.5)**
Protocols and procedures	3 (27.3)	2 (16.7)	1(14.3)	2 (20.0)	2 (18.2)	**10 (19.6)**
Quality improvement	3 (27.3)	3 (25.0)	1(14.3)	2 (20.0)	1 (9.1)	**10 (19.6)**
Universal coverage/equality/accessibility	1 (9.1)	0(0.0)	0(0.0)	4 (40.0)	0 (0.0)	**5 (9.8)**
Protection of vulnerable groups	0 (0.0)	0(0.0)	1 (14.3)	0(0.0)	4 (36.4)	**5 (9.8)**
Transparency	0 (0.0)	2 (16.7)	0 (0.0)	0 (0.0)	1 (9.1)	**3 (5.9)**
Modernisation	0 (0.0)	1 (8.3)	0 (0.0)	0 (0.0)	2 (18.2)	**3 (5.9)**
Weaknesses						
No consideration of low-income groups	5 (45.5)	3 (25.0)	2 (28.6)	5 (50.0)	6 (54.5)	**21 (41.2)**
Co-payments	5 (45.5)	3 (25.0)	2 (28.6)	7 (70.0)	4 (36.4)	**21 (41.2)**
Financial crisis	4 (36.4)	2 (16.7)	4 (57.1)	3 (30.0)	3 (27.3)	**18 (35.3)**
Funding	3 (27.3)	2 (16.7)	4 (57.1)	3 (30.0)	3 (27.3)	**15 (29.4)**
Budget cuts	3 (27.3)	2 (16.7)	0 (0.0)	3 (30.0)	3 (27.3)	**11 (21.6)**
Reduced income	3 (27.3)	0 (0.0)	3 (42.9)	0 (0.0)	5 (45.5)	**11 (21.6)**
Lack of specialist physicians	2 (18.2)	3 (25.0)	0 (0.0)	2 (20.0)	2 (18.2)	**9 (17.6)**
Lack of development policy	1 (9.1)	1 (8.3)	3 (42.9)	1 (10.0)	1 (9.1)	**7 (13.7)**
Inability to apply protocols for competence, quality and security	1 (9.1)	2 (16.7)	0 (0.0)	2 (20.0)	2 (18.2)	**7 (13.7)**
Inexperience	1 (9.1)	0 (0.0)	0 (0.0)	1 (10.0)	0 (0.0)	**2 (3.9)**
Inability to adopt reforms	1 (9.1)	0 (0.0)	0 (0.0)	1 (10.0)	0 (0.0)	**2 (3.9)**
Opportunities						
Time frames	7 (63.6)	7 (58.3)	5 (71.4)	5 (50.0)	6 (54.5)	**30 (58.8)**
Controls of expenditure	9 (81.8)	9 (75.0)	3 (42.9)	5 (50.0)	4 (36.4)	**30 (58.8)**
Government's commitment	0 (0.0)	2 (16.7)	2 (28.6)	6 (60.0)	1 (9.1)	**11 (21.6)**
External pressure	3 (27.3)	1 (8.3)	0 (0.0)	3 (30.0)	2 (18.2)	**9 (17.6)**
Transparency	2 (18.2)	2 (16.7)	2 (28.6)	1 (10.0)	1 (9.1)	**8 (15.7)**
Improvement of quality	3 (27.3)	2 (16.7)	2 (28.6)	0 (0.0)	1 (9.1)	**8 (15.7)**
Implementation of National Health System	1 (9.1)	0 (0.0)	5 (71.4)	0 (0.0)	0 (0.0)	**6 (11.8)**
Implementation of protocols	1 (9.1)	1 (8.3)	1 (14.3)	2 (20.0)	1 (9.1)	**6 (11.8)**

Equality	0 (0.0)	1 (8.3)	1 (14.3)	3 (30.0)	1 (9.1)	**6 (11.8)**
Positive outlook	0 (0.0)	1 (8.3)	2 (28.6)	2 (20.0)	1 (9.1)	**6 (11.8)**
Organisation design	1 (9.1)	1 (8.3)	1 (14.3)	2 (20.0)	1 (9.1)	**6 (11.8)**
Productivity	0 (0.0)	0 (0.0)	2 (28.6)	3 (30.0)	1 (9.1)	**6 (11.8)**
Threats						
Co-payments	6 (54.5)	3 (25.0)	3 (42.9)	5 (50.0)	5	**22 (43.1)**
Budget cuts	3 (27.3)	3 (25.0)	6 (85.7)	4 (40.0)	2 (18.2)	**18 (35.3)**
Ceiling on medicines (restricting access/number of prescriptions)	3 (27.3)	2 (16.7)	3 (42.9)	4 (40.0)	6 (54.5)	**18 (35.3)**
Viability of NHS	2 (18.2)	0 (0.0)	4 (57.1)	6 (60.0)	3 (27.3)	**15 (29.4)**
Vulnerable groups	4 (36.4)	0 (0.0)	0 (0.0)	5 (50.0)	6 (54.5)	**15 (29.4)**
Staff reductions	2 (18.2)	1 (8.3)	0 (0.0)	3 (30.0)	5 (45.5)	**11 (21.6)**
Overloaded system	2 (18.2)	0 (0.0)	0 (0.0)	3 (30.0)	3 (27.3)	**8 (15.7)**
Lack of specialist physicians	2 (18.2)	1 (8.3)	1 (14.3)	3 (30.0)	1 (9.1)	**8 (15.7)**
Family doctors (GPs)	1 (9.1)	0 (0.0)	0 (0.0)	2 (20.0)	0 (0.0)	**3 (5.9)**

Table 2 shows a list of themes that have arisen regarding the question "what are the strengths and opportunities and the threats and weaknesses of the MoH" and how many subjects from each group mentioned these themes (in percent). The weaknesses that the HSH consider most important are the following, listed in decreasing order of importance: no consideration of low-income groups, co-payments, financial crisis and funding The threats that the HSH consider most important are the following, listed in decreasing order of importance: co-payments, budget cuts, ceiling on medicines (restricting access/number of prescriptions), viability of NHS and vulnerable Groups. The HSH highlighted several advantages in the Memorandum's provisions. The "Strengths" are reorganisation, hospital autonomy, computerisation, expenditure control, the introduction of protocols and procedures, quality improvement. The most important Opportunities identified by HSH are time frames, control of expenditure Government's commitment and external pressure (see Table 2 for more details).

Regarding the second question, if the HSH had any specific concerns for the consequences that the MoU may have on health, they listed more indicators to be negatively than positively influenced. Table3 presents these indicators and the frequency of subjects (in percent) from each HSH group mentioning them.

Table 3. Identifying the influence of MoU on Health Indicators (in percentage per HSH group)

Positive influence on indicators	**OoMoH (n=11)(%)**	**MDoPPH (n=12) (%)**	**RPPUEO (n=7) (%)**	**RHPA (n=10)(%)**	**RCPO (n=11) (%)**	**Total N=(51)(%)**
Health expenditure	5 (45.5)	5 (41.7)	4 (57.1)	4 (40.0)	6 (54.5)	24 (47.1)
Cost savings for hospitals	5 (45.5)	5 (41.7)	3 (42.9)	3 (30.0)	2 (18.2)	18 (35.3)
Reduced cost	2 (18.2)	5 (41.7)	2 (28.6)	2 (20.0)	2 (18.2)	13 (25.5)
Effectiveness	2 (18.2)	4 (33.3)	2 (28.6)	2 (20.0)	3 (27.3)	13 (25.5)
Efficiency	3 (27.3)	3 (25.0)	3 (42.9)	1 (10.0)	3 (27.3)	13 (25.5)
Quality	0 (0.0)	4 (33.3)	3 (42.9)	2 (20.0)	4 (36.4)	13 (25.5)
Reduced poly-pharmacy	2 (18.2)	2 (16.7)	2 (28.6)	0 (0.0)	5 (45.5)	11 (21.6)
Equality	3 (27.3)	0 (0.0)	2 (28.6)	4 (40.0)	2 (18.2)	11 (21.6)
Use of medical technology	2 (18.2)	0 (0.0)	2 (28.6)	5 (50.0)	0 (0.0)	9 (17.6)
Transparency	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	8 (72.7)	8 (15.7)
Statistical data collection	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	8 (72.7)	8 (15.7)
Reduction of prices/ competition	2 (18.2)	3 (25.0)	0 (0.0)	2 (20.0)	0 (0.0)	7 (13.7)
Patient satisfaction	0 (0.0)	2 (16.7)	2 (28.6)	1 (10.0)	0 (0.0)	5 (9.8)
Negative influence on indicators						
Chronic diseases	4 (36.4)	6 (50.0)	5 (71.4)	4 (40.0)	7 (63.6)	26 (51.0)
Depression	5 (45.5)	5 (41.7)	3 (42.9)	4 (40.0)	9 (81.8)	26 (51.0)
Timely diagnosis	5 (45.5)	5 (41.7)	3 (42.9)	4 (40.0)	9 (81.8)	26 (51.0)
Heart disease	5 (45.5)	1 (8.3)	2 (28.6)	4 (40.0)	5 (45.5)	17 (33.3)
Accessibility	4 (36.4)	3 (25.0)	2 (28.6)	4 (40.0)	2 (18.2)	15 (29.4)
Health expenditures	2 (18.2)	2 (16.7)	2 (28.6)	4 (40.0)	5 (45.5)	15 (29.4)
Health professionals	3 (27.3)	2 (16.7)	4 (57.1)	4 (40.0)	2 (18.2)	15 (29.4)
Morbidity	0 (0.0)	4 (33.3)	2 (28.6)	5 (50.0)	4 (36.4)	15 (29.4)
Child morbidity and mortality	3 (27.3)	0 (0.0)	3 (42.9)	4 (40.0)	4 (36.4)	14 (27.5)
Long queues	6 (54.5)	4 (33.3)	0 (0.0)	4 (40.0)	0 (0.0)	14 (27.5)
Expensive medicines	2 (18.2)	3 (25.0)	2 (28.6)	3 (30.0)	3 (27.3)	13 (25.50
Preventive medicine/testing	2 (18.2)	1 (8.3)	1 (14.3)	5 (50.0)	4 (36.4)	13 (25.5)
Patient satisfaction	2 (18.2)	3 (25.0)	2 (28.6)	4 (40.0)	2 (18.2)	13 (25.5)
Quality	2 (18.2)	3 (25.0)	1 (14.3)	4 (40.0)	3 (27.3)	13 (25.5)
Life expectancy	3 (27.3)	2 (16.7)	2 (28.6)	2 (20.0)	4 (36.4)	13 (25.5)
Sexual infections	2 (18.2)	2 (16.7)	2 (28.6)	1 (10.0)	5 (45.5)	12 (23.5)
Mortality	2 (18.2)	2 (16.7)	3 (42.9)	2 (20.0)	3 (27.3)	12 (23.5)
Own perception of health status	2 (18.2)	2 (16.7)	2 (28.6)	3 (30.0)	3 (27.3)	12 (23.5)
Addicts	1 (9.1)	2 (16.7)	2 (28.6)	2 (20.0)	5 (45.5)	12 (23.5)
Vaccinations	2 (18.2)	2 (16.7)	4 (57.1)	0 (0.0)	4 (36.4)	12 (23.5)
Suicides	3 (27.3)	1 (8.3)	2 (28.6)	1 (10.0)	5 (45.5)	12 (23.5)
Healthy food	3 (27.3)	0 (0.0)	2 (28.6)	0 (0.0)	5 (45.5)	10 (19.6)
Cancer	0 (0.0)	3 (25.0)	1 (14.3)	3 (30.0)	3 (27.3)	10 (19.6)
Infection disease	3 (27.3)	0 (0.0)	1 (14.3)	3 (30.0)	3 (27.3)	10 (19.6)
Kidney diseases	0 (0.0)	0 (0.0)	1 (14.3)	2 (20.0)	3 (27.3)	6 (11.8)

However, important health indicators, such as health expenditures, cost savings, efficiency, effectiveness and quality are thought to be positively influenced. The possible negative effects on various health indicators are mainly the impact on chronic and other diseases, on timely and correct diagnoses and on accessibility to the health care system in terms of waiting lists, prevention, therapy and medicine (see more details in Table 3).

Table 4: Presentation of thematic units identified

47 Thematic Sub- Units	7 Thematic units						
	Financing/ Health System Sustainability	**Health Policies**	**Organization of Health System**	**Patients Health care**	**Health Indicators**	**Social issues**	**Economic crisis**
	Compensation Prices / Health Products Prices	Users in shaping health policies	Family / Specialists Doctors	Suffering	Mortality	Poor patients	Budget Cut
	Co-payment	Patient Rights	Time-frames	Polythematic health care	quality	Nonprofit organizations	Austerity measures
	DRGs implementation	Implementation of National Health System	Collaboration of private and public sector	Patient Exploitation	Early diagnosis	Sharing a contribution rate	Haircut deposits
	Global budgets	Mixed healthcare insurance	responsibilities and powers of health insurance organization	waiting queues / overloading of public hospitals	Transparency	Benefit of society as a whole	Impact absorption
	Utilization of sustainability studies	Reforms/ Political will	Autonomy	Prevention		Human-Focus policies	Increasing attendance at public hospitals
	Developmental plans	Examples of other countries	Internal and External Audits	Patient Views		Informing of citizens	Provisions of the Memorandum
	Health expenditure budget.	originals / Generics	Inclusion of Psychologists			Solidarity	
		Prescription of drugs	Insurance companies				

The content of all verbal comments collected, were qualitative analysed by identifying and coding the thematic units (Table 4).

In total 7 main thematic units and 47 thematic sub-units were identified that shows the main issues of HSH and as well the sub-categories of the main issues that concern them.

Discussion

The reforms introduced by the MoH are both positive and negative, with side effects already identified in some instances. The gap in documented medicine is bridged through the introduction of clinical pathways and has been evaluated as a positive measure by 89% of doctors (CGCPW, 2014). In this context, the inclusion of physicians in the process was a critical factor for success (CGCPW, 2014), which complements with the finding that the protocols are considered an opportunity within the MoU. Furthermore, user co-payment fees are in accordance with the purchasing power of Cypriot citizens - not too low as to be non-beneficial and not too high to impede access - and therefore do not punish people in need. The introduction of co-payments for ER visits appears to have significantly reduced the number of visits, which is desirable to the extent that unnecessary ER visits are avoided, but emergency situations cannot be completely avoided (CGCPW, 2014), on the other hand, the HSH identified within this research that co-payments are one of the most important weaknesses of the MoU and that long waiting queues will not disappear[6].

While this paper focussed on the public health sector, the private sector has been ignored; a similar pattern was observed in other countries affected by the recession (Kentikelenis A. et al., 2011), which complemented the finding that MoU will not promote collaboration between the private and public health sectors. Although we can assume that the Troika as a lender, in principle, is interested in public expenditures on health in the case of Cyprus, we cannot overlook the importance of the private healthcare sector. A significant proportion (43%) of the population is not entitled to public health care (Merkur S. & Mossialos E., 2007). This percentage has increased after the recent reforms (Karaiskou A., 2012, Merkur S. & Mossialos E., 2007), which complements the finding that among the negatives of the MoU is low accessibility. Specifically, the requirement implemented for eligibility of having made three years of contributions to the Social Insurance Fund inevitably leads to the non-inclusion of some staff, who can be considered victims of this measure (Economou Ch. Et al., 2014). In addition, the public health sector is experiencing a drain of doctors due to constant wage reductions, rumours about the possible introduction of important tax measures on pension benefits and uncertainty about the employment status of doctors as civil servants (Merkur S. & Mossialos E., 2007). This has been exacerbated by the government's commitment to freeze recruitment by 2016. As a result, waiting lists have been extended to thirteen months for some orthopaedic procedures. The dissatisfaction of patients is increasing, as people must resort to the private sector, which is the only timely option for certain treatments (Merkur S. & Mossialos E., 2007). All these enforce the findings of this research regarding the problems with adequate staffing.

To date, Cyprus has not experienced adverse health outcomes to a greater degree than in other countries, but it should be noted that the impact of the austerity measures has yet to fully unfold. There have been many manifestations of economic crisis, such as sudden, significant drops in household income, which led to the impoverishment of a significant part of the population (27.1% of the population is at risk of poverty or social exclusion) (Economou Ch. Et al., 2014, Eurostat, 2013). This has led to an increase in the number of patients in public hospitals; this trend is confirmed by the 30% increase in public hospital admissions (Karaiskou A. et al., 2012, MoU., 2013), and this confirms the HSH' fears of longer waiting lists. Moreover, a small country like Cyprus getting in a process formatting various multidisciplinary groups required implementing HTAs and developing clinical protocols, requires resources that may be difficult to maintain in long term (Merkur S. & Mossialos E., 2007). All these issues reflect the way the Cypriot

health care system operates (being comprised of public and private health sectors of relatively similar size) and contributes to inequalities in access to care (Cylus J. et al., 2013, Economou Ch. et al., 2014). A new General Health Insurance System (GeSY) was proposed long ago. The newly imposed Memorandum obliges the government to move forward with its implementation.

The MoU includes elements that focus on better financial controls in the health sector and provides information that could lead to better organisation, management, control and implementation of the GeSY. However, it is believed that the MoU has been mishandled and that some provisions have been selectively forwarded with the sole aim of reducing health costs while similar measures imposed seem to have dubious long-term consequences for Greek public health and healthcare (Simou E. & Koutsogeorgou E., 2014). Some of the provisions that could become useful in facilitating the implementation of the GeSY have been overlooked rather than promoted (for example, the autonomy of hospitals, diagnoses related groups (DRG) and computerised hospital and patient records). Additionally, the austerity policies were a major setback in the plans for implementation of the GeSY (Petrou P., 2009), arousing strong feelings among health professionals as well as a perceived increase in the suffering of patients. Ultimately, the austerity policies put the quality of health services at risk and, by extension, decrease patient satisfaction.

The considerable variations in the expressed views of the various HSH probably reflect the extent to which their members are affected by the Memorandum. Based on these research results, it seems that HSH fully understand the need to restructure the current health care system but disagree with a number of provisions that may affect the level of health status of the citizens. While the general scores of the HSH are positive regarding their perceptions, the scores are very low comparing to the potential positive score. Thus, it is clear that the HSH have different views of the Memorandum.

Despite these variations, the responses show that the HSH apparently understood the content of the Memorandum (positive and negative elements) and the consequences of the Memorandum on the level of health of the population and the level of the health system. Considering these negative aspects, the HSH highlighted their concerns, especially around budget cuts for health care, shortages of medicine and public hospital staff reductions. All of these aspects have consequences both on the quality of health care services and the population's level of health. They are also concerned about the economic criteria for eligibility for a medical card and the cost of the co-payments, which does not consider vulnerable citizens. The HSH are also frustrated with the repeated postponement of the implementation of a NHS, as they realise that as time passes the costs of these negative aspects increase. In general, HSH have asserted that the cost of implementation for an NHS increases with delays, and this additional cost will be paid by citizens while doubts regarding the sustainability of the GeSY will continue to be put forth as an excuse for non-implementation.

Furthermore, the HSH acknowledge that one of the Memorandums' targets is the restructuring and modernisation of the public hospitals and that they have been given some autonomy in their restructuring and operation. The HSH also understand that the Memorandum's primary objective is to reduce the operational expenditures of the MoH, at the risk of adversely affecting queue length, the supply of medicine, the hiring of additional staff, family medical budgets, the quality of healthcare services and the levels of patients' satisfaction (Karaiskou A. et al., 2012) and citizens' health. The concerns of the HSH have been previously documented (Petrou P., 2014, Theodorou M., 2014), and they continue to voice their concerns.

Nevertheless, HSH, through the Memorandum's provisions and the government's commitment, are hopeful that the GeSY will finally be implemented, medical errors will be limited and transparency will be promoted, as all of the HSH acknowledge that the present healthcare system must be reformed. However, the fact remains that not all HSH are convinced about whether the Memorandum's effects on the system are desirable, particularly with respect to the austerity in the finances of the MoH.

The concerns of the HSH seem reasonable and real, as they have been verified by other studies (Karanikolos M. et al., 2013, Rivera JD., 2012) carried out amongst selected EU citizens; specifically, studies have been performed concerning the impact on citizens' health, especially in the populations of other countries currently coping with similar MoU conditions. One example is that depressive feelings have increased between 2013 and 2014 in Cyprus (Reibling N. et al., 2017), which complements the findings of this research.

The Directorate General for Health and Consumer Protection of the European Commission Consumer, despite its legal obligation to evaluate the health effects of EU policies, has not yet assessed the impact of austerity brought about by the MoU, and is instead restricted to providing EU-specific advice on how ministries of health can reduce their budgets (Karanikolos M. et al., 2013). One source of optimism is that European civil societies, including professional bodies, have spoken about the negative health effects of the cuts in health and social spending (Rivera JD., 2012). In this context, the World Health Organisation (WHO) recognised the importance of awareness of the risks for health and health systems and the opportunities for action that have surfaced during the crisis. WHO introduced a resolution in 2009 calling on the Member States of the European Union to ensure that their health systems will continue to demonstrate their effectiveness and to act wisely regarding economic factors in terms of investment, expenditure and employment (WHO., 2009). Cyprus has also experienced significant decrease in per capita health spending since the onset of the crisis, particularly in 2013 and 2014 (OECD/EU., 2016), which complements the findings of this research.

It is obvious, that not only different groups have different perception on the subject under study but there are also different perceptions within the groups. This result was expected considering that there are many different interests and concerns between both the groups and the subgroups.

Concerning the limitation of this study, a special attention should be paid to the fact that representatives of each subgroup may not express the general opinion of the subgroup but their personal opinion.

Conclusion

The aim of this research, conducted amid the evolving economic crisis, was to identify through the eyes of HSH any shortfalls in rational political and economic management with respect to health care policy and the implementation of the MoU in Cyprus. Addressing these shortfalls could bring about the implementation of the GeSY and other necessary savings and reforms.

The total scores from each HSH group provide a good summary of either the positive or negative viewpoints related to the MoH and its overall consequences for public health.

Individuals from five groups of Cypriot health stakeholders (HSH) expressed their views on the implications of a Memorandum of Understanding (MoU) with the Euro group, European Commission (EC), European Central Bank (ECB) and International Monetary Fund (IMF). They were highly sceptical of most of the MoU provisions, and the majority of the HSH affirmed their belief that the MoU would promote the implementation of the National Health System. Additionally, the stakeholders identified several strengths/positives and weaknesses/negatives of the health reforms. Although this research was made in 2016 nevertheless, due to the fact that the implementation of the National Health System is still pending, the findings are still valid and could help the policy makers in their decisions.

Acknowledgement:
We want to thank all the Cypriot health stakeholders for participating in the present study.

Appendix I

Questionnaire
First part
Structured questionnaire of 20 questions

Date		
Name		
Position		
Organisation		
Do you agree to elaborate and publish your personal details?*	Yes *Delete the one you do not approve.	No *Delete the one you do not approve.

Questions:

Note: Each structured question to be marked on a scale from -10 (very negative) to +10 (very positive) 0 for neutral

Q1. To what extent (negative/positive) do you know the content of the MoU for health?
Q2. To what extent (negative/positive) do you agree with the content and provisions of MoU for health?
Q3. To what extent (negative/positive) do you think that the MoU for health will correct the incongruities in health care?
Q4. To what extent (negative/positive) do you think the MoU will accelerate the implementation of the GeSY?
Q5. To what extent (negative/positive) do you think the MoU have a human-centered focus?
Q6. To what extent (negative/positive) do you think the MoU will reduce public health expenditures?
Q7. To what extent (negative/positive) do you think that the MoU will promote the rational redistribution of health expenditures?
Q8. To what extent (negative/positive) do you think that the MoU will promote better organisation of public hospitals?
Q9. To what extent (negative/positive) do you think that the MoU will help reduce the wait in queues in public hospitals?
Q10. To what extent (negative/positive) do you think that the MoU will promote collaboration between the private and public health sectors?
Q11. To what extent (negative/positive) do you think the MoU is fair?
Q12. To what extent (negative/positive) do you think the MoU will affect the health status of citizens?
Q13. To what extent (negative/positive) do you think the MoU will affect the public health?
Q14. To what extent (negative/positive) do you think the MoU will influence the supply of medicines?
Q15. To what extent (negative/positive) do you think the MoU will influence the adequate staffing of hospital units?
Q16. To what extent (negative/positive) do you think that the MoU will affect the quality of health care services?
Q17. To what extent (negative/positive) do you think the MoU will influence the reformation of the health care system and services?
Q18. To what extent (negative/positive) do you think that the MoU will influence the satisfaction of patients who receive health care services?
Q19. To what extent (negative/positive) do you think that the MoU will reduce the incidence of medical errors?
Q20. To what extent (negative/positive) do you think that the MoU will promote the transparency in health sector?

Second part
Semi-structured questionnaire
Questions:

1. Answer by focussing on the provision of the MoU, identifying what you perceive as its negative and positive aspects in the Opportunities, Strengths, Threats, and Weaknesses framework for overall level of health and for the Health System.

Answer:

Opportunities	Threats

Strengths	Weaknesses

2. Do you have any specific concerns for the consequences that the MoU may have on health? If yes, interpret these concerns into health indicators that can be impacted negatively.

_____
_____
_____
_____

3. Have you specifically appraised any of the positive consequences the MoU may have on health? If yes, interpret these into health indicators that can be impacted in a positive way.

_____
_____
_____
_____

Fill in the square to indicate answer:

Yes, I am interested in receiving the results of this research ☐

No, I am not interested in receiving the results of this research ☐

Thank you for your collaboration

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