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# OUTSOURCING PHC SERVICES TO PRIVATE SECTOR: THE CASE OF CVD INITIATIVE IN LEBANON

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Implementation Research



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## List of Acronyms

PHC	Primary Health Care
MOPH	Ministry of Public Health
CVD	Cardiovascular Disease
WHO	World Health Organization
HIS	Health Information System
GP	General Practitioner
YMCA	Young Men's Christian Association
RBS	Resting Blood Sugar
WC	Waist Circumference
BP	Blood Pressure
MOSA	Ministry of Social Affairs
NGO	Non-Governmental Organization
NCD	Non Communicable Diseases
CVR	Cardiovascular Risk
AUB	American University of Beirut
SES	Socioeconomic Status
iPIER	Improving Programme Implementation through Embedded Research
ICP	Institute of Community and Public Health

## Executive Summary

The CVD initiative was developed in 2013 by the MOPH in order to decrease the morbidity of NCD in the Lebanese population. It is based on a 3-step approach: screening-diagnosis and treatment at the primary healthcare level targeting cardiovascular risk factors using a total cardiovascular risk approach in healthy individuals aged 40 and above. The service is inspired and based on the protocol developed by the WHO and described in the “Package of Essential Non-communicable Disease”. It was piloted in 25 PHCs for 3 months and today it is available in the majority of the PHCs.

Observations and compiled reports showed that the service was only sub-optimally implemented while the analysis of the pilot data showed non-compliance of health workers to the guidelines and protocols. An implementation research was needed to identify the gaps in implementation and to understand how to alleviate the reasons behind this suboptimal implementation.

The implementation research consisted of a quantitative analysis looking at the completeness of the records submitted by nurses and doctors of the PHC centers to MOPH along with a qualitative analysis of the transcribed interviews and FG discussions with healthcare providers and ministerial leaders regarding the principles, problems and solutions for CVD service. The coding identified 3 themes: 1- Partnership 2- Technical preparedness of the health workers 3- Health seeking behavior and health provision culture.

Based on the analysis of the results, it is important to make some modifications to the partnership relation between MOPH and the civil society supporting the PHC centers in order to improve the implementation of the CVD service and other services provided by MOPH. It is also important to encourage the gradual integration of MOPH services within the PHC centers, to empower health providers in the centers and to improve the monitoring and follow-up.

## Part 1: Reporting on the study outcomes

### 1. Background

#### 1.1. Contextual Background

Since the end of the civil war, the public health sector in Lebanon has shrunk to the advantage of the private sector, including both for-profit and not-for-profit organizations managing healthcare facilities. At the same time, the healthcare industry in Lebanon became slanted towards tertiary care (Ammar, 2009); whereas the Lebanese State remained the main payer of healthcare through a system of Public insurances and subsidy of tertiary care outsourced to the private sector for uninsured individuals. Within this privatized system the primary health care (PHC) remained weak, marginalized and banished from public subsidy; the Ministry of Public Health (MOPH) spends 95% of public health care expenditures on outsourcing hospitalizations while only 5% of the budget is allocated to support PHC, which is mainly invested in the successful program of chronic medications (Center for Development and Reconstruction, 2013).

The shortage of financial and human resources made it impossible for the MOPH to directly operate sufficient public delivery points for PHC services, and elected to use the private not-for-profit sector to implement a package of PHC services and public health programs. The MOPH contracted with the organizations of the civil society and non-governmental sector, owners of ambulatory health facilities, to outsource the implementation and financing of a package of primary health care services (Yassoub et al., 2014). Today the PHC network, consists of 220 PHC centers; around 67% of those belong to civil and non-governmental organizations including political parties and faith-based organizations, 20 % to municipalities and 13% are totally governmental but managed as autonomous facilities (MOPH). Those centres deliver standardized medical services as part of a comprehensive package of PHC services at minimal cost charged out of beneficiaries' pockets. In exchange, the Ministry supports these centres with technical assistance, training of staff, supply of essential drugs, vaccines and sometimes basic medical technology. Since the 90s, the Ministry is committed to secure the essential chronic drugs through the Program of Chronic Medicines, operated by the Young Men's Christian Association (YMCA), Lebanon (Ammar, 2003).

Many of these centres host grants and donations from charity and international sources, destined for the communities they serve.

Although the PHC services are yet amenable to payment, the PHC network has channelled many PHC services developed by the MOPH including routine immunization of children,

general and consultative medical care, mother and child health services, health education activities and campaigns as well as provision of essential and chronic drugs in addition to the initiative on cardiovascular risk (CV) case detection and management entitled the Non-Communicable Diseases (NCD) initiative. The latter is the subject of the present implementation research.

## 1.2. Description of the CV risk case detection and management Initiative

The CV risk case detection and management Initiative, was designed by the MOPH and the World Health Organization (WHO) - Beirut Office following the request of the MOPH Director General to implement a systematic screening of cardio-metabolic diseases in order to detect patients at risk of cardiovascular diseases (CVD) and undertake their prompt management and consequently prevent or at least delay the occurrence of cardiovascular events. The service was inspired and based on the protocol developed by the WHO and described in the “Package of Essential Non-communicable Disease” (WHO 2010)”, and it was tailored to the needs of the program and used for screening and diagnostic purposes (MOPH, 2013). The initiative was piloted for three months among 6000 beneficiaries in 25 PHC centres, after which the implementation of the initiative was improved and extended to the remaining centres within the PHC Network.

Non-physician health workers and general/family doctors employed in PHC network were trained to deliver a three-step protocol for screening asymptomatic individuals and provision of risk-lowering care to those detected with metabolic impairment, behavioural risk factors and/or for CV risk reduction. The algorithm reflecting the service protocol is displayed in annex 1.

- The first step – *the screening step*- is supervised by non-physician health workers namely nurses and it consists of approaching every person aged 40 years or above attending the PHC centre for any reason – even for dentistry and laboratory services or those accompanying other persons- and propose to them to undergo the screening. This step consists of assessing either by self-report or direct measurement eight CV risk factors: impaired blood sugar metabolism, elevated blood pressure, smoking, obesity, central obesity, physical inactivity, harmful use of alcohol and genetic predisposition for CVD (through assessing family history of CVD).

At the outcome of the screening step, the screening data are compiled to assign the screened individuals by 5 mutually exclusive risk groups according to table 1. Those categorised in the null group are advised to repeat the procedure in two- year time, those categorized in the group 4 are referred to specialists. Those categorized in the

groups 1, 2, 3 are taken in charge in the PHC centre. Those in Group 1 are referred to risk factors modification and delivered personalized health education by non-health care professionals. Those in Groups 2 and 3 are referred to the diagnostic step under the supervision of a family doctor, or a general practitioner (GP) or an internal medicine specialist as per availability in the PHC centre.

**Table1: Risk groups and outcomes**

Risk Definition	History of CV event	DM	AHT	TCVR $\geq$ 10%	RBS+	BP +	Elevated WC/ $\uparrow$ Wt	History of DL	FH	Smoker	Obese
0	No	No	No	No	No	No	No	No	No	No	No
1	No	No	No	No	No	No	No	No	At least any of three		
2	No	No or controlled		No	No	No	At least any of two				
3	No	No or controlled		At least any of three							
4	Yes	Any Uncontrolled									

Legend: DM= previously diagnosed with Diabetes Mellitus, AHT= previously diagnosed with Arterial Hypertension; TCVR= Total cardiovascular risk using an algorithm developed jointly by the WHO and the International Hypertension Society (IHS) ; RBS+= Screened positive for Random Blood Sugar; BP+= Screened positive for blood pressure; WC= Waist circumference ; DL= Dyslipidaemia; FH= family history of CVD; Wt= weight.

- For the second step- *the diagnostic step*- doctors consulting patients for the diagnostic step are requested to undertake the verification of screening results when applicable, prescribe lipid profile and repeat blood sugar to all, in addition to Hba1c for those with abnormal blood sugar level and re-calculate the CV risk based on more precise anamnesis and investigation results. At the outcome of the diagnostic step, patients are either referred to the management step or are given personalized health education by non-doctor health professionals and called for frequent follow-up in the health centre.
- For the third step- *the management step*- the doctors prescribe their therapeutic strategy including pharmacological and non-pharmacological treatment of patients detected with metabolic diseases following sound clinical guidelines tailored to the needs of non-specialist doctors and based on therapeutic goals according to the CV risk scores of patients.

All the steps are recorded on an electronic application developed as part of the PHC Health information system (PHC-HIS), connected to the PHC department of the Ministry. In the pilot phase, when a patient was referred to the diagnostic step, the nurses filled referral sheets prepared by MOPH to indicate the screening results and the reasons for referral. The doctors consulting patients for the diagnostic step were asked to fill on the same referral sheet the results of their consultation and diagnostic procedures prescribed, with their preliminary and final diagnosis, and their therapeutic choices. Nurses, in addition, are asked

to contact by phone all those referred and those who did not show up at the centre within three months.

## 2. Implementation Challenges

The screening data of the pilot intervention revealed that 12% of those previously asymptomatic for diabetes mellitus showed impaired screening results for RBS (13.7% of men and 11% of women; p-value <0.01), and around one in four from those who were unaware of hypertension were classified at increased risk of being hypertensive (31.5% of the men and 22.1% of women, p-value <0.01). Moreover, two third of the detected individuals with metabolic impairments didn't know about their status before the screening, which validates the importance of this service at the PHC level in Lebanon (MOPH, 2013). However, not all of those eligible received the needed medical attention.

As drawn from the process evaluation of the pilot study, and from observations of the implementers during the three years of the NCD service implementation, it can be generally stated that the service is implemented, and that the centers are fulfilling their mandate. However, this fulfillment is often incomplete and the implementation of the service suffers from shortfalls causing the worthiness of the CVD screening program to be compromised. A quick snapshot of those shortfalls is presented below:

- In the design of the project, the CVD screening should be proposed to all those 40 and above attending any service in the center. In practice, nurses in charge of the recruitment do it rather randomly, whenever they have time or when they feel that their monthly report lacked cases of CVD screening.
- Referral to a GP or a family doctor or internal medicine specialist rather than to a cardiologist or endocrinologist, is one of the main pillars of this initiative. The idea behind this directive is to avoid the use of the widespread practice of referring patients to expensive diagnostic procedures without sound indications. By restraining the referral to specialists, the designers of the intervention tried to limit unnecessary referrals. They also assumed that GPs and family doctors – generally appointed on daily basis in a health center, will have more time to devote to personalized health education with patients at risk than specialists having a one-hour weekly visit. Unfortunately, referral to GPs was one of the most sidestepped directives and the majority of referred patients were directed to specialists.
- This initiative is designed to allow the health care workers to report on the cases screened, diagnosed and managed on an IT application that extract monthly reports to the PHC department through intranet. However, some use other applications as per of their organizations' directives, and some still rely on papers and write their



monthly reports by hand. As a result, a good percentage of the delivered data is missing or not very accurate.

- Referred patients who did not show up should be called over the phone by the nurses in charge. This component of the initiative was not well implemented, and nurses omitted to call the non-showing up patients.
- The outreach part of the service was not conducted in many centers although this component of the pilot phase had the potential to grow into a community wide, national systematic screening of all those living in Lebanon for diabetes mellitus, hypertension and preliminary cardiovascular risk.
- The patients detected for metabolic impairment or cardiovascular risk, were not well taken in charge of either because of lack of follow up by themselves or by the health staff.
  - In the pilot phase, only one out of four patients eligible were referred to the diagnostic step in due form with a filled referral sheet (541 over 2000). The Ministry lost therefore any mean to follow up on the others.
  - From those benefitting from documented referral only 18% completed all the three steps and they were started on risk-lowering therapy. The high attrition of patients found to have cardiovascular risk is a serious threat to the worthiness of the initiative. Table 2 below from the pilot implementation illustrates this statement.
- Moreover, most of the referred patients who reached the second step with a doctor were not given the standardized management.

**Table2: Patient’s Compliance from 541 available follow-up reports (from the Pilot Study Report)**

Step	N	%
<b>1<sup>st</sup> medical visit</b> (total with available data on medical visit)	541	100
Ignored referral	134	24.8
Came to do some analysis but refused consult a doctor in the center		
Attended to medical consultation inside the center	280	51.7
Sought for healthcare outside the center	127	23.5
<b>Laboratory investigations</b> (total having been prescribed tests)	264	100
Performed the lab tests in facility	149	58.9
Performed lab tests outside the center	11	4.3
Showed up for 1 <sup>st</sup> visit but not for laboratory testing	104	41.1
<b>2<sup>nd</sup> medical consultation</b> (total having undergone testing in facility)	149	100
Attended to the diagnostic 2 <sup>nd</sup> medical visit	106	71.1
Showed up for laboratory testing but not for 2 <sup>nd</sup> medical visit	43	28.9
Total sought healthcare outside the center	127	100
Performed 2 <sup>nd</sup> medical visit in the center	10	7.8
<b>Cause of attrition</b> (total not showing up with available data on reasons)	94	100.0
Financial issues	21	22.3

“fear” of the consequences of additional testing	38	40.4
Other reasons (lives far, got sick meanwhile)	35	37.2
<b>Cause of addressing healthcare outside</b> (total having had private consultation)	98	100.0
Has already a private doctor that follows on him/her	86	87.8
Lacks trust in center for dealing with “serious” health issues	7	7.1
Other reasons (live far, had other plans, etc...)	5	5.8

## 2.1. Rationale of the Implementation Research

The challenges listed above, suggest the presence of shortfalls in governance of the PHC, whereby the MOPH was not able to manage, monitor and correct thoroughly the implementation process. To explore those procedures while understanding the barriers for proper implementation, the MOPH Director General requested to conduct an independent implementation research, the aim of which is to inform the MOPH about solutions meant to improve the implementation of this and similar other programs developed by the MOPH and implemented at the PHC level.

The results of this research study are anticipated to answer the following question: What are the contextual factors that will potentially hinder the optimal implementation of the cardiovascular disease initiative in the PHC Network? And how to prevent them from happening?

## 3. Study design and methods

### 3.1. Study Design

This study used dual method, combining quantitative examination of 296 filled referral sheets from the pilot phase, and a qualitative component including in-depth semi-structured interviews with 20 key informants, and two focus group discussions.

The qualitative component used a purposive sampling for the selection of the participants to be interviewed. It involved the selection of two groups of key informants: Direct implementers including the staff of the PHC centers hosting the program, and regulators/monitors – those are MOPH leaders involved in the control and monitoring of the CVD initiative as well as PHC coordinators who are employed by the MOPH and mandated to monitor and support the healthcare facilities in implementing Ministerial programs.

Regarding the first group of key informants, five PHC centers in Beirut area that provide this service on a regular basis were selected to participate in this study, with interviews conducted with staff (nurses, doctors and centers’ directors). To understand the acceptability and adoption of the service, a semi- structured interview was administered by the research

assistant exploring the perception of participants about the principles of the initiative, the challenges and obstacles faced and the solutions proposed for improvement.

Out of the 15 interviewees, five who expressed pertinent ideas were invited to a focus group discussion in the goal of supporting the findings of the individual interviews and reach a consensus about the main systemic dynamics that are likely to hinder optimal implementation.

Another set of interviews were conducted with five key informants from the MOPH: Dr. Walid Ammar, director general and Dr. Randa Hamadeh, director of PHC department, who both initiated this study, were interviewed to discern their objectives and opinions about the governance of the PHC in Lebanon. In addition, Dr. Alissar Rady, WHO national program officer, Mr. Ali Roumani, Information Technology (IT) and data manager and Mr. Imad El Haddad, project field coordinator in MOPH were invited to voice their opinion about the governing dynamics of this initiative, the obstacles and challenges encountered and the solutions suggested for improvement.

Another focus group was conducted with the PHC coordinators, who are employed by the MOPH to support and monitor the PHC centers in all the regions in Lebanon. This focus group aimed to collect information about the experience of the PHC coordinators in daily work with the centers implementing this program, and to gather their insight of the factors enhancing and hindering the right implementation of this initiative. The focus group also discussed the problems faced by the governing body through the MOPH coordinators and the primary health care department staff.

The data collection for the qualitative material took place from November 2015 to February 2016. The interviews and focus groups with the health providers and MOPH leaders were transcribed in English after the written approval of the interviewees and kept in a special file accessible to the study team. The records used for the quantitative analysis were also kept with the research team.

In addition to the interviews and focus groups, a review of internal documents of the Ministry and the YMCA, which are managing the supply of chronic medications, was conducted. These documents include for example policy documents, Memorandum of Understanding (MOUs) with centers and available protocols and guidelines used as a basis for the interviews and the analysis.

### 3.2. Data analysis

#### ***Quantitative Analysis***

MOPH provided the research team with data compiled from 296 referral sheets of patients who have completed all the steps related to the CVD initiative protocol (screening-diagnostic and management steps) from the PHC centers during the pilot phase of the program. These referral sheets are filled by nurses and GPs and consist of information gathered regarding the preliminary health information, diagnosis, treatment and follow up. The data gathered is analyzed using Excel for:

- Completeness of the information recorded by the nurses.
- Completeness of the information recorded by the doctor.
- Compliance of prescriptions of investigations, non-pharmacological treatment and pharmacological treatment by the doctors.

The referral sheets were used to quantify the compliance of health workers by the protocol. The referral sheets from the centers were gathered after the closure of the pilot study. The quantitative analysis included frequencies of completeness and adequacy of several important components of the protocol.

### ***Qualitative Analysis***

The interviews and focus groups' transcripts were coded and analyzed to identify patterns by generating themes and categories. The qualitative analysis was based on content analysis, which was used to group and code the patterns of gaps mentioned by health providers and Ministerial officials (Hsiu-Fang Hsieh, 2005).

## **4. Results and Interpretation**

### **4.1. Quantitative Results**

In the CVD initiative pilot study, 541 referral sheets were gathered from the PHC centers and analyzed to determine patients' compliance by the protocol concerning referral requirements. From those, only 296 patients attended the first medical visit, 14 of them did not attend the doctor's consultation but did some laboratory examinations prescribed by nurses. However, only 135 had their referral sheets signed by a doctor while another 90 had the outcome of the medical visit signed by nurses only; thus, they were not included in the analysis that explored the abundance of doctors by the protocol.

In the absence of clinical audit, and of process control from the part of the Ministry, the only available means for verification were the referral sheets. The completeness of information written on those sheets was used as a proxy of the delivered actions. Researchers assumed that what was written in these sheets reflect the actual services that were provided. To assess the compliance of nurses by the referral protocols, 296 referral sheets filled by

nurses were examined for completeness of several key indicators on the sheets. More precisely those referral sheets were examined for the degree of completeness of the following items:

- The reason of referral to the diagnostic step is indicated in the corresponding section.
- The results of the screening measurements to guide doctors (screening random blood sugar, screening blood pressure, smoking status) are documented.
- The measure of waist circumference.
- Preliminary cardiovascular risk score as assessed during the screening step.
- Referral to the GP or family doctor in the center when indicated.
- Contacted referred patients who did not show up within three months.

Similarly, the 135 referral sheets signed by a doctor were used to assess the compliance of the doctors who have consulted the patients during the diagnostic step on their fulfillment of the following clinical actions:

- Prescribing HB1AC for all patients with elevated and border line random blood sugar during the screening step.
- Checking the blood pressure at least twice for all patients with elevated blood pressure during the screening step.
- Prescribing lipid profile test for all patients referred.
- Indicating their diagnosis in terms of CV risk factors for all patients referred (even if the patient is free from any metabolic impairment at the end of the diagnostic step). For example the doctor has to indicate whether the patient is a smoker, or obese in the diagnosis field.
- Calculating for each patient the total cardiovascular risk score and metabolic syndrome score, to be used as a basis for therapeutic choices.
- Including non-pharmacological treatment in the corresponding part of the sheet for all patients eligible to management as a result of the diagnostic step.

The total sheets studied indicate the number of sheets analyzed for each of the components of the referral protocol. The number under compliance indicates the number of sheets having fulfilled the mentioned requirement.

**Table 3: Descriptive analysis of 296 referral sheets**

<b><i>GUIDELINES REQUIREMENTS</i></b>	<b><i>Total of Sheets Studied</i></b>	<b><i>Compliance</i></b>	
		<b><i>Number</i></b>	<b><i>Percent</i></b>
Reason for referral indicated	296	231	78%
Random blood sugar results mentioned	296	157	53%
Hypertension results mentioned	296	167	56%
WC measure mentioned	296	138	47%
Smoking status mentioned	296	160	54%
Total CVR mentioned	296	135	45%
Referred to a GP/family doctor/internal medicine	143	50	35%
Contact no-show patients	164	21	13%
Prescription of HbA1c to those with impaired RBS	39	20	51%
BP measurement (2 times) for those with impaired hypertension	77	15	19%
WC measured by GP	143	6	2%
Lipid profile completed	143	84	59%
CVR /metabolic syndrome scores calculated by doctors	143	0	0%
Mentioned risk factors in diagnosis	143	0	0%
Final diagnosis mentioned	143	37	26%
Non-pharmacological treatment mentioned	143	64	45%

From the examination of the referral sheets available from the pilot phase, it is clear that the abundance of health workers by the protocol is poor, with nurses being more disciplined than doctors. Nurses directed their patients to specialists in case of impaired screening results, but they omitted to contact the patients to ask about the reason of their attrition. They only recorded in half of the cases the screening results to guide the doctor in his/her consultation.

Doctors had worse results regarding their compliance by the protocol. Very few did measure the waist circumference, and none indicated the CV risk score or the metabolic syndrome scores. Both being the guides for therapeutic strategy, this omission can indicate that the treatment protocols were not conform to the guidelines adopted by the MOPH. Diagnoses were mentioned in about one third of the cases, and none of the doctors followed the directives of mentioning behavioural risk factors in the diagnosis field. The fact that doctors followed-up on patients with elevated blood pressure during screening in one over five patients, and prescribed HbA1C in half of the patients with elevated random blood sugar during screening is rather concerning, since verifying screening results should be part of a basic medical consultation.

#### 4.2. Qualitative Results

The study team went through the transcripts several times and categorized the narratives into 3 overarching themes 1- Features of the Partnership 2- Technical preparedness of the health workers 3- Health seeking behavior and health provision culture. Each theme has

sub- themes that cover more details and explain the gaps and problems observed. The themes are presented below.

#### **4.2.1. Partnership**

The unique collaboration between the MOPH and the PHC centers has succeeded in establishing PHC services in a country traditionally centered on specialists and hospitals and lacking public health service delivery. However, it had some obstacles that may interfere with the appropriateness of the services implemented.

Although in theory the centers have the option to skip partnership with the MOPH and their integration in the PHC Network, they are generally keen to join it for several reasons including financial, professional, and political. A center that is a member of the Network is perceived by the population as conform to the Ministerial guidelines, well supplied with medications, regularly monitored and controlled by the highest health authority in the country, and therefore it is better attended.

##### **Double affiliation**

The great majority of the centers in the PHC network have somehow a dual affiliation - to their respective organizations (political parties, organizations of the civil society, or faith-based institutions) and to the MOPH, under the umbrella of which they implement their PHC services and conduct the public health programs developed by the Ministry.

All the doctors working in the PHC Network, even those who work in the Ministry's owned centers are appointed on a contractual basis and they are paid by hour or, more often, on consultation basis. The nurses are in the majority employed by the organizations to which the facilities are affiliated. This double affiliation can result in limited authority of the MOPH in regulating, controlling and monitoring the work in the PHC centers.

##### **Laws and regulations**

The MOPH did not change the regulations related to dispensing YMCA chronic medications in PHC centers to accommodate the CVD service. These regulations entail that only specialists including family doctors can prescribe chronic medications regulated and delivered by YMCA, whereas GPs are not allowed. Therefore, if the patient is in need of chronic medications, he/she should have another consultation with the specialist. This defeats the purpose of the CVD initiative, which focuses on empowering GPs to manage patients with chronic diseases. In addition, some centers that do not employ a family doctor (this is the situation of the majority of PHC centers of the Network) found it to be time

consuming and unnecessary for patients to see the GP first and then be referred to a specialist, so they skipped the GP diagnostic step.

Moreover, the ministry's regulations cannot totally regulate the work of doctors because the doctors can quit if they felt that they are tightly restricted in their work; hence the center would have a hard time finding another replacement. Doctors themselves did not seem convinced by the leading role of the MOPH concerning technical aspects of their work. One of the doctors mentioned: "the ministry is always requesting us to attend trainings on topics we know and practice already and overload us with extra work when we are not well paid".

### **Divergent vision of PHC**

To explore the strength of the partnership between the MOPH and the centers, the answers voiced by the two groups of interviewees concerning priorities to be addressed for optimal implementation of CVD initiative were compared as an indicator of the vision of the two parties regarding the public health relevance of this and similar initiatives.

According to the interviewed MOPH staff, priorities were mainly stated in terms of maximizing coverage, improving quality of care, implementing standardized detection and management and establishing sound and cost-effective referral system. The PHC staff, on the contrary, stated that their priorities consist of getting more support from the Ministry to meet the demand of their patients. While the Ministry is multiplying efforts to implement universally accessible preventive measures to improve community health, the centers still focus on responding to their clientele demands, that are still centered on secondary and tertiary healthcare, in order to improve their utilization and their income.

For example, one of the Ministry's priorities is to reduce the number of interventional cardiovascular procedures (by detecting cases at risk before such procedures are due); whereas the PHC centers' directors often stated that their priority is responding to their patients' needs in more expensive interventional procedures as a way to retain them. The centers' directors emphasized their need to receive more support from the Ministry to be able to employ specialists, buy medical technology, facilitate the access of their patients to subsidized interventional investigations, and improved supply of chronic medications towards the demanded drugs, that are more expensive- even if there are cheaper equivalent ones in the MOPH-YMCA essential drug list.

This divergence in interests and vision between the developer of the initiative and its implementers threatens the very essence of this and similar public health actions, which are developed by the Ministry to reach communities as a universal and cost-effective health



program while they are implemented as income-generating services tailored to the demands of a clientele used to appreciate curative care.

### **Financial arrangements**

The MOPH does not allocate a budget to fully support the operation of the centers, even to the 13% of them belonging to the government (MOPH and Ministry of Social Affairs). To ensure their continuity, all the PHC centers of the Network charge fees for medical consultations and other medical services from the patients. This initiative was designed in a way that only the first screening step is provided without payment at delivery point to the patient, whereas the consecutive steps are amenable to payment at the usual fees set by the center. The MOPH provided the PHC centers at the beginning of the initiative some materials for the screening step – the meters, and the strips to test for RBS-, but do not continue on providing those materials once fully used. Therefore the centers have to purchase their own materials as well. As a result, this initiative is in a situation where benefiting from a preventive service depends on financing it from out of beneficiaries' pocket, - which might threaten ensuring large coverage of the service. The results from the pilot study showed well this obstacle, whereby only 10% of patients referred to consecutive steps, at best estimates, did follow up. This is a serious situation whereby 9 in 10 potentially at risk patients will not get the chance to benefit from risk lowering management.

From the narratives, it was clear that the centers cannot implement fully a free health service. The centers that can afford this are supported usually by a third party payer such as international NGOs. One of center's directors argued: *"When an NGO wants to implement a new service in the center, it supports the staff and center with the needed financial resources and materials; however, the ministry doesn't do the same."*

It seems that not all financial constraints that might face the centers in implementing a new program are always fully taken into consideration before the implementation. For example, the outreach component is one of the most important innovations in this initiative, whereby it allows the coverage of the people in the community who do not usually attend the health center, and introduces the health workers to the health actions needed in their catchment area. While some centers did not want to hear about outreach for cultural or practical reasons, others were expressing their motivation towards doing outreach activities and screening more people, but many of centers cannot afford doing the outreach because of the lack of personnel and incentives. One of centers' director said: *"We are willing to do outreach activities but we can't afford to send the nurse when she is needed in the center with the doctors, and the center can't afford to hire another nurse."* It is worthy to note that during the pilot phase the health workers were given incentives to perform the outreach

activities whereby the service was provided to 2500 beneficiaries in outreach setting. This incentive is not part of the full implementation of the program, due to lack of enough resources.

In one word, the implementation of a preventive service, using the financial rules applied for curative and secondary care services, might jeopardize the utility of the service.

### **Internal administration of health centers**

The centers' administration who are interested in remaining on good terms with the ministry, commit to all new projects in order to receive the support that goes with them without necessarily estimating the capacity of the staff to handle the new load. Regarding the CVD service, most of the interviewed centers lacked enough personnel to carry out this service properly; however, this did not prevent them from participating in the CVD initiative and requesting "overwhelmed" health personnel to implement it. A cardiologist said: "*They- he means the center's management - subscribe to any program to receive the incentives the program brings; subsequently, they made me see 40 patients in one hour. Can you name this primary health care?*"

The director of a center explained how they are overwhelmed with projects and programs from the ministry and other international NGOs. They cannot afford to refuse their requests because they will lose the support, so they manage to please everybody, sometimes on the expenses of the quality of the care delivered. The director also questioned if the MOPH and international NGOs discuss how, what and when each program can be implemented and if the center can handle an additional workload. Some International NGOs supporting health centers, in opposition, understood this problem and addressed it when they proposed new health interventions in the centers. One of the directors said: "*We have [named an international NGO] wanting to implement the same CVD program for the refugees and they also require from the nurse to fill a specific report, and we can't refuse because they pay incentives unlike the ministry*".

The overload in the center impacted negatively the health education component of this initiative, which is mandated to non-physician health workers and general practitioners. From the narratives of health workers, it is obvious that nobody in the center has the time and the motivation to deliver regularly personalized and individualized health education as requested in the protocol.

Most nurses claim that they don't have time to focus on CVD service as they have too many responsibilities in the centers: They assist doctors, prepare the medical files, do procedures, deliver medications, conduct routine immunizations, register the patients, prepare the

monthly reports, and sometimes they even have to arrange the premises after tough working days. Nurses consider the service as additional work that is not even remunerated. One nurse said: *“Sometimes we feel that no one estimated how much work it takes before introducing the service. The CVD screening step takes time and energy”*.

In addition nurses complained about the non-attendance of doctors in fulfilling what they are supposed to, leaving to nurses additional work such as filling in referral sheets. One nurse said: *“With the presence of too many programs from MOPH, the doctors rely heavily on nurses; and they themselves focus only on seeing more patients- therefore making more money”* - since they are often paid on consultation basis. In turn, doctors who are minimally paid, generally work in the health centers only at the beginning of their careers to gain experience and be known in the community before leaving work in these health centers, sometimes taking their patients with them.

### **Monitoring and control**

Once the center makes a contract with the MOPH, it commits to deliver the package of PHC services, including the CVD screening, and to present a monthly report of all the activities and related data to the MOPH. The network centers do not have the option of skipping the implementation of any program or initiative requested by the MOPH, and this latter does not discuss routinely with the directors the individual conditions of each center before the implementation.

Continuous follow-up by the ministry is secured through regular visits to centers by a team of 8 PHC field coordinators distributed in the different Lebanese regions. Those PHC coordinators are all well knowledgeable, well trained, almost all of them hold master degrees in public health or health management, and they fulfill their responsibilities with commitment. However, the monitoring activity is limited to a monthly – at best- visit, if not less, by the PHC coordinator to each center since a PHC coordinator is responsible in average of 30 centers. During this visit, the coordinators monitor all the programs implemented by the center, including the CVD program. They verify the reporting sheets, deliver technical support when needed and prepare centers for the accreditation. One of the PHC coordinators participating in the FGD stated: *“We cannot handle visiting all the centers each month and focus only on NCD because there are other programs and reporting forms that need to be filled and each time we need to give quick refreshers to the staff about what needs to be done.”*

Even in its ideal situation, the PHC monitoring system lacks tools for monitoring quality of care and clinical activities. The PHC coordinators are not allowed to verify the medical files, cannot interfere with the staffing and administration, and they cannot impose changes in the way the centers are ruled and the work is distributed. The reporting is done with the nurse in

charge who takes most of the blame when some information are missing instead of having someone at a higher level involved in reporting and sharing the blame including the doctors and administrators. The adequate implementation of the services depends on the quality of the health center and the motivation of its staff. Dr. Randa Hamadeh said: *"We cannot force the centers to do their work and assume that they will. We need to have constant follow up and monitoring to encourage the centers to implement our services"*.

The checklist used by the field coordinators combines several programs focusing mostly on the process like number of cases screened for CVD. It does not monitor the quality of care and cannot be used for clinical auditing. One of the field coordinator said: *"After a certain period, the nurses in charge of reporting to the field coordinator got used to the checklist and would prepare everything to fit the elements mentioned in the checklist. This checklist alone is not enough to reflect the quality of work and the worthiness of the program"*.

### *The PHC Health Information System*

The Ministry established a health information system (HIS) to record all the medical and health activities in the PHC centers that are members of the network in order to establish continuous control of the PHC activities and trace the dynamics of the PHC services. However, not all centers use the HIS (some opted to use their organization electronic systems), some use IT officers to enter health data, and some submit incomplete and sometimes aberrant information. As a result, according to the IT manager of the PHC department, more than 50% of the monthly reports have inadequate data regarding the CVD screening, and cannot be used for compilation and future planning. The other 50% complete and adequate reports are not compiled within the ministry to inform the program managers about the realistic implementation of the program. In addition, the HIS monitoring system lacks tools on monitoring the technical aspects of service implementation. For example, the coverage cannot be assessed as Mr. Ali Roumani said: *"There is no indicator that shows the real coverage of the service. If a center delivered the CVD service to 5 patients/month out of 10 eligible patients compared to another center that delivered the CVD service to 15 but out of 50 eligible patients, which center is more efficient"?*

The primary health care department is in charge of the CVD service and has allocated part of its resources to the program. Centrally, few personnel monitor the CVD service along with the 8 field coordinators distributed in the regions. Mr. Imad Haddad explained *"There is a need to have a team dedicated for NCD, which focuses on training, monitoring and follow-up for the continuity of the program"*. Similarly, the field coordinators suggested the same idea in the focus group claiming that it would be more efficient to hire individuals only responsible for NCD as it includes several new practices and ideas.

#### 4.2.2. Technical preparedness and capacity building

##### Training

The CVD initiative included several novel practices for the PHC centers, such as the involvement of nurses in clinical decisions within the screening step, personalized and individualized health education, prioritization of general practice over specialist care, outreach activities, focus on non-pharmacological treatment, and the use of therapeutic goals according to the total cardiovascular risk for management. Probably, more time was needed by health workers in these centers to assimilate those innovations; especially that some of them needed a radical change in understanding and delivering PHC. However, all those innovations were implemented at the same time. When a center is selected as an implementer, the nurse and the doctor who will be in charge of CVD are invited to attend the training session that discusses the rationale of the initiative, the protocol, and the processes of monitoring and follow-up.

In addition, those trained are not always those meant to implement the service. The data from the pilot study showed that around 50% of health workers who actually implemented the service, were not among the trainees when training sessions were delivered. It often happens that the center assigns a person to the training, and asks another person to deliver the work. Moreover, the turnover of the staff in the health centers is such that often the trained person leaves the work, and there is limited capacity to secure new training for the newly appointed staff. The on-the-job training was almost inexistent, because of the load of work on PHC coordinators, and consolidation and follow-up are not systematically offered. Consequently it is not rare to encounter implementers who are poorly knowledgeable of the principles and the protocols of this service. After three years of implementation, the interviewers encountered nurses who mentioned that this service is implemented just to collect data for the Ministry. The general impression about the preparedness of the health staff implementing this service was that the principles regarding the need for the CVD service were not well assimilated by the health workers.

Doctors tend to be skeptical when it comes to implement the programs and services requested by the ministry. One doctor argued: *“The trainings should be only for nurses because the doctor knows how to calculate the CVR and how to manage the risk factors and he doesn't need to be trained about it.”* Some observations during training sessions show the low interest of doctors to attend such sessions; for example, some of the doctors spent their time answering their phones, and some others left before the end of the training. Both Dr. Randa and Mr. Imad explained the difficulty to motivate doctors to attend the trainings.

### 4.2.3 Health seeking behavior and health provision culture

The CVD service is based on a protocol targeting individuals who perceive their health to be satisfactory, by using a combination of three steps across which a team of medical staff – including non-physician health workers, laboratory technicians dietician and doctors (general and specialists), provide healthcare following a guided algorithm. In order to achieve an optimal service, the following is needed: the team of health workers should work together to deliver a standardized service, and the patients should abide by medical advice and follow-up. Unfortunately this is by far not always the case.

#### Health seeking behaviors

The population's attitudes and beliefs were observed from the interviewees' perspective. No interviews were conducted with patients during the implementation study. Nurses, directors, doctors and field coordinators working with and observing patients have an idea of the way people think. Most of the patients come to the centers when they feel ill and in pain mainly to take medications prescribed by specialists and leave.

Nurses explain that patients who do not feel sick or worried usually do not care about being seen by doctors and/or performing tests and measurements. Some nurses face a challenge to convince visitors to take the screening service. One nurse said: *"If the patient is not worried about his health and does not feel ill, he will not be motivated to take a blood test and pay money especially if he is poor. The patients also feel scared to do further check-ups in order to avoid the consequences of finding out that they are ill and need to have medical attention."*

Some nurses stressed the fact that the patients are used to seek the advice of specialists and hospitals, and they do not always agree to see a GP if he/she have a problem categorized as CVD. Nurses also noticed that patients having low risks do not take the effort to do further exams and visit the doctor, and those presenting with only behavioral risk factors do not show motivation to modify them.

The nurse having the first approach with the patient needs to explain the link between risk factors and CVD because even though it might be obvious to some individuals, it is not clear to everyone. Especially in what concerns the notion of accumulation of CV risk factors. People are not aware that accumulating several risk factors would multiply their risk of having a cardiovascular event. For example as one nurse explained, *"even if some of the patients know they have high blood pressure or diabetes or dyslipidemia, they don't understand the importance to screen themselves for other risk factors and to start managing those risk factors to prevent cardiovascular disease"*.

Doctors notice with regard to CVD that patients are afraid of early commitment to drugs and prefer to postpone it till when they have no other option. One of the doctors said: *“Patients who have high blood pressure and are asked to start on medications tend to ask for others solutions in order to avoid taking hypertension medications.”* A nurse said: *“When you explain to some people about the service and the screening, they refuse and some would say: I feel good and strong, there is nothing wrong with me and I don’t need to start taking medications; it is too early.”*

The qualitative study conducted for a Master thesis in Public health at AUB in 2013 corroborated the impressions of health workers. The study is not published yet; however it helps confirming the health behavior of the population. In this study, the common perception that early introduction of chemicals (medications) can bring only harm to the development of disease was clear (Noun, 2013).

The centers of the PHC network attract usually clients from the lower socio-economic status (SES). In this stratum of the population, the reticence to do screening, to start medications, to consult doctors when not sick and to continue follow up visits is exacerbated. In addition, the knowledge about preventive medical screening is low. In the same study mentioned above, it was observed that even if money is not the only reason of non-compliance of patients, it was systematically cited as such. Patients of low SES cannot easily afford doing the blood tests and pay for the doctor’s consultation so if they are not at high risk, they will not continue with the service and they will not find the time to do so, if it wasn’t urgent (Noun, 2013).

### **Health provision culture**

Most of the nurses and specialists as well as center’s directors do not believe in the importance of consulting a GP or a family doctor since the patient will end up at the specialist- so the referral of the patients to a GP will only increase the cost of the service since the patient will pay the GP consultation and the specialist’s consultation. One of the directors said: *“It is not the way we follow in our practice. If a person has high blood pressure or an imbalanced lipid profile, then he/she should be directly seen by a cardiologist, and if a person has high blood glucose, he/she should also be seen by an endocrinologist or a cardiologist. Even in the presence of GPs in some centers, patients are not transferred to the GP because we have a cardiologist.”* This is the reason why the referral to specialists is the norm in the implementation of this program, in addition to the fact that doctors holding only a GP diploma are not allowed to prescribe chronic medications by MOPH-YMCA requirements.

With respect to the CVD service, the non-pharmacological treatment is very crucial in every step either by the nurse, GP or specialist. The nurses were enthusiastic about educating the patients they screen on non-pharmacological modalities to modify risk factors. Some centers also ask their staff to organize awareness sessions every month to gather a group of people from their catchment areas. However, this service is not standardized, and it is not part of the report that the centers submit to the ministry; especially that despite the motivation of nurses, they do not have enough time to devote to personalized health education.

Doctors also don't give time for non-pharmacological treatment, because they mainly focus on pharmacological treatment as they are used to do that. In the training, some doctors protested the directive requiring recording of non-pharmacological treatment in the pool reserved for management on patients' records. The difference between a GP's/family doctors and a cardiologist's approach was observed with respect to their attitude towards the types of treatments given by GPs and family doctors who are more motivated to provide non-pharmacological treatment.

Doctors consider themselves well knowledgeable and well trained and independent from ministerial directives, making it harder on the ministry to involve them in trainings and in practicing specific guidelines and filling reports. This is mostly the attitude observed among doctors especially specialists. A cardiologist stated: *"I know the guidelines that I have been practicing for more than 15 years. I don't need to attend trainings and I don't have the time to fill all these forms required by the ministry because my patients are waiting outside for consultation, which is more important for me."*

### *Guidelines*

The PHC clinical guidelines developed lately by the Ministry are in English and French, noting that the vast majority of PHC doctors do not master those languages. Those guidelines that include an NCD section, do not present fully the clinical material in the same spirit of the service, rather, uses the classical way of addressing each of the diseases vertically, with a mention of total cardiovascular risk approach at the end, while the main particularity of the technical aspect of this initiative is to base all the three steps of the protocol on the total cardiovascular risk score. Additionally, within the Universal health coverage program that is being implemented now, the package of hypertension and the package of diabetes are separated, which is not fully along the rationale of the CVD initiative at the PHC level, although CVR assessment is included in these packages.

Moreover, the doctors interviewed did not seem convinced with the MOPH guidelines. Many did not have at hand these guidelines when asked about them, and others stressed on following their own way of identifying the cardiovascular risk and treating the patients. This



diverse approach impacts negatively the standardized health services as was intended by the Ministry when it initiated this service.

#### 4.3. Discussion

The analysis shows that the gap in implementation is related to different causes along all steps of the process of implementation, which leads to the incomplete achievement of the CVD service. Most of the explored obstacles are related to the role and capacity of MOPH in planning and implementing primary health care services and programmes.

The MOPH vision of PHC services is meant to be universally accessible based on the needs of people, to be standardized and focused on preventive medical service and health education; however, this was confronted with the particular conditions in which those services are delivered in facilities basing their activity on fee for service as they are obliged to generate income to secure their survival.

In those conditions, the regulatory and supervisory roles of MOPH are not optimal. The MOPH is not the employer of the health workers who deliver the PHC services and therefore cannot make them accountable of the coverage, the quality of the services they deliver, and their motivation level with what the Ministry requests. Moreover, the MOPH cannot confine them to regulations that are not rentable to them, and the MOPH has limited authority to use sanctions towards poor achievers. However, those conditions derive from a political will widespread in all social domains of the country, the discussion of which is not the scope of the present research.

Nevertheless, even within those conditions, huge efforts have been paid by the Ministry in regulating and supervising the work in a large number of healthcare facilities to convert them to PHC centres. However the notions of PHC in the medical practice of those centres, still centred on curative care, are still not fully implemented.

The results of this study showed to a certain extent the discrepancy in vision and objectives between the Ministry and the PHC workers. The PHC staff – directors and direct implementers- succeeded in combining the interest of their organizations while fulfilling the requirements of the MOPH, but often without being dedicated fully to the tasks allocated by the Ministry. Consequently, the PHC staff do not feel they have ownership of the programs, while the MOPH lacks authority, resources and tools to perform thorough monitoring.

The implementation research providing the results of which are described in this report was an eye opener for the ministry to improve its support to the PHC centres. For this and future similar important health programs for the community, the MOPH shall improve negotiation with the health centres for the introduction of new programs, and play the role of educator

and motivation generator, and also improve the monitoring tools to include all aspects of the program- quality of services, clinical audit, and improved coverage. This, if coupled with wise and timely introduction of the programs, improved training, infallible and dynamic monitoring process and exploitation of the HIS at its maximum potential, will be sufficient to improve the implementation of the CVD program and raise its public health relevance and worthiness among the population.

## 5. Conclusion

After looking at the results of the implementation research, it is clear that the major issue observed has to do with some aspects of the governance of the PHC services in Lebanon. Acknowledging that the partnership between the ministry and the civil sector had tremendously positive impact, since it enabled the country to deliver PHC services and public health programs, some hiccups that may affect the correctness of their implementation still exist.

The organizations delivering the services should acquire the feeling of ownership of the programs, and be accountable for their implementation. This is not yet the case, and this partnership is yet to be improved to reach a unity of vision and interests.

Other problems were also observed. Those related to technical aspects such as the path of introduction of new programs, the attendance of trainings, the insufficient on-the-job support, the use of data can be easily resolved by better regulation.

Problems, related to laws and regulations need addressing at higher levels, such as enabling the MOPH to perform clinical audits in the private and civil sector, enabling general practitioners to prescribe chronic drugs, increase the authority of the MOPH in regulating and controlling the work of the PHC Network.

The trainings conducted by the PHC department in MOPH were satisfying to most of the health care workers interviewed. However, not all doctors seemed engaged in the trainings because of their unwillingness to participate and their belief that they don't need to be having the trainings. Another problem faced was that some nurses did not get easily familiarized with the health information system from one training only, which affected later on the process of reporting in some centres. However, the training delivered most of the information it intended to do, but it was not reinforced and consolidated by due follow up and continuous support.

Health seeking behaviour of patients and health provision culture of health care workers are another challenge that will need time and efforts to be addressed. The health behavior of the population regarding primary health care can affect their knowledge and willingness to accept and receive the CVD service and mainly their interest to screen for risk factors when they don't feel the symptoms. However, it is the role of the health providers and the MOPH to educate the patients and make them aware of the importance of screening and early detection of diseases. Unfortunately, technically the health workers do not have time to cater to this part, and a number of potential beneficiaries of this service are left apart. One of the solutions would be to advertise nationally for the service to increase the demand.

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## 6. Strategy for Implementation

Knowing that the partnership between the MOPH and PHC network is the only possible way so far to regulate the delivery of primary health care in Lebanon and to implement crucial community health initiatives such as the CVD risk detection and management, the focus on improvement should be on the gaps that have been overlooked regarding the essence of this partnership rather than jeopardizing the whole paradigm of PHC delivery, based on partnerships with the civil society sector.

The MOPH, specifically the PHC department, is the lead authority in regulating, monitoring and supervising the CVD program, while the PHC network is the sole implementer. The MOPH aims to improve the implementation of this program by focusing on enhancing its regulatory and monitoring role, and improving the performance of implementers by raising their knowledge and incentivizing their efforts.

There are very good chances for this strategy to be implemented during the preparation and the implementation of refresher sessions for CVD training, which are expected to take place end of 2016 and during 2017.

### 6.1. Power of MOPH

#### **Modify chronic medications prescription regulations**

Before undertaking any further measure, it is important for the MOPH to make some modifications to the regulations pertaining to chronic medications prescription in order to satisfy the requirements of the CVD program. Adequately trained GPs should be able to prescribe chronic medications as part of the early management of diabetes mellitus, hypertension and dyslipidemia at the PHC centers. It is important also for the MOPH to advocate for the empowerment of GPs/ family doctors and nurses in the centers for better provision of primary health care.

#### **Reinforce ownership of the programs by the PHC workers**

It is important to have a unified vision both by the MOPH and the PHC centers; in this respect, the MOPH will attend to integrate their PHC partners in the planning process and encourage them to voice their concerns and define their roles and responsibilities from the beginning. This early involvement can alleviate the feeling of imposing additional work by MOPH on the centers. The centers that do not have enough human resources can be identified from the beginning, hence measures can be taken in order not to overload the health care workers.

It is also important to have continuous discussions between the MOPH and the PHC centers management; so that every time implementation gaps needing intervention are discerned, the MOPH and PHC centers' directors would work together sound solutions to the problems and improve the outcomes of the implementation.

Other measures will be used by MOPH for future programs, to help centers assimilate and adopt the vision behind those programs such as gradual introduction of new services and discussion with the centers' staff and directors about their capacity to host any new service.

### **Strengthen monitoring and follow-up**

The MOPH needs to improve its regulatory and controlling role in order to guarantee better quality of care delivered. The MOPH will upgrade the current monitoring and follow-up system to have a hold on the quality of care, coverage of the service and the performance of the center as a whole team. For this the Ministry will develop additional indicators, to be integrated in the monitoring check list.

The Ministry will use the PHC-HIS at its full potential, to establish a system of monitoring that is less dependent on the periodic visits of PHC coordinators to the centers. Periodic reporting on any gaps or shortfalls in implementation shall be conveyed immediately to the department head to address them immediately.

The MOPH will negotiate the access to medical files to perform medical audit, and understand the paths of treatments proposed to patients. In addition, the MOPH will mandate to the IT department the regular translation of the data gathered and reported from the centers into sound information to evaluate quality of work and determine gaps in implementation.

In the near future, the MOPH will promote the utilization of electronic medical record with unique patient identification number linked to the hospital system and the PHC centers to be able to trace the patients detected by the program

### **Financial alternative other than Out-Of-Pocket fees for service (MOPH)**

The MOPH is looking for financial alternatives to get rid of the out-of-pocket fees paid against medical consultations and laboratory investigations in the PHC centers. Examples of these alternatives include the re-allocation of a part of the resources that cover tertiary care to subsidize the risk-lowering treatment for eligible patients at the PHC Network. The MOPH is also thinking of allocating funds to the service including supporting centers in employment of human resources and in case of scarce resources, centering the resources on the best achieving center in order to create centers of excellence in NCD. The MOPH has mandated

a cost analysis based on the screening data of the pilot intervention; the results of this study will be used in discussions and negotiations around this theme.

**Improve screening coverage of the CVD service (PHC department, PHC centers)**

The MOPH will work on improving the screening coverage of the CVD service by advertising for the service inside the PHC centers through posters- pamphlets, and by engaging and encouraging the health providers to advertise for the service for all individuals visiting the PHCs and by including an indicator that shows the degree of coverage in each center in order to compare and improve results. The Ministry will study the possibility of launching a national advertisement campaign according to the capacity of centers.

Finally, the MOPH will constantly perform implementation research and review the compilation of the monthly reports for this and other services to identify gaps in implementation, to be solved in consultation with the direct implementers themselves.

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## Part II: Reporting on the iPIER process

### 1. Changes in health policies and programs

The implementation research conducted for the CVD service within the MOPH PHC department helped in identifying major gaps not only related to the CVD initiative but also to other services and programs implemented by MOPH. The analysis conducted showed that governance features of the PHC and conditions of implementation in facilities not owned by the MOPH are the essential causes of imperfections in implementation. The essence of this partnership between the MOPH and the civil sector cannot be changed or reversed; nevertheless, it can be modified and revised in order to improve the delivery of PHC to the population.

The findings identified gaps in the partnership that need to be addressed to improve the CVD program and which can be also used for other programs. The focus of the MOPH will be on establishing ownership of the programs implemented through better negotiations and consultations with implementers at all stages of the program planning, development, implementation and evaluation, improve knowledge of health workers and enhance their motivation through incentives. The MOPH is also working on securing the access of PHC coordinators to the medical data and establishing a system of clinical audit to monitor the quality of services. The MOPH needs to master its role as a supervisor, regulator, and governor of PHC programs.

### 2. Collaboration between the implementers and the researchers

The Director General and PHC department at the MOPH requested to have the implementation research and applied for the grant. They mandated a team of two researchers, who were at different periods involved in the design and implementation of the CVD service, to conduct the study, expressing their willingness to provide the research team with their input and opinions. The head of the PHC department Dr. Randa Hamadeh and the staff of this department provided the research team with their help and participated in the one-on-one interviews and Focus Group Discussion. Mr. Imad El Haddad, central field coordinator, was very helpful and always ready to facilitate the data collection process for the research team.

This collaboration had positive aspects for this research that can positively affect the implementation of a new strategy within the PHC department. It involved the implementers in the project and took into consideration their concerns. It also helped the research team

understand the role of MOPH in providing PHC and to decrease bias by listening to different opinions.

### 3. Support provided by Birzeit ICPH and WHO-EMRO

For the successful implementation research, the research team received support and follow-up from Birzeit ICPH team and WHO-EMRO. Their collaboration consisted of planning and assisting the teams in developing the whole process of the implementation research. Due to their knowledge and experience in conducting research, the Birzeit ICP team had the biggest part in helping our team throughout the whole process. The workshops planned by WHO-EMRO and Birzeit ICP were extremely effective and helpful to guide the planning of the implementation research and developing the implementation strategy. The gathering of a large number of similar studies from different countries was an added value to the research team by exposing them to different challenges in implementing health programs. Birzeit ICP team was also involved in every step of the research by organizing skype calls to discuss the work and to give advice on how to proceed.

### 4. Challenges experienced

The limited time of some of the interviewees affected the duration of the interviews and the possibility to gather more details.

Another challenge came with deciding on the themes after the coding process of the transcripts. We had to go over the themes within the team and then with the Birzeit team several times before agreeing on them.

Similarly, deciding on the implementation strategy was also a challenge for the team because we were trying to take into consideration what the MOPH can actually achieve.



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## Annex 1: Screening Algorithm

