



---

**REPUBLIC OF LEBANON  
MINISTRY OF PUBLIC HEALTH**

**NON COMMUNICABLE DISEASES  
PREVENTION AND CONTROL PLAN (NCD-PCP)  
LEBANON 2016-2020**

**Beirut- Lebanon  
January 2016**



**NON COMMUNICABLE DISEASES PREVENTION AND CONTROL PLAN  
(NCD-PCP)- LEBANON (2016-2020)**

**TABLE OF CONTENTS**

<b>List of Abbreviations .....</b>	<b>4</b>
<b>A. Preamble</b>	
A1. Rationale .....	5
A2. Vision .....	5
<b>B. Epidemiology of non-communicable diseases and their behavioral risk factors in Lebanon</b>	
B1. Morbidity and mortality from NCDs in Lebanon .....	6
B2. Behavioral NCD risk factors .....	7
<b>C. Response to the NCD rising epidemic in Lebanon</b>	
C1. Prior to the NCD-PCP.....	8
C2. Elements of NCD-PCP already in place .....	9
C3. Issues in the implementation of an NCD-PCP.....	11
C4. Steps in adapting the WHO Global NCD Action Plan .....	12
<b>D. Lebanese Strategic Objectives (LSO) (2016-2020)</b>	
D1. General structure .....	14
D2. LSO1 .....	14
D3. LSO2 .....	15
D4. LSO3 .....	16
D5. LSO4 .....	18
D6. LSO5 .....	19
<b>E. Concluding issues</b>	
E1. Development of national capacities for the execution of the NCD-PCP .....	21
E2. Setting national targets and indicators .....	22
E3. Prioritized interventions: the way ahead .....	22

<b>References</b> .....	24
<b>Appendices</b>	
1. Lebanese Strategic Objectives (LSO) for the national NCD Prevention and Control Plan (NCD-PCP) (2016-2020), with corresponding interventions and expected outcomes .....	25
2. List of priority interventions under the Lebanese NCD-PCP (2014-2020) .....	30
3. Report on the National Consultation on the Prevention and Control of Non-Communicable Diseases in Lebanon (Beirut, 23 March 2012) .....	32
<b>Acknowledgments</b> .....	34

## LIST OF ABBREVIATIONS

CNRS	Centre National de Recherche Scientifique (National Center for Scientific Research)
CO	Country Office
CVD	Cardiovascular Diseases
DG	Director-General
DM1/2	Diabetes Mellitus type 1/type 2
ESU	Epidemiological Surveillance Unit
EMRO	East Mediterranean Regional Office
LSO	Lebanese Strategic Objectives
MoEd	Ministry of Education
MOI	Ministry of Interior
MOPH	Ministry of Public Health
MOPH-DG	Ministry of Public Health-Director General
NCDs	Non Communicable Diseases
NCD-PCP	NCD Prevention and Control Plan
NSSF	National Social Security Fund
PHC	Primary Health Care
PH	Public Health
SO	Strategic Objectives

## **A. PREAMBLE**

### A1. Rationale

A National Non Communicable Disease Prevention and Control Plan (NCD-PCP) has become a necessity in Lebanon, in view of the increasingly heavy epidemiological and economic burden that these diseases are causing. NCD-centered activities are currently conducted in Lebanon by various public agencies and organizations from the civil society, with a clear predominance of curative activities over preventive ones. Recently, a first Plan aimed at coordinating activities and setting landmark indicators was proposed under the auspices of the WHO Representative Office in Lebanon, originally for the period 2008-2013. Before this Plan could be adopted, it had to be updated to remain aligned with a newer version of the WHO Global Action for NCD Prevention and Control (2016-2020). This present document proposes a set of strategic objectives specifically tailored for Lebanon, largely inspired by the Global document. The vision enshrined in this document is the importance of multi-sectoralism in addressing NCD Prevention and Control. Under this vision, non-health sectors and non-governmental stakeholders are invited to play a major role in collaboration with the Ministry of Public Health (MOPH).

### A2. Vision

This Plan is constructed on three basic concepts:

1. NCD Prevention and Control is a multisectoral responsibility in which the roles of non-health stakeholders have to be defined and activated.
2. For the health sector, NCD Prevention and Control will enhance the integration of the concept of case-management including both curative AND preventive care as a standard of practice at the PHC level, and a re-orientation of PHC practitioners to community-based primary prevention.
3. This plan should contribute to the overarching goal of providing adequate universal health coverage to the entire population of Lebanon.

## **B. EPIDEMIOLOGY OF NON-COMMUNICABLE DISEASES AND THEIR BEHAVIORAL RISK FACTORS IN LEBANON**

The place of NCDs in the epidemiological status of Lebanon has already been well-established. Lebanon has completed its epidemiological transition in the early 1990s, and its morbidity profile today resembles that of more developed, increasingly ageing nations.

### B1. Morbidity and mortality from NCDs in Lebanon

After the return of civil peace in 1991, the partial restoration of the health information system of the country started indicating that the burden of communicable diseases had been greatly reduced to be replaced gradually by a heavy morbidity/mortality burden from NCDs and their risk factors. Pathological entities such as cardiovascular diseases (CVDs), cancers, respiratory conditions and diabetes constitute now the main bulk of morbidity and health care costs in Lebanon (Ammar 2003). Mental health disorders, still not well recognized in the Arab world, are also expected to add to the NCD cost, based on Burden of Disease projections for 2020 (Whiteford et al. 2013).

In 2002, 77% of death certificates carrying a clear cause-of-death were already related to chronic conditions, with four large NCD entities carrying the largest relative proportions: cardiovascular disease (45%), cancers (10%), chronic respiratory diseases (5%) and diabetes (2%) (WHO 2005). The proportion of premature deaths (below 70) from NCDs is about 45% in men and 38.7% in women (WHO 2011). In a national survey conducted in 2004, almost 75% of those above 70 years reported having at least one chronic disease (PAPFAM-Lebanon 2006). The predominance of NCDs in the epidemiology of Lebanon has also been recorded in the WHO global report "NCD Country Profiles 2011".

NCDs are a burden on social and economic development. They entail substantial expenses to individuals and families. The Ministry of Public Health

(MOPH) spends a major part of its budget on NCDs. Almost 75% of all in-patient admissions in public hospitals in 2011 were caused by the four major entities identified above (MoPH 2012). An additional cost is caused by subsidies hospitalizations in the private sector. NCD treatments available at the PHC centers accredited in MOPH network are also covered by MOPH and distributed free of charge to registered chronic patients.

## B2. Behavioral NCD risk factors

The major contributor to the emergence of NCDs as the first Public Health (PH) concern in Lebanon and elsewhere is the globalization of behaviors and lifestyles, including hyper-caloric diets and decreasing physical activity. The concomitant demographic transition of the Lebanese population, characterized by a longer life-expectancy (79 years in 2011) and steady ageing of the population is also contributing to the NCD increasing burden (Ammar 2009). The most comprehensive and recent prevalence assessment of NCD risk factors was obtained using the STEPwise Approach to Surveillance (STEPS) applied to a sample of 1982 individuals in 2009. Some revealing results can be seen below in Table 1 (STEPS 2010). These results have been received cautiously, as likely to be over-estimating risks due to a higher voluntary participation of individuals who perceived themselves already to be at higher risk. Despite this potential selection bias, the findings carry important PH significance. They show that among individuals likely to be at higher risk, prevalence rates of potentially preventable NCD determinants have already reached unacceptable levels. Findings such as these highlight the importance of planning a concerted action against NCDs instead of fragmented efforts.

**Table 1.** Risk factors for NCDs in Lebanon (STEPS 2010)

<b>Risk factors (%)</b>	<b>Males</b>	<b>Females</b>	<b>Both</b>
Current cigarette smoking	46.8	31.6	38.5
Current narguileh smoking	23.3	21.6	22.4
Low level of physical activity	52.4	40.3	45.8
No vigorous physical activity	76.9	90.6	84.5
Never measured blood pressure	20.4	12.6	16.1
Never measured blood sugar	36.2	24.2	29.6
Overweight or obese	72.9	59.4	65.4
Overweight	44.2	32.9	38.0
Obese	28.7	26.5	27.4

## **C. RESPONSE TO THE NCD RISING EPIDEMIC IN LEBANON**

### C1. Prior to the NCD-PCP

Faced with changing risk patterns and subsequent epidemiological trends, MOPH has launched at various times several actions to control and prevent NCDs. The most comprehensive action was the establishment of a National NCD Program (NCDP) between 1997 and 2007. The Program received a trust-fund from MOPH, which was managed by the WHO Country Office (CO) in Beirut. Actions were conducted under the authority of MOPH, which had hosted the Program in one of its refurbished buildings in Beirut. However, it was never clearly specified to whom the Program reported ultimately. At its peak, the Program included a medically-qualified Manager, 3 technical assistants, one administrative assistant, and a driver. It was able to launch several periodic awareness and prevention campaigns, and to gather stakeholders around drafts of National Control Plans for cancer and cardiovascular-metabolic diseases. The Program was supposed to be eventually



integrated in the MOPH organizational chart, but political upheavals made this re-organization impossible. In time, the allocated funds failed to attract or retain experienced staff members with the leadership capacity required for such complex activities, and the Program was discontinued.

The National NCDP was replaced after 2007 by a number of morbidity-specific "National Committees" with members nominated by Ministerial Decree. While a few committee members are paid MOPH staff members, the majority are volunteers from the non-governmental sectors concerned with that specific morbid issue. The performance of those committees has ranged from total inaction to attendance of a few international conferences on behalf of the Republic of Lebanon. Some have at times provided technical counseling to the MOPH Director-General (DG). None has been able to prepare a comprehensive plan leading to programmatic action for prevention and control of a given morbid entity. Consequently, all previously initiated NCD control and prevention activities have still not been linked together by one unifying vision.

## C2. Elements of NCD-PCP already in place

While a global National Plan has not been activated yet, fragmented elements are already enacted or reinforced by various stakeholders. These elements include:

1. Multisectoral field collaboration, in which MOPH provides an official umbrella, has been the preferred course of action in the area of NCD awareness and education since the return of civil peace in 1991 in Lebanon. Activities have traditionally been piloted by militant stakeholders in the civil society rather than MOPH. The most famous example of such collaboration is the annual breast cancer awareness campaign which has been conducted regularly since 2002. Oftentimes however, those activities have been implemented in the absence of epidemiological evidence to justify their priority or even appropriateness, leading to some concern in

the public and among experts. Equally unfortunate is the fact that outputs of fragmented activities are rarely collected to allow a meaningful evaluation. Increasingly, spontaneous activities initiated by health stakeholders are coming under the umbrella and ultimate control of MOPH, and their objectives are being aligned with the strategic vision of the Ministry.

2. MOPH has provided partial financial support for specialized training sessions of healthcare professionals directly involved in non-medical diabetes care, organized by the Diabetes National Committee. Several hundreds of nurses have thusly been trained to provide self-care education to diabetic patients. The actual capacity of these series of trainings to impact positively on patients remains largely unmeasured.
3. MOPH has been procuring drugs free of charge for cancer and other serious diseases since 1989 through the central Drug Dispensing Center in Beirut and recently through branches in the mohafazats.
4. MOPH also provides essential medications for chronic diseases: diabetes, hypertension, heart disease, osteo-articular conditions, through a network of nearly 200 accredited Primary Health Care (PHC) centers across the national territory. This on-going activity is a recognition that quality curative care is already available in Lebanon, but that developing NCD care at PHC may often be more cost-beneficial to patients and ultimately to the community. Guidelines for the management of CVD including preventive and curative care had been established and were updated in 2015.
5. In 2012, MOPH started piloting a new CVD screening/prevention package in some of the accredited PHC centers. Several hundreds have already been tested for metabolic problems and blood pressure and referred for

treatment. Test results are built into a risk score for CV accidents, which can help motivate clients to persevere in behavioral change leading to better projections. Preliminary data have already been published (Yamout et al. 2014). Protocols were finalized in 2015, and are planned for large introduction in the entire PHC network.

6. MOPH continued its support of a National Tobacco Program through appointing a full-time staff member to run daily activities, although direct funding of those activities have been seriously reduced. It has also a role to play in the inspection of public places to ensure that the Tobacco Control Law (174/2011) is implemented.

### C3. Issues in the implementation of an NCD-PCP

Several obstacles may impede the endorsement and eventual implementation of a unifying Plan in Lebanon today:

1. While goodwill exists across all sectors in support of NCD prevention and control, a planned comprehensive approach cannot be started without a dedicated governance structure, empowered to coordinate various activities and stakeholders. Such a structure does not exist at present.
2. The political and economic situation in Lebanon remains murky and security concerns are over-shadowing all others. Since May 2013, the country has been without a government with a constitutional mandate for major new policy decisions, such as endorsing a comprehensive NCD Plan.
3. The influx of Syrian refugees, estimated to have reached a ratio of 1/3 compared to the Lebanese population in 2014, has further increased the burden of public authorities and created a diversion from new long-term planning. However, refugees are in need of care both for communicable and NCDs. This may provide a window of opportunity for the activation of

the NCD plan, with the implication of international NGOs and UN agencies for the benefit both of refugees and their host communities.

#### C4. Steps in adapting the WHO Global NCD Action Plan

The Lebanese NCD-PCP (2016-2020) sets out five Lebanese Strategic Objectives (LSOs), with corresponding interventions, built on what had been realized so far, and tailored to the specific context and unmet needs of the country. These LSOs are largely in alignment with those proposed in the WHO Global Action Plan (2013-2020). The first two objectives proposed by the Global Plan have been collapsed at the national level into one objective which addresses the political commitment for NCD control and prevention AND the mechanisms for translating this commitment into policies and concerted activities. The earliest drafts of this Plan were elaborated in early 2013 by a joint WHO-Lebanon and MOPH drafting committee. Several iterations were performed as a result of a process of consultation and discussion with concerned stakeholders, leading to final endorsement by MOPH in December 2014.

The elaboration of this Plan was launched in the wake of a one-day “National Consultation on the Prevention and Control of NCDs in Lebanon” held by WHO-Lebanon on March 23, 2012. The meeting was attended by Minister Ali Hassan Khalil and Dr. Alaa Alwan, WHO-EM Regional Director. The consultation brought a vast array of participants (more than 100 persons) representing national health policy-makers, program managers, health care providers, representatives of professional Orders, concerned NGOs, academic institutions and senior experts from WHO and other international organizations. The focus of the meeting was to develop a national consensus around the launching of a comprehensive NCD prevention and control multi-sectoral program (Appendix 3).

Based on this Consultation, a first draft of the NCD-PCP was presented at an NCD “priority planning” meeting which included 45 participants from key stakeholders, held on October 10, 2014. This meeting discussed issues of importance for NCD control, beyond the text content per se. In particular, the issue of funding plan activities beyond 2015 and the impact of the Syrian refugee crisis and potential remediation were considered. Also during that meeting, the introduction of a new CVD prevention package at PHC level was announced. In 2015, two coordination meetings were held to discuss and build consensus on a way forward to optimize coordination and support of various sectors for NCD activities.

**Table 2.** Meetings leading to the finalization of the NCD-PCP

<b>Meeting</b>	<b>Date</b>	<b>Remarks</b>
“National Consultation on the Prevention and Control of NCDs in Lebanon” (Beirut)	March 23, 2012	more than 100 persons
NCD “priority planning” / Consensus Meeting (Beirut)	October 10, 2014	45 key persons
NCD coordination meeting (Beirut)	January 2015	Attended by representatives from various sectors: <ul style="list-style-type: none"><li>- Humanitarian and development actors</li><li>- MOPH PHC</li><li>- MEHE School health team</li><li>- Professional health orders and syndicates</li><li>- Academic and research PH institutions</li></ul>
NCD coordination meeting (EMRO – Cairo)	April 15, 2015	52 persons comparing progress on NCD planning across the EMR

## **D. LEBANESE STRATEGIC OBJECTIVES (LSO) (2016-2020)**

### D1. General structure

This plan has been developed in full awareness that the responsibility for NCD control and prevention cannot be limited to the health sector. A variety of risk factors and their mitigation fall under the mandate of non-health sectors. For example, limiting the daily intake of salt would require the intervention of ministries regulating industrial and commercial standards. Enhancing healthy lifestyles in children would require the commitment of schools and municipalities. This plan proposes coordinated activities for all sectors to ultimately control risk factors and reduce the morbidity, mortality and economic burden of NCDs. It is organized in five LSOs, listed in 3 columns in Appendix 1:

Column 1. The SO of the WHO Global Action Plan (2013-2020).

Column 2. Corresponding LSO, each with related interventions (2016-2020). Several proposed interventions are directly related to the so-called "best-buys", a list of cost-effective interventions presented in WHO Global Action Plan.

Column 3. Measurable outcomes/indicators to be expected under each intervention

This part is completed by a table of priority interventions with potential stakeholders primarily concerned (Appendix 2).

### D2. LSO1

This LSO1 focuses on issues of governance. It is based on the understanding that multisectoral cooperation with health stakeholders is already the usual MOPH "modus operandi". Cooperation with the non-health sectors remains a challenge.

Three interventions have been listed under LSO1:

1. To strengthen the institutional capacity of the MOPH to mobilize resources, build partnerships, develop the program, and monitor implementation.
2. To hold a national consensus meeting to endorse the final version of the plan as national policy document by non-health stakeholders.
3. To create a consultative structure in which relevant government agencies can be co-opted to support parts of NCD prevention and control policies falling under their mandate.

The first intervention should result in the nomination of a National NCD Coordinator, preferably within the MOPH organizational chart, who would be fully dedicated to coordinating activities under the NCD prevention and control plan. MOPH-DG will convene a consultative "National Task Force" in which governmental sectors concerned can meet may be twice a year, to share views and plans, review activities, and when possible decide on ways to implement required inter-agency activities. Delegates should be invited from the Ministries of Social Affairs, Education, Trade and Commerce, Youth and Sports, Finances and Environment, as well as the "National Council for Scientific Research" (CNRS), the Central Agency for Statistics (CAS) and the Directorate of Civil Affairs (Ministry of Interior).

### D3. LSO2

This LSO puts the emphasis on primary NCD prevention as public health policy. The interventions suggested run the spectrum from mandated laws/regulations to individual behavioral change.

Six interventions are proposed under this LSO2.

1. To promote behavioral change to healthier lifestyles through multisectoral initiatives and campaigns, in three major areas of exposure: tobacco use, unhealthy diets and insufficient physical activity. Early detection of high blood pressure, blood cholesterol and diabetes should also be promoted.



2. To create a concentrated time for the promotion for healthier lifestyles in Lebanon in May every year.
3. To engage policy action to limit the import, fabrication and marketing of harmful products, such as consumer items high in salt, empty calories and trans-fats.
4. To promote "healthy schools" interventions.
5. To improve the enforcement of smoking ban laws.
6. To work with municipalities to promote healthy city/village environments, starting with municipalities with such programs already in place.

#### D4. LSO3

This SO focuses on preventive activities at all levels of health care, and not just at the primary care level. The provision of preventive services is the area of care which is really lacking in Lebanon, much more than the quality or availability of curative care for diagnosed patients.

Three interventions are proposed under LSO3:

1. To identify standards for prevention: primary (health counseling and control of risk factors) and secondary (early detection and control) in national guidelines for routine PHC, and in accreditation conditions for PHC centers affiliated to the national network
2. To identify standards for tertiary prevention aiming at avoiding complications in routine management guidelines of NCD patients already in secondary care
3. To monitor the adherence to standards by physicians and staff, starting with settings directly or indirectly reimbursed by MOPH. The monitoring system will specify levels at which reimbursement is withheld. Other third party payers will join this monitoring system, starting with public insurers.

The first intervention under LSO3 calls for the identification of clear standards for NCD prevention within national guidelines for routine PHC practice. Neither guidelines nor associated standards are available now in Lebanon. Preventive services are rarely proposed when they are not related to the immediate reason for consultation. Primary routine care guidelines should be established in Lebanon (first measurable outcome), in which preventive standards are clearly listed (second outcome). Standards should cover primary prevention: counseling for maintenance of good health; control of risk factors such as: smoking cessation, hypertension and cholesterol assessment and control. Similarly they should cover secondary prevention, which is the early detection and control of diseases: diabetes, breast cancer, etc... The periodicity and relevance of periodic cancer screenings which can serve both as primary and secondary preventive tools (ie: Pap smears, colonoscopy...) need also to be standardized.

It is hoped that the culture of preventive "health check-up" visits can be promoted as a regular health-seeking behavior in the Lebanese public. PHC physicians play a major role in creating such a culture, when they bring up issues of health promotion and disease prevention at all opportunities. The adherence to preventive standards (when they become available) would have to be included in the accreditation or re-accreditation conditions of PHC centers affiliated to the national network (third outcome).

The second proposed intervention under LSO3 calls for the identification of standards for tertiary prevention aiming at avoiding complications, within routine management guidelines of NCD patients treated in secondary care. Care guidelines for solid tumors in adults are the only NCD guidelines already in place in Lebanon. They do not include clear standards against which one can benchmark and monitor the provision, quality and completeness of tertiary preventive care. The creation of guidelines for major NCD entities (such as CVD, cancers, diabetes, COPD...) and the inclusion of tertiary prevention

standards in each set are presented as two outcomes to be measured under this initiative.

Setting standards for preventive services at all levels of the health care system will remain an academic exercise, if they are not actually used to monitor the quality of service provision. MOPH can use its leverage in PHC affiliated centers, public hospitals and subsidized care in private hospitals to enforce the uptake of standards and to use them as benchmarks for direct or indirect reimbursement. The monitoring system will specify incrementally stringent levels at which reimbursement is released. Other third party payers may very likely join this monitoring system, starting with public insurers such as NSSF, the Army and the Police insurance programs, etc... Eventually, even private insurers can come to consider the advantages of such standards in resolving billing conflicts.

#### D5. LSO4

LSO4 focuses on the promotion of quality NCD research. The important aspect of this LSO is highlighting operational/translational “embedded” research, rather than purely clinical or epidemiological research. The ultimate aim of this LSO is therefore to favor research projects which improve our knowledge of factors impeding or enhancing the actual implementation of NCD activities within our specific context, and those affecting the outcomes of planned activities and their evaluation.

LSO4 includes 3 proposed interventions with corresponding outcomes:

1. To collaborate with CNRS to increase the funding priority for NCD operational research.
2. To facilitate the access of researchers to raw data.
3. To promote the translation of research results into policy briefs leading to improved performance in NCD prevention and control.

The CNRS is the largest national provider of funds for Lebanese academic researchers and should play a major role in coordinating research with expressed multisectoral needs for evidence. The process through which CNRS sets its list of priority research areas and the allocation of funds is not very clear. The NCD Task Force should participate in the setting of health-related priority areas, to ensure that the kind of research mostly needed is favored. Data which can be used to assess a given activity's impact and outcome are often available in governmental agencies, but researchers often find it difficult to access them. The NCD Coordinator should be empowered to facilitate easy and rapid access to data for secondary analyses.

#### D6. LSO5

This SO focuses on the development of surveillance systems able to monitor trends in NCD and their risk factors and the impact of prevention and control interventions. This LSO recognizes the importance of creating a structure which would allow a sustainable flow of health information to reach the PH deciders on a routine basis.

LSO4 lists four interventions connected through a logical, reasoned thread.

1. To establish a "captive population" for passive surveillance of NCD trends and their social and behavioral determinants.
2. To create registries for specific NCD entities, to add to the existing cancer registry.
3. To establish a pathway for mortality data autonomous from the MOI loop.
4. To integrate NCD morbidity-mortality surveillance data within the MOPH for analysis and regular dissemination

This SO proposes an alternative to large national surveys which have become increasingly more difficult to afford at regular intervals. Surveys are at risk of

lacking validity in troubled times such as those being lived in Lebanon. They do not allow a longitudinal follow-up of outcomes, a condition for evaluating the impact of preventive programs. A large part of the surveys role can be fulfilled by establishing a national "captive population" which will generate integrated, routine and continued data on all sorts of health events and their determinants, at low cost. This population is in reality a life-course cohort in which incidence and survival rates and their changes over time can be estimated with a greater degree of validity. All monitoring and surveillance data should be pooled back to an NCD data management site within MOPH.

For any life-course surveillance to be complete, vital statistics have to be linked to on-going wellness and sickness data. The current structure of vital statistics within MOI renders such a link relatively arduous. While reform is considered/initiated, an autonomous system for the collection of death certificate data has to be created, which will allow the NCD data management center at MOPH to calculate such indicators as survival rates and disease duration.

## **E. Concluding issues**

### E1. Development of national capacities for the execution of the NCD-PCP

The continued migration of promising talented young national capacities can become a threat to the comprehensive execution of PH activities in Lebanon, including those related to the NCD-PCP. The open, daily multisectoral cooperation engaged since the early 1990s by MOPH has created a supportive coalition from the civil society of medically and non-medically skilled workers, public health experts, grass-root community activists. Several stakeholders have been collaborating with MOPH for long years, thus creating a common language and operational patterns to facilitate the implementation of common projects. Often times, stakeholders such as national and international NGO and pharmaceutical companies have even contributed operational funds as well as working time and conceptual frames. However, capacities currently available, often times on a voluntary basis, within and outside MOPH, are pre-retirement seniors already stretched thin over a large array of activities. Younger colleagues could be trained to take over the next shift, but financial resources currently provided to them are insufficient to attract and retain them. The profile of tasks they will be requested to complete is not perceived as prestigious enough to compensate for financial restrictions. New tasks related to the sustained implementation of the national NCD plan require a dedicated, clearly defined staff, reporting directly to MOPH. A national reflection process needs to be started to find innovative ways for attracting human resources with the adequate capacity and inserting them within MOPH while senior mentors are still available. Efforts have also to be paid to attracting human resources from para-medical and non-health sectors/professions. This issue is the main challenge to the implementation of the NCD-PCP in Lebanon.

## E2. Setting national targets and indicators

This report has proposed "structural" outcomes for NCD-PCP objectives, which corresponds to the fact that this plan is just starting, and building structures is the expected result of any initiation period. Once structures are up and running, they will generate functional data which can be used for monitoring and evaluating the plan. This process would require the adoption of clear indicators against which results are evaluated. At this time, Lebanon is presented with 9 voluntary global targets and 25 indicators to consider as a start. It will be the role of the National Task Force to assess the validity and availability of periodic baseline data upon which such indicators can be built. Experts may be hired to provide services to that end.

The determining step towards selecting adequate indicators and targets is the creation of a surveillance system able to provide data longitudinally with the same samples of the population, instead of counting only on serial cross-sectional surveys which involve new participants at each wave. The implementation of a package of preventive NCD services in the affiliated PHC network can help create a loop which can capture longitudinal data and monitor trends on an on-going basis. The participation of the medical departments of the Lebanese Army and Interior Security Forces will add to the magnitude and representativity of this preliminary NCD surveillance system.

## E3. Prioritized interventions: The way ahead...

Appendix 2 lists activities under each LSO which have to be carried out as priorities. They are listed with expected outcomes and key players. Of all those priorities, the nomination of a coordinator remains primordial. It is the step which will allow the real "deal-breaker" for the acceleration of NCD-PCP comprehensive implantation. Other elements which will continue to pose major challenges to any stable plan. Political uncertainties will continue to loom as a serious threat to the plan. The implications of the growing

humanitarian crisis caused by the sudden increase of the general population by more than 30% over a very short period of time may also force a radical change in priorities and resource allocation away from NCDs and back to the Burden of Disease Group 1 (maternal and reproductive, nutritional, communicable diseases), which had been largely under control in Lebanon until recently.

The Lebanese NCD-PCP should therefore remain flexible and able to interact rapidly with worsening contextual factors. It should consolidate its activities by building a large coalition which can lobby for legislation and implementation of NCD control measures. In this coalition, a large portion should be allocated to consumers and other public interest groups whose commitment may be crucial to maintain the momentum on activities.



## REFERENCES

- Ammar W. Health system and reform in Lebanon. WHO-EMRO, Beirut 2003.
- Ammar W. Health Beyond Politics. WHO-EMRO, Beirut 2009.
- Lebanon Family Health Survey (PAPFAM-Lebanon, 2006): Principle report (part of the Pan Arab Project for Family Health). The Republic of Lebanon, Central Administration of Statistics and The Arab League (Social Sector). Beirut: Lebanon 2007. Available at [www.papfam.org](http://www.papfam.org). MOPH. Statistical Bulletin 2011, available at [www.moph.gov.lb/Statistics/Pages/StatBulletin2011.aspx](http://www.moph.gov.lb/Statistics/Pages/StatBulletin2011.aspx). (2012).
- Musharrafieh U, Al-Sahab B, Zaitoun F, El-Hajj MA, Ramadan F, Tamim H. Prevalence of asthma, allergic rhinitis and eczema among Lebanese adolescents. *J Asthma* 2009; 46(4):382-7
- Yamout R, Adib SM, Hamadeh R, Freidi A, Ammar W. Screening for cardiovascular risk in asymptomatic users of the primary health care network in Lebanon, 2012-2013. *Preventing Chronic Diseases* 2014; 11:E120.
- Whiteford HA, Degenhardt L, Rehm J, Baxter AJ, Ferrari AJ, Erskine HE, Charlson FJ, Norman RE, Flaxman AD, Johns N, Burstein R, Murray CJ, Vos T. Global burden of disease attributable to mental and substance use disorders: findings from the Global Burden of Disease Study 2010. *Lancet* 2013; S0140-6736(13): 61611-6.
- WHO. The Impact of chronic disease in Lebanon (2005), available at [www.who.int/chp/chronic\\_disease\\_report/media/impact/lebanon.pdf](http://www.who.int/chp/chronic_disease_report/media/impact/lebanon.pdf).
- WHO STEPS Chronic Disease Risk Factor Surveillance. Data Book for Lebanon. Beirut: American University of Beirut and WHO-EMRO (2010).
- WHO. Healthy Cities (glossary developed since 1998). Available at [www.who.int/healthy\\_settings/types/cities/en/index.html](http://www.who.int/healthy_settings/types/cities/en/index.html)
- WHO. 2008-2013 Action Plan for the Global Strategy for the Prevention and Control of Noncommunicable Diseases. Geneva 2008.
- WHO. Global Status Report on Noncommunicable Diseases. Geneva 2010.
- WHO. 2013-2020 Action Plan for the Global Strategy for the Prevention and Control of Noncommunicable Diseases. Geneva 2013.

## APPENDIX 1

### SUGGESTED MODIFICATIONS OF LEBANESE STRATEGIC OBJECTIVES IN AN UPDATED NATIONAL NCD PLAN IN ALIGNMENT WITH THE GLOBAL ACTION PLAN (2013-2020), WITH CORRESPONDING INTERVENTIONS AND EXPECTED OUTCOMES

STRATEGIC OBJECTIVES (SO) IN GLOBAL ACTION PLAN 2013-2020	LEBANESE STRATEGIC OBJECTIVES (LSO) 2016-2020	EXPECTED OUTCOMES
<p><b>SO1</b> To strengthen advocacy and international cooperation and to raise the priority accorded to NCD prevention and control at global, regional and national levels and in the development agenda.</p> <p><b>SO2</b> To strengthen capacity, leadership, governance, multisectoral action &amp; partnerships to accelerate country response for NCD prevention &amp; control</p>	<p><b>LSO1</b> To develop a national policy framework and ensure political commitment for NCD prevention and control as part of the vision for development in Lebanon</p> <ol style="list-style-type: none"> <li>1. Strengthen institutional capacity of MOPH to mobilize resources, build partnerships, develop the program, and monitor implementation</li> <li>2. Hold a national consensus meeting to endorse a final version of the plan among non-health stakeholders</li> <li>3. Create a consultative structure in which relevant government agencies can be co-opted to put in action parts of policies falling under their mandate.</li> </ol>	<ol style="list-style-type: none"> <li>1. An NCD Coordinator defined by MOPH in 2016</li> <li>2. NCD-PCP declared official national policy document at a consensus meeting</li> <li>3a. "National NCD Task Force" created by end 2016</li> <li>3b. A focal point assigned within concerned Ministries to coordinate on NCD issues for the Task Force</li> </ol>
<p><b>SO3</b> To reduce exposure to modifiable risk</p>	<p><b>LSO2</b> To reduce the exposure of population and</p>	<ol style="list-style-type: none"> <li>1 &amp; 2. A first "Healthy Living" month</li> </ol>

<p>factors for NCDs through creation of health promoting environments.</p>	<p>individuals to shared modifiable risk factors associated with NCD</p> <ol style="list-style-type: none"> <li>1. Promote behavioral change to healthier lifestyles through multisectoral initiatives and campaigns, in three major areas of exposure: tobacco use, unhealthy diets and insufficient physical activity. Early detection of high blood pressure, blood cholesterol and diabetes should also be promoted</li> <li>2. Create a concentrated time for the promotion for healthier lifestyles in Lebanon in May every year</li> <li>3. Engage policy action to limit the import, fabrication and marketing of harmful products, such as consumer items high in salt, empty calories and trans-fats</li> <li>4. Promote "healthy schools" interventions</li> <li>5. Improve the enforcement of smoking ban laws</li> <li>6. Work with municipalities to promote healthy city/village environments, starting with those where such programs are already in place</li> </ol>	<p>implemented in May 2016, and every following year thereafter</p> <ol style="list-style-type: none"> <li>3. By 2017, legislation on junk food, trans-fat content and salt reduction proposed to concerned members of Parliament</li> <li>4. By end 2016, list of pilot "healthy schools" in collaboration with the Ministry of Education</li> <li>5. Reach an 80% compliance rate on smoking ban in public urban/suburban places by end 2016</li> <li>6a. New projects selected for implementation with two rural/mountain municipalities as pilot projects by end 2016</li> <li>6b. Action Plans for rural municipalities ready by end 2017</li> </ol>
--	---	---

<p><b>SO4</b></p> <p>To strengthen and reorient health systems to address NCD prevention and control through people-centered primary care and universal coverage.</p>	<p><b>LSO3</b></p> <p>To reorient health systems to address NCD prevention and early detection at all levels of care</p> <ol style="list-style-type: none"> <li>1. Identify <u>standards</u> for prevention: primary (health counseling and control of risk factors) and secondary (early detection and control) in national guidelines for routine PHC, and in accreditation conditions for PHC centers affiliated to the national network</li> <li>2. Identify <u>standards</u> for tertiary prevention aiming at avoiding complications in routine management guidelines of NCD patients already in secondary care</li> <li>3. Monitor the adherence to standards by physicians and staff, starting with settings directly or indirectly reimbursed by MOPH. The monitoring system will specify levels at which reimbursement is withheld. Other third party payers will join this monitoring system, starting with public insurers.</li> </ol>	<ol style="list-style-type: none"> <li>1a. National guidelines for routine primary care published completed in 2015</li> <li>1b. Guidelines clearly list primary and secondary prevention standards completed in 2015.</li> <li>1c. Provision of preventive standards added as condition for accreditation of PHC centers in 2015</li> <li>2a. National guidelines for routine care for major NCD published by end 2016</li> <li>2b. Clear list of tertiary prevention standards included in each set of guidelines</li> <li>3a. Monitoring system in place by end of 2016 in 50% of affiliated primary care centers</li> <li>3b. Monitoring system in place in one demonstration public hospital by the end of 2016</li> <li>3c. Monitoring system in place in all</li> </ol>
---	--	--

		<p>centers subsidized by MOPH by end 2017</p> <p>3d. Monitoring system applied by NSSF by end 2018</p>
<p><b>SO5</b></p> <p>To promote and support national capacity for quality research and development for NCD prevention and control</p>	<p><b>LSO4</b></p> <p>To promote quality research for NCD prevention and control</p> <ol style="list-style-type: none"> <li>1. Collaborate with CNRS to increase the funding priority for NCD operational research</li> <li>2. Facilitate the access of researchers to raw data</li> <li>3. Promote the translation of research results into policy briefs leading to improved performance in NCD prevention and control</li> </ol>	<ol style="list-style-type: none"> <li>1. A consultation process with CNRS established in 2016 for the priorities of the following year, and annually thereafter</li> <li>2. Access to public data facilitated for at least one research project in 2016</li> <li>3. Evidence-based brief produced for every project</li> </ol>
<p><b>SO6</b></p> <p>To monitor trends and determinants of NCDs and evaluate progress in their prevention and control.</p>	<p><b>LSO5:</b></p> <p>To improve routine data collection procedures towards a sustainable health information system reporting on NCDs and their determinants</p> <ol style="list-style-type: none"> <li>1. Establish a "captive population" for passive surveillance of NCD trends and their social and behavioral determinants</li> <li>2. Create registries for specific NCDs to</li> </ol>	<ol style="list-style-type: none"> <li>1. A first report on a pilot sample of the "captive population" was completed in 2015, and yearly reports to follow</li> <li>2. At least one report of one new registry available by end 2018</li> <li>3. Mortality data loop functional for at least 50% of all recorded deaths by end 2018</li> </ol>

	<p>add to the cancer registry</p> <p>3. Establish a pathway for mortality data autonomous from the MOI</p> <p>4. Integrate NCD morbidity-mortality surveillance data within the MOPH data management system</p>	<p>4. NCD morbidity and mortality data included in periodic reports by end 2016</p>
--	---	---

## APPENDIX 2

### SUGGESTED LIST OF PRIORITY INTERVENTIONS UNDER THE LEBANESE NCD-PCP\* (2016-2020)

	<b>INTERVENTION UNDER LEBANESE STRATEGIC OBJECTIVES (LSO)</b>	<b>EXPECTED OUTCOMES</b>	<b>KEY PARTNERS</b>
LSO1.1	Strengthen institutional capacity within the MOPH to mobilize resources, build partnerships, develop the program, and monitor implementation	Nomination of an NCD Coordinator	MOPH; WHO-CO
LSO1.2	Hold a second national consensus meeting to endorse the final version of the plan as national policy document	NCD-PCP declared official policy at a Consensus meeting	All concerned stakeholders
LSO1.3	Create a consultative structure in which relevant government agencies can be co-opted to support parts of NCD prevention and control policies falling under their mandate	"National task Force" created	MOPH-DG
LSO2.4	Promote "healthy schools" interventions	List of pilot "healthy schools" created	MOPH, MoEd, medical societies, insurance
LSO2.6	Work with municipalities to promote healthy city/village environments, starting with those where such programs are already in place	New projects selected for implementation with two rural/mountain municipalities	MOPH, insurance, municipalities, local academic centers

LSO3.1	Identify standards for prevention: primary (health counseling and control of risk factors) and secondary (early detection and control) in national guidelines for routine PHC, and in accreditation conditions for PHC centers affiliated to the national network	National guidelines for routine primary care with clearly stated primary and secondary prevention standards	MOPH Family Medicine Society and training programs
LSO4.1	Collaborate with CNRS to increase the funding priority for NCD operational research	A consultation process with CNRS is established for the priorities of the following year	MOPH, CNRS
LSO5.1	Establish a "captive population" for passive surveillance of NCD trends and their social and behavioral determinants	A first report on a pilot sample of the "captive population" available	MOPH, academic centers
LSO5.6	Integrate NCD morbidity-mortality surveillance data within the MOPH-ESU for analysis and regular dissemination	NCD morbidity and mortality data included in periodic ESU	MOPH

\* NCD-PCP: Non Communicable Disease Prevention and Control Plan



## APPENDIX 3

# Report on the National Consultation on the Prevention and Control of Non-communicable Diseases in Lebanon

Beirut, Lebanon  
23 March 2012



*From left to right: Dr. Walid Ammar, Director General, Ministry of Public Health in Lebanon, Dr. Ala Alwan, Regional Director, Eastern Mediterranean Region Office, World Health Organization; H.E. Mr. Ali Hasan Khalil, Minister of Public Health in Lebanon, Dr. Sameen Siddiqi, World Health Organization representative in Lebanon.*

## **ACKNOWLEDGMENTS**

**Persons listed below have contributed to the elaboration of this document at various levels.**

### **DRAFTING COMMITTEE**

Salim M. Adib (MOPH/AUB)  
Walid Ammar (MOPH)  
Alissar Rady (WHO-Lebanon)

### **VISITING TEAMS**

Ala Alwan (WHO-EMRO)  
Ibtihal Fadhil (WHO-EMRO)  
Jihane Tawileh (WHO-Iran)

### **MOPH TEAM**

Hassan Alawieh  
Bahij Arbid  
Rabiha Charafeddine  
Randah Hamadeh  
Rasha Hamra  
Hilda Harb  
Wafaa Kanaan  
Michel Kfoury  
Assaad Khoury  
Kamal Mrad  
Rindala Nouredine  
Ali Roumani

### **OTHER PUBLIC AGENCIES**

Abir Ali (PM Office)  
Jawdat Al-Rassi (Civil Service COOP)  
Halim Al-Tawil (Dar el Fatwa)  
Elias Ara (Civil Defence)  
Nada Awada (Municipality of Haret Hreik)  
Fouad Daou (Civil Service COOP)  
Ali El Sayed (General Security)  
Imad Kanawati (Dar el Fatwa)  
Nina Laham (MoEd)  
Naji Marrouche (Military Medical Unit)  
Sonia Najm (MoEd)  
Habib Takash (Interior Security Forces)

## **WHO-LEBANON OFFICE TEAM**

Mona Adra  
Nada Al Andari  
Nohal Al Homsy  
Rita Arslanian  
Houssam Chamma  
Rosine Faddoul  
Samar Hammoud  
Ziad Mansour  
Lucie Sagherian  
Gharoud Sayegh  
Sameen Siddiqi  
Rouham Yamout  
Seraphine Zeitouni

## **INTERNATIONAL AGENCIES**

Lorenzo Conte (UNICEF)  
Mona Osman (UNRWA)

## **ACADEMIC SECTOR**

Abir Abdel Rahman (Balamand U)  
Michele Asmar (USJ)  
Jocelyne Bou Mosleh (NDU)  
Myrna Doumit (UL)  
Ghada Farhat (Balamand U)  
Mona Haydar (LAU)  
Nahla Hwalla (AUB)  
Hussein Ismail (AUB)  
Samer Jabbour (AUB)  
Nadim Karam (Balamand U)  
Mohamad Khedr (BAU)  
Hend Metwally (BAU)  
Sawsan Mostafa (BAU)  
Amal Mansour (ULS)  
Hala Nawfal (LU)  
Iman Nuwayhid (AUB)  
Chadi Saleh (AUB)  
Pascale Salameh (LAU)  
Abla Sibai (AUB)  
Nina Zeidan (LU)

## **PROFESSIONAL ORGANIZATIONS**

Charaf Abou-Charaf (LOP)

Samir Arnaout (Cardiology Society)  
Michel Daher (Lebanese Cancer Society)  
Joseph Kahhale (General Practice Society)  
Najla Lakkis (Family Medicine Society)  
Claude Maroun (Order of Physiotherapists)  
Bilal Sabloun (Order of Physicians- North)  
Claire Zablit (Order of Nurses)

### **NON-GOVERNMENTAL ORGANIZATIONS**

Georges Abou-Jaoude (AFICS)  
Fadi Aoun (Lebanese Society for Health Care)  
Marthe Ashkar (Conseil Maronite General)  
Joseph Awwad (YMCA)  
Mohamad Chouman (Islamic Health Association)  
Mohamad Dagher (IASC)  
Mohamad El Moussaoui (Al-Zahra Hospital)  
Rola Ezzedine (LAHSC)  
Salah Ghandour (Azm wa Saadeh)  
Michel Ghill (AFICS)  
Joseph Hallit (YMCA)  
Georges Hobeika (Secours Populaire)  
Nanor Kalendjian (Karageuzian)  
Mona Khalidi (Sanad)  
Cynthia Kheir (YMCA)  
Mohamad Korkomaz (Islamic Health Association)  
Nabil Kronfol (CSA)  
Elias Maher (Auxilia)  
Khaled Mneimneh (AFICS)  
Fawaz Mortada (Human Rights Organization)  
Serop Ohanian (Karageuzian)  
Hiba Osman (Balsam)  
Khaled Qassqass (CDM)  
Reem Rabah (Makassed)  
Rita Rhayem (Caritas)  
Amal Rihane (Lebanese Red Cross)  
Sossy Sagherian (ARC)  
Ghassan Sayyah (NGO Forum)  
Ghazi Taan (Hariri Foundation)

### **EXPERT CONSULTANTS**

Mohamad Abu Haydar  
Mohamad Kaddoura  
Mohamad Sandid