

Project Title: Shaping Research for Health in the Arab World: A Systems and Network Approach to Advance Knowledge, Inform Policy, and Promote Public Health.

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- Yemen, Jordan, Palestine and Egypt (AEHN)
- Syria, Lebanon, Turkey, Germany (LCS)

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- Arab countries and Turkey (RHWG)
- Iraq, Syria (WGHWG)
- Morocco, Kuwait, Iraq, Bahrain, Sudan and Palestine (NCD)
- Syria (LCS)
- USA, Denmark, Oman and Kuwait, Canada, Germany, Turkey (Health inequities)
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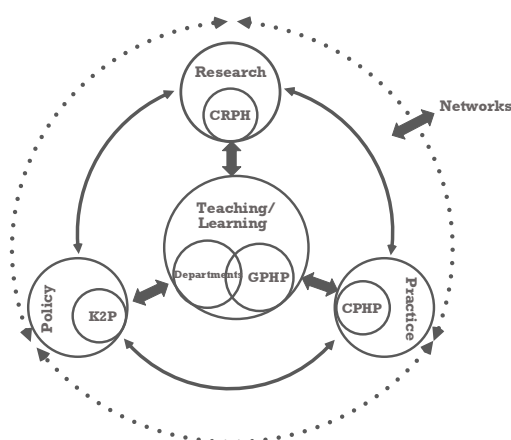
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SYNTHESIS

Shaping public health education, research and policy in the Arab World

This initiative at the Faculty of Health Sciences (FHS) aimed to strengthen systems and institutions for research and education in public health and facilitate opportunities for interdisciplinary collaboration on critical health issues across institutional and geographical boundaries in the MENA region. To this end, FHS developed and promoted a model for public health schools based on three collaborating academic Centers to enhance synergies between research, capacity development of junior researchers, knowledge translation and professional practice.

The Faculty was guided by a vision that calls for transformational education producing agents of change, relevant research informed by concerned partners and stakeholders and translated into impactful public health practice and policy, and a public health movement that strengthens institutional and individual collaborations across the region and expresses the voices, needs, and aspirations of its peoples within the region and in global policy circles. To achieve this ambitious vision, FHS adopted its innovative, homegrown 360° systems-network model to public health which is illustrated below.



Basically, FHS realized that if we want to shape public health in the region, there is a need to facilitate synergy between research, practice, and policy and approach any public health issue using these three lenses concurrently as early as possible in the process. The Centers for Research on Population and Health (CRPH), Public Health Practice (CPHP), and Knowledge to Policy (K2P) institutionalize these three functions and serve as the engines for each of these three domains as well as the facilitators for interaction and synergy between research, practice, and policy. The Graduate Public Health Program (GPHP) and other academic programs at FHS are situated in the middle of this model providing an innovative learning medium for FHS students as they become immersed during their formative years to view public health holistically in all of its dimensions (research, policy, and practice from a multidisciplinary and collaborative perspective). We also recognized that FHS cannot do it alone acknowledging the fragile and uncertain context of public health in the region. As a result, our model accommodated and supported the creation and continuity of regional

research networks of like-minded individuals and institutions as a prerequisite for any change. However, early on we realized that taking this model to scale within the region is a long and probably a multi-decade endeavor. We also understood that although our model may not fit the needs of sister academic institutions in the region its spirit and commitment to reach beyond disciplinary and geographic boundaries will.

The IDRC's grant, awarded in 2012, helped FHS set the foundations for the realization of this vision. Furthermore, the flexibility provided to FHS within this grant proved to be most useful and allowed FHS to be relevant and responsive to changes in Lebanon and the region. After all, the proposal was written as the Arab uprisings were unfolding. In it, we described the diversity in the Arab world, a region with some of the richest and poorest countries of the world with striking inequities in health indicators between and within countries. We highlighted the lack of public health infrastructure in the region and of human and financial resources to carry out the mission of public health, and the deep isolation of public health academics, and practitioners as a result of despotic regimes, lack of freedom, protracted war, occupation, and conflict. With the uprisings and the multiyear wars in several countries, the situation has exacerbated with more than half of the Arab countries engaged in active wars or heavily affected by them. Many of the health and social gains accumulated over decades have been lost, totally or partially, in some of these countries such as Iraq, Yemen, Libya, and Syria. The burden of these wars and conflicts spread out beyond the political borders of these countries. The situation in Syria, which has been described as the largest humanitarian crisis in modern day history, had a major impact on its neighboring countries. Lebanon, a country of 4.5 million residents, hosts more than one million Syrian refugees presenting the highest number of displaced people per capita in the world. The situations in Yemen, Iraq, Libya, and occupied Palestinian territories present similar tragedies. The dynamic and unpredictable nature of changes in the region confirm the legitimacy of our vision and the relevance of our adopted model for intervention. This focus was the theme for FHS's 60th anniversary which was organized in the presence of the VP for IDRC on December 2014 under the title of "Public Health in Context of Uncertainty". The uncertain and dynamic context of our region underscores the significance of IDRC's decision to provide flexibility to FHS in managing the award and shifting funds between programs and items as needed to support new and relevant research ideas or interventions. For example, re-allocated funds under the grant supported the publication of the *Lancet* special series on "Health in the Arab world: a view from within" which adopted a political analysis lens of health in the region. Later, funds were re-allocated in support of the *Lancet*-AUB Commission on Syria. Under AEHN, the political unrest in the town of Bebnine prevented the initiation of fieldwork. Consequently, some of the AEHN were used to support other and new themes but funds were re-directed to AEHN to support the study of Syrian refugee working children in the Bekaa valley which was requested by the Ministry of Labor in Lebanon and partially supported by three UN agencies (ILO, FAO, and UNICEF).

We could comfortably report that the objectives of the proposal were successfully achieved. We will start with the objective of building synergies between the three Centers and then report on some of the successes and achievements.

I. Growth and Synergy between Centers

FHS now hosts the Center for Research on Population and Health (CRPH, established in 2002), the Center for Public Health Practice (CPHP, developed from the Outreach and Practice Unit established in 2009), and the Knowledge to Policy (K2P) Center (established in 2014). The three Centers are now established units within the Faculty actively contributing to its academic mission and expansion. Their roles have been recognized by AUB's central administration and part of their budgets (staff and faculty) is now covered through operational budget. Data scientists and program coordinators will gradually join CRPH as well as Instructors of Public Health Practice in K2P.

The CRPH serves as a platform for regional research networks and an incubator for innovative and risk-taking ideas. This role is evidenced in the research programs and networks described in the following section under selected achievements.

The CPHP has been entrusted with the academic endeavor of strengthening service learning at FHS. Leading an FHS-wide research team, CPHP received a grant from the Center for Teaching and Learning at AUB to achieve this goal. The Center made a decision to concentrate the activities of all participating service learning courses in one predefined geographical catchment area: an underprivileged area in Greater Beirut (Area of Sin el Fil - Bourj Hammoud - Nabaa), within close proximity to AUB, and with an active number of NGOs. As the service learning courses progressed, the connections to the community solidified, and trust grew. A long-term partnership with Sin el Fil Municipality was developed with the vision to turn Sin el Fil into a Healthy and Safe City. After five years of cooperation between CPHP and Sin El Fil municipality, a memorandum of understanding was signed in the presence of AUB's President Fadlo Khuri between the two parties under the title of "Sin el fil: a Safer City, a Healthier Population" (February 2018).

The K2P Center has grown beyond any expectations and way beyond the boundaries of the Faculty and Lebanon. Over the last few years, many products were rolled out which allowed K2P to win the bid with Mohammed bin Rashid School of Government in partnership with the United Arab Emirates to co-organize the Health Systems Global (HSG)2020 conference in Dubai - the largest such conference globally, and the first time it is hosted in the region. K2P is also now recognized as a resource center not only in the region but in Europe working with WHO-Europe to build capacity on evidence based policy making. The Center also played a role in the realization of a Policy Support Observatory (PSO) which will be managed by FHS at the Ministry of Public Health (MOPH) in Lebanon. The PSO will analyze evidence using MOPH's data sets, registries, and tacit knowledge to inform policy at a national level. The PSO will naturally become a hub for our faculty members and students to engage in national policy dialogues, conduct research, and complete internships and practicum. More recently, K2P has extended its knowledge transfer model to include citizen advocacy and engagement which is an innovative and critical twist to policy impact.

As for synergy, earlier attempts to make the three centers work on common issues were replaced by a realization that the three centers and their activities/functions are simply complementary and links will deepen with time. CRPH and CPHP have jointly built the Arab Digital Public Health Initiative where digital platforms were proposed and developed to improve public health research and delivery especially in refugee settings. This initiative transformed later into a totally new and innovative School on Humanitarian Engineering in

collaboration with the Maroun Semaan Faculty of Engineering and Architecture (MSFEA) at AUB and relevant departments at Boston University and Johns Hopkins University. This school has now completed its fourth cycle with rave reviews and innovative realistic implementable projects being proposed by students from public health and engineering working together. The School is going with Boston University to Uganda in the summer of 2019. The significance of the institutional model and the synergistic relationship between research, practice, and policy is further illustrated in the leadership of FHS of the *Lancet*-AUB Commission on Syria. This Commission has engaged regional researchers and practitioners to delve into a better understanding of the impact of war and conflict on health. The Commission has worked closely with the three Centers, especially CRPH and K2P, and has published research and commentaries that fed into informing policy including at the UN level. The Directors of the three Centers now sit on strategic planning meetings within FHS together with the Dean, Associate Dean, and Departmental Chairpersons.

II. Selected successes and achievements

Scoping review of regional literature on Non-Communicable Diseases (NCDs): The project was collaborative with colleagues from FHS and Arab countries and focused on seven countries (namely Morocco, Kuwait, Lebanon, Iraq, Bahrain, Sudan and Palestine), chosen to represent various stages of demographic and epidemiological transitions and diverse socio-economic development levels in the region. Using scoping systematic review methods, the search generated a repository of around 3,780 records of NCD publications spanning 14 years (2000-2013). NCD group not only introduced the culture of scoping reviews to FHS and beyond, but it has also introduced discussions and debates around the concepts of research value and research waste. One of FHS junior faculty, a basic science geneticist, reviewed studies of genetic diseases and identified gaps that fed into her “public health genetics” research plan.

Testing waterpipe tobacco smoking prevention and intervention programs (TCRG): With the goal of generating best practices in the region, this program led by the TCRG aimed at reaching tobacco researchers to support, guide and translate their research project results in ways to enhance influence on policy and decision makers at both the institution and government level. As a result of the IDRC funds over six years, four teams were granted seed funds and developed waterpipe specific interventions. Building on this multi-country research program, a new IDRC grant was awarded to examine the economics of waterpipe smoking in the region. Rima Nakkash, the leader of TCRG, also led AUB’s Presidential Initiative to transform AUB into a Tobacco-Free Campus which was achieved on January 2017. FHS and AUB’s global leadership on Waterpipe Tobacco Smoking research and action led WHO’s FCTC to designate AUB as the Knowledge Hub for Waterpipe Tobacco Smoking. This designation was announced during the Third International Conference on Waterpipe Smoking Research held by FHS in November 2017.

Conflict Medicine Program as an offshoot of the War and Global Health Working Group (WGHWG): IDRC funds invested in examining war as a global health problem and facilitated the gatherings and joint research of FHS researchers with researcher from Faculty of Medicine at AUB and multiple researchers globally. Gradually and under the umbrella of the new Strategic Health Initiative, AUB launched the Conflict Medicine Program (CMP) - a

recognition of the importance of the theme of the WGHWG and its work - which is coordinated by two of the founding members of the WGHWG. CMP signed a memorandum of understanding with Medecins Sans Frontier (MSF) that defines more formally the strategic alliance between the university and the humanitarian organization. The MOU involves a number of research and capacity building projects that brings interdisciplinary thinking into research and training in conflict and health.

Health in the Arab World: In March 2012, FHS published the first academic book on “Public Health in the Arab World” (Cambridge University Press). By then, the Arab uprisings have swept the region and toppled long standing political regimes. FHS approached the *Lancet* with a proposal to publish a special issue (similar to the 2009 Lancet series on health in the occupied Palestinian territory) on health in the Arab world using a political and historical lens of analysis. With support from this IDRC grant, the *Lancet* Arab World Series entitled “Health in the Arab world: a view from within” was launched in London and Beirut in early 2014. The Series addressed a number of critical issues but two papers stood out. One on “therapeutic geographies” coined the term uncovering the collapse of national borders in seeking healthcare in the region. The other paper boldly noted that if the Arab world does not address the interlinkages between environment, population, and development it may be risking its survival. These observations and warnings are live events in the region. Following the launch of the Series and in light of the global SDG discussions, the *Lancet* asked FHS to reflect on how the Arab world in its current political instability can address these global goals. Using this grant, Abbas El-Zein and Jocelyn DeJong were funded to lead a multi-authored paper on the issue published in January 2016.

Regional Research Reviews (3R) project: CRPH has initiated work on a review project that facilitates comparisons of results of research in the region by compiling, harmonizing, and disseminating tools on key topics relevant to the region and on which FHS faculty have experience. The reviews have followed a rigorous protocol, and produced regional level statistics, focusing on social determinants and the social context of health. The approach to reviewing the literature is innovative, in that it situates itself at an intermediate level in between traditional literature reviews and systematic reviews/meta-analyses. Rather than narrowing the review to the papers with the ‘best study design’, it was inclusive of all and provided a good summary of research in the region and helped identify gaps, weaknesses and opportunities.

Pilot study on disability (Disability and public health): Research and writings on women with disability in Lebanon is scarce and the little available focuses on the experiences of parents of children with disabilities and social attitudes. Researchers at FHS identified this gap and noted that the disability rights movement has worked towards the advancement of rights for persons with disabilities while failed to address the discrimination women with disabilities face. The IDRC grant supported a preliminary and innovative study on narratives of women who live with disability in Lebanon and the Arab region which are virtually.

Review of registries and published research produced from the registries (Monitoring health inequities): FHS researchers investigated whether items that could qualify under equity and social determinants of health are included in registries in Lebanon. The team established contacts with registry directors or academic researchers involved in registry

data, collected, and examined documents and data forms for each registry. The registries are: the cancer registry, a hospital-based birth outcomes registry, and the renal disease registry. The team also reviewed all articles published in Lebanon between 1990 and 2013 on the three registries or empirical studies based on registry data, and collected observation data in medical institutions and carried out in-depth interviews with staff who are involved in data collection, management and reporting for the three registries at these institutions.

Designing an antiviolence reporting and decision support system in collaboration with the Lebanese Order of Nurses (Occupational violence): Working on the occupational well-being of nurses is of pivotal importance not only because nurses are the largest professional work force in the health sector, but also because the majority of nurses are females with research evidence indicating that they are disproportionally exposed to violence. Collaboration with the Lebanese Order of Nurses was initiated to work on designing an occupational violence reporting system and an associated decision matrix. The work on this component was concluded and the system was fully designed and an electronic system has been designed and handed over to the Lebanese Order of Nurses.

***Lancet*-AUB Commission on Syria (LCS):** This initiative falls naturally under the theme of “Public Health in the Arab World” but because of the gravity of the Syrian crisis it deserved its own attention and gradually grew into a global effort to examine the burden of wars and health in armed conflict. The undertaking of establishing, hosting and running a *Lancet* Commission has been a source of rich and new experiences for the faculty at FHS, thus strengthening existing capacity and building new ones. The *Lancet*-AUB Commission on Syria is innovative in that it is addressing a key gap in global health, i.e. the limited attention it has paid to the subject of violent conflict and health, especially conflicts that are protracted and/or resulted in major humanitarian crises. With the Syria crisis, the focus of attention of this Commission, the Commission is innovating in several specific areas:

- Proposing a new approach to the study of ill health effects of conflict based on a ‘burden of war’ concept that goes beyond the traditional measures of mortality, morbidities and injuries to include other dimensions rarely attended to in global health including cultural and heritage loss.
- Developing a gap analysis in the international response to the crisis particular humanitarian aid, in terms of its global structure and local delivery, with the aim of addressing these gaps.
- Examining health-related international law violations and particularly of the International Humanitarian Laws (IHL) leading to proposed revisions for consideration by UN agencies.

The *Lancet*-AUB Commission in Syria has been an exception to other *Lancet* Commissions. Usually *Lancet* Commissions do not produce interim research findings before the publication of a final Commission report. Nevertheless, the Commission on Syria, and in agreement with the *Lancet*, has produced several outputs, both in research, advocacy and knowledge translation. This reflects the nature of the topic (a dynamic and volatile conflict) and the relevance of the issues it raised for health research and action in the Syrian conflict and other conflicts.

Reproductive Health Working Group Seed grants (RHWG): A significant amount of time and energy by RHWG has been devoted to creating transparent mechanisms for allocating

research funds under the IDRC grant through RHWG. The network has previously allocated seed grants and funds for regional exchange, and the topics have been based on expressed research interests of network members. The RHWG has not, in the past, actively initiated joint research after developing its own research agenda. In this respect, the IDRC funding has enabled a new exciting opportunity for the group. Several seed grants have been awarded across the life of the project. A new IDRC grant has been awarded in support of RHWG activities for four more years.

Special issue of an International Journal on RHWG research (RHWG): As part of its commitments under the IDRC grant, the RHWG published a special issue of 11 papers in the international peer-reviewed journal, *Reproductive Health Matters*, covering themes on reproductive health research on the Arab region and Turkey by network members. The process that has been developed – with senior mentors advising authors how to improve their papers before the papers are submitted for international peer review – aimed to maximize the likelihood of publication and provide guidance in a non-judgmental manner. This was especially important for younger researchers who did not have experience writing for publication. The special issue which also documented the history of RHWG was launched on the 30th anniversary of this longest surviving network in the region.

Agriculture, Environment, and Health Network (AEHN): This network adopted a transdisciplinary approach to the linkages between agriculture/farming, environment, and health within the ever changing political settings. In spite of raging wars and conflicts in some countries, seed funds were transferred to researchers in Egypt, Syria, Yemen, and Palestine to examine this nexus. In Lebanon, a 50 minute documentary on the water and solid waste crisis was released and it has been shown in different fora and countries. In addition, one of the largest epidemiological surveys of working children was completed. Mentoring a large team of junior scholars (MPH students and graduates), the coordinator of AEHN led this project on child labor among Syrian refugees in agriculture in the Bekaa Valley of Lebanon under the auspices of the Ministry of Labor and in collaboration with the International Labor Organization, UNICEF, and FAO. The project collected data on 4,377 child laborers between the ages of 4 and 18 years and will be launched in June 2019.

Building Capacity

In addition to the support, mentorship, and funding of junior researchers across the region through the different research networks and professional short-term workshops on different public health priorities, this grant allowed FHS to also offer or partially support formal university-based graduate education to 12 students in the MPH program (n= 11) and MS programs (n=1). The students came from Egypt (n=5), Sudan (n=2), Syria residing in Lebanon (n=2), Yemen (n=1), and Lebanon (n=2). Most of them are back in their countries, working at well-known institutions, including: Assistant Public Health Officer, UNHCR Sudan; Resident in Family Medicine, AUBMC; Consultant Epidemiologist at the Federal Ministry of Public Health in Sudan; Research fellow, FHS-AUB; Senior Health Officer, Save The Children in Egypt; Teaching assistant, Medical Research Institute in Alexandria)

PROGRESS REPORT - OBJECTIVE 1: to build research capacity and enhance knowledge production in the region. This section will review progress in (I) the Center for Research on Population and Health overall, and (II) within the research networks integrated into the CRPH (RHWG, TCRG, AEH, Social Science and Public Health network), (III) for each of the research ideas the CRPH is nurturing, and (IV) The *Lancet*-American University of Beirut Commission on Syria: Health in Conflict

I. The Center for Research on Population and Health (CRPH)

The CRPH contribution to the IDRC project centers around facilitating multi-disciplinary collaborative research, building research capacity, and fostering linkages among research production, translation and implementation.

The IDRC proposal thus defined three areas of work by CRPH:

1. Facilitating research at FHS and the region
2. Building research capacity both at FHS and in the region, through strengthening networks and collaborations
3. Contributing to synergies among research, knowledge translation and practice, by strengthening the links among the three centers.

In this report, we present how the support of IDRC has helped build the resources at CRPH, and how CRPH has invested in activities designed to facilitate regional research capacity building, and what was done to better link research, policy and outreach.

1. FACILITATING RESEARCH AT FHS AND THE REGION

1.1. Defining research priorities and CRPH activities

As part of defining the strategy for the CRPH, a number of activities were undertaken, including:

- Holding meetings with each of the departments of FHS, to discuss ongoing and planned research, in order to take stock of strengths and potentials for collaborative, multi-disciplinary work
- Holding FHS-wide meeting to discuss regional research undertaken/ongoing by FHS
- Initiating discussions regarding how to encourage exchanges with colleagues outside FHS.

A committee was formed, the Research Facilitation Support Committee, which was in charge of reviewing strategic directions for research and discussing the best way to facilitate research at FHS and in the region.

1.2. Sharing research and incubating research ideas

1.2.1. Faculty Research Day

CRPH staff contributed to a number of research activities and organized events that have engaged faculty members at FHS in discussions of research, including the Faculty Research Day to provide the opportunity for Faculty to share recent and ongoing research; this was organized for 3 consecutive years (For a sample of a Research day agenda, please refer to

Annex 1.1). Feedback about the Research Day has been consistently positive and a number of collaborative activities across FHS departments have resulted.

1.2.2. Research Incubation Seminars

Under the IDRC grant, CRPH established Research Incubation Seminars that bring innovative ideas to FHS, draw on local AUB resources, engage research collaborators, and encourage exchanges about new research directions. These seminars are designed to provide space for presentations by FHS faculty on topics and approaches that are new, cutting edge, or controversial. They were meant for work in progress rather than for polished presentations of final results. The format seeks to encourage informal conversations, and to stimulate new ideas and collaborations. Eleven seminars were organized in the academic years 2014-2015 and 2015-2016 and were very well attended and included dynamic exchanges among faculty. Following on from successful seminar series in these years, two incubation seminars were held in the academic year 2017-2018, hosting FHS international collaborators. (For a complete list of all Incubation Seminars, please refer to Annex 1.2)

1.3. Facilitating comparative regional research

1.3.1. Comparative regional research: the Regional Research Reviews (3R) project

As part of a strategy to take stock of research in the region on key priority public health topics, CRPH initiated the Regional Research Reviews (3R) project. With the 3R, we aimed to provide an assessment of the state of the regional literature, present main results and themes, and highlight research gaps to inform research priorities moving forward. The reviews followed a rigorous protocol, and produced regional level statistics, focusing on social determinants and the social context of health. This project has been the centerpiece of CRPH work and culminated in several peer-reviewed publications, a compilation of research tools used in the region on key topics, and research databases on these topics. Inventories of research tools have already been shared with the Faculty, and the review databases will also be made available to FHS and regional researchers.

Reviews included:

1. *Physical activity*; one manuscript published in 2018 (<https://doi.org/10.1186/s12889-018-5472-z>); poster presented during SDG conference;
2. *High blood pressure*; one manuscript published in 2017 (<https://doi.org/10.1186/s40695-017-0020-z>), one manuscript submitted and under review; poster presented during SDG conference (see Section 2.4); informed a research grant on the self-management of blood pressure (see Section 1.4)
3. *Overweight and obesity*; Manuscript near completion, Published abstract, poster presented during SDG conference; informed a workshop held at the ACCESS conference in Oman (Section 2.3), and two research grants on unhealthy weight and school and community drivers of child diets (Section 1.4).
4. *Cardiovascular disease*; one manuscript submitted and under review;
5. *Violence against children*; one manuscript published in 2019 (<https://doi.org/10.1016/j.jadohealth.2018.08.016>), oral presentation at the UNICEF event "Translating Research Into Scaled Up Action: Evidence Symposium on Adolescents and Youth in MENA" Amman (November 2017), poster presented during SDG conference;

6. *Violence against women*; one manuscript submitted and under review.

Support from IDRC has been essential for this activity. In addition to partial coverage of the Associate Director's salary, the IDRC grant has provided partial coverage for a coordinator of the reviews, a research assistant and three consultants. The project has also drawn on graduate assistants who are students at the faculty.

CRPH planned to conduct workshops on various 3R topics; one was held at ACCESS on unhealthy weight (Section 2.3), and a session was organized as part of the Evidence Symposium on Youth (Please refer to CPHP section). Rather than hosting several regional workshops on disparate 3R topics, the 3R were used to inform the agenda of the large conference held by CRPH entitled "No one left behind: A feasible goal for the health-related Sustainable Development Goals in the Arab region?" - Referred to as SDG conference in this report - which engaged regional and international collaborators in comparative research, and assessed the evidence in light of the new global accountability frameworks set by the SDGs.

1.3.2. Regional data analyses

As part of the portfolio of work summarizing region-level data on the prevalence and social determinants of health in the Arab world, several regional data analysis projects have been conducted and submitted for publication.

- ***The unhealthy weight comparative analyses project:*** This focused on nutritional status in children and adolescents in the Arab world. As part of the portfolio of work summarizing region-level data on the prevalence and social determinants of nutritional status in children and adolescents in the Arab world, secondary data analysis projects used data from large multi-country surveys to investigate specificities of the double burden of malnutrition in the Arab world (manuscript under review), and of the relationships between food insecurity and mental health in the region (<https://doi.org/10.1016/j.jadohealth.2018.08.010>). These analyses also informed the development of a new grant proposal submitted to IDRC under the call on Food Systems for Non-Communicable Disease Prevention in MENA. This work complements work conducted on the 3R projects and has engaged regional and international collaborators (including co-authors from the University of Michigan, and the London School of Hygiene and Tropical Medicine). This work also involved graduate students from FHS and the London School of Hygiene and Tropical Medicine and was part of their MS theses.
- ***Other comparative analyses projects:*** in addition, CRPH has facilitated and provided datasets for other comparative analysis projects, which are still ongoing, including:
 - Inequalities and food insecurity across the Arab region - supervised by Dr. Hala Ghattas.
 - Early marriage among four subpopulations in Lebanon- supervised by Dr. Sawsan Abdulrahim (Department of Health Promotion and Community Health).
 - The demography of the Syrian refugee population in Lebanon and Jordan - supervised by Dr. Maia Sieverding (Department of Health Promotion and Community Health).

1.4. Mobilizing additional research support

Fundraising has been an important part of the work at CRPH. The availability of staff at CRPH has made it possible to develop new projects that are relevant to the region, have the potential to strengthen linkages among researchers at FHS, in the region and globally, and that can be used to leverage additional funding. Over the IDRC grant period, several proposals were prepared as part of efforts to seek resources for research and develop collaborations for comparative research across the Arab region and beyond. Some of these were funded and have led to manuscripts, publishable reports, policy briefs, as well as avenues for community involvement and ideas for further collaborative research, whereas others did not receive funding.

Although IDRC contribution to this work has been indirect, the Associate Director of CRPH who took the lead on some of these projects, and the post-doctoral fellow hired on IDRC funds contributed to research proposals and received partial salary coverage from the IDRC grant. Thus, the support of IDRC has been instrumental in leveraging additional funds.

- ***Unhealthy weight, gender and young families:*** A proposal was submitted to the National Institutes of Health, planning for a multi-site study to investigate the behavioral, social, and gender determinants of unhealthy weight through a series of surveys of households in Lebanon, Morocco, Qatar, the US, Costa Rica. Systematic comparisons were planned across these sites, which represent differences in stages in the nutrition transition, indicators of development, and constructions of gender. Researchers from five sites were included as collaborators. In addition to AUB, these include: the Laboratoire d'Epidémiologie of the Medical School of Rabat, Morocco; the Social and Economic Survey Research Institute of Qatar University; the University of Costa Rica; and the University of Massachusetts at Amherst. Although this proposal was not funded, much of the theoretical framing and underlying research around unhealthy weight fed into the conceptualization of another proposal submitted to and funded by IDRC on Tackling School and Community Drivers of Child Diets (details of which are described below).
- ***School and community drivers of child diets in Arab cities;*** identifying levers for intervention, submitted to the IDRC call on Food Systems for non-communicable disease prevention in MENA. This proposal brought together an interdisciplinary team from AUB and INNTA (Tunisia), led by CRPH to develop innovative locally relevant tools to describe the environments at the level of families, schools and communities in which children's food choices are made, and to identify points in the daily routine of children that represent threats to/opportunities for healthy eating. The proposal benefited from collaborations established through the Digital Public Health Initiative (see Section 3.1.1) with computer scientists, and was informed by the 3R project on unhealthy weight. This proposal was accepted and granted 1.48 million CAD. In addition to informing interventions aiming to influence children's food choices, and community level food policy in Lebanon and Tunisia, this study contributes to capacity building by supporting a 50% fellowship for one of the first PhD students to be registered in FHS's new PhD program in Epidemiology.

- ***Reproductive, Maternal, Neonatal, Child and Adolescent Health and Nutrition in Conflict-Affected Countries:*** A project supported by IDRC through a grant to Sickkids Toronto, subcontracted to CRPH; this work builds on previously published work on the 'Countdown to 2030' on. The team has completing a desk review which used the 3R data entry tools, and completed qualitative research to investigate facilitators and barriers to RMNCAH&N intervention coverage encountered during the Syrian conflict. A manuscript has now been submitted on this work.
- ***Self-Monitoring of blood pressure study (SMBP):*** a project on the potential for blood pressure self-monitoring to engage hypertensive patients and overcome obstacles to regular monitoring, which was informed by research conducted on the 3R Hypertension project, and is near completion with support from the Harvard Center for Global Health Delivery – Dubai. The project has also developed the tools needed for a future intervention designed to improve hypertension outcomes through the use of self-monitoring.
- A project funded by Columbia Mailman School of Public Health investigating ***chronic disease care needs of Syrian refugees in Turkey, Lebanon and Jordan***, and attempting to draw lessons pertinent to the changing health needs of Syrian refugees, based on what was learned from the response to the HIV epidemic. One publication is in press and another near completion.
- A project funded by UNICEF that analyses ***survey data on child health and deprivation*** from four subpopulations of refugees and Lebanese resident in Lebanon. This project brought a large dataset to CRPH which was used by several of the comparative data analysis projects across FHS.
- A project funded by NWO-WOTRO Science for Global Development in partnership with a Jordan NGOs, focuses on ***Sexual and reproductive health and rights of women and young people in Jordan*** and uses interactive theater as a medium to address the question: What are the key differentiators in accessing SRH services and exercising SRH rights for women and young people in Jordan?
- Proposal for a regional WHO center for ***training and research on infectious diseases of poverty***, submitted to WHO TDR; although this was not funded, the relationship established with TDR as part of this process facilitated the grant obtained by FHS for several WHO TDR scholarships.
- CRPH led on behalf of FHS, a proposal to the WHO Human Reproduction Program (HRP) Alliance for research capacity strengthening: ***Regional hubs for research and knowledge transfer in sexual and reproductive health and rights*** (SRHR) research in WHO regions – Eastern Mediterranean (EMR). Based on the faculty's longstanding research portfolio in reproductive health and maternal and newborn health, a particular concern for social determinants of health, and for conducting research that informs policies and programs to improve health, we proposed to establish a fellowship program, training materials, repositories of datasets and tools, and regional research networks that focus on

reproductive health, sexual health and childbirth. We are still awaiting the results of this proposal.

- CRPH has also submitted a large grant proposal to the Wellcome Trust's call for ***Longitudinal Population Studies*** that uses routine health data to create a cohort study which would generate data for use across FHS faculty and students, on various health themes relevant to the faculty and the SDG agenda more generally. The concept note was shortlisted and a full proposal was submitted, with the outcome pending.

1.5. Publications

The projects that are based at CRPH involve field research and in-house analyses and these represent important research opportunities. Junior CRPH staff, consultants and students have gained valuable experience from these projects. CRPH staff have also been productive in publishing the results of research projects. During the grant period, CRPH has produced more than 35 refereed publications and 14 abstracts, and contributed to 20 presentations at professional meetings. CRPH productivity has included junior members who are brought in as collaborators and co-authors.

2. FACILITATING RESEARCH CAPACITY BUILDING AT FHS AND IN THE REGION

One of the major objectives of the IDRC grant is to contribute to building research capacity in the region, through various mechanisms, including research networks, theme meetings, regional exchanges, and seed grants.

2.1. Human resources at CRPH

This IDRC grant has been instrumental in equipping the center with human resources able to facilitate and conduct research. The contribution of IDRC in providing partial support for an associate director and post-doctoral fellow has been essential, in that they were able to fundraise for various projects that hired and trained junior staff. Several full-time and part-time staff were also hired by CRPH, and more assistants joined as projects expanded. More recently, the request to appoint data scientists and program coordinators at the center has been approved with funding from FHS's operational budget.

2.2. Regional networks

These have continued their work, with support from CRPH. Progress on each network is reported under the corresponding section.

2.2.1. The Lancet Palestinian Health Alliance (LPHA) conference

Since its inception in 2009 as a scientific platform for researchers from within and outside the occupied Palestinian territories (oPt) interested in the health of Palestinians inside and outside the oPt, FHS, represented by CRPH, has provided strong academic and organizational support to the Lancet Palestinian Health Alliance (LPHA) annual conferences (<http://icph.birzeit.edu/lpha>) led by the Institute of Community and Public Health (ICPH) at Birzeit University. FHS hosted the LPHA 3rd (2012), 6th (2015), and 9th (2018) annual

conferences on AUB campus. CRPH also supported five Lebanese researchers (three from FHS) to present their findings at the 5th LPHA (2014) conference held in Amman. The CRPH Interim Director and other FHS faculty members serve on the LPHA Steering Group and contributes to reviewing abstracts for the annual conference and to discussions of strategic directions of the LPHA.

2.2.2. Lancet Arab World Series

Support from IDRC has been provided for the *Lancet Arab World Series* (LAWS), which is designed to promote the production of quality research papers about health in the Arab world for publication as a *Lancet* Series. The Series was meant to provide analyses of priority health issues in the region, as part of efforts to overcome regional invisibility within the international health community that has resulted in large part from the low research output of the Arab region.

The Steering Committee of LAWS as well as the lead authors of the papers of the Series formed the LAWS working group. During the first year of the grant, two preparatory meetings of the LAWS working group were held (September 2012 and March 2013). During the second year of the grant, papers were finalized and went successfully through *The Lancet* peer review process. *The Lancet*, in collaboration with FHS and ICPH, launched the “Series on *Health in the Arab World: a view from within*” on January 20, 2014 in London (hosted by The Royal College of Pediatrics and Child Health) and on January 23, 2014 in Beirut (hosted by FHS). The IDRC grant supported the launch activities in London and Beirut, and covered the participation of the lead authors and members of the LAWS Steering Committee in both launches.

The Series includes 6 multi-authored papers, as well as 5 comments, 1 viewpoint and 2 essays (<https://www.thelancet.com/series/health-in-the-arab-world>). The Series focuses on priority health issues in the Arab world, based on evidence interpreted mainly by scholars from the region, adopting a multidisciplinary approach that includes medical, public health, social, and political perspectives.

Follow-up activities to LAWS were discussed in a meeting on January 24, 2014 in Beirut which included members of the Steering Committee, the lead authors and the editor of the *Lancet*, Dr. Richard Horton. It was agreed to develop a paper for publication in *The Lancet* that follows up from the themes addressed in that series, providing a perspective from the Arab World on development to inform the international process of developing the Sustainable Development Goals (SDGs). Dr. Abbas El-Zein, a Lebanese citizen at the University of Sydney, Australia (and a former FHS faculty) was approached to lead that process; Dr. Jocelyn DeJong (FHS/AUB) was also invited to join. The two academics engaged a research assistant based at FHS and identified potential co-authors based on their needs for expertise and invited a subset of those to join them. The co-authors were invited to a one-day meeting in Beirut on March 12 2015, supported out of the IDRC grant. The work resulted in the publication of a viewpoint in the *Lancet* in late June 2015 ([https://doi.org/10.1016/S0140-6736\(15\)01312-4](https://doi.org/10.1016/S0140-6736(15)01312-4)). In addition, also supported by the grant, Dr. El Zein presented a corresponding abstract at a conference at the American University in Cairo (AUC).

2.3. Holding workshops to facilitate local and regional research and capacity building

Although we had planned to hold workshops about specific topics that are of particular interest to faculty in different departments and lend themselves to cross-departmental and multi-disciplinary collaborations, and that are more “generic”, i.e. dealing with research processes, such as proposal preparation and paper writing. In light of discussions with faculty at FHS and deliberations of the CRPH Committee, it was suggested that focusing on specific topics would have a greater chance of building regional linkages than organizing workshops with more generic goals, as was initially proposed. Thus, CRPH organized research activities that have reached out to regional colleagues. These have addressed topics that were identified as having particular relevance in light of the disease burden profile in the region, the fit with ongoing projects at FHS, the opportunities for co-funding and for synergies with other activities, and the potential for networking with regional and international colleagues.

- **Youth health and well-being in the Arab region:** Considering FHS’s strengths in research on youth health and wellbeing, a workshop was organized in Beirut in October 2014, to present on-going research, to identify research gaps and priorities, strengthen existing collaborations and encourage new networks to study the health of Arab youth (https://www.aub.edu.lb/fhs/Documents/research_practice_policy/centers_crph/Health%20and%20wellbeing%20of%20Arab%20youth.pdf). The workshop brought together 25 researchers from Lebanon, Jordan, Egypt, Bahrain, Palestine, Saudi Arabia, the United Arab Emirates, as well as the US and France. Participants reviewed what is known about health outcomes and conditions, assets and protective factors among Arab youth, and discussed the challenges and lessons learned from public health interventions among young people. Recent research findings on Arab youth health and wellbeing were analyzed with a contextual lens, and future research priorities were identified. The cost of travel, accommodation and preparation of the workshop was funded by IDRC funds.
- **Unhealthy weight in the Arab region:** CRPH organized a session at the 7th ACCESS International conference on health in Arab communities (1-7 March 2015, in Muscat, Oman) which brought together presentations on regional indicators of unhealthy weight, their social and gender determinants, as well as analyses of recent survey data on the subject. The session was among the most successful at the conference. Further exchanges have taken place among participants at the workshop. Funding from IDRC was used to contribute to the cost of travel to the conference and accommodation, with the balance covered by a scholarship fund from conference organizers.
- **The Digital Solutions initiative:** As part of its multidisciplinary mandate, and in an effort to incubate new research ideas around the use of cutting edge technologies in public health, exchanges were initiated with engineers and computer scientists at AUB and Newcastle University (NU). The latter has a strong digital civics lab and an interest in applying user-centered design methodologies to public health, with a focus on humanitarian settings. As a result, CRPH and CPHP initiated several research capacity building and research activities in the use of digital technology in public health practice and research which included two workshops (with costs shared between CRPH and CPHP

using IDRC funding). Collaborators at the University of Newcastle also contributed additionally towards the costs of the workshops.

1. The 1st workshop (February 2015), was in the form of a small experts meeting designed to present international experience in the use of digital technology in public health; share information about local and regional initiatives that utilize technology in public health programs; and provide a venue to identify the needs and interests of participants' organizations for further work on this topic.
2. The 2nd workshop (April 28-29, 2015) brought together approximately 40 participants, from Lebanon, the region (Jordan, Kingdom of Saudi Arabia, Egypt), and internationally. The regional participants included some who had been at the youth workshop - this was part of the center efforts to optimize networking and facilitate exchanges. The workshop was designed to introduce participants to the use of digital technology in public health and lessons learned from this, and provide a venue for the establishment of research collaborations. A half-day session was also organized after the April workshop to offer training on methodological considerations for the establishment of panel surveys, with special attention to the feasibility of establishing panel surveys to study youth health in the Arab region.

▪ ***Capacity building in research methods and rigorous data collection and analyses***

CRPH staff have conducted several training workshops for faculty, research assistants and students from FHS departments in questionnaire design, Open Data Kit for data collection, as well as data cleaning and data analysis. CRPH has made available data-collector training materials on the Ethical conduct of human research (in Arabic) to FHS faculty members, as well as Qualitative data analysis software (Dedoose and NVivo). CRPH tablets have been used as a resource by several FHS research projects and student projects, with technical support and capacity building provided by CRPH staff.

2.4. Fostering exchanges and collaborations

CRPH held a conference entitled "No one left behind: A feasible goal for the health-related Sustainable Development Goals in the Arab region?" (Beirut, June 2017) which focused on the health-related targets of the SDGs (Please refer to Annex 1.3 and 1.4 for corresponding agenda and list of speakers respectively). The conference, attended by more than 120 interested professionals and researchers, brought together 19 experts from the region and around the world to discuss the feasibility of reaching health-related targets of the UN's SDGs, with a focus on the Arab world. The conference was fully funded by the IDRC grant including support for travel, accommodation, catering, and other conference costs.

The conference was the culmination of a series of efforts to mobilize regional researchers around the health-related SDG agenda for the Arab world. Various new ideas around monitoring and implementing the SDGs in the Arab region were discussed, including open data initiatives, unified regional surveys, and innovative financing mechanisms to ensure universal health coverage. Participants had the chance to network, and several collaborations were formed or consolidated, including between CRPH and INNTA (Tunisia)

researchers, who then put together a proposal in response to the IDRC call on Food Systems for non-communicable disease prevention in MENA.

3. FOSTERING SYNERGIES AMONG RESEARCH, KNOWLEDGE TRANSLATION AND PRACTICE

During the first year of the IDRC grant, regular meetings were scheduled between the director of CRPH and the directors of the other two centers at FHS: K2P and the CPHP, with the goal of discussing how the 3 centers can work jointly to increase the synergies among research production, translation of research into policy, and applying research.

Synergies and collaborations among the three centers have gradually developed. All projects initiated at CRPH have been based on inputs as well as active consultations with faculty members in different departments and the other two centers. Several joint initiatives have resulted from the effort to integrate research, policy and practice. IDRC support was important for these initiatives, which allowed us to garner additional funding from the Iodine Global Network and UNICEF for the policy work, and Newcastle University for the ArabsDigPH initiative (described below).

Synergies established with K2P and CPHP have been maintained and built upon, and various follow-up activities and outputs have resulted from these collaborations.

3.1. Building synergies with CPHP

3.1.1. Arab Digital Public Health Initiative (Arabs DigPH)

In collaboration with CPHP, a joint initiative on Arab Digital Public Health Initiative (Arabs DigPH) was initiated under the IDRC grant. The Arabs DigPH comprises several activities including:

- Two workshops were hosted on Digital Public Health in the Arab World, jointly by CRPH, CPHP and Newcastle University. IDRC support was essential in the support of these workshops that initiated the subsequent activities (described above).
- A research project entitled “*Allo Sohtik*” with Syrian refugee women which explores the use of digital technology as a health promotion and outreach tool to improve access and utilization of antenatal care services by Syrian refugees in Lebanon. Using participatory design approaches, a mobile-phone based radio health show was developed and tested in remote refugee settlements to enhance women’s health education and communication with healthcare providers. Technical tests as well as four pilot shows have been conducted as proof of concept. The formative research study has already been published http://www.designandwellbeing.com/papers/syrian_refugees.pdf. Preliminary results have recently been published and led by a PhD student that was jointly supervised by CRPH and Newcastle University faculty (<http://dx.doi.org/10.1145/3083671.3083690>) and (<https://ehps.net/ehp/index.php/contents/article/view/2472/19>) . A review paper was

co-written with CPHP and published in the *Journal of Public Health Policy* (<https://doi.org/10.1057/s41271-016-0040-1>).

- These collaborations with Open Lab at Newcastle University, led to the awarding of two PhD fellowships to graduate students who were based at CRPH and CPHP. They both worked on establishing the Arab Digital Public Health Initiative and are now registered as PhD students at Open Lab, with doctoral research conducted in collaboration with CRPH and CPHP around digital technologies to address health issues in Lebanon.
- Based on experience from the ArabsDigPH project, the CRPH Research Associate (Dr Chaza Akik) was invited to attend a technical workshop to finalize the Global Digital Health Index, at Rockefeller Foundation's Bellagio Center (September 2017). The Global Digital Health Index (GDHI), hosted by the WHO, is an interactive digital resource that tracks, monitors and evaluates, and scores the effective use of digital technology for health across WHO Member States. This was followed up with a meeting with the Lebanese Ministry of Public Health (MOPH) for Lebanon to potentially pilot the GDHI. Additional follow up led by Dr. Akik included meetings in Stockholm in May 2018 with a research team led by Dr. Madeline Balaam (previously at Open Lab, Newcastle) at the Royal Institute of Technology to discuss dissemination of papers and follow-up on future projects under ArabsDigPH (with travel funded by IDRC).

3.1.2. Humanitarian Engineering Summer and Winter schools

As part of discussions to consolidate the ArabsDigPH initiative, with CPHP and the Maroun Semaan Faculty of Engineering and Architecture (MSFEA), the idea of a School on Humanitarian Engineering was developed, and following a first pilot in the Summer of 2017, a joint Winter School course, between FHS and MSFEA was developed and institutionalized with credit allocated through both faculties to students registering this course (Please refer to Annex 1.5 for course syllabus).

This initiative was developed in collaboration with the Departments of Biomedical Engineering and International Health at Boston University and the Center for Bioengineering Innovation & Design (CBID) at Johns Hopkins University, and has now been offered four times. The course has enabled engineering and public health students to join efforts and expertise to create innovative solutions for health challenges faced by refugee populations. A syllabus was developed and includes a taught component and a “Hackathon” component. FHS and MSFEA continues to work together to develop the ArabsDigPH initiative, leading to a program of teaching, research and practice on “Engineering Health Innovations for Human Wellbeing and Global Development”.

3.2. Building synergies with K2P

CRPH staff have worked together with K2P to translate research evidence to policy on three topics: salt iodization to ensure optimal iodine nutrition (http://www.ign.org/newsletter/idd_may16_lebanon_1.pdf), support for breastfeeding and school policies to reduce childhood overweight and obesity. These topics were chosen in light of opportunities for collaboration and perceived needs for policy support.

3.2.1. Salt iodization

- A policy brief was co-led by CRPH staff ([https://www.aub.edu.lb/k2p/Documents/K2P%20Policy%20Brief Iodine June14 2016.pdf](https://www.aub.edu.lb/k2p/Documents/K2P%20Policy%20Brief%20Iodine%20June14%202016.pdf)) who also attended and co-wrote the dialogue summary on salt iodization to ensure optimal iodine nutrition. This led to the issuing of a Ministry of Public Health decision pertaining to law 178/2011 on salt iodization and monitoring. Follow-up workshops to implement the monitoring protocols were conducted with the Department of Nutrition and Food Sciences with funding from UNICEF and the Iodine Global Network.
- The CRPH team contributed to the external monitoring of the policy, through monitoring visits (visits to salt factories in Tripoli in 2017).

3.2.2. Infant and young child feeding

- This collaboration with K2P built on research conducted as part of Chaza Akik's doctoral studies, which was used to inform a joint Briefing Note (<https://www.aub.edu.lb/k2p/Documents/Final%20K2P%20BN%20Breastfeeding%20English%20August%2025%202015.pdf>) and a Policy Brief on protecting breastfeeding in Lebanon.
- Building on this work, CRPH staff got involved in the technical advisory group to the Ministry of Public Health for the development of the first National policy on infant and young child feeding in Lebanon, which was launched in September 2018 along with a 5-year implementation plan.

3.2.3. Childhood overweight and obesity prevention

- Informed by research conducted on the CRPH initiated *Healthy Kitchens, Healthy Children* study, and the literature review conducted in preparing the proposal to the IDRC Food Systems call and the 3R review on childhood overweight, CRPH staff are contributing to the K2P Impact Team as Content Experts on the subject of childhood obesity prevention in schools.

3.2.4. Others

- CRPH staff also attended and presented at the IDRC funded workshop entitled *Towards a global research agenda on governance, ethics and conflicts of interest from corporate interactions in public health research, practice and policy*; bringing lessons learned from CRPH research studies to the discussion.

REFLECTION

The IDRC grant allowed CRPH to achieve its mission to support multi-disciplinary regional research, and to link with public health programs and policies. Under the IDRC grant, the center defined its mandate in a changing research environment to provide a convening and incubating platform to critically evaluate regional research, and bring in new research ideas and methodologies. IDRC funds were leveraged to build research capacity and attract research funding ensuring that CRPH is maintained as a vibrant and active research center.

The activities initiated under the IDRC grant were able to assess the specificities of the Arab world and compare these to other regions, as well as investigate inequities within and across countries of the region. This research will be important in identifying future priorities and tracking progress towards the SDGs.

The flexibility of the grant allowed the center to take risks (for example exploring collaborations with very different disciplines such as Engineering and Computer Science), and to think critically and outside the box. The flexibility meant we were able to adjust planned activities according to consultations with faculty members and collaborators to better suit identified needs and priorities.

The linkages formed with the other two centers were pushed by the grant and although few truly 360 degree projects emerged, it facilitated several bilateral initiatives, which have forged the way for upcoming plans for a 3-center collaboration with UNICEF.

II. Research networks

1. Reproductive Health Working Group (RHWG)

Reproductive Health Working Group (RHWG), an independent and interdisciplinary network of researchers and practitioners in the Arab region and Turkey, has been engaged in advancing the field of reproductive health in the region through conducting research and building regional health research capacity for 30 years. Focusing on providing scientifically generated evidence to improve, change or inform policies and practices in the area of women's health, RHWG engages in across- and in-country investigations of issues that are relevant and important for health system development in the region. Governed by a coordinator and six regional Consultative Committee (CC) members, consisting of long-standing RHWG members, the RHWG's membership is open to researchers and practitioners in the field of women's health in the Arab region and Turkey. RHWG members participate actively in conceptualizing, formulating, and implementing RHWG current and future objectives.

The RHWG objectives for the five-years under IDRC grant beginning June 1, 2013 were as follows:

1. Expand and sustain the RHWG network, including increasing inter-disciplinary research innovations in women's health, promoting regional exchange, and fostering networking and capacity-building opportunities.
2. Inform and influence policy- and decision-makers through regional and national policy investigations and analyses particularly concerning gaps in implementation of a comprehensive reproductive health approach.
3. Foster the production of locally relevant, paradigm-challenging evidence.
4. Nurture the new generation of regional researchers through mentoring young researchers and practitioners.

ACTIVITIES

Below is a summary of activities achieved to meet the above objectives:

I. RHWG annual meetings

RHWG have been organizing annual meetings, which were always attended by researchers and practitioners with very different backgrounds and a very positive part of the interaction was the exchange of ideas among diverse participants and disciplines. The presence of international keynote speakers and interested observers at the RHWG annual meetings has always helped to place the themes discussed at RHWG activities or those addressed in RHWG research at a regional level within an international perspective. For all meetings, the CC members and the network manager would put much effort for preparing call for abstracts, selecting a keynote speaker, communicating with members, soliciting and reviewing abstracts and planning the meeting. The RHWG major meetings that took place during the IDRC funding cycle are:

1. RHWG meeting in Gammarth, Tunisia (July 7-9, 2012): This was the first time the RHWG meeting had ever been held in North Africa, reflecting the efforts to expand the network's membership in North Africa. This meeting was covered by a no-cost extension to the longstanding grant from the Ford Foundation for the RHWG, while

all expenditures since January 2013 for meetings-related costs have been financed by the IDRC grant.

2. RHWG meeting in Muscat, Oman (January 27-29, 2014): RHWG submitted a grant application in collaboration with the Ministry of Health to the Oman Research Council, a governmental body, to support the costs of the meeting. This was the first time the RHWG meeting had ever been held in a Gulf country, reflecting the efforts to expand the network's membership to that sub-region (Please refer to Annex 2.1 for Agenda of this meeting).
3. RHWG meeting in Dhour Choueir, Lebanon (June 13- 15, 2015)
4. RHWG meeting in Broumana, Lebanon (July 13-15, 2016): while originally planned to take place in Turkey, travel restrictions for Syrians and Egyptians to travel to Turkey meant this was not possible.
5. RHWG meeting in Amman, Jordan (July 11-13, 2017)

II. Consultative Committee meetings

Members of the RHWG CC met several times during the IDRC grant period - either directly after the annual meetings or separately to plan for the forthcoming meetings and other activities - as per below:

1. in Tunisia: following the 2012 annual meeting
2. in Beirut (March 2013): to discuss development of new research themes and plan for a meeting in Oman in January 2014
3. in Beirut (June 2013): to plan for the meeting in Oman in January 2014
4. in Oman: following the 2014 annual meeting
5. in Beirut (November 2014): to plan activities of the network for the coming year
6. in Beirut (January 2017): to plan activities of the network for the coming year and the meeting in Jordan in July 2017.
7. in Beirut (October 2017 and March 2018): to plan for the launch of the special issue of *Reproductive Health Matters* (details below) and celebration of 30 years of the network and strategically plan for RHWG future.

III. Regional advocacy tool

The RHWG was approached by the international NGO, Development Alternatives for Women (DAWN), to engage in drafting a regional advocacy tool by the RHWG on progress and barriers to implementation of the International Conference on Population and Development (ICPD 1994) agenda in the region. The RHWG team conducted a review of progress over 20 years in implementation of program of action of ICPD in the region, drafted country reports (for Egypt, Lebanon, Morocco, Oman, OPT, Syria, Tunisia and Yemen), and consolidated it into one regional report (https://www.dawnnet.org/sites/default/files/resources/20150615_RAT_MENA.pdf).

IV. RHWG Seed grants

A significant amount of time and energy has been devoted to creating transparent mechanisms for allocating research funds under the IDRC grant. Clear guidelines and criteria for selection for funding under the grant - including for regional exchange, theme meetings and seed grant - had been developed and disseminated to all network members. The network has previously allocated seed grants and funds for regional exchange, and the topics have been based on expressed research interests of network members. The RHWG

has not, in the past, actively initiated joint research after developing its own research agenda. In this respect, the IDRC funding has enabled a new exciting opportunity for the group. Several seed grants have been awarded across the life of the project:

- a. two Palestinian researchers addressing the aim of exploring the impact of Israeli-imposed measures and restrictions related to family reunification on Palestinian family health and well-being.
- b. a qualitative study on perceptions about fertility of Syrian refugees in Lebanon (<https://doi.org/10.1080/09688080.2017.1378532>)
- c. a Palestinian researcher to allow time-release from her commitments to write up publications from the Palestinian study which points to areas where quality of health care in the main referral hospital in the West Bank need to be improved.
- d. A review in Syria of the PAPFAM (Arab League) Syria survey

V. Research Under New Themes

The theme of “women, health and humanitarianism” emerged as a key theme of the RHWG given the enormous scale of conflict and displacement occurring in the region. Several panels in each RHWG meeting have been devoted to presenting research on this issue. A team has been assembled on planning an intervention study to address the serious problem of early marriage among both Syrian refugees in Lebanon and internally displaced young women in Syria. Funds under this theme were devoted to employing a post-doctoral fellow at FHS of Syrian nationality (Dr. Rima Mourtada) who has been involved in several studies on reproductive health among Syrian refugees, including a qualitative study on early marriage among Syrian refugees, a study funded by an RHWG seed grant on fertility among Syrian refugees. She has worked as study coordinator on that planned intervention study.

VI. Special issue of an International journal on RHWG research

Following the RHWG meeting in Lebanon in June 2015, the CC members decided to approach the international peer-reviewed journal, *Reproductive Health Matters*, to propose a special issue of reproductive health research on the Arab region and Turkey by network members. The purpose was to showcase in particular research produced under seed grants and that had been presented at RHWG meetings. The proposal was accepted and the process that has been developed – with senior mentors advising authors how to improve their papers before the papers are submitted for international peer review – aimed to maximize the likelihood of publication and provide guidance in a non-judgmental manner. This was especially important for younger researchers who did not have experience writing for publication.

VII. Information sharing and dissemination

- The final reports of RHWG annual meetings - including a description of the presentations and a summary of the plenary discussions following each panel - have been circulated to all RHWG members and will also be posted on the password-protected website when that is arranged.
- The completed regional advocacy tool on implementation of the ICPD agenda is available on the DAWN website for international dissemination. The potential for translating the report into Arabic is also being explored. The RHWG coordinator will present its results at an international meeting at which the other regional reports will be presented. There are plans to disseminate this report broadly within the

region. RHWG has also begun to explore collaboration with the K2P center at FHS/AUB to assist in the knowledge translation of this work.

- A *Lancet* commentary entitled “Importance of research networks: the Reproductive Health Working Group for Arab countries and Turkey” has been published as part of the special series on “Health in the Arab World: a view from within” ([https://doi.org/10.1016/S0140-6736\(13\)62704-X](https://doi.org/10.1016/S0140-6736(13)62704-X)). It is basically a short account of the network emphasizing the importance of research networks during periods of political uncertainty and transition.
- “Gender Bodies and Reproduction in the Arab Countries and Turkey” (<https://www.tandfonline.com/toc/zrhm20/25/sup1>): a special issue of the international journal, *Reproductive Health Matters*, which includes 11 papers (2 of which are produced by seed grants awarded by the network).
- A manuscript produced by seed grants awarded by the network was published in a peer-reviewed journal, *Women and Birth* (<https://doi.org/10.1016/j.wombi.2015.08.008>).
- Review of reproductive health policies and legislation in selected Arab countries (Not funded by IDRC): completed by two members of the RHWG upon a request by the Middle East and North Africa Policy Forum (<https://arabstates.unfpa.org/sites/default/files/pub-pdf/Sexual.pdf>). This extensive report was disseminated at two major regional meetings in Cairo, Egypt.
- Review of Abortion-related legislation in region (Not funded by IDRC): completed by RHWG coordinator (in 2015) upon a request by WHO-Geneva.

VIII. Regional exchange

One regional exchange visit took place namely with the visit of a Turkish researcher to the Occupied Palestinian Territories to move forward towards publication of research funded under the RHWG in five countries (based on seed grants in each setting) on the quality of life of women with breast cancer in the region.

IX. Contribution to study on research networks as part of collective Monitoring and evaluation (M&E) framework

A focus of the M & E framework for the overall IDRC grant to FHS has been a question about the added value of research networks. The RHWG, as the oldest research network hosted at FHS, has been a focus of this research. Members of the network have been interviewed for that study.

X. Celebration of 30th anniversary of network and launch of special issue

A major event was organized by the RHWG to celebrate the 30th anniversary of the RHWG network in March 2018 at AUB. This was also an opportunity to launch the special issue of the *Reproductive Health Matters*. A news story on and pictures from the launch are available on the AUB website: (<https://www.aub.edu.lb/fhs/news/Pages/rhwg.aspx>).

XI. RHWG Website revamping

A website for the RHWG exists (www.rhwg.org) and is updated, but is a static, non-interactive website. An Egyptian consultant was hired and completed a revamped design of the website to make it more interactive, attractive and informative. Further work on the

website is envisioned. Once finalized the website will have password protected access for RHWG members so that certain internal documents, such as criteria for funding research projects, can only be accessed by them. This would allow the website to serve a wider public dissemination role while also serving the needs of RHWG members and would ease the sharing of information.

XII. Strategic planning for the future of the RHWG

A series of steps were achieved during the last year of the IDRC funding in terms of planning and fundraising for the sustainability of the network in the next stage, including:

- a. Detailed discussion among the CC members via email and in two face to face meetings in the fall of 2017 and in March 2018
- b. Hiring a consultant to help gather relevant material and to help the CC and coordinator to prepare a strategic plan and possible scenarios for the future
- c. A survey of RHWG members online, fielded on SurveyMonkey and sent to all members who had attended at least one meeting in the last 5 years; 42 detailed responses were received and analyzed.
- d. A one-day consultation in person with selected members, after the launch of the special issue of the *Reproductive Health Matters*, followed by a one-day meeting of the CC to plan a strategy to purposely develop a transition plan in terms of governance of the network to involve explicitly a younger generation of researchers in the Arab countries and Turkey.
- e. A process of developing a proposal for future funding was developed, and consultations started with potential donors. The coordinator was invited to attend a meeting of the Arab Council for Social Sciences in Amman in April 2018 at which she met other so-called “research infrastructure organizations” (such as the ACSS and the Economic Research Forum) in the region and where the needs and constraints to research capacity building in the region were discussed. A concept paper was submitted to IDRC in the spring of 2018, followed by a more detailed proposal.

OPPORTUNITIES AND CHALLENGES

Having a regional research capacity-building network of such longevity (30 years) in a region that has been historically and continues to be fraught with conflict is a major accomplishment. It is also particularly important that the network addresses the full range of topics included under the rubric of SRH given the increasingly fragmented work on the SRH field both internationally and in the region.

There continues to be sustained interest and commitment to the RHWG as evidenced by the growing numbers of abstracts submitted to the general meetings and the steadily increasing trend in the percentage of newcomers, who are mostly young researchers, to the RHWG meetings. The agenda team has also remarked, as have other participants in the annual meetings, on the increasing quality both of the research and the presentations at the RHWG. The longevity and sustained interest in the RHWG reflect the need by researchers, particularly younger researchers, to find a like-minded research community with whom they can share their research ideas and findings in a non-judgmental atmosphere. This capacity-building role of the RHWG is unique in the region and is particularly important as the region continues to experience political turmoil and when political conflict and other issues have tended to dominate the policy agenda. The RHWG provides an opportunity to reflect on

regional priorities while also providing a voice for regional researchers to contribute to debates internationally within the field. The RHWG remains concerned with building evidence on women's health within its social context focusing on marginalized groups in the region and increasingly focused on the major implications for reproductive health in the region imposed by massive forced migration.

The main objective of the network is capacity building of researchers on SRH in the region. The RHWG coordinator and CC have actively encouraged participation in RHWG activities by younger researchers and particularly those who completed doctoral training outside the region but are returning to work in the region. Experience has shown that they often feel isolated within their own institutional and/or national contexts and welcome participation in a regional research network.

Furthermore, in a region where men predominate at many professional and research groups, the RHWG members are predominantly women. Moreover, there are relatively few opportunities in the region for female researchers - particularly junior researchers - to participate in capacity-building and research exchange. For those living in areas which have been politically isolated (such as Palestinians, Iraqis or Syrians for example) this opportunity is particularly important.

A key constraint experienced was that the part-time coordinator has to manage the demands of coordinating the network's activities among teaching, research and other administrative tasks. The time freed by the IDRC grant did not prove sufficient. While more could be done with more supported time available, this governance arrangement balances capacity to move things forward with the need to create a sustainable and affordable structure. In future, funds in the IDRC grant under 'consultancy' will be used to support the coordinator in specific tasks.

Besides, the major changes associated with the "Arab spring" and their aftermath have affected all regional activities. RHWG members, particularly those of the younger generation of researchers, are facing unprecedented challenges to research in a region affected by wars and political upheaval and increasingly options for employment outside the region are attractive. The ongoing political turmoil in the region makes such a regional network all the more necessary given the isolation and demotivation often faced by researchers in conflict situations. Networks provide a supportive community of peers and can often be a main source of support – academic and moral – for isolated individual researchers.

On the other hand, a new and more interactive network structure is needed, including through online communication, to engage members throughout the year, and not only in connection with particular events such as the annual meeting.

2. Tobacco Control Research Group (TCRG)

Waterpipe tobacco smoking has been seen as a global emerging epidemic to both adults and youth. Tobacco industries chose to focus on youth as a new generation of consumers who can be easily attracted to the innovativeness of waterpipe tobacco. Specific innovative interventions are in high need to curb the spread of waterpipe tobacco smoking among youth. “Testing waterpipe tobacco smoking prevention and intervention (programs) to generate best practices in the region” is a project led by the Tobacco Control Research Group and aimed at reaching tobacco researchers to support, guide and translate their research project results in ways to enhance influence on policy and decision makers at both the institution and government level.

The project objectives as stated in the grant were to:

1. Develop and test waterpipe specific prevention and interventions using a combination of qualitative and quantitative research methodologies.
2. Enhance interdisciplinary regional research through the research network approach.
3. Promote transfer and translation of findings to policy and decision makers

ACTIVITIES

The activities supported by the project – across five and a half years of funding cycles - are summarized below:

I. Planning activities

The research team started by establishing contact with regional partners, soliciting their interest in participating in this regional study and forming in-country research teams. The first International Conference on Waterpipe Tobacco Smoking (October 21-23, 2013; Abu Dhabi) was the forum where the team introduced to regional tobacco control researchers information about the project. By the due date of letters of intent (LOIs) submission (Mid February 2014), a total of 14 LOIs were submitted representing teams coming from Bahrain, Iran, Palestine, Oman, Egypt, Yemen, Jordan, UAE, Lebanon and USA (Arabs living in USA).

II. Proposal writing workshop

Although the initial plan was to invite only shortlisted LOI's, the planning team decided to invite all 14 teams to a writing proposal workshop for the following reasons: the importance of building capacity of interested researchers in the region to do waterpipe research; the potential for some teams to work together on similar proposals; supporting networking for tobacco control. A workshop entitled “Towards Interventions for Waterpipe Tobacco Smoking: A Proposal Writing Workshop” was held on May 12-13, 2014 in Beirut and 2 members from each team were invited to attend (Please refer to Annex 3.1 for Agenda of this meeting). The objectives of the workshop were to: i) Support and strengthen the network of regional researchers who are interested in tobacco control and ii) Bring together everyone to work together to building solid research protocols. Following the workshop, the teams revised their work and a total of 7 research proposals were submitted for consideration for funding, out of which 4 teams were selected based on the reviewers rating and comments. Selected teams were then approached to start the sub-contract development process. All the research teams signed the subcontracts with AUB between

the period of March 2015 and June 2015. Selected teams' institution(s), principal investigators (PIs), projects' titles and amounts funded are summarized below:

Team leaders	Institution	Project	Amount funded
Ramzi Salloum	University of Florida Ain Shams University; American University of Beirut; Arabian Gulf University; Birzeit University; Dubai Medical College; Jordan University of Science and Technology; Mansoura Medical School; University of Jordan; Zayed University	Waterpipe tobacco smoking among university students: Testing policy and prevention tools using a discrete choice experiment (For final progress report, please refer to Annex 3.2)	68,000 USD
Aya Mostafa Kamal ElDin	Ain Shams University	Pictorial health warnings and waterpipe in Egypt: Effectiveness in encouraging cessation and discouraging initiation (For final progress report, please refer to Annex 3.3)	59,168 USD
Randah Hamadeh	Arabian Gulf University	Effectiveness of an educational intervention for health professional students on waterpipe tobacco smoking in Bahrain (For final progress report, please refer to Annex 3.4)	11,960 USD
Sukaina Alzyoud	The Hashemite University	School Based Waterpipe Smoking Cessation Intervention Program among Jordanian adolescents (For final progress report, please refer to Annex 3.5)	60,423 USD

III. Developing waterpipe specific interventions

As a result of the IDRC funds over 6 years, 4 teams which were granted seed funds developed waterpipe specific interventions and two of them used both quantitative and qualitative methodologies. All 4 teams have completed their research projects after they were guided on how to shape their proposals and interventions through a long process and they are now in the dissemination phase.

IV. Enhancing interdisciplinary regional research

This was achieved through a number of various approaches:

- a) One main outcome of the proposal writing workshop is that researchers from different countries and multi disciplines teamed up and worked on one unified research proposal; this team included researchers from Palestine, Lebanon, Jordan, United Arab Emirates, Bahrain and Egypt and was led by regional tobacco researcher, Dr. Ramzi Salloum, based in the United States, University of Florida.
- b) The International Conferences on Waterpipe Tobacco Smoking were always seen as an opportunity window to strengthen the relationship between regional researchers;
- a) A regional networking meeting at the WCTOH in 2015 brought together interested tobacco control researchers who proposed to work on various strategies to connect. Based on that, Public Health in the Arab World – Tobacco (PHAW-Tobacco) list was created in addition to two google spread sheets on potential tobacco research funding in the region and tobacco policies and level of enforcement were shared with this list. The information is accessible and available to all those in the list thus creating a knowledge network among different disciplines of regional tobacco interested researchers. Unfortunately, only the PHAW-Tobacco list has been active as the two google spread sheet have not been filled with any of the contacted researchers. The PHAW-Tobacco list is currently being used to share existing and new research on tobacco as well as abstract submission opportunities regionally and internationally.

V. Knowledge transfer and translation activities

- a) TCRG organized a dissemination workshop entitled “IDRC 2nd Regional Waterpipe Tobacco Smoking Research meeting: Findings and Dissemination” (March 1-2, 2017; Beirut). This workshop was a platform for the four teams to share their findings, challenges and future dissemination activities and get feedback on analysis, work jointly on manuscripts, and discuss potential strategies for transferring and translating findings to policy and decision makers (For workshop minutes, please refer to Annex 3.6).
- b) Transfer of findings was also promoted by the participation of the researchers in international conferences and presenting their findings (for example: APHA 2015 conference, ENSP 2017 conference, 3rd International Conference on Waterpipe Tobacco Smoking; WCTOH 2018) (For list of presentations, please refer to Annex 3.7).
- c) Findings from the Egyptian research project led by Dr. Aya Mostafa Kamal ElDin, Ain Shams University are being translated to policy and decision makers to draft the modified technical regulations for Pictorial Health Warnings on tobacco products, accessories, cafes, and public places especially those for waterpipe.

- d) Publications: evidence generated from this project has been translated into published peer reviewed articles (For list of publications, please refer to Annex 3.8).

OPPORTUNITIES AND CHALLENGES

The project helped in building up the research capacity of the regional tobacco researchers who were funded to execute their research projects in their own countries. These researchers were guided and provided tips and guidelines on their methodology processes, statistical analysis, writing manuscripts and dissemination strategies.

Building on the TCRG achievements and the work done by FHS in the field of Waterpipe Tobacco Smoking research, Dr. Rima Nakkash, the coordinator of the TCRG, and Associate Director Knowledge to Policy (K2P) Center and the WHO Waterpipe Tobacco Smoking Knowledge Hub, was granted by the IDRC 800,000\$ to lead a four-year multi-country study (Lebanon, Jordan, Palestine and Egypt), on the different economic aspects of waterpipe tobacco smoking. Entitled "Eastern Mediterranean Consortium on the Economics of Waterpipe Tobacco Smoking (ECON-WTS): Capacity Building and Knowledge Translation", the study aims to estimate the price elasticity of demand for waterpipe tobacco smoking (WTS) and the cross-price elasticity between cigarettes and WTS and model the impact of fiscal policies for waterpipe tobacco control on WTS rates, health care costs, and public revenues. It aspires to develop a toolkit to guide researchers conducting analyses on the economics of WTS, and develop and evaluate strategies to disseminate knowledge about the economic impact of waterpipe tobacco control policies to government agencies, policymakers, and advocates (<http://www.aub.edu.lb/fhs/news/Pages/economic-aspects-of-waterpipe-tobacco-smoking.aspx>).

Throughout the project period, challenges were faced at the administrative level from both AUB and the funded institutions, which caused some delays in subcontract development and signature, processing the payments, the reporting process and closure of financial reports. Variations in institutional systems and policies were the main reason behind these delays where some institutions had no conflict of interest policies and some had.

REFLECTION

"Testing waterpipe tobacco smoking prevention and intervention (programs) to generate best practices in the region" project aimed at reaching regional tobacco control researchers to support, guide and translate their research projects' knowledge that will influence policy makers at both the institution and government level. The main objectives of the project were to: (1) Develop and test waterpipe specific prevention and interventions using a combination of qualitative and quantitative research methodologies, (2) Enhance interdisciplinary regional research through the research network approach and (3) Promote transfer and translation of findings to policy and decision makers. This project supported Rima Nakkash as a PI to build a good working relationship with tobacco control researchers in many countries in the EMR. It came at a good time when funding to support and build evidence on effectiveness of waterpipe tobacco smoking policies was much needed in the region. It provided an opportunity for like-minded researchers to share and discuss research questions and research methods. The process included contributions of AUB tobacco

control research members including other researchers from within. The project helped in building up the research capacity of the regional tobacco researchers who were funded to execute their research projects in their own countries. These researchers were guided and provided tips and guidelines on their methodology processes and statistical analysis. The project served as a platform for regional tobacco researchers to network and communicate, opening an opportunity to collaborate and work together. This has proven as successful as evidenced by the outputs generated from this project such as published peer reviewed articles and presentations in international conferences. This relationship continued in another collaboration beyond this project. Few of the researchers that worked together were granted another fund to work together on the topic of waterpipe tobacco economics.

3. Agriculture, Environment, and Health Network (AEHN)

The Agriculture Environment and Health (AEH) Network (also named *Thimar*) funded by the IDRC has presented unique opportunities for junior scholars in Arab countries to engage in path breaking research in their fields. The research produced by members of the AEH Network span the geographies of Yemen, Palestine, Lebanon, Jordan, and Egypt and encompass a wide array of methodological and epistemic approaches to knowledge production and dissemination. Support to AEH Network members have helped produce a master's thesis, a documentary video, a horticultural library, presentations, research projects, and research articles. The diverse and vibrant research outcomes of AEH Network participants demonstrates the capacity, interest, and commitment to uncover and tell the necessary stories defining rural and agrarian experiences in the contemporary Arab world. For a list of AEHN outcomes, please refer to Annex 4.1.

Yemen

With funding support from the AEH Network, junior scholar 'Ammar Al-Fareh conducted a media analysis of national news outlets in Yemen and their coverage of rural development issues. Al-Fareh's research concluded coverage of these issues was inconsistent among national print and broadcast media, reflecting an absence of rural issues in the national discourse. His research identified several featured programs that sought to help rural people acquire knowledge and skills to improve agricultural productivity and conserve traditional practices. Noticeably absent from media coverage were conversations of women's issues as a development priority. Al-Fareh's work is one of very few analyses of Yemeni broadcast and print media, presenting a unique vantage from which to reflect on and improve the representation of rural issues within the national discourse. This research culminated in a master's thesis from the Gender Development Research and Studies Center at Sanaa University. Al-Fareh completed his MA thesis and was awarded the degree in January 2018. Al-Fareh's achievement is even more significant given the widespread realities of armed conflict in Yemen during the period of his research.

Palestine

The AEH Network has supported anthropologist Vivien Sansour's brilliant project, the Palestinian Heirloom Seed Library, which is conserving indigenous seed-varieties and protecting local horticultural traditions and knowledge in the Occupied Palestinian Territories. The seed-library preserves the genetic diversity of local, drought-resistant crops, and (in her own words) "[keeps] a culture alive". Sansour's project is simultaneously an ecological resource, a teaching space, and an artistic installation that provides immense wealth to the communities surrounding Beit Sahour, the area where the seed library is located. The Israeli occupation has had consequences for the traditional agricultural practices of Palestinian farmers, particularly with the encroachment of industrialized and invasive farming practices in the Israeli Settlements and the theft of water rights and access from occupied Palestinian communities. Some of the crop varieties archived in the seed library require almost no irrigation, as thus are resilient in the face of climate-change driven draughts and the water scarcity already facing Palestinians under occupation. Sansour's project is a form of resistance against the daily oppression of the occupation and industrial

agriculture, which, in her words, is “destroying the soil and destroying the health” of Palestinians.

See documentation of her work at:

Alaraby: <https://www.alaraby.co.uk/english/indepth/2018/2/8/palestines-seed-library-finds-fertile-ground-for-forgotten-fruit>

And

Rising Up, “How one Palestinian is saving her agricultural heritage through seeds”: <https://vimeo.com/252964765?ref=fb-share&1>

Lebanon

AEH Network scholars Karim Eid-Sabbagh and Paul Cochrane collaborated to create the documentary, *We Made Every Living Thing from Water*, which has explored the political economy of water resources in Lebanon. The Documentary has had massively successful distribution and engagement in the country. Since its first screening in a packed auditorium at AUB’s Issam Fares Institute in February 2018, it has been shown at events at the London School of Economics’ Middle East Center and Liverpool University’s Europe in the World Center as well as various smaller venues in Beirut and surroundings, usually followed by interventions by one or both directors. In the framework of the BAFF extramuros programme, the documentary was shown in 16 universities, 14 cultural centers, and over 3,000 schools during the month of November 2018. The documentary received positive media coverage in various Lebanese newspapers such as the *Daily Star*, *L’Orient le Jour*, and the *Beirut Report*, among others. In early 2019, the documentary has also been shown twice on the Lebanese television channel *Al Jadid*. The success of Eid-Sabbagh and Cochrane’s documentary demonstrates the power of film and its potential reach beyond traditional scholarship and policy writings. The film is available for free online viewing on www.athimar.org or on YouTube in English (<https://youtu.be/reJEh0jM5-8>) and Arabic (<https://youtu.be/wO9yfG6H1Ws>) or on Vimeo in English (<https://vimeo.com/259600292>) and Arabic (<https://vimeo.com/285329026>).

The AEH Network has also been instrumental in supporting a path breaking study on child labor among adolescent Syrian refugees living in Lebanon. This research has documented the living and working conditions of these children in Lebanon’s Bekaa Valley. This documentation has demonstrated the harms experienced by these communities and the degrees of neglect by the national and international response. The research, led by Dr. Rima Habib, has prompted conversations in national forums around the necessary legal, policy, and practice changes needed to protect this vulnerable class. Please see publication at: <https://gh.bmj.com/content/bmjgh/4/1/e001122.full.pdf>

Bebnine revisited:

The AEH Network has also supported a follow-up study in Bebnine, an agricultural Lebanese town in northern Lebanon that has been plagued with decades of instability,

underdevelopment, and government abandonment. This research study, led by Dr. Rima Habib, explored the environmental health infrastructure in Bebnine which has recently hosted over 20,000 Syrian refugees. The results of this study are currently under analysis for publication.

Jordan

AEH Network scholar Dr. Lucine Taminian has conducted an anthropological study of the food production systems in Jordan. Her research produced a report titled “Restructuring Food Production, Development Project, open-market economy and agrarian value relations: The case of Ghor al-Mazra’s in Southern Jordan Valley” in which she documented the ways in which subsistence farmers have been marginalized by development and modernization projects. Her research showed how declining traditional agricultural practices resulted in a nutritional transition from local food production to canned and processed food, resulting in an increase in non-communicable diseases such as diabetes and obesity. Dr. Taminian’s work has been presented in Jordan and abroad and has received coverage in the local Jordanian press. Dr. Taminian’s is in the process of developing a research article that will be published in an edited volume on war and agriculture in the region. This research highlights the societal harms that can accompany technological changes to food production and distribution.

Egypt

Research in Egypt was facilitated by the American University in Cairo, Social Research Centre. Two project components in Egypt have been completed successfully:

- First, Mariz Kelada has been working to develop and collect a range of materials that have focused on the issues of food production, rural development and local and international food trade. She has searched most available documentary sources in Arabic and English from Cairo and also explored data and graphs relating to food production available from the FAO. While she has encountered familiar difficulties she has managed to successfully collect official public documents, despite difficulty in accessing such data. She has wherever possible linked and triangulated material from official sites to newspaper and NGO material. She also collected material on health and nutrition and explored links between shifts in levels and types of agricultural productivity with differential access to health and rural welfare. Mariz Kelada’s work is guided by Professor Ray Bush who has provided a research report on the same topic for the Thimar website.
- Second, Yasmine Moataz Ahmed, who submitted and successfully defended a high quality dissertation to the University of Cambridge, entitled “Encountering the Egyptian State in Revolutionary Times: a rural perspective”, has begun work on a new research project with the Network. Entitled “The New Health Insurance Law for Egyptian Farmers: A Critical Review”, her research project focuses on the promise and contradictions in the law. Her work comprises both a wide review of policy and field research in an area where Moataz Ahmad has considerable experience and credibility. Thus, in spite of the difficult environment that Egypt has become for field research, the project delivered results on a core issue of rural well-being and the relation of governance to health. Field- as well as desk-research should were

possible for Yasmine Moataz when she returned to the region where she had worked on her dissertation research and where she has very extensive contacts and social credibility. The research was presented in the AEH-organized conference on September 16-18, 2016 (Measures and categories in the production of knowledge about rural transformation in the Arab World). Please see <http://www.athimar.org/>.

REFLECTION

The AEH Network has been instrumental in offering seed funding and mentorship to young scholars who otherwise might have challenges conducting research in their fields. The outstanding contributions of these junior scholars will continue to be featured on the AEH Network's Thimar website (www.athimar.org).

The AEH Network presented a different model of a network than the RHWG and TCRG. It connected to an already existing network of social scientists, anthropologists, agricultural scientists interested in culture and agriculture adding a health component to their research agenda, focused on the health and wellbeing of agricultural workers and their families living in unstable or conflict-affected countries, and adopted qualitative, quantitative, and artistic approaches to investigate issues. Most effective were the production of the 50-minute documentary and the conduct of the largest epidemiological survey ever of working children who are also Syrian refugees. The AEHN will continue to survive within the larger network but the project with the highest probability for continued expansion and impact is that of the Syrian refugee children working in the agriculture sector.

4. Social Science and Public Health

Social Sciences and Public Health research network was proposed as one of the research networks within the Center for Research on Population and Health. The role envisioned for this network was to strengthen the role of social sciences in public health research in the Arab world. This proposed role is integral to the new vision of public health with its emphasis on the social dimensions of public health; and is particularly relevant today knowing the context of the transformative changes that the Arab world is undergoing.

The objectives of this research network were to:

- Review how social sciences are used in public health research in the region
- Identify common themes and challenges
- Propose ways forward

The group met but did not carry out any other activities during the first year of the IDRC project; the team requested to postpone the start of the project for a whole year to start on 01 October 2013, based on a discussion by the Health and Society Group (HSG) on April 23, 2013. The rationale for the postponement is twofold:

1. Need for more time for the project researchers to have clarity on the direction and program of work in the project
2. The group was already late in starting the project and it didn't make sense to start it at the end of the first year of the project, considering the summer recess and lack of availability of researchers over the ensuing months.

However, this research network did not resume its activities at later stages in the project. Instead, the focus of this component has been integrated in other components rather than as a separate entity.

III. Research ideas that the CRPH is nurturing

1. Warfare, Public Health, and the Crisis of the State: (the War and Global Health Working Group)

The War and Global Health Working Group (WGHWG) is an interdisciplinary network of social scientist, public health and medical practitioner working on the intersections of war, medicine, and public health, bringing critical conversations on, and analysis of, contemporary war and its consequences on the health and livelihood of individuals and communities. The team builds on historical, anthropological, clinical and epidemiological frameworks to plot the complex forms of violence and insecurity emerging in conflict and post-conflict settings. While focusing on the ongoing conflicts in the Middle East, the Group is interested in the historical and global processes of warfare and their immediate and long-term effects on humans and environments. The main objectives of the group are:

- 1- Building on interdisciplinary research in the region and globally to develop and work on the theme of war, health and global interventions.
- 2- Organizing conferences and mini-meetings around subthemes and activities developed by the group.
- 3- Supporting ongoing research by scholars and students who are interested in work on the region within the interests of the group.
- 4- Expanding the group as a network of interdisciplinary scholars, with a focus on linking work on health with work and scholarship in the humanities and the social sciences to support a better understanding of the theme and further harness interdisciplinarity in terms of conceptualization, collaboration and research.
- 5- Develop curricula and courses around the themes of the group.

OUTCOME ACTIVITIES

Below are the highlights of the activities of the group and their outcomes:

I. Organization of workshops

Over the period of the grant, the WGHWG expanded with addition of new members living and working in Lebanon. The WGHWG continued holding ad-hoc regular meetings at AUB for local members to discuss research opportunities and writing of grants to support future research and activities of the group. Other than the regular meetings which were held monthly, the group organized mini-workshops around a variety of subthemes. In September of 2011, the first workshop of the Group was held at FHS with invitation of a number of local, regional and international scholars to critically explore the significance and effects of global health interventions within the context of contemporary regional warfare. One main outcome of the workshop was the writing and submission of a commentary for the *Lancet* on global health and global wars since 9/11. While the commentary was not accepted, the work evolved into a larger piece that was submitted to the *Lancet* as part of the Health in the Arab World *Lancet* series, published under the title: *Changing Therapeutic Geographies of the Iraq and Syria Wars* ([https://doi.org/10.1016/S0140-6736\(13\)62299-0](https://doi.org/10.1016/S0140-6736(13)62299-0))

The second workshop took place in Paris on December 2012, bringing together new international scholars and practitioners to examine the question of medicine and public

health in the context of war and crisis. The workshop was funded by the Collège d'Etudes Mondiales through the Chair of Anthropologie & Santé Mondiale, Professor Vinh-Kim Nguyen, who has been one of founding members of the group.

The third workshop of the WGHWG was scheduled for September 1-2, 2013, but was cancelled only days before the arrival of participants due to unforeseen threats of US military intervention in Syria.

On April 2014, the group, with the Reproductive Health Working Group, co-organized a meeting titled “Regional Research on Humanitarianism”. The meeting brought both senior and junior researchers to examine the context of humanitarian interventions in the region. As a follow up, on May 2014, the WGHWG organized a workshop titled “Politics of Humanitarian Research” in lieu of the visit of Professor Didier Fassin, the Director of School of Social Science at the Institute for Advanced Study in Princeton, USA.

On February 2017, the last workshop was organized by the group at the Collège d'Etudes Mondiales in Paris. The workshop brought local, regional and international scholars to explore the relationship between war and the rise of Multi-Drug Resistant Bacteria. The two-day meeting in Paris consolidated knowledge about the main issues and set a research agenda to apply for large international grants, tailoring that to the recent global concerns on Antimicrobial resistance and building on the experiences of local health professionals dealing with war wounds and infectious diseases.

II. Co-organization, with MSF-Belgium (OCB) and IFI, of an International and Regional Conference on the “Changing Ecologies of War and Humanitarianism” (May 4 - 5, 2016)

Efforts by WGHWG members culminated in the organization of a two-day conference in collaboration with *Medecins Sans Frontier* (MSF) and Issam Fares Institute of Public Policy and International Affairs at AUB (Please refer to Annex 5.1 and 5.2 for corresponding agenda and report respectively). Building on the intellectual work of the group, the conference addressed the contemporary challenges facing humanitarian work under the present-day conditions of war and the emerging global health issues. The conference was funded by MSF, with contributions from WGHWG and IFI. The meeting culminated in a number of outcomes, including the publication of a conference report and the engagement of the group with a large number of practitioners from the humanitarian sector. The meeting was also the platform for the launch of the Conflict Medicine Program (CMP) at the AUB—a recognition of the importance of the theme of the group and its work. The CMP became under the directorship of two members of the group, Professors Omar Dewachi and Ghassan Abu Sittah. Building on the conference, CMP signed an MOU with MSF that defines more formally the strategic alliance between the university and the humanitarian organization (<https://www.aub.edu.lb/news/2017/Pages/mema-2017.aspx>). The MOU involves a number of research and capacity building projects that brings interdisciplinary thinking into research and training in conflict and health.

III. Developing curricula around the themes of the group

Work of the group has also been focused on curricula development. During the period of the grant members of the group developed critical modules on the intersection of war and

Global/public for medical and public health students. These modules on health and conflict have been integrated in the following courses at AUB: *Global Health and Social Medicine* and *Global Health and Biopolitics, ecologies of war and Survival in the Middle East* (courses taught by Professor Dewachi).

IV. Organizing the First Global Conflict Medicine Congress (May 11 - 14, 2017)

Under the leadership of Professor Abu Sittah, one of the members of the group, AUBFM organized the First Global Conflict Medicine Congress at AUB. With support from different organizations, the conference brought together scholars and practitioners from across the world to participate in this critical event. While the work of the group was essential in the formulation of the concept note of the conference, members of the group were also very active in presenting in the conference.

V. Supporting inter-disciplinary research that explores the intersection of war and health in the region and creating new opportunities for research and collaborative work

During the period of the grant, members of the group supported in different capacities the following activities and projects:

- a. *Cost of War Project*: Based at Brown University in the USA this project received a wide media coverage by outlets such as Reuters, The New York Times, The Economist and CNN World (URL: <http://costsofwar.org/article/media>)
- b. *The Regional Therapeutic Economy and Access to Healthcare for Iraqis with Conflict-Related Physical Injuries and Disabilities (CRPID project)*: this project maps past and present policy measures that concern access to care for Iraqis with conflict-related physical injuries and disabilities. It sheds light on the role of local and regional decision makers in determining the production, implementation, and management of healthcare policy in the Arab World.
- c. Review of the medical literature on war and injuries in Iraq 2003-2013: through recruiting and working with junior researchers and students at FHS, WGHWG has reviewed the published medical literature produced on Iraq between 2003 and 2013 to analyze the discourses produced and the productive facet of war and conflict in terms of medical knowledge and expertise.
- d. Continuing research into Iraqi medical travelers for cancer care in Lebanon: work by WGHWG has also stimulated new component - a quantitative one - which involved retrieving Hospital Admission Data from AUBMC to further understand the demographics, disease categories and costs that impact Iraqi patients travelling for medical care to Lebanon. The WGHWG has also traced the political economies and etiologies of wounds and wounding in Iraq, partially through admission data of Iraqi patients retrieved from AUBMC.
- e. The WGHWG has actively undertaken research in several areas at the intersections of war and health: local AUB members, in collaboration with AUBMC, have investigated infections resulting from blast injuries and gun-shot wounds from three war zones in Iraq, Syria and Lebanon; and traced the social and political processes involved in the development of multi-resistance.

VI. Inviting skilled researchers and scholars based in the humanities and social-science to AUB

One of the group's objectives, which it continued to pursue throughout the project's period, was to invite skilled researchers and scholars based in the humanities and social-science to AUB to work on the themes of war and health, war and the health system, and therapeutic geographies. The group invited speakers as part of the 60th anniversary of FHS; and to the Workshop with AUB stakeholders on "the Politics of Humanitarian Research".

VII. Knowledge production, sharing and dissemination

The group members have collaborated on several publications, and have produced an important list of diverse outputs, as per the below summary:

- a. Reports: *Cost of War Project* (a project report) and *changing ecologies of war and humanitarianism* (a Conference report)
- b. Conferences and presentations: dissemination of research findings through conferences, academic talks and public lectures in the Middle East, US, and Europe by the group coordinator
- c. Concept note:
 - *Conflict Medicine—a Manifesto*: this concept note has been published in MSF's MSF Analysis and has been translated into Arabic and French and re-published in other venues.
- d. Book:
 - *Ungovernable Life: Mandatory Medicine and Statecraft in Iraq*: by the coordinator of the group which is now published by Stanford University Press (2017).
- e. Publications and Manuscripts: over the project's period, members of the group collaborated on a number of manuscripts.

VIII. Capacity building

This project has built up the research capacity of individuals, especially through supporting graduate students and research assistants. Many of them have been now accepted to graduate programs internationally. WGHWG has also received numerous emails from international students looking for opportunities to work with the group—especially during the summer.

IX. Network expansion and visibility

The WGHWG has significantly expanded to include many scholars and practitioners from the North, South and Middle East. WGHWG has been gaining visibility and new interests for membership. Regularly, PhD students and interested colleagues sent emails to inquire about WGHWG work and request collaboration.

OUTCOMES

Co-organization of workshops and Conferences

- 1- "War and the Therapeutic Geographies of Care" Faculty of Health Sciences, American University of Beirut, September 2011.
- 2- A Walking Seminar on "War and Medicine," *College d'Etudes Mondiales*, Paris, France. December 17-18, 2012:
<https://geographicaliminations.com/2012/12/20/a-walking-seminar/>

- 3- "Politics of Humanitarian Research" workshop with Professor Didier Fassin. Faculty of Health Sciences, American University of Beirut, May 21st 2014.
- 4- "Regional Research on Humanitarianism" joint workshop with the Reproductive Health Working Group. Faculty of Health Sciences, American University of Beirut, April 22-23, 2014.
- 5- "Global Health and the Militarization of Care" International workshop. Faculty of Health Sciences, American University of Beirut, September 1-3, 2013. (Cancelled)
- 6- First Conflict Medicine Congress: <http://mema.aub.edu.lb/48th-mema-first-global-conflict-medicine-congress/>
- 7- Changing ecologies of war and humanitarianism:

YouTube: <https://www.youtube.com/watch?v=QcUZjsaacHk>

Report: https://website.aub.edu.lb/ifi/Documents/events/2015-2016/20160504_msf/20160504_msf_brochure.pdf

Publications and Reports by the PI

Omar Dewachi, Mac Skelton Vinh-Kim Nguyen, Fouad Fouad, Ghassan Abu Sitta, Zeina Maasri, and Rita Giacaman "The Changing Therapeutic Geographies of the Iraqi and Syrian Wars," *Lancet* 383.9915 (2014): 449-457.

Omar Dewachi. The Toxicity of Everyday Survival in Iraq. *Jaddaliyya* (2013).

Omar Dewachi. The Costs of Medical Travel for Iraqis in Lebanon. The Costs of War Project. *Costsofwar.org* (2013).

Dewachi, Omar, Anthony Rizk, and Neil V. Singh. "(Dis)Connectivities in Wartime: The Therapeutic Geographies of Iraqi Healthcare-Seeking in Lebanon." *Global Public Health* 13, no. 3 (2018): 288–97.

Changing Ecologies of War and Humanitarianism: Reflecting on MSF's 40 years of working in conflict." *Medecins Sans Frontier (MSF) and the Faculty of Health Sciences (FHS) and Issam Fares Institute (IFI) at the American University of Beirut (AUB)*. URL: https://website.aub.edu.lb/ifi/Documents/events/2015-2016/20160504_msf/20160504_msf_brochure.pdf

Conflict Medicine – A Manifesto. A conceptual and policy piece published by MSF Analysis, 2016: <http://msf-analysis.org/conflict-medicine-manifesto/>
The piece has been translated into Arabic on the e-zine Jadaliyya: <http://www.jadaliyya.com/Details/33926>

Dewachi, Omar. *Ungovernable Life: Mandatory Medicine and Statecraft in Iraq*. 1 edition. Stanford, California: Stanford University Press, 2017.

In the Media

Andrew Bossone. Sharing the Pain: Moving Healthcare in Warzones. *Nature Middle East* (2014).

Collapse of trust in medical systems prompts Syrians and Iraqis to flee for care more. *The Conversation* UK (2014).

Robert Fisk: Even When Wars end in the Middle East, superbugs and aggressive cancers caused by Conflict fight on (2017) : <https://www.independent.co.uk/voices/middle-east-war-medicine-cancer-superbugs-caused-by-conflict-a7738451.html>

REFLECTION

The seed grant from the IDRC for this theme and the work of the WGHWG have been exemplary. The grant has allowed the PI and team to initiate a critical conversation on health and conflict at the FHS and extend this conversation and network, both regionally and internationally. This has been very generative at the levels of scholarship and practice. In addition to refocusing questions on health through the lens of war and conflict, the group also was successful in bringing broader conversations on global health into the region—presenting a platform for scholarship on global health from the global south. The experience of the group was very organic and was also a great platform for capacity building, as a way for students and young scholars to work with more senior and well-established ones. It would be really very useful in the future for FHS to build on the experience of this working group and its outcomes, to engage with the theme of health and conflict—which has become increasingly visible in the work of the faculty over the past few years.

2. Occupational Violence

Exposure to violence is a serious occupational hazard in Lebanon. Recent research evidence reveals that healthcare providers in general, and nurses in particular, are being exposed to high levels of verbal and physical violence in healthcare settings. Such an exposure not only threatens health providers' retention, but also has a potential negative influence on the quality of services and patient outcomes. The research objective was to pilot test an anti-occupational violence intervention and to establish a core group of local and regional researchers interested in the topic.

ACTIVITIES

The activities supported by the project – across three years of funding cycles - are summarized below:

I. Anti-occupational violence intervention

At the start of the project, i.e. beginning of 2014, progress has been achieved at this level: a proposal to pilot test an anti-violence intervention in a hospital setting was drafted and negotiations were initiated with potential institutional partners in regards to implementation. Potential collaborators have been contacted and invited to participate in the conceptualization of this intervention. However, work on the project has been delayed based on broad consultations with community partners, specifically the Order of Nurses in Lebanon and the leadership of major hospitals who would like first to see a violence reporting system set in place and would like their staff to be trained and empowered to deal with occupational violence. The plan was to design and pilot test an anti-occupational violence intervention in hospitals, and assess the outcomes of this intervention and drafting specific recommendations for research policy and practice. Based on accumulated experience and the identified priorities over the last four years, the researcher is no longer planning to carry out an antiviolence intervention but rather will work on strengthening anti violence reporting and response systems and on building capacity to prevent, report and manage exposure to occupational violence. Furthermore, the researcher aims at establishing a researcher data base and inviting them to exchange knowledge, identify synergies and deliberate the means to address priorities related to occupational violence in the Middle East Region.

II. Collaboration with the Lebanese Order of Nurses and designing an antiviolence reporting and decision support system

The scope of the project was expanded with the engagement of the Lebanese Order of nurses. Working on the occupational well-being of nurses is of pivotal importance not only because nurses are the largest professional work force in the health sector, but also because the majority of nurses are females with research evidence indicating that they are disproportionately exposed to violence. Collaboration with the Lebanese Order of Nurses was initiated to work on designing an occupational violence reporting system and an associated decision matrix. The work on this component was concluded and the system was fully designed and an electronic system has been designed and handed over the Order of Nurses. Then the Lebanese Order of Nurses became a full partner on this research component.

III. Workshop

The component entailing the organization of a workshop inviting local and regional researchers has been delayed awaiting the identification of additional researchers.

IV. Anti-violence training of trainers program

As the grant progressed and based on consultations with concerned stakeholders and community partners, building capacity on prevention and management of occupational violence at health care institutions was added to the original research objectives. The first of its kind anti-violence training of trainers program was organized from May 25-27, 2015 with local and regional representation. This was a collaborative effort between the Centers for Public Health Practice at FHS, AUB and the Order of Nurses in Lebanon (For list of attendees, please refer to Annex 6.1).

V. Core group of local and regional researchers

A number of researchers with similar interest were identified and contacted locally, regionally and internationally, to achieve the objective of establishing a core group of local and regional researchers interested in the topic. This has been also formed as an outcome of the anti-violence train of trainers program. The team also aimed to establish an anti-violence in the health care sector researcher database and inviting them to exchange knowledge, identify synergies and deliberate the means to address common issues. The focus of this database would be on local and regional researchers, yet we might solicit opinions and expertise from international experts. However, this database was not finalized.

OPPORTUNITIES AND CHALLENGES

The project helped to build the capacity of researchers involved and contributed to building institutional knowledge and capacity. This IDRC supported work on the occupational violence theme was not only able to raise awareness on this important occupational hazard but also operationalize selected interventions that have the potential to impact the delivery system and lead to sustainable improvements in Lebanon and elsewhere. Such interventions included designing an evidence based anti-violence reporting and response decision support system at the Lebanese Order of Nurses and carrying out the first of its kind anti-occupational violence regional training in Lebanon. The project paved the way for policy and practice interventions that have the potential to create a safer practice environment for nurses in Lebanon with learning lessons and experiences shared at the regional levels.

The project's scope is being expanded based on the recommendations and preferences of community stakeholders. Though this was deemed necessary to ensure full endorsement of project outcomes by community partners and to reap the best benefits out of this project, it has probably caused some delays and perhaps modification of objectives.

Challenges in the unfolding of this component of the project relate to the recruitment and retention of competent human resources within the budgeted amount. Having said that, the leading researcher is capitalizing on existing resources at the FHS in order to ensure the achievement of objectives within the allotted timeframe and budget.

REFLECTION

The aforementioned IDRC supported work on the occupational violence theme was not only able to raise awareness on this important occupational hazard but also operationalize selected interventions that have the potential to impact the delivery system and lead to sustainable improvements in Lebanon and elsewhere. Such interventions included designing an evidence based anti-violence reporting and response decision support system at the Lebanese Order of Nurses and carrying out the first of its kind anti-occupational violence regional training in Lebanon. The project paved the way for policy and practice interventions that have the potential to create a safer practice environment for nurses in Lebanon with learning lessons and experiences shared at the regional levels.

3. Non-Communicable Diseases Research Working Group (NCD)

NCDs have become the dominant causes of morbidity and mortality in the Arab world, creating major challenges for public health in a region with weak health care systems. Responding to the NCD challenge requires knowledge into relevant cross-country and/or locally driven questions that can feed into evidence-based NCD prevention and control efforts. However, NCD research efforts in the Arab world have been relatively weak and there is no regional platform for collaboration to identify research priorities, carry out such research and draw the needed lessons.

The overall objective of the proposed program of research is to respond to the NCD challenge in the region through strengthening multi-disciplinary NCD research. This is achieved through regional networking and collaboration leading to informed knowledge production in a way that would have greater impact on the development and implementation of informed policies.

ACTIVITIES

Below is a summary of the major research activities of the NCD research working group that were achieved/planned throughout the 6-year funding cycle:

I. Scoping review of regional literature on NCDs

The NCD team has decided to limit the scoping review to seven selected countries, namely Morocco, Kuwait, Lebanon, Iraq, Bahrain, Sudan and Palestine instead of all Arab countries, which provide a varied epidemiologic (advanced vs in transition), economic (high, middle and low) and geographic distribution (North Africa, ME and GCC region). In addition, some countries have been enduring more political turmoil and conflicts than others. The scoping review has been completed by going through several stages, beginning with meetings with team members to agree on variables and the coding of NCD research articles, continuing with abstracting from PubMed the relevant articles, screening them and training sessions with data entry workers before data entry took place.

II. Regional meeting of researchers and stakeholders

This research activity has been completed through organizing a regional conference at the AUB on January 20th, 2017, titled “Research on Research in the Arab Region: The case of non-communicable diseases”

(http://website.aub.edu.lb/fhs/fhs_home/academic_departments/PublishingImages/Concept-note-Agenda-NCD.pdf). The conference brought together around 100 participants including academicians from various disciplines and stakeholders from local, regional and international NGOs, including the WHO EMRO and WHO Geneva, in addition to journal editors, to discuss research on research in the Arab region. The conference was followed the next day by a closed regional NCD working group meeting, where progress on publications was evaluated. Another meeting on “Research Priorities: Tackling the Growing Burden of Non-Communicable Diseases” was convened by the Public Health Research Center at New York University, Abu Dhabi (May 2017), and attended by the PI.

III. Survey of policies and programs targeting NCDs

The research team planned to survey selected stakeholders to understand strengths and weaknesses and needs for NCD research and interventions. The approach has shifted towards conducting surveys of NCD policies and programs in Arab countries after the results and papers from the scoping reviews have been produced. However, this activity was not materialized.

IV. Publications from the scoping review on NCDs

The research team has invested in analyzing the data from the scoping review and writing-up publications for the dissemination and discussion of the findings.

- Researchers from the working group prepared a preliminary report on the findings of the scoping review. Preliminary findings were disseminated in a RESCAP-MED conference held in Istanbul (May 2013) and shared with FHS colleagues in the Incubation Seminar (April 2016) and Faculty research Day (May 2016).
- Regional researchers involved in the IDRC-funded study on NCD research production in the region presented their work and informed the main direction of the “Research on Research” conference.
- The project generated a number of tangible outputs in the form of research papers: a cross-country comparative paper and other 3 country- or theme-specific papers relevant to team members’ relative areas of expertise from the IDRC-funded scoping review dataset have been already published (as per the below), in addition to 2 under review and 2 in the write-up stage):
 - Overview paper: <https://doi.org/10.1371/journal.pone.0178401>
 - Gap analysis of genetic research: <https://doi.org/10.1186/s12961-016-0153-9>
 - Cancer research in the Arab world: <https://journals.squ.edu.om/index.php/squmi/article/viewFile/1836/1786>
 - Overview on Kuwait: <http://doi.org/10.5334/aogh.2392>

V. Seed money for junior researchers to strengthen capacity and enhance interest in NCD research

Members of the working group suggested a small diversion in the means used to “Nurture NCD research in priority areas by junior researchers”. Rather than providing seed research grants through competitive calls, the funds allocated were used to invite the key researchers (1 or 2) in each country for a workshop in Lebanon. The outcome of the workshop is felt to be broader and stronger than seed money for sporadic research activities.

OPPORTUNITIES AND CHALLENGES

NCD working group research impacted awareness of NCD and NCD research in some Arab countries. The research had also valuable impact at various levels: it enhanced partnerships with other researchers in the region, and promoted the interdisciplinary and collaborative work not only within the FHS but also in the region. The original search triggered a new and wider interest by colleagues at the AUB Faculty of Agriculture and Food Sciences examining the totality of knowledge produced on nutrition and NCD mapping the reports generated in all Arab countries, and not limited to the original list of seven countries. The search has been finalized and data abstraction is underway. The scoping review project has also generated a lot of interest and knowledge around conducting scoping reviews, and inspired

further research using new non-IDRC funded datasets. An additional two new scoping reviews, inspired by the IDRC-funded project, have been conducted using financial resources other than IDRC.

During the scoping review process, several members of the project team became familiarized with the process of this methodology and its implementation. Several student workers and research and graduate assistants were exposed to this process as well and were trained in data entry, basics of epidemiology to properly code the articles. They were also introduced to the data and have begun analysis of results of NCD scoping review or separate studies built on the same methodology. Two junior researchers were granted IDRC Seed Funding, and have reached the write-up stage. All in all, the project team benefited from an excellent learning experience in conducting scoping reviews as a result of this project.

Research by NCD working group triggered a wider initiative under the broad theme of 'Research Waste and Research Value'. Within this scope, a seminar entitled "From Edward Atiyah - via Archie Cochrane, James Lind and Doug Altman - to Carl Sagan" was presented by Sir Iain Chalmers (March 2016) (Please refer to Annex 7.1). This brought out interest in pursuing this theme further at the Faculty and AUB level and encouraged researchers to examine all kinds of academic literature (such as biomedical, qualitative, etc.) from a new lens, focusing on research waste and research value..

For this research group, human resources have been challenging, especially with high turnover of workers on data entry research assistants.

REFLECTION

The state of health research and research systems in the Arab region is increasingly becoming a concern of the scientific community; and Arab governments have yet to prioritize science and innovation as key to development. Within this framework, our work aimed at examining the landscape of knowledge produced on non-communicable diseases (NCD) in the Arab world, assessing research gaps and identifying opportunities that would support a coordinated NCD research agenda in the region.

The project was collaborative with colleagues from FHS and Arab countries and focused on seven countries chosen to represent various stages of demographic and epidemiological transitions and diverse socio-economic development levels in the region (Sudan, Palestine and Morocco for low- and middle-income countries; Iraq and Lebanon for upper-middle income countries; and Bahrain and Kuwait for upper-income countries. Using scoping systematic review methods, the search generated a repository of around 3,780 records of NCD publications spanning 14 years (2000-2013).

Overall, findings from this study have shown a major mismatch between research output and disease burden, with surplus of publications on cancer and a relative deficit of publications on cardiovascular disease between and within countries (*PLOS One* 2017). Another paper documented the blatant dearth of studies on community genetic research in NCD epidemiology (*Health Research Policy and Systems* 2016). Other thematic and

country-specific papers have shown that certain NCD risk factors (such as physical activity) are underrepresented in the literature from the region (*Global Public Health* 2019). One paper conducted a review of 'systematic reviews' of NCD research, a method that have scarcely begun to be explored in the global literature (under review).

Findings from our studies on the research-burden disconnect as well as on disparities in quantity and quality of NCD knowledge produced between higher and lower income countries call for the need for ongoing collaboration among Arab academic institutions, funding agencies and researchers to guide country-specific and regional research agendas and to advise on policy frameworks for enhancing quality of knowledge produced. The project generated a number of tangible outputs in the form of research papers (4 published in addition to 2 under review and 2 in the write-up stage- see table 1 below) and a regional conference ('Research on Research in the Arab Region: The case of non-communicable diseases', at the American University of Beirut on January 20th, 2017). The conference was attended by close to 100 participants and featured 16 presentations in addition to a panel discussion. The conference brought together academicians from various disciplines and stakeholders from local, regional and international NGOs, including the WHO EMRO and WHO Geneva, in addition to journal editors, to discuss 'research on research' in the Arab region. It uncovered the need for a broader scope of overall research production in the region and expanded the discussion beyond NCDs to deliberate on issues related to mapping overall health research in the Arab region. The meeting concluded with a multidisciplinary panel discussion which included representatives of funding agencies, medical journal editors and researchers, and those who play a key role in shaping research priorities in Lebanon and the region.

Yet, the impact of the IDRC-NCD project is seen not only in its immediate output but also in its ripple and longer-term effect on FHS students, FHS faculty and beyond. The 2 presentations made early in the project life on scoping review methodology and preliminary results from the IDRC data (one at the Lebanese Epidemiological Association conference in 2015, and later at the FHS Faculty research day) have galvanized the appetite of several researchers to utilize scoping reviews in their own disciplines, many of whom had no prior or limited knowledge of the methods. This generated a lot of interest around conducting scoping reviews, inspired further research in new areas and resulted in additional capacity building opportunities, collaborations and encouraged researchers, more widely, to examine various topics of the literature from a new lens, focusing on 'reducing research waste and increasing research value'. A total of 4 papers, tackling various research themes (e.g. ethics in research, costs of NCD) have been published and 2 others are in data abstraction phase (see table 2). Furthermore, the method is now included in a course offered at our Faculty on Epidemiology of NCDs and is increasingly used among our students in their projects.

Overall, the project team benefited from an excellent learning experience in conducting scoping reviews, increased capacity to undertake research synthesis and inspired further interest among colleagues both locally and regionally on the theme of 'research on research' using scoping research methods.

Table 1. Papers- direct outcome from IDRC

	Lead Author	Theme	Dataset	Stage
1.	Soha Yazbek	Gap analysis of genetic research	IDRC-funded dataset	Published (2016) <i>Health Research Policy and Systems</i>
2.	Abla M Sibai	Overview paper	IDRC-funded dataset	Published (2017) <i>PlosOne</i>
3.	Randah Hamadeh	Cancer research in the Arab world	IDRC-funded dataset	Published (2017) Accepted in <i>Sultan Qaboos Journal</i>
4.	Hanan Badr	Overview on Kuwait	IDRC-funded dataset	Accepted (2019) <i>Global Public Health</i>
5.	Rula Ghandour*	CVD Research in Arab countries	IDRC-funded dataset	Under second review
7.	Alaa Akkawai*	Overview of reviews on NCD	IDRC Seed Funded new dataset	Under first review
6.	Randah Hamadeh	Tobacco	IDRC-funded dataset	Write-up
8.	Anthony Rizk*	Qualitative methods in NCD research	IDRC Seed funded new dataset	Write-up

* IDRC Seed Funding granted to junior researchers granted

Papers- direct outcome from IDRC funding

1. Jamaluddine Z[‡], Sibai AM, Othman S, Yazbek S (2016). Mapping genetic research in non-communicable disease publications in selected Arab countries: first step towards a guided research agenda. *Health Research Policy and Systems*, 14:81
2. Sibai AM, Singh N[‡], Jabbour S, Saleh S, Abdulrahim S, Naja F, Yazbek S. Does published research on non-communicable Disease (NCD) in Arab countries reflect NCD disease burden? *PLoS ONE*, 2017; 12(6): e0178401.
3. Hamadeh RR, Borgan S[‡], Sibai AM (2017). Cancer research in the Arab World: A review of published studies from seven countries, 2000-2013. *Sultan Qaboos University Medical Journal*, 17 (2), e147–154.
4. Badr H, Maktabi MA[‡], Al-Kandari M, Sibai AM (corresponding). A Scoping Review of non-communicable disease research activity in Kuwait: Where is the evidence base for the best practice? *Global Public Health*; 2019 (in print)
5. Ghandour R, Husseini A, Sibai AM, Abu Rmeileh N. Cardiovascular research in the Arab world: a scoping review from seven Arab countries. *BMC Public Health* (under review)
6. Akkawi A, Khabsa J, Noubani A, Jamali S, Sibai AM (corresponding), Lotfi T. Non-communicable diseases research output in the Eastern Mediterranean Region: an overview of systematic reviews. *BMC Med Res Method* (submitted)

Table 2. Papers- Ripple effect from IDRC

	Lead Author	Theme	Dataset	Stage
1.	Farah Naja	Nutrition/Obesity	New dataset	Published (2017) <i>Nutrition Research (2017)</i>
2.	Jihad Makhoul	Ethical research practices in research	New dataset	Published (2018) <i>BMC Medical Ethics</i>
3.	Farah Madi	End-of-life experiences	New dataset	Published (2018) <i>J of Palliative Care</i>
4.	Shadi Saleh	Costs associated with NCD	New dataset	Published (2018) <i>Journal of Global Health</i>
5.	Marlene Chakhtoura	Osteoporosis	New dataset	Data abstraction stage
6.	May Mahmoud	Hypertension unawareness	New dataset	Data abstraction stage

Papers- Ripple effect from IDRC

1. Naja F, Shatila H, Meho L, Haber S, Nasreddine L, **Sibai AM**, Alameddine M, Hwalla N (2017). Gaps and opportunities of nutrition research in relation to non-communicable diseases in Arab countries: call for an informed research agenda. *Nutrition Research*, 47:1-12.
2. Makhoul J, Chehab RF, Shaito Z, Sibai AM (corresponding) (2018). A scoping review of reporting 'ethical research practices' in research conducted among refugees and war-affected populations in the Arab world. *BMC Medical Ethics*, 19:36.
3. Madi F, Ismail H, Fouad FM, Kerbage H, Zaman S, Jayawickrama J, Sibai AM (corresponding) (2018). Death, dying, and end-of-life experiences among refugees: a scoping review. *J of Palliative Care*, DOI: 10.1177/0825859718812770
4. Saleh S, El Harakeh A, Baroud M, Zeineddine N, Farah A, Sibai AM. Costs associated with management of non-communicable diseases in the Arab Region: A scoping review. *Journal of Global Health* (2018); Vol. 8 No. 2. doi: 10.7189/jogh.08.020410

4. Monitoring health inequities through enhancing the quality of existing data: a demonstration project in Lebanon

The research team initially proposed to conduct a one-year demonstration project aimed at strengthening capacity for research and action on health inequities through enhancing the quality of available data. The project planned to focus on examining and improving the quality of socioeconomic data collected through registries. The project commenced in February 2013.

ACTIVITIES

Below is a summary of the major research activities of the team that were achieved/planned throughout the IDRC funding cycle:

I. Review of registries

The team originally planned to develop a database of available registries in Lebanon and provide a detailed description of the measures available in each, and - through interviews with registry directors and staff - summarize the process employed in data collection and management. Knowing that there are only few registries in Lebanon, the team decided to focus on three main registries: the cancer registry (Lebanese National Cancer Registry, LNCr), a hospital-based birth outcomes registry (the National Collaborative Perinatal Neonatal Network, NCPNN); and the renal disease registry. The team established contacts with registry directors or academic researchers involved in registry data, collected, and examined documents and data forms for each registry.

II. Review published research produced from the registries

The team reviewed all articles published in Lebanon between 1990 and 2013 on the three registries or empirical studies based on registry data. The team compiled a list of six articles and one report on the LNCr, a list of 14 articles using data from the NCPNN, and one report on the renal registry. An annotated bibliography of all articles published from the NCPNN data was completed and used in a proposal submitted for funding.

III. Desk review of selected registries in a limited number of countries

The team engaged in one important research activity that was not outlined in the original proposal; they carried out a desk review of cancer, birth outcomes, and kidney registries in a limited number of countries (with good data-base systems). The purpose of this review was to benchmark the Lebanese registries against existing systems. The table below shows the examined registries:

Cancer	SEER (USA)	Danish Cancer Registry	Oman and Kuwait (registered with IARC)
Birth Outcomes	Canadian Birth Registry	German National Neonatal Database	Oman Birth Defects Registry
Renal	US Renal Registry	Danish Renal Registry	Turkish Renal Registry

IV. Interviewing registry directors

The research team originally planned to hold a set of small group meetings (3-5 throughout the year) with registry directors in order to i) gather information on the barriers they encounter in data collection and monitoring in general, and ii) introduce to them examples of registries from other contexts. However, after reviewing the documents and getting better knowledge of the registries in Lebanon, the team made a significant change to this action objective. Instead of group meetings with registry directors, the team decided to collect observation data in medical institutions and carry out in-depth interviews with staff who are involved in data collection, management and reporting for the registries at these institutions. This change of methodology was needed because it was concluded - based on initial meetings with registry directors - that it is important to gather data on barriers encountered on the ground by medical or administrative staff, and not only rely on information provided by the directors. After securing IRB approval, and compiling a list of all hospitals in Lebanon, and requesting transportation funds, data collection was completed for the 3 registries: NCPNN (N = 13), LNCR (N = 20) and renal registry (N = 13); all interviews were conducted by the research assistant and a visiting practicum student from the Yale School of Public Health. All data from interviews have been transcribed; analysis of the interviews with 20 medical staff who submit data to the LNCR has been carried out. The team prepared a first draft of a manuscript on the challenges encountered by staff who record cancer data and their views on the feasibility of collecting socioeconomic measures on the registry forms.

V. Trainings

The research team planned to organize several workshops; however, none of them was executed. Below are the planned workshops/trainings:

- a. A short training course on the social determinants of poor birth outcomes and the measurement of health inequities.
- b. A two-day training to medical and administrative staff involved in recording and/or sending registry data. The plan was to implement this through two separate workshops: 1) workshop on social determinants of renal diseases for nurses working with the renal registry data and 2) course for the medical students as part of Continuing Medical Education on the social determinants of diseases. It was also planned that this training be accompanied by a meeting that involves directors of the three Lebanese registries, a representative from the MOPH, and representatives from international and regional registries.
- c. A workshop on cancer registries that brings together cancer registration experts from a number of Arab countries. This plan was based on the review of cancer registries in the Arab region, which revealed an almost complete absence of any mention of the social determinants of cancer in reports and published manuscripts. The team submitted a proposal to the Qatar National Research Fund (QNRF) to fund this workshop. Although the proposal was well received, it was not funded.

VI. Analyzing NCPNN data

Because the NCPNN registry lends itself the most to an analysis of social determinants, the research team decided to work on a new objective, which was to analyze the NCPNN data from 2002 to 2014 using a critical social determinants lens. The team submitted a concept note to the March of Dimes, and a proposal - in collaboration with NCPNN director - to the Farouk Jabre Interfaculty Grants Call. The proposal was not accepted, but the team worked

with NCPNN on an analysis plan, and analyzed data (on both Lebanese citizens and Syrian Refugees).

VII. Conducting a systematic review on the social determinants of birth outcomes in LMICs.

The team conducted a systematic review on the subject of the social determinants of poor birth outcomes (neonatal and infant mortality, low birth-weight, and stillbirth) in low and middle-income countries (LMICs). Following the systematic review methodology, the team formed their data pool that contains 5559 articles, and reviewed the corresponding abstracts and the full-text articles. The team submitted a proposal to the University Research Board (URB) for funding this systematic review, which was approved in 2014.

VIII. Conducting a pilot intervention study to enhance the recording of social measures on cancer registry forms in Lebanon

The proposed intervention builds on formative research conducted earlier, with seed funding from IDRC, including a qualitative study with Lebanese oncologists on their expert opinions on the best socioeconomic measures to capture. Based on findings highlighted by this study, the team decided to carry out an experimental study to evaluate the effectiveness of an intervention to enhance the recording of SES measures on cancer registration forms using an electronic system in six tertiary hospitals (3 intervention hospitals and 3 control hospitals) in Lebanon. The team submitted a proposal to the World Health Organization for funding this study but it was rejected.

IX. Knowledge Creation Information Sharing:

- Published Paper: the team published a paper on low birthweight among Syrian newborns in Lebanon, using NCPNN data (<https://doi.org/10.1093/ije/dyy200>). The team also prepared other manuscripts based on data collected on LNCR and the review of cancer registries worldwide.
- Presenting at international conferences: the team submitted two abstracts to the World Health Summit (October 2014; Berlin) and to the World Congress on Public Health (February 2014), as well as two abstracts to the American Public Health Association, one of them got accepted for a poster presentation (November, 2015). The team presented a poster at the Regional Symposium “Socio-political Challenges in the Mediterranean Region” (December 2014; Beirut - Please refer to Annex 8.1).
- Case Study: the team wrote a case study on the LNCR work on social determinants of cancer, presenting the gaps and obstacles encountered in integrating SES into the LNCR. The case was given to students in a graduate course, where students were asked to analyze the case using the ecological model.

CHALLENGES

The research team initially proposed to conduct a one-year demonstration project, but then requested a one year extension as the project developed in two directions in relationship to two main registries investigated during the first year of the project, namely the NCPNN and the LNCR.

For analyzing NCPNN data, the team couldn't abide by the timeline set for this objective, as they needed the cooperation of the person who owns the data, which was a time consuming process. As for conducting a systematic review on the social determinants of birth outcomes in LMICs, given the big number of identified articles, it was a time intensive process and given the limited resources, the team had to recruit a second reviewer, and had to wait for graduate assistants to help proceed with this. Moreover, given the project's added plans of organizing workshops and performing secondary data analysis, the team had to secure additional funds for these activities, which was successful at times but not in all instances.

5. Disability and Public Health

The disability rights movement has worked towards the advancement of rights for persons with disabilities; it however failed to address the discrimination women with disabilities face. Research and writings on women with disability in Lebanon is scarce and the little available focuses on the experiences of parents of children with disabilities and social attitudes. Narratives of women who live with disability in Lebanon and the Arab region in general are virtually absent.

Through collecting in-depth data on the life experiences of women with disability in Lebanon, the study aims to examine how the lives of these women are affected by social structure, family, community norms, and socially constructed sexual identities.

ACTIVITIES

The below activities were supported by the project during a two-year period of the funding cycle:

I. Literature Review

The research team has conducted literature review on disability in the region and feminist perspectives.

II. Recruitment of participants

After receipt of the IRB approval, the team started recruiting participants: the recruitment of potential participants took longer than expected, given the nature of the study and the fact that the team had to wait for replies from centers/organizations that provide services to persons with disability.

III. Data collection

The team completed data collection in early 2016 through conducting 18 in-depth interviews with women who live with a disability in Lebanon. The life history method was selected as a suitable method for the study because it resonates with the social model of disability and the feminist disability theory.

IV. Analysis and dissemination

The team completed transcription of data and carried out descriptive analysis. The interviews conducted shaped the team's views on how women who live with disability experience gender-based discrimination in education and work and in how they interact with social constructions of sexuality and marriageability. The team also began drafting manuscripts and decided to move ahead with 3 separate papers, each of which will focus on one area related to disability research. Though the research team anticipated that the research findings could be produced in a number of outputs that would serve to advocate for the rights of women with disabilities, no outputs were reported by the team.

OPPORTUNITIES AND CHALLENGES

One of the co-investigators has used the life histories methodology on gender research in the past, but has not conducted research on disability. The other co-investigator has

conducted various research on disability in the past, but never using the life histories methodology. As such, this project is building the research capacities of both investigators in complementary ways, and is building capacity for interdisciplinary research in the Faculty.

It was anticipated that the findings of this research project would lend voices to women with disabilities and empower them in advocating and lobbying for their rights. It would also provide the disability rights movement in Lebanon with scientific evidence that can push for more focused programming and funding for interventions that seek to shed the veil of discrimination experienced by women with disabilities. It would also guide policy and programming into revising interventions to include specific considerations for women with disabilities, where appropriate, both in policy related to the rights of women as well as persons with disabilities. This research would also outline a number of issues that will guide a continued research agenda, within public health as well as other disciplines.

The two major challenges faced by the research team were i) difficulty in recruiting a research assistant and the resulting subsequent delays, ii) difficulty in recruiting participants.

IV. The *Lancet*-American University of Beirut Commission on Syria (LCS): Health in Conflict

The overall aim of the Commission is to produce the best science on health in the Syrian conflict, as an evidence-based approach to health in conflict analysis more broadly, and mobilize global action to strengthen the response to the health needs brought on by the conflict, with potential implications for other conflicts in this region and elsewhere.

ACTIVITIES

The activities supported by the project – during the last two years of the IDRC funding - are summarized below:

I. Launch of the Commission

The Commission started with a foundational stage that included developing the concept of the Commission, establishing the Commission, and preparing for launching the Commission, which was achieved on 1-2 December 2016 at AUB. The inaugural launch meeting was followed by other meetings (including the ones held at The Lancet office in London in January 2017, and at AUB in February 2017, during which a clear direction for the research work of the Commission was elaborated).

II. Research work and scholarly outputs

Following the formal launch of the Commission, the team initiated work to refine the scope of inquiry, establish Thematic Groups, launch research work and further develop the Secretariat and its Research and Documentation Team. Research work by LCS is done through six Thematic Groups and is particularly intense in its three ‘analytic’ objectives, that are i) to understand the impact of the crisis, ii) examine the failures of the international response, and iii) develop policy and practice options. These efforts brought about information sharing and dissemination through the publication of several outputs, including a health Policy paper on “Health workers and weaponisation of health care in Syria” ([https://doi.org/10.1016/S0140-6736\(17\)30741-9](https://doi.org/10.1016/S0140-6736(17)30741-9)). The Commission has also led the drafting of several pieces of advocacy focusing on the crucial issue of attacks on civilian and health care which included calls to action and very specific recommendations to enhance the protection of health care in Syria and armed conflicts more generally (For an updated list of outputs, please check <https://website.aub.edu.lb/lcs/Pages/outputs.aspx>).

In addition to the Commission outputs, knowledge creation and training has been reflected in the form of tacit knowledge of those involved in the research network of the Commission whose understanding of the issues around conflict and health have evolved to reflect the deepening of discussions and the inquiry of the Commission. Besides, commission Co-Chair Jabbour has led the development of a new 3-credit course on “Public Health and Armed Conflict” which will be given in fall 2018 at FHS/AUB as part of the “Certificate on Health in Conflict and Protracted Crisis” in the MPH degree.

III. Developing the Commission report

A report draft was produced in October 2017 ahead of a joint meeting of *The Lancet* and the Commission. A revised draft, incorporating feedback from the *Lancet* and from

Commissioners, was produced in December 2017 and submitted to the *Lancet*. In a March 2018 joint meeting, a 'reinvention' of the Commission report was agreed based on a new conceptual framework and new analyses. Because of the expected extensive peer review, the variable time needed for a final revision, and the 3-4 months production time at the *Lancet*, the publication of the final Commission report is expected to be delayed until late 2019.

IV. Outreach of the Commission

In addition to its scholarly work, the Commission has embarked on an outreach campaign (For an updated list of news of the Commission & Commissioners, please check <https://website.aub.edu.lb/lcs/Pages/news-media.aspx>): The Commission has organized a high-level side event on 'Protecting Health Care in Armed Conflict' in September 2017 during the High-Level Segment of the 72nd UN General Assembly at UN Headquarters in New York ECOSOC Chamber. For more information about the event, please visit the event page at <https://website.aub.edu.lb/lcs/Pages/unga.aspx>. The event was co-sponsored by Canada, the Netherlands, Spain and the United Kingdom. Canada's Minister of Health, Vice Minister of Foreign Affairs of Spain, Vice Minister of International Development of the Netherlands, and Ambassador/Permanent Representative of the UK opened the event. The UNGA event was organized by the *Lancet*-AUB Commission on Syria & Safeguarding Health in Conflict Coalition. It was also followed by a roundtable discussion at AUB New York Office focusing on the next steps. *The Lancet* published a letter, titled "Protecting health care in armed conflict: action towards accountability" reflecting on the deliberations of the high-level side event at the UN General Assembly organized by the Commission in September 2017. The letter was led-authored by the Honorable G. Petitpas Taylor, Minister of Health of Canada ([https://doi.org/10.1016/S0140-6736\(18\)30610-X](https://doi.org/10.1016/S0140-6736(18)30610-X)). Co-authors included all the dignitaries and panelists who participated in/organized the side event including Commission Co-Chairs Iman Nuwayhid and Samer Jabbour.

- Extending its reach, the Commission has convened five stakeholder consultations with different audiences in several countries in the region and in Europe affected by the Syria crisis (Syria, Lebanon, Turkey, Germany), as part of the Commission's effort to gather evidence and listen to views of experts and practitioners working in various areas and settings in Syria. The Commission has convened several multi-stakeholder consultations (For an complete list of Stakeholder Consultations, please check <https://website.aub.edu.lb/lcs/Pages/consultations.aspx>)
- The Commission has also participated in several international meetings, conferences and workshops on the Syrian crisis and provided important input to impact global dialogue on the crisis and its consequences.
- The Commission developed an extensive AUB-based website along with pages that reflect the progress of the Commission (<https://website.aub.edu.lb/lcs/Pages/home.aspx>). It also created knowledge resources for general use, launched an international LCS Network to facilitate communication and collaboration and issued an e-Newsletter that is globally distributed.

Such activities have led to the accomplishment of one of the Commission's objectives that is the establishment of a large network (and a corresponding listserv) of thought leaders,

researchers, practitioners and policymakers, at the regional and international levels to implement the recommendations of the Commission, which is continuously expanding.

OPPORTUNITIES AND CHALLENGES

The undertaking of establishing, hosting and running a *Lancet* Commission has been a source of rich and new experiences for the Faculty at FHS, thus strengthening existing capacity and building new capacity. The impact by the Commission on FHS can be captured in the following: i) Developing the institutional capacity to lead an international collaborative effort on a complex global health issue, ii) Developing the capacity of researchers within FHS to carry out high-quality research in a difficult area of research, iii) Validating the utility of the '360° systems and network' approach of FHS, supported by the IDRC grant, to address health issues of regional and global relevance and iv) Mobilizing additional research funding. The Commission has also engaged many students from FHS/AUB but also from other universities as volunteer researchers and thus contributed to capacity building and exposure for junior researchers.

On another note, the *Lancet*-AUB Commission in Syria has been an exception to other *Lancet* Commissions. Usually *Lancet* Commissions do not produce interim research findings before the publication of a final Commission report. Nevertheless, the Commission on Syria, and in agreement with the *Lancet*, has produced several outputs, both in research, advocacy and knowledge translation. This reflects the nature of the topic (a dynamic and volatile conflict) and the relevance of the issues it raised for health research and action in the Syrian conflict and other conflicts. Besides, the Commission has received multiple communications indicating that the outputs of the Commission, particularly in the area of protection on health care, have influenced donor priorities in this area.

The thinking process within the Commission has evolved considerably over the second year of its launching: while the basic tenets of the approach remain valid and current, there have been important, indeed fundamental, developments in the approach and methods. While the Commission was fully immersed in the study of the Syrian conflict during its first phase of analytic work, the next phase builds on this work towards proposing a new conceptual approach that captures health in the Syrian conflict but which has applications to other conflicts. Besides, the focus of the Commission's work has not changed but the scope of work has expanded as research is carried out; many new possibilities opened up, issues such as the siege of Eastern Ghouta arose necessitating the Commission's attention, and new horizons for future work of the Commission emerged.

PROGRESS REPORT - OBJECTIVE 2: Strengthen and influence policy and promote evidence-informed decision making in the region. This section will review progress for the Knowledge to Policy (K2P) Center.

I. Knowledge to Policy (K2P) Center

The objectives of the Knowledge to Policy (K2P) Center are:

- Support and build knowledge translation (KT) capacity of research networks, civil society, researchers, policy makers and the media including capacity of health policy making institutions;
- Inform the production, packaging and sharing of evidence from public health research in an objective manner and based on current and emerging policy making priorities;
- Inform policy making in an objective manner using the best available evidence that can be prepared and packaged given time and resource constraints;
- Develop and test models for KT that are culturally appropriate, relevant, and effective for the region

I. Foundational activities during the planning phase

a. K2P core team

Over the first year, significant effort has been done mainly to build the foundation for the work of the center in preparation for implementation. A core team was developed for K2P. This team met regularly: it developed many of the material governing the work of the center including terms of reference for all members of K2P, core functions of K2P, its mission, the guiding framework for the center activities, and a list of the products that K2P will develop. The core team also established a plan for capacity building sessions and launch, a new name, and a plan for the website. The core team also developed an advisory committee for the center: the advisory committee is composed of policymakers, stakeholders, researchers, members of the media, and non-governmental organizations.

b. Priority setting for K2P

As part of the foundational year for K2P, K2P core team defined selection criteria for priority topics; priority topics were generated from consultations with stakeholders. K2P has a set of 15 criteria for consideration when selecting priority topics. These criteria can be found at <https://www.aub.edu.lb/k2p/Pages/K2PPrioritySetting.aspx>

c. Name of the Center

Based on several rounds of deliberations and after input from diverse stakeholders, the core team has decided on the final name of the center to be: Knowledge to Policy (K2P) Center.

d. Documentary on health policymaking

The team has worked on developing a documentary on health policymaking in the Eastern Mediterranean Region (EMR). The documentary is a compilation of sound-bites from interviews with key stakeholders from several countries in the region including citizens. The expected completion date for the documentary is July 2013.

e. Website for the center

The center has developed and launched a website hosted on the AUB homepage (<https://www.aub.edu.lb/k2p/Pages/default.aspx>). This website describes the center and its events, activities, research studies and opportunities.

f. Synergy at FHS

The director has been liaising with the other centers in FHS to work on areas of synergy and form the basis for collaboration and sustainability. The three centers have met multiple times and discussed areas for collaboration and topics of common interest. The directors of the three centers used the criteria developed by K2P to assess several priority topics including Non-Communicable diseases, patient safety, universal health coverage, youth health, and occupational health and safety. The three centers also developed a common framework to describe the collective collaboration and synergy across the three centers. In addition, K2P is regularly consulted by faculty members within FHS to advise on including a KT component during proposal development. Outputs corresponding to synergy with other centers have been referred to in other sections (including CRPH and CPHP).

g. K2P Launch Event

K2P was officially launched in March 2015: the launching ceremony convened over 200 attendees including policymakers, stakeholders, researchers, think tanks, journalists and media personnel, civil society members and students, most of them were once gathered around K2P's many dialogue and meeting sessions. The ceremony included keynote speeches from the provost of the university, the dean of the faculty and a representative of the Ministry of Public Health. It also included a panel discussion around the importance of evidence-informed policies. The K2P launch was well received and as a result, the center has been receiving more requests to develop products on pressing priority topics.

h. K2P affiliations and partnerships

Internationally, K2P is affiliated with Evidence Informed Policy Network (EVIPNet) and the McMaster Health Forum in Canada. In Lebanon, K2P is affiliated with the Center for Systematic Reviews on Health Policy and Systems Research (SPARK), which is led and managed jointly by FHS and the Faculty of Medicine at AUB.

II. Capacity Building

K2P Center has extensive experiences in capacity development at both the individual and institutional levels. The capacity development activities target students, policymakers, researchers, healthcare professionals, stakeholders, members of the media, non-governmental organizations and others at national, regional and international levels, and range from training workshops to interactive classroom courses, online webinars, coaching and mentorship, and experiential field visits. K2P has also worked with Ministries of Health and related ministries to identify and help overcome institutional constraints to the use of research evidence in health policymaking. K2P Center also provided ongoing technical support and coaching and mentoring for teams across different regions including the EMR, African Region, and WHO-Europe.

a. Building capacity of students

- i. Practicum Site: K2P center has served as a practicum site for both AUB and non-AUB students wishing to conduct their practicum in the field of Masters of Public Health. MPH Practicum students placed at K2P Center learned how to develop KT tools and how to identify stakeholders and how to engage them.
- ii. Internships: K2P has hosted interns, and has developed an internship program for students where they can contribute to products developed by K2P, engage in policy dialogue sessions, or intern at a policy institution.
- iii. Graduate assistantship: K2P has hosted graduate assistants at the Faculty of Health Sciences.
- iv. Trip to the Lebanese parliament: K2P organizes an annual trip for MPH HMPD students to the Lebanese parliament where they can meet parliamentarians and get acquainted with the actual policy making process.

b. Building capacity of K2P members

K2P members have been building their own capacity during the development of the material produced by K2P: through their engagement with the Center's activities and the new methodologies, the team members have gained skills in conducting implementation research, engaging different stakeholders including policymakers and media, facilitating dialogues and citizen consultations, and conducting qualitative and quantitative data analysis. Besides, K2P Center is regularly represented in local, regional and international conferences through the participation of its team members. The aim of such participation is to promote the exchange and sharing of knowledge, information and experiences. Furthermore, K2P members are now more engaged in course work.

c. Building capacity of stakeholders

The center is developing capacity of diverse stakeholders through being vocal about the issue of KT and evidence informed policy making through workshops, dialogue events and other engagement activities (details are described below). This domain has been very well received and is starting to garner additional interest.

d. Building institutional capacity

- K2P has been approached by SRC at the American University of Cairo to help them develop a center that is similar to K2P.
- The Ministry of Public Health in Oman has prioritized the use of evidence in Public Health policies. K2P Center supported to build capacity of stakeholders at the MOH on mechanisms to promote evidence-informed health policies.
- Based on K2P's goal of supporting other institutions in the region and building their capacities, K2P supported 6 European countries on the development of their Evidence Briefs for Policy (EBPs) on Antimicrobial resistance in collaboration with EVIPNet Europe. The support included conducting 3 webinars for country teams on developing search strategies and EBPs. The support also included individualized calls, coaching and mentoring country teams. Countries are finalizing the last draft of their EBPs in preparation for policy dialogues. A manual is currently being finalized to be shared with EVIPNet Europe member states on how to develop evidence briefs for policy and how to implement an integrated KT framework to ensure uptake.

III. K2P programs and activities

a. Capacity Building workshops

K2P has organized several Capacity Building workshops for various target audiences, including ones for Civil Society Organizations, for media, and for researchers (<https://www.aub.edu.lb/k2p/Pages/K2PCapacityBuildings.aspx>).

b. Policy Dialogues

Since 2013 and up to date, K2P Center has facilitated over 12 national and regional policy dialogues on high priority issues (<https://www.aub.edu.lb/k2p/Pages/K2PPolicyDialogue.aspx>). These collaborations and engagements have collectively convened more than 500 policymakers, health professionals, researchers and civil society organizations and have led to effective cross-sectoral linkages at the national, regional and international levels. K2P has developed and distributed policy dialogue summaries at the end of each dialogue session. K2P has also evaluated each policy dialogue using an evaluation questionnaire.

c. Press tracing

K2P press tracing service is provided monthly to subscribers and includes both Press Tracing and Scoring (on a quarterly basis), and it is about media coverage pertaining to pressing public health topics (<https://www.aub.edu.lb/k2p/Pages/Press-Tracing.aspx>). K2P Press Tracing encompasses all health-related stories and issues reported in seven Lebanese and regional newspapers. The quality of articles is assessed based on criteria specific to each type of evidence (Research article, Expert opinion and Grey literature) and a weighted score is given for every article.

d. Data Development Initiatives Study

A cross-sectional study purposively sampled 38 policymakers and 22 researchers. Self-administered surveys were used to assess access to data and preferences for data visualization modalities. Participants viewed and assessed data visualization modalities (text, infographic, reportage, and animation) on Syrian refugees' health status. Based on the study results, the K2P Center is developing the Health System Eye Platform. The platform will serve as a data hub to ensure that policymakers, researchers, practitioners, students and stakeholders have access to health data and/or evidence to make informed decisions. Data visualization modalities will be used to disseminate the data.

e. Mapping survey of research institutions in the EMR

K2P has worked with WHO EMRO on a mapping survey of research institutions in the EMR. A total of 223 institutions across 22 EMR countries were included in this survey. Two manuscripts emerged from this work.

f. Establishment of a Policy Support Observatory at the Ministry of Public Health in Lebanon

In April 2018, and in recognition of its role in advancing evidence-based research and good health governance in Lebanon, K2P supported the establishment of a Policy Support Observatory (PSO) at the Ministry of Public Health (MOPH) in Lebanon. The tripartite

agreement is between the American University of Beirut (AUB), Ministry of Public Health (MoPH) in Lebanon, and the World Health Organization (WHO), which will be physically hosted at the MOPH and technically operated by the Faculty of Health Sciences (FHS). This pioneering initiative, a first in Lebanon and the region, serves as a stepping-stone towards bridging the gap between academic institutions, international health organizations, and the Lebanese public sector, allowing the MoPH to strengthen and institutionalize the use of research evidence, data, and tacit knowledge. The PSO will enable decision makers, and particularly officials and experts in the MoPH, to design special programs and draw informed policies and strategies that respond to the basic health needs and improve healthcare in Lebanon. This partnership marks yet another innovative model that can be successfully replicated in other countries in the region—and beyond—to promote evidence-informed decision-making in health.

g. Global Symposium on Health Systems Research & Policy

In a new milestone for the K2P Center and FHS, the 6th Global Symposium on Health Systems Research & Policy (HSR2020) will be hosted for the first time in the EMR. HSR2020 will take place in Dubai and will welcome around 2,000 delegates from more than 100 countries over five days from 8th to the 12th November 2020. The winning bid was put forward by the Mohammed bin Rashid School of Government, Dubai, in partnership with the United Arab Emirates, and in coordination and close collaboration with AUB, through its K2P Center. To know more about this event, please check <https://www.aub.edu.lb/k2p/Pages/HSR2020.aspx>.

In October 2018, K2P participated and was highly visible in the Fifth Global Symposium (HSR2018) – Advancing Health Systems for All in the Sustainable Development Goals (SDGs) Era, in Liverpool, UK. During this symposium, the Sixth Global Symposium was announced and the video developed by K2P was showcased. The video showcase the reasoning behind the selection of the EMR and brief statements from the Mohammed bin Rashid School of Government, Dubai, and K2P Director.

h. OD4D – MENA

K2P Center became part of the Open Data for Development (OD4D – MENA) which is one of the OD4D nodes. OD4D is a global partnership to advance the creation of locally-driven and sustainable open data ecosystems around the world. The OD4D-MENA aims to strengthen research and advocacy capacity of the open data community in the MENA region to help address the long-lasting development challenges. The node also supports innovation in different fields, as well as build stronger connections with international open data initiatives and partners.

i. Citizen Engagement

- a. Developing the Citizen Engagement Model: With the advancement and expansion in the Center's activities and in line with its citizen engagement strategy, K2P has seen the need to engage with citizens to understand their values, expectations and feedback on the recommended policies. As such, K2P Center started conducting citizen consultations with a contextualized methodology from the international literature. The process of conducting the citizen consultations in the different Lebanese governorates was exceptionally difficult because citizens were not engaged before in the process of

decision making as well as the fact that no contextualized methodological studies on how to engage with citizens in our region was available. Then, K2P initiated a research study to help in the identification of a contextualized citizen engagement model in health policy and decision-making. This new model will form the new methodological basis on which K2P will engage citizens. Furthermore, it will inform the work of all other institutions working in health policy in Lebanon, including governmental and non-governmental organizations.

- b. Citizen Consultations: K2P has conducted citizen Consultations events in different Lebanese governorates to identify citizens' values, expectations and needs around schools' policies for childhood obesity prevention. The Citizen Consultations have been conducted in collaboration with the Ministry of Health, the local primary health care centers, and the local municipalities. An K2P Evidence Bulletin (summary of the policy brief tailored for citizens) and a K2P Citizen Consultations Summary for the deliberations within the citizen consultations were produced as a result.

j. Leveraging funds

K2P has also attracted two grants to help expand its work:

- 1) The first was from the Alliance for Health Policy and Systems Research and is a strategic appointment of K2P as the lead mentor institute for developing sustainable institutional capacity for increased demand and use of evidence for health systems strengthening in low- and middle-income countries. Through this innovative program of work, K2P Center will lead capacity development of six mentee institutions, one from each of the six WHO regions.
- 2) The second grant was from IDRC and specifically on Strengthening National Health Information Systems to Promote Data-Informed Decision-Making and Achieve SDGs. In this grant, K2P will adopt a multifaceted approach that will target all three domains of information system performance—technical, behavioral and institutional— to achieve sustainable improvements in data generation, analysis and use to inform health policies and practice.

IV. International recognition

a. Designating K2P as a WHO Collaborating Center for Evidence-Informed Policy and Practice

In March 2015, the K2P Center was designated as a WHO Collaborating Center for Evidence-Informed Policy and Practice, making it the first and only WHO Collaborating Center in Lebanon and the MENA Region and the second globally after the McMaster Health Forum in Canada (<https://www.aub.edu.lb/k2p/Pages/WHOCollaboration.aspx>).

b. lead mentor institute for developing sustainable institutional capacity

As mentioned above, K2P Center has been strategically appointed - by the Alliance for Health Policy and Systems Research at the World Health Organization - as the lead mentor institute for developing sustainable institutional capacity for increased demand and use of evidence for health systems strengthening in low- and middle-income countries. This international recognition is a demonstration of the role that K2P Center plays in developing capacity in evidence synthesis, KT and health policymaking.

V. K2P Priority setting

a. Development of a priority setting tool

As part of the WHO Collaborating Center TORs, K2P is supposed to host a priority setting workshop every two years to guide the production of evidence synthesis and KT products. K2P Center partners with two entities to form the evidence network at AUB: The Center for Systematic Reviews on Health Policy and Systems Research (SPARK), and the Clinical Epidemiology Unit (CEU) which hosts the AUB GRADE Center. Prior to proceeding with the priority setting exercise, K2P deemed it necessary to develop a priority setting tool for prioritizing review questions in the area of health policy and systems research, as no such tool was identified in the literature. Equally important was the development of an integrated approach for evidence synthesis and KT to guide the work of the Center. SPARK and K2P has achieved major progress with regards to the aforementioned two aspects, where they developed the tool and updated the integrated approach by incorporating a new section on rapid response services to reflect the center's decision to scale up to rapid reviews and rapid response products. The tool and the approach are to be used to derive a ranked list of priorities for research synthesis and KT products.

b. Priority setting exercise

In collaboration with the Johns Hopkins Bloomberg School of Public Health (JHSPH) and supported by the Alliance for Health Policy and Systems Research at the World Health Organization, the K2P center initiated conducting a priority setting exercise through focused dialogues in 4 different Arab countries (Lebanon, Jordan, Tunisia and Bahrain). The purpose of the priority setting exercise is to reflect on likely health policy and system challenges to achieving the SDGs and explore the health policy and system challenges within three pre-identified focal areas, which are: (1) Protecting and promoting access to health services through systems of social protection; (2) Strengthening multi-sectoral collaborations for health; (3) Developing more participatory and accountable institutions for health.

c. Focused policy dialogue in Jordan

The first of a series of dialogues was conducted in April in Jordan. Discussions raised a need to overcome inter-ministerial and inter-institutional challenges and promote accountability by addressing corruption to attain the SDGs. Moreover, participants agreed to the necessity of strengthening social protection schemes for better access to health care. The knowledge generated from those discussions will help identify priority topics for Policy Briefs and questions for Health Policy and Systems Research, so as to help countries achieve the SDGs.

VI. K2P Products and Dissemination

a. Scholarly Publications

K2P has contributed to advancing the field of KT and evidence-informed policymaking through its various research publications, including scholarly papers. For a list of Scholarly Publications by K2P members and affiliates please check <https://www.aub.edu.lb/k2p/Pages/Scholarly-Publications.aspx>.

b. Policy products at K2P

K2P has developed a unique set of products catered to address policy priorities at different stages of the policy cycle. K2P is constantly upgrading and enhancing the products to respond to urgent priorities as they emerge and using data innovation initiatives to develop unique visuals that summarize main recommendations. Since 2013 and up to date, K2P Center has prepared over 40 KT products that respond to national and regional health policy and systems (HPSR) priorities, with topics being selected using a validated set of criteria. For a list of K2P publications, please check <https://www.aub.edu.lb/k2p/Pages/K2P-Publications.aspx>. The various products that K2P has developed during the IDRC grant period include:

- i. K2P Policy Brief (<https://www.aub.edu.lb/k2p/Pages/K2PPolicyBrief.aspx>)
- ii. K2P Briefing Note (<https://www.aub.edu.lb/k2p/Pages/K2PBriefingNote.aspx>)
- iii. K2P Dialogue Summary
(<https://www.aub.edu.lb/k2p/Pages/K2PDialogueSummary.aspx>)
- iv. K2P Evidence Summary
(<https://www.aub.edu.lb/k2p/Pages/K2PEvidenceSummary.aspx>)
- v. K2P Media Bite (<https://www.aub.edu.lb/k2p/Pages/K2PMediaBite.aspx>)
- vi. K2P Personalized Briefing
- vii. K2P Rapid response (<https://www.aub.edu.lb/k2p/Pages/K2PRapidResponse.aspx>)
- viii. K2P Guidance Brief

c. Media Links

K2P has been actively engaging with the media and news outlets to disseminate activities. Several media appearances are documented in previous reports (<https://www.aub.edu.lb/k2p/Pages/K2P-In-The-News.aspx>).

VII. K2P Impact

K2P Center is the first center of its kind in Lebanon and the EMR to shape and impact health and social policies at national and regional levels by providing context-specific solutions to complex policy issues, convening high profile dialogues and engaging in capacity-building.

Faced with changing expectations and growing demands for evidence, and transitions towards the SDGs, K2P Center has expanded its scope of work from health to social policies and a broader focus on the SDGs. It has also moved beyond preparing policy briefs and conducting policy dialogues to encompass a range of KT innovations including rapid response services, evidence-based advocacy, citizen consultations, media engagement and data-driven innovations.

K2P Center has achieved impact at multiple levels, from changing the cultures at AUB to influencing health and social policies and practices, to promoting and institutionalizing the use of evidence and data in policy and practice, including at the MOPH, and to contributing to advancing the field of KT. K2P is also extending support to policy implementation and recommendation developments.

K2P has played an important role in changing the KT culture at AUB as a whole, and at the Faculty of Health Sciences, respectively. Overall, AUB-level efforts to engage with the

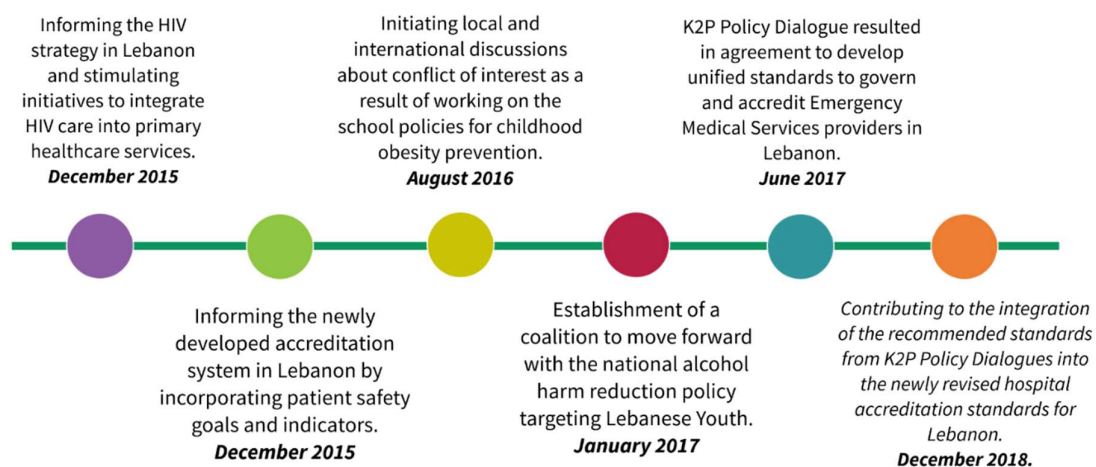
government and make an impact on public policies and actions have mainly been impeded by:

- ad hoc interactions with government
- suboptimal alignment with system- and strategic- planning
- limited interactions and sharing of knowledge across the different University programs

At the same time, the demand from government and public policymakers for evidence creates an opportunity for AUB to engage in long-term, sustainable, and strategic collaborations with government. Consequently, K2P Center coordinated with the President, provosts and Deans of Faculties at AUB to approve the launching of the Government Relations Initiative (GRI) at AUB for engaging and collaborating with the government. This initiative will facilitate a comprehensive, university-wide process to develop, sustain and institutionalize relationships between academia and government. Importantly, it will shift the mission of AUB beyond the tradition of education and research towards a ‘third mission’ related to its ability to partner with governments and communities to achieve societal impact.

Within the Faculty of Health Sciences, KT – in the form of producing policy briefs – has become an element in the annual performance review at the Faculty. Moreover, KT courses have become a core requirement for all students enrolled in the Masters in Public Health programme starting Academic Year 2018/2019. Additionally, researchers at the Faculty of Health Sciences and beyond are now regularly consulting K2P on how to incorporate KT into their grant proposals, as well as on how to take their research topics forward to bring about impact at the policy level.

K2P Center has collaborated with the Ministry of Public Health (MOPH) and related ministries and stakeholders on several high priority issues which have achieved the following policy impact:



VIII. Challenges

The foundation of the center has consumed more time than originally anticipated: significant amount of time was required to develop and articulate the concept of the center

including its guiding framework, form, function, scope, governance, engagement strategy and resources. In addition, there has been some changes in terms of timelines due to delay in budget approvals and also revising some budget items.

Moreover, the below issues need to be addressed for the long-term sustainability of the Center:

- i. Budgetary issues
 - In order to improve future performance of the center, it is critical to have a customized budget to fit needs and requirements to operate a center. Space is also critical. The demand for the center activities is high and sufficient and competent human resources are needed to ensure the smooth and efficient functioning of the center.
 - Additional funding for sustainability – including exploring revenue generating model for K2P
- ii. Human resources
 - To ensure the center has sufficient skilled and competent human resources (More researchers in the core team)
 - There is a challenge in retention of skilled staff
 - K2P still does not have a core team that is not on soft money

REFLECTION

Since its establishment, K2P Center has not only been providing evidence but also creating and responding to stakeholders' demands for evidence, and in doing so, has raised the expectations and changed the culture for evidence-informed policymaking. K2P has also promoted regular exchange between researchers, policy-makers and other stakeholders, and institutionalized those knowledge translation efforts. K2P continuously worked on making the case for knowledge translation, through its communication and advocacy, its products and stakeholder engagement. It was – and continues to be – important to distinguish knowledge translation from communication, and knowledge translation products from research studies in order for people to really understand and appreciate K2P's potential in influencing health policy-making. K2P is constantly evolving and has shifted from purely health related policy priorities to social policies that have an impact on health. K2P has also created a product specifically designed to cater to citizen and incorporate their views in the policymaking process; this is unprecedented in the context of Lebanon.

Overall, K2P has undergone five major transformations:

1. Becoming more inclusive in policy-making processes by engaging stakeholders such as non-governmental organizations, citizens and the media;
2. Strengthening multi-sectoral collaboration by involving the health, education and social sectors;
3. Making knowledge translation efforts more sustainable by moving from individual to institutional capacity-building
4. Broadening the target of knowledge translation efforts from national to regional and international levels.

5. Continuing to experiment with innovative KT approaches and tools (e.g. policy advocacy briefs, rapid response services, and data-driven innovations)

This project and the overall transformations that have taken place since its launch are critical particularly in the era of SDGs where evidence-informed policymaking and practice and cross-sectoral collaborations are key to realizing the 2030 development agenda. K2P Center is strategically positioned to continue to pursue that goal.

K2P Center emphasizes the importance of the flexibility IDRC provided with respect to implementing the project, given its nature and the diverse sets of activities, task and topics involved which in turn required prioritizing some aspects over others at any given time. We appreciate the flexibility that has been provided to us by IDRC and we request this to continue, in future projects. IDRC can also play an important role in facilitating sharing of experiences across different knowledge translation platforms and international and local actors as well as scale up innovations and learnings to the LMICs. Some of the useful lessons that can be derived from promoting evidence informed policymaking are summarized below:

- Understanding the current political system and the national context in which policy decisions are made is important to facilitate efforts to promote evidence-informed policymaking
- With right approach, governments, public policymakers and legislators can be open to evidence
- Scaling up and ensuring timely and sustained response to growing demands requires readiness, resources and capacity-building to undertake evidence syntheses and support their implementation in policy and practice.
- Knowledge translation centers / platforms have critical roles in bridging the gap between research and policy and promoting evidence-informed policymaking in the EMR and beyond
- It is critical to create demand and value for your work through:
 - Sharing exemplary practices wherein public officials and leaders appreciate contribution of research to policy
 - Sharing success and impact stories
 - Enhancing awareness and building capacity of policymakers and stakeholders on the role of evidence in policymaking
 - Being responsive to policymakers' and stakeholders' changing priorities and needs
 - Remaining objective and politically-neutral
 - Sustaining credibility and accountability

A key important lesson is the need to adopt strategies to sustain current efforts and initiatives. We recommend that future projects incorporate a section on how they plan to sustain their projects right from the start. Institutionalization is key to sustainability of efforts to promote evidence-informed policymaking, and can occur through strengthening institutional capacity, the latter which requires resources, legitimacy and regulatory support. Institutionalization will help promote systematic integration of evidence into the decision-making process, while avoiding a dependence on personal relationships which risks disruption over time. In moving forward, there is a need to institutionalize and support the evolving culture of use of evidence in policymaking. The success of the center has raised the

bar and expectations and we will constantly strive to excel as we move forward. There is a need for more institutional support and capital funding to support the constantly evolving role and activities of K2P.

Future outlook

K2P needs more sustainable funding beyond IDRC budget including exploring revenue generating model for K2P to sustain and expand its scope of work:

1. Scale up capacity within K2P to develop and experiment with more innovative KT products, tools and approaches that can address a wider range of policy priorities and needs at national, regional and global levels
2. Developing the advocacy products and exploring additional topics in that regard
3. Implementing citizens' engagement strategy and involving citizens in shaping policies and practices
4. Advancing the 2030 Sustainable Development Goals through promoting multisectoral collaborations and developing targeted products Supporting the building of bridges and/or integration across silos (in areas of existing strength) that are trying to support policymaking based on the best available data and evidence
5. Conducting policy tracing research and developing a framework to guide this process and contribute to evidence in that regard including investing in multi-method case studies with longer time horizons and using a common approach to demonstrate impact
6. Sustaining and developing more partnerships at FHS, AUB, national, regional and international levels.
7. Institutionalizing the relationship between K2P and external organizations including public sector and parliament Addressing additional social policy topics
8. Lead the preparation for the Sixth Global Symposium on Health Systems Research in 2020
9. Implementing and evaluating the process of developing and sustaining the PSO to derive lessons learned for scaling up to additional sectors and countries
10. Scaling up K2P model to other countries in the EMR and beyond

PROGRESS REPORT - OBJECTIVE 3: To strengthen public health professional practice in the region. The progress on this objective will review activities of the Center for Public Health Practice (CPHP).

I. Center for Public Health Practice (CPHP)

The overall objective of the center is to strengthen public health professional practice in the region. It aims to create a network of skilled and motivated public health professionals that are capable of scientifically determining the health needs of their communities, designing evidence-based interventions that would respond to those needs, analyzing the factors that contribute to effective implementation and finally evaluating the outcomes of the intervention in order to inform best practices.

The revised sub-objectives of the center are:

Sub-objective 3.1: To inform the training and intervention program for FHS

Sub-objective 3.2: To build capacities of public health practitioners

Sub-objective 3.3: To empower communities to lead public health initiatives

Sub-objective 3.4: To upgrade the Outreach and Practice Unit to a Center for Public Health

ACTIVITIES

Below is a summary of CPHP activities, reflecting how the IDRC grant supported CPHP to achieve its mission and strategic goals:

I. Administrative issues

a. Upgrading the Outreach and Practice Unit (OPU)

The center engaged in September 2012 in assessing its past activities and initiatives aiming to redefine its mission and formulate a strategic plan. The development of the center's strategic plan was the roadway for redefining the sub-objectives, outputs and indicators of the center's objective under the IDRC grant. As the center grows to become more visible nationally and regionally, it was upgraded from the Outreach and Practice Unit (OPU) to a Center for Public Health, Outreach, Practice and Stewardship (CPHOPS). At last, the group settled on the name: Center for Public Health Practice (CPHP). The group worked on preparations for the launch of CPHP, and the expected launch date for the Center was December 2014 as part of FHS 60th anniversary event.

b. Constructing a website for the center

A website for the center was constructed (<https://www.aub.edu.lb/fhs/Pages/cphp.aspx>): a general outline of the layout and content of the website was developed and agreed upon, and information related to each component of the website was compiled. The website serves to be a platform to introduce and disseminate the work of the center while offering a wide range of resources, which can be used by partners and individuals working in the field of public health. However, the launch of the website in the new format was postponed since the whole website of AUB is being revamped. Discussions were made to update at least the content of CPHP website even if it stays in the old layout/format.

c. Establishing an Advisory Board for the Center

An advisory board for the center specifically was not created, though it was planned to, because there was a plan to create a common advisory board for the 3 centers: CPHP, K2P and CRPH.

II. Workforce development

a. Developing an online survey to monitor and report on current and emerging public health needs and resources in the region

The center planned to develop an online survey to define current and emerging public health needs and resources in the region. The center developed a survey to set public health priorities. Upon completion, this survey was seen to be lengthy and might result in an even lower response rate than previously expected. This activity underwent several transformations at the end of which a change of orientation occurred.

b. Developing a Workforce development framework

After an unsatisfactory research results on needs assessment methods, the search was shifted to focus on reviewing public health priorities in the region and identifying gaps in the literature. The desk review findings showed that there are major discrepancies in disease priorities between sub-regions of the Arab world. A decision was made to shift focus from defining needs into defining the public health professionals that the center will target in its workforce development program, and the competencies that are needed by these different professionals to effectively perform their tasks. This exercise led to the development of a classification of the public health professionals working in the region. The tasks that are expected to be performed by each category were identified and then grouped into the competencies needed. A working model to establish an effective workforce development program for the Faculty of Health Sciences was also developed. This workforce development framework focused on defining the inputs, beneficiaries, training modules, and outcomes of the program.

III. FHS-community partnerships

a. Advancing Service Learning (SL) experience

While researching criteria for successful community selections, the center, as part of an FHS research team, submitted a grant to develop SL at the faculty. This was viewed as an opportunity that could greatly enrich the process of setting the criteria for community selection, pave the way for initiating communities of practice and might be as well presented as a method for sustaining partnerships. The center was identified as the body that provided institutional support for the SL initiative in the faculty mainly by facilitating access to communities and partners and matching course objectives with partners' needs. CPHP was responsible for providing technical, logistical and financial support for faculty members and students. The SL research was supported by several funds, including IDRC, and involved 3 phases: assessment and planning, piloting, and evaluation. The training of faculty members, transportation expenses for students and faculty, and the salary of a full-time research assistant to coordinate the initiative were covered from the IDRC grant.

The IDRC grant allowed CPHP to successfully leverage funds from the CTL (Center for Teaching and Learning) at AUB when a team of 7 faculty members decided to respond collectively to a grant call from the CTL by submitting a proposal entitled “Expanding Service Learning Experience in Public Health at the Faculty of Health Sciences” (Submitted March 2014) that aims to expand the SL experience that was initiated in summer 2012 at FHS, and refine its evaluation process. The three main outcomes that the research team aimed to achieve by adopting service learning as a teaching pedagogy included a) enhancing students’ sense of civic responsibility through their active and participatory engagement in communities; b) improving the students’ learning experience by incorporating structured retrospective and prospective reflection; c) addressing public health needs of communities by providing support and technical resources through students and their course instructors. A “framework for service learning in public health” was developed, endorsed by the Dean of FHS and faculty, and provided the platform for institutionalizing service learning at a programmatic level at FHS.

b. Preparing a framework for community partnership

The formation of a successful community partnership required research on corresponding success drivers, and the guiding principles to any partnership. The center came across multiple models, frameworks, and guidelines on campus-community partnerships and formulated one which was applicable for public health community agreements.

c. Selecting community of practice

The center capitalized on the existing project on SL being piloted at FHS to build its first community of practice: the venue for SL courses was an underprivileged area in Greater Beirut (Area of Sin el Fil - Bourj Hammoud - Nabaa), within close proximity to AUB, and with an active number of NGOs with which to collaborate. This pre-determined geographical location has been designated as the target community of practice for all FHS functions, from SL courses, research projects, practicum sites and so forth. CPHP made a decision to concentrate the activities of all participating service learning courses in one predefined geographical catchment area with the intent to enhance the health and environmental outcomes of the populations and communities served.

d. Long-term partnership with Sin El Fil Municipality

- A long-term partnership with Sin el Fil Municipality was developed with the vision to transform the area under its jurisdiction into a Healthy and Safe City. This vision aligned perfectly with CPHP mission to advance public health practice and impact the health of populations. In line with this vision, a concept note was drafted around the long term project between CPHP and the municipality and a short-term action plan was drafted focusing on two priorities identified by the Department of Social Development of the Municipality: healthy schools and food safety. Based on several discussions made with members from Sin El Fil municipality, it was agreed to focus on implementing the activities related to the “Healthy Schools” priority, following the health city conceptual framework of WHO and choosing schools as a point of entry for the medium-term action plan. In October 2016, a series of preparatory meetings were held between CPHP technical team, the local community development officer, the head of the education committee at Sin El Fil municipality and the schools administrations. Following these

meetings, several activities were implemented. The end result was implementing behavioral interventions in Sin El Fil schools, while identifying two main behavioral concerns to focus on: substance abuse and violence. CPHP conducted the peer education workshop for students (aged between 13-15 years old; from 10 schools; grades 8, 9 and 10; April 3-5, 2018). The perspective was to nurture a culture of healthy behavior and social responsibility among the school students and build their capacities to become the agents of change in their neighborhoods and communities. This will allow the establishment of a cohort of young people that will design, plan and implement long-term actions towards a “Safer City, a healthier population” – the moto of the partnership that was formalized in February 2018 in a Memorandum of Understanding.

- Signing a memorandum of understanding between FHS and Sin El Fil municipality: after five years of cooperation between CPHP and Sin El Fil municipality (which is coordinating the partnership on behalf of the community), a memorandum of understanding (MOU) was signed between the two parties under the title of "Sin el fil: a Safer City, a Healthier Population" (February 2018).
- All activities including an environmental and physical assessment of 10 schools in the area, the implementation of some of the recommendations, peer education training of school students, life skills training of school teachers, transportation expenses for CPHP members, and the salary of a full-time research assistant to conduct the assessment and coordinate all activities were covered from the IDRC grant.

e. Long-term partnership with Burj Hammoud Municipality

Discussions were initiated with Burj Hammoud municipality to expand the collaboration between CPHP and the municipality beyond SL and community engagement activities through drafting an action plan. This activity has been suspended for the time being since working on Sin El Fil community proved to be very time and human resource intensive.

f. Students' community engagement

Every year, capacity development trainings are delivered to MCF students including: personal development, citizenship and advocacy. For one year, non-MCF students attended the trainings as well. In order to engage non-MCF students in the summer community engagement component, CPHP has advertised for opportunities for students to be involved in activities implemented in Sin el Fil under the umbrella of the long-term partnership initiated with the municipality.

To consolidate the partnership with Sin el Fil municipality and capitalize efforts in this community of practice, FHS students worked in collaboration with the municipality and NGOs in the area on projects as part of SL courses undergraduate and graduate courses. In addition, Master Card Foundation (MCF) scholars carried out their summer community engagement project in Sin el Fil. Following on the experience of Sin el Fil, and the success in building the long-term partnership and trust through students' engagement, FHS students were also engaged in projects in the area of Burj Hammoud for three consecutive years. This was part of their SL courses and the community engagement program of the MCF scholar.

IV. Synergy between CPHP and CRPH

a. Selecting a common topic

Following several meetings between the directors of the three centers at FHS, a common topic was identified as a priority health issue that all three centers could address simultaneously to understand and test the collaboration process between the three centers: non-communicable diseases were selected as the pilot example. Thus, all three centers have a role to play in improving the status of this health issue. The centers have discussed that it would probably be best to initiate this collaboration in one geographical community rather than on a national scale. This idea will be presented to the faculty at large for endorsement.

b. ArabsDigPH

Through its engagement with several partners and communities locally and regionally, CPHP identified challenges in programming that can be summarized in 4 main areas: 1) the availability of aggregated data that can support public health practitioners (in NGOs, governments, UN agencies, etc) in identifying needs and priorities specific to a public health issue; 2) the evaluation of programs to bring forward evidence of effectiveness and impact; 3) active participation of the beneficiaries in the program planning and implementation; 4) Limited access to the most at risk populations. These challenges fall under the broader competencies defined in the Workforce Development and Intervention Framework of the Center developed in the initial phases of the IDRC project; therefore, CPHP decided to explore the use of digital solutions in addressing these challenges. CPHP and CRPH, who had almost similar challenges but from a research lens, joined forces to launch the *ArabsDigPH initiative* to provide public health practitioners and researchers with a forum for sharing experiences, and identifying capacity building priorities in the use of digital technology in public health practice and research. Several steps were undertaken to move forward with this initiative:

- A first workshop was organized in April 2015 on the “Use of digital solutions in public health” with the IDRC funds. CPHP and CRPH engaged interested AUB faculty members from engineering and computer sciences as well as faculty from the Open Lab of Newcastle University in the workshop. One objective was to create a platform (ArabsDigPh) where teams of academicians and practitioners would incubate ideas. Unfortunately, the NGOs had limited capacity to move forward the designs for digital solutions developed in the workshop, and there were limited capacities on our side to drive these solutions. Consequently, with our colleagues in Engineering, we submitted grant proposals to move forward with a regional hub to support digital public health projects, which were not awarded.
- FHS faculty members were asked to fill an online survey of few questions, which allowed focusing the initiative on the research interests of faculty members and the networks they are involved in.
- A concept note was drafted for conducting a training workshop around the use of digital solutions to address women’s health in Alexandria, as a result of collaboration between CPHP, CRPH, Open Lab in Newcastle and Alexandria Regional Center for Women’s Health (planned to be held in September 2016). However, there was a change in management at the women’s center in Alexandria while the old management at the center identified the need for the training; thus, the workshop implementation did not materialize.
- In December 2016, CPHP and CRPH in collaboration with the Newcastle University Open Lab in the United Kingdom (UK), conducted a two-day post-conference workshop “Engaging Youth through Digital Solutions” for selected youth practitioners

and researchers attending the Lancet regional conference on “Adolescent and Youth Wellbeing in the Arab region: Challenges & Promises of the Second Decade of Life” conference. The workshop was meant to: a) Synthesize and prioritize the outcomes of the conference and the youth issues that emerged; b) Analyze gaps and challenges facing youth in program design and implementation; c) Identify solutions that address priorities and challenges using value sensitive design. The workshop, partially funded through the IDRC grant, resulted in the creation of a youth network through a Facebook group that continuously engages with the Lancet Youth Commission.

c. Humanitarian Engineering School

As mentioned above, the Arab Digital Public Health (ArabsDigPH) is an initiative launched by CPHP and CRPH in April 2015 and in collaboration with Newcastle University’s Open Lab and one colleague from the Maroun Semaan Faculty of Engineering and Architecture (MSFEA) to provide a platform for initiating cross-disciplinary research and efforts to develop digital solutions for obstacles to public health programming and research
https://www.aub.edu.lb/fhs/Documents/research_practice_policy/centers_cphp/FactSheet_Humanitarian%20Engineering%20a%20Health%20Perspective.pdf. In 2017, building on their previous collaborations, FHS (represented by CPHP and CRPH) and MSFEA came together to develop the School on Humanitarian Engineering.

- School on Humanitarian Engineering: The interdisciplinary course *Humanitarian Engineering: Designing Solutions for Health Challenges in Crises* is a collaborative initiative between the Faculty of Health Sciences (CPHP and CRPH) and the MSFEA, alongside the Departments of Biomedical Engineering and International Health at Boston University (BU) and the Center for Bioengineering Innovation & Design (CBID) at Johns Hopkins University (JHU). The course has been organized four times so far (For course syllabus, please refer to Annex 1.5). The School encourages students to engage in designing engineering solutions that would alleviate health challenges faced by people in protracted humanitarian crises. The school adopts an innovative inter-faculty *service learning* course model that is also open for professionals working in humanitarian settings. The course was designated as Social Sciences General Education for undergrads and approved in both faculties as a technical elective for graduates. It is attended by students from AUB, JHU and BU from various backgrounds including: engineering, architecture and planning, health sciences, social sciences, business, etc...
- Humanitarian Engineering initiative: Building on the success of their multidisciplinary collaboration, FHS and MSFEA aim to develop further the initiative and broaden it to cover “Engineering Health Innovations for Human Wellbeing and Global Development”. This initiative elevates the synergy beyond CRPH and CPHP at FHS to become a synergy between two faculties (FHS and MSFEA) with their entire body of faculty members and students. Under this initiative, two joint research proposals between MSFEA and FHS (represented by CRPH and CPHP) were submitted but not awarded.

d. *Allo Sohtik* project

As one of the results of the collaboration between both CPHP and CRPH and the Open Lab in Newcastle University, a PhD candidate has worked on the development of an intervention related to antenatal care through the use of a mobile-phone based radio health show and

WhatsApp in remote informal tented settlements for Syrian refugees in Lebanon, named as “Allo Sohtik” project. The implementation of this intervention and the work in progress is guided by CPHP, CRPH and Open Lab. Technical tests as well as four pilot shows as proof of concept have been conducted. The formative research study has already been published http://www.designandwellbeing.com/papers/syrian_refugees.pdf. Preliminary results have recently been published and led by a PhD student that was jointly supervised by CRPH and Newcastle University faculty (<http://dx.doi.org/10.1145/3083671.3083690>) and (<https://ehps.net/ehp/index.php/contents/article/view/2472/19>). A review paper was co-written with CPHP and published in the *Journal of Public Health Policy* (<https://doi.org/10.1057/s41271-016-0040-1>).

V. Capacity-building

a. Designing and implementing trainings

- CPHP hosted a 2-day workshop for interested faculty members to support them in designing service learning courses.
- Guided by the workforce development framework, the center had decided to develop training programs to be implemented starting academic year 2013-2014. IDRC fund was used towards supporting the establishment of the “Program planning in public health: using evidence to enhance effectiveness” (January 2014). Two other training workshops were conducted for external stakeholders - not funded by IDRC but guided by the framework - namely: “Project Management in Humanitarian Settings” and “Community Mobilization”.
- In collaboration with the Department of Epidemiology and Population Health at FHS, the Center is gradually building the evidence-based public health program. Three modules have already been developed and offered: “Evidence- based program planning”, “Data management” and “Data analysis”. Three modules are still being developed: “Sampling and sample size calculations”, “Questionnaire design”, “Study design”. These courses are not funded by IDRC but were derived from the Workforce Development Framework.
- CPHP, and the Lebanese Order of Nurses, planned and implemented a training of trainers on "Occupational Violence in Healthcare" (May 2015) – upon identifying a need by the Occupational Violence research component funded by IDRC.
- In collaboration with the Department of Epidemiology and Population Health at FHS, the Center delivered a Data Analysis workshop - in World Vision premises in Lebanon upon their request. The workshop wasn’t financed by IDRC but falls under the workforce development framework developed to fulfill the objectives of the IDRC grant.
- In collaboration with the Department of Health Promotion & Community Health at FHS, CPHP organized an interactive executive workshop on Social Marketing for Public Health (December 12-14, 2017).
- The center delivered a monitoring and evaluation training entitled “If you can’t measure it, you can’t improve it” (April 11-15, 2016)
- Several discussions are ongoing with the new Head of the Order of Nurses around capacity building activities. These activities would encompass training managers and nursing directors in each area of Lebanon, who are able to have an influence on current decision making processes within health settings, and building on the observations of those who already attended last year’s training to guide other types of trainings.
- As for the internal stakeholders, the center - in collaboration with the MasterCard Foundation (MCF) scholars program - has developed a Capacity Building and Community

Engagement Program that “allows students to experiment with different levels of individual and collective development to reach a state where they are ready to become agents of change in their societies and actively participate in public life”. The program extends over the 3 years of enrollment of the scholars in the undergraduate program. These activities were funded by the MasterCard Foundation Scholarship Program.

- Delivering an M&E training to FHS staff members: During December 2016, CPHP initiated the process of organizing a workshop on M&E for FHS faculty members and research assistants. Few faculty members expressed interest in attending this workshop and others preferred that their respective research assistants attend the workshop. In line with that, and after several discussions, the center decided to postpone the planning and implementation of this training workshop.

b. Sponsoring practitioners for the trainings

As part of the IDRC funds, practitioners may be sponsored to attend courses or workshops at FHS. As such, the center sponsored:

- 6 participants - “Program planning in public health: using evidence to enhance effectiveness”
- 4 regional participants - workshop on “Use of digital solutions in Public Health”
- 13 participants - training on “Prevention of Occupational Violence in Healthcare”
- 4 regional participants - training “If you can’t measure it, you can’t improve it”
- 21 regional participants - post-conference workshop: “Adolescent and Youth Wellbeing in the Arab region: Challenges & Promises of the Second Decade of Life” conference
- 1 staff from Local Development Department at Sin el Fil Municipality - “Social Marketing Workshop”

c. Hosting professionals in Residence

In order to respond to the current conflict that the Arab region is subjected to, and particularly to the humanitarian crisis regarding Syrian refugees, one Professional in Residence was hosted at FHS for 10 days and developed a concept note on “Establishing emergency response resource unit” (September 2013). Although the center planned to host more professionals in residence who would support and benefit from other activities of the center, none else was hosted as this activity proved to be challenging.

VI. Monitoring and evaluation within humanitarian work

Given the importance of Monitoring and Evaluation (M&E) in Humanitarian aid projects and the escalating need and demand for capacity building in M&E among NGOs’ staff members, CPHP decided to plan, design and implement a ‘Winter School’ which includes a series of courses to cover all the facets of M&E in humanitarian work. A draft concept note was prepared in an attempt to design a preliminary structure for the suggested winter institute. Further discussions and meetings with the various departments at FHS are required in order to identify the topics, resources and final structure of the proposed institute.

VII. Dissemination (regarding CPHP work in the communities of practice)

- Two draft papers on the SL experience at FHS (one around the SL framework and the other around the outcomes of SL) have been prepared, but not yet published.

- Presentation entitled “Developing a framework for Service Learning in Public Health”; Presented at Takaful 2014 - Fourth Annual Conference on Arab Philanthropy and Civic Engagement (March 2014)
- Seminar entitled “Developing a framework for Service Learning in Public Health”; Presented within FHS weekly seminars (February 2014)
- Presentation on “Developing a framework for Service Learning in Public Health”; Presented at the Fourth International Conference on Effective Teaching and Learning in Higher Education (February 2014)
- CPHP team facilitated a discussion session on the SL experience at FHS at the American Association of Colleges and Universities (AAC&U) annual conference, “Global Engagement and Social Responsibility: Higher Education's Role in Addressing Global Crises” (October 2017; New Orleans) around a case study prepared by CPHP entitled “Service Learning in Public Health: Framework, Results, and Sustainable Community Partnerships”. CPHP documented in this case study the story of SL at FHS, its persisting challenges, and its contribution to the transformative learning experience of students.
- Oral presentation on “Service Learning in Public Health: Framework, Results, and Sustainable Community Partnerships”; Presented during the American Public Health Association (APHA) Annual Meeting & Expo (November 2017). Couple of abstracts were earlier submitted to APHA (2014) but were not accepted.
- A paper entitled “The impact of digital technology on health of populations affected by humanitarian crises: recent innovations and current gaps” was published in the *Journal of Public Health Policy* as part of a special issue on Digital Technologies, Health Equity & Public Health. This paper is the result of the joint efforts between CPHP and CRPH.

REFLECTION

CPHP aims to advance evidence-based public health practice in Lebanon and the region while enhancing the academic experience of students and faculty. It builds solid community partnerships and develops human capabilities to impact the health of populations.

Within the framework of its mission, CPHP aspires to achieve the following strategic goals:

1. Design and implement national and regional health development programs that respond to public health priorities
2. Design and implement a relevant health workforce development program that responds to public health needs in the region
3. Expand opportunities for student and faculty civic engagement
4. Enhance the return of public health practice into FHS academic programs and mission

While CPHP has collaborated with many partners to address strategic goals 1 and 2, it was only through the IDRC grant that it was able to create and sustain initiatives that contribute to the enhancement of the academic program, promote civic engagement and build university-community partnerships. The grant allowed CPHP flexibility to design and experiment innovative ideas of its own with no obligation to focus on a specific theme or

disease or population group. Those initiatives are: Service learning, the Sin el Fil community of practice, and ArabDigPh.

Service learning Initiative: our future steps in terms of the Service learning Initiative include integrating service learning into the core courses required by all students at FHS; this will necessitate a change in the curricula and the commitment of resources in order to ensure the sustainability of this initiative. The revised CEPH accreditation criteria, where practice experience has become a cross-cutting requirement in MPH programs, provide an opportunity for better integration.

Developing a sustainable University-community partnerships: sustaining the partnership and the activities to fulfill the desired results and impact has become a challenge now that the IDRC grant came to an end. However, follow-up on the activities that have already been initiated are currently being coordinated by a Research Assistant recruited from CPHP overhead budget. CPHP and the municipality team will write proposals to seek funding; the proposals will include a component of implementation research in order to study the long-term impact of the initiative and document lessons learned. The initiative could be scaled up and replicated to other communities in Lebanon or in the region.

ArabsDigPh – a joint initiative with CRPH: the body of knowledge on Service Learning - gathered by CPHP during the 6.5 years of the IDRC project - informed the development, implementation and evaluation of the Humanitarian Engineering model. The grant also allowed CPHP and CRPH members to interact and build a solid relationship among themselves and with colleagues in engineering under the ArabDigPh umbrella, which culminated in the creation of the joint Humanitarian Engineering Initiative. The two faculties have now established a Steering Committee to strategically grow this initiative into a partnership for “Engineering Health Innovations for Human Wellbeing and Global Development”.

In conclusion and as explicitly stated at the beginning of this reflection, IDRC grant contributed to enhance the academic return of the practice function of FHS institutionalized within CPHP. The most pertinent lesson learned is that building long-term sustainable partnerships to improve public health practice and strengthen public health education requires time, patience and resilience.

PROGRESS REPORT - OBJECTIVE 4: Advance an institutional model for academic public health based on a systems approach that integrates and enhances synergy between research, knowledge translation and policy impact, and outreach and practice, and uses networks to impact public health in the region. This section will review the monitoring and evaluation framework for the overall grant.

I. Monitoring and Evaluation

The objectives of the M&E framework are:

1. To institutionalize M&E into the processes of work early in the life of the grant.
2. To build project M&E into a larger encompassing framework of overarching goals which are also being evaluated.
3. To provide guidance / structure to the process of M&E.
4. To be able to 'measure' / assess / determine impact of this project at various intervals

The M&E component planned to monitor the grant at three levels:

1. Overarching evaluation questions: three overarching institutional questions have been prioritized:
 - What are the characteristics of research networks that support informal capacity building and enhance knowledge production?
 - What are important skills/capacities/resources to be found in institutions that enable them to influence their environments?
 - How is this project synergistic? How is the sum of the product of this project all together greater than the sum of its parts?
2. Tracking of outcomes for the grant as a whole
3. Tracking of outcomes defined by specific centers and/or projects

In what follows, we concentrate on the overarching evaluation questions.

Overarching question I: What are the characteristics of research networks that support informal capacity building and enhance knowledge production?

The M&E team developed a detailed proposal for IRB regarding this evaluation question during the first year of the grant and received IRB approval in December 2013. The M&E team met with the network coordinators in order to discuss selection of potential participants. Using mixed purposeful sampling approach, information-rich members were selected for the study in order to get in-sight and in-depth understanding of their experiences with networks, from three already established regional research networks: i) Reproductive Health Working Group (RHWG), ii) Choices and Challenges in Changing Childbirth Group (CCCC) and iii) Tobacco Control Research Group (TCRG).

Using in depth-interviews, the M&E team interviewed 24 persons in total: 7 males & 16 females; from 9 countries: Lebanon, Syria, Jordan, Egypt, occupied Palestinian territory, Tunisia, Morocco, Yemen and Turkey. Interviews were audio recorded and transcribed; and

subsequently analyzed using thematic analysis. IDRC grant covered the attendance of the senior research assistant working on this component to two RHWG meetings to collect data related to this project (in Muscat, Oman - January 27-29, 2014 and in Dhour Choueir, Lebanon - June 13 - 15, 2015).

In addition to conducting interviews as planned with a selective sample of members, it was decided to get a wider range of information from as many network members as possible, so as to be able to learn more about networks and if/how they result in knowledge production. Thus, it was proposed to also send a set of general questions to all network members after they agree to participate. Using email-based surveys, a total of 7 participants responded to the short questionnaire.

The original plan was to re-interview network members one and a half year after first interview. However, the team thought that there wouldn't be much gain from this step. Instead, the team decided to expand to other research networks in order to consolidate and triangulate findings. In an attempt to move to new networks, the M&E team has met and communicated with members who gave feedback regarding other potential research networks (LPHA and RESCAP-MED). Three in-depth interviews with members of RESCAP-MED were conducted, which made the total of interviews equals to 27.

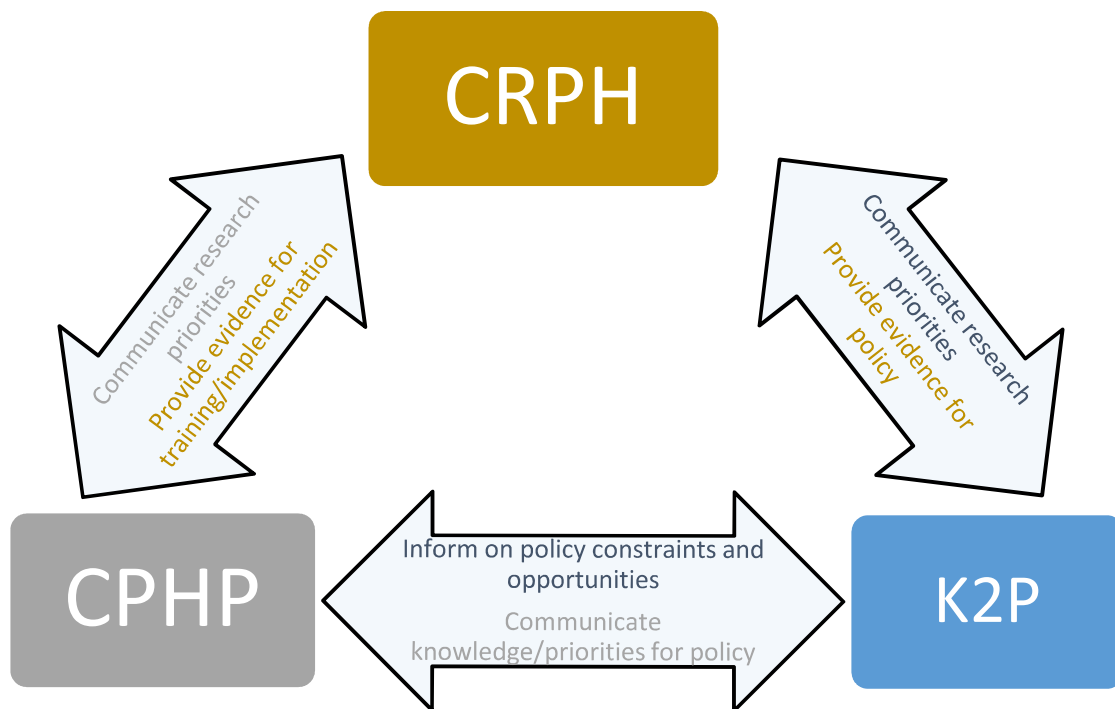
Overarching question 2: What are important skills/capacities/resources to be found in institutions that enable them to influence their environments?

The M&E team has started working on this research question, through several channels: literature review has been conducted, and key references have been noted. In addition, interviews have been conducted with faculty members at FHS. As a result, a list of regional academic institutions has been drafted, including ones that they think have or have not influenced their environments. The team has also thought through various aspects of this research, including approach, categorization of universities, sampling frame, target population. In addition, a concept note was prepared to host an expert meeting to discuss this research question in more depth and identify the relative advantage of moving forward with it given all the other initiatives taking place concurrently. However, this component was delayed as it was proven difficult to grasp its large scope, and make it manageable.

Overarching question 3: How is this project synergistic? How is the sum of the product of this project all together greater than the sum of its parts?

The importance of synergy is most evident in the institutionalization of the three centers within FHS and their interactions with each other. The directors of the 3 centers were all cognizant of the value of collaboration to strengthen the impact of their activities, and met regularly to share info on the scope of their work. They have developed a model of interactions and synergy as per below. The interactions were more bilateral than trilateral. These bilateral collaborations represented opportunities for further work. The directors have also engaged in discussions on the possibility of working together on a priority topic. The synergy has developed gradually but systematically.

Examples of Bilateral collaborations were covered in the progress reports of the centers above. The synergistic aspect of this large project has become more evident starting the 3rd year of the grant. It is until then when the references of project or Centers to each other and their interactions have increased. Throughout the consecutive progress reports, the project or Centers have referred to joint activities in research, practice, and policy. The benefits of linkages became clearer and Centers reached out to each other. Research projects also started to seek out Centers.



While M&E team continued to monitor synergistic interactions, it also considered the need of an external evaluator to assist in evaluating this question. Based on internal discussion at FHS, and IDRC feedback, it was agreed that an external evaluator would be helpful for the Faculty to assess its progress towards meeting this objective. For this purpose, terms of reference (TOR) were developed for a Monitoring Evaluation and Learning (MEL) consultant. The TOR was circulated across the Faculty, IDRC and Public Health in the Arab World network. Out of 8 applications received, Mr. Bob Williams - who has vast experience in M&E and organizational change - was hired.

A series of discussions took place between the M&E team and Mr. Bob Williams. Based on these, Mr. Williams developed a methodology that consisted of identifying how FHS has influenced public health education, research, practice, and policy in the Arab region (outcomes); what criteria the participants were using to judge "influence"; and what outputs led to these successes. During the weeks of October 12 and 19, 2015, FHS hosted a series of five workshops aimed at taking stock of the evolution and institutionalization of the 360° systems network approach (held around education, practice, research, policy, and

synergy). The intended outcomes of the workshops were to (i) understand the extent to which the objective of an alternate model has been achieved; (ii) understand the extent to which the idea of synergy and interaction has indeed occurred, and (iii) reflect on lessons learned in order to guide our strategy moving forward. Each of the workshops included FHS faculty with primary responsibility in this area, in addition to broader AUB colleagues, or regional colleagues, or decision/policy makers in Lebanon who knew of the work of FHS and could speak to the area. Preliminary results of the discussions with Bob William were shown in previous progress reports.

Project outputs and dissemination

- An abstract based on Preliminary data analysis of transcribed interviews was submitted to the 14th World Congress on Public Health (WCPH) **entitled** “Research Networks: fora for capacity building and knowledge production”, and presented as oral presentation on 14th February 2015, in Kolkata, India.
- Results were also presented at the Faculty research day organized by CRPH on May 3, 2016, entitled “Research Networks: Fora for Capacity Building and Knowledge Production”.
- An abstract was submitted and accepted for poster presentation during the American Public Health Association (APHA) 2017 Annual Meeting & Expo to be held in Atlanta, GA in Nov. 4 - Nov. 8, 2017 (<https://apha.confex.com/apha/2017/ih/papers/index.cgi?username=376828&password=359445>)
- Two manuscripts are currently being developed: (1) A 360° systems-network approach to Public Health Education and Research: A model (voice) from a region in turmoil; and (2) Assessing the capacity and characteristics of Research Networks as fora for capacity building and knowledge production.
- The outputs for monitoring and evaluation were mainly around information sharing. The discussions in the M&E committee clarified the content of each component as well as the more overarching objectives of the grant, and resulted in a more cohesive understanding of the project as a whole, as well as the M&E efforts. The discussions with Bob Williams and tools used in his group meetings enhanced the skills and understanding of the M&E team to organizational evaluation methods.