HEALTHY LIFESTYLE FAMILY-BASED INTERVENTION
for Iraqi and Jordanian families in Jordan

International Medical Corps
I.) BACKGROUND

“Sometimes, it can feel like life is something happening to us or around us and all we can do is watch…”

(Thuraya, an HSL participant and Iraqi mother of three, Irbid, Jordan)

Jordanian and Iraqi refugee families living in Jordan are facing a potential health crisis, as the rapidly growing number of people with chronic diseases threatens to overwhelm the already overtaxed local health system. Chronic diseases, often referred to as non-communicable diseases (NCDs), are diseases of long duration and generally slow progression; they include heart disease, stroke, cancer, chronic respiratory diseases, and diabetes. According to WHO chronic diseases are currently the leading cause of mortality in the world (63% of all deaths). In 2008 out of the 36 million people who died from chronic disease, 9 million were under 60-years-old and 90% of these deaths occurred in low- and middle-income countries.

A great percentage of chronic diseases are easily preventable however through the simple reduction of both behavioral risk factors, such as tobacco use, physical inactivity, alcohol use and unhealthy diet, and other underlying metabolic/physiological causes, such as raised blood pressure, raised blood glucose, raised blood cholesterol, and overweight and obesity (WHO Global Status Report on Non-communicable Diseases 2010).

Table 1: Jordan NCD mortality (WHO 2008 estimates)

<table>
<thead>
<tr>
<th>NCD Mortality (WHO 2008 estimates)</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total NCD deaths (000s)</td>
<td>12.9</td>
<td>9.2</td>
</tr>
<tr>
<td>NCD deaths underage 60 (percent of all NCD deaths)</td>
<td>34.2</td>
<td>31.1</td>
</tr>
<tr>
<td>Age standardized death rate for NCDs per 100 000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All NCDs</td>
<td>817.8</td>
<td>568.4</td>
</tr>
<tr>
<td>Cancers</td>
<td>109.8</td>
<td>89.2</td>
</tr>
<tr>
<td>Chronic Respiratory Diseases</td>
<td>45.7</td>
<td>17.5</td>
</tr>
<tr>
<td>Cardiovascular diseases and diabetes</td>
<td>550.4</td>
<td>379.8</td>
</tr>
</tbody>
</table>

Table 2: Jordan Behavioral risk factors (WHO 2008 estimated prevalence)

<table>
<thead>
<tr>
<th>Behavioral risk factors (WHO 2008 estimated prevalence %)</th>
<th>Males</th>
<th>Females</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current daily tobacco smoking in adults aged 15+</td>
<td>48.8</td>
<td>4.1</td>
<td>27.1</td>
</tr>
<tr>
<td>Current daily cigarette smoking in adults aged 15+</td>
<td>37.2</td>
<td>2.7</td>
<td>20.4</td>
</tr>
<tr>
<td>Physical inactivity (no national data available)</td>
<td>---</td>
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<td>---</td>
</tr>
</tbody>
</table>
Table 3 Jordan Metabolic risk factors (WHO 2008 estimated prevalence)

<table>
<thead>
<tr>
<th>Metabolic risk factors (WHO 2008 estimated prevalence %)</th>
<th>Males</th>
<th>Females</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raised cholesterol in adults aged 25+ years</td>
<td>46.3</td>
<td>46.4</td>
<td>46.4</td>
</tr>
<tr>
<td>Raised blood pressure in adults aged 25+ years</td>
<td>31.4</td>
<td>25.9</td>
<td>28.8</td>
</tr>
<tr>
<td>Raised blood glucose in adults aged 25+ years</td>
<td>14.2</td>
<td>14.7</td>
<td>14.4</td>
</tr>
<tr>
<td>Overweight in adults aged 20+ years</td>
<td>62.3</td>
<td>66</td>
<td>64.1</td>
</tr>
<tr>
<td>Obesity in adults aged 20+ years</td>
<td>24.0</td>
<td>36.4</td>
<td>30</td>
</tr>
</tbody>
</table>

In Jordan NCDs alone are estimated to account for 74% of all deaths.

Graph 1 Jordan Proportional mortality (% of total deaths, all ages) (WHO, NCD country profiles, 2011)

Although country capacity to respond to and address NCDs has been in place in Jordan, there is no integrated topic-specific action operational for either behavioral or metabolic risk factors.

Chronic illnesses require continuous medication and medical consultations that place a significant financial burden on families in Jordan, especially refugee families with limited resources. And Iraqi refugees are far more susceptible to chronic diseases given their social and economic constraints they have been facing in Jordan.

Chronic diseases have a substantial negative impact on human development as well, as they reduce people’s productivity thus greatly contributing to poverty. Much of that burden can be reduced through simple NCDs prevention strategies and the complementary management of existing NCDs conditions. Therefore WHO recommends the implementation of practical and affordable population-based health interventions that should be integrated into primary health care. Only such a comprehensive approach will ensure sustainable human and society development.
II.) INTERVENTION

“We didn’t have any idea about a healthy lifestyle. Life was just normal; you do what everyone else does. Eat, smoke, don’t exercise and not because you don’t know it’s bad. We just didn’t think about it. We lived carelessly…”

(Ali, HLS participant)

To address the issue of chronic illnesses in Jordan, International Medical Corps, in partnership with Jordan Health Aid Society (JHAS), implemented the Healthy Lifestyles (HLS) family-based campaign from 2010-2011. Available to Jordanian and Iraqi refugee beneficiaries of three International Medical Corps-supported health clinics in Jordan, HLS is a behavior change communication (BCC) project that provided families with both knowledge of risk factors leading to chronic diseases and preventive measures against these diseases. Specific areas of focus included health risk factors such as smoking, obesity and high cholesterol to help beneficiaries manage their own health conditions and practice healthy lifestyle habits. Available to beneficiaries seeking services at Abu Nseir Clinic (Amman), Irbid Clinic (Irbid) and Zarqa Clinic (Zarqa), the HLS campaign was available to participants with at least one family member already suffering from diabetes or hypertension. Presence of other risk factors among the rest of the family members was also taken into consideration.

As chronic diseases result from many factors, the HLS campaign focused on interventions that simultaneously addressed:

1. Nutrition and weight management
2. Physical activity
3. Health-seeking behaviors

Comprised of clinic- and community-based events (including a four-day camp), the HLS campaign aimed to raise awareness of the benefits of healthy nutrition and physical activity with exercises designed specifically for patients with chronic conditions. International Medical Corps’ HLS campaign reached 25 Iraqi and Jordanian families (100 individuals in total) and was designed to increase participants’ knowledge on healthy lifestyle choices and facilitate the acquisition of skills needed to practice these choices, as well as encourage them to do regular medical check-ups and seek health care. The entire family was engaged in the process, while accommodating different needs of family members based on their age and health status.

Families participating in the program were taught to:

- prepare healthy food
- quantify daily food portions by food group
- practice daily exercises
- practice home-based management of chronic conditions through basic monitoring of:
  - body mass index
  - blood pressure
  - blood sugar
  - food, salt, sugar and coffee intake

The families were divided over three-month-long-rounds during which they attended a four-day HLS camp that took place at Youth Hostels of the Ministry of Health in Aqaba or Ajloun. Families were accompanied by a multi-disciplinary team of International Medical Corps and JHAS program staff who organized and oversaw the camp program activities. Upon successful completion of the camp, families started regular participation in both clinic and community-based activities. Effectiveness and sustainability of families’ achievements was monitored through both a Knowledge Attitudes and
Practices (KAP) survey that gathered self-reported behavioral data from participants and quarterly gathering and monitoring of bio indicators.

III.) RESULTS ACHIEVED BY THE INTERVENTION

“Pulling us out of our regular routine gave us a chance to stop and see our life clearly and think about the short and long term consequences of our actions...that’s what affected me the most.”

(Enam, a mother of three)

Positive behavioral changes were observed in the daily habits of families participating in the HLS campaign including weight management, nutrition, physical activity and health-seeking behavior.

1. Weight management

As being overweight and obesity lead to the onset of many chronic illnesses, such as type 2 diabetes mellitus, blood pressure and heart disease, monitoring weight was a very important aspect integrated within the HLS campaign. The KAP survey showed a clear 93% improvement among the participants in terms of weight monitoring. The percentage of participants who say they now monitor their weight weekly increased significantly as well.

![Figure 1 Percentage of participants who monitor their weight](chart.png)

2. Nutrition

The role of nutrition and a healthy diet rich in fiber from fruits, vegetables and whole grains and limited in fat (especially saturated fat) as a main determinant of chronic illnesses developed later in life is well established. The findings from the KAP study clearly showed that 92% of the participants began to follow a healthy diet in order to maintain their weight. Healthier food preparation practices were demonstrated by a 51% improvement in terms of lower oil usage in cooking, as well as 79% improvement in the amount of oil and fat used in cooking. There was a significant 51% improvement in the consumption of lower fat products, specifically low-fat milk, and a 36% improvement in consumption of fiber. Salt intake among the participants was shown to be very high prior to taking part in the program – upon completion, 42% of the participants reduced their salt consumption.
3. Physical activity

Physical activity constitutes an important component of a healthy lifestyle. The KAP study showed that percentage of participants who exercise increased from 52% to 93% with an overall improvement of 79% indicating adoption of this positive behavior. There was also a significant increase in the frequency of exercise - more participants now exercise daily.

4. Health-seeking behavior

There was a 59% improvement in the frequency of routine health check-ups which greatly increases the chance of identifying the onset of chronic diseases before they become serious. The percentage of participants who used to take their medicine according to doctor’s prescription was quite high even before the study, however there was a 5% improvement after the program.
Based on the KAP survey conducted, International Medical Corps’ HLS campaign for Iraqi and Jordanian families in Jordan proved to be a successful health intervention. The KAP revealed great improvements in participants’ behavioral practices which consequently lead to healthier lifestyles. Many factors contributed to the success of the program:

1. The HLS campaign was designed to be culturally appropriate (including segregation by gender), and tailored to fit all members of a family in order to maximize behavioral changes, prevent unhealthy practices and ultimately prevent chronic illness.
2. The intervention focused on promotion of healthy lifestyle choices that are accessible and affordable to families, without adding an extra financial burden.
3. Motivation of the participants to change their unhealthy habits was in place, as was an enabling environment created to maintain healthier choices through family and community support. This greatly sped up the process of abandoning unhealthy practices.
4. The HLS campaign helped participants realize their abilities to improve their lives, empowering them to make conscious health decisions.

The next round of the HLS campaign in Jordan is running and the intervention has expanded for another International Medical Corps-supported clinic: Al Medina Clinic in Amman. In addition, the campaign has become a permanent component International Medical Corps’ Primary Health Care program in the country. Encouraged by our success in Jordan, International Medical Corps is planning to replicate the HLS campaign in other countries in which we operate worldwide.