Chicago Health Solutions

May 2016 Global Health Challenge

Special thanks to our partners:

CHICAGO INNOVATION EXCHANGE
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HEALTHY CHICAGO
CHICAGO DEPARTMENT OF PUBLIC HEALTH

THE UNIVERSITY OF CHICAGO | Center for Global Health

UChicago Careers in Health Professions

Thank you to the CHS board for putting this case together: Evelina Sterina, Gabrielle Wimer, Joseph Mocharnuk, Karen Yang, Katie Zellner, Konje Machini, Maryann Deyling, and Yixuan Song

Logistics Information

The case provided here is a complex scenario about a particular health concern for refugees in Jordan. The authors have provided some background information and figures to help teams reading the case; however, teams are responsible for finding any additional information they might need.

Because of the complexity of the health problem, the case does not have a single correct answer and encourages exploring numerous perspectives and methodologies to develop a comprehensive solution.

Below is a timeline with key dates and submission deadlines for this May's Challenge.

5/9	Case released and sign up for office hours becomes available.
5/11	Mentor office-hour sign up closes. Each team must register for **2 office hour sessions**. At least two members of the team must be present at the CIE (Promontory Room) for these sessions.
5/13	Kick-off panel on refugee health in the Promontory Room at the CIE beginning at 6 pm. This event is recommended as the panelists will be able to provide a good overview and insight on the key issues related to the case. Refreshments will be served.
5/14	The Promontory Point room at the CIE has been reserved for office hours and for teams to use as work space from 9 am – 9 pm. Snacks will be available throughout the day, and a catered lunch will be brought in from 12 – 1 pm.
5/15	1-page (single-spaced) proposals of your team's solution due via email to yangk@uchicago.edu at 3 pm. Once again, the Promontory Point room at the CIE will be available as a collaborative workspace prior to the submission deadline.
5/16	The top 5 teams will be notified by email if they have moved on to round two.
5/17-5/21	Teams that have advanced to round two continue working on their proposals with their graduate student mentor. A PDF version of your team's presentation is due via email to yangk@uchicago.edu by noon on Sunday 5/22. Presentations should be no longer than 10 minutes.
5/22	The top 5 teams will present to our panel of judges beginning at 1 pm in the Promontory Point room at the CIE. 10 minutes will be allotted for the presentations and 5 minutes for Q&A from the judges. Teams may decide on the number of team members who give the presentation, but all team members are expected to attend final presentations. Following the announcement of the winners, there will be a networking reception. Refreshments will be provided.

The CIE is located at 1452 East 53rd Street. The East Shuttle and the CIE shuttle will drop you off directly in front. The entrance is on the North side of the street. To reach the Promontory Point room, tell the front desk that you are here for the case competition and head to the staircase. The room is on the 3rd floor. If you have any problems feel free to call 203-451-4605 to speak to CHS Director Gabby Wimer.

Judging Criteria

Proposals will be judged according to the following criteria

Creativity and Innovation:
How novel an approach is this? Do similar strategies exists? Does it propose new ways of utilizing existing resources?

1 2 3 4 5 6 7 8 9 10

Feasibility and Sustainability
The proposed solution has a high probability of being successfully implemented.
Team displays understanding of community and identifies resources as well as partnerships that would allow for such an approach to be sustainable.

1 2 3 4 5 6 7 8 9 10

Organization and Clarity
Slides are clear and understandable. Team responds to questions effectively and concisely.

1 2 3 4 5

Delivery (Voice, Body, Eye contact)
Good presentation skills. Engages the audience.

1 2 3 4 5

The Challenge

"Cancer, diabetes, and heart diseases are no longer the diseases of the wealthy. Today, they hamper the people and the economies of the poorest populations even more than infectious diseases."

– Ban Ki-Moon, United Nations Secretary-General, June 15, 2009

Ban Ki-Moon made this observation in 2009, but seven years later the far-reaching effects of non-communicable diseases continue to be overlooked. This is especially true for refugee populations, who receive most of their care from humanitarian agencies that lack the knowledge and resources to adequately provide such services. Diabetes in particular is increasingly being recognized as a pressing problem for the growing refugee population in the Middle East. The refugee population in this region was already quite large prior to the Syrian crisis due to protracted conflicts in Iraq and Palestine. The ongoing war in Syria has led to a large influx of refugees in surrounding countries, including Jordan, which is currently housing over 660,000 refugees. As a small nation with a national budget of about $7.6 billion[1] it has been hard pressed to meet the needs of so many people, especially when it comes to a disease that requires a large investment of time and money to monitor.

In their January 2016 article titled "Surviving the war to fight diabetes as a refugee," the World Health Organization recounted the story of Hammad Faleh, a 32-year-old refugee who fled the Syrian Arab Republic in 2012 with his wife and three children in order to escape the horrors and carnage of war. Once an English teacher in his home country, Hammad had successfully managed his diabetes for 14 years with the help of doctors and the established infrastructure of Syrian hospitals. But following his migration to the Jordanian refugee camps, the debilitating effects of his disease began to show. With no income to support him and minimal access to insulin treatments, the symptoms of his disease worsened. The soaring costs of medication in Syria have further aggravated the problem, making the few medications that are available exorbitantly expensive for the vast majority of refugees. Furthermore, the diets of most refugees consist of rice, bread and other high-carbohydrate foods, which are often banned or strictly regulated in the diets of diabetes patients.

Various international agencies, like the United Nations High Commissioner for Refugees (UNHCR) and World Food Programme (WFP), NGO's, and international partners are continuing to work to meet the health needs of refugees. The US Agency for International Development (USAID) has been providing substantial aid to groups working in Jordan to assist refugees, and it has recently decided to allocate some of its funding to a program specifically aimed at improving diabetes care for refugees. They have asked for your help with designing this program.

Your task is to come up with a proposal to present to USAID. They have recognized that diabetes has been sorely overlooked as an important health issue for refugees and they are looking for ways to improve diabetes management for refugees in Jordan. In your plan make sure to include:

1. **The specific refugee population, if any, that you will be targeting**
2. **How your plan will be implemented (be sure to identify specific partners)**
3. **A budget that explains how much money each partner will receive and what this money is for**
4. **An explanation of how you will evaluate the success of your program**
5. **A timeline that also addresses the feasibility of scaling up within the next 5 years**

[1] 2008 estimate

The Refugee Crisis in Jordan

In June 2015, the UNHCR recorded 664,102 refugees and 20,693 asylum seekers in Jordan, summing to 684,795 "people of concern" in the country. Roughly 32,000 of these refugees were from Iraq, while the majority of refugees in Jordan are Syrian.[2] The influx of refugees started at an alarming rate in 2012 and continues today.

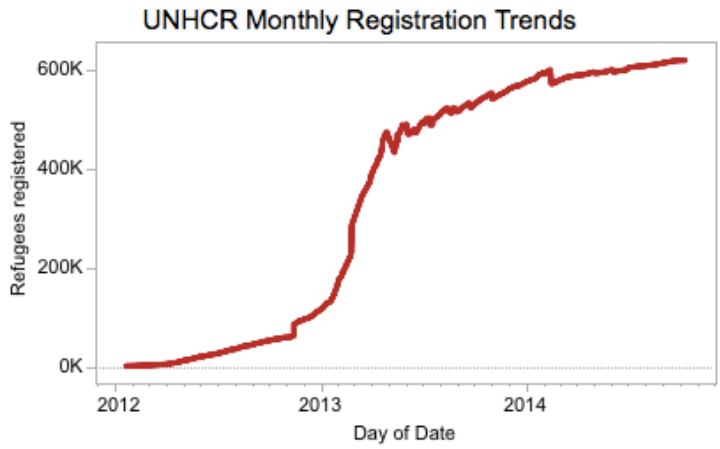

Fig 1. Source: http://syrianrefugees.eu/?page_id=87

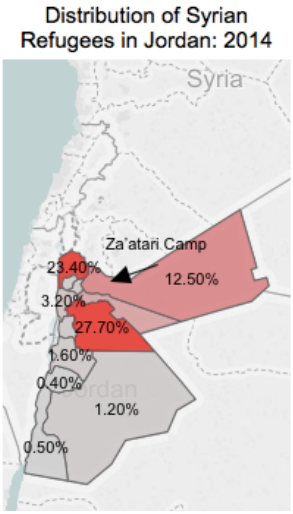

Fig 2. Source: http://syrianrefugees.eu/?page_id=87

Within Jordan, the majority of refugees live in the north, with roughly 20% within camps. [3] Za'atari Camp, built in 2012, is the largest of the four main camps and was home to roughly 80,000 people in August 2014.[4]

While Jordan did not sign the 1951 Refugee Convention, which explains who qualifies as a refugee and what rights they have,[5] the Jordanian government officially recognized the crisis in 2012[6] and refers to those entering the country seeking safety and security as refugees. According to the UNHCR, the "protection space is generally favourable, although fragile owing to the country's own socio-economic challenges"[7]. In 2014, the government of Jordan published the National Resilience Plan, which laid out concrete goals to be reached by December 2016 in key areas including housing, health, and employment. The country's Ministry of Planning and International Cooperation is overseeing and

[2] UNHCR. "2015 UNHCR country operations profile— Jordan." http://www.unhcr.org/pages/49e486566.html
[3] Ibid
[4] "Jordan." http://syrianrefugees.eu/?page_id=87
[5] UNHCR. "1951 Refugee Convention." http://www.unhcr.org/pages/49da0e466.html
[6] "Jordan." http://syrianrefugees.eu/?page_id=87
[7] UNHCR. "2015 UNHCR country operations profile— Jordan." http://www.unhcr.org/pages/49e486566.html

coordinating these efforts and has established the Host Communities Support Platform to bring together government ministries, donors, and NGOs along with the UN.[8]

What is Diabetes?

Diabetes is a chronic condition associated with abnormally high levels of glucose in the blood. Insulin secreted from the pancreas helps to lower blood glucose, but the absence of or insufficient production of insulin can cause diabetes. The health repercussions and effects of this disease are wide-ranging. High blood sugar levels can lead to frequent urination, increased thirst, dehydration and increased hunger. If left untreated, diabetes can lead to more severe health problems, such as stroke, kidney failure, foot ulcers, heart disease, and damage to the eyes.

Oral and injected medications are currently the best way to manage blood sugar swings and enable the body to metabolize insulin more effectively. However, these treatments cannot be considered a cure, although they do allow one to live a normal life while managing diabetes. The goal in any insulin treatment, which can include rapid-acting, long-acting, and intermediate options, is to maintain normal blood sugar levels so that further complications are prevented.

Other medications used to maintain general health for patients with diabetes include:

- Pramlintide (Symlin): An injection of this medication before eating can slow the movement of food through the digestive system in order to help counteract the sharp increase in blood sugar that occurs after meals.
- High blood pressure medications: For patients with diabetes that also have high blood pressures, certain medications such as angiotensin-converting enzyme inhibitors or angiotensin II receptor blockers can be used to keep the kidneys healthy.
- Aspirin: Doctors may recommend that diabetic patients take aspirin on a daily basis to protect the heart.

Another important component to managing diabetes is healthy eating and the monitoring of carbohydrates. The best way to implement this part of diabetes health maintenance is to eat nutritious, low-fat, high-fiber foods such as fruits, vegetables and whole grains. It is generally best to avoid refined carbohydrates such as white breads and sweet foods. If feasible, patients should consult dietitians to help manage these dietary restrictions. Regular aerobic exercise is another excellent way to manage one's diabetes, as long as exercise regimens are approved by a doctor. Increased activity can necessitate changes in meal plans or insulin doses. Clearly, this sort of attention to diet and exercise is hard to maintain for refugees whose lives are constantly in flux. The following sections outline many of the barriers that refugees face both in controlling their diabetes and receiving care and treatment.[9,10]

[8] United Nations and HCSP. "National Resilience Plan: 2014-2016. Proposed Priority Responses to Mitigate the Impact of the Syrian Crisis on Jordan and Jordanian Host Communities." January 2014. http://un.org.jo/uploaded/publications_book/1458650480.pdf

[9] Mayo Clinic. "Type 1 Diabetes." http://www.mayoclinic.org/diseases-conditions/type-1-diabetes/basics/treatment/con-20019573

[10] Medicine Net. Diabetes, Type 1 and Type 2. http://www.medicinenet.com/diabetes_mellitus/article.htm

Healthcare Available for Refugees

Healthcare options and access depend greatly on which camps refugees are in as there are varying amounts of support given by each organization to the different camps. In general, organizations such as the International Organization for Migration (IOM),[11] the United Nations, and various NGOs coordinate and fund healthcare for refugees.[12] This aid is generally associated with specific camps, which serve specific nationalities or religious groups. Some of the major forms of healthcare for refugees center on preventative health measures, including the implementation of health screenings for urgent health concerns and vaccinations for endemic infectious diseases.

One organization working in refugee camps is Raba'a Al Sarhan Transit Center, which conducts initial health screenings for incoming refugees.[13] These health screenings indicate whether refugees are treated as "red cases," those requiring immediate emergency medical attention, or "yellow cases," those requiring follow-up treatment for non-urgent consultation. Additionally, the IOM developed several infectious disease control programs to vaccinate and screen for cases of TB, measles, and polio. In 2014, of 604,000 refugees, 416,650 had been screened for TB, 326,966 had received TB awareness sessions, and 137 cases of TB had been diagnosed. 64,000 refugees were vaccinated against polio, 116,000 were vaccinated against measles, and 40,000 were provided with vitamin A supplements.[14]

The refugee crisis in Jordan burdens public healthcare facilities as they serve 53.9% of refugee health care seekers. 29.6% seek care from the private sector and 16.6% seek care from the NGO/Charity sectors. Only 31.6% of care seekers pay out-of pocket. The average out-of-pocket payment is 18.8 USD, not including the cost of medication.[15] Before 2014, UNHCR-registered refugees had free-of-charge access to healthcare facilities through the Ministry of Health, but as the refugee population and cost has grown, refugees are now required to pay more out-of-pocket costs at the same rate as uninsured Jordanians. These hospitals are already overcrowded and the waiting time to receive an appointment is now up to several months.[16]

The focus on prevention of chronic infectious diseases is of great significance because chronic diseases increase refugees' daily expenses, generating new costs such as medication, assistance in daily activities

[11] IOM. "Enhancing Access to Prevention and Health Care for Syrian Refugees in Jordan." August 2014. https://health.iom.int/sites/default/files/MP_infosheets/IOM%20Jordan%20Emergency%20Health%20Response%20%26%20Syria%20Crisis%20info%20sheet%20August%2020....pdf

[12] UNHCR. "2015 UNHCR country operations profile— Jordan." http://www.unhcr.org/pages/49e486566.html

[13] Cookson, Susan T., Hiba Abaza, Kevin R. Clarke, Ann Burton, Nadia A. Sabrah, Khaled A. Rumman, Nedal Odeh, and Marwan Naoum. "Impact of and Response to Increased Tuberculosis Prevalence among Syrian Refugees Compared with Jordanian Tuberculosis Prevalence: Case Study of a Tuberculosis Public Health Strategy." *Conflict & Health* 9, no. 1 (June 2015): 1–7. doi:10.1186/s13031-015-0044-7.

[14] Mateen, Farrah J, Marco Carone, Huda Al-Saedy, Sayre Nyce, Jad Ghosn, Timothy Mutuerandu, and Robert E Black. "Medical Conditions among Iraqi Refugees in Jordan: Data from the United Nations Refugee Assistance Information System." *Bulletin of the World Health Organization* 90, no. 6 (June 1, 2012): 444–51. doi:10.2471/BLT.11.097048.

[15] Ibid

[16] Global Network for Rights and Development. "Harmonization of the Jordanian healthcare system with human rights." April 2 2014. http://gnrd.net/seemore.php?id=277

of living, and transportation assistance.[17] Although the health care costs are highly subsidized by nonprofits, caring for chronic diseases is very financially difficult for NGOS, national organizations, and international agencies in the long term, especially because of the recent decline in humanitarian assistance.

Health Problems of Refugees

Given the often dire conditions in which refugees find themselves, both infectious and non-communicable chronic diseases (NCDs) are highly prevalent in camps. Most forms of diabetes can be easily managed when patients have access to proper medications and diet. Many of the techniques used to identify potential at-risk individuals and to efficiently diagnose patients in urban and more developed areas are absent for refugees residing in Jordan. As a result, diabetes can quickly degrade into a serious, and even life-threatening condition.

Dr. Yousef Shahin, Chief of Disease Prevention & Control at the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA) notes that there is an "epidemiological transition in disease burden…[with] the main causes of mortality and morbidity among Palestine refugees now, as in most of the world, [being] non-communicable diseases (NCDs) such as diabetes, cardiovascular diseases and cancer."[18]

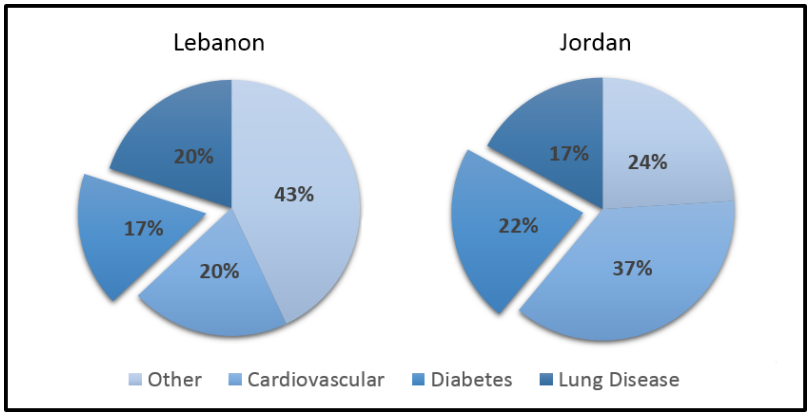

Fig. 3 Non-communicable diseases as reported from Lebanon and Za'atri camp (Jordan), November 2013

[17] Mateen, Farrah J, Marco Carone, Huda Al-Saedy, Sayre Nyce, Jad Ghosn, Timothy Mutuerandu, and Robert E Black. "Medical Conditions among Iraqi Refugees in Jordan: Data from the United Nations Refugee Assistance Information System." *Bulletin of the World Health Organization* 90, no. 6 (June 1, 2012): 444–51. doi:10.2471/BLT.11.097048.

[18] "Diabetes care in refugee camps: The experience of UNRWA". *Diabetes Research and Clinical Practice.* April 2015.

In particular, diabetes is a frequent cause of disability and premature death in refugee camps. UNHCR notes that in November of 2013, 17% and 22% of all NCD related visits to its clinics in Lebanon and the Jordan Za'atri camp respectively were diabetes related.[19]

Estimates range widely, but UNRWA places the lower bound of the prevalence of diabetes for 20-79 year olds at 8-11%.[20] While this figure is in line with the prevalence rates in Europe (9-10%) and the USA (9%), the diagnosis and management of diabetes present significant difficulties for refugees. In particular, the lack of consistent criteria for testing means that most patients are diagnosed only after the effects of the disease have manifested in serious physical symptoms.

Once diagnosed, there are many barriers to effectively managing the disease. A survey conducted by UNRWA and the World Diabetes Foundation in 2012 found that less than 30% of a sample of 1,600 patients under UNRWA care in Jordan, Lebanon and Palestine were following physician's prescribed management regimen.[21] Reasons for lapses in management range widely. The lack of availability of doctors, insulin, and education, the financial burden on refugee families in obtaining insulin when available, the stress caused by physical displacement, and several other factors make diabetes a significantly higher burden of disease in refugee populations than in developed countries.[22]

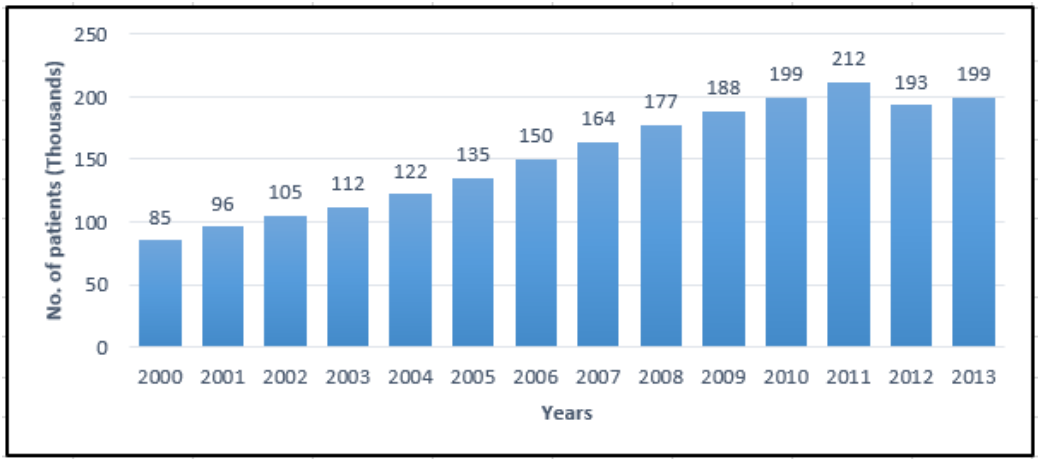

Fig. 4 Number of diabetes patients under UNRWA care (2006–2013). The drop in last two years is related to non-availability of data from Syria due to ongoing conflict.

[19] INTER-AGENCY REGIONAL RESPONSE FOR SYRIAN REFUGEES HEALTH AND NUTRITION BULLETIN http://reliefweb.int/sites/reliefweb.int/files/resources/InteragencyRegionalSyrianrefugeesHealthreportDecember2013.pdf

[20] WHO. "Iraqi refugees manage their diabetes in Jordan." http://www.emro.who.int/jor/jordan-infocus/iraqi-refugees-diabetes-jordan.html

[21] UNRWA. "Dangerously High Rates of Diabetes Among Palestinian Refugees." February 2014. http://www.unrwa.org/newsroom/press-releases/%E2%80%9Cdangerously-high%E2%80%9D-rates-diabetes-among-palestinian-refugees

[22] WHO. "Surviving the war to fight diabetes as a refugee." January 2016. http://www.who.int/features/2016/surviving-war-to-fight-diabetes-as-refugee/en/

Barriers to Diabetes Care

In response to the increasing rates of chronic disease, and diabetes in particular, the Jordanian government has created the National Center for Diabetes, Endocrinology and Genetics (NCDEG), publicized standard treatment protocols, bolstered youth health education, improved physician training and certification, and conducted limited public awareness campaigns.[23] However, barriers to care within the Jordanian healthcare system continue to exacerbate the diabetes problem amongst refugees.

The Jordanian health sector comprises five main units: Ministry of Health, the Royal Medical Services (for military personnel), government university medical centers, private hospitals, and the UNRWA clinics.[24] These providers are poorly coordinated and vary in quality. Both public and private healthcare centers though, are suffering from "brain drain," as highly-trained doctors emigrate to the US and Gulf States in pursuit of better compensation for their services.[25]

"It's clear that diabetes management during a humanitarian crisis is not a simple problem. It cannot be solved overnight. The problems for developing nations stack up on top of each other – the higher rates of diabetes, the lack of a suitable infrastructure, the increased likelihood of an international crisis – and it isn't clear which one needs to be solved first. In this case, diabetes draws attention to much deeper problems of political and economic inequality."

~ Kurt Wood, Research Editor for diabetes.co.uk

Prevention and early discovery of pre-diabetes can cut expensive treatment costs down the road. In Jordan, the annual direct cost of diabetes treatment for Jordanians is nearly JD654 million, which is compounded by the social costs.[26] However, many obstacles derail patients from effective preventative care. For example, the cost of care is often prohibitive. Given that refugees have little to no income, the JD10+ bill for a preventive care visit is often too much.[27]

The structure of the healthcare system is also not conducive to early recognition of pre-diabetes. Since there is no national medical record system, and refugees carry around their medical records on a sheet of paper, when a patient is referred for further care, the physician has no sense of the patient's medical

[23] Gallagher, Haley, Maggie Gebhard, William Nash, Nick Occhipinti, and Brooklyn Walker. "The Jordanian Diabetes Crisis. 2008. *http://www.umich.edu/~ipolicy/Policy%20Papers/diabetescrisis.pdf*
[24] Ibid
[25] Ibid
[26] The National Center for Diabetes, Endocrinology and Genetic Diseases. http://www.ncd.org.jo/Informative%20knowledge.htm
[27] Hashemite Kingdom of Jordan Department of Statistics, "Economic Surveys," 2002/2003. http://www.dos.gov.jo/sdb_ec/sdb_ec_e/index.htm)

history. Therefore, providers miss the symptoms of pre-diabetes often recorded in medical files, and this is even more difficult for refugees given the lack of care coordination for them whether they reside in a city or in a camp.[28]

The American Association of Diabetes Educators and the American Diabetes Association encourage self care management as the most important aspect of diabetes care. This includes practices such as medication, foot care, blood glucose testing, dietary adherence, and exercise. However, for refugees all of these can be incredibly difficult given limited resources and access to medical care and supplies. Dietary adherence and exercise pose particular difficulties in the camps where fresh fruits and vegetables are often limited, and there is a lack of space to exercise. Even for urban refugees, finding healthy food can be incredibly difficult due to a lack of income. And given that urban centers lack parks and public recreational areas, and that traffic conditions pose a danger to pedestrians, exercising outside of the camps can be difficult as well.[29]

[28] Gallagher, Haley, Maggie Gebhard, William Nash, Nick Occhipinti, and Brooklyn Walker. "The Jordanian Diabetes Crisis. 2008. *http://www.umich.edu/~ipolicy/Policy%20Papers/diabetescrisis.pdf*
[29] Ibid

Current Initiatives

Table for Two Initiative:

While not explicitly setting out to tackle the problem of diabetes, the work of the NGO Table for Two addresses the related problem of poor nutrition. The group is partnering with the WFP to provide meals to 16,000 Syrian refugee children in Za'atari and Azraq camps. They already have $150,000 in funding for this initiative, which not only will help keep children in school, but will also help ensure they are well fed, mitigating the risk that they will develop Type II diabetes or other chronic conditions in the future.[30]

E-Health Initiative:

A study conducted by the National Center for Biotechnology Information analyzed the infrastructures of six primary healthcare clinics in Jordan, which serve Palestinian refugees diagnosed with diabetes. It sought to report the number and characteristics of new patients registered in the second quarter of 2013 and to examine treatment outcomes and the "cumulative burden" of late-stage complications due to untreated diabetes. Using routine data collected through healthcare providers, the study found that there is a high burden of disease due to DM at primary health care clinics in Jordan. The study gave credence to the use of real-time electronic medical record systems in order to monitor incidence, prevalence and treatment outcomes of Palestinian refugees. It also allowed for regular assessment of clinic performance and for more routine checkups for patient blood glucose levels, blood pressure, and other ancillary concerns for diabetes patients including foot exams and eye-care.[31]

[30] "Table For Two NGO to Support Efforts to Improve Nutrition for Syrian Child Refugees in Jordan." *Jordan Times*, May 23, 2015. http://www.jordantimes.com/news/local/table-two-ngo-support-efforts-improve-nutrition-syrian-child-refugees-jordan.

[31] Khader, A., G. Ballout, Y. Shahin, M. Hababeh, L. Farajallah, W. Zeidan, I. Abu-Zayed, et al. "Diabetes Mellitus and Treatment Outcomes in Palestine Refugees in UNRWA Primary Health Care Clinics in Jordan." *Public Health Action* 3, no. 4 (December 21, 2013): 259–64. doi:10.5588/pha.13.0083.

Appendix: Graphs and Tables

USG HUMANITARIAN ASSISTANCE TO SYRIA AND NEIGHBORING COUNTRIES PROVIDED IN FY 2014[1]

IMPLEMENTING PARTNER	ACTIVITY	LOCATION	AMOUNT
USAID/OFDA[2]			
U.N. Food and Agriculture Organization	Agriculture and Food Security	Syria	$1,000,000
NGO Partners	Health, Humanitarian Coordination and Information Management, Logistics and Relief Commodities, Protection, WASH	Syria	$122,303,574
U.N. Department of Safety and Security (UNDSS)	Humanitarian Coordination and Information Management	Syria	$500,000
UNICEF	Health, Nutrition, Protection, WASH	Syria	$22,000,000
U.N. Populations Fund	Health, Protection	Syria	$2,500,000
WFP	Logistics and Relief Commodities	Syria	$2,500,000
WHO	Health	Syria	$13,000,000
	Administrative and Support Costs	Syria	$1,507,856
TOTAL USAID/OFDA ASSISTANCE			**$165,311,430**
USAID/FFP			
NGO Partners	Food Assistance	Syria	$35,898,819
WFP	Syria Emergency Operation (EMOP)	Syria	$99,845,900
WFP	Regional EMOP	Egypt	$8,000,000
WFP	Regional EMOP	Iraq	$10,000,000
WFP	Regional EMOP	Jordan	$44,750,000
WFP	Regional EMOP	Lebanon	$55,750,000
WFP	Regional EMOP	Turkey	$22,000,000
TOTAL USAID/FFP ASSISTANCE			**$276,244,719**
STATE/PRM[3]			
International Committee of the Red Cross (ICRC)	Health, Relief Commodities, Shelter, WASH, Capacity Building	Syria, Jordan, Lebanon	$31,000,000
IOM	Relief Commodities, Border Transport, Health	Jordan, Iraq, Lebanon, Egypt	$4,600,000
NGO Partners	Health, Protection, Education, WASH, Shelter, Psychosocial, Mental Health	Jordan, Lebanon, Iraq	$31,674,328
UNFPA	Mental Health, Capacity Building, Protection	Lebanon, Turkey, Jordan, Iraq	$1,700,000
UNHCR	Protection, Camp Management, Shelter and Settlements, WASH, Education, Relief Commodities	Syria, Jordan, Lebanon, Turkey, Iraq, Egypt, Regional	$104,700,000
UNICEF	Education, WASH, Child Protection, Health	Jordan, Lebanon, Turkey, Iraq, Egypt	$48,700,000
U.N. Relief and Works Agency for Palestinian Refugees in the Near East (UNRWA)	Food, Health, Education, Relief Commodities, Shelter, WASH	Syria, Jordan, Lebanon	$28,100,000
WHO	Health	Turkey	$400,000
TOTAL STATE/PRM ASSISTANCE			**$250,874,328**
TOTAL USG HUMANITARIAN ASSISTANCE TO SYRIA AND NEIGHBORING COUNTRIES IN FY 2014			**$692,430,477**

Fig 7. Source: https://www.usaid.gov/sites/default/files/documents/1866/syria_ce_fs17_06-19-2014.pdf

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Global Network for Rights and Development. "Harmonization of the Jordanian healthcare system with human rights." April 2 2014. http://gnrd.net/seemore.php?id=277

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Hashemite Kingdom of Jordan Department of Statistics, "Economic Surveys," 2002/2003. http://www.dos.gov.jo/sdb_ec/sdb_ec_e/index.htm)

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