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# Communicable Diseases Among Refugees with a Focus on the Middle East

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## Abstract

During the past few years, millions of refugees from the Middle East and North Africa fled their countries to almost everywhere in the globe. Civil wars and acts of violence are the main reasons behind the exodus of populations seeking a better life and more secure living conditions. In fact, the current conflict in Syria and Iraq led to massive influx of refugees worldwide and in particular to neighboring countries of the Middle East. This refugee situation is unparalleled since the end of World War II. Besides the individual tragedies of refugees, a public health disaster is being witnessed in the countries of origin which, in many instances, affect the hosting countries as well. Many of these hosting countries witnessed a re-emergence of numerous communicable diseases as a result of the influx of refugees; they were unprepared, and their health sectors did not deliver the adequate response. In this chapter, we review major sexually transmitted diseases in refugees, with a focus on the Middle East. We also discuss the major actions taken in response to the ongoing displacement of refugees by the Government of Lebanon and suggest solutions and recommendations to the Lebanese public health system which is facing new urgent challenges.

**Keywords:** STIs, refugees' health, communicable diseases, Middle East, Lebanon, Syrian refugees

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## 1. Introduction

During the past decade, millions of refugees worldwide, in particular from the Middle East, fled their home country. The United Nations reported that at the end of 2010, there were over 43 million people in the world displaced because of conflict or persecution [1]. The latest

counts conducted by the United Nations High Commissioner for Refugees (UNHCR) revealed that there have been 16,121,427 refugees by the end of 2015 [2]. Over half of the refugees worldwide came from Syria, Iraq, Afghanistan and Somalia and the top hosting countries were Turkey (2.5 millions), Pakistan (1.6 million), Lebanon (1.1 million) and Jordan (0.5 million) [3]. Refugees face multiple barriers in accessing healthcare and maintaining proper follow-ups, including lack of resources needed to cover expenses, cultural differences and lack of health care facilities in the regions of residence.

The purpose of this chapter is to shed light on the reproductive health of displaced people in the Middle East, including sexually transmitted diseases.

## 2. Health of refugees at the international level

In the United States of America, 18,007 Syrian refugees were resettled between October 1, 2011 and December 31, 2016. Despite the huge resources in the United States of America, the establishment of Medicaid was not sufficient to assure that all refugees have been adequately screened for diseases and have access to proper medical care. In many states, it was difficult to find health clinics that were willing to provide regular appointments to refugees on Medicaid, especially since the services needed to encompass primary care and include specialty clinics and surgery [4].

Europe is experiencing one of the most significant influxes of migrants and refugees in its history. European countries received over 2 million asylum applications in 2015, which represent around a three-fold increase to the number of applications received in 2014 (709,757). Most applications were from Syria (675,668), Afghanistan (406,300) and Iraq (253,558). Around 60% of these applications (1.2 million) were received by European Union member states with Germany and Sweden receiving almost half of the total applications. The number of refugees entering Europe passed the 1 million mark in 2015, a long expected and symbolically significant capstone to a year in which displaced persons flocked to the continent in historic proportions [5].

History is rife with examples of infectious diseases that have been linked to human mobility and migration. Diseases and epidemics often accompanied commercial traders, sailors, pilgrims and other migrants to thrive in new and foreign environments [6]. One particularly famous example is the re-emergence of tuberculosis (TB) in Europe. While once considered a disease of the past, new cases of TB in Europe and the West are frequently attributed to the migration of people from endemic countries, such as Africa and India [7]. In some refugee settings, women and children are believed to comprise about 80% of the population, and they are the most vulnerable to the consequences of displacement, including rape, infectious diseases, and, in particular, sexually transmitted infections (STIs) [8]. In addition, sexual violence and poverty were highlighted as leading to an increase in the transmission of STIs, HIV/AIDS and unwanted and/or high-risk pregnancies. Many become disconnected from their relatives and from their traditional cultural and legal supports. Such issues also impact their reproductive health status. If the hosting countries do not provide adequate reproductive health care services, this could

aggravate the situation through unwanted pregnancy and unsafe abortion. In addition, such refugees carry an important disease burden due to disease prevalence in their country of origin, disruption of immunization programs, or even exposure during migration [9].

### **3. Health of refugees at the regional and national levels**

In the Middle East and North Africa, increasing numbers of refugees are being noted as a result of complex political conflicts. Millions of Syrian and Iraqi refugees fled to neighbouring countries or to Europe, the United States of America and other countries. The UNHCR Syria End of Year Report 2015 estimated that 4.2 million of the Syrian populations were refugees, and the average life expectancy of Syrians has fallen by 20 years since the onset of the crisis [10]. Such groups are diverse and require different health and humanitarian interventions, particularly in the reproductive health needs as well as infectious diseases like TB and hepatitis and, in particular, sexually transmitted infections including HIV/AIDS. The UNHCR as well as hosting countries and humanitarian relief organizations agree that reproductive health care should be a priority during such an emergency situation. Several challenges exist to face the situation, and activities must be strengthened in some key areas, such as adolescents' health, in particular HIV and STI prevention and care and an adequate response to sexual and gender-based violence [10].

Lebanon is a country in the Middle East with a population of 4.2 million [11]. Since the 1970s, the Lebanese healthcare system has had to face many challenges due to multiple reasons including wars, political instability, economic difficulties and massive influx of refugees with about 500,000 Palestinian refugees since 1948 [12]. However, the most pressing challenge facing Lebanon is the Syrian refugee crisis. Following the start of the acts of violence in Syria in 2011, there have been an increasing number of Syrian refugees coming to Lebanon. By the end of 2015, their numbers had reached 1.5 million, in addition to 53,000 Palestinians returning from Syria and about 50,000 Iraqis [13]. The new refugees represent more than a 30% increase in Lebanon's pre-crisis population, resulting in the highest refugee density of any country worldwide since 1980 [14]. The refugees from Syria have not been placed in formal camps but are dispersed across Lebanon in houses among the Lebanese population, while about 17% are residing in informal tented settlements [15]. The unprecedented influx of refugees has put a heavy burden on the Lebanese government, society and economy, which is facing many other challenges. The refugee crisis threatens the ability of the government to provide adequate and sustained health services which puts thousands of individuals at risk of acquiring and spreading different infectious diseases. It is estimated that, on average, there are about 50,000–55,000 new deliveries per year among the Syrians in Lebanon. In addition, there are reported cases of HIV infections as well as other sexually transmitted infections.

Previous research by the International Rescue Committee and the Resource Center for Gender Equality ABAAD conducted in Lebanon in August 2012 highlighted that some refugee women and girls in Lebanon have resorted to prostitution as a means to generate an income and meet basic needs. The research noted that 'survival sex' is a type of violence that Syrian women are frequently subjected to [16].

## 4. Sexually transmitted infections

In this chapter, the discussion will cover the most important sexually transmitted infections among refugee populations, including hepatitis B, hepatitis C, chlamydia/gonorrhea, HIV/AIDS and tuberculosis.

### 4.1. Hepatitis B

Hepatitis B is a viral infection that is potentially life-threatening and is a major common global health concern. Infection with hepatitis B virus is prevalent among all refugee groups. Screening for hepatitis B identifies susceptible individuals who can be offered vaccine and infected individuals who are eligible for treatment. Most screening protocols test for hepatitis B surface antigen (HBsAg) and its antibody (HBsAb). Refugees identified as HBsAg positive will need further testing to identify the stage of the disease and need for treatment. Understanding beliefs about hepatitis B in refugee populations is important when discussing the implications of test results and will facilitate compliance with prevention strategies and management of the disease. A cross-sectional study among 2769 Tibetan refugees residing in India reported HbsAg seropositivity in 247 (8.9%) individuals of which 60.7% were positive for hepatitis B e antigen, indicating higher infectivity and chances of transmission [17]. In Lebanon, among the Syrian refugees, a rise in hepatitis B incidence was noted from a total of 8 cases in 2013 to 48 cases in 2016 [18]. This shows a trend that is supported by clinical observations. However, a more reliable house-to-house survey could be considered.

### 4.2. Hepatitis C

Hepatitis C is a contagious blood-borne viral infection caused by the hepatitis C virus (HCV), leading to both acute and chronic hepatitis infection. In a study looking at the prevalence of active hepatitis C virus infections among refugees in the United States of America from various countries in Africa and Asia, it was reported that 63 out of a total of 4890 (1.1%) were positive for HCV RNA. The refugees from Thailand had greater numbers of HCV-positive samples than refugees from other countries [19]. In Lebanon, among the Syrian refugees, the number of reported cases of Hepatitis C doubled from a total of four cases in 2013 to eight cases in 2016 [18], a trend similar to hepatitis B.

### 4.3. Chlamydia/gonorrhea

Chlamydia and gonorrhea are a major cause of acute disease, infertility and perinatal morbidity and mortality worldwide. It is well known that refugees are at an increased risk of these infections because of many factors associated with civil disruption and displacement, including poor sanitation and/or socioeconomic status resulting in vulnerability to sexual exploitation, sexual violence and abuse and lack of access to prevention and educational efforts. The current CDC guidelines recommend annual screening for chlamydia in sexually active females > 25 years of age with risk factors (e.g., new sex partner or multiple sex partners). Testing is also recommended in those with signs or symptoms of infection or when infection is suspected, usually through medical history and physical examination. In such

cases, the use of urine ligase chain reaction to detect gonorrhea and chlamydia infection is most appropriate. Moreover, cervical cancer is the second-most common cause of female cancer mortality worldwide, accounting for approximately 274,000 deaths annually [20]. 70% of cervical cancers are due to high-risk human papillomavirus (HPV) types 16 and 18. The majority of female refugees are from countries where cytologic screening and HPV testing are limited or absent, which leaves this population at a much more increased risk of developing cervical cancer later on in their life. Therefore, cervical cancer screening should be prioritized at the level of other early resettlement issues, such as infectious disease screening and treatment. Results from a screening medical examination of 25,779 refugees arriving to Minnesota during 2003–2010 showed that a total of 18,516 (72%) refugees tested positive for at least one sexually transmitted infection: 183 (1.1%) of 17,235 were seropositive for syphilis, 15 (0.6%) of 2512 were positive for chlamydia, 5 (0.2%) of 2403 were positive for gonorrhea and 136 (2.0%) of 6765 were positive for human immunodeficiency virus [21]. In Lebanon, data are not available concerning such disease entities among refugees. However, clinical observations indicate a rise in their prevalence.

#### 4.4. HIV/AIDS

HIV/AIDS is another commonly seen viral infection caused by the human immunodeficiency virus that still has cure, and currently up to 36.7 million people are living with HIV, with almost half only being treated. This contagious viral infection is spread through bodily fluids attacking the body's immune system mainly the CD4+ cells or T cells, leading to opportunistic infections which are behind the detrimental effects of HIV or the acquired immunodeficiency syndrome [22].

With the extremely high number of people living with HIV, the greatest toll is in sub-Saharan Africa which also accounts for three-quarters of the global death count. The epidemiological impact of HIV has also consequences on the society's development since most of the affected people are young and in their most productive years; there is a negative relationship between the rise of HIV prevalence and the growth of gross domestic product [23]. The only currently available treatment for HIV is through antiretroviral therapy which limits the infections and AIDS; this therapy is also used in pre- and post-exposure prophylaxis treatments in high-risk populations [22].

In Lebanon, a study was conducted exploring the socio-demographic correlates of condom use and HIV testing among men who have sex with men refugees, by surveying and testing 150 participants. Results revealed that a total of four (2.7%) participants tested positive for HIV [24]. The National AIDS Program at the Lebanese Ministry of Public Health (MOPH) reveals a slight increase in the number of newly reported cases of HIV/AIDS from 93 in 2010 to 109 in 2014 with a few being refugees, about 10 cases being reported [25]. All patients have free access to a comprehensive management protocol according to the World Health Organization criteria.

#### 4.5. Tuberculosis

Most cases of TB in immigrants are due to the reactivation of infection with *Mycobacterium tuberculosis*. As refugees often arrive from parts of the world where TB is more common, it

is not unusual to identify cases of latent TB infection in these individuals. All refugees must have a physical and mental examination conducted by an approved physician; this medical screening includes a physical examination, including a chest X-ray, and an evaluation for tuberculosis. Any refugee with a chest X-ray suggestive of a current or past TB disease must undergo additional stringent laboratory testing. If laboratory tests are positive for an active TB disease, treatment is required for at least 6 months. Among 11,773 newly arrived asylum seekers in Germany, 16 X-ray investigations gave the suspicion of active tuberculosis, thereof 11 cases could be verified by culture and thereof 9 cases were classified as microscopically positive [26]. In Turkey, the prevalence of TB among 10,689 Syrian refugees was found to be 18.7/100,000. However, the actual prevalence may be even more since many refugees are not in camps and many are homeless in big cities and are therefore at high risk of getting infected with TB. In Jordan, the incidence of TB increased by 40% between 2013 (56 cases/16 months) and 2014 (74 cases/12 months) [27]. In Lebanon, there has been a 27% increase in TB cases since 2011 [28]; the government provides free medical care including the drugs for 6 months to all those living in the country including refugees from various places.

## 5. Discussion

Since the beginning of the refugee influx to Lebanon, a highly indebted middle-income country with a history of political strife, presence of other vulnerable displaced populations and weak government capacities [29], the conflict brought increasing hardships to both populations. Lebanese and Syrians share economic difficulties and security impacts that are increasing the tensions between the formerly harmonious neighbors [30]. The Regional Refugee and Resilience Plan 2015–2016, including the Lebanese Crisis Response Plan (LCRP), is one of the response plans put in place in an effort to enable the country to cope with the many emerging needs imposed by the refugee crisis. The LCRP is managed by the UNHCR and the United Nations Development Project. It attempts to raise US\$2.14 billion to provide protection and humanitarian assistance to 2.2 million de facto Syrian refugees who are highly vulnerable and have acute needs and invest in institutions, services and economies to reach 2.9 million vulnerable people. The LCRP has three strategic priorities or response areas which address the capacities of affected communities, national government and Lebanese. The three response strategies work on nine sectors including basic assistance; food security; shelter; education; water, hygiene, and sanitation (WASH); livelihoods; health; social stability and protection [31].

Moreover, a mapping of ongoing reproductive health (RH) activities was conducted in October 2014, in collaboration with 17 health actors. Results of this mapping revealed that nearly 90% of actors offer RH education through health centers and mobile medical units, 80% implement RH education at community level through outreach and 6% provide RH education through campaigns. The north region is covered by 31% of actors, Beirut and Mount Lebanon regions by 56%, Bekaa region by 50% and the south region by 31%. 90% of health education projects cover family planning, whereas pregnancy and breastfeeding are covered by 80% of projects. Reproductive tract infections and sexually transmitted infections are covered among 68% of

the projects and 56% cover prenatal and postnatal care. The age group targeted through RH activities is mostly 14–60 years old, including youth. Women are reached within most of the health education activities, but there are 4 out of 16 actors also reaching men. RH consultation counts revealed around 28,372 pregnant woman and 18,243 family planning visits. All RH education projects target Syrian refugees, whereas 44% target also Lebanese and 12% Palestinians [32].

## 6. Recommendations

Based on the reviewed data, the authors who are basically partially involved in this field recommend that

1. It is urgent to adopt a new strategy and an innovative approach to support the Lebanese public health system in providing good quality of care to the Syrian and Iraqi refugees while fulfilling their mission to be at the service of the hosting Lebanese citizens and the populations residing in Lebanon.
2. It is imperative to implement pre-departure screening programs at the countries of origin in order to detect and possibly start treatment of communicable diseases as early as possible. This will also limit the risks of spreading any of these diseases among the population of the hosting country. A study assessing the health status of newly arrived refugees in Toronto, Canada, revealed considerably higher rates of various infectious diseases such as HIV and hepatitis B among refugees compared to the Canadian-born population, highlighting the importance of early screening and providing timely preventive and curative care [33].
3. To improve refugees knowledge of available health services, intensifying awareness on the location of the network of health services where support is available is important. This should especially address the subsidies for primary healthcare services and the availability of free vaccines, screening campaigns, essential and chronic medicines and family planning services at facilities in the MoPH network. Awareness-raising should continue through UNHCR reception centers, community centers, outreach workers, municipalities, NGO partners and mass information campaigns.
4. Humanitarian organizations need to promote gender equality. Sex- and age-disaggregated data should be collected, analyzed and used in planning and implementation of aid projects.
5. It is also crucial to draw attention to the situation of women who are forced to engage in paid sex in order to earn an income or women who face exploitation or gender-based violence.
6. Efforts need to be placed on building the capacity of care providers on clinical care for sexual assault survivors, gender-based violence case management and caring for child survivors as well as facilitating access to counseling services for men, women, boys and girls, including mental health services targeted at men, such as anger and stress-management workshops.



## 7. Conclusion

It should be understood that there is a need to place social suffering on an ease-disease continuum because it connects health to indicators of well-being, quality of life, insecurity and distress, among other manifestations of the ill health including reproductive health and STIs accompanying the traumas of war. Survivors of war oscillate back and forth on this continuum, depending on degree, severity and chronicity of violation as well as the resources available to assist them to recover—health, wealth, strength, cultural stability and social support, among others.

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