Contents

Introduction ................................................................. 2
Iowa Refugee Health Program ........................................... 3
Purpose ............................................................................... 3
Demographic and Arrival Data ........................................... 4
Initial Refugee Health Assessment ..................................... 6
  Tuberculosis (TB) ............................................................ 7
  Human Immunodeficiency Virus (HIV) ......................... 9
  Hepatitis B Virus (HBV) ............................................... 9
  Hepatitis C Virus (HCV) .............................................. 10
  Syphilis ........................................................................ 10
  Intestinal Parasites ...................................................... 11
  Malaria ........................................................................ 11
  Lead .............................................................................. 12
  Major Diagnoses and Referrals ..................................... 12
Summary ........................................................................... 13
Contact Information ......................................................... 13
Introduction

A refugee is a person who has been forced to flee his or her home country because of fear of persecution or violence. The United Nations High Commissioner of Refugees (UNHCR) defines a refugee as a “person who, owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality, and is unable to, or owing to such fear, is unwilling to avail himself of the protection of that country.”

According to the UNHCR, an estimated 68.5 million people are now displaced globally due to conflict, persecution, generalized violence or human rights violations. Among those forcibly displaced are 25.4 million refugees who have fled to another country, over half of whom are children under the age of 18. At the end of 2017, the global number of refugees under UNHCR’s mandate was estimated to be 19.9 million, the highest level recorded in the past two decades. More than half of all refugees worldwide came from three countries: Syrian Arab Republic, Afghanistan and South Sudan (Figure 1). Syrians represent nearly one-third of the world’s total refugee population, and experienced a 14 percent increase in the number of refugees from the previous year. The refugee population in sub-Saharan Africa increased by 1.1 million (22 percent) in 2017, mainly due to the crisis in South Sudan. The refugee population in Asia-Pacific region increased by 21 percent from the previous year, mostly due to the arrival of refugees from Myanmar (Burma) in Bangladesh.

Figure 1. UN Refugee Agency Statistical Yearbooks, 2017
Iowa Refugee Health Program

Prior to coming to the United States, refugees often have limited access to health care services, food supplies and sanitation, which can have implications for health including malnutrition, infectious diseases and chronic conditions. Refugees may have also experienced acute and chronic traumatic events which can affect their mental health and emotional well-being, and add additional barriers to successful resettlement.

The Iowa Refugee Health Program, located in the Iowa Department of Public Health (IDPH) Bureau of Immunization and Tuberculosis, collaborates with local clinics, resettlement agencies, and community and ethnic-based organizations throughout the state to protect and improve the health and well-being of refugees.

Iowa Refugee Health Program responsibilities include:

- Ensure a comprehensive initial health assessment is completed for each newly arriving refugee
- Communicate CDC refugee health assessment guidelines and updates to private health care providers and local public health agencies
- Compile, analyze and distribute health assessment data to private health care providers and local public health agencies

Purpose

The purpose of this report is to provide primary refugee health information to clinicians, local partners and stakeholders, policy makers and the general public. The data in this report are compiled from information provided by UNHCR, ORR, Centers for Disease Control and Prevention (CDC), the IDPH and medical clinics throughout the state of Iowa. This report includes demographic information and health assessment outcomes for primary refugees, including special immigrant visas (SIVs) arriving in Iowa during fiscal and calendar year 2017.
Demographic and Arrival Data

The United States resettled 53,716 refugees in federal fiscal year (FY) 2017 (October 1, 2016 - September 30, 2017), a decrease of 37 percent from the previous year. Executive Order 13780, titled Protecting the Nation From Foreign Terrorist Entry To The United States, lowered the U.S. refugee admissions ceiling from a proposed 110,000 to 50,000. As a result, the U.S. received a reduced number of refugees for resettlement in 2017. The state of Iowa accepted 682 refugees for resettlement in FY 2017, a decrease of 32 percent from the previous year (Figure 2). In calendar year 2017, Iowa resettled 570 primary refugees, a 48 percent decrease from the previous year (1,105). The state received the highest number of arrivals in February and April (Figure 3).

At the time of arrival in Iowa, refugees ranged in age from 6 months to 86 years age. The majority of arrivals (87 percent) were under 40 years of age and 48 percent were children and young adults age 19 and under (Figure 4). For refugee youth under the age of 18, 47 percent were aged 0-6, 27 percent were aged 7-12, and 27 percent were aged 13-18 years (Figure 5). Of the 2017 refugee arrivals, 49 percent were male (277) and 51 percent were female (293), which is consistent with previous years (Figure 6).
Arrivals

Refugees arrived in Iowa in 2017 from 17 different nations, with the highest numbers arriving from the Democratic Republic of Congo and Eritrea (Figures 7 and 8). There were 54 individuals entering on SIVs from Iraq and Afghanistan. These individuals receive assistance with resettlement, and are eligible to receive the Office of Refugee Resettlement (ORR) benefits and services, similar to refugees.

Figure 6. Iowa Primary Refugees by Sex, Iowa, 2013-2017

Figure 7. Iowa Primary Refugees by Nationality, 2017

“Other” Includes Republic of Congo, Syria, Honduras, India, El Salvador, Rwanda

Figure 8. Iowa Primary Refugees by Country of Origin, 2017
Iowa Refugee Health Program Annual Report

**Figure 9. Iowa Primary Refugees by Initial County of Resettlement, 2017**

Resettlement occurred in 10 counties, with Polk County receiving nearly 80% of arrivals (Figure 9). Catholic Charities and U.S. Committee for Refugees and Immigrants (USCRI), have offices and remote placement sites in Polk, Linn and Woodbury counties.

**Initial Refugee Health Assessment**

The Federal Refugee Act of 1980 directs every state to offer a Refugee Health Assessment to each newly arriving refugee, but it is not mandatory. The State of Iowa strongly recommends all newly arriving refugees receive this initial health assessment. During the initial refugee health assessment, clinicians identify and address the immediate health needs of refugees, evaluate for diseases of public health significance, treat acute and chronic conditions, establish primary care, and make referrals to specialists when needed (Figure 10).

**Iowa Refugee Health Assessment**

Iowa Refugee Health Program’s guidelines for performing health assessments are consistent with the CDC Guidelines for the Domestic Refugee Health Assessment. Health assessment data guides the development of public health responses to emerging refugee health issues.

The IDPH Refugee Health Program launched a new data collection process in 2017. The new web-based application, the Iowa Refugee Health Assessment Screening (IRHAS) module in the statewide immunization registry IRIS, collects demographic data and screening results from the health assessments. Medical providers conducting the health assessments enter health assessment results into IRHAS or submit forms to the IDPH Refugee Health Program.

For calendar year 2017, **99.1 percent of Iowa’s primary refugees received comprehensive initial health assessments** (Figure 11). Of Iowa’s 570 primary arrivals, five did not receive an initial health assessment. Refugees may not receive an initial health assessment if they move out of state, were unable to be located, or chose not to receive a screening. Of the health assessments received, 62.3 percent were initiated within 30 days, 34.4 percent were initiated within 31-60 days, 2.1 percent were initiated in 60+ days, and 0.4 percent were initiated within 90+ days (Figure 12).
Refugees received initial health assessments at 10 clinics in Iowa:

- Blank Children’s Hospital Infectious Disease Clinic
- Broadlawns Primary Care Clinic
- Community Health Centers of SEIA - Louisa County
- Des Moines University Family Medicine Clinic
- Linn County Public Health
- Primary Health Care - Bery Engebretsen Clinic
- Primary Health Care - Marshalltown Medical Clinic
- Peoples Community Health Center
- River Hills Community Health Center
- Siouxland Community Health Center

**Tuberculosis (TB)**

Tuberculosis (TB) remains a major health problem globally, in the U.S. and in Iowa, resulting in the death of 1.3 million people annually. While TB disease rates in the U.S. continue to decline, the case rate among foreign-born persons in the U.S. remains high and approximately 15 times higher than among U.S.-born persons in 2017 (14.6 compared to 1.0 cases per 100,000 persons). In Iowa, the TB case rate was 1.5 cases per 100,000 persons, which is lower than the provisional national average of 2.8 cases per 100,000 persons. Despite accounting for only 4 percent of the Iowa population, foreign-born persons have accounted for 75 percent of the state’s reported TB cases in the past 10 years (2008-2017).

**Pre-departure Screening & Classification**

Refugees receive a TB class status during their overseas medical examination prior to departure. Refugees diagnosed with active TB disease (Class A TB status) during the overseas medical exam are unable to enter the U.S. until they are treated and are no longer infectious. Refugees with positive findings other than infectious TB disease receive a Class B designation and require additional follow-up upon arrival to the U.S.

**Domestic Initial Health Assessment**

The CDC recommends screening all refugees for TB upon arrival to the U.S. The interferon-gamma release assay (IGRA) is preferable to the tuberculin skin test (TST) for refugees due to a potential history of BCG vaccine. BCG vaccination may cause a false positive reaction to the TST, but IGRA are not affected by previous vaccination. IGRA are to be used for individuals 2 years and older, and pregnancy is not a medical contraindication for IGRA or TST.
The IDPH TB Control Program works to eliminate TB disease by collaborating with clinicians and local public health agencies to minimize the spread of TB through promoting effective TB and latent TB infection (LTBI) diagnosis and treatment. Clinicians should offer those diagnosed with LTBI treatment to prevent TB disease in the future.

Of the 546 primary refugees screened for TB in Iowa in 2017, 22.0 percent (120) were diagnosed with LTBI and three were diagnosed with active TB disease (Figure 13).

**Class B TB**

In 2017, 41 primary refugees received a Class B TB status (7.2 percent of arrivals). Fifteen Class B refugees were diagnosed with LTBI and three were diagnosed with active TB (Figure 14).

**Clinician Tip: Screen all refugees for TB**
- Review overseas records and evaluate for signs and symptoms of TB disease
- Administer an IGRA (preferred) or TST (acceptable) unless there is a documented previous positive test
- Obtain a chest x-ray (CXR) for refugees with Class B status, a positive IGRA/TST, or have signs or symptoms compatible with TB disease
- Positive test results and normal CXR, offer LTBI medication and fax completed Patient Information Sheet to IDPH at 515-281-7504
- Report cases of TB disease to IDPH at 515-281-7504

**Clinician Tip: Class Bs require a CXR regardless of IGRA or TST results**

CDC Guidance: Screening for Tuberculosis Infection and Disease During the Domestic Medical Examination for Newly Arrived Refugees: [https://www.cdc.gov/immigrantrefugeehealth/guidelines/domestic/tuberculosis-guidelines.html](https://www.cdc.gov/immigrantrefugeehealth/guidelines/domestic/tuberculosis-guidelines.html)
Human Immunodeficiency Virus (HIV)

According to the UNHCR, while conflict, displacement, food insecurity and poverty may leave refugees more susceptible to HIV, displaced populations do not always display higher rates of HIV infection. There are numerous complex factors affecting the risk of infection for refugees, including:

- Pre-conflict HIV rates among refugees in country of origin
- Exposure to sexual abuse and violence
- HIV rates of surrounding communities in refugee camps
- Level of drug use in refugee camps and surrounding communities
- Level of interaction between refugees and host populations

Refugees are no longer routinely tested for HIV prior to departure to the U.S. and the virus was removed from the list of inadmissible conditions in January of 2010. Refugees are offered HIV testing after a positive diagnosis of syphilis or gonorrhea during the overseas medical examination.

In 2016, an estimated 39,782 people were diagnosed with HIV in the U.S. and an estimated 125 Iowans were diagnosed with HIV in 2017. Of the 516 refugees screened for HIV in 2017, two (0.4 percent) tested positive for HIV, with one individual testing positive prior to departure (Figure 15).

CDC Guidance: Screening for HIV Infection During the Refugee Domestic Medical Examination: (Updated April 16, 2012):

Hepatitis B Virus (HBV)

Chronic HBV infection is a major cause of preventable morbidity and premature mortality. Most refugees resettling in the U.S. arrive from countries of intermediate and high HBV endemnicity. High endemic regions include the prevalence of chronic HBV infection of ≥8 percent and a lifetime risk of acquiring HBV infection of >60 percent.

In 2016, 48 states reported 3,218 cases of acute hepatitis B and the overall incidence rate was 1.0 cases per 100,000 persons. Forty-three states reported 14,847 cases of chronic hepatitis B. In 2016, Iowa reported 86 confirmed or probable cases of chronic hepatitis B and 10 cases of acute hepatitis B. Of the 530 primary refugees screened for the hepatitis B surface antigen (HBsAg) in Iowa, 21 tested positive (Figure 16).
Hepatitis C Virus (HCV)

The CDC recommends screening refugees with identified risk factors for HCV, including injection drug use, HIV positive, those receiving whole blood or blood component prior to migration, exposure to blood and bodily fluids of infected persons, and other risk factors. The CDC estimates 3.4 to 6 million people living in the U.S. have chronic HCV and an estimated 45-85 percent of people with HCV are unaware of their infection. IDPH estimates that 39,219 to 149,173 Iowans are living with HCV infection. Of the 314 primary refugees screened for the HCV in Iowa, only one tested positive (Figure 17).

Figure 17. Iowa Primary Refugee Hepatitis C Screening Results, 2015 - 2017

CDC Guidance: Screening for Hepatitis During the Domestic Medical Examination for Newly Arrived Refugees (Updated March 5, 2014):

Syphilis

Screening for syphilis is an essential component of the overseas medical examination and the initial health assessment. In 2016, a total of 27,814 cases of primary and secondary syphilis were reported in the U.S., yielding a rate of 8.7 cases per 100,000 persons. In Iowa, the rate of primary and secondary syphilis was 2.8 per 100,000 persons. In 2017, six of Iowa’s primary refugee arrivals tested positive for syphilis (Figure 18).

Figure 18: Iowa Primary Refugee Syphilis Screening Results, 2015-2017

CDC Guidance: Screening for Sexually Transmitted Diseases During the Domestic Medical Examination for Newly Arrived Refugees: (Updated February 28, 2017):
Intestinal Parasites

Intestinal parasites are among the most common infections found in refugee populations. Intestinal parasite screening focuses on soil-transmitted helminthic infections (*Ascaris*, *Trichuris*, hookworm), *Strongyloides* and *Schistosoma*. Presently, the majority of resettling populations receive presumptive treatment for parasitic infections prior to departure, making screening upon arrival unnecessary for many refugees. Certain populations may not receive pre-departure presumptive treatments due risk factors such as pregnancy, breastfeeding, young age or other medical contraindications. Refugees from *Loa loa* endemic Sub-Saharan African countries do not receive presumptive ivermectin due to the possible risk of encephalopathy associate, and should be tested for strongyloidiasis.

Of the 217 new arrivals with completed stool ova and parasite or serology tests, 71 were positive for at least one parasite (Figure 19). The most common pathogenic parasites detected were *Schistosoma* (19 cases) and *Giardia* (19 cases) and eight tested positive for *Strongyloides*. The most common non-pathogenic parasites detected was *Endolimax nana* (20 cases). Refugees also tested positive for *Entamoeba histolytica*, *Blastocystis hominis*, *Chilomastix mesnili*, *Entamoeba coli*, *Entamoeba hartmanni*, *Escherichia coli* and *Iodamoeba buetschlii*.


Malaria

Malaria is a mosquito-borne disease resulting from an infection with a parasite. Refugees often come from areas in the world where malaria transmission occurs or occurs in some parts of the region (Figure 20). In 2017, seven primary arrival refugees were screened for malaria and no malaria was found in the blood smears for any individual.

Clinician Tip: Most refugees will not need to be screened for malaria. Screen symptomatic refugees or if the refugee is from Sub-Saharan Africa and did not receive pre-departure presumptive treatment or had a contraindication to treatment prior to arrival.

Lead

According to the CDC, the prevalence of lead poisoning in newly arrived refugee children may be 14 times greater than that of the general U.S. population of comparable age. Malnutrition, anemia and micronutrient deficiencies heighten lead absorption and the harmful effects of lead toxicity. Potential lead exposures include lead-containing gasoline, industrial emissions, ammunition manufacturing and use, burning of fossil fuels and waste, and lead-containing traditional remedies, ceramics, food and utensils.

The CDC recommends screening lead screening for all refugee children age 6 months to 16 years, and follow-up blood tests 3-6 months post-resettlement in children 6 months to 6 years of age regardless of blood lead level (BLL). A positive lead reading is 5μg/dl or more, which is a change from 10μg/dl effective in 2014. In Iowa during 2017, 216 refugee youth were screened for lead poisoning during the initial domestic health assessment and 29 (13.4 percent) had elevated BLL (Figure 21).

Major Diagnoses and Referrals

During the initial refugee health assessment, clinicians identify and address the immediate health needs of refugees, evaluate for diseases of public health significance, treat acute and chronic conditions, establish primary care and make referrals to specialists when needed. The health concern reported most frequently by clinicians in 2017 (other than those presented earlier in this report) were dental problems (52), vision loss (44), mental health concerns (12) and hearing problems (7). Fifteen women had confirmed pregnancies, three refugees tested positive for chlamydia and none tested positive for gonorrhea.

The most common referrals made during the initial refugee health assessment were for dental care (176), primary care (174), vision care (52), obstetrics/gynecology (15), public health nurse (6), hearing (5), mental health (4) and WIC (4). Other referrals for specialized care included dermatology, neurology, speech therapy, physical therapy, plastic surgery and infectious disease.
Summary

Iowa has a strong history of welcoming and providing aid to vulnerable refugee populations. The state accepted 570 primary refugees for resettlement in 2017. Newly arriving refugees are among the most vulnerable populations in the state due to barriers such as language, cultural practices and lack of knowledge regarding basic U.S. health care. The Iowa Refugee Health Program strives to overcome these obstacles by ensuring clinicians have access to current screening and treatment guidelines, as well as health assessment data specific to newly arriving refugee populations.

The executive order titled *Protecting the Nation From Foreign Terrorist Entry To The United States* was released on March 6, 2017, and lowered the U.S. refugee admissions ceiling from 110,000 to 45,000. As a result, Iowa received a reduced number of refugees for resettlement in 2017. Despite this reduction, the state experienced a rise in the number of refugees arriving with severe medical conditions. Individuals with evidence of health concerns are typically given high priority for resettlement in order to ensure that their medical needs are addressed as quickly as possible.

The potential increase in high need medical cases requires even greater collaboration and communication between IDPH, medical professionals and community partners. The Iowa Refugee Health Program will continue to coordinate with medical clinics, resettlement agencies and stakeholders throughout the state to ensure that all refugees are connected to quality and comprehensive health care. Health and wellness are vital to successful resettlement. The integration of refugees into the U.S. health care system is critical to making refugees truly at home in Iowa.

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