Objectives

- Discuss how doctors are involved in the immigration process.
- Describe important health needs for new immigrants to the United States.
- Discuss CDC recommendations for PCPs of new immigrants at the first visit.
- Identify and utilize available resources regarding immigrant health.
- Pimping
- Maps

• AMERICA!
Disclosures

- I’m usually DC, but I’ll go Marvel today
Clinical case:

At 4:10 PM on a Thursday, your last patient arrives for a 4:00 PM appointment. It is an establish care visit. The patient is a 15 year old girl who recently emigrated from Botswana 3 weeks ago. She has never before established care in the US. She does not have records from her previous PCP in Botswana.

She is feeling well today.

- What will you need to do?

A. Immediate quarantine for Ebola
B. CBC, BMP, PPD
C. CBC, CXR, and immunizations
D. CBC, glucose, lipids, Vitamin D level, PPD, UA, urine pregnancy, HIV, RPR, chlamydia PCR, strongyloidiasis and schistosoma serologies, mental health screening, and empiric 250 mg atovaquone/100 mg proguanil daily for 3 days
Ebola Reminder

Ebola is here

Botswana is there
This is going to take a while

- The Centers for Disease Control and Prevention (CDC) has published guidelines for medical examination of newly arrived refugees, as well as a 12-point checklist that includes screening recommended for refugees arriving in the United States [1].
- But don’t worry! CDC says:
  
  "All screening tests and immunizations need not be completed in the first visit; establishing a trusting relationship will facilitate completion of all the required elements over time."

1. Centers for Disease Control and Prevention: Immigrant and Refugee Health—Guidelines for the US Domestic Examination for Newly Arriving Refugees
Definitions
...from the US Department of Homeland Security

- **Immigration and Nationality Act (INA)** - outlines immigration, temporary admission, naturalization, and removal of foreign nationals
- **Immigrant** - A non-US citizen who comes to the US (22 exceptions) [1]
  - >1 million new immigrants to the US per year
- **Refugee** - Person who is outside their country and who is unable or unwilling to return to that country due to a well-founded fear of persecution [1]
  - ~60,000 new refugees to the US per year

1. Official Website of the Department of Homeland Security: IMMIGRATION AND NATIONALITY ACT \ INA: ACT 101 - DEFINITIONS \ Act 101(a)
More definitions

- **Immigration Medical Exam (IME)**- Required for all immigrants and refugees prior to obtaining full US citizenship
  - Must be completed before arriving in US for refugees
- **Panel Physician**- a medical doctor practicing **overseas** who has an agreement with a local US embassy or consulate general to perform immigration MSEs
- **Civil Surgeon**- **US physician** authorized to perform official IMEs
- **Division of Global Migration and Quarantine (DGMQ)**- CDC department that provides technical instructions (TI) for conducting IMEs
  - TIs are legally binding guidelines for all Panel Physicians and Civil Surgeons
**Class A vs Class B**

- **Class A conditions** - preclude an immigrant or refugee (possibly temporarily) from entering the United States [1].
  - Communicable public health concern (i.e. TB, Syphilis)
  - Failure to show proof of required vaccinations (single dose of a series counts)
  - Physical or mental disorder with associated harmful behavior
  - Drug abuse or addiction

- **Class B conditions** - physical or mental abnormalities, diseases, or disabilities which cause a “substantial departure from normal well-being”. These typically only require a waiver to be filled.
  - Inactive tuberculosis
  - Serious or permanent disabilities
  - Terminal diseases
  - Untreated medical conditions

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Where do we come in?

• The purpose of the Immigration Medical Exam is ONLY to exclude inadmissible conditions
  • Also may not have been done if the patient is not a legal immigrant
• Immigrants (especially refugees, adoptees, and those with class B conditions) typically also undergo a “New Arrival Screen” carried out by any qualified health professional.
  • Recommended but not required
• The New Arrival Screen also helps new immigrants to establish care with a PCP and seek care for chronic conditions that may have previously been neglected
CDC 12 point checklist

1. History and physical
2. Nutrition and growth
3. Pregnancy test
4. Immunizations
5. Mental health screening
6. General laboratory testing
7. Tuberculosis
8. Lead testing
9. Malaria
10. Intestinal and Tissue Invasive Parasites
11. Sexually transmitted diseases
12. HIV
Establishing Rapport

- Establishing rapport is the critical first step.
- This may require several visits.
- Stressful factors for immigrant patients include lack of familiarity with the healthcare system, language and cultural barriers, and the possibility of prior emotional or physical trauma.
- In addition, patients may be reluctant to discuss concerns due to fear that revealing health problems may affect their immigration status.

Explain what to expect

- Ask about immediate medical or social concerns first.
- And of course, don't forget the importance of...
Has the screening been done already?

- Many immigrants to the United States complete some of the New Arrival Screen prior to arrival [1] via an organized system that includes
  - Department of State
  - International Organization for Migration
  - Centers for Disease Control and Prevention (CDC)
  - State health departments
  - United States resettlement agencies
- However, some groups are excluded and many illegal migrants arrive with no health or immunization documentation.
- It must be presumed that the tests have not been done unless the patient can specifically remember them

1. Centers for Disease Control and Prevention: Immigrant and Refugee Health
1. History

• Acute complaints come first (this will help with rapport)
• Standard elements of a detailed history:
  • Complete ROS, PMH, SH, FH, allergies
• Pregnancies and their outcomes, possibility of current pregnancy, menstrual history, contraceptives used
• Medications (including complementary and alternative)
• Asking the circumstances of the immigration is helpful to gauge if there may be any underlying mental health concerns
  • Mental health screening should occur in the first or second visit and include assessment for suicide risk
• Social history should include inquiry regarding current living conditions as well as migration history, including regions of residence and travel.
  • “From birth to the United States”[1]
1. Physical Examination

- Explain out what you are doing
- Vital signs
- Visual acuity should be tested
- Specifically, look for:
  - Dental caries
  - Murmurs
  - Scars or skin markings
  - Hepatosplenomegaly
- Provide a same-sex examiner if requested
  - Defer genital exams until established, but WILL need an exam to screen for female genital cutting

1. Centers for Disease Control and Prevention: Domestic Examination For Newly Arrived Refugees: Guidelines and Discussion of the History and Physical Examination
2. Nutrition and growth

- Take dietary history (e.g., restrictions, cultural dietary norms, food allergies)
- Measure weight and height for growth curves
- Head circumference if appropriate
3. Pregnancy test

- Extremely low threshold
- Perform before giving any medication or vaccine that could complicate pregnancy
4. Immunizations

- All new patients will need their immunization records updated
- Outside immunization records may be considered valid if they include:
  - name of the vaccine
  - the month and year of vaccine
  - AND if the schedule reflects the timing as outlined by the CDC
- A single dose of a series fulfills the requirement for proof of vaccination
- Serologic testing can be considered to avoid unnecessary re-vaccination, especially if immunity is likely (i.e. varicella)
- Give make-up vaccines per standard make-up schedule

The figure below provides catch-up schedules and minimum intervals between doses for children whose vaccinations have been delayed. A vaccine series does not need to be restarted, regardless of the time that has elapsed between doses. Use the section appropriate for the child’s age. Always use this table in conjunction with Figure 1 and the footnotes that follow.

### Persons aged 4 months through 6 years

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Minimum Age for Dose 1</th>
<th>Dose 1 to dose 2</th>
<th>Minimum Interval Between Doses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dose 2 to dose 3</td>
</tr>
<tr>
<td>Hepatitis B1</td>
<td>Birth</td>
<td>4 weeks</td>
<td>8 weeks and at least 16 weeks after first dose; minimum age for the final dose is 24 weeks</td>
</tr>
<tr>
<td>Rotavirus1</td>
<td>8 weeks</td>
<td>4 weeks</td>
<td></td>
</tr>
<tr>
<td>Diphtheria, tetanus, &amp; acellular pertussis 2</td>
<td>6 weeks</td>
<td>4 weeks</td>
<td></td>
</tr>
<tr>
<td><strong>Haemophilus influenza type b</strong>1</td>
<td>8 weeks</td>
<td>4 weeks</td>
<td>4 weeks if current age is younger than 12 months and first dose administered at &lt; 7 months old</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>8 weeks and age 12 months through 59 months (as final dose) if current age is 12 through 59 months and first dose administered between 7 through 11 months (regardless of Hib vaccine [PRP-1 or PRP-OMP] used for first dose); OR if current age is 12 through 59 months and first dose administered at younger than age 12 months; OR if first 2 doses were PRP-OMP and administered at younger than 12 months. No further doses needed if previous dose administered at age 15 months or older</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pneumococcal6</td>
<td>6 weeks</td>
<td>4 weeks</td>
<td>4 weeks if current age is younger than 12 months and first dose administered at age 12 through 14 months. No further doses needed if first dose administered at age 15 months or older</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inactivated poliovirus7</td>
<td>6 weeks</td>
<td>4 weeks7</td>
<td>6 months7; minimum age 4 years for final dose</td>
</tr>
<tr>
<td>Measles, mumps, rubella4</td>
<td>12 months</td>
<td>8 weeks13</td>
<td>See footnote 13</td>
</tr>
<tr>
<td>Varicella10</td>
<td>12 months</td>
<td>4 weeks</td>
<td></td>
</tr>
<tr>
<td>Hepatitis A1</td>
<td>12 months</td>
<td>6 months</td>
<td></td>
</tr>
</tbody>
</table>

### Persons aged 7 through 18 years

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Minimum Age for Dose 1</th>
<th>Dose 1 to dose 2</th>
<th>Minimum Interval Between Doses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dose 2 to dose 3</td>
</tr>
<tr>
<td>Tetanus, diphtheria; tetanus, diphtheria, &amp; acellular pertussis 4</td>
<td>7 years4</td>
<td>4 weeks</td>
<td>4 weeks if first dose of DTaP/DT administered at younger than age 12 months</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6 months if first dose of DTaP/DT administered at age 12 months or older and then no further doses needed for catch-up</td>
</tr>
<tr>
<td>Human papillomavirus12</td>
<td>9 years</td>
<td></td>
<td>Routine dosing intervals are recommended12</td>
</tr>
<tr>
<td>Hepatitis A7</td>
<td>12 months</td>
<td>6 months</td>
<td></td>
</tr>
<tr>
<td>Hepatitis B1</td>
<td>Birth</td>
<td>4 weeks</td>
<td>8 weeks and at least 16 weeks after first dose</td>
</tr>
<tr>
<td>Inactivated poliovirus7</td>
<td>8 weeks</td>
<td>4 weeks</td>
<td>6 months7; minimum age 4 years for final dose</td>
</tr>
<tr>
<td>Meningococcal13</td>
<td>8 weeks</td>
<td>8 weeks</td>
<td>See footnote 13</td>
</tr>
<tr>
<td>Measles, mumps, rubella5</td>
<td>12 months</td>
<td>4 weeks</td>
<td></td>
</tr>
<tr>
<td>Varicella10</td>
<td>12 months</td>
<td>3 months</td>
<td>3 months if person is younger than age 13 years 4 weeks if person is aged 13 years or older</td>
</tr>
</tbody>
</table>

**NOTE:** The above recommendations must be read along with the footnotes of the schedule.
Schedule has 3 pages of footnotes which outline the “exceptions” related to more or less doses needed if patient started immunizations late.

The “Exceptions: outlines that our teenager will need:

- 3 vaccine series for Hep B
- 3 vaccine series for IPV
- 1 Tdap per usual adolescent schedule
- Demonstrate varicella immunity or 2 dose series
THAT MOMENT YOU REALIZE
HE'S REALLY CAPTAIN PUERTO RICO
5. Mental health screening

- There is a high prevalence of mental health issues among immigrants and refugees [1], particularly those arriving from areas of civil unrest:
  - major depression
  - situational anxiety
  - posttraumatic stress disorder (PTSD)
- Detailed social history is the key to understanding what kind of stressors your patient may be facing [2]
  - May be spread out over several visits, but initial screen for suicidal ideations should take place early, likely in the first visit
  - Social history should include reason for the move
  - Sexual history should include questions about sexual trauma
- As rapport is established, move to a screening questionnaire

2. CDC: Guidelines for Mental Health Screening during the Domestic Medical Examination for Newly Arrived Refugees
1. WHO, Global and Regional Estimates of Violence against Women
5. Mental health screening tools

- The New Mexico Refugee Symptoms Checklist-121 (NMRSCCL-121)
  - assesses the broad range of persistently distressing somatic and psychological symptoms in refugees
  - valid predictor of traumatic experiences, PTSD, anxiety and depression in both Kurdish and Vietnamese refugees[1]

- The Hopkins Symptom Checklist-25 (HSCL-25)
  - assesses anxiety and depression symptoms,
  - valid for the general U.S. population and for Indochinese refugees and has transcultural validity.
  - scale predicts “clinically significant” anxiety and depression in general U.S. and refugee samples and are valid as diagnostic proxies

5. Mental health screening tools

- The Posttraumatic Symptom Scale-Self Report (PSS-SR)
  - reliable predictor of the PTSD diagnosis in U.S. populations
  - 17 items, essentially DSM-IV PTSD diagnostic items.
  - PSS-SR continuous scores and the diagnostic proxy were highly correlated with war-related trauma and anxiety depression in Kurdish and Vietnamese refugees

- Refugee Health Screener-15 (RHS-15)
  - 4-12 minutes, validated 2012. [1]
  - clinically significant anxiety, clinically significant depression, PTSD
  - Validated in Iraqi, Nepali Bhutanese, Karen, and Burmese refugees

### SYMPTOMS

<table>
<thead>
<tr>
<th></th>
<th>NOT AT ALL</th>
<th>A LITTLE BIT</th>
<th>MODERATELY</th>
<th>QUITE A BIT</th>
<th>EXTREMELY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Muscle, bone, joint pains</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2. Feeling down, sad, or blue most of the time</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3. Too much thinking or too many thoughts</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4. Feeling helpless</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5. Suddenly scared for no reason</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6. Faintness, dizziness, or weakness</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7. Nervousness or shakiness inside</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8. Feeling restless, can’t sit still</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9. Crying easily</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
14. Generally over your life, do you feel that you are:

   Able to handle (cope with) anything that comes your way ...........................................0
   Able to handle (cope with) most things that come your way ...........................................1
   Able to handle (cope with) some things, but not able to cope with other things ...............2
   Unable to cope with most things .......................................................................................3
   Unable to cope with anything .........................................................................................4

15.

**Distress Thermometer**

**FIRST:** Please circle the number (0-10) that best describes how much distress you have been experiencing in the past week including today.

```
10              Extreme distress
9
8
7
6
5
4
3
2
1
0              No distress
```

“I feel as bad as I ever have”

“Things are good”

ADD TOTAL SCORE OF ITEMS 1-14: ___
6. Laboratory testing

- CBC (everybody)
- UA (only if able to do clean catch)
- Newborn screen (per state regulations)
- Lipid panel (per USPSTF guidelines)
- Vitamin D
- Optional: BMP, B12, and FSBS (no evidence)
Why check a CBC?

- CBC is useful for identification of anemia, macrocytosis, microcytosis, and eosinophilia [1]
- Name the disorder by CBC:

A. Hemoglobin 10.1 g/dl; hematocrit 30.3%; MCV 90 fL; Leukocyte count 4,800/mm³ (200/mm³ eosinophils), 180,000/mm³ platelets;
B. Hemoglobin 8.6 g/dl; hematocrit 25.2%; MCV 88 fL; Leukocyte count 9,400/mm³ (300/mm³ eosinophils), 403,000/mm³ platelets;
C. Hemoglobin 8.1 g/dl; hematocrit 24.3%; MCV 92 fL; Leukocyte count 10,700/mm³ (400/mm³ eosinophils), 92,000/mm³ platelets;
D. Hemoglobin 9.4 g/dl; hematocrit 29.3%; MCV 75 fL; Leukocyte count 10,900/mm³ (2,800/mm³ eosinophils), 431,000/mm³ platelets;

1. Parasitic infection
2. Malaria
3. HIV
4. Sickle cell disease
5. (Eosinophilia)
6. (Thrombocytopenia, anemia)
7. (Low WBC count, lymphopenia sometimes)
8. (Normocytic to microcytic anemia)

Vitamin D and B12 screening

- Deficiencies in vitamin B12 and vitamin D have been observed with high prevalence among some immigrant groups in cross-sectional studies:
  - B12 deficiency has been observed with high prevalence among Bhutanese Nepali and Iraqi refugees [1].
  - Australian study showed low B12 in Iranian and Afghanistani refugees.
  - Vitamin D deficiency has been observed with high prevalence among African immigrants, including Somali and Ethiopian women [2].

- Initial Vitamin D screening is recommended for refugees
- There is no consensus on universal screening for vitamin B12 deficiency

CAPTAIN AMERICA, STOP! IT'S IMPOSSIBLE FOR YOU TO EAT YOUR SHIELD!

IF I DON'T, BUCKY, I'LL DIE!

creamteasandjammydodgers: if this scene isn't in The Winter Soldier I will protest.
7. Tuberculosis

- In one study, 59 percent of foreign-born individuals diagnosed with TB had resided in the United States for more than five years, 15 percent had been in the United States for less than one year, and 18 percent between one and four years [1].

- Testing for Latent TB should be performed regardless of time since immigration, since TB may present years after exposure [2].
  - PPD (TST) or interferon-gamma release assay (IGRA).
  - IGRA not recommended in children <5 years old
  - Patients with a positive TST or IGRA should undergo chest radiograph and assessment for signs of active tuberculosis. In the absence of active disease, treatment for LTBI should be administered.


2. Centers for Disease Control and Prevention: Immigrant and Refugee Health—Guidelines for Screening for Tuberculosis Infection and Disease during the Domestic Medical Examination for Newly Arrived Refugees
Reading a PPD

- What would be the parameters for a positive PPD in our patient?
- What if the patient had a BCG vaccine?
8. Lead

- One Minnesota study showed that for 1,724 refugee children 0-3 years old arriving in Minnesota 2004-2005, 4.3% had a BLL of ≥ 10 mcg/dl. [1]
- Blood lead level recommended for all refugees 6 months - 16 years of age [2].
- SECOND blood lead recommended for refugees 6 months - 6 years old 3-6 months after they get permanent residence, regardless of the results of the initial lead test.

2. CDC: Screening for Lead during the Domestic Medical Examination for Newly Arrived Refugees
1. The Global Benefits of Phasing out Leaded Fuel’, Department of Environmental and Occupational Health at the California State University, Northridge, Professor Thomas Hatfield and Peter L. Tsai.
9. Malaria (Africa only)

- CDC guidelines recommend individualized management by group [1]
- Presumptive treatment or laboratory screening for *P. falciparum* malaria is appropriate if patient is from an endemic area AND:
  - Has fever (by history or exam)
  - Has unexplained anemia, thrombocytopenia, or splenomegaly
- Can also be considered for asymptomatic individuals following arrival from sub-Saharan Africa (if treatment was not administered prior to migration)
- 3 options:
  - Screening with three blood films at 12 to 24 hour intervals
  - Presumptive treatment with 4 tabs of 250 mg atovaquone/100 mg proguanil daily for 3 days
  - Presumptive treatment with 4 tabs of 20 mg artemether and 120 mg lumefantrine for 6 doses
  - **Presumptive treatment is preferred** because screening is cumbersome

9. Malaria

- Pregnant women and children <5 kg should undergo laboratory testing but no presumptive treatment.
- Screening is NOT warranted for asymptomatic individuals from:
  - Southeast Asia
  - South Asia
  - Central Asia
  - parts of East Africa (e.g., Nairobi)
  - all areas in the Western Hemisphere
- Asymptomatic patients from Sub-Saharan Africa may also complete their empiric antimalarial course prior to travel to the US.
- No need to screen for other types of malaria than *P. falciparum*
Botswana is there

Sub-Saharan Africa
Get ready for some worm pix
10. Parasitic infections

- > 1 billion people in the world are estimated to have parasites [1]
- CDC guidelines dictate which immigrants require treatment or screening for parasitic infections [2]
  1. Helminths
  2. Strongyloides (w/ or w/o Loa Loa)
  3. Schistosoma
- In all cases, antiparasitic pretreatment before departure means additional treatment is not necessary
  - This saves LOTS of money
- Everyone else should either undergo screening or receive presumptive treatment following arrival.

10a. Helminths

- Empiric treatment for soil-transmitted helminths prior to immigration has been shown to reduce the prevalence of parasitic infections in refugees resettled from selected countries [1]
- Screening or empiric treatment of soil-transmitted helminths MAY be appropriate for non-pretreated, asymptomatic, at-risk individuals following arrival from the following regions:
  - Asia
  - Middle East
  - Africa
  - Latin America
  - Caribbean
- May be deferred until after delivery for pregnant women.
- Tx: Albendazole 400 mg PO for one day [2]

Proportion of children (1-15 years of age) in the country requiring preventive chemotherapy for soil-transmitted helminthiases, worldwide, 2010

The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement. © WHO 2011. All rights reserved

Data Source: World Health Organization
Map Production: Control of Neglected Tropical Diseases (NTD): World Health Organization

STEVE, YOU FREE?
I GOT US PIZZA.

... OF COURSE I'M FREE...

I'M AN AMERICAN.
10b. Strongyloidiasis

- Screening or empiric treatment of strongyloidiasis is recommended for non-pretreated asymptomatic individuals following arrival from the following regions [1]:
  - Asia
  - Middle East
  - North Africa
  - Sub-Saharan Africa (non-Loa loa endemic areas)
  - Latin America
  - Caribbean
- Screening for strongyloidiasis consists of serologic testing; stool ova and parasite is not adequate
- Empiric treatment is ivermectin 200 mcg/kg/day once a day for two days
- NOT recommended for pregnant women

Prevalence: health service reporting

Prevalence: community-based studies

Prevalence in immigrants/refugees

10c. Strongyloidiasis with loa loa

- Among patients from *Loa loa* endemic areas, *Loa loa* infection needs to be ruled out before ivermectin can be given for strongyloidiasis [1].
  - Screening for loiasis consists of quantitative daytime blood smear or serology.
  - Strongyloidiasis + loa loa treatment: Albendazole 400 mg twice a day for seven days.
  - It is particularly important that patients from endemic areas undergo presumptive treatment for *Strongyloides* prior to anticipated immunosuppression due to the risk of disseminated disease.

Distribution of schistosomiasis, worldwide, 2012

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Data Source: World Health Organization
Map Production: Control of Neglected Tropical Diseases (NTD)
World Health Organization

What? Too many maps??

BRUH

DO YOU EVEN 'MURICA?
10d. Schistosomiasis

- For asymptomatic non-pretreated individuals following arrival from sub-Saharan Africa, including pregnant women and children, schistosomiasis must be covered [1]
- 2 choices:
  - Screening consists of serology. Stool and urine examination are not adequate
  - Presumptive treatment with praziquantel 40 mg/kg x1

### Treatment Schedules for Presumptive Parasitic Infections for U.S.-Bound Refugees, administered by IOM\textsuperscript{a}—June 2015

<table>
<thead>
<tr>
<th>Region</th>
<th>Country of Processing</th>
<th>Principal Refugee Groups (location)</th>
<th>Presumptive Parasite Treatment for Eligible Refugees\textsuperscript{b, c}</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>Ethiopia</td>
<td>Eritreans (Shimelba); Somalis (Kebrabeya); Multiple (Addis Ababa)</td>
<td>Albendazole; Praziquantel; Ivermectin; Artemether-lumefantrine</td>
<td>Ivermectin since Jan 2014</td>
</tr>
<tr>
<td></td>
<td>Kenya</td>
<td>Somalis (Dadaab); Somalis, Sudanese, Congolese (Kakuma); Multiple</td>
<td>Albendazole; Praziquantel; Ivermectin</td>
<td>Ivermectin since Sep 2013</td>
</tr>
<tr>
<td></td>
<td>Tanzania</td>
<td>Congolese; Sudanese; Multiple</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Rwanda, Uganda, Burundi</td>
<td>Somalis (Kigali); Multiple</td>
<td></td>
<td>Ivermectin since April 2014</td>
</tr>
<tr>
<td></td>
<td>South Africa and other countries</td>
<td>Multiple</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Asia</td>
<td>Malaysia</td>
<td>Burmese (Kuala Lumpur)</td>
<td></td>
<td>Ivermectin since Feb 2013</td>
</tr>
<tr>
<td></td>
<td>Nepal</td>
<td>Bhutan</td>
<td></td>
<td>Ivermectin since Jan 2013</td>
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<tr>
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<td>Thailand</td>
<td>Burmese, Bhutan</td>
<td></td>
<td>Ivermectin since July 2011</td>
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<tr>
<td></td>
<td>Iraq</td>
<td>Iraqis</td>
<td></td>
<td>Ivermectin since Jan 2014</td>
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<tr>
<td>Mideast</td>
<td>Jordan</td>
<td>Iraqis and Syrians (Amman)</td>
<td>Albendazole; Ivermectin</td>
<td>Ivermectin since Jan 2014</td>
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<td></td>
<td>Lebanon, Syria, Turkey, Egypt</td>
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<td>Europe</td>
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<tr>
<td></td>
<td>Americas</td>
<td>Cuba, other</td>
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<td>N/A</td>
</tr>
</tbody>
</table>

\textsuperscript{a} Information provided by the International Organization for Migration (IOM) during required overseas refugee medical exam.
11. Sexually transmitted diseases

- Screening per CDC guidelines, starting with a sexual history [1].
- Nucleic acid amplification test for chlamydia in:
  - Women 15-25 years of age x1
  - Women with new or multiple sexual partners
  - Symptomatic patients
  - Patients with leukocyte esterase on urine dipstick
- Nucleic acid amplification test for gonorrhea in:
  - Symptomatic patients
  - Patients with leukocyte esterase on urine dipstick
- RPR or VRDL in all patients ≥15 from syphilis endemic countries
  - Confirmatory testing with fluorescent treponemal antibody, treponema pallidum particle agglutination assay, or enzyme-linked immunosorbent assay [ELISA] should be performed if positive RPR or VDRL.

1. Centers for Disease Control and Prevention: Immigrant and Refugee Health—Screening for Sexually Transmitted Diseases during the Domestic Medical Examination for Newly Arrived Refugees
Syphilis endemic countries

<table>
<thead>
<tr>
<th>Region</th>
<th>Country</th>
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</thead>
<tbody>
<tr>
<td>Africa</td>
<td>Angola</td>
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<td></td>
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<td></td>
<td>Solomon Islands</td>
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<td></td>
<td>Vanuatu</td>
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</tbody>
</table>
12. HIV

- HIV testing was removed from the requirements for US admission in January 2010, but is still recommended.
- CDC recommends an “opt out” approach with EHR documentation if patients opt out.
- Should be repeated 3-6 months following settlement if high risk.
- General CDC guidelines for the United States recommend HIV screening in health-care settings for all persons 13-64 years of age [1].
- Unless negative maternal antibody and low risk can be proven, CDC recommends also screening all immigrant children under age 13 [2].

2. Centers for Disease Control and Prevention: Screening for HIV Infection During the Refugee Domestic Medical Examination
Finished yet, CDC?
Hepatitis B (13?)

- CDC recommends immigrants from countries where the prevalence of hepatitis B infection is ≥2 percent should undergo routine screening, regardless of vaccination status in country of origin [1].
  - hepatitis B surface antigen (HBSAg)
  - Hep B surface antibody (HBSAb or anti-HBS)
  - Hep B core antibody (HBcAB or anti-HBc)
- Horizontal transmission of hepatitis B has been documented in family units. Individuals living in the household of a carrier should also be offered screening and immunization.
- Hepatitis B carriers should be:
  - Evaluated for treatment
  - given vaccination against hepatitis A
  - given routine screening for early detection of hepatocellular carcinoma;

1. CDC: 2014. Screening for Hepatitis During the Domestics Medical Examination for Newly Arrived Refugees
Prevalence of chronic infection with hepatitis B virus, 2006

%: percent.

Hepatitis A and C

- Screening for hepatitis A may be cost effective for certain groups but is not currently required [1].
- Routine screening for hepatitis C among immigrants is controversial due to lack of data on cost-effectiveness [2].
- Screening is most appropriate for groups with identified risk factors or those coming from areas of known increased prevalence for hepatitis C.
- History should include blood transfusions and needle-sharing practices such as tattooing or acupuncture to determine if screening is needed.


Global hepatitis C, 1999

Tired yet?

That really Spangled

My stars
Pimpin’ time!

- Eosinophilia may reflect...
  - parasitic infection such as strongyloidiasis, filariasis, or schistosomiasis.
- Hematuria, female infertility, or chronic pelvic pain may reflect...
  - schistosomiasis.
- Thrombocytopenia and anemia may reflect...
  - malaria
- Splenomegaly may reflect...
  - hyperreactive malaria syndrome or schistosomiasis.
- Rash or itching in the setting of eosinophilia may reflect...
  - onchocerciasis and other filarial worms.
- Heart failure or esophageal motility disorders may reflect...
  - Chagas disease.
- Seizures or other central nervous system symptoms may reflect...
  - neurocysticercosis.
Take away points

• The Centers for Disease Control and Prevention (CDC) has published guidelines for medical examination of newly arrived refugees, as well as a 12 point checklist that includes screening recommended for refugees arriving in the United States.
• Establish rapport and focus on mental health early in the encounter
• Use the CDC vaccine catch-up guide for immunizations
• Immigrants from tuberculosis (TB) endemic areas should have screening with PPD or IGRA
  • Receipt of Bacille Calmette-Guérin (BCG) vaccine should not be considered in interpretation of the result.
• Presumptive treatment or laboratory screening for *Plasmodium falciparum* malaria for asymptomatic patients from sub-Saharan Africa
• Presumptive treatment or laboratory screening for patients from areas with endemic parasitic diseases
• Immigrants from countries where the prevalence of hepatitis B infection is $\geq 2\%$ should undergo routine screening, regardless of vaccination status
Resources

- Association of Refugee Health Coordinators [ARHC]: www.refugeehealthcoordinators.org/default.html
References

- CDC: 2014. Screening for Hepatitis During the Domestics Medical Examination for Newly Arrived Refugees
References

- Centers for Disease Control and Prevention: Immigrant and Refugee Health—Screening for Sexually Transmitted Diseases during the Domestic Medical Examination for Newly Arrived Refugees. www.cdc.gov/immigrantrefugeehealth/guidelines/domestic/sexually-transmitted-diseases.html


Questions?

The strength of this country isn't in buildings of brick and steel. It's in the hearts of those who have sworn to fight for its freedom...

- Captain America