



**Hepatitis B in Immigrant Populations:  
The Need for Improved Testing, Vaccination, and Ongoing Care  
Meeting Agenda**

**March 20, 2019**

1:00-1:05 pm	Welcome/Introductions	Kristin
1:05-2:00 pm	Hepatitis B in Immigrant Populations, Q&A	Dr. Janine Young
2:00-2:15pm	Hepatitis B Grant, Policy Updates	Stephanie/Kristin
2:15-2:30pm	Q&A, Evaluations, Networking	All

**\*Please take a few minutes to complete the pre-test before the presentation starts.\***

# Hepatitis B in Immigrants

## The need for improved testing, vaccination and linkage to ongoing care

Janine Young, MD, FAAP

March 20, 2019



**DENVER HEALTH**  
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School of Medicine  
UNIVERSITY OF COLORADO  
ANSCHUTZ MEDICAL CAMPUS

- No financial or other relevant disclosures

# Goals

- Case examples
- Review US immigration data
- Provide overview of hepatitis B epidemiology in immigrant populations
- Summarize approach to hepatitis B refugee screening and vaccination overseas and at US arrival
- Review international approaches to decreasing hepatitis B infections overseas
- Discuss strategies to improve hepatitis B screening, vaccination and linkage to ongoing care in immigrant populations



Burmese women receiving prenatal care at local hospital. Prenatal lab testing done and she has Hep B, viral load not high enough for anti-virals during pregnancy.

Infant is born, receives HBIG and 1<sup>st</sup> hep B vaccine at dol 1.

Infant discharged and receives timely hep B vaccines and is found to be uninfected and protected against hep B at 9 month WCC.

Of note, mom has 2 other children

**Questions:** How is the mother managed after birth of the baby? Other children? What standards are in place in CO to address this? How often do women have prenatal lab screenings done overseas?

Photo credit: Cynthia Maung, MD, Mae Tao Clinic, Mae Sot, Thailand



Photo credit:  
WHO Hepatitis  
2017

Somali refugee woman tested in X State at US arrival for Hep B, diagnosed with HBV infection in 2007 and lost to follow-up since initial screening

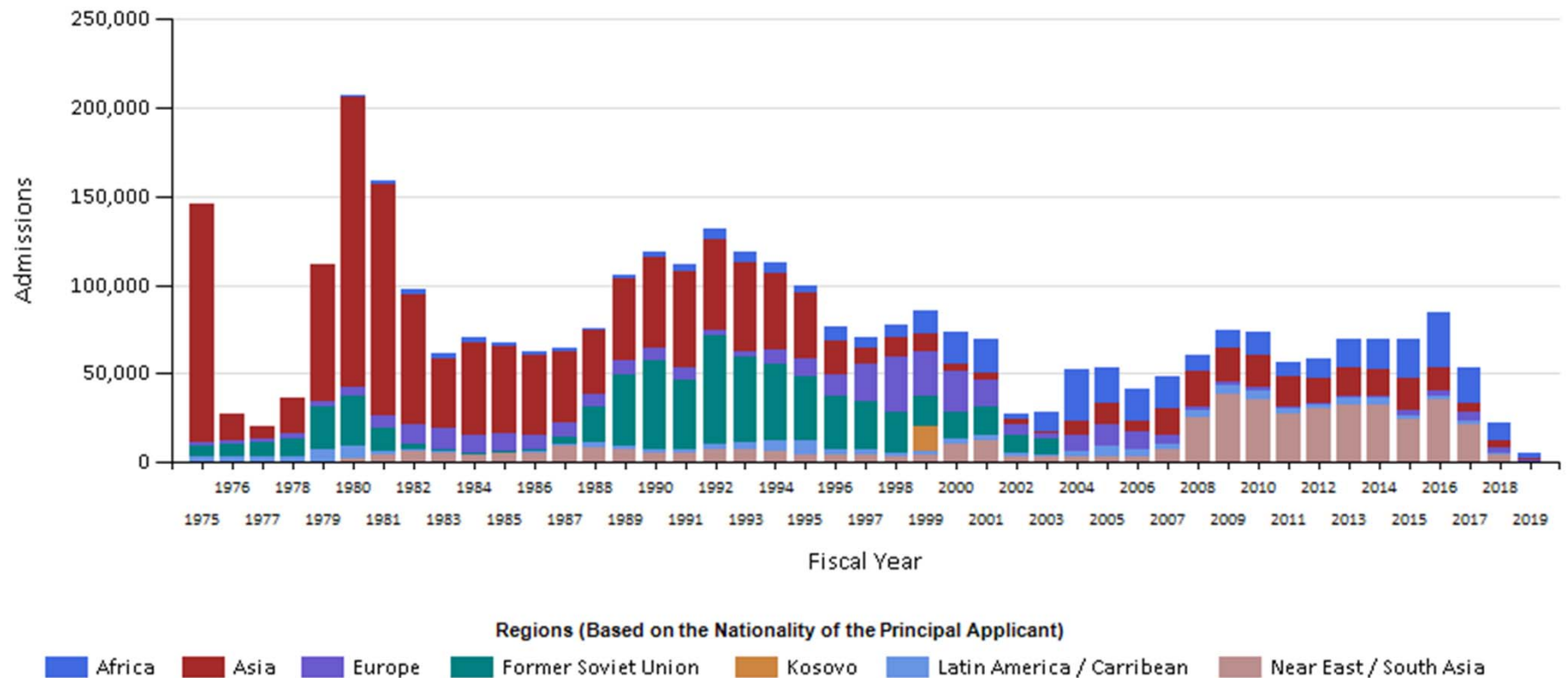
5 yo daughter and other sibs not tested at arrival. Unclear if husband was tested and records cannot be tracked down.

Her daughter now presents at age 17 yo and prior screening labs reviewed. No results for Hep B can be found. She is now tested and is Hep B s Ag positive.

Mom and daughter re-linked to care, afraid to have liver biopsy

Moved to MN

# US Dept of State, Refugee Admissions by Region, 1975-12/31/2018



# Colorado Arrival Data, FY 2017, 2018

- FY 2018:
  - Primary arrivals: 839
  - Secondary arrivals: 254

- Primary arrivals:

- Afghanistan 239
- DRC 179
- **Burma 113**
- Eritrea 71
- Ethiopia 53
- Bhutan 29
- Russia 19
- **Somalia 10**
- **Syria 3**
- **El Salvador 5**
- **Guatemala 2**
- **Honduras 0**
- **Sudan 6**
- **Iraq 15**

## FY 2017:

Primary arrivals: 1703  
Secondary arrivals: 364

Afghanistan 333  
DRC 169  
**Burma 174**  
Eritrea 73  
Ethiopia 34  
Bhutan 78  
Russia 8  
**Somalia 224**  
**Syria 119**  
**El Salvador 18**  
**Guatemala 2**  
**Honduras 0**  
**Sudan 3**  
**Iraq 215**

CRSP,  
<https://www.colorado.gov/pacific/cdhs/about-refugees#About>

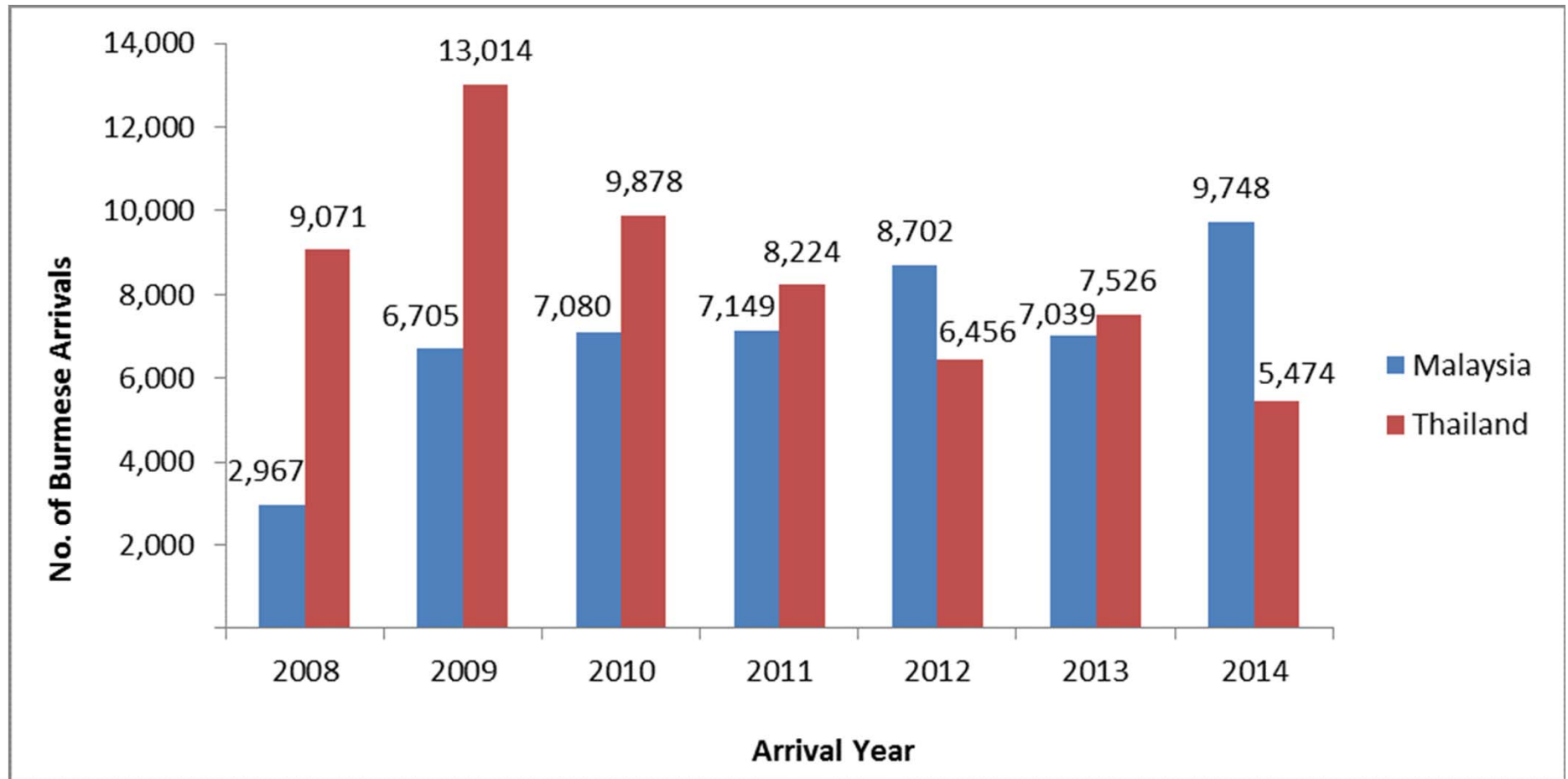




Photo credit: J Young

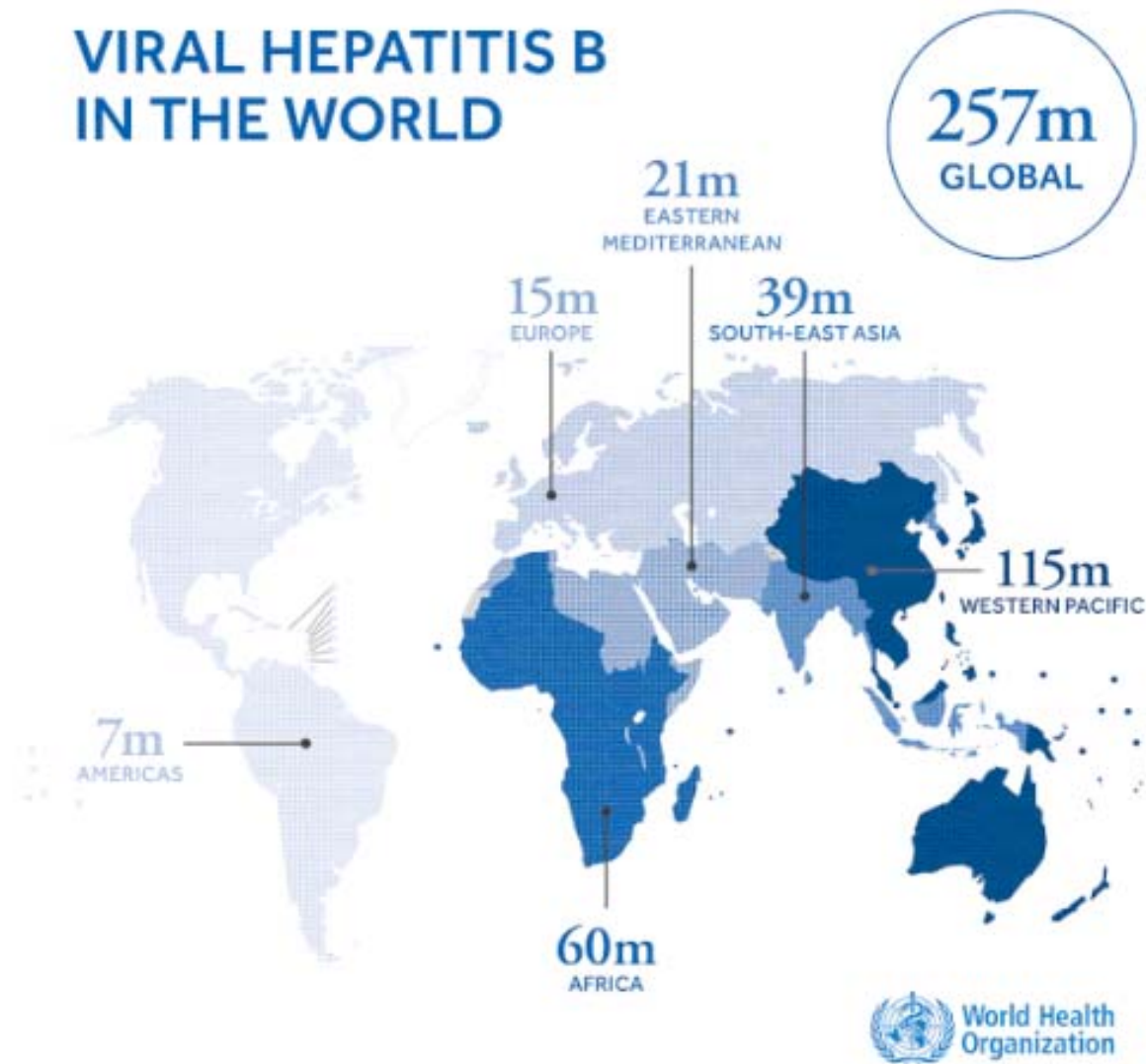
## Burmese Refugees, 2008-2014 (N=109,033)

- Majority are from minority ethnic groups
  - Karen, Chin, Kachin, Mon, Rakhine, Shan, Wa



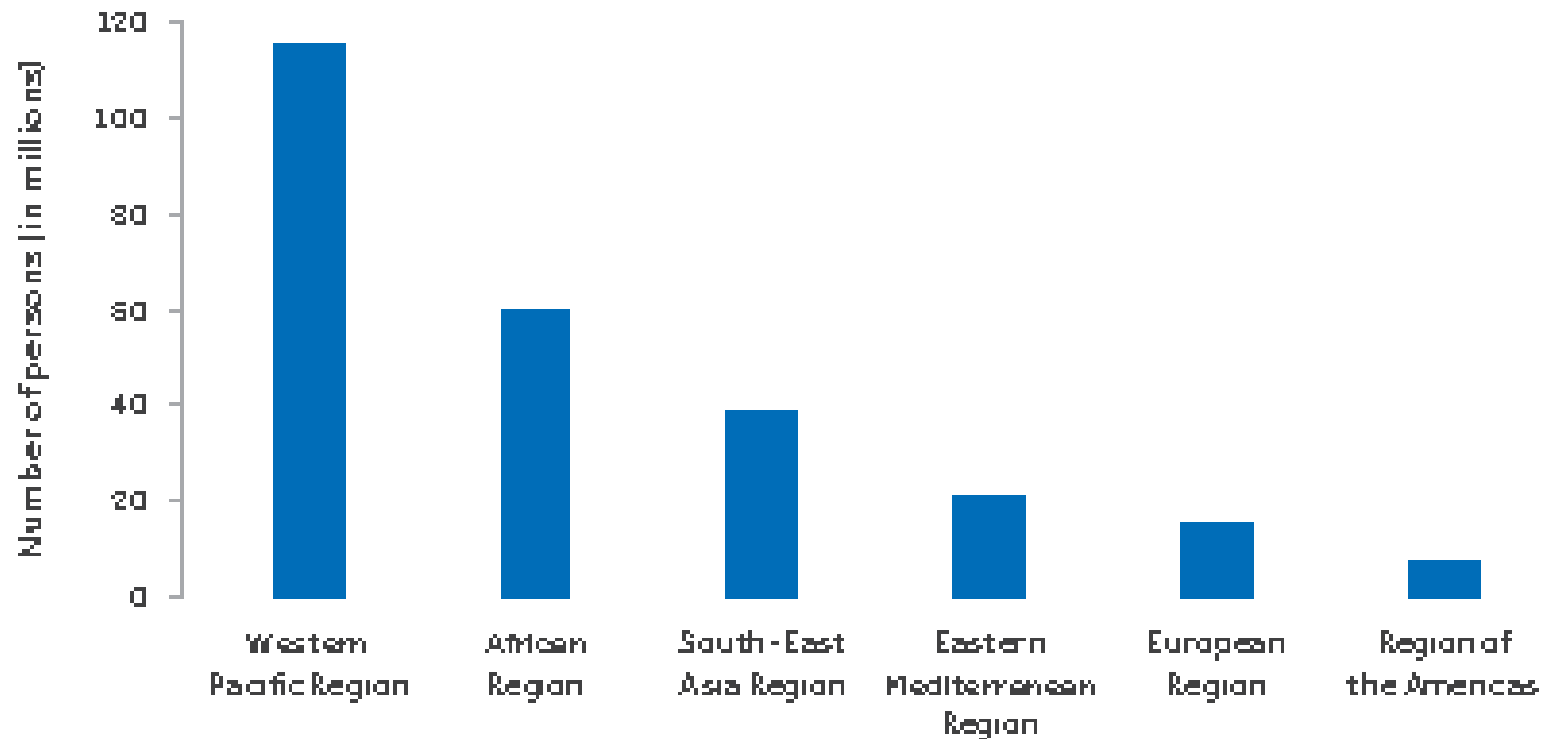
Source: CDC Refugee Health Profiles

# VIRAL HEPATITIS B IN THE WORLD



<https://www.who.int/hepatitis/news-events/global-hepatitis-report2017-infographic/en/>

# HBV prevalence by region, 2015



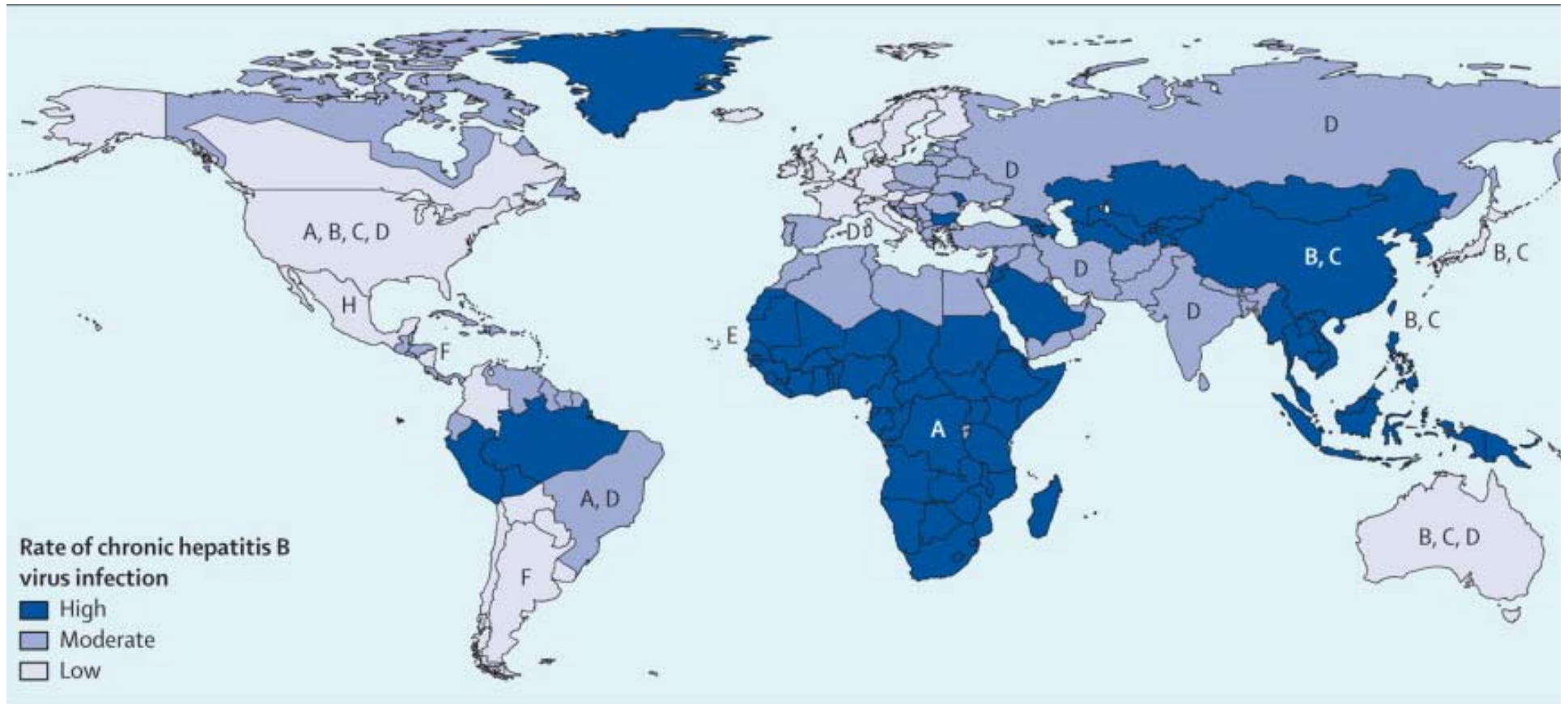
<https://apps.who.int/iris/bitstream/handle/10665/255016/9789241565455-eng.pdf?sequence=1>

# Hepatitis B Background Data

- ~ 30% people world-wide have evidence of current or past infection
- ~65 million women of childbearing age are infected with HBV
- 2015, ~884,400 deaths from HBV, cirrhosis>HCC



# Distribution of Hepatitis B Genotypes



## The Lancet, 2014



The Mae La Refugee Camp.  
Photo credit, Karen News

# Definitions

- **Hepatitis B:**
  - Double-stranded DNA virus transmitted either horizontally (via blood, unprotected sex) or vertically
- **Hepatitis B Infection:**
  - +HBsAg
- **Chronic Hepatitis B Infection:**
  - +HBsAg >6 months
- **Vaccine-derived protection from Hep B:**
  - -HBsAg, -HBcAb, +HBsAb
- **Cleared Hep B infection**
  - -HBsAg, +HBcAb, +HBsAb



IOM Mae La Refugee Camp Health data,  
refugees pending resettlement  
January-July 2018

- 7/153 (4.38%) Hep B s Ag positive
- UPT positive: 22/442 (4.74%) positive
- HIV 0/123 positive
- Hep C 0/9 positive

## Prevalence of Hep B in Refugee Children, by age and country of origin, 2006-2012—CO, PA, WA, MN

Condition	Bhutan	Burma via Thailand	Burma via Malaysia	DRC	Ethiopia	Iraq	Somalia
Hepatitis B surface antigen, no.	298	1952	64	44	511	308	2446
0–18 y, %	0.7	4.6	0.0	4.5	5.3	0.0	3.6
< 5 y, %	0.0	0.6	...	...	3.6	0.0	1.1
≥ 5 y, %	0.9	6.1	0.0	5.9	5.5	0.0	4.0

Yun K, et al. AJPH, 2016