Considerations for Nutrition and Growth in Newcomer Families

September 11, 2025

Minnesota Center of Excellence in Newcomer Health

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Acknowledgment

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Learning Objectives

- Illustrate the intersection of migration, culture, and nutrition
- Describe screening for growth parameters and micronutrient deficiencies
- Compose approaches to treating growth faltering and micronutrient deficiencies
- Practice how to approach conversations about nutrition with newcomer families

Today's Speakers

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Thomas Jefferson University

Wyss Wellness Center

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Harborview Medical Center

UN International Organization for Migration

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(Moderator)

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Agenda

- Introducing nutrition and newcomers
- Partnering in care with Rohingya people
- Growth and nutrition in children
- Growth and nutrition in adults
- Specific screening:
  - Lead screening
  - Vitamin D deficiency
  - Iron deficiency anemia
  - Pregnancy and lactation
- Wrap up
- Q&A

iStock: FatCamera

Food is love.

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Displacement influences nutrition in many ways.

Maternal Nutrition

Infant Nutrition & Growth

Toddler Nutrition & Growth

Childhood Nutrition & Growth

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Case

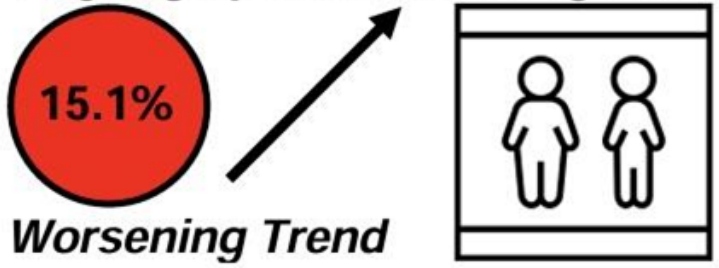
- Rohingya speaking family
- Father, Mohammed Jafar: 40 years old, healthy
- Mother, Asia: 32 years old, pregnant, establishing care in late second trimester
- Grandmother, Sajida: 60 years old
- Son, Mohammed Nur: 8 years old
- Daughter, Anesa: 18 months old

Partnering in Care with Rohingya People

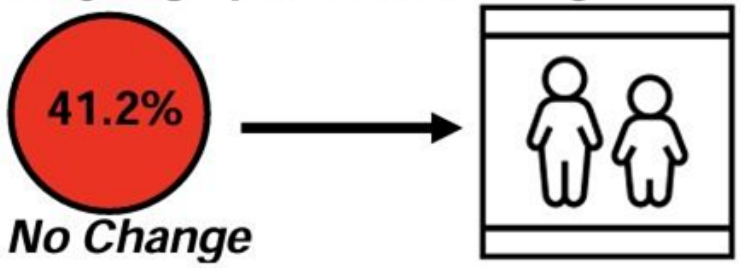
Tell me more about your family's meals?

Highlights of 2023 SENS in Cox's Bazar Rohingya Camps

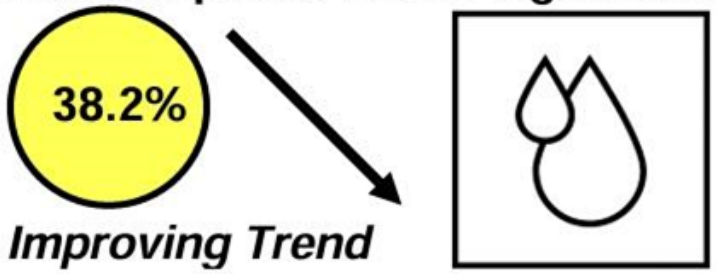
Under-5 Wasting (by WHZ)
Very high public health significance



Under-5 Stunting (by HAZ)
Very high public health significance

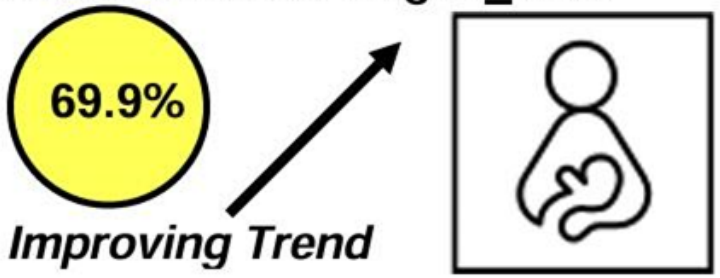


Under-5 Anemia
Medium public health significance

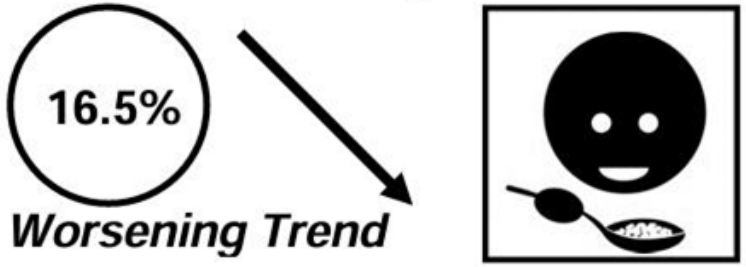


Women Anemia
Medium public health significance

Exclusive Breastfeeding for infants <6 months
Under UNHCR Target ≥75%



Minimum Acceptable Diet (MAD) for children 6-23 months
No established target



[UNHCR Bangladesh 2023 Standardized Expanded Nutrition Survey (SENS) Final Executive Summary (https://rohingyaresponse.org/wp-content/uploads/2024/01/2023_BAN_CXB-SENS-FINAL-EXEC-SUMMARY_4-JAN-2024.pdf)]

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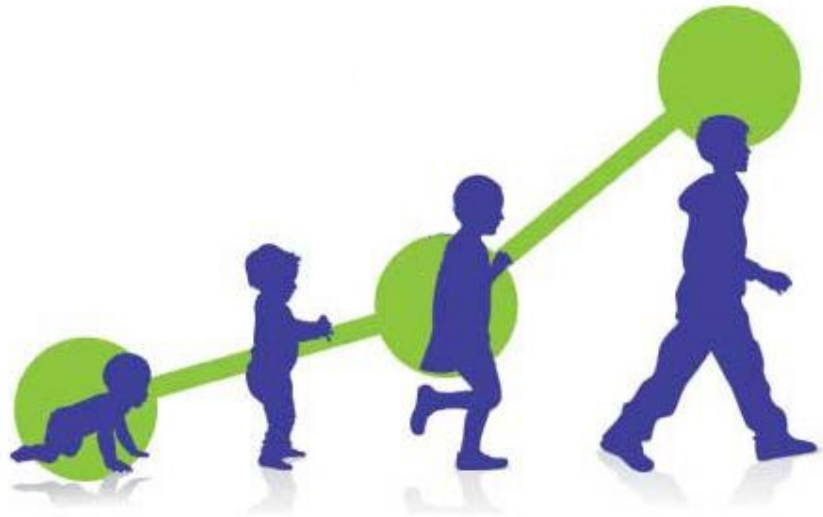
Malnutrition includes both undernutrition & overnutrition

Nutrition Status Category
Wasting/Severe & Moderate Acute Malnutrition
Healthy weight
Overweight
Obesity
Stunting/Chronic Malnutrition



0-2 years
Weight-for-length z-score

> 2 years
BMI z-score

Micronutrient deficiency may affect people regardless of anthropometric measurements

WHO, 2006

Anthropometrics for a < 2 year old (2017)

Primary Indicators	Mild Malnutrition	Moderate Malnutrition	Severe Malnutrition
Weight-for-length (z score)	-1 to -1.9 z score	-2 to -2.9 z score	≥ -3 z score
Length-for-age (z score)	No data	**Stunting** -2 to -2.9 z score (no data)	**Stunting** ≥ -3 z score
Deceleration in weight-for-length/length/OFC/ MUAC (z score)	Decline of 1 z score	Decline of 2 z score	Decline of 3 z score
OFC (z score)	-1 to -1.9 z score	-2 to -2.9 z score	≥ -3 z score

Anthropometrics for a 2-20 years old (2017)

Primary Indicators	Mild Malnutrition	Moderate Malnutrition	Severe Malnutrition
BMI-for-age (z score)	-1 to -1.9 z score	-2 to -2.9 z score	≥ -3 z score
Height-for-age (z score)	No data	**Stunting** -2 to -2.9 z score (no data)	**Stunting** ≥ -3 z score
Weight Loss	5.0 - 7.4% UBW	7.5 – 9.9% UBW	≥ 10% UBW
Deceleration in BMI/Height/MUAC (z score)	Decline of 1 z score	Decline of 2 z score	Decline of 3 z score

Case 1: Daughter, Anesa, 18 months

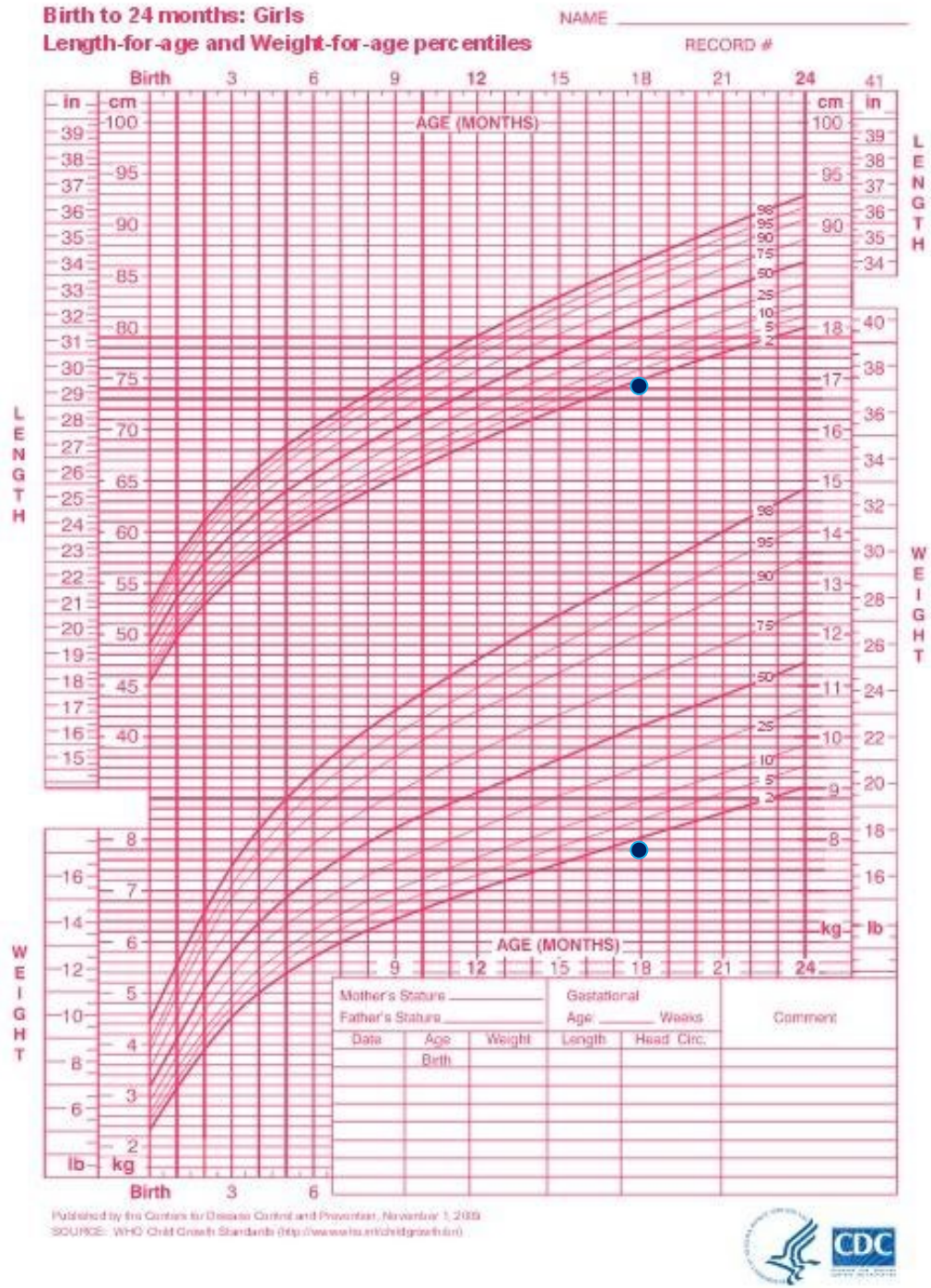
Anesa is an 18 month old, recently resettled with her Rohingya-speaking family from Malaysia

You peek at the growth curve before going in the room and notice:

-Length: 2nd %, Z – score = < -1

-Weight: 1st %, Z – score = <-2

-WFL: < 1st %, <-2



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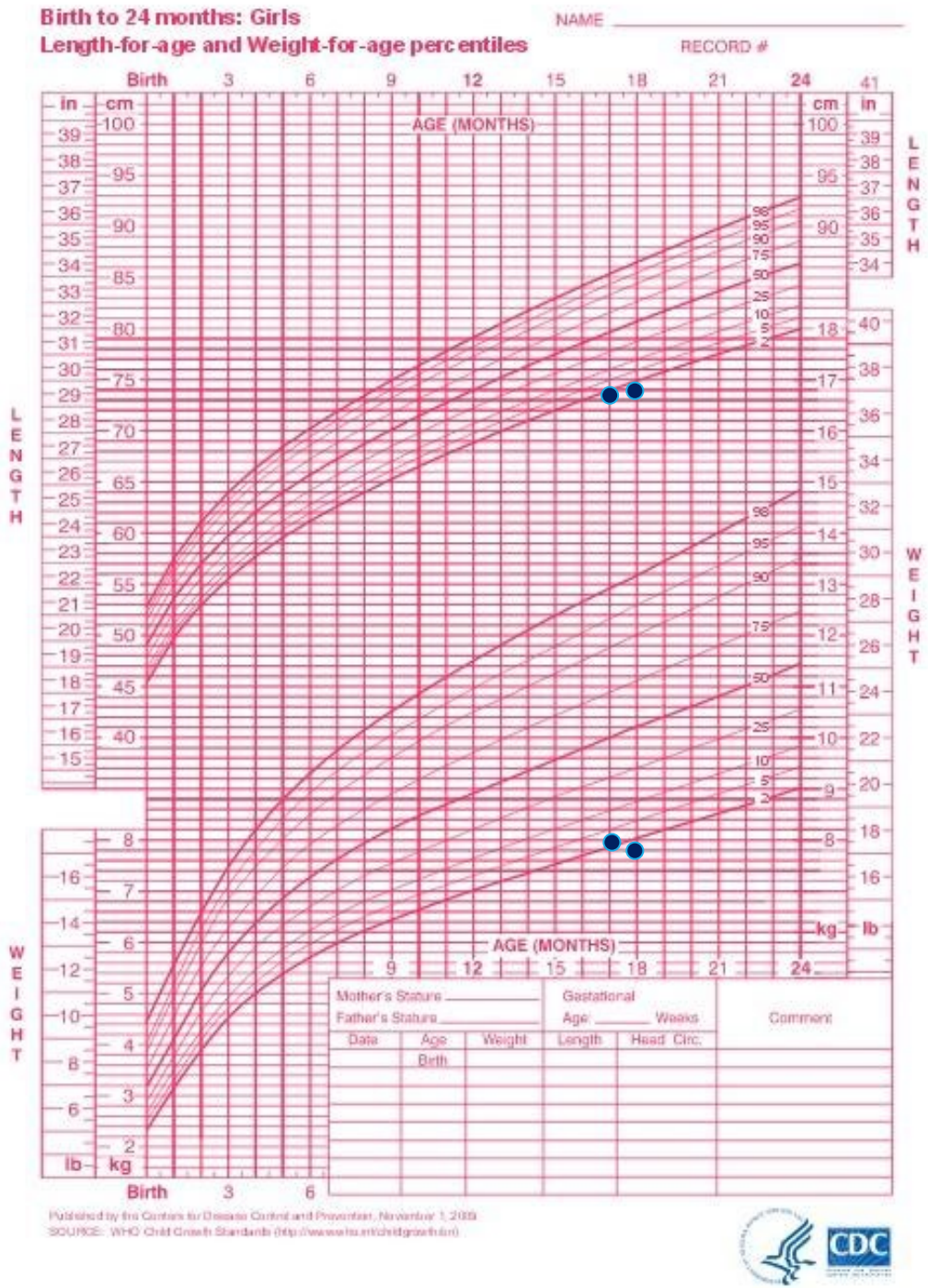

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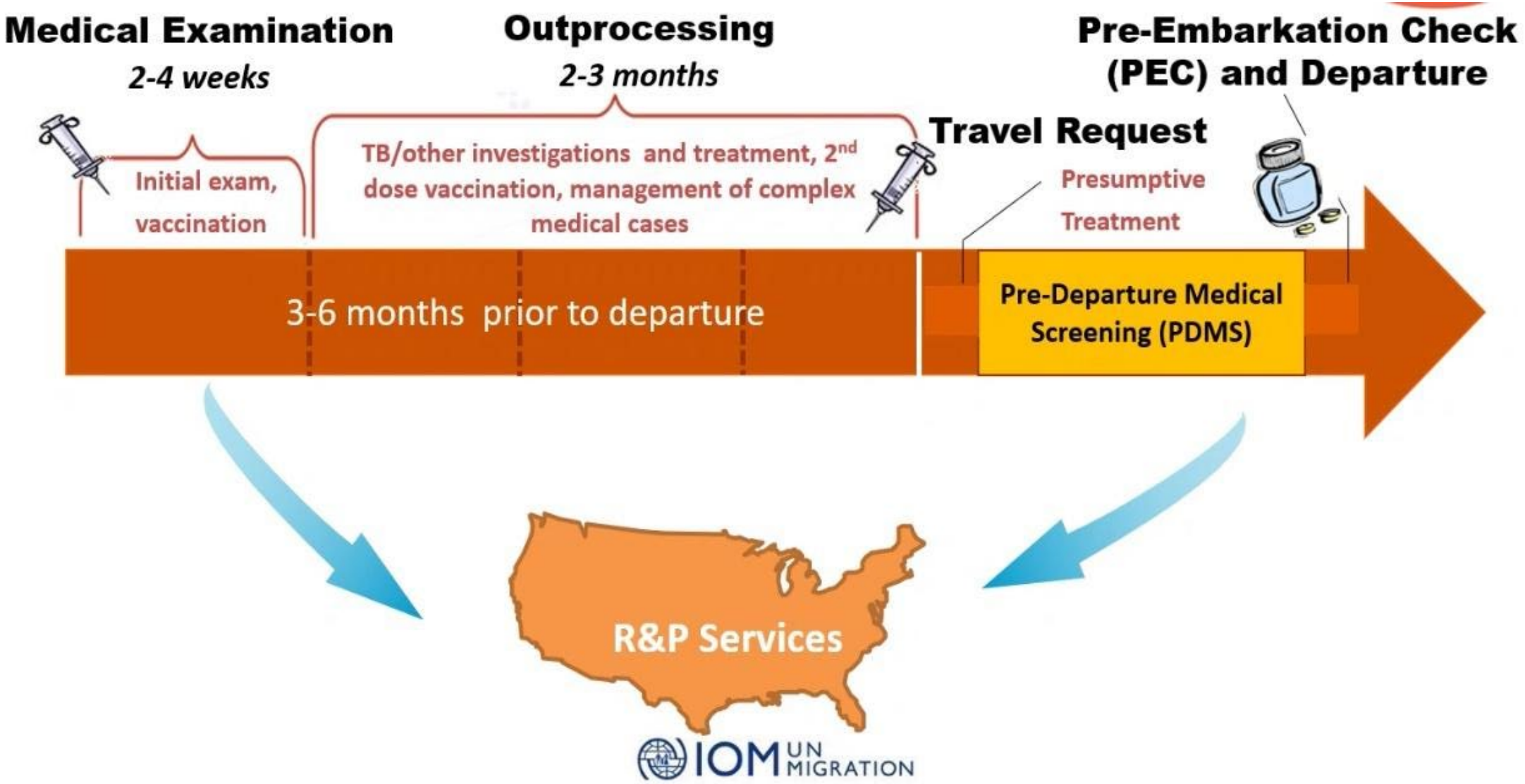
Overseas Medical Examination



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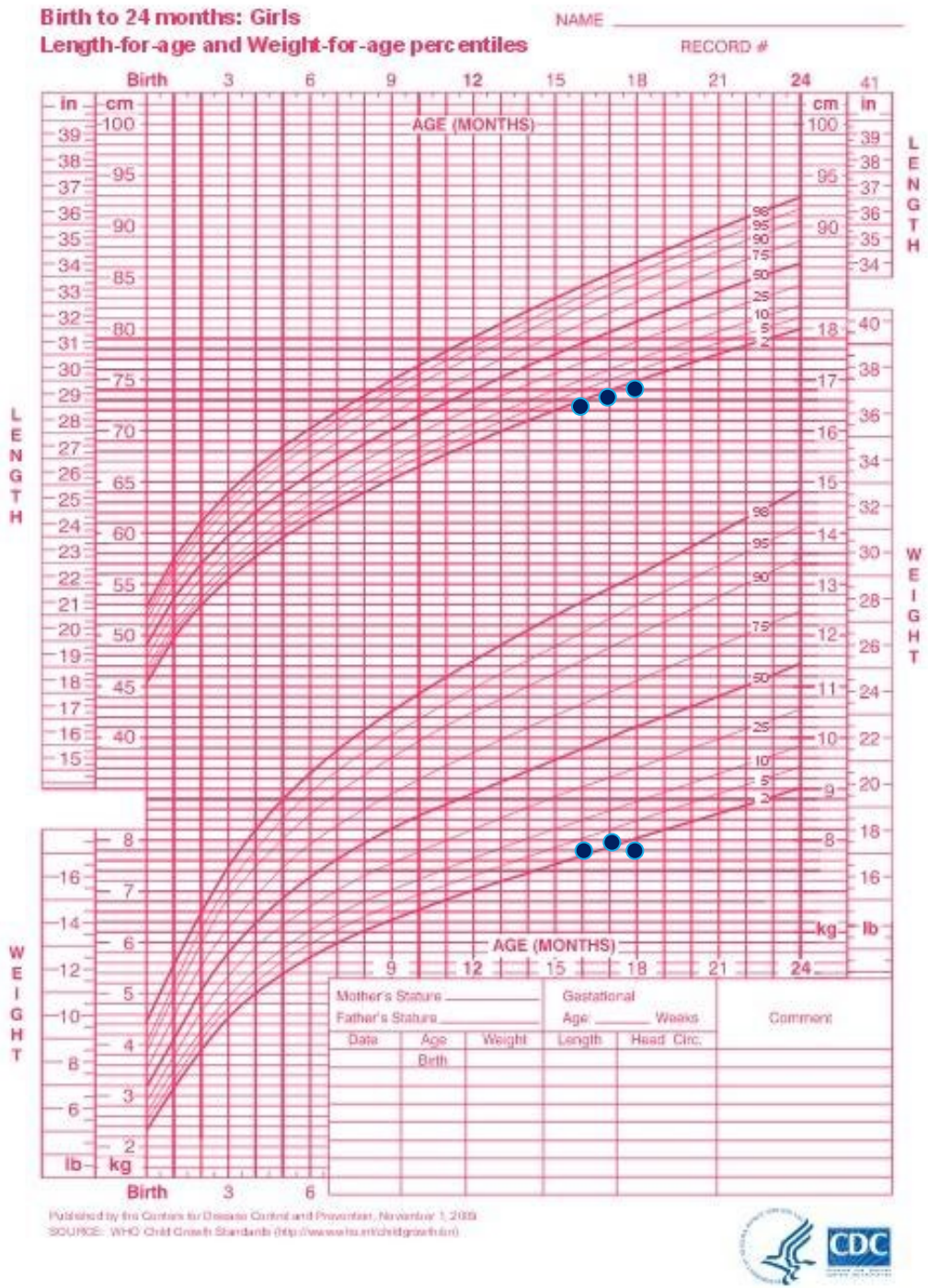

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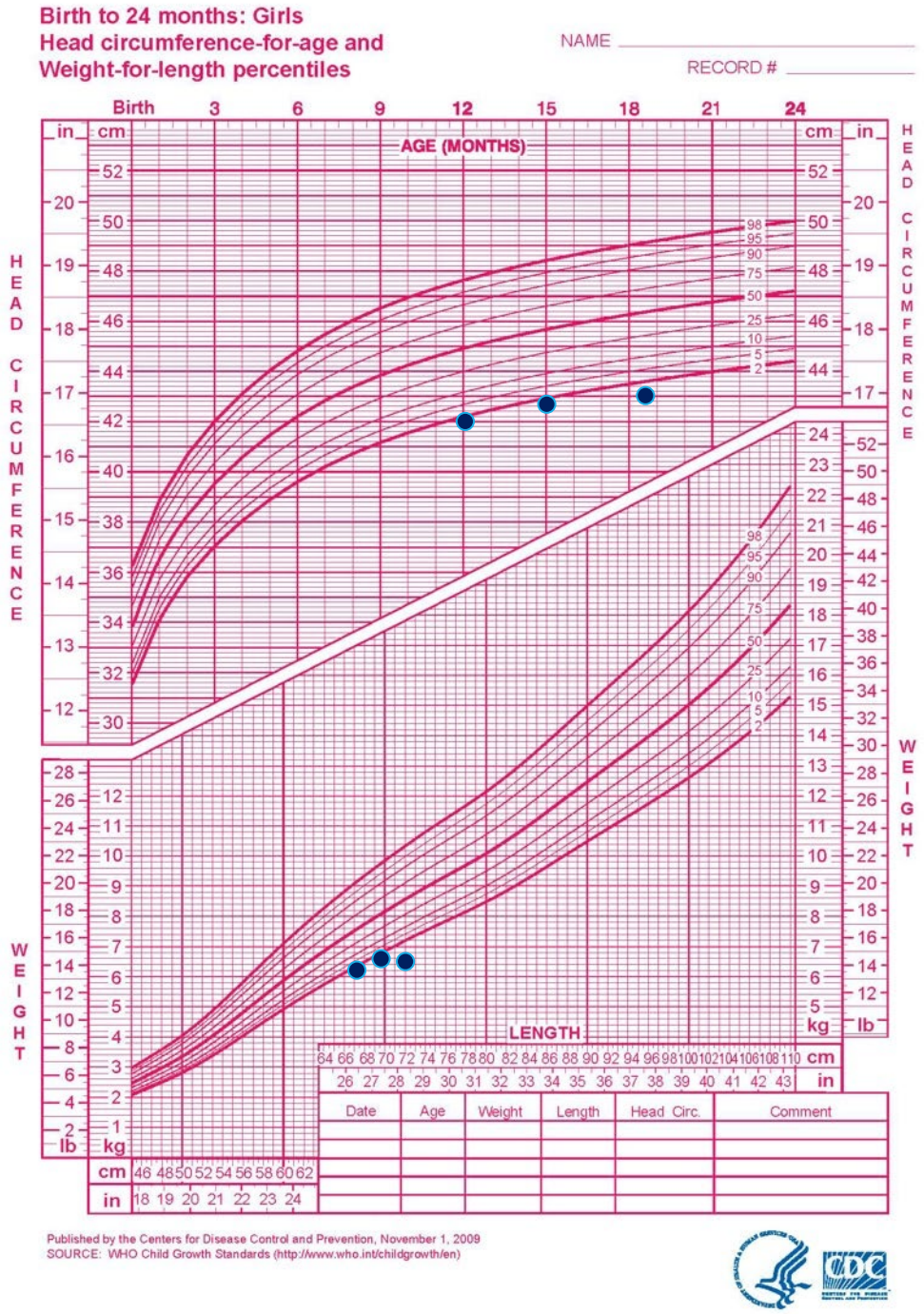

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Prevalence of Wasting among U.S.-bound Refugee Children at Overseas Exam by Intended U.S. State (≥ 500 Arrivals), EDN, October 1, 2023–September 30, 2024 (n= 28,804)*

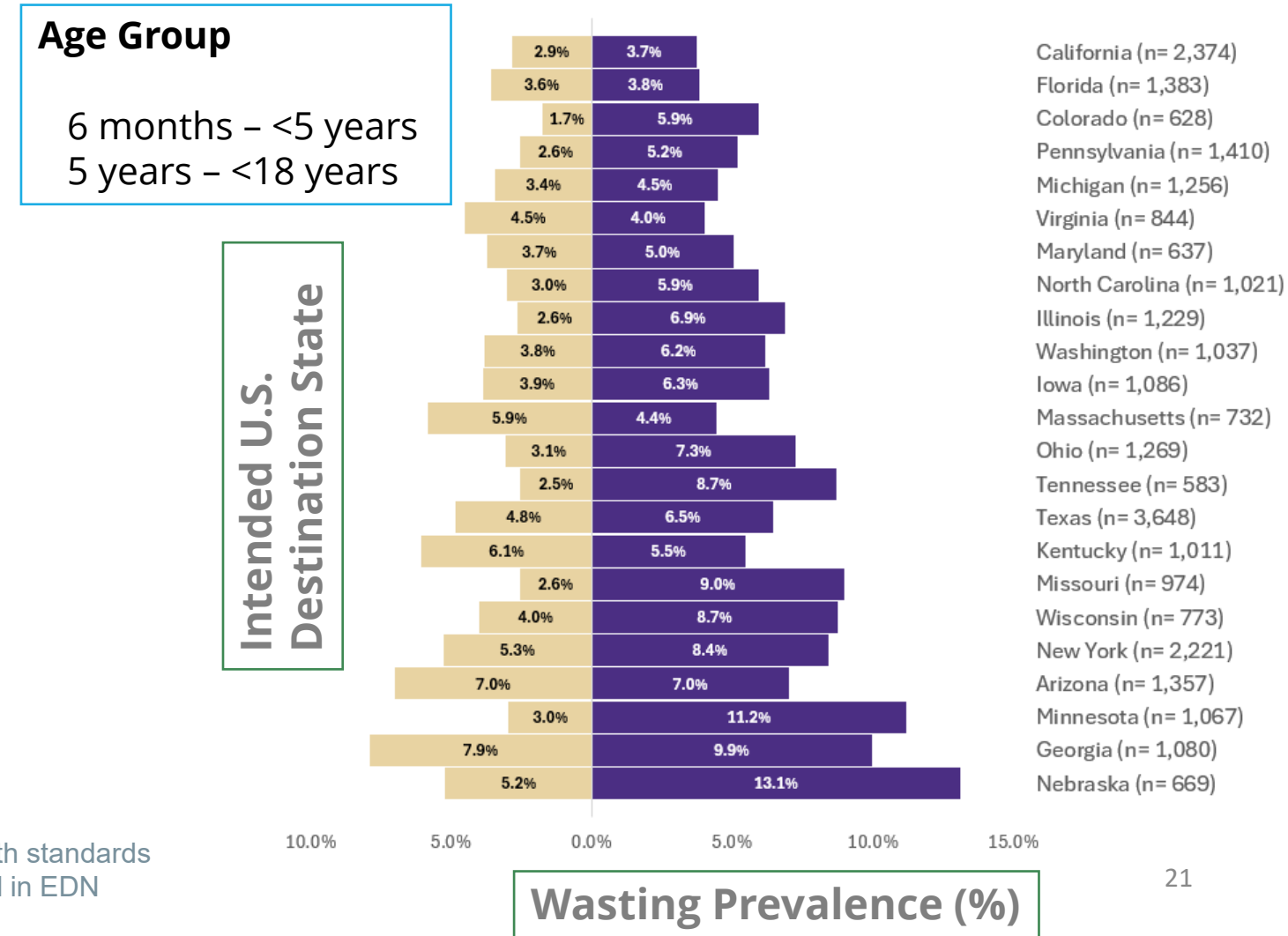
Wasting prevalence (range):

- 6 months – <5 years:

  1.7% – 7.9%

- 5 years – <18 years:

  3.7% – 13.1%



*247 children with z scores above or below 5 SD from the WHO growth standards median excluded, 9 children did not have a destination state recorded in EDN

Malnutrition can be a warning of an underlying condition

Inadequate nutrient intake	*e.g., lack of access to food, nutrient intake during pregnancy, mechanical problems (cleft palate)*
Inadequate appetite or inability to eat large amounts	*e.g., cerebral palsy, hydrocephalus, gastrointestinal problem*
Inadequate nutrient absorption or increased losses	*e.g., malabsorption (parasitic infection), gastroenteritis*
Increased nutrient requirements or ineffective metabolic utilization	*e.g., congenital heart disease, chronic infection (TB), chronic respiratory insufficiency (BPD)*

Developed with Dr. Tarissa Mitchell

Feeding as Critical Health Indicator

- Poor feeding is a major risk factor for morbidity and mortality for children with motor disabilities
  - Feeding ability
  - Lengthy and/or distressing mealtime
  - Growth disturbance and malnutrition

Sewell et al. Managing common symptoms of cerebral palsy in children. BMJ 2014; 349.

Growth Faltering

Failure to Thrive or Growth Faltering: Medical, Developmental/Behavioral, Nutritional, and Social Dimensions

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Failure to Thrive or Growth Faltering: Medical, Developmental/Behavioral, Nutritional, and Social Dimensions (https://doi.org/10.1542/pir.2020-001883)

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Growth & Nutrition History

- Dietary Recall (24 hours)
  - *Tell me what your child ate before they came today? And what about before that?*
- Anthropometric history
  - *Has your child ever been in a program for child nutrition?*
- Family history
- Pregnancy history: growth of infant and parental health
- Young children
  - *When were they weaned from breast feeding?*
  - *How long did they drink formula for?*
  - *Does she have any difficulty feeding? Sweating? Coughing?*
  - *Did they take or they taking vitamins/minerals/medications?*
- Food security (prior to immigration and current)

Case 1 Nutrition: 18-month-old Daughter

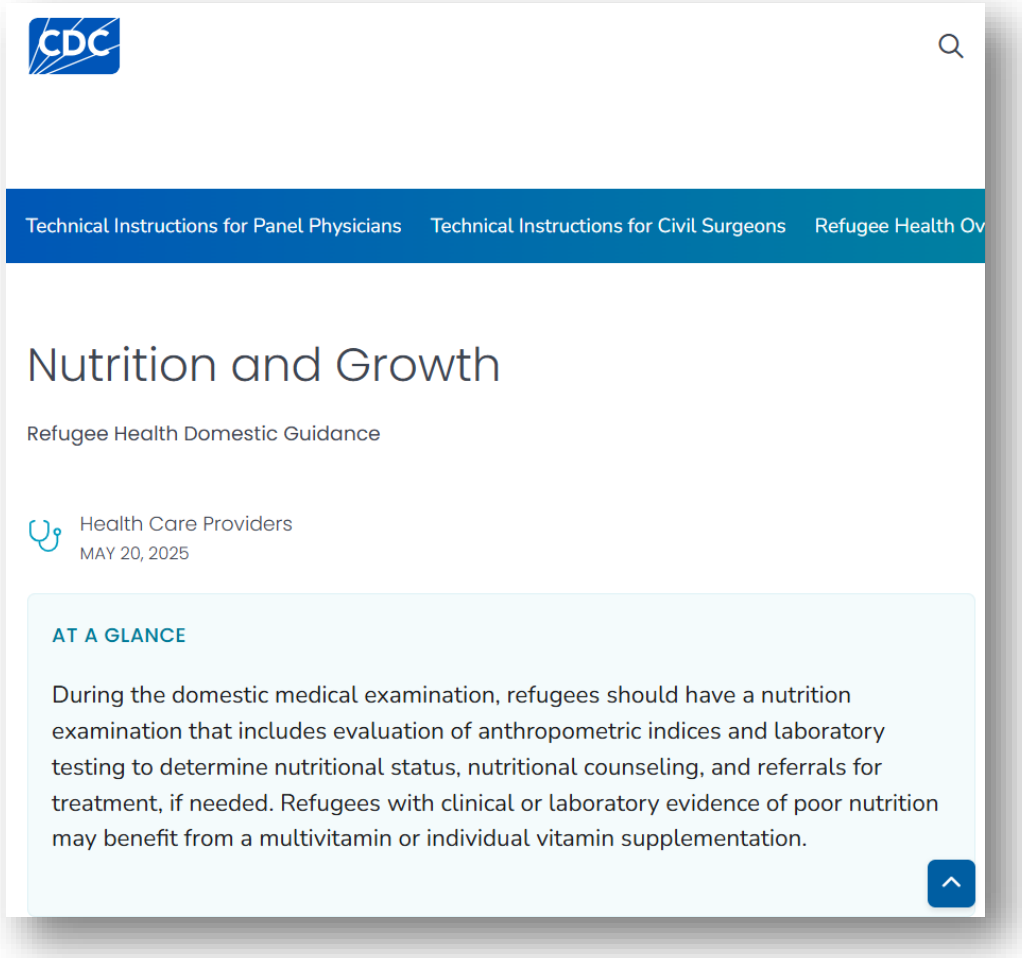
- Born in Malaysia
- Per family: born full term, no complications, Mom had good access to food throughout pregnancy & no illness, “normal birth weight”
- Med Hx: “thin” and different than siblings
- Starting to introduce foods: beef, cereal, eggs, banana, strawberry
- Breastfeeding ad lib
- No sweating with feeding and keeping up with siblings
- No PICA, leg pain, but does seem tired and has a poor appetite
- Current food is secure, has WIC and SNAP

What Next?

- Review of labs from PH screening
  - Hb 11.2, MCV 67, Lead 2
- Iron deficiency & Growth Labs
  - TSH
  - Vitamin D
  - ZPPH & Ferritin
  - Hgb electrophoresis
- Did not receive presumptive treatment overseas (or unknown)
  - Albendazole
- Nutrition Referral
- Check in 4-6 weeks

Domestic Medical Exam

- Funded by Office of Refugee Resettlement
- Required for refugees and some parolees within 90 days of arrival
- Identify priority health issues including infectious disease, orient new arrivals to U.S. health care system, connect with medical home and specialty care



CareRef (https://careref.web.health.state.mn.us/) is a tool that guides clinicians through conducting a routine post-arrival medical screening of a newly arrived refugee to the U.S. based on the current CDC Domestic Refugee Screening Guidance.

CDC: Nutrition and Growth Refugee Health Domestic Guidance (www.cdc.gov/immigrant-refugee-health/hcp/domestic-guidance/nutrition-and-growth.html)

updated May 2025

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CareRef

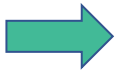
Customized Clinical Recommendations

Based on the following information about the refugee, the following guidelines are outlined below. The refugee is a 17 month old female who was born in AFGHANISTAN and departed out of AFGHANISTAN.
Please inquire about additional travel history, and check for travel-associated diseases and health alerts (opens new tab).
*Recommended lab tests are denoted by checked boxes

Best and Promising Practices

Consent and Confidentiality

General Laboratory Testing


☑ Perform complete blood count (opens new tab) with differential and platelets.
☑ Congenital and iodine-deficient hypothyroidism should be considered in all infants and children <6 years of age. Thyroid-stimulating hormone (TSH) and free T4 should be used when screening for thyroid disease.
☑ Clinicians can consider screening for hemoglobinopathies in individuals from high prevalence areas (opens new tab) .
Screening should include hemoglobin electrophoresis, particularly in individuals with anemia, red blood cell abnormalities, and/or morbidity suggestive of disease.

Refugee Domestic Benefits

- **Office of Refugee Resettlement (ORR)** provides benefits and services to assist resettlement and integration
- Goal to become **self-sufficient within 120 - 180 days**
- Also receive public benefits: asylees, SIVs, T-Visa, some parolees
- Benefits include
  - Medicaid
  - Refugee Cash Assistance up to 4 months*
  - SNAP, WIC
  - TANF or SSI if eligible
  - Refugee Social Services up to 5 years (if qualify)

Work Requirements Are Coming for Many People on SNAP.

Take Action to Keep Your Benefits!

Starting as soon as September 1, 2025, many adults will need to work 20 hours a week to keep their SNAP. These work rules do not apply to people who meet an exemption. If you are not exempt or working 20 hours a week, you can only get 3 months of SNAP in 3 years.

You DON'T have to meet SNAP work requirements if:

- You have a physical or mental health condition that reduces your ability to work;
- You are earning at least $217.50 a week before taxes;
- You have children under the age of 14;
- You are over age 65 or under age 18;
- You are getting a disability benefit like SSI or SSD;
- You are enrolled in school or training at least half time;
- You meet another exemption, like you are pregnant or receiving Unemployment Compensation

What if my health issue reduces my ability to work?

- Take the form on the back of this flyer to your doctor. Ask them to sign now.
- Even if you work now, it's a good idea to get this form signed to protect your SNAP if your hours change.
- Once work requirements start, you can submit this signed form to the County Assistance Office to keep your benefits.

Get this medical exemption form signed soon! If you don't, you could lose your SNAP as soon as the end of November.

We do not yet know all the rules or when exactly they will go into effect, but we do know that people with the medical form signed by their medical provider will be able to keep their SNAP.

July 2025

[Work Requirements Are Coming for Many People on SNAP. Take Action to Keep Your Benefits!](https://clsphila.org/highlights/work-requirements-for-snap-benefits/)
(https://clsphila.org/highlights/work-requirements-for-snap-benefits/)

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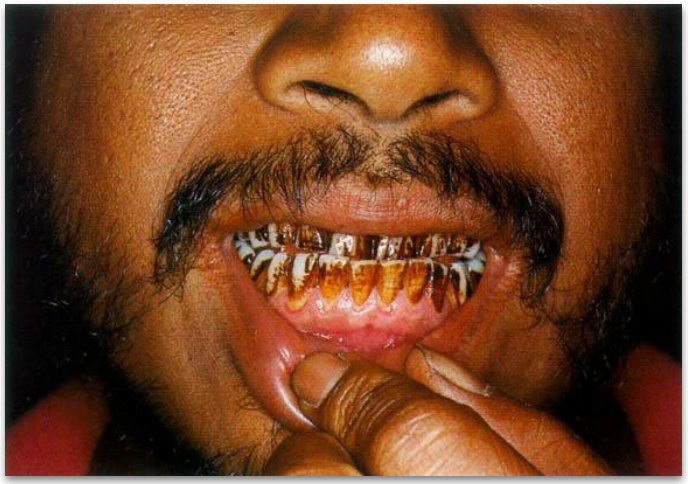
Nutrition evaluation of adult refugees

- Medical history (including surgeries, major infections)
- Food insecurity
- Review of systems
  - Weight loss
  - Chronic diarrhea
  - Dental problems
  - Fatigue, pica/pagophagia
  - Skin and nail changes
- Physical exam
  - Dentition and oral hygiene
  - Skin, hair, nails
  - Lymphadenopathy
  - Murmur, peripheral edema



Teeth staining from betel nut

Journal of the American Academy of Dermatology
Betel: Consumption and consequences
(https://doi.org/10.1016/S0190-9622(98)70543-2)

Nutrition evaluation of adult refugees (continued)

- Diet and social history
  - Typical daily nutrition and cooking
  - Ability to eat independently
  - Significant medical conditions affecting eating
  - Sunlight exposure
  - GI symptoms
  - Limitations in diet (access, culture, religion)
- Social Determinants of Health screening (SDOH)

Case 2: Father, Mohammed Jafar, 40 years old

- No known medical problems
- BMI 20
- Chews betel nut and smokes tobacco daily
- Family history unknown

Routine refugee intake labs including CBC ordered

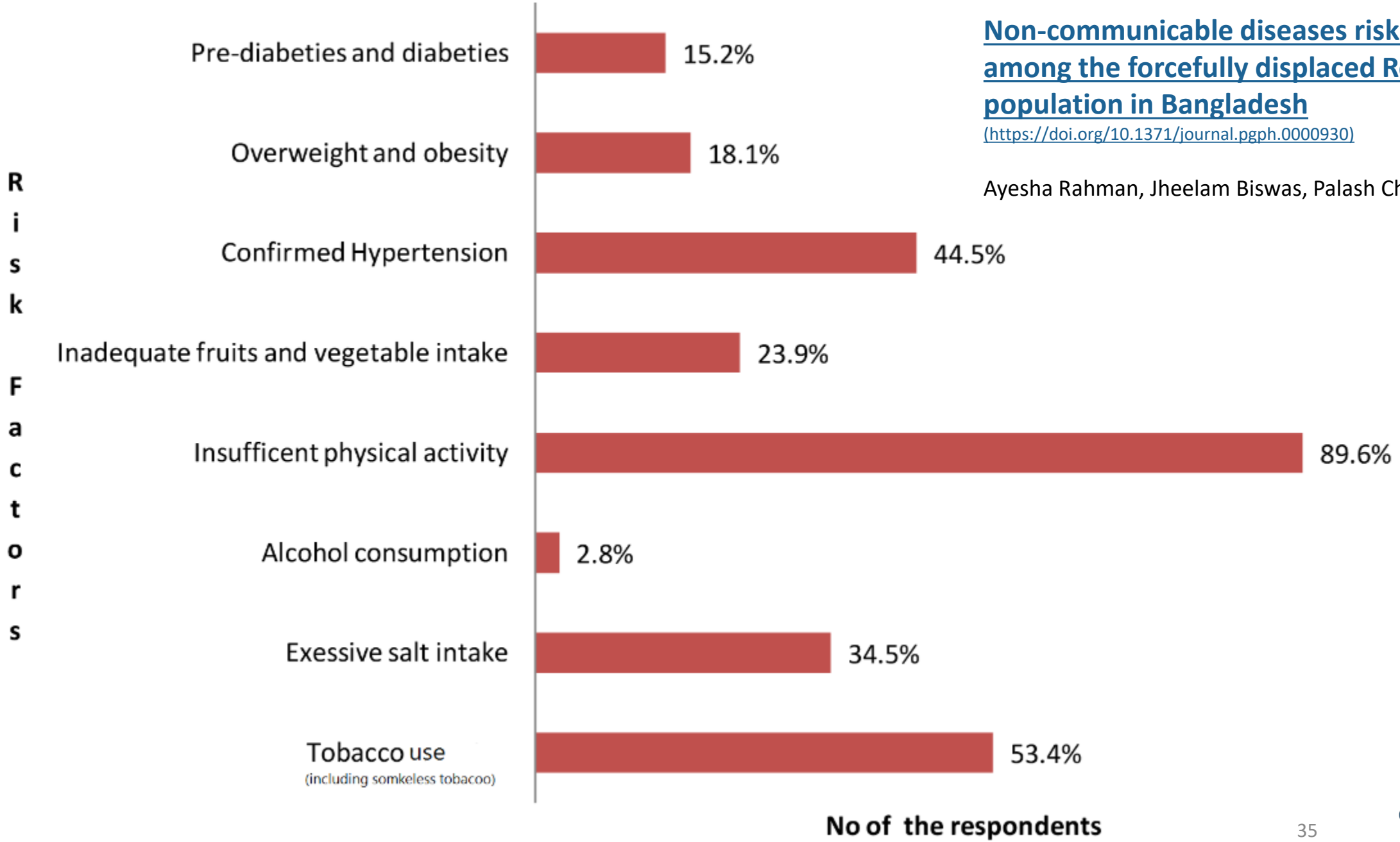
BP 135/90

Additional lab testing?

Non-communicable diseases risk factors among the forcefully displaced Rohingya population in Bangladesh

(https://doi.org/10.1371/journal.pgph.0000930)

Ayesha Rahman, Jheelam Biswas, Palash Chandra Banik



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Overnutrition and metabolic screening

- Certain newcomer populations are disproportionately affected by chronic disease
- Diabetes screening
  - Test: **Hemoglobin A1c**, random blood sugar, fasting blood sugar
  - Recommended for:
    - 35-70 years old if overweight/obese
    - Any age if overweight/obese with risk factors
- Cardiovascular disease screening
  - Test: **Non-fasting lipid panel**
  - Recommended for:
    - 40-75 years old with cardiovascular risk factors (e.g., hypertension, smoking)

Case 3: Grandmother, Sajida, 60 years old

- BMI 25
- Complains of **fatigue** and **diffuse body pain**, **epigastric pain/burning**
- Routine refugee intake labs
  - Normal hemoglobin
  - Positive quantiferon
- Reports **weight loss**
- Has never seen a dentist
- Wears traditional clothing and hijab

Next steps in evaluation?

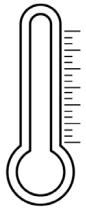
AgeInternational: In pictures: a space for older Rohingya refugees
(www.ageinternational.org.uk/news-stories/features/rohingya-age-friendly-spaces/)

Unintentional weight loss in elderly: differential

GI disease

Endocrine

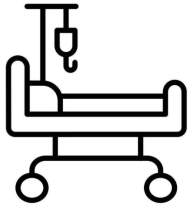
Depression



Infection

Medication

Food insecurity



Malignancy

Dental

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Case 3 Evaluation: Grandmother, Sajida, 60 years old

- BMI 25
- Complains of **fatigue** and **diffuse body pain**, **epigastric pain/burning**
- Routine refugee intake labs
  - Normal hemoglobin
  - Positive quantiferon
- Reports **weight loss**
- Has never seen a dentist

EVALUATION

Lipid panel, A1c, CMP, TSH
Vitamin D
Consider B12
CXR
H pylori testing
Dentist
Assess mood
Cancer screening

Case 4: Mother, Asia, 32 years old, pregnant

- Establishing care in late second trimester
- Ran out of prenatal vitamin while in transit
- G3P2002
- C/o fatigue, PICA, mild exercise intolerance, and RLS
- Routine prenatal labs
  - CBC - hemoglobin electrophoresis
  - Gestational diabetes screening negative

Additional nutrition labs?

Lab Results

- Hemoglobin - **9.0** (MCV 68)
- Lead - **5.0**
- 25-hydroxyvitamin D level - **12**

Iron deficiency anemia

- Symptoms
  - Fatigue, exercise intolerance/dyspnea, racing heart
  - Pica
  - Pale skin and conjunctiva; hair loss
  - Restless leg syndrome (RLS)
  - Irritability, mood changes, headache
- Exam findings
  - Murmur
  - Tachycardia
  - Pale skin and conjunctiva
  - Nail changes
  - Hair thinning

Conjunctival pallor
(J Gen Int Med)

Koilonychia
(dermnet.nz)

Anemia

TABLE 2—Prevalence of Selected Conditions Among Refugee Children Who Arrived in 4 US States From 2006 to 2012, by Age and Country of Origin

Condition	Bhutan	Burma via Thailand	Burma via Malaysia	DRC	Ethiopia	Iraq	Somalia
Anemia, no.	858	2355	236	202	578	517	2751
0–18 y, %	10.7	22.8	5.5	14.4	16.3	5.6	21.4
< 5 y, %	12.9	35.1	5.4	18.4	18.1	6.9	32.2
5 to < 12 y, %	9.1	21.1	2.6	16.2	14.3	4.2	19.8
≥ 12 y, %	10.9	15.6	9.0	11.1	16.7	6.3	19.2

Range (0-18): 5.5% to 22.8%

Range (<5): 5.4% to 35.1%

Burma via Thailand (<5): 35.1%

Burma via Malaysia (<5): 5.4%

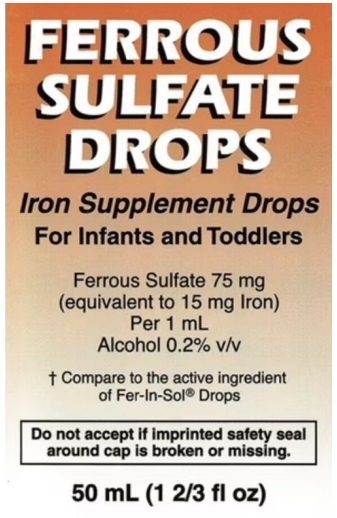
Yun K, et al. American Journal of Public Health. November 2015

Table 5. Iron Content in Common Foods

Food (serving size)	*Amount of elemental iron (mg)*
Soybeans: cooked (1/2 cup)	4.4
Lentils: cooked (1/2 cup)	3.3
Spinach: cooked/boiled, drained (1/2 cup)	3.2
Beef: cooked (3 oz)	2.5
Beans (lima, navy, kidney, pinto): cooked (1/2 cup)	1.8 to 2.2
Baby food brown rice cereal: dry (1 tbsp)	1.8
Baby food green beans (6 oz)	1.8
Baby food oatmeal cereal: dry (1 tbsp)	1.6
Turkey and chicken: dark meat (3 oz)	1.1 to 2.0
Baby food lamb or chicken (2.5 oz)	1.0 to 1.2
Baby food peas (3.4 oz)	0.9

Information from reference 2.

325mg ferrous sulfate
(65mg elemental iron)
drugs.com



75mg ferrous sulfate
(15mg elemental iron)
drugs.com

Wang, AFP, 2016

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Lead screening in pregnancy

ACOG - risk based screening

The American College of Obstetricians and Gynecologists
WOMEN'S HEALTH CARE PHYSICIANS

COMMITTEE OPINION

Number 533 • August 2012 *(Reaffirmed 2016)*

Box 1. Risk Factors for Lead Exposure in Pregnant and Lactating Women

- Recent emigration from or residency in areas where ambient lead contamination is high—women from countries where leaded gasoline is still being used (or was recently phased out) or where industrial emissions are not well controlled.
- Living near a point source of lead—examples include lead mines, smelters, or battery recycling plants (even if the establishment is closed).
- Working with lead or living with someone who does—women who work in or who have family members who work in an industry that uses lead (eg, lead production, battery manufacturing, paint manufacturing, ship building, ammunition production, or plastic manufacturing).
- Using lead-glazed ceramic pottery—women who cook, store, or serve food in lead-glazed ceramic pottery made in a traditional process and usually imported by individuals outside the normal commercial channels.
- Eating nonfood substances (pica)—women who eat or mouth nonfood items that may be contaminated with lead, such as soil or lead-glazed ceramic pottery.
- Using alternative or complementary substances, herbs, or therapies—women who use imported home remedies or certain therapeutic herbs traditionally used by East Indian, Indian, Middle Eastern, West Asian, and Hispanic cultures that may be contaminated with lead.
- Using imported cosmetics or certain food products—women who use imported cosmetics, such as kohl or surma or certain imported foods or spices that may be contaminated with lead.

Lead toxicity in pregnancy

- Lead readily crosses placenta as early as first trimester
- Elevated lead levels in pregnancy are associated with gestational hypertension, spontaneous abortion, low birth weight, and impaired neurodevelopment (ACOG)

Lead Testing

For pregnant/lactating refugees:

- Elevated capillary screening results should be confirmed with blood drawn by venipuncture.
- All newly arrived pregnant or breastfeeding refugees should be prescribed a prenatal or multivitamin with adequate iron and calcium.
- Follow-up blood lead testing is recommended for those whose blood lead level (BLL) is ≥5 µg/dL at initial screening (see Table 1 in the ACOG Committee Opinion on Lead Screening during Pregnancy and Lactation (opens new tab)).
- If pregnant and BLL is ≥5 µg/dL, consider a referral to a local provider with expertise in high-risk lead exposure or consult a high-risk obstetric provider for treatment and management.
- See Refugee Health Domestic Guidance: Lead (opens new tab) for complete screening guidance.

Lead screening for refugees

Table 1: Screening recommendations for all newly arrived refugee infants, children, adolescents, and pregnant and lactating women and girls

Recommended Screening Measures	Population
Initial lead exposure screening with blood test	• All refugee infants and children ≤ 16 years of age • Refugee adolescents > 16 years of age if there is a high index of suspicion, or clinical signs/symptoms of lead exposure • All pregnant and lactating women and girls*

Lead based eye makeup
European Journal of Pediatrics

Aluminum cookpot
boston.gov

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CDPHE

New Arrival Health Overview:

BURMA(MYANMAR)

Domestic Medical Exam Data from 7 Partners of the Colorado Center of Excellence in Newcomer Health Network* for newcomer arrivals during federal fiscal year (FFY) 2013-2023.

*www.ColoradoNewcomerHealth.org

ARRIVALS BY IMMIGRATION STATUS

Newcomers from Burma (Myanmar) included many visa groups such as **REFUGEES, ASYLEES,** and **UNACCOMPANIED REFUGEE MINORS** (URMs). The majority were classified as refugees.

98.8%
Refugees

ARRIVALS BY AGE AND SEX AT BIRTH

The largest arrival age group to the US is **18** to **44** year olds, representing **44.7%**. Arrivals of unknown age represented **5.0%** (not displayed).

47.2% Female

52.7% Male

NUMBER OF PEOPLE ARRIVING BY FEDERAL FISCAL YEAR

Resettlement peaked in **FFY 2015** with **2,391** arrivals, representing **18.7%** of the **12,814** total Burmese network arrivals.

The population of Burma (Myanmar) is comprised of over 135 ethnic groups.

HEALTH CONDITIONS IDENTIFIED DURING DOMESTIC MEDICAL EXAM

92.4%
of reported arrivals completed the Domestic Medical Exam

Commonly Reported Conditions
(positive screening)

Among Adults (6,812 Adults)

- Latent Tuberculosis **(23.5%)**
- Intestinal Parasites **(13.0%)**
- Hepatitis B **(9.3%)**

62.7% Tested negative for all conditions screened

Among Children (5,030 Children)

- Elevated Blood Lead Level **(29.0%)**
- Latent Tuberculosis **(6.3%)**
- Intestinal Parasites **(6.3%)**

70.5% Tested negative for all conditions screened

This project was supported by the CDC Centers for Excellence in Refugee Health (6 NU50CK000562-02-02). The findings and conclusions in this report are those of the contributors and do not necessarily represent the official position of the CDC.

Colorado COE in Newcomer Health Infographics (https://sites.google.com/state.co.us/refugeecoe/resources/infographics)

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New Arrival Health Overview: AFGHANISTAN

Domestic Medical Exam Data from 7 Partners of the Colorado Center of Excellence in Newcomer Health Network* for newcomer arrivals during federal fiscal year (FFY) 2013-2023.

*www.ColoradoNewcomerHealth.org

Last updated on: 10/16/24

ARRIVALS BY IMMIGRATION STATUS

Newcomers from Afghanistan included many visa groups such as **HUMANITARIAN PAROLEES, SPECIAL IMMIGRANT VISA HOLDERS (SIVs)**, and **REFUGEES.**

51.7% Humanitarian Parolees

34.9% SIVs

12.2% Refugees

ARRIVALS BY AGE AND SEX AT BIRTH

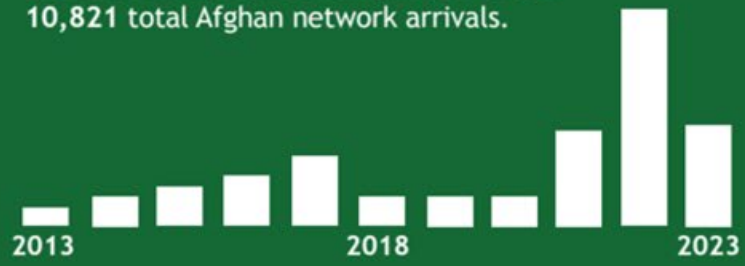
The largest arrival age group to the US was **18 to 44** year olds, representing **47.9%.**

46.0% Female

54.0% Male

NUMBER OF PEOPLE ARRIVING BY FEDERAL FISCAL YEAR

Resettlement peaked in **FFY 2022** with **5,356** arrivals, representing **49.5%** of the **10,821** total Afghan network arrivals.



Humanitarian Parolees are Afghan Nationals granted parole to the US based on the urgent need for rapid evacuation and relocation under Operation Allies Welcome between July 31, 2021 and September 30, 2023. (ORR Policy Letter 22-01)

HEALTH CONDITIONS IDENTIFIED DURING DOMESTIC MEDICAL EXAM

91.6% of reported arrivals completed the Domestic Medical Exam

Commonly Reported Conditions (positive screening)

Among Adults (5,310 Adults)

Latent Tuberculosis	Intestinal Parasites	Hepatitis B
(19.6%)	(5.4%)	(3.3%)

75.2% Tested negative for all conditions screened

Among Children (4,597 Children)

Elevated Blood Lead Level	Intestinal Parasites	Latent Tuberculosis
(43.1%)	(5.7%)	(3.7%)

62.8% Tested negative for all conditions screened

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Colorado COE in Newcomer Health Infographics (https://sites.google.com/state.co.us/refugeecoe/resources/infographics)

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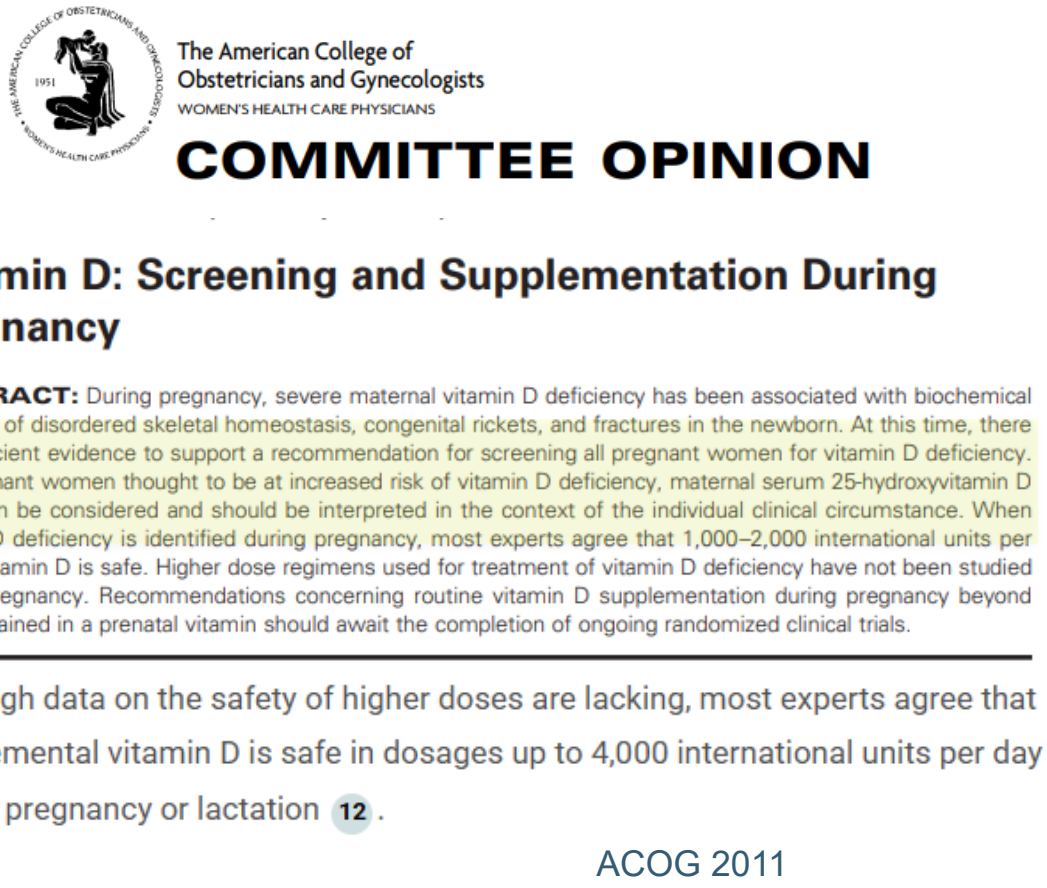
Vitamin D deficiency

- Screen those **at risk**
  - Exclusively breastfed children
  - **Limited sunlight exposure**
  - Nonambulatory
  - Elderly
  - Malabsorption
  - Kidney disease
  - **More melanated skin**
- Symptoms and findings
  - Majority asymptomatic
  - Low bone density due to demineralization



The American College of Obstetricians and Gynecologists
WOMEN'S HEALTH CARE PHYSICIANS

COMMITTEE OPINION

Vitamin D: Screening and Supplementation During Pregnancy

ABSTRACT: During pregnancy, severe maternal vitamin D deficiency has been associated with biochemical evidence of disordered skeletal homeostasis, congenital rickets, and fractures in the newborn. At this time, there is insufficient evidence to support a recommendation for screening all pregnant women for vitamin D deficiency. For pregnant women thought to be at increased risk of vitamin D deficiency, maternal serum 25-hydroxyvitamin D levels can be considered and should be interpreted in the context of the individual clinical circumstance. When vitamin D deficiency is identified during pregnancy, most experts agree that 1,000–2,000 international units per day of vitamin D is safe. Higher dose regimens used for treatment of vitamin D deficiency have not been studied during pregnancy. Recommendations concerning routine vitamin D supplementation during pregnancy beyond that contained in a prenatal vitamin should await the completion of ongoing randomized clinical trials.

Although data on the safety of higher doses are lacking, most experts agree that supplemental vitamin D is safe in dosages up to 4,000 international units per day during pregnancy or lactation [12].

ACOG 2011

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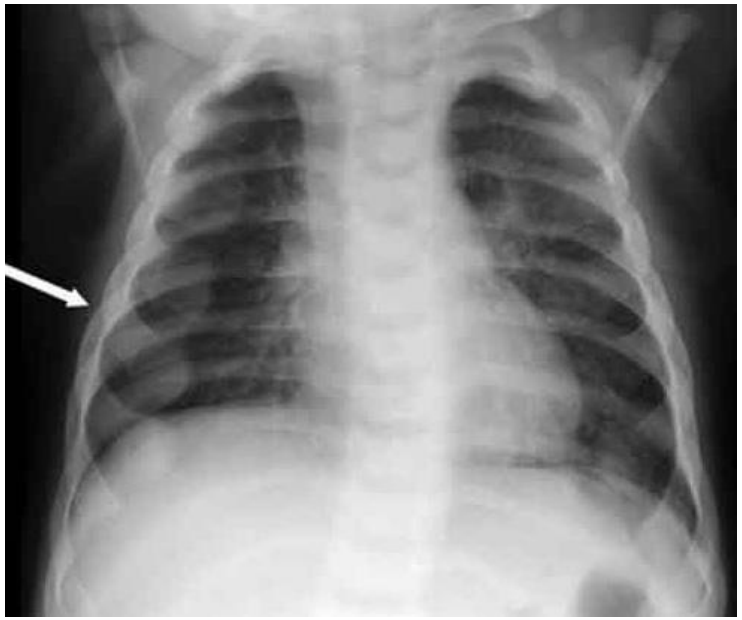
Severe, prolonged Vitamin D deficiency: osteomalacia (adults), rickets and osteomalacia (children)



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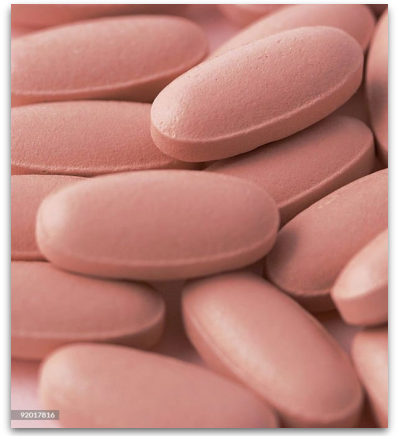
Case 4: Counseling for Asia, pregnant mom

- Iron deficiency anemia (Hgb 9.0)
  - **PO iron once daily alternating days** (reduce GI side effects)
  - Level typically improves around 6 weeks
- Vitamin D deficiency (Vit D 12)
  - Supplement with cholecalciferol (Vit D3) 1000-2000 IU
- Lead toxicity (Lead 5.0)
  - Identify source
  - **Encourage breastfeeding if BLL <40**
  - Treat iron deficiency anemia

Pregnancy and Lactation - nutrition summary

- Increase caloric intake (400 calories/day), discuss weight gain goal
- Prenatal vitamin with **folic acid**; continue while breastfeeding
- Screen **all** pregnant refugees for iron deficiency
- Screen **all** pregnant refugees for lead toxicity
- Consider Vitamin D testing



Most PNV contain
Folic acid
27mg iron
400 IU Vitamin D

Case 4 Follow-up

- Returns in 2 months
  - Weight gain of 1.5 lbs
  - Weight/length at -1.5
  - Good appetite and energy
  - Drinking whole milk from a bottle
  - Taking iron
- Iron deficiency & growth labs
  - TSH: normal
  - Vitamin D: mild deficiency
  - ZPPH & Ferritin: iron deficiency
  - Hgb electrophoresis: normal
- Developmental assessment & Birth to 3 referral
- Discussed eating together and modeling eating
- Consider additional labs now or at next visit: giardia; H. pylori

EVALUATION

CBC
ZPPH & Ferritin
TSH
Vitamin D
Hgb Electrophoresis
Giardia
H. Pylori

CareRef: Giardia

Giardia	Refugees are not presumptively treated for Giardia before departure. ☑ Testing is recommended for those with symptoms (opens new tab). Stool ova and parasite testing has low sensitivity. Stool antigen is the preferred test for identifying Giardia infections. The majority of Giardia infections are asymptomatic, and it is unknown whether treatment of asymptomatic infection is of any benefit to the infected host. Giardiasis is not associated with eosinophilia. Screening asymptomatic children younger than 5 years of age for Giardia stool antigen and treating those who test positive may be beneficial and is done by some experts in refugee children, although data supporting this approach are lacking.

Counseling on Feeding: Tell me more.

Can you tell me more about feeding or eating with your child?

What foods are important to you and your family?

What does your child eat at school?

How can I support you and your child with eating at school?

What questions do you have?

Wrap up: Food is love.

- Consider sensitivity of feeding
- Screen for food insecurity
  - SNAP
  - WIC
  - Maps to local food banks

Migration Health Institute: Halal Meals and Culturally Appropriate Welcome Kits (https://mhi.taskforce.org/promising-practice/halal-meals-and-culturally-appropriate-welcome-kits/)

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Thank you! Questions?

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Thank You!

Please remember to complete your evaluation

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