Nutrition and growth in immigrant children are affected by many things including:
- Country of origin
- Access to food and health care
- Food insecurities
- Language and cultural barriers
- Presence of infectious diseases
- Vitamin/nutritional deficiencies

Nutritional assessment as recommended by the CDC includes:
- History and physical
  - Dietary history
  - Physical exam including weight, height/length, head circumference, BMI
  - Assessment of malnutrition and overnutrition
- Laboratory testing
  - CBC
  - Population-specific labs (i.e. vit B12 deficiency in those lacking access to meats)

Common vitamin/nutritional deficiencies in immigrant children:
- Iron
- Vitamin A
- Vitamin D
- Zinc
- B12
- Iodine

Growth charts:
- The CDC recommends using the WHO growth charts, which can be found at [http://www.who.int/childgrowth/en/](http://www.who.int/childgrowth/en/)
- Catch-up growth can be delayed due to several barriers as mentioned above

Mental health issues in pediatric immigrants are very individualized and depend upon:
- Countries of origin
- Highest risk areas
  - disrupted health care systems
  - conflict zones
  - under-resourced
- Status entering country and reasons for seeking entrance
  - Immigrant: individuals or families who voluntarily leave their countries to enter U.S.
  - Refugee: individuals and families in danger or displaced from home countries because of civil, political or social unrest
  - Asylum-seeker: individuals or families already in the U.S. and seeking status as asylum-seeker through government embassies
- Accompanied/unaccompanied

Specific mental health issues:
- Isolation
  - Family/community/country/culture
  - Language
- Depression/anxiety
  - Stress/poverty
  - Resettlement
  - Food security
  - Living situation
  - Resources/employment
- Exposure to violence/PTSD
  - Home country/during journey
  - Domestic violence and neighborhood in U.S.
  - Exploitation/abuse

Support upon arrival
- Family members already here
- Defined place to go to
- Resources (financial, education, health, etc.)
MENTAL HEALTH AND DEVELOPMENTAL NEEDS – continued

Available tools for behavioral and mental health concerns
• Pediatric Symptom Checklist – long and short versions, bilingual, excellent for general screening (Bright Futures)
• Center for Epidemiological Studies CES-D and Center for Epidemiological Studies CES-DC for depression (Bright Futures)
• CRAFFT – specific for substance abuse (Bright Futures)
• SCARED - specific for anxiety (not available from Bright Futures)

Developmental assessment
• Done routinely as recommended by AAP 2006 guidelines - language development is expected to be the same for children in monolingual families as well as bilingual families
• Multilingual tools available
• Refer as soon as developmental concerns arise

Resources
• http://www.nctsn.org/content/working-unaccompanied-and-immigrant-minors

IMMUNIZATION EVALUATION

• At the first medical exam performed in the U.S., if the child cannot produce documentation of previous vaccination, vaccines should be provided
• Considerations include country of origin, record of vaccination documentation and age of child
• Vaccination records:
  – Vaccines administered outside the U.S. can be accepted if their schedule is similar to that recommended in the U.S.
  – Only written records should be accepted as evidence of vaccination
• Two accepted approaches:
  – Assume the patient is unvaccinated and immunize regardless of immunization record
  – If greater than six months of age, test antibody titers to vaccines reported. This can be considered for: measles, mumps, rubella, hepatitis A and B, and polio.

TUBERCULOSIS (TB) SCREENING

• Children immigrating from countries with a high burden of tuberculosis (> 40 cases per 100,000), close contact with someone with TB disease or symptoms of TB disease should have a Mantoux tuberculin skin test (TST) or interferon-gamma release assay (IGRA) for Mycobacterium tuberculosis
• Previous Bacillus Calmette–Guerin (BCG) vaccine may influence the results of the TST, however a history of vaccination with BCG should not influence interpretation of the TST.
• Repeat screening of immigrant children who are asymptomatic for TB and have had an approved pre-arrival screening is unnecessary.

• Additional considerations:
  – MMR is not routinely administered in most developing countries
  – Zoster and Human Papillomavirus (HPV) are not required for immigrant children

Tuberculosis (TB) Screening for Immigrant Children

- Place Mantoux Tuberculin skin test (TST) (preferred for children < five years of age) or draw blood for interferon-gamma release assay (IGRA) for Mycobacterium tuberculosis.
- Positive – No S&S of TB disease
  - Physical exam, medical history and chest radiograph
  - Chest radiograph concerning for TB Disease
  - Start treatment for Latent Tuberculosis Infection (LTBI)
- Negative with S&S of TB Disease
  - Physical exam, medical history, chest radiograph & further lab testing for TB disease
- Negative – no S&S of TB disease
  - Consider consultation with TB expert for infants, young children and for persons with immunodeficiency


Immigration Evaluation References

Mental Health and Developmental Needs References:
- Mental Health and Developmental Needs – continued
  - At the first medical exam performed in the U.S., if the child cannot produce documentation of previous vaccination, vaccines should be provided
  - Considerations include country of origin, record of vaccination documentation and age of child
  - Vaccination records:
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Primary care of the newly immigrated child – page 2 of 2

napnap.org/special-interest-groups/global-health-care-sig/