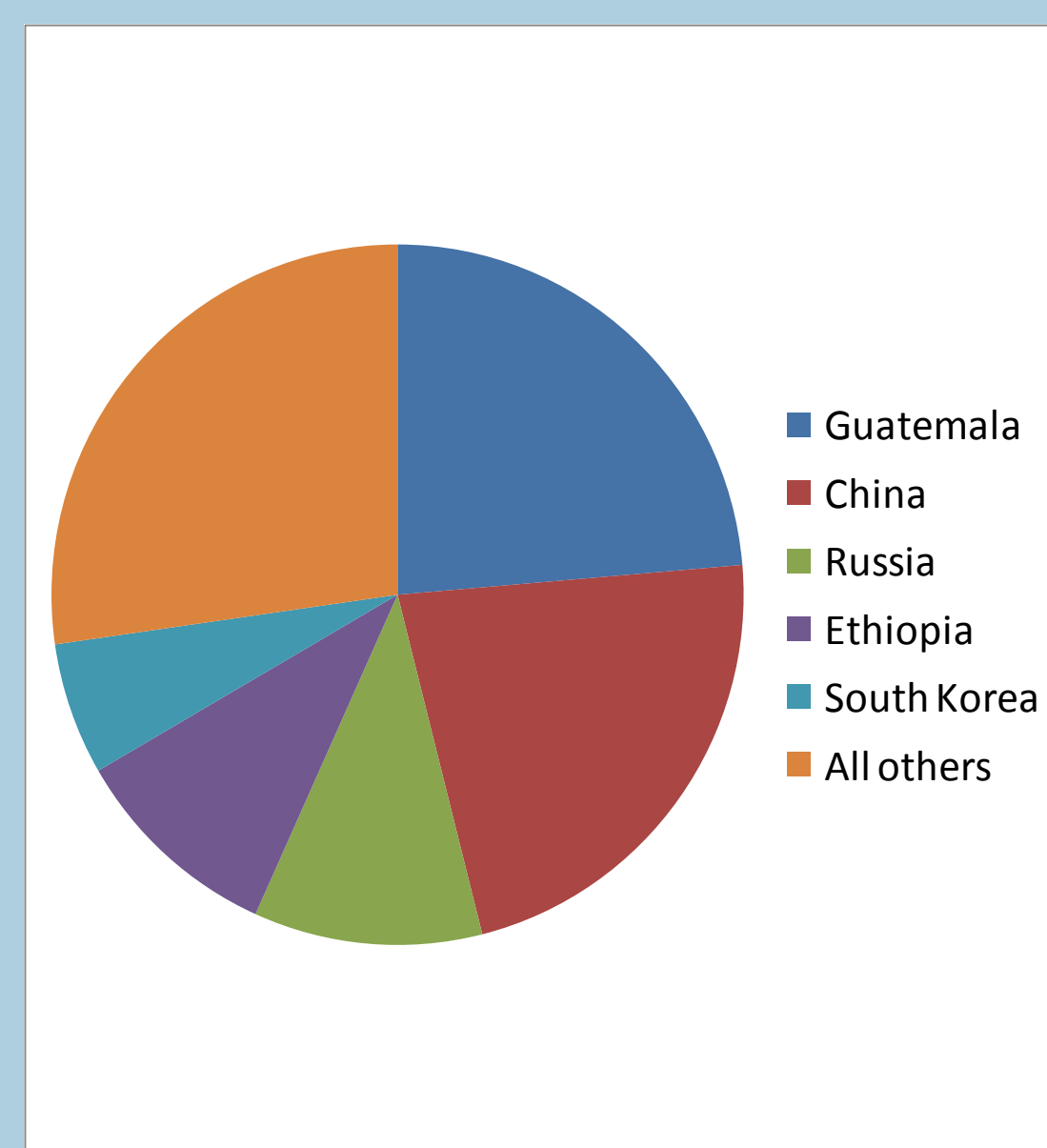


Background

- ❖ In 2008, over 17,000 foreign-born children were adopted by US families, with more than 215,000 being adopted since 1998.¹⁷
- ❖ Growth failure is almost universal in international adoptees and iron deficiency is common.^{7, 12}
- ❖ Rapid periods of growth experienced by international adoptees after adoption place them at greater risk for iron deficiency.⁶

Country of Origin 2008¹⁷



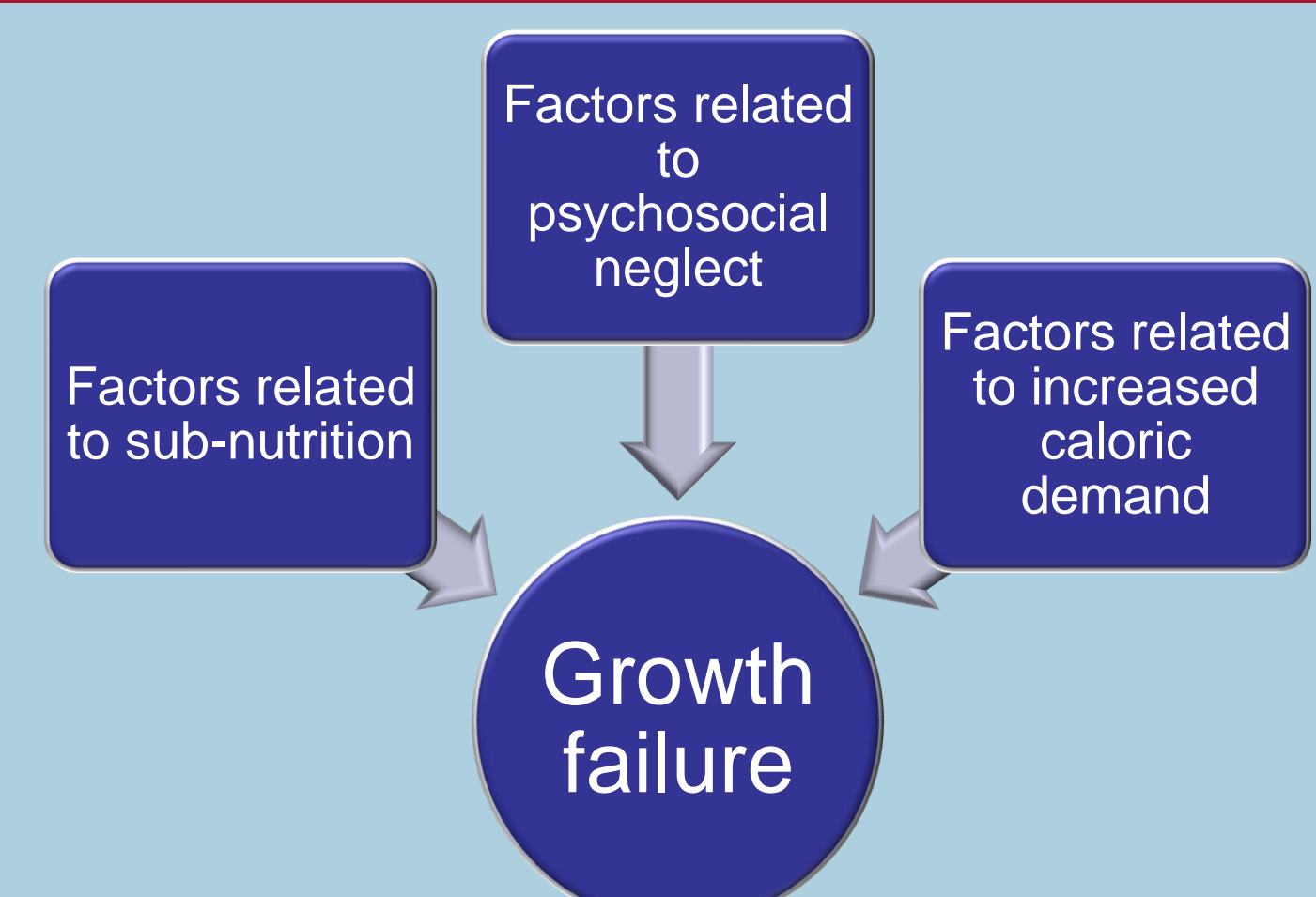
Common Health Problems^{4,7-8,12-16}

- ❖ Growth Failure
- ❖ Iron Deficiency
- ❖ Developmental Delay
- ❖ Gastrointestinal Disease
- ❖ Common Childhood Infectious Diseases

Purpose

- The purpose of this poster is to:
- ❖ Describe growth patterns commonly seen in internationally adopted children.
 - ❖ Discuss the importance of iron in regards to growth and development.
 - ❖ Provide clinical tips to optimize growth and iron in the internationally adopted child.

Growth Failure in the Internationally Adopted Child



Guatemalan adoptees¹³
 20% \geq 2 SD below the mean in weight; 16% \geq 2 SD below the mean in height; 17% \geq 2 SD below the mean in head circumference

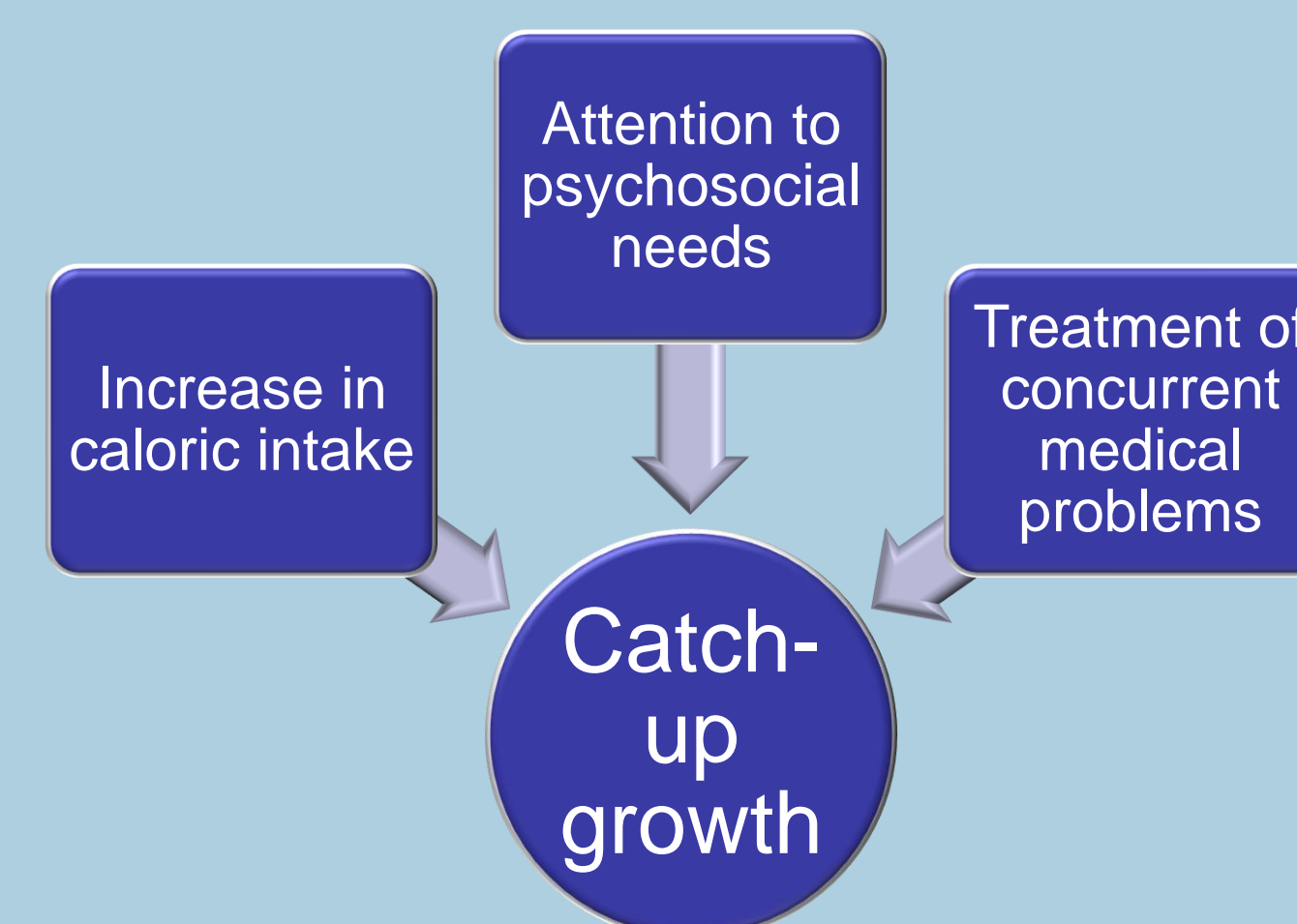
Russian and Eastern European adoptees^{8,16}
 44-51% \geq 2 standard deviations (SD) below the mean in weight; 34-68% \geq 2 SD below the mean in height; 38-49% \geq 2 SD below the mean in head circumference

Chinese adoptees¹⁴
 18% \geq 2 SD below the mean in weight; 39% \geq 2 SD below the mean in height; 24% \geq 2 SD below the mean in head circumference

Ethiopia and Eritrea¹⁵
 8% \geq 2 SD below the mean in weight; 12% \geq 2 SD below the mean in height; 6% \geq 2 SD below the mean in head circumference

Catch-up Growth

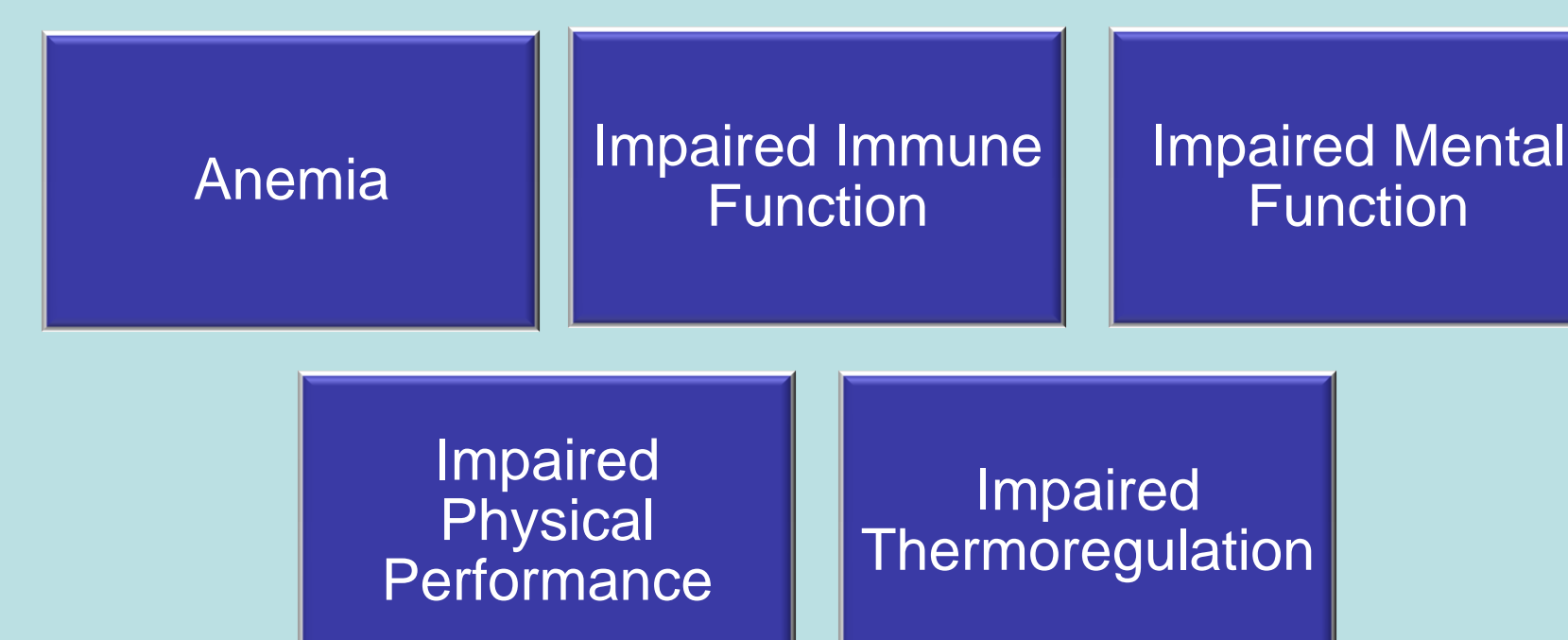
Many internationally adopted children experience large amounts of growth, called catch-up growth, in their first year after adoption.^{7,12,18}



Iron Deficiency and the Growing Child

- ❖ Iron deficiency is more common in individuals experiencing periods of rapid growth, which is noted in the internationally adopted child after adoption.^{6,19}
- ❖ Iron deficiency anemia has been reported in 30-35% of internationally adopted children at the initial health screen in the US.¹³⁻¹⁵

Health Problems Related to Iron Deficiency³



- ❖ Impaired mental function has been noted prior to the development of anemia in iron deficiency states.^{1-3,5,9-10}
- ❖ Anemia is thought to occur after iron has been fairly depleted, so basing a diagnosis of iron deficiency on the presence of anemia may be inaccurate.¹⁹

Assessment

- ❖ Accurate measurement and plotting of weight, height, and head circumference.
- ❖ Accurate evaluation of iron deficiency, not just anemia, at initial health screen and follow-up visits.^{6,19}
 - ❖ Serum Ferritin Concentration
 - ❖ Percent Transferrin Saturation
 - ❖ Hemoglobin
 - ❖ Mean Corpuscular Volume

Intervention Strategies

- ❖ Supplement nutrition when needed.
 - ❖ PediaSure
 - ❖ Toddler Formulas
 - ❖ High Calorie Infant Formulas
- ❖ Supplemental iron therapy if iron deficient.
- ❖ Discuss the importance of prompt and complete treatment of any other health conditions such as infectious diseases.
- ❖ Discuss the importance of developing a secure attachment and meeting physical and emotional needs promptly.^{7,12}



Follow-up

- ❖ Since catch-up growth can impact iron utilization in the body, consider re-evaluation for iron deficiency at follow-up visits.
- ❖ Continue to monitor for catch-up growth and if not observed, consider referrals for further evaluation.^{7,12}