ACT SHEET FOR POSITIVE NEWBORN SCREENING RESULT (FAE)
HEMOGLOBIN E TRAIT (Hb AE)

Disease Category: Hemoglobinopathy

Meaning of the Screening Result: Hemoglobin FAE pattern on newborn screen is highly suggestive of Hemoglobin E trait. However, IEF (the test used for screening) does not quantitate results. Without quantitation those newborns with A and E hemoglobins where the E hemoglobin is nearly as much as the A hemoglobin, could be at risk of a thalassemia.

YOU SHOULD TAKE THE FOLLOWING ACTIONS:

- Contact the family to inform them of the screening result and to offer education and counseling.
- Reassure the family that infants do not have clinical problems related to the carrier state for Hemoglobin E.
- Order confirmatory testing (hemoglobin electrophoresis).
- Encourage parents to seek genetic counseling and testing as indicated.
- Report findings to Nebraska Newborn Screening Program.

Pediatric specialists in hemoglobinopathies are available at Children’s Hospital (402) 955-3950 and UNMC/Nebraska Medical Center (402) 559-7257.

Condition Description: Individuals with Hemoglobin E trait are carriers of the gene for Hemoglobin E.

Clinical Expectations: Prognosis is for a normal life expectancy. Microcytosis may be noted. Peripheral blood smears may also show target cells. Carriers are at risk for having children affected with Hemoglobin E disease, Hemoglobin S-E disease or Hemoglobin E Beta thalassemia.

Confirmation of diagnosis: Diagnosis is confirmed by hemoglobin electrophoresis and parental or DNA studies as indicated. (However, if on confirmation a thalassemia or coexistent thalassemia is identified, it is important to refer these patients to pediatric hematology for further work-up, to determine clinical significance.)
Additional information:
• Acute and Chronic Complications - www.tdh.state.tx.us/newborn/sc_guide.htm
• Grady Comprehensive Sickle Cell Center Web Site - www.scinfo.org
• Management and Therapy of Sickle Cell Disease -
• Sickle Cell Disease Association - www.sicklecelldisease.org
• Hemoglobinopathy Podcasts http://feeds.feedburner.com/Pediatrics_bytes