

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

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.

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 is identified, it is important to refer these patients to pediatric hematology for further work-up, to determine clinical significance.)

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