

# 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 co-existent 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](http://www.tdh.state.tx.us/newborn/sc_guide.htm)
- Grady Comprehensive Sickle Cell Center Web Site - [www.scinfo.org](http://www.scinfo.org)
- Management and Therapy of Sickle Cell Disease - [www.nhlbi.nih.gov/health/prof/blood/sickle/index.htm](http://www.nhlbi.nih.gov/health/prof/blood/sickle/index.htm)
- Sickle Cell Disease Association - [www.sicklecelldisease.org](http://www.sicklecelldisease.org)
- Hemoglobinopathy Podcasts [http://feeds.feedburner.com/Pediatrics bytes](http://feeds.feedburner.com/Pediatricsbytes)

