KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT
NEWBORN SCREENING ACT SHEET

SCREEN FOR: HEMOGLOBINS F, A & S

CONDITION: SICKLE CELL CARRIER (TRAIT) (Hb AS)

DIFFERENTIAL DIAGNOSIS: The hemoglobins are listed in order (F>A>S) of the amount of hemoglobin present. This result is different than FS which is consistent with sickle cell anemia or FSA which is consistent with sickle beta-plus thalassemia.

METABOLIC DESCRIPTION: Generally benign genetic carrier state (trait) characterized by the presence of fetal hemoglobin (F) and hemoglobin A and S.

ACTION TO BE TAKEN:

- Contact the family to inform them of the screening result and offer education and reassurance that infants and young children do not have clinical problems related to the carrier state for hemoglobin S.
- Repeat screen or confirm result by alternate assay.
- Offer family members referral for hemoglobinopathy testing and genetic counseling.
- Report findings to newborn screening program.

CONFIRMATION OF DIAGNOSIS: Hemoglobin separation by electrophoresis, isoelectric focusing or HPLC showing FAS pattern. Family or DNA studies may be used to confirm genotype.

CLINICAL EXPECTATIONS: Infants are usually normal at birth. Prognosis is good, with a normal life expectancy. Carriers are at risk for having children affected by sickle cell disease.

REPORTING: Report diagnostic result to family and Kansas NBS program.

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DISCLAIMER: These standards and guidelines were adapted from the American College of Medical Genetics ACT sheets. They are designed primarily as an educational resource for physicians to help them provide quality medical services. Adherence to these standards and guidelines does not necessarily ensure a successful medical outcome. These standards and guidelines should not be considered inclusive of all proper procedures and tests or exclusive of other procedures and tests that are reasonable directed to obtaining the same results. In determining the propriety of any specific procedure or test, the healthcare provider should apply his or her own professional judgment to the specific clinical circumstances presented by the individual patient or specimen. It may be prudent, however, to document in the patient’s record the rationale for any significant deviation from these standards and guidelines.