

OVERALL AIM: To improve access to diagnosis and care for children with sickle cell disease (SCD) by establishing a newborn screening (NBS) program for sickle cell disease in northern Ghana and enrolling diagnosed patients in follow-up care

Inputs	Activities	Outputs	Outcomes	Impact
- St. Jude funding award - Human resources - Equipment - Logistics - Space - Existing lab capacity - Existing pilot program	- Engage stakeholders - Develop research instruments - Train laboratory and clinical staff on SCD - Assess existing newborn screening programs for SCD in Sub-Saharan Africa - Document lessons learned from a pilot NBS program in Tamale Teaching Hospital (TTH) - Conduct a prospective cohort study to compare the early clinical progress of babies with possible SCD diagnosis - Develop a plan for expansion of the screening program in TTH and establishment of a dedicated NBS center for SCD	- Documentation of existing NBS programs in SSA - Data report of SCD NBS pilot program - Understanding of HCW and caregiver perspectives - Comparison of clinical outcomes among study population based on timing of diagnosis - Stakeholders engaged for expansion of NBS	Short-term - Increased knowledge of SCD among clinical/lab staff - Increased frequency of patient care delivered by trained personnel - Improved identification of SCD Intermediate - Expansion and enhancement of SCD screening program - Uptake of SCD care for eligible children in SCD clinic Long-term - Improved outcomes for patients with SCD	Improved access to timely, accurate diagnosis of SCD through NBS in Northern Ghana - Development and launch of the national guidelines for the diagnosis and management of SCD in Ghana - Increased availability of SCD testing through NBS - Increased acceptance of point-of-care testing for large-scale NBS in Ghana - Sustained increase in proportion of newborns screened for SCD Improved access to effective interventions for SCD, leading to improved patient outcomes - Sustained enrollment of eligible children to SCD clinic - Long-term participation of eligible children at TTH - Reduction in SCD-related infant mortality and disease complications - Reduced costs of care Demonstration of a scalable model for NBS for SCD in limited-resource settings