

## The Sickle Cell Unit

One Health Centre | National University–Sudan



The Sickle Cell Unit at the National University–Sudan is a dedicated multidisciplinary hub committed to transforming the landscape of Sickle Cell Disease (SCD) care. By integrating clinical excellence, cutting-edge research, and community-driven prevention, we aim to reduce the burden of this condition and improve the quality of life for patients across Sudan.

### Understanding the Challenge

Sickle Cell Disease (SCD) is a group of inherited haemoglobin disorders that represent a significant public health challenge in Sudan.

- **The Global Context:** Sub-Saharan Africa accounts for nearly 80% of global cases. Without early intervention, mortality rates for children under five remain alarmingly high.

- **SCD in Sudan:** Prevalence varies by region, reaching over **30%** in areas like Darfur and Kordofan. Internal migration and urbanisation mean that the clinical burden is now a national priority, particularly in urban centres like Khartoum.



## **Our Rationale**

Current gaps in the Sudanese health system—including limited specialised centres, a lack of national newborn screening, and irregular access to essential medicines like hydroxyurea—necessitate a coordinated response. The One Health Centre provides the ideal platform to link human health, clinical research, and community advocacy.

## **Mission & Objectives**

Our primary goal is to establish a comprehensive, multidisciplinary unit that provides integrated clinical care, research, and training.

### **Key Objectives:**

- **Clinical Excellence:** Provide world-class care and emergency management for SCD patients.

- **Early Detection:** Establish neonatal and community screening programmes to ensure early diagnosis.
- **Research & Data:** Develop a national SCD registry and lead epidemiological and genetic research.
- **Capacity Building:** Train the next generation of healthcare professionals in advanced SCD management.
- **Advocacy:** Combat social stigma through education and premarital counselling.

### Core Components of the Unit

Clinical Services	Diagnostic & Preventive	Research & Training
Outpatient & Inpatient care	Haemoglobin electrophoresis	Epidemiological & Clinical trials
Emergency vaso-occlusive care	Newborn screening programmes	Professional CPD programmes
Blood transfusion services	Genetic counselling	Medical curricula integration
Pain & Palliative management	Prophylactic vaccinations	International collaborations

### Community Engagement & Education

We believe that medicine extends beyond the clinic. Our unit actively works to:

- **Break the Stigma:** Combat misconceptions through school and community awareness campaigns.
- **Support Families:** Facilitate patient support groups and advocacy programmes.
- **Prevention:** Offer premarital screening and genetic counselling to empower informed decision-making.



## Governance & Partnerships

The Sickle Cell Unit operates under a structured multidisciplinary team, including:

- **Clinical Team:** Specialist haematologists, paediatricians, and SCD-specialised nurses.
- **Support Units:** Laboratory, Research & Data, and Community Outreach.
- **Strategic Partners:** We collaborate closely with the Ministry of Health, the WHO, NGOs, and international academic institutions to ensure sustainable, evidence-based care.

## Our Impact

By bridging the gap between clinical care and public health, we strive for:

- **Health Outcomes:** Reduced under-five mortality and improved maternal-child health.
- **Socioeconomic Relief:** Lower out-of-pocket costs for families and improved school attendance for children.

- **Systemic Change:** A strengthened national health workforce and data-driven policymaking.

### **Join Us in Our Mission**

The Sickle Cell Unit is more than a clinic; it is a beacon of hope for thousands of families in Sudan. Through innovation and empathy, we are building a future where SCD is no longer a barrier to a long and productive life.

