Deciphering Developmental Disorders in Africa (DDD-Africa)

H3Africa
Human Heredity & Health in Africa

The Goal: to find genetic causes of developmental disorders in African populations.

The Problem

Developmental disorders cause an ongoing major delay in the process of normal child development. Delay can occur in one or many areas—for example, gross- or fine motor, language, social, or thinking skills. There is little known about the prevalence of DD and the impact on families and health care services. We do know that there are many different forms of developmental disorders, and although these disorders are usually individually rare, collectively they affect many children across the Continent of Africa.

Project Strategy

1. Recruit 500 children affected by a severe developmental disorder, together with their mothers and fathers.
2. Collect detailed clinical information and DNA samples from patients and their parents and perform whole-exome sequencing and bioinformatics analysis to uncover the underlying genetic causative mutations that have led to the occurrence of the developmental disorder.

Potential Impact

DDD-Africa will create a unique opportunity to improve research capacity, and to build a wider collaborative network focused on these rare disorders on the African continent in future. Our long-term goal for the project is to develop a practical and effective approach for the sustainable integration of whole-exome sequencing into DD diagnostics in a way that will enable a precision public health approach for Africa.

Project Leads

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Project Sites

A: South Africa
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