

Educating on sickle cell risk

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Members of the public in sub-Saharan Africa who are carriers of the hereditary disease sickle cell disease must be educated aggressively through public health campaigns to raise awareness of the risks of parenting offspring with the disease if their partner is also a carrier, according to research published in the *International Journal of Medical Engineering and Informatics*.

There are many physical and emotional public [health](#) components of [sickle cell disease](#), explains William Ebomoyi of the Department of Health Studies College of Health Sciences, Chicago State University, Illinois, USA. Moreover, there ethical and legal considerations surrounding the screening of newborns for this potentially lethal disease.

Sickle-cell disease (SCD), also known as sickle-cell anemia (SCA) or drepanocytosis is an inherited condition in which a child of parents both of whom are carriers of the associated hemoglobin gene who inherits both copies will produce abnormal red blood cells that are rigid and often sickle-shaped. The disorder causes both acute and [chronic health problems](#), such as repeated infections, severe attacks of pain and potentially stroke and death. Carriers of just one copy of this particular hemoglobin gene tend to have greater resistance to the lethal parasitic disease malaria compared to people without a copy of the gene. However, around 2 percent of the population of sub-Saharan Africa is born with SCD. Moreover, incidence is rising across the globe as populations migrate.

In the age of genomics, however, Ebomoyi suggests that raising

awareness of the risks of having children with SCD if both parents are carriers is important. "An aggressive health education of the public is required to maintain a shared responsibility for their courtship behaviour by alerting potential suitors of their heterozygous status," he suggests. He adds that, "Major sickle cell education programmes need to be integrated into the curriculum of elementary, secondary and tertiary academic institutions."

More information: Ebomoyi, E.W. (2015) 'Ethical, legal, social, and financial implications of neonatal screening for sickle cell anaemia in Sub-Sahara Africa in the age of genomic science', Int. J. Medical Engineering and Informatics, Vol. 7, No. 1, pp.46-56.

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