

# **Robotic Health Assistant for Rational Management of Fevers Among Nomads**

The innovation described in this paper was motivated by concern that in Africa, parasite resistance to antimalarial drugs is associated with irrational drug use where health facilities are inaccessible. However, advancements in digital technology, simple diagnostic devices, and smart drug packaging inspire innovative strategies.

The combination of communication technology, rapid diagnostic tools, and antibiotic and antimalarial medicines can increase access to evidence-based malaria management, reduce mortality, and slow the development of resistance to drugs. The author initiated the development of a solar-powered device (Feverkit) programmed with user-interactive capabilities and equipped with a detachable laboratory and dispensary for community management of fevers. The operational performance of 10 units of the device was evaluated among 20 nomadic Fulani communities in northeastern Nigeria.

A brief introduction to its parts and functions was sufficient for community-selected nomadic caregivers to use it competently for managing 207 fever cases in eight weeks, with a 97% ( $p=.000$ ) recovery rate. The Feverkit guided the nomads to distinguish between malaria and non-malaria-induced fevers, and thus selectively treat them. Camp communities accepted the device and were willing to pay between US\$33 and \$334 (mean, \$113; mode, \$67) to keep it. Public-private sector collaboration is essential for sustaining and scaling up production of the Feverkit as a commercial health device for the management of fevers among nomads.

**Partners/ Funders: The Bill & Melinda Gates Foundation  
Grand Challenges Explorations (GCE) grant #53105,**

**Source: Robotic health assistant (Feverkit) for the rational management of fevers among nomads in Nigeria – PubMed (nih.gov)**