

# **SUPPORTING PAEDIATRIC CARE USING INTERNET BASED TELEMEDICINE CONSULTATION IN RURAL KENYA: BARRIERS, CHALLENGES AND OPPORTUNITIES**

**Authors:** Kithyoma V<sup>1</sup>, Kumar P<sup>1,2</sup>, Alnasser Y<sup>3</sup>, Saidi S<sup>1</sup>, Musa A<sup>4</sup>,

## **Affiliation:**

1. Health-E-Net Ltd, Nairobi
2. Strathmore Business School, Nairobi
3. University of British Columbia, Vancouver
4. Lodwar County Referral Hospital, Lodwar

**Background:** Healthcare in rural Kenya depends mainly on non-physician clinicians (NPC) with varying levels of pediatric training and skills. Telemedicine can provide a tool to help manage and treat patients locally by supporting existing NPCs.

**Objective:** This study aims to assess quality of an Internet-based tele-consultation service after one year of implementation. It focuses on identifying barriers and opportunities in employing tele-consultations to support pediatric care in rural Kenya.

**Methods:** The study adopted mixed methodologies. The first phase was a review of all consultations. In the following phase, the research team visited 11 rural clinics in Turkana County, Kenya to conduct interviews with clinicians utilizing the Internet-based tele-consultation service.

**Results:** Reviewing all received tele-consultations revealed 110 consultations. Defining pediatric age to extend from birth to 18 years yielded 30 cases (27%). Of these, majority involved male children (n=18, 60%). There were no tele-consultations requested for neonates; infants comprised only 6% (n=2) and under-5s 37% (n=11) of all pediatric consultations. Infectious, trauma and ENT-related consults were the most common (n=15; 5 each). Among all consultations, only 30% (n=9) documented vaccination history, 10% (n=3) recorded any growth parameters. All consultations lacked dietary history. Family and social histories were addressed along with allergy and medications. After conducting interviews, a general positive attitude was observed among NPCs. All clinicians consider unreliable internet network to be the biggest challenge. Some found sending a tele-consult time-consuming and lengthy. Nevertheless, they viewed it as a tool to help their community and gain their trust. Also, teleconsultation was preferred over physical referral as it provides them with education and continuity of care.

**Conclusion(s):** Internet-based tele-consultations can provide a tool to increase access of care to pediatric specialists and improve quality of care in rural sites, but disparities still exist. Having offline features that reduce dependence on connectivity to the Internet, a pediatrics-focused platform and documentation training may advance quality.