

Neurxtend Foundation Initiatives for Online Stroke Consultation and Management in Northern Uganda and Uganda

1. Background

Stroke is rapidly becoming one of the **leading causes of disability and death** in Uganda.

- Many stroke patients in **Northern Uganda** face major barriers to early diagnosis, emergency treatment, and rehabilitation.
- The region lacks **neurologists, neuroimaging facilities, and rehabilitation centers**, forcing patients to travel long distances to Kampala or Gulu for care — often after critical treatment windows have passed.
- The result is **high mortality and disability rates**, especially among the poor and rural populations.

Recognizing these gaps, **Neurxtend Foundation** has launched a comprehensive initiative to establish **Online Stroke Consultation and Management Services** — using telemedicine to connect rural hospitals and patients to national and international stroke specialists.

2. Goal

To **improve access, quality, and continuity of stroke care** in Northern Uganda and across Uganda through the use of **tele-neurology and digital health technologies**.

3. Objectives

1. **Provide timely online stroke consultations** between rural health centers and stroke specialists.
2. **Enable early diagnosis and management** of stroke cases using telemedicine-supported clinical decision tools.
3. **Train and mentor rural health workers** in stroke identification, emergency care, and rehabilitation via online platforms.
4. **Establish a digital stroke registry** for tracking, research, and quality improvement.
5. **Reduce disability and mortality** by ensuring faster access to expert neurological care.

4. Core Initiatives and Activities

A. Establishment of Online Stroke Consultation Hubs

- Set up **telemedicine hubs** in regional referral hospitals (e.g., Gulu, Lira, Arua, Pader).
- Equip them with **computers, internet, webcams, and digital diagnostic tools** such as portable ECG and blood pressure monitors.

- Connect these hubs to **neurologists in Kampala, the USA, and other partner countries** for real-time consultation and treatment guidance.

B. 24/7 Tele-Stroke Consultation Network

- Launch a **round-the-clock online stroke consultation platform** linking emergency units and health centers to stroke specialists.
- Enable **remote review of CT scan results, lab data, and clinical signs** to support diagnosis (ischemic vs. hemorrhagic stroke).
- Offer **virtual second opinions** for complex stroke cases.

C. Online Stroke Management and Follow-up System

- Develop a **tele-stroke patient management system** to monitor patients after discharge.
- Include tools for:
 - Tracking **medication adherence** (e.g., blood thinners, antihypertensives).
 - Providing **rehabilitation guidance**, including physiotherapy exercises and caregiver instructions via video or SMS.
 - Scheduling **regular follow-up consultations** with neurologists.

D. Stroke Awareness and Community Education

- Use digital platforms (social media, radio talk shows, webinars) to educate communities on:
 - Early signs of stroke (FAST – Face drooping, Arm weakness, Speech difficulty, Time to act).
 - Risk factors such as high blood pressure, diabetes, smoking, and poor diet.
 - Importance of **early hospital arrival within the golden hour** for effective treatment.

E. Capacity Building and Training

- Conduct **virtual training sessions** for nurses, clinical officers, and medical officers on stroke management protocols.
- Provide **certified e-learning courses** in collaboration with partner universities and hospitals.
- Include modules on **rehabilitation, nutrition, and caregiver support**.

F. Digital Stroke Data and Research

- Establish a **stroke database and registry** to collect real-time data on stroke incidence, outcomes, and challenges.
- Use data for:
 - Research on stroke patterns in Northern Uganda.
 - Planning evidence-based interventions.
 - Influencing national health policies for non-communicable diseases (NCDs).

5. Implementation Strategy

- **Phase 1:** Pilot tele-stroke services in Pader and Gulu districts.
- **Phase 2:** Expand to other regional hospitals across Northern Uganda.
- **Phase 3:** Scale the program to cover all regions of Uganda, integrating it into the national telemedicine framework.

Partnerships will be established with:

- **Ministry of Health (Uganda)**
- **Regional Referral Hospitals**
- **International Neurology Institutions**
- **ICT and health technology companies** providing telemedicine platforms.

6. Expected Outcomes

- Reduced **stroke-related deaths and disabilities** through faster, expert-guided interventions.
- Increased **diagnosis and treatment rates** for stroke and related NCDs.
- Strengthened **capacity of rural health workers** to manage neurological emergencies.
- Creation of a **digital ecosystem for neurological care** in Uganda.
- Improved **quality of life for stroke survivors and their families**.

7. Sustainability Plan

- Integrate tele-stroke services into **existing health information systems** under the Ministry of Health.
- Build local capacity through continuous training and mentorship.
- Establish **cost-sharing models** with hospitals and insurance schemes.
- Seek partnerships with **donors, research institutions, and private health providers** for long-term support.

8. Conclusion

The growing burden of stroke in Uganda demands **innovative, technology-driven solutions**. Through its **Online Stroke Consultation and Management Program**, the **Neurxtend Foundation** is pioneering a new era of **digital neurological care**, ensuring that even the most remote communities in Northern Uganda can access **timely, expert, and life-saving stroke treatment**.