



Improving Health and Fighting Poverty in Africa with Solar Power, Internet and Telehealth

Jack Higgins, MD



Global
Telehealth
Network



IEEE
smart village®



Rotary

District
5170
California



Rotary

District
6080
Missouri



Rotary

District
9213
Uganda



Rotary

District
9212
Kenya

Fighting Health Inequities

The Global Telehealth Network was founded on the belief that no one should be denied access to health care because of location, social status or ability to pay.



The Challenge

- In many underserved areas in the world, people ARE denied access:
 - Limited-resource countries
 - Conflict zones (e.g., Syria and Ukraine)
 - Refugee camps
 - Underserved urban and rural areas in the U.S.
 - Tribal lands in the U.S.
 - Disaster areas anywhere
- Healthcare Heroes – Doctors and nurses who volunteer with missions
- However, most physicians who want to help are deterred by challenges:
 - Inability to take time away from their practices
 - Expense and risks of travel
- WE NEED A SOLUTION THAT ALLOWS VOLUNTEERING WITHOUT TRAVEL

Expanding the Pool of Volunteers

- Many doctors and psychologists say they would volunteer to help patients in need if they could do so at minimal cost or risk, and without disrupting their practices and personal lives.
- Telehealth lets professionals use computers in their own offices or homes to treat patients virtually anywhere.



Global Telehealth Network (GTN)

- The nonprofit Global Telehealth Network (GTN) can reduce health inequities in medically underserved areas in U.S. and world-wide.
- Doctors and nurses working in underserved areas often encounter patients with complex problems.
- It's often difficult or impossible to obtain specialty consultations.
- GTN's volunteer physicians and psychologists offer free online consults for health workers located in underserved areas.

How It Works

- Local Provider (doctor or nurse) uploads consultation request to GTN's website, including patient history & exam findings.
- GTN matches them with most appropriate physician or psychologist to provide needed consult.
- However, many locations that we want to serve lack Internet access and/or reliable electricity.
- IEEE Smart Village members have the expertise to develop solar power systems and enhanced Internet connectivity wherever they're needed.

The Collaborative

- **IEEE Smart Village** supports entrepreneurs who install solar power and Internet access for health care, education and economic development.
- **Global Telehealth Network** provides consultations to assist doctors and nurses on the ground.
- **Rotary Clubs and Districts** provide volunteers, connections, mentoring, fundraising, monitoring & evaluation.

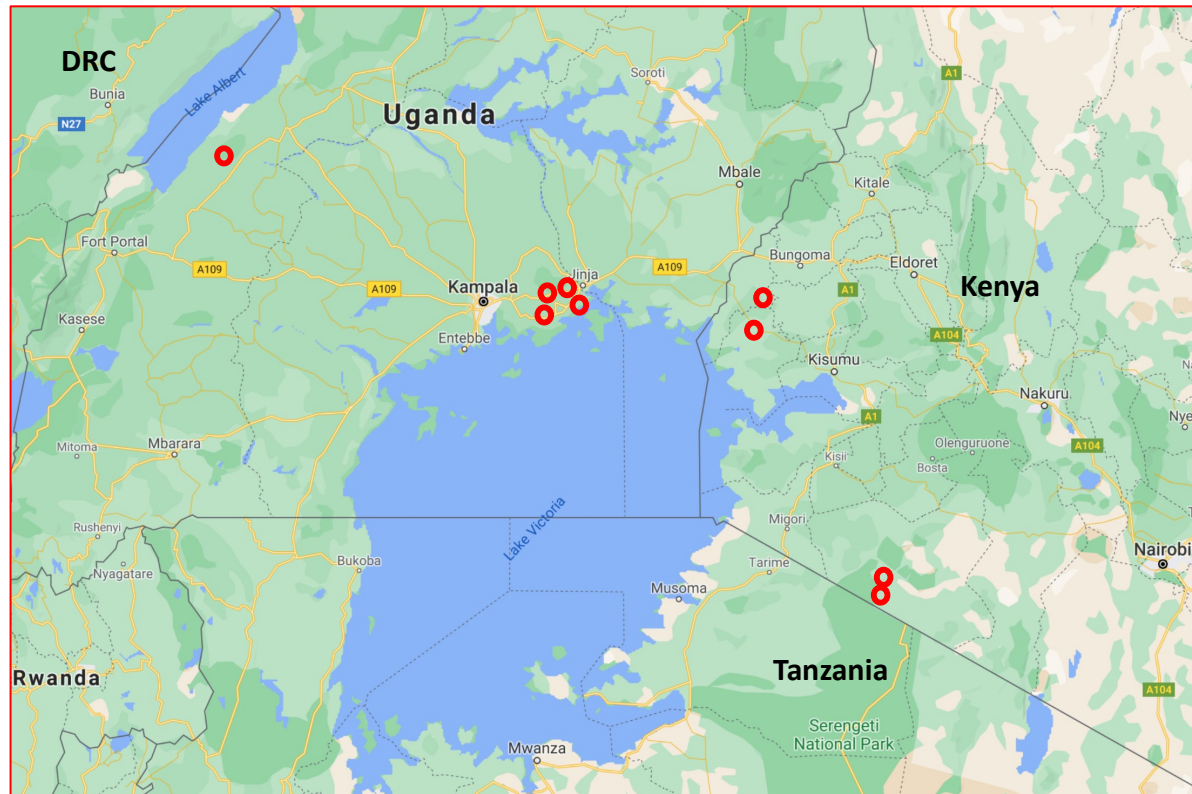


- Initial pilot projects in Uganda and Kenya



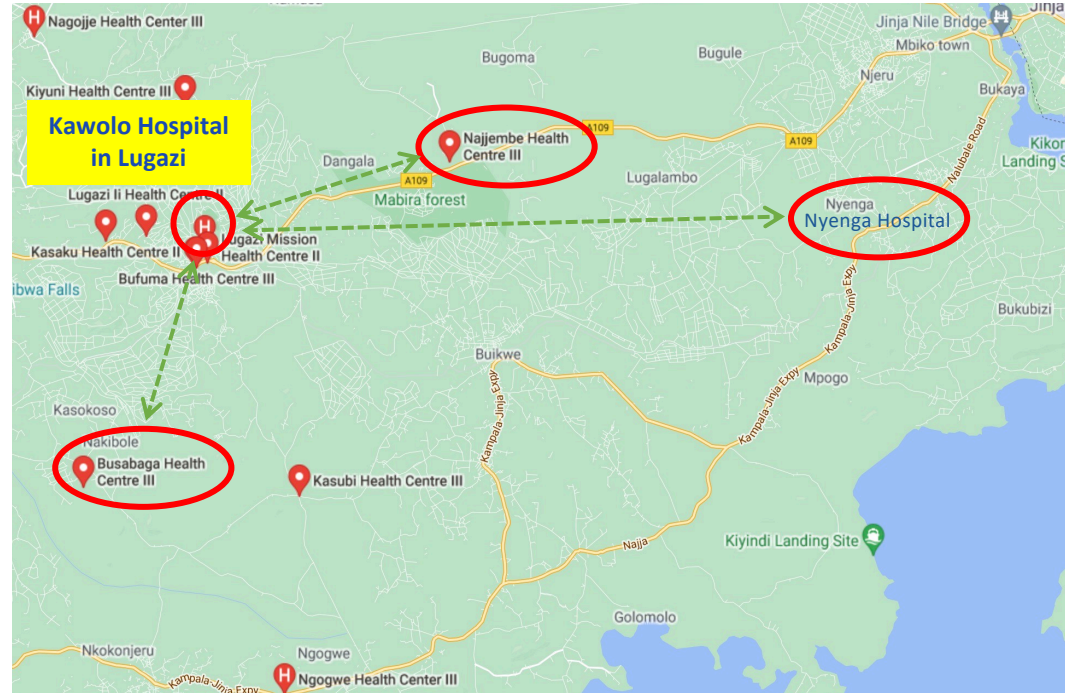
Pilot Projects in Uganda and Kenya

- Solar Power / Internet / Telehealth for 9 sites
 - 3 Hospitals
 - 4 Community clinics
 - 2 School clinics
- Projects vary depending on results of local community needs assessments



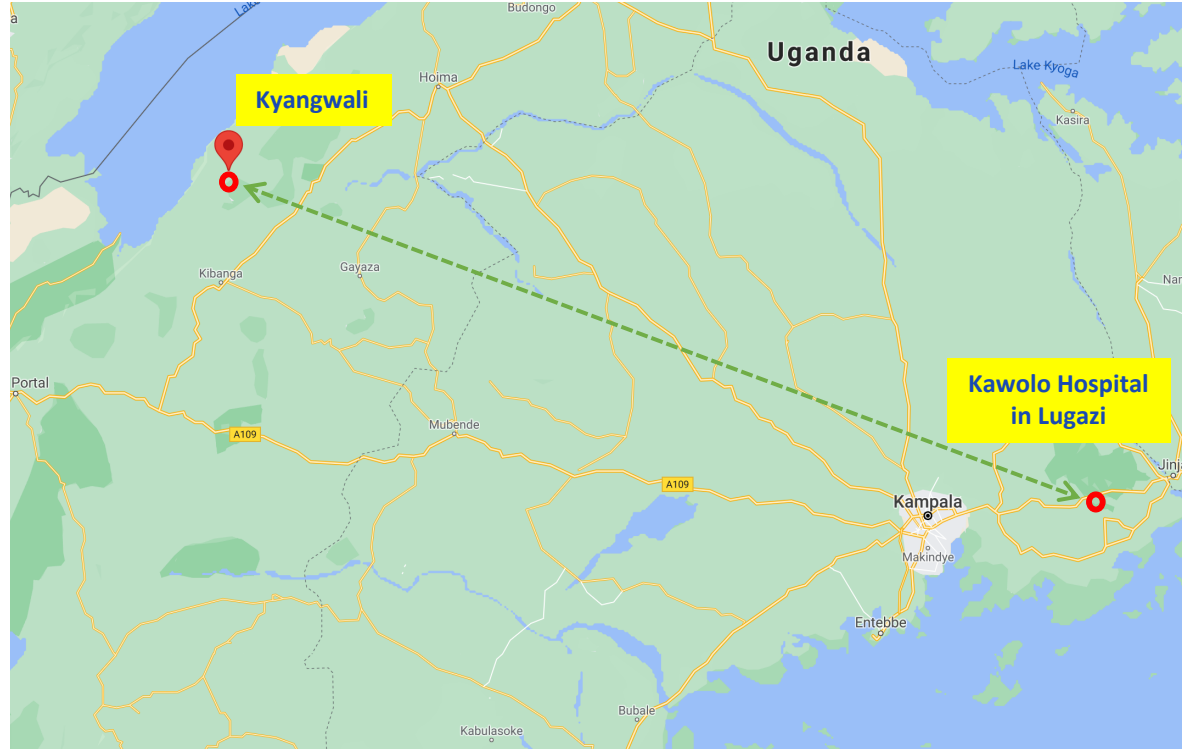
Pilot Projects in Eastern Uganda

- Telehealth, Solar Power and Internet:
 - Kawolo General Hospital
 - 3 of the 53 smaller facilities that refer to Kawolo General Hospital
 - Nyenga Hospital
 - Najjembe Health Centre III
 - Busabaga Health Centre III



Pilot Project in Western Uganda

- Kyangwali settlement for 120,000 refugees, mostly Congolese
- COBURWAS School
- One nurse cares for 816 students and 43 staff, had no physician back-up previously
- Now nurse can access telehealth consultations and continuing medical education



Pilot Projects in Kenya

- Solar power, Internet & telehealth:
 - Matibabu Foundation Hospital
 - Talek Community Health Center (adjacent to the Maasai Mara)
 - Sekenani Health Center (in the Maasai Mara)
 - Nambale Magnet School



Collaborating Rotary Clubs and Districts

- Rotary E-Club of Silicon Valley Smart Village
- Rotary Club of Los Altos, CA, USA
- Rotary Club of Cupertino, CA, USA
- Rotary Club of Branson-Hollister, Missouri, USA
- Rotary Club of Hollister, Missouri, USA
- Rotary Club of Belleville, Ontario, Canada
- Rotary Club of Mengo, Kampala, Uganda
- Rotary Club of Kololo-Kampala, Uganda
- Rotary Club of Milimani, Nairobi, Kenya
- Rotary Club of Busia, Kenya
- Rotary District 5170, California, USA
- Rotary District 6080, Missouri, USA
- Rotary District 7070, Ontario, Canada
- Rotary District 9214, Uganda
- Rotary District 9212, Kenya

**10 Rotary Clubs
5 Rotary Districts**

**We intend to collaborate with
many more as we scale across
Africa and to other continents.**

Next Rounds of Projects/Services

- Africa
 - Additional sites in Kenya and Uganda
 - Nigeria
 - Liberia
 - Tanzania
 - Ethiopia
 - Cameroon
 - Sierra Leone
 - Côte d'Ivoire
- Latin America and the Caribbean
 - Galapagos islands
 - Haiti
 - Guatemala
- Conflict Zones
 - Ukraine
 - Syria
- United States
 - Free clinics in California and other states
 - Tribal lands of Native Americans and Alaska Natives