Kano Connect

Strengthening the Kano State healthcare system by improving communication

**Background**
eHealth Africa’s Kano Connect project seeks to improve communication and information flows within the healthcare system of Kano State in Northern Nigeria. Enriching the flow of communication allows a large quantity of data to be collected. This data can then be analysed and used to greatly improve the ability to track and act on crucial health performance indicators across the entire Kano State.

Kano is the country’s most populated state and second largest industrial area. Kano Connect represents a partnership between the Kano State Primary Health Care Management Board (KSPHCMB), the Gates and Dangote Foundations and eHealth Africa (eHA). eHA is responsible for the development and integration of the communications and collaboration platform, including mobile and dashboard applications, providing training and technical support, as well as necessary guidance to ensure a smooth transition and handover of the project to the KSPHCMB in a sustainable way.

**Deliverables**
eHA delivered Kano Connect-enabled Android smartphones to over 1800 healthcare workers (HCWs) across primary levels of the healthcare system in Kano State. The smartphones operate in a closed user group (CUG), allowing users to communicate via voice calls & text-messaging for free within the group and access mobile data. To provide these services, eHA has partnered with one of Nigeria’s largest telecommunication corporations, etisalat.

Each phone came equipped with Open Data Kit (ODK), an application which allows the HCWs to easily submit data on e.g. local healthcare planning or vaccine management via questionnaires. eHA provides training and technical support for the HCWs on the use of ODK. Additionally, eHA distributed over 350 solar-powered phone chargers to solve the issues of reliable electricity sources in a cost-effective and environmentally sustainable way.

**Kano Connect Dashboard:** As the central hub for Kano Connect, the Kano Connect Dashboard stores a user directory of HCWs utilising the Android smartphones. It also shares calendars and location details of all Kano State’s health facilities. The user directory provides an easy-to-use search function to quickly find relevant HCWs. Additionally, the Dashboard supervises and manages the collection of Routine Immunisation Supportive Supervision (RISS) data.

**Routine Immunisation Supportive Supervision:** RISS evaluates health facilities’ distribution of vaccinations to the population for which it is accountable and works to provide support to facilities where required. Each health facility in Kano State submits answers to a questionnaire on topics such as: Is there a poster-size local map showing all health facilities and those providing routine immunisation? Is there an updated temperature monitoring chart on each freezer storing vaccines?

HCWs complete the questionnaires via the ODK application, which is offline capable, and submit them in Excel spreadsheet form, this is imported into Formhub, an open source solution with a data repository. This allows the questionnaires to be completed at the health facility even without network connectivity, often the case with more remote facilities, and submitted later when network conditions improve.

The Kano Connect Dashboard displays information on which health facilities have submitted their monthly questionnaires and how they submitted. This allows supervisors to follow-up with any facility failing to provide information.

**Future plans**
In addition to adding tighter and more efficient integration to the communication network already in place, the third stage of development will add a number of extensions to the dashboard and surrounding ecosystem, for example:

**Mobile directory app:** Create an android mobile application put the dashboard’s directory functionality into all phones in the Kano Connect network, thus improving user searches and team collaboration. This application is scheduled for released in late 2016.

**Improved analytics:** The goal is to improve presentation of the increasingly large dataset gathered from the questionnaires. Configurable and intelligible graphs enhance the data analysis used to drive decision making.

**Resource centre:** Create an online resource centre that will provide the HCWs with educational and instructional videos. The aim is to ensure that each primary health worker in Kano has access to learning resources via the Kano connect platform.

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