

## **LEVERAGING TECHNOLOGY FOR COST EFFECTIVE HEALTH CARE DELIVERY**

Ladies and Gentlemen:

Greetings.

The World Health Organization estimates that the number of blind and visually impaired will double from 180 million to 360 million persons by 2020 if concerted action is not taken.

More than two-thirds of global blindness and visual impairment is in the developing world. This is particularly true of Nigeria where about 1.5 million persons are blind and an estimated 4.5 million persons are severely visually impaired.

We at MTN laud the efforts of the Ophthalmologic Society of Nigeria in the quest for the prevention of blindness in Nigeria. It is instructive to note that as much as 80% of instances of vision loss are avoidable - either preventable or treatable with currently available knowledge and technology.

The phenomenal growth of the Nigerian telecommunications industry has boosted teledensity in Nigeria from about 2% in 2002 to 34% as at April this year. This aggressive pace of growth, fuelled by over \$11bn in infrastructural investments, has opened up opportunities for the delivery of new and exciting telecommunication services. Since launch in August 2001, MTN has steadily deployed network infrastructure across Nigeria. It now provides services in 223 cities and towns, more than 10,000 villages and communities and a growing number of highways across the country. Currently, MTN has about 4,000km of optic fibre criss-crossing the length and breadth of the country. This infrastructure has provided the enabling infrastructure for the rollout of advanced voice and data-intensive services, in tandem with our millennium development goals.

The recent launch of MTN's 3.5G services provides our teeming subscribers with access to broadband Internet services, video telephony and video streaming (the ability to download music and videos from the Internet and other portal sites). The mobile phone has, thus, become the platform for telecom, media, and technology convergence with the network as an essential enabler of progressive aspirations for millions of Nigerians today.

As network capabilities, hardware availability and consumer comfort levels begin to converge; we at MTN see possibilities for efficient and cost effective health care delivery across Nigeria through the use of telemedicine.

There are many kinds of telemedicine, from continuing medical education to patient monitoring, but remote medical consultation –i.e. knowledge-sharing between healthcare workers, focused on specific cases – is the variant most frequently proposed to improve access to specialist expertise in areas where adequate numbers of specialists are simply unavailable. The WHO statistics on Nigeria indicate that we currently have only ~ 1.9 ophthalmologists per million inhabitants. There is, therefore, an imperative to leverage technology to extend the services of the few specialists we have for the benefit of the millions of our people who face the awful prospect of blindness.

Telemedicine is the proposed platform for bringing Specialists, Physicians, Para-Medical staff and Patients together for a seamless exchange of medical data and specialized diagnosis. As an example, consider the following scenario:

*Risikat's eyes worry her; they hurt sometimes and she wonders what to do about it. Her friend has just experienced a six-month waiting period at her local government hospital for a visiting team of eye surgeons. This has discouraged her from seeking help. She visits the hospital and, to her surprise, is scheduled for an appointment the next day. After filling out the necessary paperwork on the day of her visit, medical assistant Sillifat, leads her into the examination room and introduces her to a young ophthalmology resident from the State University, Dr. Olugbenga Ayo. Dr. Ayo first takes several pictures of Risikat's eyes from varying angles using a computerized retinal camera. This digital camera is connected by a cable to a computer, and Risikat is amazed to see her eyeballs floating instantaneously on a computer screen. Thanks to this innovation, testing her for glaucoma won't require the traditional dilation with numbing eye drops.*

*Also viewing the digitized images of Risikat's eyes is Prof. G. Osagie -- an ophthalmologist sitting at his computer 250 kilometres away at LUTH. Ayo and Osagie discuss Risikat's eyes; Risikat can see and hear Prof. Osagie on the screen and the doctor is able to study this patient thoroughly without even being in the room.*

*While a high percentage of new patients arrive at the community hospital with serious eye problems, Risikat gets a clean bill of health. Her condition is diagnosed as "dry eye" -- nothing a little vial of Visine can't remedy.*

This is just one example of remote consultation. Other simpler systems may be set up between specialists for the exchange of information via simple SMS and email.

Other areas that can benefit from the telecoms revolution include

- **The management of individual patient records:** This is becoming increasingly more challenging in the contemporary health environment where records are paper-based, limiting the extent to which information can be shared amongst geographically dispersed specialists. We advocate the use of centralised electronic patient record and billing systems accessible via our telecom network to improve operational efficiencies.
- **Access to online information / professional databases:** We suggest the use of use of mobile handheld devices, such as *BlackBerry from MTN*, by medical practitioners visiting patients in their homes or in remote sites, to improve efficiency. These would save time and money and allow the health care professionals involved in a case to access completely up to date information at any time.

There are obvious business efficiencies to be gained from improvements in the existing healthcare administrative systems. My intention is simply to arouse your interest in telecoms as a cost effective healthcare delivery channel. I am sure you are better positioned to see that there are several readily identifiable clinical benefits, especially in terms of better health information and reduction of errors.

We look forward to supporting you in your effort to prevent the spread of blindness in Nigeria and look forward to working with you in this regard.

Thanks for listening.

Bola Akingbade