

**Keynote Presentation**

**Building Sustainable Eye Health Systems**

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**INTRODUCTION**

The World Health Organisation (WHO) defines a sustainable healthcare system as a system that improves, maintains, or restores health while minimizing negative impacts on the environment and leveraging opportunities to restore and improve it, to the benefit of the health and well-being of current and future generations.<sup>1</sup>

There are three pillars of a sustainable healthcare system. These are social equity,



**Figure 1:** The three pillars of a sustainable healthcare system (University of Nottingham copyright ©)

economic viability, and environmental protection. As in the Venn diagram in Figure 1, these three entities overlap to make a viable and sustainable healthcare system. This can be extended to eyecare systems that involve the eyes.

**SOCIAL EQUITY**

Social equity in eye healthcare is concerned with justice and fairness of social policy that contribute to eye health. Since the 1960s, the concept of social equity has been used in a variety of institutional contexts, including education and public administration. For an eye

health system to be sustainable, it must be equitable. Both the rich and the poor must have equal access to excellent eye care, and access must be equitable despite differences in age, sex, ethnicity, tribe or social standing. A system that is not affordable by most of the residents in a community cannot be regarded as equitable. Those who cannot afford care must be supported to do so.

An example of an equitable eye care system is the Aravind eye care system in Southern India<sup>2</sup>. Within this system, certain services such as cataract surgery are 'free'. People who can afford are asked to pay amounts that are within the reach of the average wages in the community. Certain 'perks' are provided for the paying public, such as more comfortable or luxurious settings during admission and consultation, or better control over the timing and circumstance of the service being given. But the actual quality of care is the same and the outcomes are comparable. One can draw a parallel to passengers on an airline. The passengers in the first-class cabin are fewer and have more space and legroom, in addition to enjoying the personal attentions of an air stewardess. Passengers in economy may not enjoy this same degree of personal service, but do get some services, nonetheless. The most important outcome in air travel is safe arrival at the destination. And both passengers in first class and in economy hopefully arrive at the same time at the destination. In the same way, outcomes of eye care interventions to the paying and non-paying public should be the same.

In addition, eye care should be within the reach of members of the public. Government policies should be made in such a way that quality eye care is available within a reasonable distance

to where they live. In Africa in general, and Nigeria in particular, there is at the moment a maldistribution of eye care personnel, with most ophthalmologists, optometrists and ophthalmic nurses gravitating towards the cities and leaving vast areas of the hinterland uncovered. Affirmative action to incentivise eye care workers for rural postings should be undertaken. Also, hospitals both governmental, faith based and private should be incentivised to undertake outreach camps and offer free surgery.

### **ECONOMIC VIABILITY**

**Economic viability:** A project is economically viable **if the economic benefits of the project exceed its economic costs, when analysed for society as a whole.** The economic costs of the project are not the same as its financial costs—externalities and environmental impacts should be considered. An eye care system must be economically viable to be sustainable. Investments in an eyecare system include: Training of personnel, their salaries and housing, the real estate in which the facility is placed, the equipment utilized by the facility, (rented or purpose built), the cost equipment, its maintenance and depreciation, pharmaceutical costs, cost of consumables and other miscellaneous inputs such as energy, security, water supply, taxes, and administrative costs.

All these have to be balanced by income into the system. The sources of income for any eye care system have to be carefully considered. These may include Out of pocket payments from clients, Managed care (HMOs, NHIS, Governmental budgets), and so called retainerships through companies, ministries or parastatals with funds set aside for health care. In addition, sustained and realistic budgeting on the part of governments is highly necessary, especially for government run entities. Most importantly, the inflows must balance and exceed the outflows for a system to be sustainable.

It must be recalled that outflows from an eye care organisation must include but is not limited to the following: Replacement of broken machines, Depreciation of broken machines and tools, Investment in new technology, Training and retraining of staff, Staff development and Maintenance of infrastructure.

### **ENVIRONMENTAL SUSTAINABILITY**

**Environmental sustainability:** The WHO considers this to be very important, hence it is one of the three legs of a sustainable health care system. Environmental health and protection refer to protection against environmental factors that may adversely impact human health or the ecological balances essential to long term human health and environmental quality, whether in the natural or human-made environment. A sustainable eye care health system must be environmentally responsible, in terms of safe disposition of biological waste (e.g. emanating from surgical care) and industrial waste associated with the eye care industries, such as in the production of lenses, frames and consumables. It is everyone's job to reduce carbon emissions in hospitals and to reduce the environmental impact of healthcare management. Efforts should be made to reduce or manage carbon footprints (i.e., CO<sub>2</sub> emissions), and activities should be carried out in aesthetically appealing hospital environment. The ethos of recycling, optimisation of energy and water consumption, and modernisation of architecture and engineering to make it sustainable towards zero-emission must be imbibed.

It must be admitted however, that there are challenges in running an environmentally friendly healthcare system in Nigeria. These include the lack of reliable energy source<sup>3</sup> and the need to use diesel powered generators which are environmentally polluting. It goes without saying that other means of energy such as solar inverters should be explored. In Nigeria today, inverters are actually necessary to protect equipment from wide fluctuations in power. Nonetheless, these off-grid solutions also generate problems with the need to replace and dispose batteries. There is also a dearth of planned hospital waste disposal systems in many parts of Nigeria, especially outside urban centers, thus there may also be challenges with the safe disposal of hospital waste.

### **OTHER CONSIDERATIONS**

**Other considerations:** Sustainable eye health care systems should be geared towards meeting the most prevalent needs of the host community. Therefore, a system that works in the UK may not necessarily work in Nigeria. Also, the training of eye care practitioners must be with a view to meeting the needs of the environment in which they will ultimately work.

In setting up these systems, suitable equipment should be provided. In addition, there is a need to think regionally and nationally in the meeting of our needs and we need to minimize insularity in our practices. Furthermore, barriers between private and public care should not be too rigid. Expertise should be utilised regionally and should cover various practices for the benefit of our patients without let or hindrance.

There is also a need to integrate the training of eye health care workers, be they optometrists, ophthalmic nurses, orthoptists, and opticians. We need to get rid of the silos!

### **CONCLUSION**

In conclusion, sustainability of eye care services is based on three important issues: Economic viability, equity, and environmental sustainability. Other considerations in Nigeria must include: Focus on most relevant needs,

Regional and national integration of services, and freedom of movement of expertise. All these factors must be considered before a sustainable health care system can be put in place.

### **REFERENCES**

1. WHO and sustainable healthcare systems: <https://www.who.int/publications/i/item/WHO-EURO-2017-2241-41996-57723> Accessed 3<sup>rd</sup> November 2022.
2. Aravind eye care systems. <https://aravind.org> Accessed 3<sup>rd</sup> November 2022
3. Nigeria energy crisis is getting worse: <https://punchng.com/nigerias-energy-crisis-is-getting-worse>. Accessed 3<sup>rd</sup> November 2022.