Appendix - 3

Case Study - Is the Aravind Model Transportable? The Malawi Eye Care Project

WHO has been monitoring us to see if the Aravind model can work in other developing countries. I remember especially one wonderful, talented young man who came from Sri Lanka. He was a very good surgeon, and at Aravind he realised that he could go back to his country and establish the same kind of organisation. He went home, and in a month's time he secured enough voluntary support to do 500 operations in a week—something which just shook up the country. The same thing is happening in other countries.

—Dr. G. Venkataswamy

Background

Malawi is a small country in southern Africa, bordered by Tanzania to the north, Mozambique to the east and south, and Zambia to the west. As per 1995 statistics, Malawi has a population of 10,346,194. Ninety percent of the population live in rural areas. Based on several surveys conducted in Malawi, the prevalence of blindness (VA in the best eye < 3/60) is estimated to be 1% of the population or about 110,000 blind people, of which 50% (55,000) of the blindness is due to cataract. The other major causes of blindness include glaucoma, trachoma and childhood blindness. As the life expectancy increases, combined with a population growth of 1.9% per annum, the number of blind people is expected to rise.

Tertiary eye care centres at Central Hospital in Lilongwe and at Queen Elizabeth Eye Hospital in Blantyre are the major eye care service providers.

In 1998 both the hospitals together performed 1,814 operations, of which 794 surgeries were cataract. The Lions SightFirst Eye Hospital (LSFEH) is the expanded eye unit of Central Hospital, a separate building housing an eye ward, OPD and OT built with support from Lions International.

There are also 23 district hospitals that have eye clinics and perform operations by mobilising patients from camps. The camps are done periodically, once in every four months at each district. The hospitals are performing at only 30-40% of their capacity, possibly due to problems in needs-based planning, managerial expertise in eye care delivery, and leadership.

International Eye Foundation (IEF), a well-established NGO playing a significant role in eye care, proposed to make the Malawi Eye Care Project financially sustainable through increased productivity, improved quality outcomes and appropriate pricing. In this context, Lions Aravind Institute of Community Ophthalmology (LAICO), a unit of Aravind Eye Hospital in Madurai, India, was identified to provide support and consultation, both clinical and managerial, for orientation and training of the Malawi Eye Care Project team.

Project planning

Thus evolved the Malawi Eye Care Cost Recovery Project, aimed at turning the Lions Sight First Eye Hospital in Lilongwe into an efficient and effective system for offering high quality and large volume eye care services to the community. The short-term goal of the project was to impart necessary clinical and management training to the hospital personnel to improve their efficiency and the number of patients served. The long-term goal is to make this hospital financially self-sustaining through patient revenues and other cost recovery methods, subject to obtaining government approvals.

Three phases of the project

- Fact finding, planning and needs assessment visit to Malawi by LAICO team
- LSFEH team visit to LAICO for gaining exposure to the Aravind model and for training and formulation of strategy, action plans and systems development.
- Follow-up visit by LAICO team to Malawi to help them in the implementation process

Phase One (March 9-20, 1999)

The four-member LAICO team, (consisting of specialists in management, clinical, outreach and information systems) visited Malawi for planning and needs assessment. The main aims of this visit were:

- to establish a relationship with LSFEH staff
- to gain an overall understanding of
  - the hospital and its activities
  - the external environment
  - the community
- to carry out detailed study on clinical and administrative systems, management issues, and outreach activities
- to jointly work out a strategy and action plan for the hospital

Phase Two (April 5 -May 11, 1999

A team consisting of six members from Malawi, including director and ophthalmologist Dr. C and paramedical and outreach staff, visited Aravind Eye Hospital and observed several clinical and non-clinical procedures for high quality and large volume cataract surgeries. The team also attended a Vision Building Workshop at LAICO where they developed strategies and action plans for improving their systems, procedures and other eye care activities.

Phase Three (September 15 - October 23, 1999)

In the final phase, a five-week follow-up visit was made by a six-member team (the same team of specialists plus two OT nurses) from Aravind Eye Hospital and LAICO to help the hospital implement their strategies and action plan developed during the workshop. This was achieved through surgical demonstrations, mobilising patients through outreach endeavours, and establishing systems and procedures to support the above activities.

A total of 500 cataract operations were carried out, of which the LAICO team did 180 and the local team (ophthalmologist and cataract surgeon trainees) performed the remaining. Thirteen camps were conducted during the visit and 385 patients were mobilised for surgery. Patient counselling in the ward and the outpatient department (OPD) was introduced. Subsidised fees of 500 MK (Malawian Kwacha) for IOL surgery were introduced and within two weeks 15 paying patients were admitted. Standardisation of various systems in the OPD, operating theatre, ward and camps was done. An assessment of the surgical training programme was carried out, and monitoring and quality control systems were set in place. Job descriptions were developed for the staff. Information

systems were introduced in OPD, ward, theatre and camps. Systems in inventory management and accounting were introduced in administration. Further training, in the form of demonstrations and lectures, was scheduled and carried out regularly.

Factors contributing to the effectiveness of the project

- This Lions Sight First Eye Hospital had done 449 cataract surgeries in the year 1998, of which 226 were IOL surgeries. During this project 500 cataract surgeries with IOL were performed in a period of five weeks. No additional resources in terms of staff were involved, apart from the LAICO team. The LAICO team played a facilitator role and the local team carried out the work. The local team did about 65% of the surgery. This was achieved mostly due to the process of the project. The needs assessment visit to Malawi helped the LAICO team to gain an understanding of LSFEH and of the eye care situation in Malawi and the visit of the Malawi team to Aravind/LAICO created a chance for them to observe high quality, large volume models. As well, during their stay they worked out detailed action plans for each of the strategies developed during the Vision Building Workshop with the support of the LAICO team members. This was very helpful for the follow-up and implementation visit. Because the Malawi team had become familiar with the Aravind model, during the follow-up visit they easily adopted many of the proposed systems and procedures they had based on the Aravind model.
- The target of mobilising 100 patients a week and performing 30-40 surgeries a day was initially felt to be unachievable. But seeing it happen in the first week impressed the Malawi team and they became very proactive.
- All the activities were carried out during normal working hours. This built confidence among them and eliminated their fear of having to work extra hours.
- Role clarity among the LAICO team members and local team members facilitated implementation of all the scheduled activities during the five-week period.
- Dr. C and other staff were very actively involved. Students were enthusiastic, willing to learn and hard working at the same time. This motivated the LAICO team to work more efficiently.
- An adequate supply of medicines, IOLs and other consumables was planned and organised prior to this final visit and this kept the work flowing.
- IOL surgeries were popularised among the staff and patients. This will be very helpful for moving toward the long term goal of financial self-sufficiency.
- Most of the new systems and procedures put in practice were found to be effective and hence were accepted by the local staff.

Learnings from the Project

- The nursing staff and ophthalmologists functioning independently at times caused conflict. They have begun to build teamwork and to eliminate the parallel working of clinical and paramedical functions. Team work is vital.
- Because the person identified for the role of administrator was absent during the follow-up visit, there was no one to take up this role. Commitment is vital.
- All outreach procedures had to be worked out again because the identified administrator was not available. Although a new person was identified, he was new to the set-up and not familiar with the project. Continuity is vital.
- Some non-cooperation of the staff in certain areas kept the chores from going on, particularly in the absence of the director. Dedication to the vision by all staff is vital.
- The ophthalmic assistant students were not actively involved in the process. Though they were scheduled for camps and shifts in the OPD, ward and theatre, they did not attend because they were preparing for their examinations. Timing is vital.
- Management Information Systems (MIS), such as for monitoring clinical outcomes, had to be developed by LAICO team members because of non-availability of trained computer personnel. The right combination of staff skills is vital.
- Cataract surgeon trainees were posted for preoperative and postoperative work-ups without adequate guidance and supervision. Due to this, patients who could be discharged earlier — as well as those requiring specialised attention — were unnecessarily kept waiting for a long time. At the same time, due to lack of training in case selection, some outreach patients who did not require surgery also ended up being admitted. There was no one to guide these processes. Training is vital.

Recommendations

- There is a need for continuous monitoring of the progress because some staff perceived the large volume of work to be only for five weeks.
- Dr. C was the only person who could take decisions and only if he was available were things happening. There should be a second person identified who can carry out Dr. C's role in his absence.
- The paying OPD is run only one day per week. It was observed that only 10 patients were given appointments and others were scheduled for the next week. To increase revenues, the paying OPD should be open five days per week.
- Remodeling the ward for admitting paying patients should happen only after implementing the above and after a pricing structure is created.
- A refractionist needs to be appointed or an ophthalmic assistant needs to be trained in refraction. A separate category of refractionist staff should be created.
- All staff should receive continuing medical education (CME).
- Dr. C is encouraged to continue to exercise his leadership to ensure that staff follow the new systems and procedures for high quality, large volume, and sustainable cataract surgery.