Aravind Eye Care

Challenges
India has more blind people than any other country, the majority of which is caused unnecessarily by cataracts. Of India’s population of 1.2 billion, 12 million, including 300,000 children, are blind. Around 80 per cent of blindness in India is caused by cataracts. There are just 2 million cataract surgeries every year for an estimated 3.8 million people a year developing cataracts. To clear the current backlog India must deliver 5 million eye surgeries a year for a decade.

In most Indian hospitals the cost of treating cataracts is out of reach for most of the population.

Method
Clinical leadership and mission
Aravind was set up and is managed by doctors all motivated by the objective of eliminating needless blindness. The hospitals’ guiding values have created a focus on equity, standardization, compassionate patient centered care, affordability and accountability which is shared by the clinical leaders. From its inception Aravind’s guiding slogan was “do more, get less”, and a relentless focus on cost control and clinical achievement drives the system to this day. This mission has enabled Aravind’s leaders to perfect the model of healthcare delivery.

Specialisation
The founder of Aravind based healthcare delivery on the “McDonald’s” approach of developing a process driven model of achieving consistency, quality and affordability. Established in 1976, Aravind now operates 4,000 beds in 5 hospitals in the Tamil Nadu region of south India. In addition Aravind runs 39 primary eye care centres and over 2,500 screening camps per year. Aravind Eye Care has specialised and delivers over 315,000 eye surgeries a year. In addition, 2.6 million patients receive outpatient care. The largest NHS eye hospital delivers 30,000 surgical operations and 400,000 outpatient admissions each year. Diagnosis, referral and procedure are performed quickly as part of a streamlined process and a highlyorganised pathway.

Doctors are recruited on their commitment over skills and intensively trained in the key ophthalmological procedures needed by Aravind. While many other hospitals slowly introduce new doctors to surgery, Aravind’s post graduate medical training gets junior doctors performing cataract surgeries in their first year. 80 per cent of the medical workforce are trained at Aravind. Medical officers rotate through Aravind’s core services, including research, outpatient care, telecare consultations and community services, as well as surgery. The best performers are allowed to specialize. Rather than using financial incentives, to retain the best staff Aravind bring senior doctors into leadership positions.

5 Ibid.
8 Moorfields Eye Hospital NHS Foundation Trust (2010), Annual Report.
Intensive work
Aravind’s 160 consultants represent 1 per cent of India’s ophthalmologists but perform 5 per cent of total eye surgeries. Doctors at Aravind do 25-40 procedures a day and 2,600 operations a year. This is against a national average of just 400 in India.10 This allows Aravind to perform 850-1000 surgeries each day. There is an assembly line system of operating at Aravind, and surgeons switch between two operating tables with support from staff. 70 per cent of activities in surgery are done by a team of 4 nurses, who prepare a second patient on one table while the surgeon operates on his first patient on the other.11,12 The process is standardised with the use of key skills and discretionary elements reduced to a minimum. Surgeons subspecialise in different procedures.

Lower cost specialist staff
While healthcare in the NHS and the West is a high skilled industry, Indian innovators have challenged professional assumptions about what functions different health workers can perform. “Task shifting” is an important feature of healthcare in the developing world to address shortages of medical professionals and make health services more affordable.13 Aravind maximises doctors’ time by providing them with a high level of trained support. Ophthalmic assistants receive a two-year bespoke training programme and are trained to excel in particular roles on the patient pathway. They specialise in outpatient services, attending wards, assisting surgeons, refraction, patient counselling, housekeeping, and medical records.14 Trained paramedics carry out some of the more routine and repetitive tasks such as taking various measurements, conducting diagnostic tests, and preparing patients.15 Trained counsellors explain diagnosis, treatment options and payment to patients. Consultant Ophthalmologists can concentrate on clinical and surgical care.

Transparency
Aravind has invested heavily in IT. Registration and scheduling are computerised, leaving clinicians to focus on treatment. The system generates daily schedules, taking into account that days admissions and patient preferences and planned treatment.16 Patient diagnosis and treatment details are computerised and can be easily accessed by doctors across Aravind sites. Waiting times are monitored in real time and by activity. The daily patient demand is forecast based on past trends.17

According to Dr Ravindran, Chairman of Aravind, “transparency promotes a culture of excellence”. Data on inputs and outcomes allow Aravind to benchmark itself against hospitals in India and worldwide. This drives improvement in cost and quality. Staff performance is also closely managed. At Aravind variations in clinical procedures are monitored, the number of complications are recorded on a daily basis and assessed each week. Each complication is graded according to severity and each surgeon is ranked according to their severity scale.18

15 Ibid.
Community outreach and telecare
As well as providing high volume surgical services at the central hub in Madurai, Aravind has set up 39 primary care centres and runs over 2,500 eye camps each year to provide eye care service to the rural population. Each day Aravind might run 5-6 outreach camps allowing them to examine as many as 1,500 people, of which 300 are transported to the hospital for surgery. Each primary care centre is manned by 4 highly trained paramedics supported by doctors through telemedicine. This system provides 500-600 telemedicine consultations each day.

Outcomes
Low cost and high quality
The Aravind Eye Care System is now the largest, most productive eye care facility worldwide. At Aravind the average cost of a basic cataract surgery is around $30 compared to the Indian average of $75-100. There is a constant strive to improve performance and further drive the cost down. This volume is achieved with no loss in quality, with the infection rate per 10,000 Aravind patients at 4, compared to the 6 in NHS.