

The Nelson Mandela Children's Hospital

History

In 2005, Madiba expressed his wish for improved medical care for children. This was taken up by the Nelson Mandela Children's Fund (NMCF) under the leadership of Mrs Sibongile Mkhabela, who has been central to the project since its inception. After numerous discussions, including those with members of the paediatric academic community in Gauteng, it was agreed that there was a great need for a dedicated children's hospital that would provide specialised medical and surgical services for children. This was confirmed by detailed feasibility studies.

The Nelson Mandela Children's Hospital (NMCH) Trust was established in 2009 and, after various sites were considered, it was agreed with the University of the Witwatersrand (Wits) that the hospital would be built on one corner of the Wits Education Campus. An international architectural firm together with a South African (SA) partner were appointed in 2010 and they had many meetings with various stakeholders, including clinicians from the various disciplines who would be most involved with the hospital. It was estimated that ZAR1 bn was needed for the construction and equipping of the hospital and a global awareness and fundraising campaign was initiated in 2012 for the largest civil-society-led capital campaign in SA.

When sufficient funds had been raised to justify the initiation of the project, building commenced in March 2014 and, for many of us who passed the building site frequently, the rapidity with which the building took shape was remarkable. A commissioning team was appointed in early 2016 and set about equipping the hospital. By the end of 2016 the hospital was ready to open, and the official opening ceremony was held on 2 December.

Planned services

The National Department of Health has divided tertiary services into three categories:

- **T1:** general specialist services
- **T2:** central referral services usually provided by subspecialists
- **T3:** national referral services provided by one or two centres in the country, sometimes referred to as quaternary services.

The NMCH will concentrate on providing T2 and T3 services primarily for Gauteng and surrounding provinces, and also for some from further afield including Southern African Development Community (SADC) countries. Currently these services in Gauteng are somewhat fragmented as a result of services that developed in previously racially segmented hospitals, and combining them into one centre will be important for developing critical mass in these areas and promoting research. Some public-sector services such as paediatric cardiothoracic surgery and renal transplantation may move in their entirety, but most would provide expanded and hopefully improved services. No child who qualifies for admission would be turned away. The main services planned for the NMCH are:

- **Cardiology and cardiothoracic surgery:** A state-of-the-art cardiac catheterisation suite and cardiothoracic theatre will allow for a major reduction in the current backlog for cardiothoracic surgery, as well as provide for the expansion of non-invasive interventional cardiology and the development of cardiac magnetic resonance imaging.
- **Nephrology and renal transplantation:** The current shortage of renal haemodialysis services has limited the number of children that can be offered haemodialysis with a view to transplantation. Expansion of these services will help greatly in this regard and should increase the number of successful transplants, the ultimate goal in the treatment of chronic renal failure.

- **Oncology:** Haematological and other malignancies requiring complex treatment resulting in immunological depression will benefit from the facilities at NMCH, with its specialised cubicles for treating such patients. Surgery for various malignancies with state-of-the-art theatre and intensive care units (ICUs) will also benefit greatly. A bone marrow transplant unit will also be developed.
- **Paediatric and neonatal surgery:** Complex surgery for both congenital and acquired conditions will be centralised at NMCH, again taking advantage of the theatre and ICU facilities.
- **Neurology and neurosurgery:** Video telemetry and other specialised neurological services will be developed. Complex neurosurgery will be centralised and epilepsy surgery will be developed.
- **Organ transplantation:** Solid-organ transplantation will be centralised at the NMCH, once again taking advantage of the theatre and ICU facilities.

Other paediatric subspecialties will be needed to support these services as well as develop and expand services in their specific fields. These include pulmonology, gastroenterology, endocrinology and infectious diseases, which will require additional subspecialists to be trained over time. Other surgical disciplines will also benefit greatly from the theatre and ICU facilities, including orthopaedic surgery, craniofacial surgery, ophthalmology, urology and otolaryngology. Central to all these services will be the major support services and facilities:

- **Paediatric and neonatal ICU:** Public-sector hospitals in Gauteng currently suffer from an acute shortage of both paediatric and neonatal ICU beds, resulting in unacceptable delays in both acute and elective complex surgery. The hospital, when fully functional, will have 24 neonatal and 24 paediatric ICU and high-care beds, which will facilitate the existing surgical services and many of the medical disciplines, as well as providing for some new services such as bone marrow transplantation.
- **Operating theatres:** Dedicated state-of-the-art theatres for cardiothoracic, transplant, neuro-, and orthopaedic surgery and others will allow further expertise to be developed and, together with ICU facilities, will cut down on unacceptable delays in surgery.
- **Anaesthesiology:** Expertise that has already been developed at existing hospitals will be concentrated at NMCH. This will be expanded as the surgical services in the various specialties develop.
- **Imaging:** State-of-the-art magnetic resonance imaging, computed tomography and positron emission tomography-computed tomography scanners, as well as other imaging equipment are already in place to provide services for NMCH as well as helping to reduce waiting times at the other hospitals.

Additional support from the allied medical disciplines, laboratory services and pharmacy have all been provided for.

Staffing

Very few of the services to be provided will involve the transfer of existing staff to NMCH, as the vast majority of the services will be an expansion of existing services or the development of new services. Training of general and specialised nurses, as well as fellows in medical and surgical disciplines has been in place for several years. However, staffing of the hospital will be an ongoing challenge and must be done carefully so as not to deplete staff at the existing public hospitals. Conditions of service will be the same as those for the public sector. Training of both doctors and nurses is ongoing and the interest shown in working at NMCH from those in SA and abroad indicates that, although it may take several years, the hospital can be fully staffed.

Patient selection

Each discipline has already, or will define, which categories of patients will qualify for admission to NMCH, and all patients will be referred through defined channels of referral. Referral back to the referring hospital will take place when appropriate and follow-up will depend on the services needed. No accident and emergency service will be available, as that of Charlotte Maxeke Johannesburg Academic Hospital is less than 1 km away. Private fee-paying patients, who could make up to 20% of the patients treated, will be admitted provided their condition fits the criteria for admission. Similarly, those from SADC countries or further afield will be admitted on the same basis once a suitable funding model has been worked out for them.

Training and academic affiliation

Once the NMCH is functional, an application will be made to the Health Professions Council for recognition as a training facility for nurses, registrars, fellows etc. Due to NMCH's proximity, the majority of trainees will probably be affiliated to Wits, but registrars and fellows from the University of Pretoria and Sefako Makgatho University will also rotate through NMCH. Supernumerary registrars and fellows from other countries will be supported. Specialists and subspecialists employed by NMCH will have the option of joint appointment with any of the medical faculties. Links with the University of Johannesburg and other tertiary institutions will also be encouraged.

Funding is the key

The NMCH will be run as an independent facility with a board consisting of members from all the relevant stakeholders. Most of the funding for the hospital will come from the National Treasury and, as required constitutionally, will be channeled through the Gauteng Department of Health, with additional funds from the GDH which will follow some services that move from existing hospitals. Additional funding will come through fee-paying or foreign patients. However, funding for the coming financial year will only allow a very limited service to be provided, consisting of imaging, haemodialysis and cardiac catheterisation, with some ICU back up. The resources that have gone into the physical facility and training of human capital cannot be utilised in the near future until funds allow for sufficient staff to be employed. Every effort should be made by all the relevant stakeholders to ensure that sufficient funding becomes available so that the hospital can be utilised to its full potential.

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The recently launched Nelson Mandela Children's Hospital in Johannesburg, South Africa.