

THE RED CROSS WAR MEMORIAL
CHILDREN'S HOSPITAL
&
THE CHILDREN'S HOSPITAL TRUST

**IMPACTING CHILD HEALTHCARE
IN AFRICA AND GLOBALLY**



The Red Cross War Memorial Children's Hospital in Cape Town, South Africa is one of the leading children's hospitals in the world. Not only does the Hospital provide world-class treatment to seriously ill children, but also carries out high level medical training both locally and internationally, and conducts groundbreaking research into childhood illnesses which has global influence. As the largest, stand-alone tertiary hospital dedicated entirely to child health, the Red Cross War Memorial Children's Hospital's stature far outweighs its 260 000 annual patient visits. It holds the hope of a healthy childhood, a parent's faith in healing, and a medical professional's gift of prevention and cure for tomorrow's most precious resources – our children.



“ It is known throughout the world as a centre of excellence for pioneering research and treatment of childhood diseases and as the premier centre of specialist paediatric training in Africa. Though located in Cape Town, it has become a national and international resource. ”

Former president and international icon, the late Mr Nelson Mandela

The Hospital's global and national milestones

As the largest, stand-alone tertiary hospital dedicated entirely to child health in sub-Saharan Africa, the Red Cross War Memorial Children's Hospital has an impressive list of successes and milestones within paediatric healthcare on the continent and globally:

1950s

- Established South Africa's first neonatal surgery unit in South Africa.
- The first successful intubation on a neonate, which was the onset of critical care globally.
- The first open-heart surgery on a child in South Africa.

1960s

- The first successful separation of conjoined-twins in South Africa.
- Established the first dedicated children's cancer service in South Africa.

1970s

- Established the first Poisons Information Centre in South Africa.
- The first tertiary Hospital in South Africa to host a Paediatric Clinical Nurse programme.
- Established the first centre for child accident prevention in South Africa, Childsafe.

1980s

- Established the first and only dedicated paediatric trauma unit in South Africa.
- The first tracheostomy and ventilation home care programme in South Africa was developed, enabling children with respiratory problems to be cared for at home.
- The first, and still only, dedicated paediatric neurosurgical unit in SA was established.

1990s

- The first paediatric heart transplant in South Africa.
- The first liver transplant programme for children in Africa was established.
- The first combined liver and kidney transplant on a child in South Africa.

2000s

- The first living-related liver transplant in South Africa.
- A new state-of-the-art Operating Theatre Complex was built, comprising eight fully equipped specialised operating theatres of which three are fully digitalised. The new digital installation is the first of its kind and sophistication in sub-Saharan Africa and is technically on a par with the most advanced installations in the USA, Europe, Asia, Middle East and Australia.

2010s

- The upgrade of the only specialised paediatric Burns Unit within a dedicated children's hospital in Africa, with modernised facilities on a par with the ICU level of critical care and international standards.
- A Surgical Skills Training Centre is built - the first and only of its kind in sub-Saharan Africa to offer training in paediatric Endoscopic Surgery.

Achievements and calibre of the medical staff at the Hospital

The Red Cross War Memorial Children's Hospital has attracted and retained many of the leading paediatricians and surgeons in various sub-specialties in their field to work at this incredible institution.

Herewith a synopsis of just a few of its world-renowned staff:

Professor Heather Zar - Head of the Department of Paediatrics and Child Health; Director of the Division of Paediatric Pulmonology; Director of Child & Adolescent Health at the Red Cross War Memorial Children's Hospital and at the University of Cape Town.



- Closely involved in the development of global and African educational and research networks.
- Her research focuses on child lung health, childhood TB, pneumonia, HIV-associated lung disease, and asthma.
- She has been published widely in high impact journals and is the recipient of a number of research awards.
- Rated as an internationally acclaimed researcher, receiving an A-rating by the South African National Research Foundation.

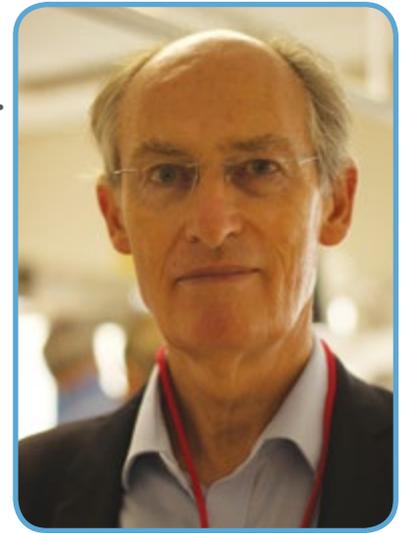
Holds leadership positions:

- President of the Pan African Thoracic Society; and
- President of the South African Thoracic Society.
- Recently won the National Science and Technology Forum NSTF-BHP Billiton TW Kambule Award for: an Individual for an Outstanding Contribution to Science, Engineering, Technology and Innovation (SETI) through Research and its Outputs over the last 10 years.
- In 2014, Professor Zar attended the American Thoracic Society meeting in San Diego and received the World Lung Health award in recognition for her research work and innovations in improving child health.



Charles FM Saint Professor Alastair Millar - past Professor of Paediatric Surgery at the University of Cape Town; Chief of Paediatric Surgery at the Red Cross War Memorial Children's Hospital 2006 - 2013.

- Awarded the Denis Browne Gold Medal for Outstanding Services to Paediatric Surgery by the British Association of Paediatric Surgeons in 2011.
- Appointed as Honorary Professor of Paediatric Transplantation at the University of Birmingham, UK.
- Held the position of Executive Council Member of the World Federation of Associations of Paediatric Surgeons (WOFAPS)
- Assistant Secretary and Secretary Elect 2013.
- On the Editorial Board of the two major paediatric peer-review surgical journals; the Journal of Paediatric Surgery and Paediatric Surgery International.
- Past President of the South African Transplantation Society and is President of the Senate for the College of Paediatric Surgeons of South Africa.
- More than 180 publications in peer-review journals, 23 chapters in major textbooks and more than 160 presentations at national and international conferences.



Professor Anthony Figaji - Head of Department of Paediatric Neurosurgery at the Red Cross War Memorial Children's Hospital.

- He has a PhD in brain monitoring in children with brain injury, a subject on which the unit has become one of the world's leading authorities.
- Recipient of the 2008 UCT Fellows' Award and of the 2008 Bronte Stewart Research Prize for the most meritorious PhD thesis in the Health Sciences Faculty.
- He collaborates with several institutions on research projects, mainly in paediatric brain trauma, including Lund University in Sweden and the University of Pennsylvania in Philadelphia.
- The only African representative on the executive committees of the International Neurotrauma Society and the International Society for Intraoperative Neurophysiology.



Emeritus Professor Heinz Rode - carried the position of Chief Specialist and Charles F.M. Saint Professor and Head of the Department of Paediatric Surgery at the Red Cross War Memorial Children's Hospital and University of Cape Town (1997 to 2007).

- Through his research and engagement in burns care Prof. Rode is also regarded as the leading academic and practical burns surgeon in South Africa.
- He is recognised throughout the world as a leading paediatric burns specialist. He has won many international awards for outstanding services to burned children, which include the Zora Janzekovic Golden Razor Award for outstanding services to paediatric burns from the European Club for Paediatric Burns; the Golden Jubilee Award for outstanding services to medicine from the Colleges of Medicine of South Africa; and recognised as a leading burn surgeon in South Africa from the South African Burn Society.



Professor Andrew Argent - Medical Director of the Paediatric Intensive Care Unit (PICU) at the Red Cross War Memorial Children's Hospital for the past 15 years.

- He is a member of the international advisory group for the Advanced Life Support Group (UK).
- Course Director of the Advanced Paediatric Life Support course (UK) in South Africa.
- Prof. Argent is a past president of the Critical Care Society of Southern Africa, and current president of the World Federation of Paediatric Intensive and Critical Care societies.
- He was invited to Boston Children's Hospital Paediatric ICU – one of the most respected PICU's in the world – to teach, lecture junior staff, participate in ward rounds, as well as be interviewed for a webinar which was broadcast worldwide. Such an honour is highly regarded in the medical industry.



Professor Jo Wilmshurst - Head of Paediatric Neurology at the Red Cross War Memorial Children's Hospital; Director of the African Paediatric Fellowship Programme.

- A member of the executive committee of PANDA-SA (Paediatric Neurology and Development Association of Southern Africa), the African Paediatric Neurology Association and of the Commission on Paediatrics for the ILAE (International League Against Epilepsy).
- The Secretary of the International Child Neurology Association, and part of the combined ILAE/WHO working group for establishing neonatal guidelines.
- She has been awarded the travelling fellowships from the King's Fund and Peel Trust in the UK and the Novartis Epilepsy Fellowship (Australia).
- Over the past 5 years, Prof. Wilmshurst has written chapters in three leading international textbooks and has published 25 articles in peer-review journals.



Professor Mignon McCulloch - Consultant Paediatric Nephrologist in the Paediatric Intensive Care Unit at the Red Cross War Memorial Children's Hospital.



- Previously held the post of Consultant Paediatric Nephrologist at Evelina Children's Hospital (Guy's & St. Thomas' NHS Trust), London.
- Prof. McCulloch is Paediatric Renal advisor to Kings College Hospital (London) for the Paediatric Liver and Small bowel transplant programme.
- An Honorary Associate Professor (University of Cape Town).
- Has a Fellowship of College of Paediatricians Examiner and has also established a 6 month training programme for fellows from elsewhere in Africa.
- She is a Council member from 2011 to 2015 representing training on the International Paediatric Transplantation Association (IPTA) and in collaboration with Great Ormond Street Hospital Paediatric Transplant programme, performed the first Paediatric HIV Transplant in the UK.
- In her current post Prof. McCulloch is rolling out the Acute Kidney Injury and Acute Peritoneal Dialysis programme throughout Africa.

Several members of the Department have recently been honoured with international or national awards. **Emeritus Professors Atties Malan, David Woods** and **Vincent Harrison** were awarded the United South African Neonatal Association (USANA) Life Service Award for their commendable vision and contributions to the development of neonatology.

The Department of Paediatrics and Child Health presented **Emeritus Professor Maurice Kibel** with a Lifetime Contribution award for his dedication and outstanding contribution to child health over a lifetime.

Emeritus Professor Sid Cywes was given a Lifetime Achievement award in Paediatric Surgery by the World Organisation for Paediatric Surgery.



The Children's Hospital Trust funds projects and programmes at the Hospital and beyond which has significant influence on paediatric healthcare in Africa and globally.

There is a perception that South Africa is a wealthy country on the African continent and therefore does not require external funding. What's important to remember is that thousands of children treated at the Red Cross War Memorial Children's Hospital are from informal settlements/shacks and almost all of the children are from impoverished communities and families, with the most disadvantaged children emanating from the Eastern Cape. Herewith a few of the key projects funded by the Children's Hospital Trust that have a global impact:

1. The Centre for Childhood Infectious Diseases (incorporating the Paediatric Infectious Diseases Unit (PIDU) and Research Centre for Adolescent and Child Health (REACH))



- The PIDU works primarily with stable patients with infectious diseases.
- Between 2004 and 2009 the HIV mortality rate at the Hospital decreased by 68% as a direct result of the treatment the children received in PIDU.
- The Unit is one of few registered with the Health Professions Council of South Africa to train paediatric infectious diseases sub-specialists.
- The Unit also provides hands-on training for doctors and nurses working in the Western Cape antiretroviral treatment programme, and conducts regular symposia for these HIV health professionals.
- The Clinical Research Unit has over 50 researchers associated with them and under the leadership of Prof. Heather Zar, carries out a wide range of research addressing the leading causes of childhood illness and death in African children (TB, HIV-associated respiratory illness and asthma)
 - Research on prevention of respiratory illness and TB in HIV-infected children has led to recommendations for use of a medicine, isoniazid, in HIV-infected children older than a year as an effective preventative strategy and has been included in World Health Organisation (WHO) guidelines.
 - Research on asthma in children has led to the development of a low cost plastic bottle "spacer" – this has enabled effective asthma therapy to children especially in poorly resourced areas. The recommendation for use of this bottle spacer is contained in several international guidelines, including those of the Global Initiative for Asthma and South African guidelines.

- o Research on childhood TB has changed the way in which TB is diagnosed in children, enabling the use of rapid testing to diagnose TB as well as drug-resistant TB within one day. This is now included in the recommendations from the WHO and South African national guidelines.
- There is a strong focus on pneumonia as a major killer of children under 5 years of age.
- Prof. Zar's projects have been supported through major global funding agencies, including the National Institutes of Health in the USA, the European Developing Country Clinical Trials Partnership, the Wellcome Trust, the Global Alliance for Vaccine and Immunisation, the Bill & Melinda Gates Foundation, the Rockefeller Institute and the World Health Organisation.
- Work emanating from this Unit has influenced national, continental and global guidelines for treatment of children, with impact on child health in several areas.
- Through this support, Prof. Zar has been able to develop much-needed capacity in child health, with the establishment of a very productive paediatric clinical research unit at the Hospital, the growth of several satellite clinical research sites such as community-based clinics, and the training of several PhD and master's students.

2. African Paediatric Fellowship Programme

The Children's Hospital Trust has been funding the African Paediatric Fellowship Programme (APFP) since 2007. This broad impact programme under the leadership of **Professor Jo Wilmschurst**, was created to develop capacity in clinical services, research and training in child health in Africa.



- The programme aims to train African fellows in highly specialised paediatric skills that will improve the training and health delivery offered by their home institutions. The strength of training these fellows on their own continent, is that the methods and techniques taught are relevant to their own African setting. By growing this into a network of skilled African healthcare professionals, they are empowering them to advocate for building capacity and improving child health in Africa.
- The programme has trained around 60 paediatric sub-specialists from several countries in Africa including Malawi, Kenya, Nigeria, Ethiopia, Uganda, Ghana and others.
- APFP has developed long-term partnerships with academic institutions and tertiary level teaching hospitals in a number of countries including Malawi, Ethiopia, Zambia, Uganda, Zimbabwe, Kenya, Nigeria, Tanzania and Ghana.
- Since the start of the APFP, 55 trainees have, or are completing training in paediatric disciplines with 98% retention for those who have returned. A further 22 have been accepted into the programme in 2014. There are now 22 partner institutions in 11 countries across Africa.

Case in Point

An example of the impact of this programme is demonstrated by one of the Kenyan fellows, **Dr Bashier Admani**. After completing his training in paediatric nephrology at the Hospital, Dr Admani returned to his work at Agar Khan University Hospital in Kenya with the goal of establishing a Paediatric Nephrology Service.

Not only is the service now providing vital care to Kenyan children, but his first renal transplant has been a great success. He continues to have tremendous impact as Senior Lecturer and has recently organised the 4th African Paediatric Nephrology Association Congress in Nairobi.

The APFP committee members have conducted site visits in Africa and Tanzania is developing a strategic healthcare plan to train multidisciplinary teams.

Collaboration is underway between the Muhimbili University of Health and Allied Sciences (MUHAS) and the affiliated centre, the Comprehensive Community Based Rehabilitation in Tanzania (CCBRT) hospital, to strategically train multidisciplinary teams to improve healthcare delivery in key areas. A strategic plan was submitted in February 2013, following the APFP site visit, which addresses training needs in relevant areas identifying specific healthcare workers (medical, nursing and rehabilitation therapy). Fellowships for promising trainees can now be planned for with the APFP. In addition, an educator visit is scheduled for 2014 from stakeholders from the Tanzanian partner institutions which will enable this strategic plan to be developed further.

Similar positive illustrations have occurred with other trainees, for example those trained in the field of pulmonology returned to Kenya and have successfully lobbied to alter the vaccination policy. On returning to Kenya, a recent Kenyan trainee in paediatric pulmonology, Dr Francis Ogara, has influenced national policy on Tuberculosis in children, promoting better diagnosis and treatment of children.

3. Child Nurse Practice Development Initiative

- Since inception in April 2007 this programme is achieving its objective to increase the number of qualified paediatric nurses in South Africa and Africa to affect the quality of care for sick children.
- Through a partnership with the University of Cape Town's Department of Nursing, the School of Child and Adolescent Health and the Red Cross War Memorial Children's Hospital, a full-time one year hospital-based postgraduate course is being offered. This course qualifies graduates for registration as paediatric nurses with the Health Professions Council of South Africa.
- The programme has successfully trained 158 nurses since being established, significantly increasing the number of qualified child nurse specialists, while also facilitating the re-integration of qualified child nurses into their own practice settings.
- In 2011, 55% of the enrolled students were from African institutions. In 2012, this increased to 70%. Partner countries are Malawi, Botswana, Namibia, Zambia, Ghana and Uganda.
- A highlight of this programme was the launch of the first Clinical Masters programme in Child Health Nursing with the University of Malawi. This programme is the first of its kind in Africa.



4. The Surgical Skills Training Centre



- The Surgical Skills Training Centre was officially opened at the Red Cross War Memorial Children's Hospital in June 2011.
- It is the first such centre in sub-Saharan Africa, to provide local and African surgeons and physicians the opportunity to train in the foundations of endoscopic (minimally invasive) surgery.
- The Centre is used for those training in specialties other than surgery too, such as local anaesthesia workshops, and basic surgical skills courses for medical students and junior registrars.
- With the new Operating Theatre Complex at the Red Cross War Memorial Children's Hospital, the 9-station Surgical Skills Training Centre linked to this facility is ideally placed to advance multidisciplinary endoscopic surgery skills both locally and continentally.

The Surgical Skills Training Centre has made major contributions to paediatric surgery both locally and internationally.

International contributions have been through:

- o the introduction of new surgical techniques;
- o training postgraduates and fellows;
- o and teaching international students from USA, Europe and UK in practical surgery and involving them in clinical research.

In Africa the contribution has been through:

- o establishing a consortium between Cincinnati Children's Hospital and the Red Cross War Memorial Children's Hospital to create a teaching hub for African Paediatric Surgeons;
- o establishing long-term outreach assistance and training programmes in South Africa for Paediatric Surgeons from African countries;
- o and establishing a web-based weekly teaching programme and training courses for African paediatric surgeons including: Ghana, Nigeria, Saudi Arabia, India, Kenya, Malawi, Turkey, Greece, Switzerland, Germany, England and Zambia.

5. Poisons Information Centre

- The Red Cross War Memorial Children's Hospital is the only institution in South Africa that gathers and collates poisons information at its Poisons Information Centre.
- There are only 2 emergency poison lines available 24 hours to the South African public and medical professionals use this database as their source of information, which is available for both children and adults. It includes relevant information on child poisonings from international resources making information specific to South Africa immediately available on demand.
- The database is distributed to more than 30 centres country-wide and to five other African countries.
- To date, it has grown from a system holding data on 200 to over 40 000 named toxins.
- The Children's Hospital Trust funded the migration of their CD-based information system to a web-based system which now ensures an efficient and more accessible poisons advice service to medical professionals and the general public throughout Southern Africa.
- The internet-based system, called Afritox, is accessible on- and offline by medical professionals throughout the entire Southern African region, as well as medical professionals in neighbouring African countries outside South Africa.

6. ICU as a centre of excellence

The Paediatric Intensive Care Unit at the Red Cross War Memorial Children's Hospital is the biggest in Africa and has an extraordinary team of people whose international collaborations have rolled out globally and in Africa. The Hospital's ICU provides opportunities for training registrars from all over Africa to specialise in paediatric critical care and members of the professional team are often invited to conferences and hospitals in Africa and abroad to share their insights and lecture in critical care for children.



As a result of the internationally renowned research, training and expertise, the Unit has achieved exceptional results including:

- o the dramatic decrease in the mortality rate of children with burns and head injuries (accounts for the majority of trauma-related death and disability in South Africa)
- o optimised care for children with HIV with a less than 15% mortality rate whereas previously most children with HIV died.

The ICU teams deal with complex cases including cardiac (250-300 cases per year), neonatal surgery (on the smallest of children, weighing as little as 700grams), neurosurgery (with more experience than anywhere else globally particularly with brain oxygen monitoring), trauma and burns (managing far more cases than in USA and UK), chronic conditions, tracheostomy children, metabolic (diagnosing inborn errors at a cellular level), respiratory and neurological conditions.

In Conclusion

Since established in 1994, the Children's Hospital Trust has funded prioritised projects and programmes at the Red Cross War Memorial Children's Hospital and since 2011 has implemented an outreach strategy to broadly impact on paediatric healthcare in the Western Cape Province in South Africa. This has resulted in even more children being granted the best possible chance of living the life they were destined for. The Children's Hospital Trust is driven by its commitment to get children back home where they belong – safe from injury and the burden of disease that is rife on the African continent.

See our 2014-2015 priorities listed below:

- **Upgrading and expansion of the Paediatric Intensive Care Unit at the Red Cross War Memorial Children's Hospital**, which currently houses 22 of the 26 paediatric ICU beds in the Western Cape. In addition to increasing the capacity to accommodate more paediatric ICU beds, this improvement of the Hospital's paediatric ICU will include high-care facilities for neonates, isolation units to curb cross-infections and enhanced facilities for staff and parents.
- **Upgrading the Parents Accommodation at the Red Cross War Memorial Children's Hospital**, to make sure that when patients are being treated, they have their families nearby. This renovation will include an extension to double the amount of accommodation to 120 beds for parents and caregivers, plus a play area for children waiting to be discharged, and an isolated area for parents who suffer from TB.
- **St Joseph's for Chronically Ill Children** - providing an improved paediatric rehabilitation programme for special-needs patients and to also empower and involve parents in their child's rehabilitation. Upon discharge from the Red Cross Children's Hospital, it is sometimes necessary for a patient to receive intensive or longer term rehabilitation at an intermediate level of the healthcare system and supporting this rehabilitation programme assists to alleviate the burden of referrals on the Red Cross Children's Hospital.
- **Sarah Fox Children's Convalescent Hospital** - providing an inpatient paediatric palliative care service at this step-down facility. This hospital provides longer-term, palliative and holistic paediatric pain care for 65 children with life-limiting or life-threatening illnesses per year.
- **Practical Approach to Care Kit for Children (PACK child)** - assisting medical doctors and nurses at primary healthcare clinics with effective tools to better diagnose, treat and refer sick children between 0 -12 years old.
- **Child Speech and Hearing Programme** - providing screening, treatment and therapy for children aged 0 - 6 years with speech and hearing impediments in the Western Cape.



To support any one of the Trust's priority projects and programmes that will help children on their journey back to childhood contact the Trust office on +27 21 686 7860 or email chantel.cooper@chtrust.org.za

