

## The “little” needs that make a big difference

---

*Philanthropy has been a part of SickKids' history since its doors first opened in 1875. The great philanthropists of our past put the fledgling hospital on its feet, and, years later, enabled SickKids to establish its Research Institute. But the achievements of these giants would have come to nothing were it not for the huge community of generous donors who followed them. Donors have helped SickKids become Canada's most research-intensive hospital and the largest centre dedicated to improving children's health. Your generosity contributes directly to SickKids' reputation for leadership and we are proud and grateful for everything you have done and continue to do.*

Every day, SickKids meets the needs of patients with every type of medical condition, requiring a broad range of clinical expertise and resources, and with the additional challenge that these patients are children. Treating children demands not only special expertise, but also special technologies, and special, kid-sized, equipment. Our role as Canada's premier paediatric hospital adds a further demand – the rare and difficult cases for whom SickKids can be the last resort often require highly specialized resources. To serve each and every patient in the best possible way SickKids has a perpetual, ever-changing list of practical priorities it must address on a daily basis.

Donations without restriction enable the Hospital to address these demands.

### **Critical Talent and Research**

Such unrestricted gifts enable us to compete in the world market for the very best in clinical practice and research. In 2005-06 we were able to recruit Dr. Felix Ratjen as Head of the Division of Respiratory Medicine, and H.E. Sellers Chair in Cystic Fibrosis. Dr. Ratjen is a former Professor of Paediatrics at the University of Essen in Germany with a formidable reputation for research in cystic fibrosis. At SickKids his knowledge and drive are creating clinical research networks and establishing a research base that will generate and explore new ideas for treatment of this killer disease.

Donors have made it possible to attract leaders in science like Dr. Ratjen. They also support our innovative clinician-scientist program – a program that helps form tomorrow's leaders. As clinician-scientists, our physicians and surgeons have time set aside to conduct laboratory research into the illnesses they treat in the Hospital. This melding of the clinical with research has led to transformative insights. Dr. Peter Dirks, a SickKids neurosurgeon, observed that brain tumours he had removed surgically would re-grow. He turned to his laboratory at the Research Institute to find out why. His research led to the discovery of a tumour stem cell. He showed how it could cause tumour re-growth, and that many cancer therapies would fail because they did not kill the cancer-sustaining stem cells. Dr. Dirks' discovery is changing our thinking about cancer cell growth.

The importance of attracting and retaining the best in medical and research science cannot be understated. SickKids has become a leader in research because of its ability to attract investigators like Felix Ratjen and Peter Dirks. Graduates and Fellows vie for the opportunity to work and study in the labs of such “global greats.” The net result of these interactions is knowledge – knowledge shared and applied in clinical practice, to improve the health of children and the adults that they become.

Some of the achievements of our clinicians and scientists in 2005 include—

- Dr. Maru Barrera led a team of researchers who found that children who survive cancer have almost twice the rate of educational and social problems compared to children without a history of cancer.
- Dr. Gideon Koren and researchers from St. Michael’s Hospital calculated that the annual cost of Fetal Alcohol Spectrum Disorder to Canadians is upwards of \$344 million a year.
- Drs. Norman Saunders and Jeremy Friedman edited *Caring for Kids: The Complete Canadian Health Guide for Children*, a comprehensive guide – in layman’s language – to health and wellness in children.
- Dr. Brian McCrindle and James G. Wengle wrote *Get a Healthy Weight for Your Child*, to help parents prevent and treat childhood obesity.
- The psychiatry program developed multi-media resource materials with practical, hands-on strategies for teaching children with attention deficit disorder.

### **Essential Equipment**

Technologically advanced medical equipment has changed the face of health care. At SickKids, we believe that acquisition and effective use of technology is an important priority that helps us keep the best professionals and continues the revolution in patient care. No matter how small or large the item, our ability to be ready with the right equipment at the right time – thanks to your generosity – is critical. Last year your support helped us purchase:

- **Clinical thermometers – Hospital wide**  
Temperature is a basic vital sign and is checked on all inpatients and many outpatients frequently throughout the day. Because temperatures are taken so often, and need absolute precision in the readings, SickKids uses very high quality, durable instruments. They must be specially designed to fit tiny ears and mouths. They must be digital because the risk of mercury contamination is not acceptable.

They must also be located throughout the hospital in sufficient quantities to ensure efficiency for the nursing staff. Last year your generosity enabled the addition of 50 more thermometers and accessory kits (disposable attachments that protect from infection) towards the Hospital-wide need of 500.

- **Berlin Heart System – Cardiac**

The **Berlin Heart** is a ventricular assist device (VAD) – a mechanical pump that takes over the function of the damaged ventricle of the heart and restores normal blood flow. This lessens the workload on the heart and allows a damaged heart to rest in order to heal. Berlin Hearts are also used when blood flow from the heart is inadequate; or for patients awaiting a heart transplant. Last year donor contributions of \$150,000 went towards the purchase of one Berlin Heart.

- **Patient Monitors – Hospital wide**

Patient monitors at every bedside provide vital information such as heart and respiration rates, oxygen saturation and blood pressure. Staff can customize functions for a particular patient based on age group and condition. Thanks to improved technology there are fewer false alarms and more accurate readings. New Clinical Information Centres let staff see information on all monitored patients in one spot around the clock, and review details from the previous 72 hours. When a patient's alarm sounds, a paging system tells staff the nature and location of the problem, allowing for an immediate response. Last year donors contributed \$3,000 towards this ongoing need.

- **Video endoscopic system – Operating Room**

Endoscopy is a type of minimally invasive surgery that involves much smaller incisions, resulting in less scarring and faster recovery. Surgeons operate through small incisions by using an endoscope, a fiber-optic instrument with a small video camera that gives doctors a magnified internal view of a surgical site on a television screen. The smaller instruments of the endoscope allow for an increased range of motion, of particular advantage in operating on small children. Last year one was purchased at a cost of approximately \$50,000.

- **Infant Incubators – Neonatal Intensive Care Unit**

Incubators/Isolettes are used to tightly control the temperature and humidity of the immediate environment of the infant. Infants are less able to respond to changes in the temperature around them compared to older children and adults. Maintaining a stable environmental

temperature is especially important for sick, premature, and low birth weight babies. Such babies are more likely to suffer ill effects such as feeding difficulties, low blood sugars, hypothermia, and difficulty breathing when the temperature around them changes – even by a few degrees. Last year the Hospital purchased ten incubators at approximately \$25,000 each.

- **Ventilators – Neonatal Intensive Care and Critical Care Units**  
Ventilators are machines used to help infants breathe when they cannot do so effectively on their own. This may be due to prematurity, illness, anomalies, or injury during birth. Without ventilators many of these infants would die or suffer irreversible brain damage. Each year an average of 17 babies *per day* at SickKids use a ventilator for breathing. The new infant ventilators are designed to adjust automatically to the baby’s breathing effort, promoting spontaneous breathing and early weaning from the machine. The machines also conduct important measurements that enable clinicians to evaluate the effects of ventilatory strategies and respond accordingly. Last year, thanks to donor contributions, the Hospital was able to acquire two more much needed ventilators at \$50,000 each.
- **Digital Fundus Camera (RETCAM) – Ophthalmology**  
The RETCAM, used to photograph the retina, was initially used for retinoblastoma, but has now become essential to the management of retinopathy of prematurity (ROP) and numerous retinal and anterior segment diseases. The digital RETCAM enables doctors to analyze images in real time, comparing current images to those previously taken, assessing change and making management decisions on the spot. It has the additional advantage of electronically communicating images for consultations abroad – SickKids Ophthalmology is regularly consulted on images from other countries and the RETCAM significantly advances its ability to work on this international scale. Last year the Hospital purchased one camera at a cost of \$25,000.

These are just some examples of the equipment and technology acquired in 2005-06 to serve children in many different parts of the hospital where the need arose.

Your generosity helped SickKids bring people with outstanding skills to treat and heal the children in our care; *and* to provide them with the tools and technology they needed. You helped us achieve results.

On behalf of all of us and the children we serve—

**Thank you.**