Department of Paediatrics

Annual Report 2012

University of Pretoria

Steve Biko Academic Hospital

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
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Message from the HOD

Dear Friends of the Department of Paediatrics and Child Health

2012 was a spectacular year for our Department and so many people made that happen. My thanks go to my staff (doctors and administration). You have made us great!

Some of our successes include the launch of our Vision/Mission Programme, doubling our research and publication outputs, two successful PhD's and 4 MMed's and a most succesful Update with over 170 delegates.

In addition we are now moving ahead with our fund raising initiative (KIDS UP) to start raising money for much needed equipment for some of our Divisions.

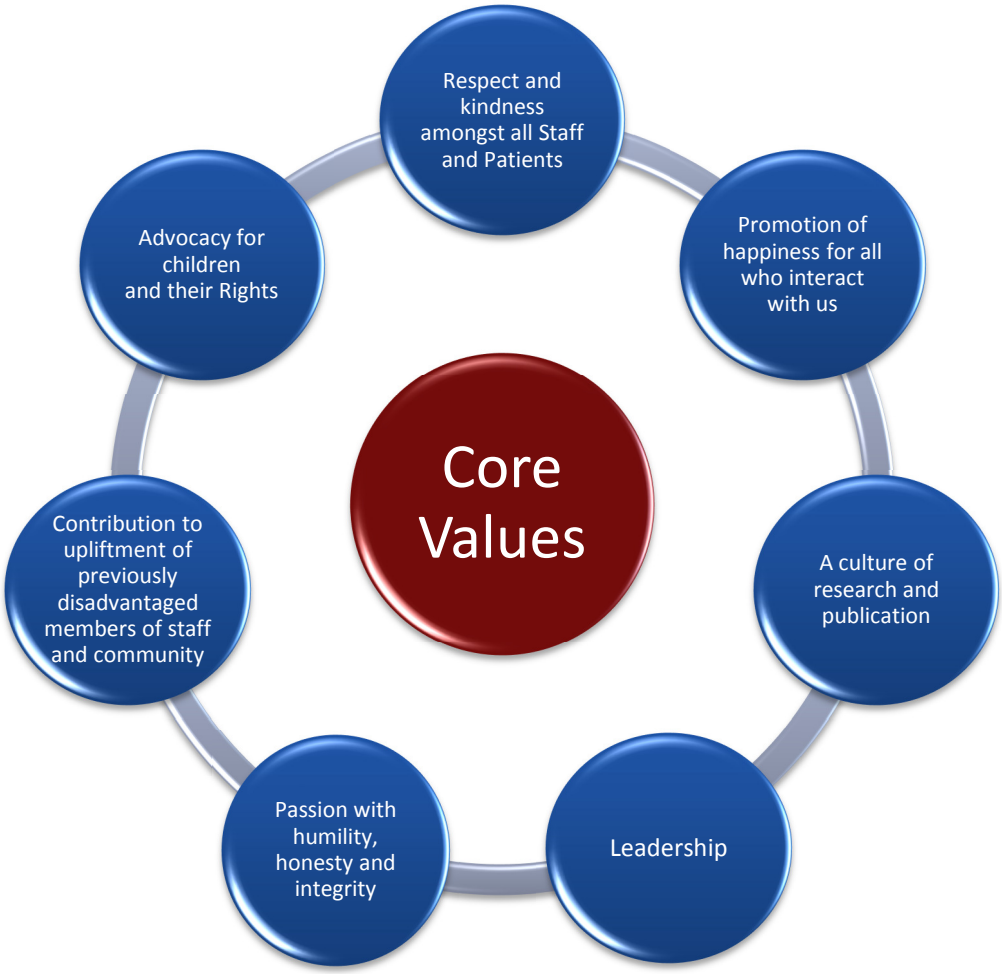
I present this Annual Review with pride.

Robin J Green

Vision and Mission

Our Vision

To be the MOST SUCCESSFUL Professional Department at the University of Pretoria; leading through STAFF DEVELOPMENT, PERFORMANCE and quality THROUGH PUT.



Our Mission

To be a national and continental resource and advocate in Paediatrics and Child Health, advancing excellence in research, training and continuing professional development, clinical care, and administration and to be a sought after training centre for Paediatrics in Africa.

Community Involvement

Nephrology

World Kidney Day is celebrated each year on the second Thursday in March – it was on 8 March In 2012. It was established as an annual calendar event through the combined efforts of the International Society of Nephrologists (ISN) and the International Federation of Kidney Foundations (IFKF). The National Kidney Foundation of South Africa (NKFSA) is a member of the IFKF.

The mission of World Kidney Day is to raise awareness of the importance of our kidneys to our overall health and to reduce the frequency and impact of kidney disease and its associated health problems worldwide.

The main driving force for the WKD campaign is the fact that kidney disease is a massive health burden globally with 10% of all people having Chronic Kidney Disease (CKD).

- Goals of the NKFSA include early diagnosis and prevention of progression of kidney disease.
- The NKFSA focuses on schools to host educational talks and has pamphlets and posters available for public awareness. We participated in a small study on BP levels in school children in 2011 and reported the results at the South African Renal Society Congress in September 2012

Neurology

The UP/Netcare initiative at Moot Hospital is a consultant service for paediatric neurology and a valuable service to the community. In addition it is an external source for research funding. An outreach program to Polokwane Mankweng Complex is in place and members of the team visit the site and assist those clinicians in the diagnosis and management of patients with neurological problems.

The Neuronetwork is an active community involving many individuals involved in the care of children with special needs in our referral area and beyond. The aim is to create a coherent environment for our patients taking care of all their needs. The personnel and therapists of all the schools for children with special educational needs were invited to the annual meeting this year, held at New Hope School. It was a very successful meeting and 120 individuals, including therapists in private practice and from Mpumalanga, attended the workshop on “Bullying”. There is also an important focus on health care professionals working in the primary and secondary health care environment including Mpumalanga. Continuous professional education is a priority as we want to ensure a functional down referral system for the paediatric neurological patients outside the direct referral area of our hospital.

Neonatology

Despite being only two consultants working in neonatology, we actively participate in the Johnson & Johnson project on Neonatal Resuscitation by presenting workshops at our referral hospital. There is a telephonic consultation service for neonatal problems and outreach actions to Tshwane District Hospital and Mamelodi Hospital .

Oncology

The paediatric oncology unit is actively involved in outreach and in August of this year we held an awareness campaign for the department of health, the northern Gauteng Region. In early 2013 we will visit Mpumalanga Hospitals, with the view of establishing a shared care program to reduce the number of hospital admission from this region.

Pulmonology

Refiloe Masekela is the Chair of the National Asthma Education Programme and has created significant momentum in asthma education. World Asthma Day is celebrated in May.

She is also secretary to the Pan African Thoracic Society and has shared Advocacy in World Asthma Day and World Pneumonia Day.

Clinical Service

Cardiology

Table 1: In-patients

	Total	Ave	Ward	Ave	ICU	Ave	Surgeries	Caths	Deaths
	Admissions	Stay	Admissions	Ward stay	Admissions	ICU stay			
January	18	6	13	3	5	5	4	5	0
February	32	7	23	4	9	6	7	9	0
March	29	7	20	3	9	5	7	15	2
April	32	8	24	4	8	7	6	7	2
May	*43*	*6*	*30*	*2*	*13*	*5*	*10*	*12*	*1*
June	41	7	27	2	14	3	11	12	2
July	32	5	23	2	9	4	7	13	1
August	36	6	25	4	11	4	8	15	3
September	33	7	20	3	13	5	10	9	3
October	37	8	27	3	10	6	8	13	3
November	64	5	56	2	8	5	12	15	4
December	18	5	16	3	2	8	3	8	1
Total	**415**		**304**		**111**		**93**	**133**	**22**

Table 2: Cardiac Catheterisations and other Procedures

Month	Dx Catheters	PDA devices	BD	Other Interventions	Total	Holter ECG	Stress ECG
						1	1
January	4		1 x Ao		5	2	0
February	7	2			9	1	0
March	14		1 x PV		15	2	0
April	5	2			7	3	0
May	11	1			12	3	0
June	3	5		ASD closure x 4	12	2	0
July	10	3			13	1	0
August	14			ASD closure x 1	15	1	0
September	8	1			9	3	0
October	6	3	4 x PV		13	3	1
November	10	2	1 X PV	2 X PV Implantations / 1 x PDA stent	15	3	0
December	6	1		Coarct redilation	8	2	0
Total	**98**	**20**			**133**	**27**	**2**

Table 3: Mortality Statistics for Cardiology 2012

Date		Hospital No.	Ward	Diagnosis	Med	Surg	Expected
Mar	3	GT63935302	6.9	VSD; PDA; Severe PHT		Yes	No
	20	GT42628605	6.9	VSD		Yes	No
April	26	GT63942414	6.9	PA; VSD; Post central shunt		Yes	No
	15	GT63936942	8.6	Shones Complex; Ao valve BD	Yes		Yes
May	1	GT63942403	8.7	Hypoplastic left heart syndrome	Yes		Yes
June	20	GT63944667	8.7	Complex congenital cyanotic lesion	Yes		No
	17	GT63943335	8.7	Complex congenital cyanotic lesion	Yes		Yes
July	27	GT63946096	8.7	Coarctation of the Ao, LV dysfunction	Yes		No
Aug	31	GT42520453	6.9	TOF; Post central shunt		Yes	No
	20	GT63944930	8.6	Congenital Rubella; PDA; PHT	Yes		No
	27	GT63947107	8.6	Downs; PHT; PDA	Yes		No
Sep	30	GT63909421	6.9	Downs; AVSD; PDA		Yes	No
	11	GT63878247	6.9	TOF		Yes	No
	22	GT63945479	6.9	VSD		Yes	No
Oct	4	GT63949704	8.6	Coarctation, DCMO	Yes		Yes
	24	GT63935479	6.9	PDA; embolised device	Yes	Yes	No
	8	GT63945682	8.7	CCCHD; Duodenal Atresia	Yes		Yes
Nov	6	GT63950337	8.6	SBE	Yes		No
	9	GT63950909	8.6	Pulmonary Atresia IVS Post PDA stent	Yes		No
	22	GT6394423	6.9	TGA, VSD		Yes	No
	28	GT63944071	8.6	DCRV, DCMO	Yes		Yes
Dec	27	GT63954015	8.7	Downs, TET	Yes		No

Table 4: Clinic statistics for Cardiology for the Year 2012

Month	New patients	Follow ups	Total	Sonars	Ward Consultations	ECGs	Admissions
Jan	43	111	154	75	17	120	18
Feb	60	177	237	130	25	190	32
Mar	64	193	257	140	30	176	29
Apr	44	144	188	98	23	140	32
May	54	173	227	125	25	180	*43*
Jun	64	166	230	90	35	200	41
Jul	58	176	234	110	29	195	32
Aug	63	196	259	150	36	210	36
Sep	51	153	204	132	34	170	33
Oct	56	173	229	110	36	180	37
Nov	16	218	234	60	26	80	56
Dec	12	72	84	35	10	30	16
Total	**585**	**1952**	**2537**	**1255**	**326**	**1871**	**405**

Table 5: Ward Statistics for Cardiology 2012

	Total admissions	Avg stay	Ward admissions	Avg ward stay	ICU admissions	Average ICU stay	Surgeries	Caths	Deaths
January	18	6	13	3	5	5	4	5	0
February	32	7	23	4	9	6	7	9	0
March	29	7	20	3	9	5	7	15	2
April	32	8	24	4	8	7	6	7	2
May	*43*	*6*	*30*	*2*	*13*	*5*	*10*	*12*	*1*
June	41	7	27	2	14	3	11	12	2
July	32	5	23	2	9	4	7	13	1
August	36	6	25	4	11	4	8	15	3
September	33	7	20	3	13	5	10	9	3
October	37	8	27	3	10	6	8	13	3
November	64	5	56	2	8	5	12	15	4
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Total	**415**		**304**		**111**		**93**	**133**	**22**

General Paediatrics and Infectious

Diseases

Although the General Paediatrics service has been in existence, a new Infectious disease unit that includes the management of complex HIV patients has recently been added.

Patient Care

In patients	488
Out patients HIV clinic	447
Out patients General Follow up	112
Out patients OPD	686
Total	**1 734**

In patient care

General Paediatrics and Infectious diseases consists of a 6 bed unit situated in Ward 9.5, but also utilize the 4 bed gastroenteritis isolation and the 3 isolation beds available in ward 9.5 and ward 3.1.

Total nr admissions: 488, **Average length of stay 11.5 days**. As part of inpatient care the general firm also see all HIV paediatric patients in other wards and also manage all ward consults from other disciplines.

Clinics

HIV clinic

The unit has grown at an alarming rate and has seen **447** patient this year alone. The unit operates clinics 4 days per week. The new patients are seen on Mondays. One Tuesday per month Oncology patients with HIV are seen at the Oncology clinic in Tshwane. The other 3 Tuesdays are allocated to complex patients and teenagers. Wednesday a full day HIV clinic is operational. Thursdays are allocated to the HIV Bronchiectasis clinic.

The HIV clinic only has Dr Cloete allocated to the clinic. An intern joins the clinic after completion of ward work in Ward 9.5. The registrar allocated to general paediatrics is shared with acute care and is unable to attend the clinics as acute care management of patients take preference. This is a major challenge.

Paediatric Outpatients and General Clinic follow up

Paediatric Outpatients had a busy year.

Table 6:Clinic Statistics Paediatric OPD

Clinic Statistics Paediatric OPD			
Clinic stats	**New**	**Follow up**	**Admissions**
November	47	52	12
December	18	29	1
January	22	32	2
February	27	18	3
March	34	29	1
April	39	37	2
May	26	39	1
June	29	32	4
July	17	20	2
August	23	20	1
September	27	22	2
October	22	25	2
Total	331	355	20

As seen in statistics above a decline in the follow up visits can be noticed. This is probably due to the new general follow up clinic started in May 2012. We only had 1mortality in OPD for the whole year.

A new service has been created this year in May to accommodate general paediatric patient that need long term care and follow up. All patients awaiting appointments at sub specialist clinics also attend this clinic until they are formally

assessed and transferred to a sub specialty. Currently the clinic is operational on Monday afternoons. A **total of 112** patients have been seen in this clinic from May 2012

Gastroenterology

The service rendered by Paediatric gastroenterology is growing annually.

Admissions that cover the whole spectrum of gastroenterology are being reported at a rate of between 30 and 45 per month, adding up to a total of 430 admissions for 2012.

Our main clinics are held on Mondays with a transplant clinic on Tuesday mornings and semi-private patients on Thursday afternoons. A total of 926 patients were seen in the outpatient department.

Our endoscopy service also grew and a total of 15-20 endoscopies per month were done.

The Tukkie-Netcare initiative also grew and the clinic on Fridays at Moot Hospital is established as a significant service.

Special Clinic Report Personnel involved Medical: clinics on Tuesdays and Fridays on a voluntary basis			
Year	**New patients**	**Total patients**	**Clinics per week**
2012	300	926	3

Neonatal Division

The Neonatal Unit consists of 29 beds (10 ICU and 19 High care beds) and is the designated referral site for high risk complicated deliveries including ante-natal diagnosed foetal abnormalities in Central and Eastern Tshwane district. The total deliveries in this area amounted to about 18000 for 2012. It was acknowledged that the Neonatal care facilities were insufficient. The initial structural changes for the new NICU were started but work was halted in the light of the financial crisis. The cutting back on overtime service for nursing staff is affecting the neonatal unit in a very severe way and is going to impact on the outcome of patients.

The foetal-maternal unit is a busy unit and mothers present with a wide range of obstetric and medical problems. The burden of disease in the obstetric patients is high with pre-existing maternal disease accounting for maternal deaths; non-pregnancy related infection and hypertensive disorders of pregnancy. A high percentage of caesarean sections (54%) and infants with low birth weight (34%) are recorded. In addition to ill-inborn infants, sick babies are transferred from the regional service.

"The Steve Biko Academic Hospital Neonatal Database and Clinical Audit: Quality Improvement for Neonatal Care" was started in 2011. The reason for a clinical audit iprogramme in the Neonatal Intensive Care Unit is to improve patient outcomes by improving professional practice and the general quality of services delivered. The first complete Vermont Oxford report was received during October 2012. It is very clear that the disease profile of Obstetric patients and their babies in our care differ from the average unit participating in the Vermont Oxford Network. Indicators of antenatal care and

neonatal care in our unit are now documented. A number of opportunities for improvement were identified and the unit is actively working to implement best care practices in preventing hypothermia in very low birth babies, preventing infection through antibiotic stewardship, central line bundle care and feeding practices. The other best practice identified for neonatal care, prevention of necrotising enterocolitis and prevention of ROP is practice in the unit.

Data related to perinatal care is being collected at all the maternal and neonatal services in the area using the Perinatal Problem Identification Program. Thus perinatal indices (perinatal, neonatal mortality rates, low birth weight rate) patterns of disease and modifiable factors are known. Despite a 12% increase in births at SBAH, the neonatal mortality rate revealed an improvement. Birth asphyxia related neonatal deaths remain unacceptable high.

Table 7: SBAH

	2011	2012
Total deliveries	2873	3273
LBW Rate (<2500g)	35%	34,3%
PNM	95.7/1000	98.7/1000
NNMR	47.7	38.1/1000
ENMR	33.7/1000	27.4/1000
LNMR	14/1000	10.7/1000
Perinatal Care Index	1.80	1.90

Table 8: 2011 SBAH Neonates (Inborn)

2011			NNMR
500-999g	167	5.8%	414/1000
1000-1499g	176	6.1%	241/1000
1500-1999g	259	9.0%	75/1000
2000-2499g	406	14.1%	20/1000
≥2500	1865	64.9%	12/1000
Stillborn:Neonatal †		1.1:1	

Table 9: 2012 SBAH Neonates (Inborn)

2012			NNMR
500-999g	152	4.6%	637/1000
1000-1499g	203	6.2%	129/1000
1500-1999g	290	8.9%	45/1000
2000-2499g	477	14.6%	15/1000
≥2500	2151	65.7%	12/1000
Stillborn:Neonatal †		1.8:1	

Figure 1: Final Cause of Neonatal Death: Steve Biko Inborn 2012

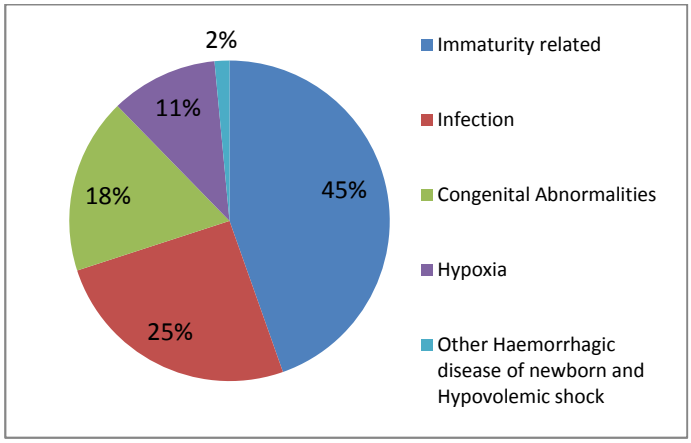


Figure 2: Monthly deaths 2012 (n=95)

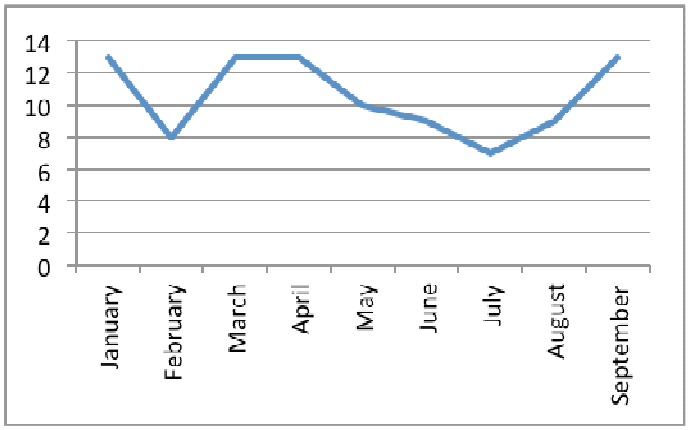
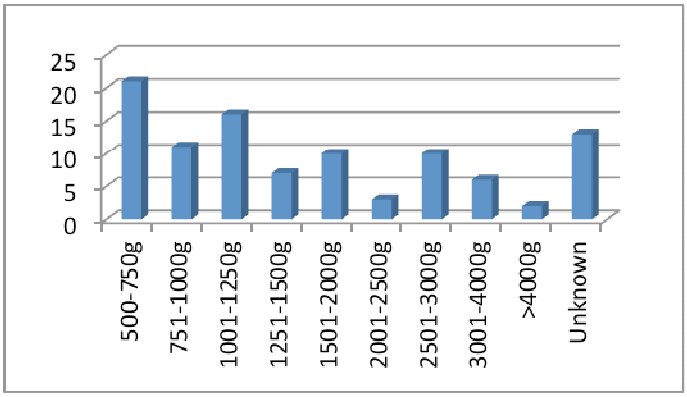


Figure 3: Weight distribution of deaths (n=95)



Implementation of different projects to improve quality of care in NICU:

- Prevention of hypothermia on admission to NICU
- Cord blood pH for identification and grading of birth asphyxia
- Improvement of data collection
- Use of human breast milk and breast milk banking in the unit
- Prevention of nosocomial infection
- Best care practices: CLABSI
- Therapeutic hypothermia for improvement of outcome for babies with HIE.

Special clinic report	• High risk multidisiplanary clinic (Tuesday and Thursday mornings) • Baby follow-up clinic (Every day)
Personnel involved Medical	• Prof De Witt, Dr Lloyd and Interns • Occupational therapy and Dietetics • Speech therapy and audiology, Social work on consultation basis

Neurology

The Paediatric Neurology Unit had a successful year and managed almost 6,000 patients in total:

In patients	345
Out patients	5531
Total	**5 876**

Clinics

The Paediatric Neurology Unit runs 6 clinics per week. The follow-up patients are seen on Mondays and the clinic runs the entire day. The neurodevelopmental intervention clinics are on a Tuesday and Thursday and are a one stop service for all the patients that need a multidisciplinary team in their management. Table 1 gives a breakdown of the patient numbers at the different clinics.

The average number of patients managed per month in 2012 at the paediatric outpatient facility was 23. See Table 2. There was a decline in the number of new patients seen at the UP/Netcare clinic, because of Dr Lubbe that resigned and the clinic was restructured. The clinic growth is graphically presented in Figure 1 and the distribution of the clinic patients in Figure 2.

Personnel involved:

- Dr Lubbe resigned from her full-time post in July 2012 and she is currently doing 20 hours sessions per week. She is appointed by the University of Pretoria.
- Dr Human is appointed for 8 hours sessions per week.
- Dr Pretorius did 2 hours sessions per week and had a contract until December 2012 at the University of Pretoria.
- The two fellows involved are Dr Lamb (since August 2011) and Dr Mogashoa from 1 Military Hospital since August 2012.
- One registrar and one intern rotate through the Unit at a time.

Challenges:

- The waiting lists for new patients are at least 4 months, despite daily clinics run by the allocated people. Patients with urgent or emergency neurological problems are admitted to be sorted out as in patients.
- The shortage of permanent personnel in the Unit.

In patients

- 345 Patients were admitted to ward 8.6 during 2012. Only 33 patients stayed longer than 15 days and their mean stay was 30 days. The mean stay for the rest of the patients was 4 days.

Rehabilitation Unit

- The rehabilitation facility for Paediatric Neurology patients at the Tshwane Rehabilitation Centre played a role in the long-term neurology patients. Regular rounds were done there.

Table 10: Patient numbers seen at the different clinics from 2007-2012

Year	Neurology Clinic			UP/Netcare Clinic			CP/NDI-Clinic	Grand Total	
	Old	New	Total	Old	New	Total	Old	New	Total
2007	1988	619	2607	138	119	257	856	**738**	**3720**
2008	2414	665	3079	172	134	306	1146	**799**	**4531**
2009	2726	653	3379	209	101	310	1204	**754**	**4893**
2010	2455	559	3014	220	140	360	1253	**699**	**4627**
2011	2919	568	3487	202	120	322	1758	**688**	**5567**
2012	2884	593	3477	182	69	251	1803	**662**	**5531**

Table 11: Average number of patients seen per clinic at SBAH

Year	Average number of patients
2007	15.4
2008	18.4
2009	20.6
2010	18.3
2011	23.4
2012	23.5

Figure 4: Growth of the Out Patient Paediatric Neurology Service

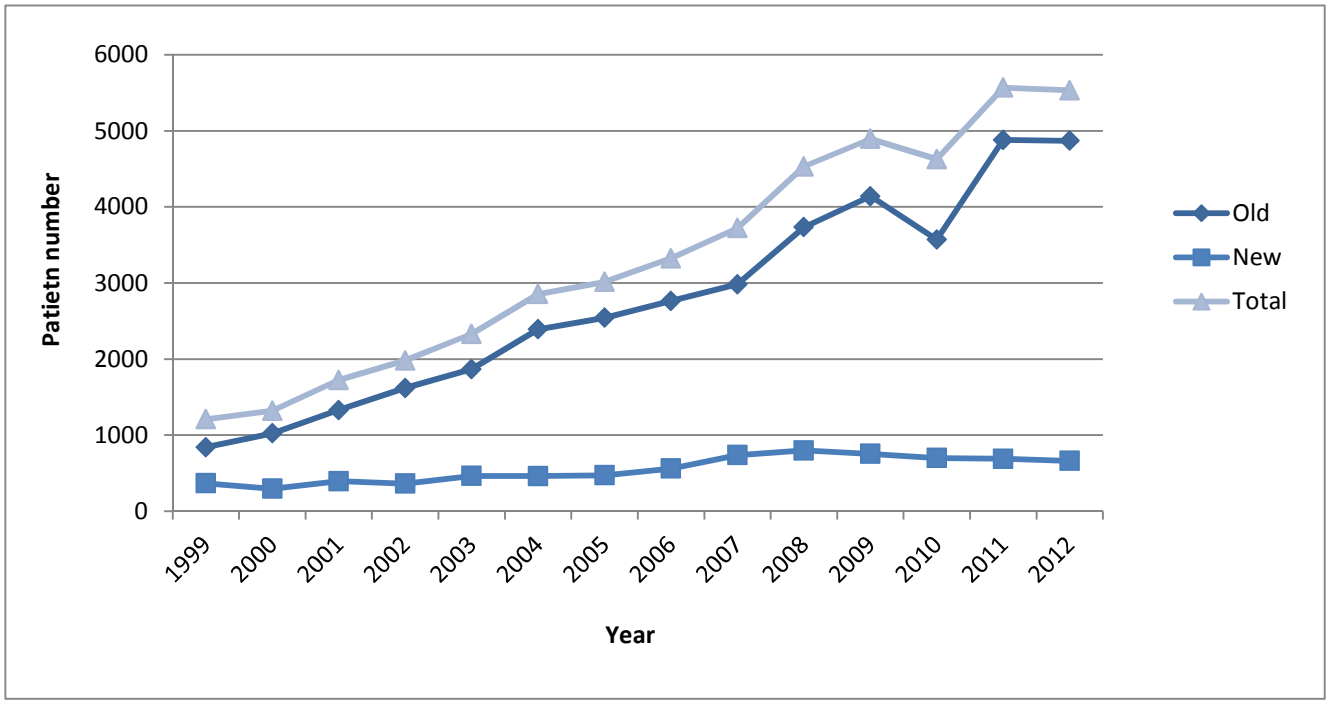
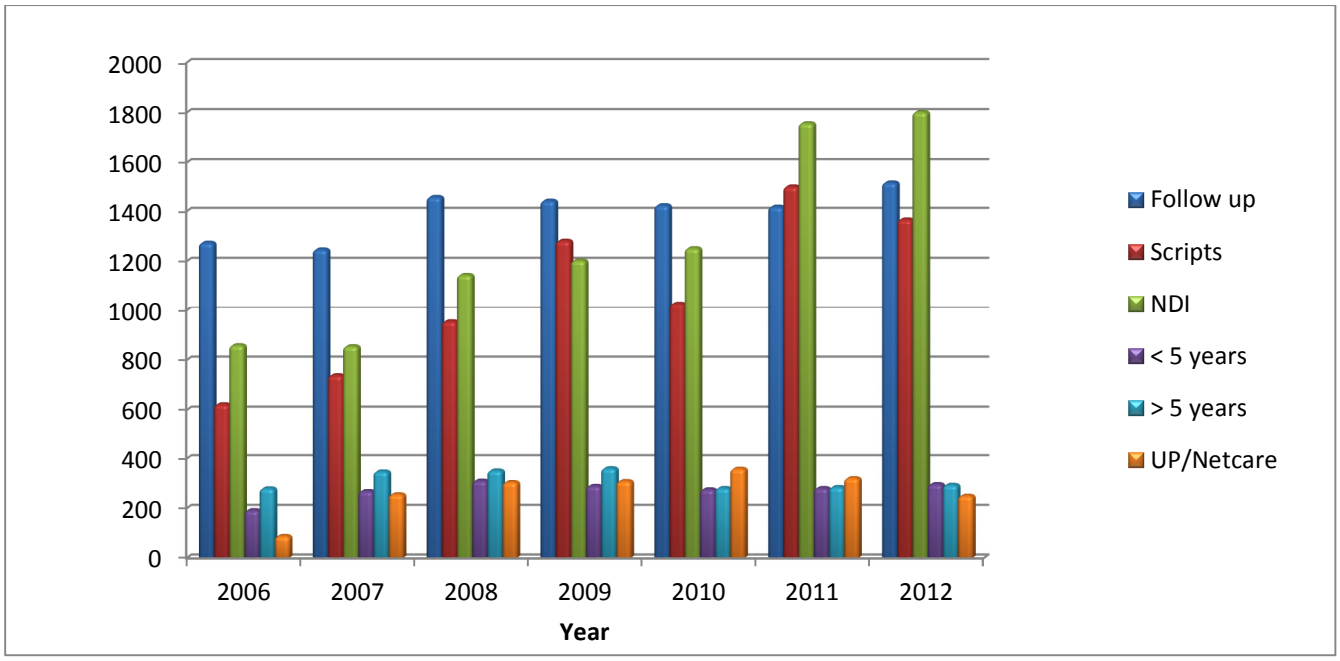


Figure 5: Patient distribution of Out Patient Paediatric Neurology service



Pulmonology

Table 12: Statistics Paediatric Chest and Allergy Clinic January to December 2012

Clinic	Visits
Asthma clinic	1606
Bronchiectasis clinic	434
Cystic fibrosis clinic	205
Total number OPD visits	**2245**

Table 13: Statistics Paediatric Intensive Care Unit January to December 2012

Month	Admissions	Carried over	Deaths	Female	Male	Occupancy %	Mortality %
January	25	3	8	16	12	76	29
February	31	6	5	21	16	102	14
March	25	6	7	21	10	111	23
April	34	4	3	23	15	99	8
May	33	6	7	17	22	110	18
June	39	5	7	14	30	111	16
July	32	6	8	13	24	111	21
August	32	4	8	18	18	102	22
September	23	6	3	15	15	111	10
October	16	6	4	11	11	109	18
November	32	6	9	19	19	106	24
December	24	6	10	12	18	94	33
Total	346	64	79	200	210	0	0
Av.	29	5	7	17	18	104	19

Table 14: Case Mix for Paediatric Intensive Care Unit January to December 2012

Month	Bronchiolitis /Asthma	Pneumonia	PCP	Cardiac	Paeds Other	Poisoning	Surgery	Trauma	Total
January	0	1	2	3	6	3	13	0	**28**
February	0	3	1	2	10	2	17	2	**37**
March	0	3	2	0	11	1	14	0	**31**
April	3	2	0	1	16	1	15	0	**38**
May	4	3	3	3	11	1	13	1	**39**
June	1	3	1	6	15	0	17	1	**44**
July	1	5	2	3	11	0	15	0	**37**
August	3	2	1	4	10	2	13	1	**36**
September	3	2	0	5	10	0	8	1	**29**
October	2	5	2	3	1	0	6	3	22
November	2	6	2	8	7	1	11	1	38
December	3	1	0	6	7	0	10	3	30
Total	22	36	14	41	109	8	139	13	409
Av.	2	3	1	4	10	1	13	1	34

Haematology

Table 15: Patients seen at Paediatric out patients by Dr. JC Opperman during 2012

Clinic	Visits
Paediatric Haematology	239
Paediatric Haemophilia	73
Paediatric Endocrinology	432
Total	**744**

Nephrology

The admissions over the first 10 months of 2012 (for the period 1 Jan to 31 October 2012) were the same as for the first 11 months in 2011 (period 1 Jan to 30 November 2011) – which means that there was a small increase in the number of admissions. It however increased the workload of the registrar significantly, as the overall firm also includes haematology and endocrinology patients of Dr Opperman.

Duration of stay of patients was one day less than in 2011.

Dr Sigwadi completed her fellowship training in July and then left to One Military Hospital. It resulted in a heavier work load for Prof van Biljon who has to do the all the working ward rounds, teaching ward rounds with SICS and registrar, respond to all the ward consultations and do scheduled student rounds with other undergraduates.

The renal unit has reached its maximum functioning capacity which will not be sustainable without a fellow or co-consultant in the long run.

Dialysis: 14 patients had acute anuric renal failure requiring dialysis. Acute peritoneal dialysis was initiated in 7 only and was successful in 6 of 7. The other patients were not dialysed for several reasons including futility of treatment and co-morbid disease e.g. sepsis and bacterial meningitis, cerebral infarction following hypertonic dehydration, dehydration in a vegetative spastic quadriplegic cerebral palsy. Two patients were referred to other units for dialysis: one was referred to the Morningside Children's Kidney Treatment Centre for continuous veno haemodiafiltration and the other was a 15 year old girl who had acute anuric renal failure who was incorrectly referred to Paediatric Nephrology. She was referred to the Adult Nephrology Unit.

Manual Peritoneal Dialysis was performed in wards 8.7 and 8.6. This places a strain on the nursing staff. It is labour intensive and the work load could be decreased with automated peritoneal dialysis cyclers. The renal unit does not have a "PD night machine." A machine will be of great benefit, but it will only be motivated for if there is some guarantee that the consumables will be available.

Standard lactate PD fluid was used to dialyse an infant post cardiac surgery who had multi-organ failure. Progressive lactic acidosis contributed to his death because bicarbonate dialysis was not available.

Chronic ambulatory dialysis was started in 3 patients with stage 5 CKD. 2 patients were from Mpumalanga Province and the other one from 1 Military Hospital.

Several patients (7) were declined chronic dialysis for a combination of reasons, including co morbid disease, social and logistic reasons.

In total there were 6 patients receiving chronic dialysis. 2 children died of cardiovascular complications (after being on peritoneal dialysis for 18 and 7 months respectively). In another child dialysis was stopped due to futility of treatment (Hyperoxaluria Type I) and in another the mother refused further treatment after the child was on PD for 10 months.

Data of all patients receiving chronic dialysis Patient was reported to the National Dialysis Registry as required of all registered dialysis units in South Africa.

All patients on chronic dialysis were offered the opportunity to be evaluated for eligibility of renal transplantation (to Paediatric Renal Unit, CMJAH or Morningside Children's Kidney Treatment Centre). Two children with autosomal recessive polycystic kidney disease and CKD V but who are not yet on dialysis were referred to Red Cross Children's Hospital for eligibility of liver kidney transplantation. No child received a renal transplant in the past year.

Table 16: Ward 8.6 report - Nephrology admissions

Year	Admissions	Mean hospital stay	Number of Deaths
2006	75	9.5	
2007	77	14	3
2008	106	13	4
2009	118	7	5
2010	99	10	4
2011	173	10	8
2012	183	8.7	8

Table 17: Special Clinic Report

Year	New patients	Total patients	Clinics per week
2006	70	846	2
2007	70	726	2 occasionally 3
2008	77	698	2 routine clinics 1 research clinic
2009	63	712	2 occasionally 3
2010	87	697	2 occasionally 3
2011	100	777	3
2012	93	689	2 occasionally 3

Personnel involved Medical: Prof G van Biljon . Dr P Sigwad left in July 2012 –but helps in the clinics on Tuesdays and Fridays on a voluntary basis

Paediatric Oncology

The paediatric oncology service at Steve Biko Academic Hospital had a busy year.The unit consists of 30 in-patient beds, 5 of which form part of a high care isolation unit that is equipped to perform haematopoietic stem cell transplants. There are 10, day care beds in the outpatient clinic. The paediatric oncology service is run under the guidance of 2 consultant paediatric oncologists and 2 paediatric registrars. The clinical service admits approximately 100 new cases a year; there are approximately 1500 outpatient visits per annum.

The service is able to offer paediatric allogeneic haematopoietic stem cell transplantation; this is the only paediatric unit to offer this care in a state hospital in South Africa.

The Paediatric oncology unit has close working relationship with radiotherapy, adult medical oncology, nuclear medicine and our patients are often presented at multidiscipline meetings such as the head and neck, orthopaedic and neuro-oncology combined meetings. The staffing has increased the team consists of myself, Dr Omar a registered Paediatric oncologist, Dr Buchner and Vermeulen, both are paediatricians and are completing the training in Oncology both posts have been independently funded. Although the doctor to patent ratio has increased we are still below the recognised norms.

Haematopoietic Stem Cell Transplant.

Steve Biko Academic Hospital is currently the only state paediatric service to offer allogeneic stem cell transplant. To date one of the biggest obstacles in this life saving treatment has been the availability of suitable donors. During the last year we have only managed to perform two bone marrow transplants. Both the patients have done extremely well. We look forward to expanding this number to over five in 2013.

Service delivery

Inpatient

New patients: 122

We admitted and managed 122 new patients in 2012; this is an increase of approximately 20% increase on 2011.Our average the bed occupation was 80%, with just under 8000 in patient days.

Outpatients

Total out patients seen: 2601

The number of outpatients has increase as well by approximately 20% from 2011; about a third of patients received outpatient treatment which has reduced the number of admissions and reduces strain on the inpatient service.

Looking forward

The oncology unit is growing and maturing well, we are able to consistently offer world class treatment to our patients. We will continue to streamline the care we offer with the view of offering more shared care in an effort to reduce the hospital admissions and keep our patients as near to home as possible.

Publications will form a large part of our focus next year and our aim is that each member of the team will prepare a paper ready form publication by the end of the year.

Clinical Unit Accreditation. (SAOC and JACIE)

The unit meets all the criteria set out by SAOC (South African oncology Consortium) for accreditation.

In 2012 we have with the help of NGO and active fund raising efforts have managed to refurbish just over half of the ward. This effort has transformed the ward a child friendly space that has motivated the staff and patients alike. – Reynders, D

Teaching and Training

Courses Attended

Dr Lamb and Dr V Mogashoa attended the Griffiths training course and were sponsored by the Paediatric Neurology Unit.

Hipokrates Seminar: Renal Fluid and Electrolyte Disorders in the Neonate. Guadalajara, Mexico. 4-6 October 2012. van Biljon, I.

Lecture Critical Care Society of South Africa. Masekela, R

Lectures for University of Limpopo Update 2012. Masekela, R

Lecture at Ventilation Workshop Update 2012. Masekela, R

Workshop co-ordinator for Allergy Course (Foundation of Professional Development). Masekela, R

Assessment Course presented by the College of Medicine - Prof De Witt

HIV Management in Teenagers – February 2012. – Cloete, J.

5th WSPCCA annual symposium 30th – 31st March 2012 – Cardiology Staff

SA Heart annual conference 19th – 22nd July 2012 – Cardiology Staff

Bana Pele SAPA Conference 2012 – 22nd – 26th August 2012 – Cardiology Staff

APLS Generic Instructors Course – September 2012. – Cloete, J.

HIV Clinicians conference – November 2012. – Cloete, J.

Bristol Neonatal Echo Course November 2012 - Dr. Lloyd

SAGES Fellow's Weekend Spier Cape Town February 2012 - Dr Meyer

ESPGHAN Gastroenterology Summer School Cape Town, March 2012 Dr Meyer

ESPGHAN Gastroenterology Summer School Cape Town, October 2012 - Dr Terblanche and Kock

Paediatric e-learning Programme in Paediatric Nutrition completed, Modules 1-9, Nestle Nutrition - Dr Kock, Meyer and Terblanche

Gastroenterology Foundation: Obscure GI Bleeding, The Hyatt Johannesburg May 2012 - Dr Kock and Meyer

SAGES Durban August 2012 - Dr Terblanche

Hepatobiliary Congress Wits November 2012 - Dr Terblanche and Kock

World Congress of Hepatology, Gastroenterology and Nutrition Taipei 2012 - Dr Terblanche and Kock

Training: Invited Lectures and Workshops

Assessment and Treatment of Hypertension in Children and Adolescents, Paediatric Cardiology Workshop, 13th Annual. van Biljon, I.

Basic management and triage of patients using the IMCI system. – Cloete, J.

Congress - SA Heart Congress, Sun City 21 July 2012. van Biljon, I.

Critical Care Congress: ART in Paediatric Intensive Care setting. – Cloete, J.

General Nurses Forum Steve Biko Academic Hospital. – Cloete, J.

Involved in implementation, training and new protocols written for the Severe Acute malnutrition system implemented in Steve Biko Academic Hospital.– Cloete, J.

Mitochondrial mini-symposium at University of Pretoria.– Smuts, I

Neuronetwork at New Hope School sponsored by Sanofi. – Smuts, I

Paediatric Oncology hold regular, weekly training programs with nurses and junior medical staff.

Post graduate Wednesday Afternoon Discussion: Chronic Kidney Disease in Children 2 May 2012. van Biljon, I.

Regular training for Paediatric Nursing Staff in Paediatric Outpatients and Ward 9.5.– Cloete, J.

Resuscitation training and mentoring in all the Paediatric Wards excluding neonatal wards. – Cloete, J.

Tembisa Hospital: Hypertension in childhood - Approach to diagnosis and management. van Biljon, I.

Tembisa Hospital: HIV management in Paediatric Intensive Care. – Cloete, J.

The Cardiology unit proudly co-hosted a successful workshop in our cardiac catheterisation theatre, for the implantation of the Edwards SAPIEN Pulmonic Transcather Heart Valve. This was sponsored by Edwards Lifesciences SA, who bore the cost for the whole workshop including the expensive valves and bringing in an overseas proctor, experienced with the procedure. Three live cases were successfully treated, with attendees from the major national paediatric cardiac centres.

Urinary Tract Infections In Children. Paediatric Nephrology Workshop, 30 August 2012 during Congress of Nephrology at ICC CSIR, Pretoria. van Biljon, I.

Witbank Hospital: Management of urinary tract infections - Review best practice guidelines as proposed byNICE (UK National Institute for Clinical Excellence and American Academy of Paediatrics. van Biljon, I.

Gastroenterology

We are involved in structured lectures for block 3, 8 and 10.

Block 3: Physiology - Paediatric Growth Charts - Prof Wittenberg

Block 3: Physiology - Growth disorders of Childhood - Dr Terblanche

Block 10 - Dr Terblanche and Meyer

- Approach to infant feeding
- Approach to jaundice
- Approach to vomiting
- Approach to gastroenteritis
- Approach to abdominal pain

Prof Wittenberg

- WHO growth charts and Z-scores

Block 8 - Prof Wittenberg managed these lectures while Dr Terblanche was on maternity leave

- Neonatal jaundice
- Abdominal pain
- Dysphagia and vomiting
- Dyspepsia
- Intestinal parasites and chronic inflammatory conditions of the gut
- Metabolic liver conditions, severe and chronic liver diseases
- Infective and malabsorptive diarrhoea

Two fellows Dr Kock and Meyer are being trained.

Paediatric Pulmonolgy offers academic lectures on a Monday afternoon.

Supervision / Mentoring Activities

Currently co-supervisor for Master nursing student Mercy Ncaba research.– Cloete, J.

Cardiology unit: Drs Choopa, Mathews, Masemola

Neonatology Unit: Prof de Witt is supervising Dr. Lloyd's research project on Neonatal Mortality

External Examinations

Final Year Medical Student Exams. - van Biljon, I.

University of Witwatersrand, 23November 2012 - van Biljon, I.

CMSA Part II October 2012 - van Biljon, I.

Prof Smuts was involved in FC(Paed) Part I and II exams, assisted WITS in the coordination of the practical component of the exam in October 2012 and also acted as an examiner in the Paediatric Neurology Certificate exam.

Certificate ID (Paed) - Masekela, R

MMed (Paed) - Masekela, R

DCH - Masekela, R

Undergraduate teaching Dr Omar is the Chair and Manages the Haematological block for third year medical students. Dr Reynders is the chair of Paediatric child health teaching block.

External teaching activity: Dr Reynders was examiner for the certificate of medical oncology and was a moderator of a MMed thesis for a candidate at University of the Free State.

Final Year Medical Student Exams: University of Witswatersrand – Cardiology unit

MMed dissertation: University of Witswatersrand – Cardiology unit

Medunsa - Prof de Witt

Internal Examinations

MMed (Paed) MMed Final November 2012- van Biljon, I.

UP Final Year Medical Student Exams: moderator and examiner - van Biljon, I.

Block 10 exam October 2012- van Biljon, I.

Two paediatric neurology fellows are currently in training. – Smuts, I

Supervision MMed Projects: Drs Monene, Granga and Magidimisa. - Masekela, R

MMed(Paed) University of Pretoria October 2012 - Prof de Witt

Block 9 exam October 2012 - Prof de Witt & Dr Lloyd

Block 10 exam as per departmental roster - Prof de Witt & Dr Lloyd

SIC as per departmental roster - Prof de Witt & Dr Lloyd

Block 10 exams – both Dr Kock and Terblanche

SIC exams: Both Dr Terblanche and Kock on 2 separate occasions, as well as organizing the exams.

University Committees

PTC Committee and EDL Committee. van Biljon, I.

Infection Control Committee. van Biljon, I.

School of Medicine, University of Pretoria. - Masekela, R

Steve Biko Hospital Committees. - Masekela, R

Clinical Audit Committee. - Masekela, R

Infection Control Committee. - Masekela, R

TB committee. - Masekela, R

Employment Equity Committee. - Masekela, R

Hospital-Clinic Referral Committee. - Masekela, R

Initiative (MBFHI) committee. - Masekela, R

Undergraduate curriculum committee - Neonatal

Assessment committee - Neonatal

Academic Advisory Committee – Neonatal

Steve Biko Hospital Committees

Perinatal mortality and morbidity meetings – Neonatal

Critical care committee – Neonatal

Infection control – Neonatal

Antibiotic stewardship – Neonatal

Baby friendly hospital initiative – Neonatal

Clinical audit meetings – Neonatal

Membership of Provincial, National and International Bodies

Paediatric Expert Committee to Review the Hospital Level Essential Drugs List for Department of Health - van Biljon, I.

Serving on executive committee of SA Renal Society - van Biljon, I.

Secretary of South African Renal Society (SARS) - van Biljon, I.

S A Paediatric Nephrology Society (SAPNS) - van Biljon, I.

SA Transplant Society (SATS) - van Biljon, I.

On the board of directors of National Kidney Foundation (NKF) - van Biljon, I.

Member of South African Medical Association (SAMA) - van Biljon, I.

Member of SA Paediatric Association (SAPA) - van Biljon, I.

Member of College of Medicine of Paediatricians (CMSA) - van Biljon, I.

International Paediatric Nephrology Association (IPNA) - van Biljon, I.

Research

Publications

Common paediatric renal conditions. CME 2012;30 (2): 49-52. van Biljon, I.

Common acquired kidney diseases in children. CME 2012; 30(2): 67-70. van Biljon, I.

A practical approach to urine dipstick test abnormalities in relation to kidney and urinary tract disorders in children. SA Fam Pract 2012; 54(5):392-396. van Biljon, I.

From the coalface of clinical paediatric neurology: Menkes disease – a lesson not to be forgotten. S Afr JCH. 6(2), 2012.Lubbe E.

The characteristics of juvenile myasthenia gravis among South Africans. SAMJ. 102(6): 532-536, 2012. Heckmann JM, Hansen P, Van Toorn R, Lubbe E, Janse van Rensburg E, Wilmshurst J.

Metabolomics of urinary organic acids in respiratory chain deficiencies in children. Metabolomics Apr: DOI:10. 1007/s11306-011-0309-0,2011, 8(2):264-283, 2012. (Impact factor: 4.5).Reinecke CJ, Koekemoer G, Van der Westhuizen FH, Louw R, Lindeque JZ, Mienie LJ and Smuts I.

Characterization of mtDNA variation in a cohort of South African paediatric patients with mitochondrial disease. European Journal of Human Genetics doi:10.1038/ejhg.2011.262, 20:650-656, 2012.(Impact factor: 4.4).Van der Walt E, Smuts I, Taylor R, Elson J, Louw R, Van der Westhuizen FH.

Disclosure of a putative biosignature for respiratory chain disorders through a metabolomics approach. Metabolomics doi:10.1007/s11306-012-2455-z, 2012. (Impact factor: 4.5).Smuts I, Van der Westhuizen FH, Louw R, Mienie LJ, Engelke UFH, Wevers RA, Mason SW, Koekemoer G, Reinecke CJ.

HIV-related bronchiectasis in children: an emerging spectre in high tuberculosis burden areas. Int J Tuberc Lung Dis 2012;16:114-119.Masekela R, Anderson R, Moodley T, Kitchin OP, Risenga SM, Becker PJ, Green RJ.

Positron emission tomography in the prediction of inflammation in children with human immunodeficiency virus related bronchiectasis. Hell J Nucl Med 2012;15:23-27.Masekela R, Gongxeka H, Green RJ, Sathekge M.

The role of macrolides in childhood non-cystic fibrosis-related bronchiectasis. Mediators Inflamm 2012;134605. Epub Apr 18. Masekela R, Green RJ.

Outcome of human immunodeficiency virus-exposed and -infected children admitted to a paediatric intensive care unit for respiratory failure. Pediatr Crit Care Med 2012Jul 11. [Epub ahead of print].Kitchin OP, Masekela R, Becker P, Moodley T, Risenga SM, Green RJ.

Disagreement between common measures of asthma control in children. Chest 2012 Aug1 [Epub ahead of print]. Green RJ, Klein M, Becker P, Halkas A, Lewis H, Kitchin O. Moodley T, Masekela R.

Phenotypic expression of the 3120+1G>A mutation in non-Caucasian children with cystic fibrosis in South Africa. J Cyst Fibros. In Press. Masekela R, Zampoli M, Westwood T, White DA, Green RJ, Olurunju S , Kwofie-Mensah M.

Case of the month: ALLSA website October 2012. Abbott, S.

Prescribing habits for upper respiratory tract infections in children. S Afr Fam Pract 2012;54(5). Abbott, S.

Improving neonatal care in rural areas: an approach to common causes of neonatal mortality. Lloyd LG, MBChB, DCH(SA), FCPaeds(SA), MMed(Paeds), S Afr Fam Pract 2012;54(4):297-301

Should the routine approach to diarrhea management be modified in an area of high prevalence of paediatric HIV infection?South African Journal of Child Health February 2012 6(1):17-20. AJ Terblanche, R Netshimboni, DF Wittenberg

Publications in Non-Subsidized Journals

Abstract: South African School Hypertension Survey. Anthony Meyers, G Mongape, I van Biljon, A Molopo, G Candy, F du Toit. CVJ Africa 2012; 23 (7) :11

The use of B-blockers in the management of portal hypertension in children less than 2 years of age. Bana Pele Congress Polokwane 22-26 August 2012. C Kock, AJ Terblanche, DF Wittenberg

Sonographic appearance and liver biopsy results in infants with cholestatic jaundice. Bana Pele Congress Polokwane 22-26 August 2012. M Choopa, AJ Terblanche, DF Wittenberg

Conference Papers

Congress poster American Academy of Asthma Allergy and Immunology: The role of atopy in Childhood asthma. Abbott, S.

Conference Poster Presentations

Cryptococcal Meningoencephalitis in an Immune-competent 7-month old Infant – An Unusual Radiologic Presentation Poster presentation First RSSA / SASPI Paediatric Imaging Congress Sandton 2012. Vedajallam S, Chacko A, Lubbe E, Smal J, Liptak P.

Imaging of Disease Progression in a Case of Idiopathic Moyamoya Poster presentation Faculty Day Health Sciences 2012. Chacko A, Smal J, Lubbe E, Adroos N.

Imaging of Disease Progression in a Case of Idiopathic Moyamoya Poster presentation First RSSA / SASPI Paediatric Imaging Congress Sandton 2012. Chacko A, Smal J, Lubbe E, Adroos N.

Lack of efficacy of erythromycin in childhood HIV-related bronchiectasis-A randomised controlled trial. South African Thoracic Society Congress, Sun City, 29 September-2 October 2012. Masekela R, Anderson R, Gongxeka H, Becker PJ, Steel HC, Green RJ.

The use of B-blockers in the management of portal hypertension in children less than 2 years of age.Bana Pele Congress Polokwane 22-26 August 2012. C Kock, AJ Terblanche, DF Wittenberg

Conference and Workshop Attendance without Reading a Paper

Nephrology Congress 2012 of South African Renal Society Congress, ICC, CSIR, 31 Aug – 2 September 2012 - van Biljon, I.

Paediatric Nephrology Workshop, ICC, CSIR, 30 Aug 2012 - van Biljon, I.

South African Transplant Society Controversies Workshop, Radisson Blue Hotel, Sandton 5 May 2012 - van Biljon, I.

UP Update ICC CSIR 10-11 March 2012 - van Biljon, I.

Prof Smuts, Dr Lubbe, Dr Human and Dr Lamb were sponsored by the Paediatric Neurology Unit

to attend the first RSSA/SASPI Paediatric Imaging Congress in Sandton.

Dr Lubbe and Dr Lamb were sponsored by the Paediatric Neurology Unit to attend the 12th International Child Neurology Congress and the 11th Asian and Oceanian Congress in Brisbane, Australia.

Prof Smuts attended the Human Variome Meeting, Paris, France June 2012.

Prof Smuts and Dr Lubbe attended the PANDA meeting with Sameer Zuberi on Epilepsy and other Channelopathies, Cape Town and were partially sponsored by the Paediatric Neurology Unit.

Prof Smuts was sponsored by Genzyme to attend the Steps forward in Pompe Disease, 6th European Symposium, Berlin, Germany 23-24 November 2012.

UPDATE IN NEONATOLOGY "2012" Clinical Application of Evidence Based Medicine Neonatal ICU - Prof de Witt & Dr Lloyd

USANA Neonatal Update ; Midrand; 14 April 2012 - Prof De Witt

Here be lungs 2012, Stellenbosch - Dr Lloyd

SAGES Durban August 2012 - Dr Terblanche

Hepatobiliary Congress Wits November 2012 - Dr Terblanche and Kock

World Congress of Hepatology, Gastroenterology and Nutrition Taipei 2012 - Dr Terblanche and Kock

ESPGHAN Gastroenterology Summer School Cape Town, March 2012 - Dr Meyer

ESPGHAN Gastroenterology Summer School Cape Town, October 2012 - Dr Terblanche and Kock

Visitors to the Department

Prof Paul McArthur from Alder Hey Children's Hospital, Liverpool and Clinical Director at the Whiston Hospital, Liverpool, UK.

Dr Joanna Elson, Newcastle University, UK.

We were privileged to have Prof S Brown from the University of the Orange Free State visit on 2 occasions to assist with difficult interventional cardiology cases in our cardiac catheterisation theatre.

International Visits

WPGHAN Taiwan 2012 - Dr Kock and Terblanche

Current Research Projects

Mortality and morbidity of HIV positive patients with pneumocystis jerovechii pneumonia. – Cloete, J.

The mitochondrial project with several sub projects is making steady progress. - Smuts, I.

The clinical and electrophysiological correlation in cerebral palsy patients with a history of birth asphyxia.- Smuts, I.

Gastroenterology

Cholestatic jaundice in infants less than 2 years of age - Terblanche AJ, Wittenberg DF, Protocol 153/2008. Patient recruitment for this large audit of children presenting with cholestatic jaundice under the age of 2 years is ongoing. Patient numbers are close to 700 now and statistical analysis with journal publication will soon follow. This study will the also form the basis of further PhD studies.

EUS-FNA as diagnostic method in HIV positive children with mediastinal or abdominal lymphadenopathy of uncertain etiology, Terblanche AJ, Cocoran C, Van der Merwe SW.

Protocol 179/2010. Patients are actively recruited for this study. 12 patients have already been enrolled. The paediatric surgeons are of great help in providing theatre time on their Friday lists, and Dr Fritz Potgieter assists performing in the EUS procedure

Current protocols under development

The incidence and significance of hepatopulmonary syndrome in children with chronic liver disease treated at Steve Biko Academic Hospital. A Meyer, AJ Terblanche, DF Wittenberg. Protocol for submission

The use of Beta-blockers in Paediatric portal hypertension. C Kock, AJ Terblanche, DF Wittenberg

Paediatric Oncology

We are in the process of setting up and hosting a national acute lymphoblastic leukaemia protocol. This will offer excellent opportunity with regards to research outputs and also assist in leukaemia treatment in Southern Africa.

Collaborative research with other departments such as pharmacology and haematology are on-going as is national research projects driven by the SACCSG (South Africa Children's Cancer Study Group). – Reynders, D

Clinical Unit Accreditation. (SAOC and JACIE)

The unit meets all the criteria set out by SAOC (South African oncology Consortium) for accreditation.

In 2012 we have with the help of NGO and active fund raising efforts have managed to refurbish just over half of the ward. This effort has transformed the ward a child friendly space that has motivated the staff and patients alike.

Neonatal

Vermont Oxford Neonatal Network participation to improve the quality of neonatal care at Steve Biko Academic Hospital

Neonatal mortality in a tertiary centre: Can we do more?

A research project undertaken by dr Lloyd, supervised by Prof de Witt

Appointments and Resignations

New Appointments

Fellows

Dr V Mogashoa in Paediatric Neurology

Dr C Kock in Gastro-entorology

Dr G Lamb in Neurology

Dr Anell Meyer

Dr W Wijnant

Resignations

Dr E Lubbe

Dr S Abbott

Dr A Meyer

Awards and Important Events

Degrees

PHD–MasekelaR

PHD–SmutsI

Dip Allerg (SA) – Wijnant W

MMed (Paeds) - Kock C

Mmed (Paeds) - Netshimboni R

MMed (Paeds) - Pentz A

MMed (Paeds) - de Campos K

Awards

FC Paed I – Naidoo D

FC Paed II – Pentz A (66%)

Fellowships - Abbott S (70%)

Pathology – CoetzeeM (81%)

Physiology – Combrink M (70%)

Best Research Presentation/Publication of a Registrar–Choopa M / Buchner A

Best slide presentation –PillayH

Discovery sub-speciality Award to Dr Terblanche for Dr Meyer

Certificates

Cardiology– Joshi J

Nephrology– Sigwadi P

Pulmonology– Abbott S

Neonatology – Lloyd L

FC Paed– Buchner S

FC Paed – Badenhorst Z

FC Paed – Pentz A

Important events

New family members

We'd like to congratulate Darisha Naidoo on the birth of their daughter -Shrayen.

Congratulations to Dr A Terblanche on the birth of her son, Daniel Johann Terblanche - born 2012/04/06

Christmas Toy Drive

Human Resource Department joins forces with Paediatrics

Every year with the Christmas Lunch of the Dean: Faculty of Health Sciences, the personnel buy gifts for the little ones in Hospitals, we put the gifts in a big box, have our Christmas Lunch, go home and get on with our lives.

This year HR decided to take the gifts to SBAH and together with Prof Izelle Smuts and her team we gave the sick children gifts on 14 December 2012.

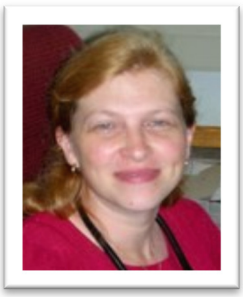
Figure 6: Prof Izelle Smuts and her team

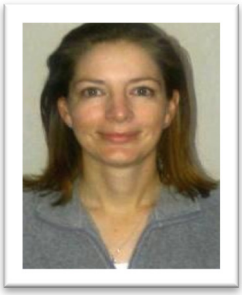
Figure 7: Some of the happy faces with their gifts

Figure 8: June 2012 Momentum staff handing out soft toys to cheer up the patients

Staff 2012

	Name	Position	Telephone	E-mail
	Prof R Green	Professor and Head of Department	012 354 5276	robin.green@up.ac.za
	Prof I Smuts	Associate Professor Principal Specialist Senior Lecturer	012 354 5287	Izelle.smuts@up.ac.za
	Dr JC Opperman	Principal Specialist, Senior Lecturer	012 354 5298	johannes.opperman@.up.ac.za
	Prof FF Takawira	Principal Specialist, Adjunct Professor	012 354 5298	fari.takawira@up.ac.za
	Prof D Reynders	Principal Specialist, Senior Lecturer	012 354 3258	david.reynders@up.ac.za

	Prof TW de Witt	Specialist, Adjunct Professor Senior Lecturer	012 354 5298	wilma.dewitt@up.ac.za
	Prof G van Biljon	Specialist Adjunct Professor Senior Lecturer	012 354 5299	Ida.vanbiljon@up.ac.za
	Prof R Masekela	Specialist, Adjunct Professor Lecturer	012 354 5272	refiloe.masekela@up.ac.za
	Dr L Mitchell	Specialist Lecturer	012 354 5269	lindy.mitchell@up.ac.za
	Dr E Lubbe	Specialist Lecturer	012 354 5295	elsa.lubbe@up.ac.za

	Dr A Terblanche	Specialist Lecturer	012 354 5304	alta.terblanche@up.ac.za
	Dr J Joshi	Specialist Lecturer	012 354 5301	jayneel.joshi@up.ac.za
	Dr F Omar	Specialist, Lecturer	012 354 3256	fareed.omar@up.ac.za
	Dr L Loyd	Specialist, Lecturer	012 354 5298	Lizel.Lloyd@up.ac.za

Administration Staff

	Mrs RJ Steyn	Secretary to the Head of Department	012 354 5276	rsteyn@medic.up.ac.za
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	Ms A Shibambo	Secretary to Prof TW de Witt	012 354 5303	anna.shibambo@up.ac.za
	Ms E West	Secretary to Prof I Smuts	012 354 5287	Elne.West@up.ac.za
	Ms F Nkoane	Secretary to Prof D Reynders	012 354 3258	Fairhope.Nkoane@up.ac.za