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## A Report of an Elective Spent in the Department of Paediatrics, Victoria Hospital, South Africa

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### Abstract

I chose to spend the 8 weeks of my elective in South Africa as it is a country which fascinates me in many ways. Known as the "Rainbow Nation" it is a country of diverse beauty; with many races, languages and cultures. Unfortunately there are also extreme inequalities in standard of living and quality of life, stemming from the long term effects of the apartheid era. The result is a population ranging from third world poverty to first world wealth and prosperity, literally on one another's doorstep. Healthcare mirrors the same disparity, with the private sector providing medical care of world-wide cutting edge standards, whilst the local state clinics and hospitals struggle with limited resources to provide care to a population rife with poverty and AIDS.

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# A Report of an Elective Spent in the Department of Paediatrics, Victoria Hospital, South Africa.

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## Choice of location / speciality

I chose to spend the 8 weeks of my elective in South Africa as it is a country which fascinates me in many ways. Known as the "Rainbow Nation" it is a country of diverse beauty; with many races, languages and cultures. Unfortunately there are also extreme inequalities in standard of living and quality of life, stemming from the long term effects of the apartheid era. The result is a population ranging from third world poverty to first world wealth and prosperity, literally on one another's doorstep. Healthcare mirrors the same disparity, with the private sector providing medical care of world-wide cutting edge standards, whilst the local state clinics and hospitals struggle with limited resources to provide care to a population rife with poverty and AIDS.

I chose to work at Victoria Hospital in Cape Town as it is a provincial state hospital affiliated with the University of Cape Town (UCT), but is a smaller 'peripheral' unit compared to the main teaching hospitals Groote Schuur (where the first heart transplant was performed) and Red Cross Children's Hospital. From this I hoped to gain more experience and continuity of care as part of a small team responsible for a designated paediatric ward. I chose paediatric medicine for two reasons. Firstly, it is a career path that interests me greatly, and secondly I wanted to observe the effects of HIV on the paediatric population. It is a very uncommon problem in the UK, as we have standard HIV prophylaxis treatment given to the low numbers of HIV positive mothers we do see. This lowers vertical transmission rates to about 2% (with or without elective caesarean deliveries).<sup>1</sup> I therefore encountered the widespread medical and social problems that result in these children, and how they are managed and treated – an experience I would never have come close to in the UK or other developed countries.

## Healthcare in South Africa

President Nelson Mandela's first major policy announcement after election was that all health care for children under 6 years and for pregnant and lactating women would be free in the South African government's health service<sup>2</sup>, and this was implemented in July 1994. In 1995 it was announced that South Africa was to get a new national health system, which will guarantee universal (and largely free) access to primary health care for "permanent residents", regardless of race, health profile, or income.<sup>3</sup> HIV/AIDS is the most major health concern in South Africa today and its effects have been staggering:

- In the last 12 years, the HIV prevalence in South Africa rose from under 1% to way over 20%, according to statistics revealed by The United Nations Program on HIV & AIDS (UNAIDS).<sup>4</sup>
- National mortality rates for South African men aged between 20-40 years have increased by >150% since 1998, and the mortality rate for women has risen even more (2003 RSA Aids conference<sup>4</sup>).
- An estimated 5.3 million South Africans were HIV positive by the end of 2002, according to the Department of Health's statistics, which were extrapolated from surveys at antenatal clinics.<sup>4</sup>
- In 2002, 15.7% of workers employed in public/private healthcare sectors were HIV positive and >60% of children admitted to one tertiary hospital were HIV positive (majority <12 months old).<sup>5</sup>
- The HSRC conducted a national census-derived random sample survey of HIV prevalence using oral specimens from 8840 persons aged 2

years and above. Among 2-14 year olds seroprevalence was 5.6%, a rate which - extrapolated to all South African children - yields 670,000 HIV-infected.<sup>6</sup>

- UNAIDS statistics reveal that the percentage of hospital beds occupied due to AIDS, ranges from 26%-70% for adults and 26%-30 % for children. Only 1% of infected Africans receive antiretroviral (ARV) treatment, and many millions don't receive medication for opportunistic infections.<sup>4</sup>

The political stance of the South African government regarding the AIDS crisis was thrown into controversy when in early 2000, President Thabo Mbeki sent a letter to world leaders expressing his doubt that HIV was the exclusive cause of AIDS and arguing for a consideration of socioeconomic causes. Until April 2002, the international scientific community's interest in South African policies on AIDS was almost exclusively focused on the polemic raised by the president. In November 2003, whilst on my elective (and in the run-up to the forthcoming national elections), the long criticized government announced it was to make ARV drugs available to citizens suffering from AIDS or HIV. Health Minister Manto Tshabalala-Msimang told a press conference, "Government will as a matter of urgency start implementing a programme to provide ARV treatment in the public health sector."<sup>7</sup>

## Narrative of Experience

Victoria Hospital has 23 HIV positive children on HAART (Highly active anti-retroviral therapy) that are seen on a monthly basis with their caregivers. This has been made possible by funding from the UK in the form of a study into compliance with complicated 3 drug regimens taken twice daily at weight-dependent dosages. Caregivers may be parents, relatives or workers in homes for children with chronic illness, and in most cases will be poorly educated and of low socioeconomic status. Accuracy with dosages and maintenance of regular intake is vital due to the development of drug resistance if not adhered to correctly. There is a weekly designated HIV clinic where all the patients on treatment are reviewed, their drug doses recalculated, fully examined, any problems recorded in detail and their drug diary compliance charts checked. It also provides an opportunity to provide on-going counselling and education. Although this is not an overtly complicated process, it is very time consuming (on average 1 hour per consultation). With only 3 doctors per clinic, the department is already near its limit with regards to manpower even with this relatively small number of patients, especially as treatment is life-long, and stopping is severely detrimental to its long-term efficacy. Therefore there are very strict criteria that have to be met before a child can be placed in the study, e.g. they have to be HIV Category C (the most advanced form), but more importantly their social circumstances have to be compatible with treatment i.e. a trustworthy adult has to take full-time responsibility for the administration of treatment, monthly attendance at clinic (which may often be a long, timely journey from home and involve the whole day) as well as general care and support. It is unsurprising that this is the major barrier in the majority of cases, but nonetheless the most frustrating and upsetting. One child I had experience with in particular, and who is close to the hearts of all the paediatric team, is a 3 year old little boy SM. SM is a twin B with an HIV negative twin sister. His mother died in May 2003 from AIDS related illness and his father is a fisherman who spends much of his time at sea. SM has category C HIV with severe developmental delay, and suffers from chronic lung disease (lymphoid interstitial pneumonia (LIP)) and recurrent gastroenteritis. He was an inpatient for my entire elective period with oropharyngeal

candidiasis, pneumocystis carinii pneumonia (PCP) and reactivated pulmonary tuberculosis (PTB). SM would benefit enormously from HAART and all the medical team would love to see him started. Unfortunately, the reliability of his father and aunt is not of high enough standard to ensure compliance. His family are once again being given a chance to prove their reliability: he has been discharged on TB medication, given in the community on a daily basis at specific TB clinics to which his caregivers will have to take him. The team is hoping that compliance on TB treatment will be an indication of their possible readiness to undertake HAART. There may be a possibility for admission into a care facility if the family again prove to be unreliable. In contrast, KT is another 3 year old little boy with category C HIV that was admitted for treatment of recurrent asymptomatic klebsiella UTIs. He has suffered from PTB with LIP, HIV encephalopathy and severe developmental delay. At 3 yrs he is unable to pull to stand or walk and has severe flexion deformities of his ankles. However, after 3 months of HAART his CD4 count has improved from 11% to 15% and he is currently in good health.

Seeing patients from such poor backgrounds was a humbling but frustrating experience. A standard history has to include questioning on basic needs so often taken for granted in developed countries, such as access to water and electricity. Nutrition is often poor, for example HIV positive mothers are still encouraged to breast feed their babies as the main causes of infant / childhood mortality are malnutrition and infectious diseases and therefore the advantages outweigh the risks of transmission and the risks of bottle feeding. In order to come to clinic, the patients travel in mini-bus 'taxis', vehicles of questionable road worthiness designed for 16 passengers but most often crammed full of many more. They may have to take up to 3 of these, and then wait for hours to be seen – there is no "appointment" time. Yet these circumstances are accepted by these people, who are so grateful for any help they receive. The medical staff are treated with the utmost reverence and respect and their advice never questioned. The frustration lies with a feeling of helplessness and inability to change their circumstances for the better. Also, when problems are missed or not dealt with correctly, the effects can be devastating. One such case involved a 15 month old little boy CF, who developed tuberculous meningitis (TBM). It was known that his grandmother, living in the same house, was on treatment with established TB for a month and yet, CF never received prophylaxis. This oversight led to a paediatric medical emergency as TBM is associated with high levels of morbidity and mortality. CF had neck stiffness of such severity that when 2 fingers were placed behind his head and lifted, his whole body rose from the bed like a board. He lay in a marked opisthotonus position with global severe hypertonia, hyperreflexia, was extremely irritable and poorly responsive. He had an associated communicating hydrocephalus, bilateral basal ganglia infarcts and a 6<sup>th</sup> nerve palsy. When started on TBM treatment and oral prednisolone, the medical team were doubtful as to how good his prognosis was. Thankfully, 2 months into his treatment his progress was quite remarkable and he was smiling, responsive and his tone markedly improved. The team is now hopeful he will make a full recovery. Although now rare in the UK, TB is a major problem in rural South Africa. BCG vaccinations are administered neonatally and children in close contact with adults with the disease should be placed on prophylactic treatment (child-to-child transmission is rare). If TB is suspected a TINE test (similar to Mantoux test) is performed, although these can be difficult to interpret. A 'reactive' test is very common as many people have had some exposure to the bacilli, and active disease is only indicated by a severe reaction. Occasionally positive results come as a surprise when tests are done routinely for in-patients. For example, RM, a 6 month old little boy who was admitted with an acute dehydrating gastroenteritis, fever and cough was found to have a highly positive TINE test and on chest x-ray showed features of a right middle lobe pneumonia and PTB. He also had features of foetal alcohol syndrome – another commonly seen problem in impoverished communities where alcohol consumption levels are high and educational standards poor.

## Reflections

The paediatric departmental team at Victoria Hospital consists of a consultant, a medical officer (equivalent to a Specialist Registrar) and a rotating intern (JHO). The structure of the state health service is similar to the NHS although deficits in funding and staff are much more pronounced. After their intern year and one year of community service, newly qualified doctors are entitled to go into private practice or work overseas, and most chose this path. Although the doctors that do work in the state system are highly qualified and competent, they are restricted by a lack of resources. Often they are unable to prescribe the best drugs as they are too expensive or simply unavailable. The same limitations apply to clinical procedures, investigations and surgery. However there is an understanding from patients who are eternally grateful for any care they receive, and a positive attitude in the doctors who aim to do the best they can with the resources available to them. The result is a vibrant atmosphere of complete motivation and commitment to the practice of medicine that is unrivalled by any of my previous placements. Working with a small, friendly and totally dedicated team was a wonderful experience as I was really made to feel appreciated and part of the team, and was often thanked for my help. I was quickly seeing my own patients and treating them with supervision.

My time in South Africa has opened my eyes to the realities of third world medicine and has done wonders for my own self-confidence and self-belief, which has been one of my weaknesses. I was also able to identify gaps in my clinical knowledge, especially with such a different spectrum of presenting complaints and I feel I have gained invaluable experience, especially in the treatment of HIV in children. I feel very encouraged and hope to take a more involved approach to the rest of my medical studies and future work in order to gain as much knowledge and development of my clinical skills as possible. I also hope that I will be able to carry the same motivation, attitudes and priorities that I have experienced during my elective into my future career, some of which I would like to spend in Africa.

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