ELECTIVE (SSC5b) REPORT (1200 words)

A report that addresses the above four objectives should be written below. Your Elective supervisor will assess this.

The South African health care system was ranked 175 (out of 191) by the WHO in 2000. This reflects a two tiered structure, serving some 60 million South Africans, in which 80% of generally lower income patients rely on the state health care system, and the remaining 20% of middle to high income earners choose to be seen privately, almost invariably via an insurance based system monopolised by two or three companies. Measured health outcomes vary drastically inside this binary. The state sector, underfunded and under resourced, has been tainted by a long history of poor service: poor access; long wait times; crumbling infrastructre; inadequate access to medicines and procedures, and poor practise. Life expectancy in SA is 57.5 years (2014), comparing badly to the UK, at 81.06 years.

Despite all medical traning taking place in public universities, 70% of these newly qualified doctors transfer to the private sector; 2013 estimates show the vanacy rate for doctors in the state health service at 50%. South Africa has only 0.6 doctors per 1000 people (OECD average: 3.2). Nurses are in equally short supply, with only 1.1 per 1000 people (OECD average: 8.8).

The 10000 or so General practisioners in the public sector may work in a range of facilities, including urban and district hospitals, community health centres or specialist clinics, as well as a range of affiliated, non-governmental organisations.

In the state sector, particular resources are devoted to key public health challenges, which can be roughly divided (below), and will each be touched upon briefly.

1) **Communicable disease (HIV, Malaria and TB, amonst others)**
2) **Non-communicable, chronic conditions and lifestyle disease**
3) **Maternal and neonatal disease**
4) **Injuries from traffic accidents and interpersonal violence**

Approximately 6 million South Africans live with AIDS/HIV (~14%) – a higher prorption than any other country, a significant number of which are undiagnosed. This is a disease confined mostly to black and "coloured," poorer individuals in rural regions of the country. Though country-wide antiretroviral programmes have been rolled out, the epidemic continues, and will take some years to have any significant impact. Tuberculosis in south africa is on the rise, with approximately 500000 cases reported in 2013, equating to 1% of the population contracting it each year. 80% of the population is infected with the tuberculosis bacteria and live with latent disease. The emergence of drug and muti-

exaccerbated by poor access to clean and "safe" water, and poor sanitation systems (including toilets, piping and refuse), continue to spread disease in rural areas, and remain a key public health challenge over the coming decade.

Diet related disease at both ends of the spectrum, coexists - with malnutrition, in rural areas and obesity, mostly, in urban areas – a "double burden". Approximately one tenth of males and a water of adult women were found to be obese in 2003. At the same time, some 10-20% of children are underweight at birth. Tobacco related disease, alcohol abuse, and the development of rudimentary mental health services are further key public health chanllenges faced by the state over the coming years.

In 2015, the international dibates federation estimated that 7% of South Africans have Diabetes (T1 or T2), which translates to approximately 3.85m people. These numbers are rather uncertain, with ranges of between 3.6% and 14.1% found in recent literature. In contrast, the UK prevalence is ~9%.

While the healdline figures may seem comparable, this is misleading. First, the rate of new diagnoses in south africa increasing dramatically. For example, In 2010, the estimated prevlaence was 4.5%. When the two figures are combined, this suggests a 155% increase in 5 years. Secondly, there is considerable doubt as to whether the the under funded and under resourced south african state health service, relied upon by 80% of the population, will be able to absorb this burden. Diabetes is a multifacted disease requiringing patient education, lifestyle intervention and pharmacology in equal measure.

South Africa sees an extraordinary number of injuries and violence, with all injury related related mortality accounting for some 5% of mortality, including and in particular - homicides and road traffic accidents. Additionally, 3.5 million south africans seek assitance for non fatal injuries, each year. Further, violence perpetrated on women, if an increasing concern, with both reported rape and sexual assualt cases at record levels.

Unsurprisingly, the basic concerns outlined above, more or less apply across the African continent and it's 1 billion people. Of the bottom 20 health care systems in the world, as ranked by the WHO, some 16 are African. Infectious disease; in particular HIV, TB, Malaria, and generally, GI infections, account for some 1/3rd of mortality in Africa, and while inroads have been made, the scale of the challenge is daunting in a region marred by political instability and violence. Infrastructure and resources aren't available and the health workforce itself is insufficient, with approximately 2.7 doctors per 100000 people. Healthcare is underdeveloped, underfunded, and simply inadequate for the vast majority of the population, and compares very poorly to western countries across all measures. At its worst, in Sierra Leone, life expectancy is a little less than 45 years (WHO estimate, 2013). The average across the continent is 58 years, in comparison to western Europe and American, at 80 years.

Of particular concern for the present and future, are the combined effects of ongoing conflict, and the changing climate, each of which both cause and exacerbate extreme poverty, driving migration, whether extra- or intra-African. Countries or regions that have resulted in more than between 1000-10000 deaths in the last year alone include: Somalia, Kenya, Nigeria, Sudan, South Sudan, Cameroon, Niger, Chad, Libya, Egypt and Ethiopia; some 11 countries resulting in excess of 100000 deaths. Further conflicts, resulting in under 1000 in the last year are simply too innumerable to realistically list. Though the data on intra-African migration is particularly poor, in 2010 it was estimated by the WHO that as many as 20million Africans had migrated internally, by the year 2010. Additionally, some further 10 million Africans have emigrated outside of Africa.

Despite its disproportionately small contribution to carbon emissions, the African continent will possibly suffer most of all from the ravaging effects of a warming climate. This is in part because it is woefully under-resource and under-prepared. However, it's peri-equatorial geography also mean that it more likely to experience the more extreme consequences of shifting climate pattern, including a significant rise in daily average temperature, increasingly unreliable rainfall and other extremes of weather. This will make farming more difficult, disrupt food chains and water supplies (already tenuous – at best) and could make Malaria rates, amongst other infectious disease, skyrocket. It is also to likely to lead to further conflict over scarce resources, food and water in particular, and drive the emigration of large numbers of people. The UN estimates, that by 2050, the African population will have double to approximately 2 billion, further compounding the problem in an already resource starved region.