ELECTIVE (SSC5c) REPORT (1200 words)

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

At SportsMed Mumbai, I had the privilege of being able to observe a variety of specialist sports medicine physicians, orthopaedic surgeons, musculoskeletal radiologists, physiotherapists and osteopaths. Of those attending these clinics, approximately 70-80% were those without an elite sporting background. The remaining 20-30% were composed of recreational and elite athletes. The doctors in the majority of clinics that I observed had an area of interest, such as the shoulder or knee joint.

It was very clear to see that in addition to sporting injuries, the majority of those attending the private outpatient clinics possessed an array of co-morbidities and non-communicable diseases such as obesity, hypertension, coronary artery disease, diabetes mellitus, osteoarthritis and the metabolic syndrome. Common presentations were of acute and chronic muscular, ligamentous and tendinous pathologies and osteoarthritis. The musculoskeletal problems experienced by the non-athletic population were often compounded by the sedentary nature of the general Indian population and often were not related to sporting activity at all. Of those musculoskeletal ailments linked to sport, many were principally due to lack of conditioning or lack of knowledge of correct techniques to execute and practice a certain sport efficiently and effectively. Occasionally, some of the musculoskeletal injuries were due to accidents while on mopeds and motorcycles. In contrast to this, the well-conditioned international cricketers seen during my time with the Rajasthan Royals medical team often had strain injuries due to over-training; rarely having any associated medical problems.

According to the World Health Organisation, co-morbidities such as coronary artery disease and diabetes mellitus are relatively more prevalent in India than in other countries. Hypertension and obesity are relatively less prevalent in India than in other countries. Having said this, the patients seen in the private clinics were often of a relatively more affluent nature than the general Indian population and thus often possessed these co-morbidities. The highest cause of death in India is ischaemic heart disease, with 12.4% of the population dying from this. Chronic obstructive pulmonary disease is 2nd and stroke is 3rd, and respectively, they kill 10.8% and 9% of the Indian population. There are a whole host of global health strategies in India, aiming to combat the above issues such as heart disease, environmental health and strengthen immunisation systems.(1)

India provides both public and private healthcare. Health insurance, commonly provided by employers is available to help provide funds, however, majority of the population do not possess health insurance resulting in payments being made from one's pocket. The quality and coverage of medical care lacks consistency in India, huge variations are present between states as well as rural and urban locations. Rural areas are disadvantaged by a reduced number of doctors and health care professionals and shortages in supplies, making it increasingly common for those who are poorest to be faced with a reduced level of care. For this reason, Indians prefer to use private healthcare facilities with over two thirds of urban and rural households opting to be treated privately.(2)

There are two main healthcare programs in India; the National Rural Health Mission (NRHM) is run by the government and the second is the Rashtriya Swasthya Bima Yojana (RSBY) which is a health

insurance scheme fronted by the Ministry of Labour and Employment. NRHM which was first started in 2006 focuses on improving health facilities in public hospitals and runs public health prevention interventions with the Ministry of Health and Family Welfare. There have been improvements in maternal healthcare but all other services are still in need of radical change. RSBY provides insurance for individuals considered to be "below the poverty line" for particular tertiary care and have had some success in reducing the number of out-of-pocket payments however, whether the scheme helps to improve overall population health is debatable.(3)

The private heath sector makes up 70% of all primary medical care in India and more than 40% of all hospital care. Nursing homes are usually made up of 2 to 50 beds and are owned individually or by a number of managers, usually operated as a family business. These facilities give both inpatient and outpatient care. The Trust Hospitals, Corporate Hospitals, Public Ltd and Specialized Research Institutes are the tertiary care providers. Private sector hospitals are equipped with the latest facilities and have 300 to 500 beds with well trained nursing and health care staff. This sector manages their own finances, producing revenue to sustain themselves with the aim to expand their services further. Such private sector hospitals are often in urban thriving locations. Public sector hospitals provide inexpensive treatment and medical care whereas private sector hospitals have highly skilled clinicians with excellent reputations. There is a massive trade-off in India between mediocre care and state-of-the-art care, inevitably dictated by what an individual can afford. (4)

The sports medicine conditions seen while at SportsMed Mumbai were very similar in nature to those seen in the UK. Having said this, the injury mechanisms in India varied, possibly due to demographic differences. I predominantly spent my time in dedicated knee and upper limb (shoulder, elbow and wrist) clinics with two very eminent orthopaedic surgeons. As mentioned above, common presentations were of acute and chronic muscular, ligamentous and tendinous pathologies and osteoarthritis.

In the knee, I had exposure to a variety of injuries and pathologies. The majority of patients visiting the knee clinic had anterior cruciate ligament (ACL) injuries, ranging from Grade 1 which describes mild damage to the ligament to Grade 3 which describes a complete tear of the ligament. These injuries were usually caused by changing direction rapidly, stopping suddenly or slowing down while running, landing from a jump incorrectly or direct contact or collision. In addition to the ACL injuries, there were also often concomitant meniscal and collateral ligament tears. The doctor in this clinic was more often than not able to diagnose the injury solely based on his examination. Other pathologies that I saw at the clinic were posterior cruciate ligament tears, patellofemoral pain syndrome and degenerative osteoarthritic changes. With imaging taking place on-site, the doctors were often able to confirm their examination findings and therefore the diagnosis. If there was any doubt over the findings on imaging, the very skilled radiologists were able to provide clear explanations of the abnormalities that they noted on the scans. Knee surgery and post-surgical rehabilitation were also done at the same facility, making it very convenient for the patient.

During my time in the upper limb clinic I was able to observe a variety of injuries, such as biceps tendon tears, rotator cuff tears and tendinitis, frozen shoulder, lateral and medial epicondylitis, glenoid labrum tears and HAGL (humeral avulsion of the glenohumeral ligament) injuries. Similarly here, the very skilled doctor was able to diagnose a patient's injury from his extensive upper limb examination. On-site imaging was occasionally used to confirm a diagnosis and was often carried out

for completeness. Upper limb surgery was also carried out on-site and post-surgical rehabilitation was also done at the same facility, again making it very convenient for the patient.

In the state of Maharashtra, there are a variety of sports medicine services, ranging from hospital departments, sports medicine clinics, and sports physiotherapy centres. For example, there are centres for sports medicine at Kokilaben Hospital and Sancheti Hospital, which was the referral centre for the Commonwealth Youth Games 2008. SportsMed Mumbai has previously hosted the most famous athletes, in particular the world's best cricketers, to diagnose and treat their injuries. The multidisciplinary team at SportsMed Mumbai includes a team of prominent sports physicians, orthopaedic surgeons, radiologists, physiotherapists and osteopaths. Patients have access to fantastic radiology services, with images usually being provided on the same day. The clinic's function is not only curative and rehabilitative, but also preventative, which is the most important of all.

In India, there is currently an absence of a training programme in Sports & Exercise Medicine and doctors in training routinely carry out further training abroad, commonly in the UK, USA or Australia to gain a wider appreciation of the speciality and to gain the necessary musculoskeletal skills and experience to effectively treat common pathologies seen in their practice. There are opportunities to carry out a postgraduate diploma in Sports Medicine in India.

The majority of athletes who have received treatment at SportsMed Mumbai are Indian. Having said this, many Indian Premier League (IPL) international players have also been treated by physicians working at this clinic and the sports physicians provide world-class medical care, from diagnosis through to rehabilitation for these cricketers

1. Who.int. WHO | India [Internet]. 2015 [cited 3 June 2015]. Available from: http://www.who.int/countries/ind/en/

2. Internationalstudentinsurance.com. Healthcare System in India [Internet]. 2015 [cited 3 June 2015]. Available from: http://www.internationalstudentinsurance.com/india-student-insurance/healthcare-system-in-india.php

3. Nbr.org. Healthcare in India: A Call for Innovative Reform [Internet]. 2015 [cited 3 June 2015]. Available from: http://www.nbr.org/research/activity.aspx?id=298

4. Sajprevcardiology.com. Utilization of Private Sector in Healthcare in India [Internet]. 2015 [cited 3 June 2015]. Available from: http://sajprevcardiology.com/vol9/vol9_1/utilization.htm