

## **ELECTIVE (SSC5a) REPORT (1200 words)**

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

### **1) Investigate the prevalence and distribution of ENT diseases among Malaysian populations, explore the implications within the broader framework of global health.**

The prevalence and distribution of ENT (Ear, Nose, and Throat) diseases among the Malaysian population exhibit notable patterns having broader implications within global health.

Allergic rhinitis (AR) is highly prevalent in Malaysia due to the tropical climate fostering allergens like dust mites, pet dander, and fungal spores [1]. A multinational survey in 2011 estimated the prevalence of AR in Malaysia at 7.1%, higher than in Hong Kong, the Philippines, and Singapore [2]. Studies have shown a significant increase in AR among secondary school children, rising from 11.2% to 55.5% in recent years [3]. Otitis media is also common in Malaysian children. Tonsillitis and sinusitis are frequently observed, caused by allergies, infections, or structural issues in the nasal passages.

Hearing loss is a significant public health issue in Malaysia, particularly noise-induced hearing loss (NIHL), which is prevalent among workers exposed to high noise levels. In 2019, the Department of Occupational Safety and Health (DOSH) recorded 5,699 cases of occupational noise-related hearing disorders [4]. This statistic was highlighted during the Seminar and Launch of the Guideline on Management of Occupational Noise-Related Hearing Disorders at the International Islamic University of Malaysia (UIAM). Additionally, a study revealed that 50.8% of palm oil mill workers in Peninsular Malaysia suffer from NIHL, indicating a considerable risk even for those not classified as high-risk workers [5].

Nasopharyngeal carcinoma (NPC) is the fifth most common cancer among Malaysian male residents predominantly from Chinese ethnicity, and geographically top common cancer among males in Sarawak population [6]. The aetiology of NPC is probably multifactorial includes genetic factors, Epstein-Barr virus (EBV) infection, and dietary habits [7].

These conditions reflect a broader pattern of ENT issues influenced by Malaysia's environmental and lifestyle factors. Addressing these through improved healthcare access and public health awareness and strategies, can significantly reduce their burden and implications on global health.

### **2) Identify and analyse the structural and functional differences of healthcare delivery in Malaysia specific to ENT with the healthcare system in the UK.**

There are significant structural differences between the healthcare systems in Malaysia and the UK. In Malaysia, the Ministry of Health provides subsidised care through government hospitals and clinics, catering to the public sector. Conversely, the private sector offers more specialised and quicker services, but at a higher cost, being funded through out-of-pocket payments and private insurance. In the UK, the National Health Service (NHS) delivers public healthcare funded by taxation, ensuring most services are

free. Although private healthcare is available in the UK, it is not as prevalent as in Malaysia.

In Malaysia, the public sector, particularly rural areas, is frequently overcrowded, resulting in longer waiting times, and they have less access to specialised treatment than urban centres. Although the NHS offers widespread accessibility, there are also issues with long waiting times for non-urgent procedures and specialist consultations.

Both Malaysian and UK ENT services have formal referral pathways from primary to secondary care. However, there are still lengthy waiting time for elective operations and specialist appointments due to high demand. Patients generally have access to modern medical equipment, but resource allocation can vary, leading to disparities in service quality between regions.

The UK has a well-established structured training system for producing ENT specialists, with advanced training and research opportunities. Malaysia has a growing number of ENT specialists in urban areas and the private sector.

### **3) Assess the impact of socio-economic factors on the prevalence and management of ENT diseases globally, with a specific focus on Malaysia, providing insights to inform more effective public health strategies**

Globally, socioeconomic factors have a major impact on the management and prevalence of ENT disorders. These variables include living conditions, healthcare availability, education levels, and income levels [8]. World Health Organisation (WHO) reports show differences in socioeconomic levels affect healthcare outcomes and access.

In low-income and developing nations, the frequency of untreated ENT problems is made worse by inadequate access to healthcare facilities [9]. Malaysia's Ministry of Health reports that the public sector is overburdened, impeding efficient healthcare delivery. A study in the Malaysian Journal of Public Health Medicine highlights significant differences in access to healthcare in urban and rural communities. Malaysia's tropical climate and urban pollution contribute to high rates of allergic rhinitis and sinusitis, while occupational hazards, like noise-induced hearing loss in industries such as palm oil production, are prevalent [10]. Similarly, other environmental factors such as poor living conditions contribute to the spread of infectious ENT diseases like sinusitis and otitis media; meanwhile overcrowding and inadequate sanitation increase the likelihood of respiratory droplet transmission, the common route for ENT infections such as the common cold, influenza, and streptococcal pharyngitis. Air pollution and environmental contaminants, such as nitrogen dioxide (NO<sub>2</sub>) and sulphur dioxide (SO<sub>2</sub>), further put urban people at greater risk of respiratory infections, due to irritation of the respiratory tract, and exacerbate existing ENT conditions [11].

Increasing healthcare funding and implementing outreach programmes in urban and rural regions are necessary to improve access to ENT care in Malaysia. It takes comprehensive public health education to decrease workplace dangers and increase awareness. Targeted ENT health education to the general lay population is also needed to improve ENT health outcomes in Malaysia. For instance, social media platforms, such as TikTok, can serve as potent platforms for sinus health education, as it is capable of reaching wide and diverse audiences [12]. Work on educating medical professionals also needs to be done

to improve care of ENT diseases. International Journal of Paediatric Otorhinolaryngology assists in this mission as it focuses on the dissemination of information concerning prevention, cure, and care of ENT disorders in infants and children. Finally, access to ENT services can be ensured by addressing health inequalities through investments in healthcare infrastructure and more robust policies. By addressing these socio-economic factors, Malaysia can improve the management and outcomes of ENT diseases, contributing to better overall public health.

#### **4) Expand my clinical and surgical knowledge in ENT, fostering a deeper understanding of diverse pathologies and treatment modalities within the field.**

During my time shadowing the ENT department, I have been exposed to a breadth and depth of diverse cases and intricate procedures, which has allowed me to witness the complexities of the ear, nose and throat organs and the importance of interdisciplinary care. From routine tonsillectomies to complex cases of chronic rhinosinusitis, each patient encounter has been a learning opportunity, each that has shaped my understanding of ENT care.

One of the most common procedures I observed was the tonsillectomy with adenoidectomy, often performed on children suffering from recurrent tonsillitis. Post-operative care involved vigilant monitoring for infection or bleeding, ensuring adequate hydration, and managing pain. Educating patients and caregivers about signs of complications was crucial, emphasising the importance of early intervention. Similarly, another prevalent condition I encountered was chronic otitis media, often requiring myringoplasty to repair a perforated eardrum. Understanding the nuances of each case, such as the location and size of the perforation, was essential for determining the best course of action.

In addition to surgical cases, I learned to diagnose and manage various ENT conditions such as allergic rhinosinusitis, obstructive sleep apnoea, and epistaxis. A key insight I took away was that each patient case presented with their own unique challenges, requiring a tailored approach to management. Rarely were cases textbook and straightforward as taught in medical school tutorials. For instance, I encountered multiple cases of Ludwig's angina, a life-threatening cellulitis of the soft tissue involving the floor of the mouth and neck. Managing these cases required a multidisciplinary approach, often involving intensive debridement and airway management to ensure patient safety. However, airway management proved a challenge with certain patients with luxated teeth, obesity and cervical spine abnormalities. Similarly, in one case I remember the patient was co-morbid with uncontrolled type 2 diabetes. In such circumstance, involving multiple teams was common, such as collaborating with the diabetes team to control blood sugar levels and the renal team to review kidney function. This highlighted the interconnected nature of health conditions and how a holistic approach is crucial to optimise patient health outcomes.

#### References:

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