Feature Article

Exchange Experiences: Exploring Chinese Healthcare as Australian Medical Students

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Abstract

This feature article explores the similarities and differences in the medical education and health care systems of modern China compared with those of the Western world. It explores how a system interacts with, and adapts to, the political and social structure of its population and the challenges that can arise from this.

The authors were part of a medical school exchange program to the First Affiliated Hospital, Sun Yat-sen University Guangzhou where they observed the inner workings of the hospital. The authors have drawn their observations from their experiences attending lectures, taking patient histories and observing cases during their rotations through each department of the First Affiliated Hospital. The experience gave the authors insight into how healthcare and education can vary between each country and the factors controlling this.

Introduction

A sprawling metropolitan city, with a population almost half that of Australia at 12.5 million, Guangzhou is the capital of the Guangdong Province in South East China.

As third year medical students, we were fortunate enough to take part in a two-week exchange program with the First Affiliated Hospital, Sun Yat-sen University, Guangzhou, in January 2019. Sun Yat-sen University was founded in 1924 by Dr Sun Yat-Sen, a democratic revolutionary leader of the 20th century. It is a top-tier university nationally and is renowned internationally, with many successful relations and exchange programs, including Harvard University. During the program, we rotated through different hospital departments each day, looking at their extensive facilities, discussing interesting cases, and receiving lectures from their esteemed clinicians. Having recently finished our second year of medical school, this was a fantastic opportunity to explore different clinical settings, learn first-hand from patients, and compare healthcare in China with that of our own country. During our stay, we also caught a glimpse of the city's rich culture and history, and enjoyed its scrumptious food (Figure 1), stunning views of the Pearl River and the avant-garde architecture of the Canton Tower (Figure 2); the 4th tallest free-standing structure in the world.

Throughout the course of the program, we observed many differences between the Chinese and Australian healthcare systems and their clinical settings. In this article, we will discuss these in relation to systemic and social features, referring to the population and the healthcare framework of China, as well as community-based and cultural factors.

Body

This article discusses the differences between Australia and China (specifically Guangzhou) using the following sections: patient population, healthcare systems, family dynamics, doctor-patient relationships, and medical education. Table 1 summarises the observed similarities and differences between both countries.

Patient population

First Affiliated Hospital, Sun Yat-sen University, is one of the major tertiary hospitals in China and receives complex cases from the surrounding regions. As such, we were fortunate to witness the clinical aspects of rare conditions including dermatomyositis, amyloidosis, and amyotrophic lateral sclerosis.

The major disease burden in China is related to non-communicable diseases (NCDs) and the leading causes of mortality are cerebrovascular disease, cardiovascular disease, and respiratory illness [1]. This differs slightly to Australia, where coronary heart disease, dementia and Alzheimer's disease, and cerebrovascular disease are the top three causes of mortality [2].

China's large population translates into a high patient-to-doctor ratio. We experienced this in the Sun Yat-sen emergency department (ED) where there were huge crowds of patients in each treatment room with one doctor and one nurse looking after more than ten patients simultaneously. The other hospital departments that we visited were also significantly larger than those we have experienced in Australia, often spreading across multiple floors in the building, in order to look after huge numbers of presenting patients.

The volume of patients in Chinese hospitals is also significantly higher than in Australia. The staff at Sun Yat-sen report that each day over 20,000 patients pass through their ED. Despite our initial scepticism, this became quickly believable when we observed the swarming ED during our visit. The rooms were packed with patients and their families, and beds had to be placed in the hallways to accommodate the large numbers. There were no curtains or partitions separating the patient beds, and physical examinations and investigations such as ultrasounds were conducted openly. This way of practice appeared to be the norm, however, despite being in a busy and time-pressured environment, we observed several instances where doctors devoted considerable time to patients requiring further assessment. This method of assessment of patients differed to our experiences in Australia, where patient information is discussed behind curtains or partitions at the bedside. It may be that inadequate infrastructure for the number of patient presentations plays a role in this process of more open patient assessment in China [3].

Healthcare system

The healthcare system in China is different from its Australian counterpart in many ways. For instance, in mainland China there is no concept of General Practice. The patients in urban areas rely on outpatient clinics in the hospital or immediate treatment through the emergency department, from where they can be transferred either vertically or horizontally, within the hospital. Vertical integration being the ability to transfer between generalists and specialists, while horizontal integrations is the collaboration or transfer between different specialists. On the other hand, rural regions have 'medical care centres', that act as the first point of contact, from where patients can then be transferred, if required [4].

China, and more specifically Chinese healthcare, varies greatly between regions. One of the most significant differences between rural and urban areas is the medical insurance policy. Unlike Australia, where there is a publicly funded universal health care system for all citizens and permanent residents, China provides variable public health insurance according to one's place of residence and employment status. China has three major health insurance schemes - the rural New Cooperative Medical Scheme, the Urban Employee-Based Medical Insurance and the Urban Residence-Based Medical Insurance. Overall, Urban Employee-Based Medical Insurance provides more comprehensive packages and benefits than the other two schemes, especially in terms of outpatient services. Furthermore, migrants from rural regions who are living or employed in urban regions are not eligible for the urban insurance schemes, and most provinces do not accept New Cooperative Medical Scheme reimbursements. This has led to a huge disparity between populations that are originally from the city and those who have moved there from rural areas. This is further exacerbated by the large influx of people into cities due to urbanisation [5]. This effect is compounded by the Hokou System, which mandates that changes to place of residence require legal permission [6]. As such, migrant populations often feel especially discontent with the quality and extent of health services they receive in urban settings, leading to a reduced engagement of this population subset with the urban healthcare systems in China [7].

We experienced the lack of available healthcare in the Guangdong province when we were introduced to a 51-year-old man from a rural area who had presented with a three-month history of cough. He had been diagnosed with lung cancer, for which he was recommended treatment with monoclonal antibodies. Due to the insurance system in China, there was no public funding available for his treatment in Guangzhou, which forced the patient to opt for palliative care. We were told that this was just one of the thousands of similar cases of rural-born patients living in urban China. In Australia, the Medicare system provides for all citizens, permanent residents, and migrants with a valid visa and a first-degree relative with permanent residency. As such there is no funding disparity between rural and urban patients, with respect to public health insurance. But, there is a disparity in Australia between accessibility of health care in rural and remote communities compared to the urban population.

Geographic locations, as well as distinct cultural and linguistic differences in the Aboriginal and Torres Strait Islander populations, play a major role in the lack of delivery of adequate medical attention in rural and remote Australia [8]. In China, healthcare services, hospitals and pharmacies are also less accessible to the rural population, and this leads to further healthcare discrepancies between the rural and urban populations [6].

Family dynamics

During our stay in China, we observed that patient care and medical practice both revolve strongly around traditional beliefs and customs and family ties. There is a strong focus on family. Statistics show a low divorce rate of 1.4 per thousand marriages, and that only 1.5% of those over 65 live in an elderly care home [3]. Comparative Australian rates are two divorces per thousand marriages and 6% nursing home dwellers [9,10]. In the hospital setting we typically observed at least one family member with the patient at all times, and a young female patient with an unknown cerebellar pathology had up to five family members with her at any one time.

A strong sense of duty was observed in the older people and thus a hierarchy of sorts was apparent [3]. This hierarchy appeared to take precedence over confidentiality, with family

members present in all medical consultations. An instance where this hierarchy was experienced occurred when one of our colleagues acted as a volunteer to demonstrate the Enhanced External Counterpulsation. This is a non-invasive therapy for people with angina or heart failure which helps increase blood flow to the heart with the use of strong pulsating cuffs around the calves and thighs. Upon completion, the student's blood pressure was measured and was found to be unexpectedly high. Upon discovering this, the examining doctor proceeded to discuss this with our coordinator, without first indicating to our colleague that there was an anomaly.

Doctor-patient relationship

A study has found that in China the doctor-patient relationships are poor due to the brief nature of consultations and the lack of trust in doctors [11]. The combination of traditional Chinese values, low medical literacy rates, and high patient numbers mean that the majority of consultations we observed were short and, on occasion, appeared rushed. Despite this, we witnessed doctors with a fluid and systematic approach to consulting and assessment who demonstrated an excellent approach to both verbal and non-verbal communication.

Differences in doctor-patient interactions are inevitable due to the rigid biomedical model of education seen in Chinese hospitals [12]. There was a strong focus on the biological aspect of the disease in China, as opposed to the bio-psycho-social model used in Australian medical schools. The Western curriculum aims to accommodate the changing role of a doctor as, not just a scientist, but a humanist, secondary to a belief that this creates compassionate and empathic doctors [13]. Chinese culture is based around family, and such family dynamics and beliefs may not support patients' autonomy in making healthcare decisions. This may explain the differences in teaching and learning we experienced whilst visiting China compared to that experienced at our Australian medical school.

Doctors in China must consider the country's diverse culture that possesses the many contrasting philosophies founded in Confucianism [11]. We observed many patients hold on to superstitious or religious beliefs, and think that these could help "cure" their illnesses. An example is the belief that the drinking of water from the temple could cure their disease. The lack in patients' knowledge, coupled with the brief nature of the consultation, led to most patient-care decisions being made by the physicians. This paternalistic model of medicine in China which could be due to the lack in patients' medical knowledge, especially in the rural areas where most people have less education.

Education

We were fortunate enough to be able to attend lectures as well as a demonstration of how Problem Based Learning (PBL) is run in China. Although the PBL system was almost identical to that with which we were familiar, with students working collaboratively through a case, the content differed slightly, with respect to national policies and cultural backgrounds to be studied.

Another significant difference between medical education in Western countries and China is the incorporation of alternative medicine into the medical curriculum [14]. Alternative medicine in China mentioned and taught included acupuncture, moxibustion, cupping, guasha, massage, and oral herbal medication. Chinese herbal medication and traditional remedies were very important in Chinese everyday health and lifestyle. Chinese medicine is often used in conjunction with pharmaceutical drugs, thus making it critical for a health professional to have a sound understanding of its effects, contraindications, and interactions.

Doctors were observed routinely asking their patients specifically about their Chinese traditional medications, and they possessed extensive knowledge of them, allowing safe clinical decisions to be made. There was an entire floor for the Department of Traditional Medicine at the hospital, highlighting the importance of this branch of alternative medicine. The department's role in patient care involved incorporating traditional Chinese medicine into their Western style evidence-based medication regime.

Education continues to evolve worldwide, and current literature suggests that China is adapting its medical school curricula to keep pace with the Western World [13]. In almost all Chinese medical schools, humanities is a compulsory course. Sun Yat-sen University has implemented behavioural science, humanities and social sciences, and medical ethics into the official medical curriculum. Sun Yat-sen University has also facilitated an exchange program with Curtin University Medical School with the aim of observing how psychosocial aspects of our course are incorporated into our learning.

Our challenges faced

One of our biggest early challenges was the language barrier. Very few of the hospital staff spoke English and we did not speak Cantonese, the local language. Fortunately, our facilitating clinicians and the supervisor from our medical school were bilingual, and served as our translators. It was an interesting experience to be taking histories, or asking for consent before a physical exam, through a translator. Our non-verbal skills such as eye contact, gestures, facial expressions, and reading expressions and cues, were useful in connecting with the patient, and our lack of direct verbal communication sharpened these skills. Australia is a diverse and multicultural country and it is not unusual for health professionals and patients to encounter a linguistic divide. The use of interpreters and non-verbal cues for communication in China allowed us to improve our patient communication and highlighted the similarities in communication irrespective of location.

Conclusion

Our visit to the First Affiliated Hospital, Sun Yat-sen University, was an invaluable experience made extremely memorable by the warm welcome we received from our host. During the three-week exchange, we gained significant insight into healthcare delivery at a tertiary hospital in a metropolitan city of China. As pre-clinical medical students with limited patient exposure, it was an incredible opportunity that was both exciting and challenging. To be in a clinical setting with patients, and to observe clinical signs of common, as well as rare, medical conditions was a rewarding experience. Despite our initial concerns regarding the language barrier, it did not cause difficulties because of the incredible support of our professor, Dr Daniel Xu, as well as the clinicians and administrative staff at Sun Yat-sen University. We learnt a great deal during our placement, furthering both our medical knowledge as well as the cultural and social norms that guide medical practice in China. We hope to grow the partnership between the two universities and maintain the relations we built during our visit, and would love to return, given the opportunity. It was an experience that we will remember and cherish for the rest of our lives (Figure 3).

Legend

Figure 1. Food on offer in the vibrant city of Guangzhou

Figure 2. Canton Tower and Guangzhou's skyline

Figure 1. Front office of The First Affiliated Hospital, Sun Yat-sen University

Table 1. The similarities and differences between the Australian and Chinese medical systems

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Table

Table 1. The similarities and differences between the Australian and Chinese medical systems

		Guangzhou	Australia
Patient population	Top three causes of mortality	1. Cerebrovascular disease 2. Cardiovascular disease 3. Respiratory illness	1. Coronary heart disease 2. Dementia and Alzheimer's disease 3. Cerebrovascular disease
	Ethical considerations	- Lack of confidentiality (e.g. patient details were discussed at the bedside in open rooms occupied by four patients and their carers) - Lack of privacy (e.g. no curtains or partitions separating the patient beds, and physical examinations and investigations, such as ultrasounds, were conducted openly) - Lack of patient autonomy (e.g. Most decisions made by elder family members or in consultation with family)	- Privacy and confidentiality are fundamental to any doctor-patient interaction (e.g. strict rules to cover patients and use blinds even for the simplest procedures and examinations) - All decisions are made by the patient themselves, provided they fulfil capacity criteria
	Volume of patients	Roughly 20,000 patients per day pass through ED.	Only about 200 patients passing through an average ED per day.
	Doctor-patient ratio	1.8 physicians per 1000 people	3.6 physicians per 1000 people
Healthcare system	Healthcare system structure	No GP system, patients arrive directly at ED. There are medical care centres in regional areas which mirror Australian GP practices.	GPs are usually the first point of contact.
	Medical insurance policies	Variable public health insurance according to one's place of residence and their employment status Urban Employee-Based Medical Insurance has more	A publicly funded universal health care system, Medicare, provides for all citizens, Permanent Residents, and migrants with a valid visa and a first degree relative with

		comprehensive packages and benefits than the other two (the rural New Cooperative Medical Scheme and the Urban Residence-Based Medical Insurance) schemes, especially for outpatient services. Moreover, migrants from rural regions who are living or employed in urban regions are not eligible for the urban insurance schemes.	Permanent Residency. There is no funding disparity between rural and urban patients.
	Rural vs. Urban Health care	Health care is very dependent on geographical location in terms of facilities, staffing and accessibility. Rural patients have poorer health outcomes in both countries.	
Family dynamics	Divorce	Much stronger ties in China, reflected by divorce rates of only 1.4 per thousand.	Comparative rates: divorce rates of 2 per thousand.
	Elderly	Only 1.5% of people over 65 living in aged care homes.	6% of people over 65 living in aged care homes.
	Hierarchy	A strong sense of duty in the older/experienced individual is very evident especially in a medical situation.	Although a hierarchy often exists due to the innate nature of society, it is not as evident.
Doctor-patient relationships	Nature of Consultation	Due to patient values, medical literacy rates, and volume of patients, consultations are often brief.	A larger emphasis on building rapport by doctors leads to a more thorough consultation.
	Focus of Consultation	Consultation seemed to have a larger focus on the biological aspects of disease due to the biomedical model of education in Chinese hospitals.	Consultations focus on holistic care reflected in the change of Western medical curriculum.
	Assessment techniques	Doctors in both countries use similar verbal and non-verbal communication techniques during history and examination to come to a diagnosis.	
	Cultural Barriers	Both countries have patients where cultural barriers will need to be overcome. In China patients are often superstitious and can present dissociated from their care. In Australia however, due to the high levels of immigration along with the Indigenous and Torres Strait Islander population there is a vast number of cultures and they all come with their associated differences that all need to be approached accordingly.	
Medical Education	Problem Based Learning	Our university utilizes Problem Based Learning as a core component of its curriculum. Sun Yat-sen seems to incorporate a similar system where Problem Based Learning is used to allow students to work collaboratively to discuss a case and its content.	
	Biopsychosocial Model of	A strong focus on the biological aspect of the disease	Medical education follows the bio-psycho-social model

	Medicine	however, there is a push to implement psycho-social into its curriculum.	and is discussed throughout the curriculum.
	Alternative Treatment	Heavy incorporation of Traditional Chinese Medicine in the medical curriculum reflecting the demographic of patients in Guangzhou.	No incorporation of alternative medicine into the curriculum.