

# The beginning of medical education in Hong Kong 125 years ago...its unique features in comparison with similar efforts in China

Medical education in Hong Kong began with the inauguration of the College of Medicine for Chinese in 1887. Although training in western medicine for Chinese had been started half a century earlier in the mainland of China, with a few exceptions, much of it was in the form of apprenticeships without a formal course of study, such that by the end of the 19th century medical education in China was still on the whole poorly developed. This paper presents some examples of significant efforts in western medical education on the Chinese mainland during the 19th century. It compares the Hong Kong College with these efforts, and examines those features which, together, made the College unique. These included its independent status as an educational institution, its use of English as a medium of instruction together with the attendant advantages that brings, the availability of students with the requisite language skills to undertake such studies, the availability of teachers, support of the public, and access to autopsies and dissection. Moreover, opportunities for employment in the public sector and in private practice gradually became available for its graduates, thus accelerating the acceptance of western medicine by the Chinese population and the development of these services in Hong Kong. The College, at its inception, could rightfully claim a leading position in these various aspects. Its story should be a source of inspiration and pride, and of encouragement for the local medical profession to continue this 125-year-old tradition of service and leadership.

## Introduction

The centenary of the beginning of university medical education in Hong Kong is being celebrated this year (2012), though in fact it was 125 years ago that western medical education was first started in the territory. The establishment of the College of Medicine for Chinese (HKCM) in 1887 was a landmark event for Hong Kong. Not only was it the first tertiary educational institution in the territory, it was also a significant landmark for western medical education for all Chinese.

The fact that Dr Sun Yat-sen was enrolled among its first batch of students, and later became its most famous graduate, is something that the College can be justly proud of. However, it can also lay claim to a broad range of other achievements that deserve wider recognition. This paper compares the establishment of the HKCM with similar efforts in the Chinese mainland in the field of western medical education during the 19th century, and seeks to identify aspects which made the Hong Kong College unique, particularly at the time of its inception.

## Early efforts in medical education in 19th century China

### Early efforts in Canton (Guangzhou)

Western medical education in China began soon after the arrival of the first medical missionaries in the Chinese mainland.<sup>1</sup> In 1835, Dr Peter Parker, having been sent to China by the American Board

of Commissioners for Foreign Missions, opened the first hospital for western medicine inside China known as the Ophthalmic Hospital in the 'Factories' district of Canton. At that time, foreigners were not allowed to reside in the Chinese mainland except in this restricted area, and only for 8 months in the year; mainly they were there for purposes of trade. The Ophthalmic Hospital became almost an instant success and was soon to be patronised by large numbers of the Chinese population who came to receive free treatment, not only for eye diseases but also a whole range of other ailments.<sup>2</sup> With the rapidly increasing popularity of the hospital, in 1837 Parker started to recruit local youths to assist him in his work, and these apprentice-type trainees became proficient in performing a range of eye operations. Their ability was acknowledged even beyond the province, as recorded in 1861 by another well-known early medical missionary, William Lockhart.<sup>3</sup> This type of apprenticeship training became a common model for other missionary hospitals, although it was apparent to the missionaries themselves that this education fell short of what was required to produce fully fledged doctors who could practice independently.

There was further progress in 1855, when the hospital that was renamed the Canton Hospital, was put under the care of another medical missionary, Dr John Glasgow Kerr. Dr Kerr moved the hospital to a new building in 1859 after the first burnt down, and gave it the Chinese name of Pok Tsai Hospital (博濟醫院). In 1862 he wrote in his hospital report that it

was “considered an important part of the objects of the hospital to educate young men in the science and art of surgery. *This cannot now be done to the extent desired* [italics added], but the practical knowledge acquired by the pupils is such as places them far in advance of native physicians in the treatment of many forms of disease and especially in every department of surgery”.<sup>4</sup> In 1866, when a new building for the hospital was opened, Dr Kerr was able to report that: “In connection with the new hospital, a school of medicine has been opened in which systematic instruction is given to the pupils connected with the two hospitals, (*Kum-li-fau and Pok Tsai*) and to a few others. It is hoped that this is the germ of a medical school which will in future years send its pupils into all parts of the empire.”<sup>5</sup> Dr John Kerr was assisted in the teaching of this course by Dr Wong Fun (黃寬) the first Chinese to gain a medical degree at a western university, having graduated from Edinburgh University in 1857, and by Kwan Ato (關亞杜), one of Dr Parker’s first batch of assistants at the Ophthalmic Hospital. Instruction at the Canton Hospital medical school was given in Anatomy, Physiology, Chemistry, *Materia medica* and Surgery, including Practical and Chinese medicine, the latter being taught by Kwan. This was probably the first systematic medical course of its kind in China.

By 1871, Dr Kerr could report that more than 12 young men who had spent at least 3 years at the hospital undergoing such training, were engaged in practice on their own account, mostly in country towns. “They also sent patients to the Canton Hospital when operations were required, and which they could not perform”.<sup>6</sup> In 1880 the medical school attached to the Canton Hospital also gained the distinction in being the first in China to admit female students. Sun Yat-sen spent 1 year in 1886 receiving medical training there, prior to transferring to the College of Medicine in Hong Kong when it opened in 1887.

As students attached to the missionary hospitals at that time rarely had the opportunity to learn English at a level that enabled them to take a medical course in that language, almost all of them were taught in Chinese. Their education was highly dependent on good translations of medical books, and on the availability of teachers who were proficient in the Chinese language. Dr Kerr personally translated from the English original 34 volumes of Chinese medical texts and authored works of his own,<sup>7</sup> with others also contributing to this effort. This limited availability of suitable teachers, and of western medical literature in the Chinese language was undeniably a significant drawback in the overall education of the students. Moreover, during the 19th century the argument about the relative merits of teaching in Chinese or English was to recur again and again among the medical missionary community.<sup>8-12</sup>

## 於125年前開始的香港西醫教育：其獨特性並與19世紀國內西醫教育發展的比較

香港的西醫教育始於1887年創立的香港華人西醫書院。雖然在學院成立前約半世紀，國內已有華人開始學習西醫，但除少數特例外，大部份皆採取學徒制，正式課程教學很罕有。直至19世紀末，中國的西醫教育仍未達到良善發展地步。本文回顧19世紀中國大陸西醫教育發展的幾個重要里程碑，並與香港華人西醫書院的模式作比較，從而檢視後者的獨特性，包括保持其作為教育機構的獨立地位、採用英語教學所帶來的優勢、擁有足夠語言能力投身學習的學生和來自不同專科的教師、公眾的支持，以及為醫科生提供解剖與驗屍的學習機會。隨著西醫書院畢業生於公立醫院就業或私人執業的機會增多，香港華人對西醫治療的接受程度加增，促使有關服務也迅速擴展。無可否認，香港華人西醫書院於成立時在華人西醫教育各方面均處於先導地位，確實令人鼓舞及引以為榮，足以激勵本地醫學界將這個擁有125年歷史的服務和領導傳統承傳下去。

### Early medical education in Peking (Beijing)

In 1862 the Imperial Tung Wen College (同文館) was started in Peking under the auspices of the Tsungli Yamen (總理衙門), the Ministry of Foreign Affairs. Although it was initiated as a language school mainly for training Chinese youths in foreign languages to meet the requirements of translation and interpretation, it later became a College of general education. Sporadic teaching in western medicine was attempted, including a medical course given by Dr John Dudgeon, who was in charge of a hospital in Peking under the London Missionary Society (LMS). According to Dr WAP Martin, the President of the College, “The Yamen gave him the title of Professor and invited him to lecture, but refused to permit our students to receive clinical instructions at the mission hospital. Ten years were thus lost, the lectures amounting to nothing more than the communication of ideas such as ought to form a part of liberal education.....The ministers declined to expand the class into a medical school for fear of encroaching on the domain of the Tai-i-yuan (太醫院) [*this College is also known by the English name: College of Imperial Physicians*], an effete college of medicine which has charge of the Emperor’s health and is supposed to possess a monopoly of medical sciences.....”.<sup>13</sup>

It was not until 1904, when the Union Medical College was started (formed from the union of efforts by several Missionary Societies), that a formally organised medical college with a 5-year course was available in Peking.<sup>14</sup> In 1915, this Medical College was taken over by the China Medical Board of the Rockefeller Foundation, and in 1919, became the new Peking Union Medical College.

### Early efforts in medical education in Tientsin (Tianjin)

In 1880, the English medical missionary, John Kenneth Mackenzie, started a hospital in Tientsin with funds provided by Viceroy Li Hung Chang (李鴻章) and named it the Viceroy's Hospital. When there was a recall to China of the students who had studied in America under the Chinese Educational Commission, Mackenzie was able to convince Li Hung Chang of the advisability of recruiting a number of these recalled students for medical training at his hospital, since they had already obtained a basic general education in English and in scientific subjects to be trained in western medicine, specially to fill the posts of military physicians and surgeons for the Chinese army and navy. In Tientsin there were a number of other foreign doctors associated with the Imperial Customs Service, as well as with the British and American Navy, who could offer assistance in teaching or examining. With funds supplied by Li Hung Chang, this Viceroy's Hospital Medical School was started in 1881. Thus, the Tientsin school had the honour of being the first school of western medicine in China to be funded by the Chinese Government, and was probably the first school to use English as the main medium of instruction.

Initially the course lasted 3 years, and was mostly taught by Dr Mackenzie himself. The school had the use of skeletons and models for teaching anatomy, and also a set of microscopy teaching slides; though there were very occasional limited autopsies, human dissection for learning anatomy was not allowed.<sup>15</sup> For subsequent admissions, Mackenzie had to rely on a supply of students from Hong Kong who were competent to study medicine in English, coming from the Normal School (in 1883) and the Central School (in 1884). This pioneering project was not without its difficulties and disappointments.

Out of the first batch of six graduates in 1885, only the top two were successful in gaining positions in Li Hung Chang's employ, one in the Viceroy's Hospital and one in the newly opened Army Medical College. Unfortunately the others who were sent to various military units failed to achieve acceptance by the rather conservative military officers.<sup>16</sup> This was a major disappointment for Mackenzie, and the scheme to train military doctors to provide humanitarian aid in times of war appeared to be ahead of its time. With the death of Dr Mackenzie from smallpox in 1888, the Viceroy's Hospital Medical School lost its government funding and had to close, but medical education was later continued by Mackenzie's students as the Peiyang Medical College, renamed the Naval Medical College in 1915. So these early efforts, although apparently abortive due to the untimely death of Dr Mackenzie, were to bring benefits in the long run.

### A questionnaire survey of medical education in China

An interesting survey of medical teaching in China was made in 1896, and was based on a questionnaire sent out to 140 medical missionaries, with 60 replies received.<sup>17</sup> Thirty nine of these indicated some form of medical teaching had been conducted. Besides pointing out that the Canton Medical Missionary Hospital had trained 4 times as many students as any other hospital in China, the author highlighted the fact that the classes taught were small, there being only three locations (including Hong Kong), where there were more than 10 students currently enrolled. The vast majority had two to six students only, mostly without any regular or systematic teaching. The author concluded that "scarcely half a dozen places in China had [in 1896] reached the point where they could be realistically considered to be a medical school". The lack of a reply from Shanghai was also noted, despite its "commanding position at the very centre of China" (as viewed from the perspective of the foreign community). Although this survey confirmed the somewhat under-developed state of formal medical education in most parts of China at the end of the 19th century, these findings were not altogether unexpected. After all, despite their best intentions, the relatively small number of medical missionaries were scattered in many cities throughout China and had their hands full meeting the medical needs of the vast population around them. Thus, there was little time to spare for running a formal medical curriculum. For a more comprehensive survey of these efforts, the reader is referred to the account given in Wong and Wu's *History of Chinese Medicine*.<sup>18</sup> However, the survey report provided added impetus to the growing movement to bring about higher standards of medical teaching by the cooperative efforts of different hospitals and mission groups, through the formation of Union Hospitals and Union Medical Colleges, which were eventually to appear in the ensuing century.

### The beginning of medical education in Hong Kong

#### An earlier proposal to start western medical education in Hong Kong

As early as 1845, a scheme to start a medical school in Hong Kong had been proposed by Dr Benjamin Hobson of the LMS. Hobson had arrived in Hong Kong from Macau in 1843, to take charge of the Medical Missionary Hospital (MMH) which had been built on Morrison Hill, soon after the British colony was founded. A China Medico-Chirurgical Society was founded in Hong Kong on 13 May 1845,<sup>19</sup> and it was Hobson's hope that the members of the Society, together with staff of the MMH in Hong Kong, could become the nucleus of the teaching faculty.

Unfortunately Hobson was ahead of his time, and was not able to raise sufficient funds to start this school, and the project did not come to fruition. The MMH was closed in 1853.<sup>20</sup>

### The College of Medicine for Chinese, Hong Kong

The seeds of a renewed scheme to provide western medical education for Chinese in Hong Kong were sown in 1881 by a small group of individuals. They opened a dispensary (the name commonly used at that time for a medical out-patient clinic) in the LMS Chapel within the crowded Taipingshan district of Hong Kong, not far from the present Hong Kong Museum of Medical Sciences.<sup>21</sup> The free clinic was held twice a week and run by a local private practitioner, Dr William Young; expenses for medicines were defrayed by a businessman, HW Davies. The popularity of this clinic confirmed the need for a hospital in Hong Kong to provide western medical services to the Chinese population, without the high fees charged by the Government Civil Hospital. With the establishment of such a hospital, the intention was that a medical school for Chinese could also be started. An appeal for public subscriptions was launched in 1884, which received the enthusiastic support of Dr Patrick Manson who had arrived in Hong Kong in December 1883 to start his private practice.

Before coming to Hong Kong, Manson had spent 17 years working in China and had a deep appreciation of the medical needs of the country which he knew could only be met by producing Chinese physicians trained in western medicine. While in Amoy (now Xiamen), he had trained some Chinese assistants in the hope that from them, the practice of western medicine could spread.<sup>22</sup> He had also encouraged a pilot scheme in 1883 for students from the Hong Kong Central School to receive training at the David Manson Memorial Hospital in Takao (now Kaohsiung) in Formosa (now Taiwan). (David Manson was Patrick Manson's younger brother who died of sunstroke in 1878 after a period of service as Customs medical officer in Takao. The hospital there was renamed in his memory after his death). Unfortunately, the scheme, with Takao's Customs medical officer, Dr William Wykeham Myers as a sole teacher, lasted only a short time.

Regrettably, the project for starting a charitable public hospital stalled because of conflicting views on its management and insufficient public subscriptions.<sup>23</sup> At this juncture another key personality in the chain of events arrived on the scene, namely Ho Kai (何啟). Ho Kai had been educated in Britain, and had qualified with MB,ChM from the University of Aberdeen in 1879. He had also been called to the Bar at Lincoln's Inn. After returning to Hong Kong in 1882 with his English wife, he left

medicine to practise law. Ho Kai stepped in to offer a sum of money to build the hospital on land to be acquired by the LMS at the corner of Hollywood Road and Aberdeen Street. Ho Kai's wife Alice died of typhoid in June 1884, only 2 years after coming to Hong Kong. Thus, the hospital was to be named the Alice Memorial Hospital (AMH) in her memory (Fig 1). Ho Kai also stipulated that it would be managed by the LMS, although the 'friendly co-operation' of private practitioners in town would be welcome. In February 1887 when the hospital was opened, there were only 10 expatriate doctors on the list of registered medical practitioners in Hong Kong,<sup>24</sup> and four of these volunteered to serve as (part-time) physicians to the AMH, each with his own ward. Patrick Manson was among that group.

From the start, the AMH was designed with students in mind, as was seen in the plans of the hospital drawn up by the architects, which included rooms for students.<sup>25</sup> However, it required the arrival of another key personality to trigger the establishment of the HKCM on a proper footing. That person was James Cantlie who arrived in Hong Kong on 27 July 1887, having been recruited by Manson to join his practice in preparation for his retirement.<sup>26</sup> Cantlie had been teaching medical students for more than 14 years while working at the Charing Cross Hospital in London, and was keen to continue doing this in Hong Kong (Fig 2). Furthermore, he was a skilled administrator. It was mostly due to his influence that the HKCM was firmly established as an independent educational institution. This was to have a significant impact on the running of the College, and on its eventual development into the Medical Faculty of the University of Hong Kong.

Together, Patrick Manson, Ho Kai, and James Cantlie formed the indispensable members of a gifted team that brought about the establishment of the HKCM, which was formally inaugurated on 1



FIG 1. The Alice Memorial Hospital at the corner of Aberdeen Street and Hollywood Road, home to the College of Medicine for Chinese

Reprint with permission: Council for World Mission archive, SOAS Library, University of London



FIG 2. James Cantlie with his Anatomy class at the College of Medicine for Chinese  
Reprint with permission: Hong Kong Museum of Medical Sciences Society

October 1887 at Hong Kong's City Hall. The start of this College raised many hopes, and those present at the inauguration felt they were witnessing history being made.

### What distinguished the Hong Kong College from its earlier counterparts in China?

There were at least five noteworthy aspects.

#### 1. The College as an independent organisation

Although the HKCM had some similarities with its counterparts inside China in being associated with a missionary hospital, it differed in having, at the same time, a separate identity and organisational structure. A month after he arrived in Hong Kong, Cantlie called a meeting on 30 August 1887 at the AMH for those interested in starting a medical school, which was attended by eight people. It was resolved at that meeting that those present would become the Senate of the College (ie the committee which dealt with teaching and examinations); and that there was to be also a Court (the authority responsible for the management of College affairs) as well as a General Council consisting of all students and staff, with a Rector elected from a prominent member of the community.<sup>27</sup> This type of governance structure was entirely unique for Chinese medical schools, and resembled that of universities in Britain, such as Aberdeen, the university where Manson, Cantlie, and Ho Kai received their medical degrees. The group also elected Manson as Dean, Cantlie as Secretary, and asked for the College to be put 'under the auspices of the Governor'. A prospectus was prepared and a structured syllabus drawn up. This ensured that the College existed as a separate organisation in its own right, and that there would be room for the medical fraternity in Hong Kong, as well as all others interested

in supporting the College to play a significant part in its future development.

#### 2. Advantages of using English as the medium of instruction, and availability of staff and students

Hong Kong, being under British administration, had by that time sufficient Chinese students educated to a level where they could take advantage of an English medical education. It has been mentioned already how the Viceroy's Hospital Medical School in Tientsin and the pilot scheme in Takao had to recruit its students from Hong Kong. The Government Central School (forerunner of the present Queen's College) had been started in 1862 in Gough Street in Central; its Headmaster Frederick Stewart, was recruited from Britain.<sup>28</sup> It was the first Government School given a special mandate to promote high standards of English teaching for local students. Therefore, by 1887 (25 years later), there was already a well-established system of secondary schooling in the English language. A number of Mission schools in Hong Kong, including the Diocesan School as well as St Joseph's and St Paul's College, also provided an English education, and were able to feed students into the HKCM course. Teaching in English brought with it at least two big advantages. Firstly, students had access to a large range of textbooks and other reference works, similar to those available to students in the western world. Secondly, a larger pool of eligible persons was available for the College to call upon as teachers and examiners, which was not limited to those who could teach medical and scientific subjects in the Chinese language. These teachers, working in a voluntary capacity, included not only medical doctors but also those with training in chemistry, botany and other science subjects, as well as Latin. They included persons serving in Hong Kong in various capacities in Government, the Armed Forces, and private organisations. Dr John Kerr of Canton, who was present at the opening ceremony of the HKCM, made the following comment: "To the profession in Hong Kong belongs the credit of inaugurating the *first* college [in China] with a full faculty of able men" [*italics added*].<sup>29</sup> Thus, the highly respected senior missionary who was most credited with the development of medical education inside China had personally acknowledged the HKCM as the *first* in China with such a faculty.

#### 3. Availability of autopsies and human dissection

The lack of autopsy cases for teaching as well as facilities for dissection in anatomy classes had often been lamented by teachers on the Chinese mainland. Post-mortem examinations and dissection of cadavers were rarely allowed inside China until after the establishment of the Republic, when in 1913, a presidential mandate was issued to make autopsies

legal.<sup>30</sup> By contrast, in Hong Kong, public mortuaries had been established since 1883,<sup>31</sup> and the office of the Coroner had been introduced along with the English common law system.<sup>32</sup> Even though an organised schedule of dissection for learning anatomy was not put in place until quite late in the life of the HKCM, the opportunity for students to observe autopsies and human anatomy was undoubtedly readily available from the very inception of the College.

#### 4. Support of the community

The three successive Deans of the HKCM, Manson, Cantlie and Clark, were all respected leading members of the medical profession in Hong Kong, and enjoyed wide support from the community. Patrick Manson had also established an international reputation for the scientific work that he did in Amoy. The successive Rectors who served as head of the organisation came from the ranks of the Colonial Secretary and Chief Justices. Not only had many members of the community taught at the College for many years (without remuneration), there were both Chinese and expatriate donors who provided funds, scholarships, prizes, and teaching equipment. Successive Superintendents of the Alice Memorial and Nethersole Hospitals took up the post of Director of Studies and Secretary to the College, whilst also supervising students who lived in the hospitals. This degree of public support and goodwill offered to the College could scarcely be rivalled by any other Chinese medical school at that time.

#### 5. Opportunities for work after graduation

This is probably the most contentious of all the aspects where Hong Kong differed from other medical schools inside China. Graduates from the medical missionary institutions in China were either employed as assistants in their training institutions, or went out to undertake a limited form of practice with limited facilities at their disposal.

At first, graduates of the HKCM also had difficulties, including lack of opportunities to serve inside China as had been originally hoped for. Besides, the Licentiate diploma awarded by the College was initially not recognised by the Hong Kong Medical Council. The early graduates were therefore not offered employment by the Hong Kong Government. Nevertheless, after the plague outbreak of 1894, and through efforts made by successive Deans, publicly funded positions did become available, as assistants in the Tung Wah Hospital, in Government and Chinese public dispensaries, in the Kowloon-Canton railroad, and in the Bacteriological Institute. Besides, a number of them went into private practice, became successful in their careers, and gained the confidence of their patients. These

increasing opportunities reflected a gradual change in acceptance of western medicine by the Chinese population of Hong Kong with increased demand for such services. Undoubtedly, the availability of a group of Chinese doctors trained in western medicine must also have been a key factor in bringing about this change in attitude.

#### Incorporation of the College into the University of Hong Kong

When the University of Hong Kong was established, an agreement was reached with the HKCM that all its students who met the entrance requirements, all teaching staff, properties and finances, endowments, scholarships and teaching equipment would be transferred to the new medical faculty.<sup>33</sup> The Dean of the HKCM, Dr Francis Clark, also served as Dean of the Medical Faculty for the first 3 years of the Faculty's existence. Significantly, the General Medical Council (GMC) of England announced that it would recognise the Hong Kong MB, BS qualification for registration with the GMC, only 1 year after the establishment of the University of Hong Kong.<sup>34</sup> It was clear that without the pioneering efforts of the HKCM in providing a solid foundation for the University, this recognition would not have come about so soon after its inauguration.

#### Conclusion

It is safe to say that in the field of medical education for Chinese, the HKCM at its inception stood out in many respects as the *first* in China. The fact that the College could claim such a distinction when it was started by a small group of committed 'volunteers', should be a source of inspiration to all. It must be acknowledged that a contributory factor to their success was that they were clearly building on the foundation of the many developments in Hong Kong over several decades that gave them a competitive advantage. This also confirms the special place Hong Kong holds in cultural and scientific exchange between East and West, and should encourage the local medical profession to continue this role in pioneering medical education and medical services.

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Chairman of the HKMMS Society, also provided helpful comments on the manuscript. Permission to publish Fig. 1 Alice Memorial Hospital [Reference: CWM/LMS/China/Photographs/Box 8/File52/Item 6], was kindly given by the School of Oriental and African Studies (SOAS) Archives of the University of London, acting for the Council for World Mission, and Fig 2 was kindly provided by the Hong Kong Museum of Medical Sciences Society.

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