# CLINICAL SERVICES PLAN FOR THE DEVELOPMENT OF CHINESE MEDICINE HOSPITAL

Food and Health Bureau

THE GOVERNMENT OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION

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## **Executive Summary**

#### **PURPOSE OF PLAN**

This report presents the Clinical Services Plan (CSP), which maps out the strategies and directions of (a) Chinese Medicine (CM) predominant healthcare services, (b) education and training of CM professionals and (c) research on CM and CM drugs (Chinese medicines)<sup>1</sup> of the Chinese Medicine Hospital (CMH). The CSP forms the basis for the planning and design process of the CMH development project and helps to ensure that the physical design of hospital meets the needs of future services and users.

The CSP does not address workforce issues, financial issues or the change management strategies necessary to give effect to the models of care described.

#### **BACKGROUND**

In the 2014 Policy Address, it is announced that a site has been reserved in Tseung Kwan O (TKO) for setting up a CMH. The Chief Executive announced in the Policy Address of 2017 that the Government has decided to finance the construction of the CMH, and invited the Hospital Authority (HA) to assist in identifying a suitable non-profit-making organisation (NPMO) by tender to take forward the project and operate the hospital.

 $<sup>^{1}</sup>$  CM drugs refers to CM herbs, granules, products and other forms of Chinese medicines under the context of this CSP.

In 2018, the Food and Health Bureau (FHB) sets up a Chinese Medicine Hospital Project Office (CMHPO) to oversee the CMH project, and to take forward the planning, tendering, construction and commissioning of the CMH as well as the commissioning of a suitable NPMO to operate the CMH.

#### THE PROPOSED CHINESE MEDICINE HOSPITAL

The proposed CMH is located in TKO. It should serve as the flagship CM institution leading the development of CM and CM drugs in Hong Kong. The hospital will be tasked to provide quality CM services; and provide a platform for the training and education of CM practitioners (CMP) and for promoting clinical research for the development of CM services and CM drugs. It will be a change driver facilitating service development, patient flow, knowledge flow and talent flow with the whole CM sector. The CMH should also execute and implement the Government's policies on CM and enhance the status of CM in and outside Hong Kong. It should as well seek to promote local and world recognition of CM services. On top of that, the "Hong Kong CMH" should seek to become a reference model for many other regimes where doctors trained in western medicine (WM) would want to collaborate with CM trained practitioners in a hospital setting.

#### **CHALLENGES**

Since this is the first CMH in Hong Kong, Hong Kong does not have the previous experience to coordinate and plan for its establishment. There is no identical model from places where CM hospitals have been established could be adopted as blueprint because of differences in healthcare system,

professional training and legislative set-up. Detailed and careful consideration of various factors is necessary when planning for the CMH.

#### PLANNING PROCESS

A non-committal Expression of Interest (EOI) exercise was conducted by the Government in 2016. Returns, proposals and comments from seven parties were received.

In 2017, an international external consultant was appointed to carry out an extensive stakeholder consultation to solicit views and comments on the CMH development framework consisting of missions, governance model, business



model, operational model, financial model and contract management model of the CMH. From the consultancy study exercise, among the key areas of the framework, the business model and the operational model were identified as the most important parts in the outlining of the CSP.

With the setting up of CMHPO, Expert Group (EG) and User Group (UG) were formed in mid-2018. For the formulation of the CSP, the UG Meeting was extended to include members from the EG. Proposals were put up for discussion based on views and recommendations collected since 2016. Additional information was



further sourced to facilitate discussion, and advices and comments from the above committees given through meetings and surveys were then consolidated. The CSP was then finalised and agreed for governance endorsement.

#### CAPACITY PLANNING

The proposed CMH is definitely greenfield in Hong Kong, where there is no relevant experience nor precedent cases as reference. The healthcare system in Hong Kong is unique and there are clear regulatory frameworks for CM and WM. There is no similar information and practices outside Hong Kong, even in Mainland China, Taiwan and overseas alike, that can be reliably referred to in projecting Hong Kong usage and demand.

Irrespective of the challenges in the availability of actual statistical information, the capacity planning process is referenced to:

- (a) Age profile of the Hong Kong population
- (b) Overall health situation in Hong Kong
- (c) Health utilisation information in Hong Kong including
  - i. HA services
  - ii. CM services in Hong Kong
  - iii. Chinese Medicine Centres for Training and Research (CMCTRs) services
- (d) Experience from CM institutions outside Hong Kong

Regarding bed complements, the CMH will receive secondary and tertiary referrals from both public and private health sectors. Therefore, the service target of the CMH will be to the whole Hong Kong population. As inpatient CM service is under development, it is reasonably believed that an initial provision of 400 beds will be an appropriate start for the CMH after benchmarking with hospitals of various nature.

Based on the nature of the CMH and the nature of CM interventions, an international consultant proposed the number of inpatient beds and day beds to be 280 and 120 respectively. It is regarded that the recommendation could be generally acceptable with minor adjustment catering for the research requirement (280 inpatient beds, 100 day beds and 20 beds in Clinical Trial and Research Centre).

High dependency beds are considered necessary for the CMH and a provision of 4 high dependency beds is appropriate.

The consultant has made reference to the institutions outside Hong Kong and conservatively estimated that the annual outpatient attendance to be 315,000. Apart from the consultant's estimation, cross reference was also made to the throughputs of the 18 CMCTRs. Based on this, the estimated number of consultation rooms was around 70.

#### **LEVELS OF CARE**

The services provided by the CMH will cover primary, secondary and tertiary care. Since primary CM care should be provided nearby at the community level, the provision in the CMH is mainly for service development, training and research purposes. Secondary and tertiary care provision are for promoting the development of specialised services and CM advancement.

#### SERVICE SCOPE

On the scope of service provision, the CMH will have inpatient, day patient, outpatient and community services.

In the CMH, inpatient beds will be mostly assigned general beds and special beds with a few as high dependency beds. The day beds in the CMH will be assigned as general and special beds. Special beds mainly cater for private patients and developing special diseases.

The outpatient clinic of the CMH will be further divided into:

- (a) General Outpatient Department (GOPD)
- (b) Referral Outpatient Department (ROPD)
- (c) Special Disease Centres
- (d) Preventive Care and Health Maintenance Centres
- (e) Private Clinic

Within the primary care service profile, the CMH may provide patient care in the community through outreach. The CMH will also conduct health promotion and education programmes to enhance the awareness of the community to the values of CM in health.

#### **SERVICE TYPE**

The CMH should provide a comprehensive range of CM services. Service types include pure CM, CM playing the predominant role and Integrated Chinese-Western Medicine (ICWM) services:

(a) Pure CM Services

Pure CM services will be provided based on the theory of traditional CM with a comprehensive range of CM diagnosis and treatment methods.

- (b) Services with CM Playing the Predominant Role in collaboration with WM
  - i. CM will be the dominant component of medical care. The attending CMP should provide diagnosis and treatment according to CM theory while supported by WM methods.

- ii. If the patient has multiple diseases, the attending CMP should also provide treatment according to CM theory, while the WM doctor should monitor and handle the adjuvant conditions, so as to achieve the goal of holistic care.
- iii. In the sequence of assessment, diagnosis, interventional treatment, patient outcome evaluation, CM should be the dominant component of medical care, while at different stages being assisted with WM where indicated.

#### (c) ICWM Services

In the design of ICWM programmes, collaboration will be on specific patient types or diseases where CM and WM would be integrated into the care protocols based on the strengths of both treatment types to achieve the desired patient outcome.

## **DISEASE CATEGORY/SCOPE**

The hospital services will cover episodic, chronic, complex diseases, convalescence, rehabilitation, palliative care, health maintenance and preventive care and other disease categories.

#### TYPES OF SERVICES NOT TO BE INCLUDED IN CMH

Accident and emergency services, general anaesthetic surgical services, intensive care services and child delivery services will not be included in the CMH.

#### ROLES OF WESTERN MEDICINE IN CMH

In the CMH, WM should play the following roles:

- (a) For services with CM playing the predominant role, WM should manage the adjuvant conditions in achieving holistic care for patients and could come in at different stages of care as clinically indicated for patient benefits and safety.
- (b) For ICWM services, WM should work together with CM as genuine parts of the total patient care.
- (c) Onsite WM care would be made available to support patients when patients' conditions are becoming critical or requiring resuscitation.

#### CLINICAL SERVICES OPERATIONAL MODEL

CM and WM divisions would be established in the CMH. The two teams would provide joint clinical services where appropriate using an integrative collaboration model. Collaboration model refers to a vertical approach with collaboration across teams while integrative model is a horizontal approach with integrative working model within the same team.

#### **NETWORKING**

Being a genuine and indispensable component within the Hong Kong healthcare system, the CMH will link up and network with related healthcare providers of various professional background in both the public and private sectors encompassing both Chinese and Western Medicine. The CMH will also work with partners in the non-medical sectors to achieve health in the community. The 18 CMCTRs will closely network with the CMH performing

the function of satellite service, training and research centres. Linkage, exchange and collaboration will be extended to counter-parts beyond Hong Kong.

#### KEY RECOMMENDATION ON CLINICAL SERVICES

In order to provide comprehensive CM services and promote the development of CM, specialised services and special diseases should be established gradually in the CMH.

For specialised services, development should be according to the following principles:

- (a) Academic characteristics of CM;
- (b) According to the classification as stipulated in the Chinese Medicine Ordinance (Cap. 549 of the Laws of Hong Kong) and traditional classifications as used in CM tertiary education;
- (c) Being able to meet the medical needs of the Hong Kong population and the need on education and research as well as the need for strategic development;
- (d) Diseases which CM has specific advantages and strengths and treatments which CM has its uniqueness; and
- (e) Adopting a gradual approach in development and risk management approach in screening patients with high risk conditions.

The range of specialised services should be broad as a start while room for future development should be allowed.

The following specialised services are proposed to be included in the CMH:

内科、外科、婦科、兒科、骨傷科及針灸科.

For special diseases, the CMH should in stages identify specific priority disease areas for strategic development basing on:

- (a) Medical needs of the Hong Kong population
- (b) CM having specific advantages and strengths
- (c) Availability of local talents and collaborative support

The followings are recommended as focused direction in considering special diseases:

- (a) Stroke rehabilitation (中風後復康)
- (b) Cancer rehabilitation / palliative (腫瘤復康/紓緩)
- (c) Long standing pain (長期痛症)
- (d) Infertility, Prenatal and postnatal care (不孕及產前產後治理)
- (e) Preventive care and health maintenance (治未病)
- (f) Elderly degenerative diseases (老年退化性疾病)
- (g) Mental illness (情志病)
- (h) Chronic skin diseases (皮膚頑病)
- (i) Chronic joint diseases (關節頑病)
- (j) Seasonal flu (季節性流感)
- (k) Others

For WM services, apart from providing 24-hour inpatient coverage for acute or emergency patient conditions and the need for providing essential supporting clinical services such as selected diagnostic radiology and pathology services, depending on the types of patients admitted and how outpatient clinics are organised, WM services of various related specialties could be provided.

# FACILITIES RELATED TO WESTERN MEDICAL DIAGNOSTIC AND TREATMENT

The CMH should have the essential WM diagnostic and treatment facilities to meet the clinical service requirements. In case of a need for special investigations, the CMH can consider contracting out related items or seek collaboration with HA. Radio-diagnostic facilities, endoscopy facilities, pathology, blood supply, WM pharmacies (for dispensing and storage), central sterile supplies, minor operating theatres and electrophysiology and respiratory assessment centre are recommended.

#### INTEGRATED ALLIED HEALTH SERVICE UNIT

For allied health services, an integrated approach, which enables the allied health professionals to work closely as a team in the management of patients with complex needs, is suggested. In initial stage, this may include physiotherapy, occupational therapy, speech therapy, clinical psychology, dietetic, optometry and audiology. Prosthetic and orthotic and podiatry may be considered at later stage.

#### CHINESE MEDICINE PHARMACY

The CM pharmacy will consist of the followings:

- (a) CM drug dispensing area
- (b) Simmering / decoction, packaging and storage
- (c) CM drug store
- (d) CM drug compounding facilities

#### EDUCATION, TRAINING AND RESEARCH

On education and training, the CMH will collaborate with academia, the industry and other related institutions, providing specific healthcare training and education opportunities to related CM and WM professionals in Hong Kong.

On research, the CMH will lead the research and development of CM including CM drugs in Hong Kong. The CMH will collaborate closely with relevant universities, educational and professional bodies, CM and CM drug industries both local and outside Hong Kong to promote evidence-based clinical research for CM and ICWM. The CMH would also encourage and facilitate researches on the basic theory of traditional CM, initiated by hospital staff.

Moreover, a Clinical Trial and Research Centre (CTRC) will be set up in the CMH to conduct high standard clinical trials so as to provide a platform for CM development including the development of new proprietary Chinese medicines (pCms) and the establishment of new clinical indications of pCms

especially in therapeutic uses, which will foster the development of pCm industries and promote international marketing of pCms.

#### **DESIGN IMPLICATIONS**

The design of the CMH should uphold CM traditions and culture while at the same time being green and environmentally friendly. Patient-centred, family-oriented and staff-friendly concept will be applied in the design.

The CMH will be an intelligent hospital bringing together the architecture and design of the hospital, innovative technology, and best practices in healthcare to achieve optimal patient care.

To achieve an efficient and user-friendly design, an appropriate spatial arrangement of clinical activities planned for the convenience of patients and staff should be implemented so that the overall network of circulation would be minimised as far as possible.

The ambulatory centre is one of the community and cultural foci of the CMH. In principle, zonal approach, where the campus is divided into functional zones i.e. ambulatory, outpatient, day care zones and inpatient zones, which are designed and located specifically to meet the requirements of the respective services in the campus layout.

The outpatient clinic will adopt a functional concept in design, where the GOPD and ROPD rooms will share the same generic design. Service unit concept is an approach to the design of OPD. In the unit, there are consultation rooms with assessment / treatment rooms for share uses.

A generic design approach will be adopted with flexibility for converting adult ward as inpatient or day ward according to operational need. Regardless of different specialised services, a generic ward is appropriate for all gender and patient type. The generic design is flexible for any change of use in the future, even without the need for minor alternation works.

Paediatric wards will be flexibly designed to suit male and female patients of different age groups, with proper planning strategy to ensure privacy. Combined inpatient and day patient areas accommodating both general and private patients will also be considered.

#### INFORMATION TECHNOLOGY

The CMH will be an intelligent hospital using advanced IT systems for providing efficient and effective patient services and healthcare management. The CMH is planned to be equipped with the following IT systems:

- (a) Clinical management system, which will be compatible for joining the Electronic Health Record Sharing System (eHRSS)
- (b) Patient administration system
- (c) Enterprise resource planning (ERP)
- (d) Other non-clinical patient supporting systems

#### **CONCLUDING REMARKS**

This first CMH in Hong Kong will be a change driver facilitating service development, patient flow, knowledge flow and talent flow with the whole CM sector through the provision of CM predominant healthcare services; the provision of a platform to train CM professionals and the conduct of clinical research on CM and CM drugs. Recommendations on models of care, clinical services, education, training and research have been made. Since the CMH project is greenfield, flexible design will be adopted for future development.

## **PURPOSE OF PLAN**

## Purpose of Plan

This report presents the Clinical Services Plan (CSP), which is a guiding document that maps out the clinical strategies and future service directions of the Chinese Medicine Hospital (CMH). The CSP forms the basis for the planning and design process of major hospital development projects and helps to ensure that the physical design of hospital meets the needs of future services and users.

Specifically, the CMH should provide multiple functions which include (a) the provision of Chinese medicine (CM) predominant healthcare services; (b) the provision of a platform to train CM professionals; and (c) the conduct of clinical research on CM and CM drugs (Chinese medicines)<sup>2</sup>. In view of this, the CSP also gives guidance on the latter two.

The report touches on the design implications of the preferred strategies but it is not a document about design or master planning. It is intended however, to inform the design process that will follow the adoption of the CSP (Plan).

The report does not address workforce issues, financial issues or the change management strategies necessary to give effect to the models of care described.

<sup>&</sup>lt;sup>2</sup> CM drugs refers to CM herbs, granules, products and other forms of Chinese medicines under the context of this CSP.

# PURPOSE OF PLAN

#### **SPECIAL NOTE**

The purpose of the Plan does not include non-clinical support services such as catering, transport and parking, stores and purchasing. However, there are some non-clinical supporting services that will have implications on clinical service planning. Therefore, key components of those services are mentioned in the Plan. These are mostly confined to the **Implementation Enabler** chapter of this report.

## Background

#### (I) POLICY OBJECTIVE ON CHINESE MEDICINE HOSPITAL

The policy for the future development of CM was enshrined in the Basic Law of the Hong Kong Special Administrative Region (HKSAR). Article 138 of the Basic Law provides that "the Government of the Hong Kong Special Administrative Region shall, on its own, formulate policies to develop western and traditional Chinese medicine and to improve medical and health services."

In the 1997 Policy Address, the Chief Executive of HKSAR stated that "For the protection of public health, we aim to introduce a bill in the next legislative session to establish a statutory framework to recognise the professional status of traditional Chinese medicine practitioners; to assess their professional qualifications; to monitor their standards of practice; and, to regulate the use, manufacture and sale of Chinese medicine. The establishment of a sound regulatory system will lay a solid foundation for the future development of traditional Chinese medicine within our overall medical care system. I strongly believe that Hong Kong has the potential to develop over time into an international centre for the manufacture and trading of Chinese medicine, for research, information and training in the use of Chinese medicine, and for the promotion of this approach to medical care."

Subsequently, the Chinese Medicine Ordinance (Cap. 549 of the Laws of Hong Kong), the major part of the legal framework on regulating CM in Hong Kong, was enacted in 1999. The drive for the development of CM was started.

The subsequent Policy Address in 2001 sets out Government's policy to establish 18 Chinese Medicine Centres for Training and Research (CMCTRs)

in each of the 18 administrative districts, adopting a tripartite collaboration involving Hospital Authority (HA), a non-governmental organisation (NGO), and a local university to deliver research-oriented CM service.

In 2013 Policy Address, the Government announced "The Preparatory Task Force on the Chinese Medicine Development Committee appointed by the current-term Government has put forward proposals on the Committee's terms of reference and composition. I will set up the Chinese Medicine Development Committee at the end of this month. The Committee will focus its studies on policies and measures to further the development of the Chinese medicine industry. Key study areas include enhancing the professional standards and status of Chinese medicine practitioners; strengthening research and development of Chinese medicine; promoting treatment with integrated Chinese and Western medicine; expanding the role of Chinese medicine practitioners and Chinese medicine in the public healthcare system; and introducing Chinese medicine inpatient services."

In the 2014 Policy Address, it is announced that a site has been reserved in Tseung Kwan O (TKO) for setting up a CMH. The Chief Executive announced in the Policy Address of 2017 that the Government has decided to finance the construction of the CMH, and invited the HA to assist in identifying a suitable non-profit-making organisation (NPMO) by tender to take forward the project and operate the hospital.

In 2018, the Food and Health Bureau (FHB) set up a Chinese Medicine Hospital Project Office (CMHPO) to oversee the CMH project, and to take forward the planning, tendering, construction and commissioning of the CMH as well as the commissioning of a suitable NPMO to operate the CMH.

#### (II) THE PROPOSED CHINESE MEDICINE HOSPITAL

Being the first Chinese medicine hospital in Hong Kong, the proposed CMH should serve as the flagship CM institution leading the development of CM and CM drugs in Hong Kong. The hospital will be tasked to provide quality CM services; and provide a platform for the training and education of CM practitioners (CMP) and for promoting clinical research for the development of CM services and medication. It will be a change driver facilitating service development, patient flow, knowledge flow and talent flow with the whole CM sector. The CMH should also execute and implement the Government's policies on CM and enhance the status of CM in and outside Hong Kong. It should as well seek to promote local and world recognition of CM services. On top of that, the "Hong Kong CMH" should seek to become a reference model for many other regimes where doctors trained in western medicine (WM) would want to collaborate with CM trained practitioners in a hospital setting.

The CMH will strive to promote the development of CM and CM drugs in Hong Kong through various means including the development of service programmes and clinical protocols on CM including Integrated Chinese-Western Medicine (ICWM) through an evidence-based approach and research; best practices and standards leading the development of high quality and safe practices in CM; infrastructure including service partnership with community CMPs and building information technology (IT) platforms and contributing to electronic health record system; clinical training platform to enhance capability of CM and related healthcare professionals; advance expertise areas in facilitating CM specialisation development; and evidence-based knowledge development and research platform for enhancing knowledge acquisition and research capabilities and new CM drug development.

The CMH is located in TKO Area 78 at the western part of the lower platform of Pak Shing Kok and occupies a gross site area of about 4.33 hectares. It faces Wan Po Road to its west and abuts Pak Shing Kok Road at its south. To the north there is the Fire Services Training School cum Driving Training School of the Fire Services Department. The location of the CMH is shown on the map at Appendix 1 of this Plan.

#### (III) CHALLENGES

Since this is the first CMH in Hong Kong, Hong Kong does not have the previous experience to coordinate and plan for its establishment. There is no identical model from places where CM hospitals have been established could be adopted as blueprint because of differences in healthcare system, professional training and legislative set-up.

Detailed and careful consideration of various factors, including the following challenges, is necessary when planning for the CMH –

- (a) establishing a framework for and experience in the operation of a Chinese medicine hospital;
- (b) meeting the developmental needs of the CM sector;
- (c) ensuring effective provision of CM and ICWM services with CM having the predominant role;
- (d) making suitable financial arrangements;
- (e) ensuring effective management of the operation contract; and

(f) facilitating the cooperation between the CMH and the educational, training and research institutions.

## **Planning Process**

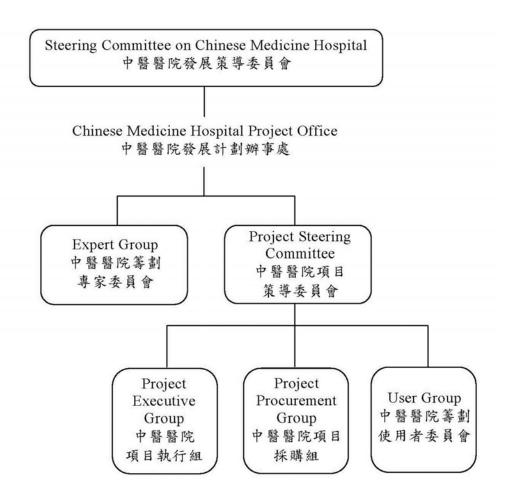
(I) GOVERNANCE OF THE CHINESE MEDICINE HOSPITAL PROJECT

A Steering Committee on the Development of CMH chaired by the Permanent Secretary for Food and Health (Health) and comprising representatives from the FHB, Education Bureau, Department of Health, Architectural Services Department and HA, was established to oversee and steer the development of the CMH to ensure that all aspects necessary for the smooth launching and operation of the CMH are in place.

The CMHPO, established under FHB, oversees the CMH project, takes forward the planning, tendering, construction and commissioning of the CMH as well as the commissioning of a suitable NPMO to operate the CMH.

The governance structure of the CMH project is illustrated in Figure 1.

Figure 1. Governance structure of the CMH project.



A Project Steering Committee (PSC) which is chaired by the Project Director of the CMHPO is established under CMHPO in overseeing the planning, designing and construction of the CMH.

In the planning of clinical services, the PSC is supported by a Project Executive Group (PEG) and a User Group (UG). Their roles/work are as follows:

(a) the PEG is responsible for the development of the CSP, Project Definition Statement, Functional Brief, Schedule of Accommodation, Room Data Sheet etc. based on input from the User Group and sub-groups according to the proposed scope of the CMH, guide and monitor the process of design development; and confirming acceptance of developed design and sign off drawings;

(b) the UG comprising members from the Chinese Medicine Development Committee (CMDC)<sup>3</sup>, three universities with School of Chinese Medicine (Universities) as well as the HA renders professional advice and input in key planning and design issues from perspective of user.

An Expert Group (EG) to provide expert advice on policy direction and functional input, particularly on CM related matters, to facilitate preparation of specifications for selection of operator for the CMH is also set up under the CMHPO. EG comprises of members from the CMDC, the Universities, the HA and FHB.

The Membership and terms of reference of respective committees are shown in Appendices 2 – 6.

under the CMDC.

<sup>&</sup>lt;sup>3</sup> The Chinese Medicine Development Committee (CMDC), chaired by the Secretary for Food and Health, was established in February 2013 to give recommendations to the Government concerning the direction and long term strategy of the future development of Chinese medicine in Hong Kong. The CMDC comprises representatives from the Chinese medicine practice, Chinese medicine trade, academia, research and development, testing and healthcare sectors, as well as lay persons. Two Subcommittees, namely, the Chinese Medicine Practice Subcommittee and the Chinese Medicines Industry Subcommittee, have also been formed

#### (II) METHODOLOGY

A non-committal Expression of Interest (EOI) exercise was conducted by the Government in 2016. Returns, proposals and comments from seven parties were received. In 2017, an international external consultant was appointed to carry out an extensive stakeholder consultation to solicit views and comments on the CMH development framework consisting of missions, governance model, business model, operational model, financial model and contract management model of the CMH. With the setting up of CMHPO, EG and UG were formed in mid-2018. For the formulation of the CSP, the UG Meeting was extended to include members from the EG. Proposals were put up for discussion based on views and recommendations collected since 2016. Additional information was further sourced to facilitate discussion, and advices and comments from the above committees were then consolidated. The CSP was then finalised and agreed for governance endorsement.

#### A. Expression of Interest

During January to May in 2016, the Government invited non-committal EOI from NPMOs which are interested in developing and operating a Chinese medicine hospital. Responding NPMOs provided feedback with various services and service models proposed.

## B. Consultancy Study on CMH Development Framework and Models

To support the Government in the preparatory work for the CMH, an international external consultant was appointed to carry out an extensive stakeholder consultation exercise to solicit the stakeholders' views and comments on the CMH development framework and models:

- (a) Missions
- (b) Governance model
- (c) Business model
- (d) Operational model
- (e) Financial model
- (f) Contract management model

The consultation exercises took place in two stages in 2017. Stage I collected views on the framework of the models, whilst Stage II collected views on the detail design of the models.

Stage I consultation with local stakeholders, including CMDC, the Universities, NGOs, CM professional groups, WM doctors' / nursing associations, HA and parties who have submitted proposals of Government's EOI exercise, focused on the framework of models developed from the result of the non-committal



EOI exercise, namely missions, governance, business model, operational model, financial model and contract management model. Almost 30 consultation sessions with nearly 100 local organisations /institutions were

conducted. On the other hand, consultation with four invited experts from the Mainland China, Taiwan, and Korea was also carried out covering different aspects of regulatory regime, hospital governance, clinical service organisation, of government, support etc. factors success of



designing and operating a CMH with respect to their own areas.



In Stage II of the consultation exercise, views from local universities, NGOs, CMDC, and CM hospital experts from Mainland China, Taiwan and Korea had been collected. An Experts Sharing Seminar was held on 11 November 2017 with the participation of local CM, the Universities, WM and healthcare related industries.



From the consultancy study exercise, among the key areas of the framework, the business model and the operational model were identified as the most important parts in the outlining of the CSP.

#### C. Review by the Extended User Group Meetings

Based on the findings for business model and operational model, the clinical service provisions and other planning parameters were evaluated and synthesised for initial drafting of the CSP. Meetings were held with UG members, with invitation extended to members of the Expert Group. The views were also deliberated with PEG members.

Regarding recommendations on clinical services, to better define the specialised services and special diseases to be established in the CMH, additional reference information was gathered for members' consideration and surveys



were conducted among members of the extended UG meetings.

For training, research and related facilities, survey on the requirements were conducted with the Universities to help designing the related provisions to meet teaching, training, education and research needs. The collated information was further deliberated in the extended UG meetings.

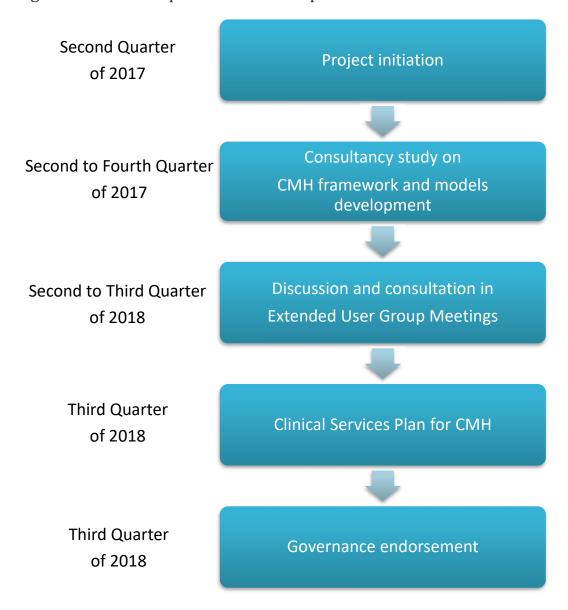
#### (III) POLICY OVERLAY

The CSP was put up to CMDC for advice and PSC for endorsement. Policy overlay for the CSP was provided through the SC. This involved policy decisions at high level with broad considerations having regard to the views of various stakeholders, including the Government, the HA, academia and the CM industry.

Illustrated below is the methodology and process outlined above for the development of the CSP (Figure 2).

# PLANNING PROCESS

Figure 2: Outline of process for development of the Clinical Services Plan



# CURRENT SITUATION OF CHINESE MEDICINE IN HONG KONG

# Current Situation of Chinese Medicine in Hong Kong

### (I) SERVICE DELIVERY

CM services are delivered across Hong Kong by both the private and public sectors – around 88% of registered CMPs are employed in the private sector<sup>4</sup>. Public sector includes Government, the HA, academic and subvented organisations.

In the community as a whole, CM service are mainly provided at primary care level. CM consultations constituted around 18% of all outpatient consultations of Hong Kong in  $2014^{\,5}$ . Secondary and tertiary care CM services, including inpatient beds or general day hospital care, are not yet evident in HK.

Regarding ICWM services, there had been ad hoc practices. To gather experience regarding ICWM and operation of CM inpatient services, the HA launched the ICWM Pilot Programme in September 2014, and further implemented Phase II of this programme in December 2015. Under this ICWM Pilot Programme, ICWM treatment covering inpatient services and CM outpatient follow-up services for inpatients of three selected disease areas, namely stroke care, low back pain care and cancer palliative care, is provided in seven HA hospitals. Phase III of the ICWM Pilot Programme, which was

<sup>&</sup>lt;sup>4</sup> Report of the Strategic Review on Healthcare Manpower Planning and Professional Development. Food and Health Bureau, Hong Kong Special Administrative Region, 2017

<sup>&</sup>lt;sup>5</sup> Thematic Household Survey Report No. 58, Census and Statistics Department, Hong Kong Special Administrative Region. (data collected during Mar to Aug 2014)

# CURRENT SITUATION OF CHINESE MEDICINE IN HONG KONG

commenced in April 2018, was extended to cover a disease area on shoulder and neck pain care.

At present, practices and acceptance of referral from CMPs to integrated services or WM services, and referral from WM doctors to CM services seldom occur.

CMPs are not currently responsible for the care of inpatients apart from ICWM Pilot Programmes or any care in 24-hours settings.

#### (II) EDUCATION, TRAINING AND RESEARCH

Three local universities, namely the University of Hong Kong, the Chinese University of Hong Kong and the Hong Kong Baptist University, currently offer six-year full-time University Grants Committee (UGC)-funded undergraduate degree programmes in CM which have an annual intake of about 90 students. Graduates of these programmes are eligible for the CMP Licensing Examination to qualify as registered CMPs.

For post-graduate education, there are post-graduate master programmes offered by universities. Newly registered CMPs may apply for working and receiving training at the CMCTRs for three years, during which they will be employed as CMP trainees. The CMPs of the CMCTRs are also provided with opportunities to participate in pre-employment training, clinical training, visiting scholar scheme, junior and senior scholarship scheme, training in research knowledge and practical knowledge, commissioned training in WM,

# CURRENT SITUATION OF CHINESE MEDICINE IN HONG KONG

CM research, on-line training courses etc. Some CM associations also offer continuous education to CMPs. However, there is a lack of systematic clinical training platform for registered CMPs.

Regarding nursing, there are some modules on CM in undergraduate nursing courses. However, there are no established CM formal nursing qualifications.

CM "specialisation" qualifications, in similar ways that specialisation takes place in WM, is not yet evident in Hong Kong.

CM researches are mainly carried out by the Universities. CMCTRs also facilitate some researches. While the WM counterparts have set up two Clinical Trial Centres, CM has not established any clinical trial centres.

# Capacity Planning

#### (I) HEALTH AND HEALTH UTILISATION INFORMATION

The proposed CMH is the first CMH in Hong Kong. As of to-date, the development of CM in Hong Kong has mainly been focused in primary care and outpatient services, where development of inpatient services is not established. The proposed CMH is definitely greenfield in Hong Kong, where there is no relevant experience nor precedent cases as reference. The healthcare system in Hong Kong is unique and there are clear regulatory frameworks for CM and WM. There is no similar information and practices outside Hong Kong, even in Mainland China, Taiwan and overseas alike, that can be reliably referred to in projecting Hong Kong usage and demand.

Irrespective of the challenges in the availability of actual statistical information, the capacity planning process is referenced to:

- (a) Age profile of the Hong Kong population
- (b) Overall health situation in Hong Kong
- (c) Health utilisation information in Hong Kong including
  - i. HA services
  - ii. CM services in Hong Kong
  - iii. CMCTR services
- (d) Experience from CM institutions outside Hong Kong

#### A. General Health Data

#### 1. Aging Population

The population has shown a continuing dejuvenation and aging trend in the past 10 years. The number and proportion of the population aged under 15 have fallen, reflecting the sustained reduction in fertility rates. This is also observed from the shrinking base of the pyramids. A similar phenomenon has also appeared in the age group of 15–24<sup>6</sup>.

On the contrary, the proportion of persons aged 65 and over (excluding foreign domestic helpers) increased from 12.9% in 2006 to 16.6% in 2016 owing to population aging<sup>6</sup>.

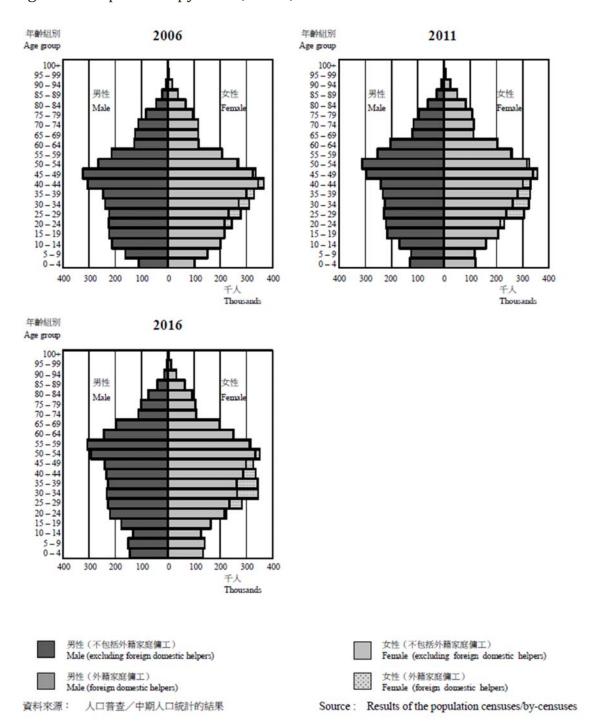
The Hong Kong Resident Population is projected to increase from 7.34 million in mid-2016 to a peak of 8.22 million in mid-2043, and then decline to 7.72 million by mid-2066. Population aging is expected to continue. With postwar baby boomers entering old age, the number of elderly persons aged 65 and over is projected to more than double in the coming 20 years<sup>7</sup>. The proportion of elderly people in our community will double from 1 in 8 in 2007 to 1 in 4 by 2033<sup>8</sup>.

<sup>&</sup>lt;sup>6</sup> Demographic Trends in Hong Kong 1986-2016. 2017 Edition. Census and Statistics Department, Hong Kong Special Administrative Region.

<sup>&</sup>lt;sup>7</sup> Hong Kong Population Projections 2017–2066. Census and Statistics Department, Hong Kong Special Administrative Region.

<sup>&</sup>lt;sup>8</sup> Your Health, Your Life. Healthcare Reform Consultation Document. Mar 2008. Food and Health Bureau, Hong Kong Special Administrative Region.

Figure 3. Population pyramid, 2006, 2011 and 2016



#### 2. Mortality and Morbidity

#### 2.1 Major mortality

The age-sex specific mortality rates for both genders and all age groups have been decreasing continuously, reflecting that residents of Hong Kong tend to have longer along with advancement in healthcare services. Yet, because of population ageing, the overall mortality rates and the number of deaths showed an increasing trend<sup>9</sup>. Neoplasms, diseases of the circulatory system and diseases of the respiratory system were the main causes of deaths. Figure 4 shows the ten leading causes of death in 2016.

Figure 4. Number of registered deaths by ten leading causes of death in 2016<sup>10</sup>

RANK	DISEASE GROUP	NUMBER OF REGISTERED DEATHS
1	Malignant neoplasms	14,181
2	Pneumonia	8,217
3	Diseases of heart	6,174
4	Cerebrovascular diseases	3,211
5	External causes of morbidity and mortality	1,372
6	Chronic lower respiratory diseases	1,642
7	Nephritis, nephrotic syndrome and nephrosis	1,699
8	Dementia	1,371
9	Septicaemia	963
10	Diabetes mellitus	491
	Other causes	7,341
	All causes	46,662

<sup>&</sup>lt;sup>9</sup> Hong Kong Monthly Digest of Statistics. December 2016. Census and Statistics Department, Hong Kong Special Administrative Region.

<sup>&</sup>lt;sup>10</sup> Health Facts of Hong Kong 2017 Edition. Department of Health, Hong Kong Special Administrative Region. Ranking is based on number of registered deaths in 2015.

#### 2.2 Morbidity

#### Chronic diseases

In 2013, persons required long-term (i.e. lasting at least 6 months) medical treatment, consultation or medication for certain type(s) of diseases, representing about 19.2% of the total population of Hong Kong, higher than that being 16.7% in 2007. The three most commonly cited diseases that required long-term medical treatment, consultation or medication were hypertension, diabetes mellitus and heart diseases<sup>11</sup>. Figure 5 shows the most common non-communicable diseases and the related healthy living issues in Hong Kong. Details are presented in Appendix 7.

Figure 5. Most common non-communicable diseases and the related healthy living issues in Hong  $\rm Kong^{12}$ 

NON-COMMUNICABLE DISEASES	HEALTHY LIVING ISSUES
Cancer	Alcohol Consumption
Cerebrovascular Disease	Diet and Nutrition
Diabetes Mellitus	Drug Safety
Heart Diseases	Environmental Health
Hypertension	Food Safety and Hygiene
Mental Health	Obesity
	Physical Activity
	Smoking

<sup>&</sup>lt;sup>11</sup> Social data collected via the General Household Survey. Special Topics Report No. 62. 2014. Census and Statistics Department, Hong Kong Special Administrative Region.

<sup>&</sup>lt;sup>12</sup> Information from Centre for Health Protection.

### 3 Health utilisation information of HA services

## 3.1 Hospitalised Patients

Patients were hospitalised mainly due to disease of the genitourinary system, neoplasms, disease of the digestive system, disease of the respiratory system and disease of the circulatory system. These top 5 diseases together took up over 50% of total inpatient attendances, as illustrated in Appendix 8.

Figure 6. Inpatient discharges and deaths in all hospitals classified by disease, 2015 (Top 10)13

DISEASE CLASSIFICATION	ATTENDANCES	PERCENTAGE
Diseases of the genitourinary system	260,957	12.7%
Neoplasms	253,985	12.3%
Diseases of the digestive system	205,325	10.0%
Diseases of the respiratory system	169,407	8.2%
Diseases of the circulatory system	156,770	7.6%
Factors influencing health status and contact with health services	130,809	6.4%
Pregnancy, childbirth and the puerperium	114,624	5.6%
Injury, poisoning and certain other consequences of external causes	109,341	5.3%
Diseases of the musculoskeletal system and connective tissue	83,633	4.1%
Certain infectious and parasitic diseases	61,188	3.0%

 $<sup>^{13}</sup>$  Health Facts of Hong Kong 2017 Edition. Department of Health, Hong Kong Special Administrative Region.

### 3.2 Bed Complement with Discharges and Deaths

According to the HA, the total number of inpatient beds and day service available are 26,318 and 1,681 respectively in 2016/17. Corresponding number of discharges and deaths are 1,126,912 and 633,508 respectively.

Figure 7. Bed complement<sup>14</sup> and number of discharge and deaths for inpatient and day service in HA<sup>15</sup>

	INPATIENT		DAY SE	ERVICE
Hospital Authority (42 hospitals)	Bed complement	Number of Discharges and Deaths	Bed complement	Number of Discharges and Deaths
	26,318	1,126,912	1,681	633,508

#### 3.3 Length of Stay

In view of the nature of the planned CMH, information on the average length of stay (ALOS) of local public hospitals of similar scale and nature were taken as reference.

Figure 8. Extracted data of bed complements and ALOS in HA

HOSPITAL	BED COMPLEMENT (2016/17) <sup>16</sup>	ALOS (DAYS) (2016/17) <sup>17</sup>
Our Lady of Maryknoll Hospital	236	8.2
Tung Wah Group of Hospitals	531	23.4
Wong Tai Sin Hospital		
Haven of Hope Hospital	461	24.7
Total in Hospital Authority	26,318	7.1
(42 hospitals)		

<sup>&</sup>lt;sup>14</sup> Report on Annual Survey on Hospital Beds in Public Hospitals - 2016/17. Hospital Authority.

<sup>&</sup>lt;sup>15</sup> Hospital Authority Statistical Report (2016-2017).

<sup>&</sup>lt;sup>16</sup> Report on Annual Survey on Hospital Beds in Public Hospitals - 2016/17. Hospital Authority.

<sup>&</sup>lt;sup>17</sup> Hospital Authority Statistical Report 2016 - 2017. Hospital Authority.

4 Health utilisation information of Chinese Medicine Services in Hong Kong

#### 4.1 CM services in Hong Kong

CM services are delivered across Hong Kong by both the private and public sectors, and around 90% of all CMPs are employed in the private sector. Public sector includes NGO, academic organisations, and HA, which established the 18 CMCTRs.

In the community as a whole, CM service is mainly provided at primary care level  $^{18}$ . CM consultations constituted around 18% of all outpatient consultations of Hong Kong in 2014. Secondary and tertiary care CM services, including inpatient beds or general day hospital care, are not yet evident in HK.

#### 4.2 CMCTR services

As the 18 CMCTRs predominantly provide CM services in the public sector, information on attendance is extracted for reference.

In 2017/18, the total number of attendance at the 18 CMCTRs exceeded 1.2 million. The respective number of attendance at each of the CMCTRs is listed at Figure 9.

<sup>&</sup>lt;sup>18</sup> Inpatient (Secondary and Tertiary care) share: Public/private share by Inpatient Bed Day Occupied in 2015, Hospital Authority and Department of Health, Hong Kong Special Administrative Region; Outpatient (Primary care) share: - Thematic Household Survey Report No. 58, Census and Statistics Department, Hong Kong Special Administrative Region (data collected during Mar to Aug 2014).

Figure 9. Annual patient attendance of 18 CMCTRs for 2017/18 (in descending order)

CMCTR BY DISTRICT	ATTENDANCE
Yuen Long	87,158
North	79,334
Tai Po	77,169
Tsuen Wan	76,153
Sha Tin	75,012
Kwun Tong	73,638
Wan Chai	72,008
Sham Shui Po	71,342
Wong Tai Sin	68,174
Tuen Mun	64,714
Southern	64,411
Sai Kung	62,728
Kwai Tsing	59,515
Yau Tsim Mong	59,465
Kowloon City	58,516
Central and Western	55,120
Eastern	54,768
Islands	41,617
Total	1,200,842

The annual attendance was further down analysed by disease type as summarised in Figure 10. Detail of the breakdown by disease type is presented in Appendix 9.

Figure 10. Annual attendance of 18 CMCTRs breakdown by disease type for 2017/18

SPECIALISED DISEASE TYPE	ATTENDANCE	PERCENTAGE
內科	1,047,389	68%
外科	136,095	9%
婦科	80,215	5%
兒科	24,168	2%
骨傷科	177,757	12%
其他	75,516	5%
TOTAL	1,541,140	100%

## B. Experience outside Hong Kong

CM hospitals with outpatient department in Mainland China, Taiwan and Korea were taken as a reference. Analysis on the inpatient bed number and outpatient attendance of these hospitals were performed for reference as illustrated in Figure 11. Analysis of Inpatient Chinese Medicine Service Utilisation in Shanghai with the Shanghai population was also compared.

#### Referenced Institutions outside Hong Kong

The following table shows the bed complement and annual outpatient attendance at a sample of CM hospital facilities outside Hong Kong.

Figure 11. Outpatient attendances at CM facilities outside Hong Kong 19

HOSPITAL	NUMBER OF BEDS	ANNUAL OUTPATIENT ATTENDANCE	OUTPATIENT ATTENDANCE / BED	CMH EQUIVALENT (400 BEDS)
Taipei City Hospital, Department of Chinese Medicine	750 <sup>20</sup>	480,000	640	256,000
<b>Kyung Hee University</b>	300	300,000	1,000	400,000
Guangdong Hospital of Traditional Chinese Medicine, Zhuhai Hospital	400	700,000	1,750	700,000
Shanghai University of Traditional Chinese Medicine Longhua Hospital	1,250	2,660,000	2,128	851,200
Guangdong Provincial Hospital of Traditional Chinese Medicine	3,000	6,800,000	2,267	906,667
Shanghai University of Traditional Chinese Medicine Shugang Hospital	720	2,950,000	4,097	1,638,889
Jaseng Hospital of Korean Medicine	174	1,200,000	6,897	2,758,621

Figure 12. Inpatient Chinese Medicine Service Utilisation in Shanghai<sup>21</sup>

POPULATION	NUMBER OF DISCHARGE	ACTUAL TOTAL INPATIENT DAYS	AVERAGE LENGTH OF STAY
24,197,000	216,495	2,094,696	9.68

<sup>&</sup>lt;sup>19</sup> Information extracted from the consultancy study on the subject.

 $<sup>^{20}</sup>$  The Chinese Medicine Clinic Centre for Taipei City Hospital was located in the Kunming Branch. However, the consultant noted that the number of beds at the Kunming Branch was undisclosed. As a reference point, the number of beds at the Renai Branch was disclosed – 750 beds.

<sup>21 2016</sup> 年全市醫療機構主要業務情况. 上海市衛生和計劃生育委員會.

## C. Manpower

Manpower information is relevant in capacity planning as the information may reflect manpower availability and training needs. The following information on CMP is based on the Report of the Strategic Review on Healthcare Manpower Planning and Professional Development<sup>22</sup>.

#### 1. CMP

As at 2016, there were 7,262 registered CMPs and 2,647 listed CMPs in Hong Kong. Only registered CMPs are allowed to prescribe the Chinese herbal medicine listed in Schedule 1 of the Chinese Medicine Ordinance. Around 90% of registered CMPs worked in the private sector. The median age was 59 for registered CMPs and 66 for listed CMPs.

The Universities offer six-year undergraduate courses in CM which are recognised by Chinese Medicine Council of Hong Kong (CMCHK) as approved courses for Licensing Examination. The number of training places has remained steady over the past decade being around 80 annually. The number of students studying CM programmes in the Mainland recognised by CMCHK has decreased from the peak of about 470 in 2013/14 to 260 in 2015/16.

## 2. Results of licensing examination of CMP

A person who aspires to be a CMP must have satisfactorily completed such an undergraduate degree course of training in Chinese Medicine practice or its

<sup>&</sup>lt;sup>22</sup> Report of the Strategic Review on Healthcare Manpower Planning and Professional Development. Food and Health Bureau, Hong Kong Special Administrative Region, 2017.

equivalent, whether or not conferred by a local university, as is approved by the CMP Board of CMCHK before they can take the Licensing Examination and obtain registration to practise in Hong Kong. The results of the Licensing Examination from 2012 to 2016 are as follows.

Figure 13. Number of candidates who sat the Licensing Examination of CMCHK and the passing rates

YEAR	NO. OF CANDIDATES			
	Written Test		Clinical Examination	
	Sat for examination	Passed (Passing rate%)	Sat for examination	Passed (Passing rate%)
2012	323	239(74%)	429	199(46%)
2013	398	257(65%)	445	200(45%)
2014	341	244(72%)	450	203(45%)
2015	396	292(74%)	492	211(43%)
2016	437	348(80%)	573	237(41%)

## 3. Number of newly registered CMPs (locally and non-locally trained)

The average number of candidates passing the Licensing Examination and getting registered for the period from 2012 to 2016 is about 204, including listed CMPs (2; 1%), locally trained graduates (104; 51%), and non-locally trained graduates who had completed a recognised undergraduate degree course of training in Chinese Medicine, or its equivalent, as approved by the CMP Board of CMCHK (98; 48%). From the above figures, it is estimated that at any one time in the coming 10 years, the number of registered CMP of 1-3

years of post-registration experience would be around more than 600 and 4 – 10 years of post-registration experience would be around more than 1400.

## 4. Chinese medicine pharmacy

Regarding the CM pharmacy profession, it is not subject to statutory registration.

#### 5. CMCTRs

The manpower provision of 18 CMCTRs including CMPs, nurses and CM pharmacist / dispensers was studied, as summarised below in Figure 14.

Figure 14. Manpower provision of 18 CMCTRs

RANK	HEADCOUNT AS AT 31 MAR 2018 <sup>23</sup>
CMPs	371
Registered Nurse	3
CM Pharmacist / Dispenser	126
CM assistant	31
Total	531

<sup>&</sup>lt;sup>23</sup> Round up to the nearest integer.

#### (II) BED COMPLEMENT FOR CMH

#### A. Total number of beds

The current construction site allows provision of around 400 beds. The referenced institutions outside Hong Kong are major centres of respective local regions, showing a range of 300 to 3,000 beds<sup>24</sup>. The CMH will be the first and only Chinese medicine hospital at the time of its services commissioning providing CM inpatient services in Hong Kong. It will receive secondary and tertiary referrals from both public and private health sectors. Therefore, the service target of the CMH will be to the whole Hong Kong population. As inpatient CM service is under development, it is reasonably believed that an initial provision of 400 beds will be an appropriate start for the CMH after benchmarking with hospitals of various nature.

## B. Inpatient and Day Bed

Based on the nature of the CMH, the beds are largely for diseases that are complexed, including chronic diseases. There will be no emergency case admission, and the average length of stay are expected to be longer. However, on the other hand, in considering the nature of CM interventions, day service provisions could also be a main-stay of care apart from outpatient service provision. The consultant proposed the number of inpatient beds and day beds to be 280 and 120 respectively. Balancing the above two considerations, it is regarded that the recommendation could be generally acceptable with minor adjustment catering for the research requirement (280 inpatient beds, 100 day beds and 20 beds in Clinical Trial and Research Centre) bearing in

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<sup>&</sup>lt;sup>24</sup> Jaseng Hospital of Korean Medicine is excluded due to its limited scope of service.

mind that when designing the physical facilities, flexibility and interconvertibility features should be built-in.

## C. High Dependency Beds

High dependency beds are considered necessary for the CMH as there may be some patients who require closer monitoring or stabilisation before transfer. Apart from a minimal provision, buffering and contingency capacity should be built-in. Therefore, provision of 4 high dependency beds is appropriate.

#### (III) OUTPATIENT CONSULTATION ROOMS

The consultant has made reference to the institutions outside Hong Kong noted at Figure 11. The number of outpatient attendances varies significantly between an annual attendance of 250,000 to 2,800,000. Noting that the CMH is still a greenfield development and market demand has not been proven, the consultant conservatively estimated that the outpatient attendances would be in the lower quadrant of the reference points noted in the market research at Figure 11, i.e. between 256,000 to 400,000 annual attendances and as such assumed that the annual stabilised outpatient attendance was 315,000 patients. Apart from the consultant's estimation, cross reference was also made to the throughputs of the 18 CMCTRs.

Based on this, the estimated number of consultation rooms was around 70, which has taken into account the followings: -

- (a) Number of working days per year, with the below factors considered:
  - i. number of holidays

- ii. number of non-working days due to weather issues, maintenance issues etc.
- (b) Number of working hours per day
- (c) Ratio of new to old case
- (d) Ratio of complex to general case
- (e) Ratio of teaching to non-teaching cases
- (f) CM and WM joint consultation
- (g) Turnaround time per attendance

It is worth noting that with the development of the CM service in the Hospital, the workload as well as teaching need may increase. Flexibility in terms of operating hours / days and space re-design could be considered as indicated.

## Models of Care

On the provision of healthcare service, the CMH should be integrated into the existing healthcare system while operating with CM predominant mode of operation. In this chapter, levels of care, scope of services, types of services and other important aspects that contribute to the delivery of health services will be covered.

## (I) LEVELS OF CARE

The services provided by the CMH will cover primary, secondary and tertiary care and to promote the development of specialised services.

## A. Primary Care

Primary care is the first point of contact that patients made with their CMP / WM doctors, with the aim at improving their health, treating and preventing diseases, and thereby reducing the need for more intensive medical care. It covers many health services, services in relation to prevention of diseases, general treatment services, including general outpatient services and outreach services.

## B. Secondary Care

Secondary care refers to non-inpatient specialised medical care and general hospital care. It is provided by specialised medical practitioners, usually in the hospital setting, but some specialised services are also provided in the community. Secondary care services include specialised medical care and

convalescent inpatient care, day inpatient service, and specialised outpatient services.

## C. Tertiary Care

Tertiary care refers to highly complex and costly hospital care, usually with the application of advanced technology and multi-disciplinary specialised expertise. Tertiary care usually targets at patients with complex or rare diseases.

Since primary CM care should be provided nearby at the community level and currently is mainly provided in the private sector and also by the 18 CMCTRs, the provision in the CMH is mainly for service development, training and research purposes. Secondary and tertiary care provision are for promoting the development of specialised services and CM advancement.

#### (II) SERVICE SCOPE

On the scope of service provision, the CMH will have inpatient, day patient, outpatient and community services. They are further described below:

## A. Inpatient and Day Services

Inpatients are those who are admitted into hospitals and have stayed for more than one day. Day inpatients refer to those who are admitted into hospitals for non-emergency treatment and who are discharged within the same day and overnight accommodation is not needed.

In the CMH, inpatient beds will be mostly assigned as general beds and special beds with a few as high dependency beds. The day beds in the CMH will be assigned as general and special beds. Special beds mainly cater for private patients and developing special diseases.

The patient source for inpatient and day service in the CMH will be by referral from the CMH Outpatient Department, CMCTRs, enrolled CMPs from the private sector, and partnering institutions and organisations. Characteristics of hospitalised patients are as follows:

- (a) They may have complexed conditions which require monitoring on clinical conditions and response to treatments; or
- (b) They have to undergo intensive treatment / interventional programmes; or
- (c) Some may have disability or functionally deficit who have difficulty in self-care and require an in-hospital environment for care; or
- (d) Some may need long-term care.

## B. Outpatient Services

An outpatient is a patient who attends a clinic with a clinic session. Patient leaves after the consultation and is not admitted to a hospital and do not use a hospital bed. The outpatient clinic of the CMH will be further divided into:

(a) General Outpatient Department (GOPD), which accepts patient self-referral cases. <sup>25</sup> The GOPD can operate during normal operation hours, extended hours or 24 hours.

<sup>&</sup>lt;sup>25</sup> General Outpatient services will be provided by CMPs from various specialised services on rotation basis. Other outpatient services will be provided by CMPs from respective specialised services.

- (b) Referral Outpatient Department (ROPD), which accepts referrals from GOPD of the CMH, CMCTRs, partnering organisations, CMPs, WM doctors and professional healthcare providers. Referrals should be facilitated by protocol.
- (c) Special Disease Centres for focused CM service development. Patients can attend this Centre by referral or self-referral.
- (d) Preventive Care and Health Maintenance Centres caters for health maintenance and preventive interventions. People can attend this Centre by referral or self-referral.
- (e) Private Clinic for widening patient choice. Patients attend this Clinic by referral or self-referral.

## C. Community Services

This is part of the primary care services. The principles in providing primary care services mentioned earlier should follow. The community service comprises two types of service:

## a) Patient / client care in the community:

This encompasses the provision of health care to patient / clients in need outside hospital setting. The care is usually provided outreach at inpatient / client's home or other residential setting, old age homes, community health premises or mobile clinics.

#### b) Health promotion and education:

The CMH will conduct community health promotion and education programmes thereby contributing to creating and adding value to CM in achieving health.

### (III) SERVICE TYPE

The CMH should provide a comprehensive range of CM services. Service types include pure CM, CM playing the predominant role and ICWM services:

### (a) Pure CM Services

Pure CM services will be provided based on the theory of traditional CM with a comprehensive range of CM diagnosis and treatment methods, including Chinese herbal medication, acupuncture, cupping etc.

## (b) Services with CM Playing the Predominant Role in collaboration with WM

- i. CM will be the dominant component of medical care. The attending CMP should provide diagnosis and treatment according to CM theory while supported by WM doctor through WM methods.
- ii. If the patient has multiple diseases, the attending CMP should also provide treatment according to CM theory, while the WM doctor should monitor and handle the adjuvant conditions, so as to achieve the goal of holistic care.
- iii. In the sequence of assessment, diagnosis, interventional treatment, patient outcome evaluation, CM should be the dominant component

of medical care, while at different stages being assisted with WM where indicated.

### (c) ICWM Services

In the design of ICWM programmes, collaboration will be on specific patient types or diseases where CM and WM would be integrated into the care protocols based on the strengths of both treatment types to achieve the desired patient outcome.

## (IV) DISEASE CATEGORY / SCOPE

The hospital services will cover episodic, chronic, complex diseases, convalescence, rehabilitation, palliative care, health maintenance and preventive care and other disease categories.

## (V) TYPES OF SERVICES NOT TO BE INCLUDED IN CMH

The below services will not be included in the CMH:

- (a) Accident and emergency services
- (b) General anaesthetic surgical services
- (c) Intensive care services
- (d) Child delivery services

## (VI) ROLES OF WESTERN MEDICINE IN CMH

In the CMH, WM should play the following roles:

- (a) For services with CM playing the predominant role, WM should manage the adjuvant conditions in achieving holistic care for patients and could come in at different stages of care as clinically indicated for patient benefits and safety.
- (b) For ICWM services, WM should work together with CM as genuine parts of the total patient care.
- (c) Onsite WM care would be made available to support patients when patients' conditions are becoming critical or requiring resuscitation.

## (VII) CLINICAL SERVICES OPERATIONAL MODEL

The CMH would provide pure CM, CM playing the predominant role and ICWM clinical services. CM and WM teams would provide joint clinical services where appropriate using an integrative collaboration model.

#### A. Collaboration model

(Vertical approach with collaboration across teams)

CM and WM divisions would be established to manage clinical services, each led by respective Medical Director / Deputy Hospital Chief Executive (HCE) (WM) and Medical Director / Deputy HCE (CM). Clinical departments in CM division would be set up based on specialised services and clinical departments of WM division would be set up based on specialties and subspecialisations as indicated. The clinical departments under the CM division would be led by CMPs as Chiefs of departments, whereas that of the WM division would be led by WM doctors as Chiefs of departments. The two divisions and respective departments would be separate entities and collaborate through consultation and mutual support.

## B. Integrative model

(Horizontal approach with integrative working model within the same team)

Based on the disease types, special disease centres would be set up. Each special disease centres would be staffed by an integrated team, comprising WM and CM professionals as required. Each special disease unit would be headed by a Chief, who could be a CMP or a WM doctor depending on the nature of the programme.

Staff serving in the CMH would be of various backgrounds, namely the CMH and the Universities. The staffing of the clinical departments and special disease centres would be through open recruitment and could be of various combinations of background depending on expertise and needs. The Chiefs of clinical departments / special disease centres would be recruited in an open manner with fixed duration and terms. Relevant cooperation mechanism and accountability system, monitoring and management structure would be in place to facilitate the coordination and collaboration of the teams to provide seamless and quality patient care.

Practice guidelines including governance, administrative system, team structure, accountability and responsibility, operating guidelines, clinical protocols, clinical audit and cultural establishment will be developed.

## (VIII) NETWORKING

Being a genuine and indispensable component within the Hong Kong healthcare system, the CMH will link up and network with related healthcare

providers of various professional background in both the public and private sectors encompassing both Chinese and Western Medicine. The CMH will also work with partners in the non-medical sectors to achieve health in the community. The CMH will build a platform that would facilitate appropriate service development, patient flow, knowledge flow, personnel flow, partnership and collaboration in service, training / education, and research. The 18 CMCTRs will closely network with the CMH performing the function of satellite service, training and research centres. Linkage, exchange and collaboration will be extended to counterparts beyond Hong Kong. In particular, the CMH will collaborate with CMHs in Mainland China to leverage on their expertise and experience in the development of CM, lifting the professional standard of the CM industry in Hong Kong.

# Key Recommendations on Clinical Services

## (I) METHODOLOGY

The key recommendations outlined below were developed with reference to the information on population, mortality, morbidity, services utilisation, manpower, and experience outside Hong Kong as described in **Capacity Planning** together with the proposed models of care set out in the previous chapter and results of surveys conducted under the extended UG meetings. The recommendations were results of intensive deliberations within the extended UG. Principles on classifications of specialised services and special diseases were identified.

## (II) CLINICAL SERVICES

## Specialised Services / Special Diseases

In order to promote the development of CM, specialised services and special diseases should be established gradually in the CMH.

## 1. Specialised Services

For specialised services, development should be according to the following principles:

- (a) Academic characteristics of CM;
- (b) According to the classification as stipulated in the Chinese Medicine Ordinance and traditional classifications as used in CM tertiary education;

- (c) Being able to meet the medical needs of the Hong Kong population and the need on education and research as well as the need for strategic development;
- (d) Diseases which CM has specific advantages and strengths and treatments which CM has its uniqueness; and
- (e) Adopting a gradual approach in development and risk management approach in screening patients with high risk conditions.

Traditional CM believes that human body should be approached in totality while exploring the overall dynamic interactions within. Under this principle, development of specialised services is not inevitable. In the advancement of theory and clinical practice, CMPs can use their ability in totality to accurately analyse the mechanism of all diseases occurring in humans and formulate treatment methods. That is to say, "ability in totality" is one of the important clinical abilities of CMPs. Therefore, some CM professionals think that there is no need for specialised services development in CM. However, the development of specialised services in CM has also its merits and gained support from the CM professionals. Development of specialised services would have benefits in the following areas:

- (a) Clinical department operation
- (b) Clinical team building
- (c) Service development
- (d) Training, education for healthcare professionals
- (e) Research
- (f) Public and patient awareness
- (g) Linkage with international counterparts

Being the first Chinese medicine hospital, the range of specialised services should be broad as a start while room for future development should be allowed. In establishing specialised services, all CM services provided in the CMH should still be based on the principle of the holistic fundamental theories of traditional CM and the application of syndrome differentiation and treatment. The balance between ability in totality and ability in specialised services should be achieved.

For specialised services, the description is in Chinese with no English translation to maintain the original meaning. Reference to WHO International Standard Terminologies on Traditional Medicine in the Western Pacific Region 2007 can be made in case English terms are needed.

The following specialised services are proposed to be included in the CMH:

## (a) 內科

內科所屬病症會按其病因病機及證治規律,以中藥為主要治療方法。

## (b) 外科

外科範圍廣泛,凡是疾病生於人的體表,能夠用肉眼可以直接診察到的, 凡有局部症狀可憑的,包括瘡瘍、皮膚病、瘰癧、乳病、癭瘤、岩、眼、 耳、鼻、咽喉口腔、肛門病、和外科其他雜病,皆屬外科的治療範圍。

## (c) 婦科

婦科服務內容為防治婦女特有疾病,包括月經、帶下、計劃生育、產前產 後及婦人雜病。

## (d) 兒科

兒科服務對象包括嬰兒、小童及至青少年。

## (e) 骨傷科

骨傷科主要處理外傷(即骨折、脫位及筋傷)與內傷(即臟腑損傷及損傷所引起的氣血、臟腑、經絡功能紊亂而出現的各種損傷內證)。治療上會採用手法、針灸、中藥等方法。

## (f) 針灸科

針灸科服務中,相關疾病的治療方法主要採用針灸,再按需要輔以中藥及其他中醫治療手段。 就針灸是否獨立成科,在中醫業界亦有不同的觀點。有指因針灸為治療手法而非按中醫生理體系的診斷區分,或未必適合個別成科。考慮到針灸發展的歷史沿革、其獨有的經穴理論與手法,成立針灸科將有助系統性的知識及臨床技巧傳承與發展,同時利於服務營運及管理

(包括轉介服務)。在此一提,針灸此治療方法並不局限於針灸科,其他分科服務中也能使用針灸。

#### 2. Special Diseases

For special diseases, the CMH should in stages identify specific priority disease areas for strategic development basing on:

- (a) Medical needs of the Hong Kong population
- (b) CM having specific advantages and strengths
- (c) Availability of local talents and collaborative support

The followings are recommended as focused direction in considering special diseases:

- (a) Stroke rehabilitation (中風後復康)
- (b) Cancer rehabilitation / palliative (腫瘤復康/紓緩)
- (c) Long standing pain (長期痛症)
- (d) Infertility, Prenatal and postnatal care (不孕及產前產後治理)
- (e) Preventive care and health maintenance (治未病)
- (f) Elderly degenerative diseases (老年退化性疾病)
- (g) Mental illness (情志病)
- (h) Chronic skin diseases (皮膚頑病)
- (i) Chronic joint diseases (關節頑病)
- (j) Seasonal flu (季節性流感)
- (k) Others

The development of disease management programmes, promotion of best practices and professional standards can further enhance and demonstrate CM efficacy and safeguard patient safety. Together with the development of collaboration platforms and related infrastructure, continuous development of services can be ensured. These should be jointly developed by and shared with the industry.

- 3. Organisation of Specialised Services and Special Diseases
- (a) The services at GOPD will be general without being further classified into specialised services. CMPs of various training background will render services for holistic care. Should there be any cases that need specialised care, referral to ROPD, other outpatient clinics including Special Disease Centres, or admission to the Hospital will be arranged.
- (b) In view that the course of disease in paediatric patient can change very rapidly, paediatric inpatient service development should adopt a staged approach, beginning with the provision of outpatient service. Patients planned for inpatient care should be screened out for high-risk conditions as a risk management measure.
- (c) Special Diseases can be run on sessional basis depending the pace of development and service demand.
- (d) The CMH will provide onsite 24-hour general CM inpatient service.

#### 4. Specialties and Subspecialties Required in Western Medicine

Access to services of the following specialties and subspecialties could be considered in the CMH:

#### (a) Onsite 24-hour coverage

Coverage is to cater for general WM inpatient support including the development of acute or emergency situations, needs for resuscitation and critical patient escort. Doctors with family medicine, internal medicine, accident & emergency medicine, anaesthesiology and other background could be considered.

#### (b) Day-to-day ward round and outpatient clinic services

Coverage is for day-to-day inpatient care and outpatient clinic services on consultation or joint programme basis. Depending on the types of patients admitted and how outpatient clinics are organised, doctors with family medicine, internal medicine, surgery, obstetrics & gynaecology, paediatrics, orthopaedic & traumatology, clinical oncology, neurology, psychiatry, dermatology, anaesthesiology and other background could be considered.

#### (c) Supporting Clinical Services

Selected diagnostic radiology and pathology services should be made available 24 hours to support routine, acute or emergency service demand. Arrangement for non-critical services or services not planned for onsite provision could be made accessible by referral.

Subject to service demand, onsite, on-call or visiting WM doctors of the corresponding specialties and subspecialties can be arranged to render services.

#### (III) CLINICAL SUPPORTING SERVICES

#### A. Facilities Related to Western Medical Diagnostic and Treatment

The CMH should have the essential WM diagnostic and treatment facilities to meet the clinical service requirements. In case of a need for special investigations, the CMH can consider contracting out related items or collaboration with HA. Recommended facilities in the CMH are as follows:

- (a) Radio-diagnostic facilities (e.g. X-ray, computed tomography [CT], magnetic resonance imaging [MRI] and ultrasound[US])
- (b) Endoscopy facilities (two endoscopy rooms)
- (c) Pathology (Core laboratory etc.)
- (d) Blood supply
- (e) WM pharmacies (for dispensing and storage)
- (f) Central sterile supplies
- (g) Minor operating theatre (two)
- (h) Electrophysiology and respiratory assessment centre

#### B. Integrated Allied Health Service Unit

For allied health services, an integrated approach, which enables the allied health professionals to work closely as a team in the management of patients with complex needs, is suggested. In initial stage, this may include physiotherapy, occupational therapy, speech therapy, clinical psychology,

dietetic, optometry and audiology. Prosthetic and orthotic and podiatry may be considered at later stage.

#### C. Chinese Medicine Pharmacy

The CM pharmacy will consist of the followings:

- (a) CM drug dispensing area
- (b) Simmering / decoction, packaging and storage
- (c) CM drug store
- (d) CM drug compounding facilities

Due to the large physical volume of Chinese herbs and the complex preparation methodologies, the operational model should be aligned with the capability of the service providers in the CM drug supply chain of Hong Kong for better space utilisation. Modern technologies should be adopted to improve efficiency and safety. For efficient dispensing, synergistic CM and WM pharmacy will be set up. While CM and WM pharmacy will have nearby segregated storage for each stream, the two pharmacies will share one common dispensing counter so that patient can receive drugs in one go. For drug compounding, facilities should be designed for small volume production for individualised patient care, training and research. Large scale production should be commissioned to outside service providers fulfilling Good Manufacturing Practice (GMP) requirements.

The above is an initial direction and recommendation on service provisions, which will be adjusted and fine-tuned based on the development of CM in Hong Kong, local citizen healthcare needs, CM professional development,

manpower readiness, healthcare technology advancement and future operator's strength.

### Education, Training and Research

The CMH will be a clinical training platform to enhance capability of CM and related healthcare professionals as well as an evidence-based knowledge development and research platform for enhancing knowledge acquisition, research capabilities and advances in CM and CM drugs.

#### (I) EDUCATION AND TRAINING

On education and training, the CMH will collaborate with academia, the industry and other related institutions, providing specific healthcare training and education opportunities to related CM and WM professionals in Hong Kong.

As a hospital with major role in training, the CMH will collaborate with the Universities to provide clinical training for its undergraduate and postgraduate students. The university training requirements would be set according to individual university programmes. Where-ever possible, students from the Universities could study and learn together to achieve common learning objectives. Trainers from different institutions including the CMH and the Universities would also participate in the overall provision of training.

The CMH will provide continuous training to the hospital staff. The CMH will collaborate with the industry to provide both basic and advanced clinical post-graduate training opportunities to relevant clinical professionals in practice, including CM and WM streams. Furthermore, the CMH will develop

a collaboration platform with local and overseas professional bodies, institutions, universities to facilitate exchange and partnership.

The CMH would provide training and related supporting facilities to support its training function. For optimal utilisation of resources, teaching facilities will be of shared use. These facilities include multifunction rooms which can be converted into one big classroom with audio-visual (AV) and closed circuit television (CCTV) facilities, skill and demonstration laboratory with AV equipment and space for work stations plus one-way mirror consultation rooms, tutorial rooms for group discussion, one-way mirror consultation rooms in GOPD and ROPD, large teaching consultation rooms that can accommodate multiple students in OPDs, Special Disease Centres and ambulatory wards, and a CM library including discussion room, resource centre and journal storage. Offices for the Universities for education and research purpose will be provided. As students may attend different training or practicum at different places in the hospital campus during a day, student support facilities will be offered. In view that there may be a large audience from academic side, the CM industry and other healthcare professional counterparts for lecture or conferences, lecture theatres that can be converted into one large theatre will be set up with conference reception facilities, backstage, AV aid and CCTV connected for video classes.

#### (II) RESEARCH

On research, the CMH will lead the research and development of CM including CM drugs in Hong Kong. The CMH will collaborate closely with relevant universities, educational and professional bodies and CM drug industries both local and outside Hong Kong to promote evidence-based clinical

research for CM and ICWM. The CMH would also encourage and facilitate researches initiated by hospital staff. All research projects have to seek prior research ethics approval by Institutional Review Board (IRB) of a recognised institution as determined by the CMH. Mutual recognition of IRB approval status across the CMH and the partnering Universities has to be further discussed. The CMH will aim to become an internationally recognised high-standard clinical research platform.

#### The types of researches include:

- (a) Researches on the basic theory of traditional CM and its clinical application
- (b) Clinical research on CM or ICWM interventions

Moreover, a Clinical Trial and Research Centre (CTRC) will be set up in the CMH to conduct high standard clinical trials so as to provide a platform for CM development including the development of new pCms and the establishment of new clinical indications of pCms especially in therapeutic uses, which will foster the development of pCm industries and promote international marketing of pCms. This CTRC would be capable to conduct Phase I and Phase II clinical trials. Researches to be conducted within this facility have to be approved by the CMH. These facilities will be of shared use through advanced booking and subject to availability.

In the CTRC, there will be consultation rooms, bed cubicles (20 beds in total) dedicated for overnight observations and a patient leisure area. While all drug preparation will be conducted in respective CM and WM pharmacies,

space will be planned for drug storage with refrigerators and freezers, and for specimen processing in the CTRC vicinity. In addition, associated administration, staff and patient facilities will be set up. Research data rooms would be provided within the CTRC to the partnering Universities.

### Implementation Enabler

#### (I) DESIGN IMPLICATION

#### A. Upholding Chinese Medicine Traditions and Culture

Sensitive and culturally appropriate design can contribute to the healing process for those who are sick as well as creating a focus for health promotion in the broader community. In designing the CMH, CM traditions and culture should be upheld. The identity of CM shall be reflected in the architectural motif including façade design, interior design and details.

#### B. Intelligent Hospital

According to patient care with top priority of the hospital, an intelligent hospital brings together the architecture and design of the hospital, innovative technology, and best practices in healthcare to achieve optimal patient care. For example, the use of wireless technology in healthcare environment interweaving remote devices, systems, as well as mobile technologies that offer a better patient experience with live information such as interactive queuing information throughout the patient journey.

A smart system such as advanced patient appointment booking systems through mobile application or internet could be adopted so that patients could technically arrive the CMH minutes before the booked appointment time. It is beneficial to patients and staff by avoiding a large crowd of people waiting at each stop of services, such as registration, consultation, treatment, pharmacy, and payment.

Moreover, real-time location systems (RTLSs) offers healthcare professionals up-to-the-minute information on availability and location of usable equipment. Automated material transfer systems such as pneumatic tube system, vertical conveyor system, automatic guided vehicle (AGV) etc. for transporting drugs, specimens, documents, food, linen, and consumables between wards and departments should be provided to increase operational efficiency.

#### C. Sustainability, Green, and Environmental Friendly

Energy consumption of a hospital is tremendous due to many factors such as 24-hour air-conditioning for inpatient ward, cold store, drug store etc. The geographical character of the site of the CMH is elongated with the longitudinal south-west facing façade. The building form and façade treatment have to be well designed to minimise heat gain while maximising visibility to the TKO so that energy consumption could be minimised. Water consumption and sewage volume could be reduced by proper building services systems. Coverage of greenery shall be maximised to reduce heat island effect and cooling loading of the hospital. It would also harmonise with the surrounding natural environment. In terms of features for this sustainable hospital, there are many components to be considered and explored, including but not limited to, the followings:

- (a) Energy efficient building envelop
- (b) Maximise natural daylight (i.e. solar tube or skylight)
- (c) Maximise natural ventilation
- (d) Green roof
- (e) Photovoltaics (PV) panel
- (f) Landfill Gas Utilisation

- (g) Solar hot or Methane water system
- (h) Zonal lighting system with occupancy sensors for areas that traffic is less busy
- (i) Rainwater harvesting
- (j) Enhance indoor air quality
- (k) Provision for three-coloured waste separation bins

As far as operation is concerned, the principles set out below could be adopted:

- (a) Reduce, Reuse and Recycle
- (b) Go paperless
- (c) Reduce disposal items
- (d) Adopt food waste management strategy

#### D. Flexible Space Utilisation and Design

Though the number of inpatient bed and day bed are worked out through capacity planning exercise, the development of services in the CMH is still greenfield. A phasic approach will be adopted for the development of scope, range of treatment, and types of specialised services. In view of this, a generic design approach will be adopted to allow flexibility to meet the growth and change of service model due the ever changing needs in the community. Where possible, modular concepts of space planning and layout should be considered, including generic room design served by modular floor layout supported by easily accessible and adaptable mechanical and electrical systems. Planning for future development and expansion should be embedded in the design. For instance, modification and expansion could be

possible by manipulating the adjacency of "soft" and "hard" spaces in the dimensions of stacking, zoning, and also the master layout plan.

#### E. Patient-centred, Family-oriented Concept, and staff friendliness

In planning the CMH, patient privacy, personal care, pleasant environment, supporting facilities i.e. user-friendly wayfinding strategy, cosy interior design, barrier-free access, appropriate acoustic performance for individual room, and baby care room, and other elements in relation to patient-centred care will be incorporated in the design. To create a family friendly environment, facilities for family day room and overnight room, especially in inpatient setting, will be provided. To enhance the health and efficiency of staff, a healthy work environment is imperative. Sufficient communal areas i.e. staff room, recreation room, rest area, and spiritual supports with design emphasising relaxed feeling, abundant natural daylight, good air quality shall be implemented.

#### F. Hospital Circulation

The CMH should be convenient for patients, relatives and staff. To achieve an efficient and user-friendly design, an appropriate spatial arrangement of clinical activities planned for the convenience of patients and staff should be implemented so that the overall network of circulation would be minimised as far as possible.

Lifts for patients, patients transfer on bed, relatives, and staff should be segregated in order to enhance operation flow and reduce congestion. Hygiene should be upheld at all times in a hospital. There should be a

dedicated lift for transporting dirty items such as garbage and clean waste respectively.

Strategy and planning for evacuation lifts among the staff / bed lifts shall be considered to allow patients on beds be evacuated from the hospital in case of fire and emergency. Moreover, an oversized lift should be provided for delivering heavy equipment such as MRI and CT Scanners for maintenance or replacement in the future.

In areas of large patient movement, such as in the outpatient and ambulatory zones, escalators should be provided. There should be a visual connection between the public lift lobby and escalators for collaborating the overall vertical passenger movement system. In addition, "healthy staircase" should be implemented as far as possible to promote health by means of stair climbing. The "healthy staircase" should be strategically located with visual connection to the lift lobby to attract passengers to choose an alternative way for travelling between floors.

To enhance the efficiency of operation and to alleviate traffic load of lift systems in the hospital, automated material transfer systems such as pneumatic tube system, vertical conveyor system, AGV etc. for transporting drugs, specimens, documents, food, linen, consumables will be considered between wards and departments.

The stacking and zoning of facilities shall be planned sensibly so that a provision of direct vertical transportation system i.e. dumbwaiters or

dedicated lifts could be provided for quick and effective way of transporting equipment and documents between floors. In addition, soiled linen chute system shall be provided for alleviating lift traffic volume.

Within the hospital, much of the circulation should be planned carefully with a hierarchy of security control, such that patients visiting clinics, diagnostic and treatment areas should be segregated from inpatient areas. Routes for transferring infected patients should not be used by other patients or public. In addition, visitors should have simple and direct routes to each of the service zones without passing through other service zones.

The flows of patients, visitors and staff are well demarcated by means of proper planning and well-designed "way-finding" strategy so that users could access their respective destinations without the need for assistance.

#### G. Ambulatory and Outpatient

The ambulatory centre is one of the community and cultural foci of the CMH. In principle, zonal approach will be adopted, where the campus is divided into functional zones i.e. ambulatory, outpatient, day care zones and inpatient zones, which are designed and located specifically to meet the requirements of the respective services in the campus layout.

The outpatient clinic will adopt a functional concept in design, where the GOPD and ROPD rooms will share the same generic design. The setting will primarily cater for patients with advanced booking and probably some walk-

in patients, but it can also serve other service models such as extended hour or even 24-hour outpatient clinics. Therefore, the stacking and planning of outpatient shall be carefully examined.

Service unit concept is an approach to the design of OPDs. In the unit, there will be consultation rooms with assessment / treatment rooms for shared use. This concept will be applied to GOPD, ROPD, Special Disease Centres, Preventive Centre and Health Maintenance Centres, and Private Clinic yet the size of each unit may vary as per the respective patient volume.

Patients will receive treatment at the cluster of intervention rooms adjacent to the OPDs. In general, the layout of treatment room could be multifunctional which could be easily converted for the service of tui-na, acupuncture, and moxibustion. Proper building services such as special ventilation system should be provided to eliminate the odour of burning moxa. Smart queuing systems will be used to indicate availability and location of rooms. Patient changing and shower facilities will be inserted in a cluster of treatment rooms for minimising the walking distance.

#### H. CM and WM Pharmacy

For efficient dispensing, synergistic CM and WM pharmacy will be set up. While CM and WM pharmacy will have nearby segregated storage for each stream, the two pharmacies will share one common dispensing counter so that patient can receive drugs in one go.

The smart system could synchronise the shroff and pharmacy to minimise patient waiting time as well as patient volume at queuing area. It should also be connected with designated automatic drug dispensing systems for both CM and WM drugs to reduce human error and waiting time. Therefore, adequate clear headroom and size of the pharmacy should be taken into account for installation of the smart system.

#### Inpatient Ward and Day Wards

A generic design approach will be adopted with flexibility for converting ward as inpatient or day ward according to operational need. Since there is higher traffic volume for day ward, it will be ideal for the operation of day ward be located lower levels in close proximity to other treatment or scanning facilities.

A patient-centred and family-oriented approach will be adopted for the design concept. Bedroom with ensuite bathroom is a standard nowadays, and it shall be implemented in the CMH. All clinical and non-clinical facilities like CM and WM assessment and medication rooms, multi-function room, case conference room, patient interview room, patient dining and family lounge with pantry, patient changing, shower, personal lockers, rehabilitation area, and other supporting facilities will also be available on each ward floor. Some of these facilities could be embedded within each ward, and some could be shared among wards at a central location where a service lift could connect all floors to enhance efficiency of logistics. Most importantly, they should all be located on the same floor to minimise patient transfer.

The design of treatment room should be versatile such that services for herbal steaming, acupuncture & moxibustion, and tuina can be provided, or it could be altered internally for change of use in the future. Therefore, special ventilation should be embedded in the building services system.

Visibility is critical in an inpatient ward for the purposes of control, surveillance, interaction and communication among patients and nurses. Central Nurse Station would be the centre of the ward surrounded by bedrooms with direct visual connection to each bedroom.

Circulation for staff and bed transfer shall be separated from the visitors. All dirty facilities i.e. dirty utility, disposal room and cleaner's room shall be located at a discrete area away from the patients and visitors. Ceiling hoist system connecting some bedrooms and the assisted bathroom shall be provided for patients with walking difficulty. User-friendly reception and healthy work environment should also be designed for patients, family accompanies and also staff.

#### 1. Paediatrics Ward

Paediatric wards will be flexibly designed to suit male and female patients of different age groups, with proper planning strategy to ensure privacy. Combined inpatient and day patient areas accommodating both general and private patients will also be considered. There will be a cosy family stay and a delightful play area.

#### 2. Adult Ward

Regardless of different specialised services, a generic ward is appropriate for all gender and patient type. The generic design is flexible for any change of use in the future, even without the need for minor alternation works.

A generic ward is an amalgamation of bedrooms with the patient support facilities. The capacity of a generic ward would be in between 40 and 60 beds. There will be 6-bedrooms and some single Airborne Infection Isolation Rooms (AIIR). For private ward, the design may be a combination of 1-bed, 2-bed, 3-bed rooms and a few AIIR. The layout and provisions are similar to the general ward except that the beds / cubicles will be designed with more personalised features like family stay rooms, bedside entertainment and communication, with a higher level of privacy.

#### J. Western Medicine Facilities

Since CM having the predominant role with collaboration of WM services in the CMH, WM facilities such as high dependency beds, radiology, core laboratory, mortuary, endoscopy, minor operating theatre, and central sterile supply will be provided.

#### K. Outreach Service

For outreach services, office and work area with communication tools will be provided.

#### L. Rehabilitation Service

There will be an integrated rehabilitation unit comprising physiotherapy and occupational therapy services. The design of the integrated unit will be based on functional need. For instance, rehabilitation for upper limb and lower limb could be contained in a zone. Gymnasium, life skills lab and special treatment modalities, though being discrete in activities, will be arranged in close proximity to one another to facilitate patient flow. Integrated workshop including patient area and offices will be planned for clinical psychology, speech therapy, medical social services etc. Optometry and audiology which require special design on facilities should be planned for potential needs.

#### M. Research

To foster clinical research, which is one of the main scope for the CMH, there will be a CTRC which consists of patient monitoring area with inpatient / day bed provision, drug storage & specimen processing area, clinical trial administration, and other associated patient and staff facilities.

#### N. Education and Training

Education and Training is one of the key roles of the CMH. The Education and Training facilities will be both set up as a distinct unit and integrated with the clinical areas. Seminar and lecture facilities will compose of two large mergeable lecture theatres with video conferencing facilities connecting other teaching facilities within the CMH as well as overseas institutes, multifunction classrooms, tutorial rooms, skill & demonstration laboratory, CM library, student support facilities, herbal garden, and training & research offices for the Universities. Amongst the clinical areas, there will be two

consultation rooms with one-way mirror facilitating clinical teaching and a number of large teaching consultation rooms strategically located in the Outpatient and Day-patient areas.

#### O. Community Health

For community CM health education and promotion, interactive learning console, multi-media exhibition area will be available at the Community Health Education Centre. Cafeteria will be one of the most frequently visited areas in the CMH. It can be interwoven with the herbal garden for both leisure and education purposes.

#### P. Other facilities

The CMH is located in TKO area, and it is remote from MTR stations in TKO district. It is also inconvenient to access the CMH by any other public transports. Sufficient parking facilities for visitors, patients, visiting doctors, professors, and CMPS will be considered. Public transportation, such as taxis, minibus, and buses are also vital to improve the accessibility for the patients of the CMH.

Considering the first CMH in the history of Hong Kong, it shall be a sustainable, green, pedestrian friendly, and state-of-the-art hospital. Pedestrian traffic shall be segregated from the vehicular traffic as far as possible, so underground parking and loading facilities shall be explored. Moreover, due to the height limit stipulated in the Outline Zoning Plan, there is a significant restriction to the development potential of the site. An underground parking facility could alleviate such restriction and provide a pedestrian-friendly

hospital, and it also frees up the ground floor area for the clinics (i.e. GOPD and ROPD) in which we are expecting large daily patient volume.

Adequate Ambulance and Non-Emergency Ambulance Transfer loading / parking facilities shall also be provided since there will be patient referral services.

Logistics for domestic waste, clinical waste, soiled linen, recyclable material should be separated from food and clean supplies, and their flows should be separated from the traffic of patients and visitors.

Staff supporting accommodation such as call room with ensuite, overnight rooms, and staff barracks with adequate staff changing facilities and staff rooms shall be provided to make a hospital function effectively.

At the CMH, the physical, emotional, social, and spiritual needs of all patients, family members, visitors, and staff will be well supported by the spiritual support facilities.

The provision of kitchen serving patient meals should cater for individual patient, including those with special dietary requirement.

A canteen for both visitors and staff shall be provided with provisions complying with the statutory. The design shall be prudent to allow privacy for staff at all time.

#### (II) INFORMATION TECHNOLOGY

The CMH will be an intelligent hospital using advanced IT systems for providing efficient and effective patient services and healthcare management. In view of the rapid advancement in technology, adequate capacity shall be reserved for both the CMH and operator to develop relevant systems. Wi-Fi access should be available for staff, public, patients and visitors with appropriate security measures. The CMH is planned to be equipped with the following IT systems:

#### A. Clinical Management System

Clinical management system(s) covering inpatient and outpatient services will be established for both CM and WM, integrated at an appropriate level for effective patient management. It will include comprehensive patient clinical information such as clinical history including allergic & risk profile, clinical progress, patient assessment tools, diagnostic requests and reports, treatment & drug profile and be compatible for joining the Electronic Health Record Sharing System (eHRSS). The system will also include integrative functions of other clinical systems including radiology system, laboratory system, pharmacy system, nursing and allied health systems.

Picture Archiving and Communication System will be installed for imaging sharing and transfer. At wards and patient areas, mobile applications will be provided to help healthcare professionals in patient management. Remote access will also be provided to facilitate 24-hour patient management as far as possible.

The infrastructure should enable the CMH to join eHRSS, facilitating sharing of appropriate patient information with other healthcare services providers for continuity of patient care. There could be considerations in establishing certain degree of linkage to the clinical systems of the HA and the 18 CMCTRs to facilitate patient referral, booking and continuity of care. Clinical data analysing functions will be built-in to facilitated training and research purposes. Big Data applications will also be considered.

#### B. Patient Administration System

The patient administration system of the CMH will provide one-stop service for appointment booking, registration, queuing, revenue collection, admissions, discharges, drug dispensing, delivery, live indoor wayfinding for patients etc. Mobile application and website will be explored to facilitate both patients and healthcare professionals in the above. For example, patients can make or change appointments through mobile application or website at any time any place. There will be a scanning device at the main lobby to scan the barcode or Quick Response (QR) code generated on patient's mobile application to register the arrival status. With the embedded infrastructure of indoor wayfinding technology via Wi-Fi and Bluetooth signals covering all patient accessible areas in the CMH, the mobile application will instruct and

navigate (real time) the patient to the next destination such as assessment room, treatment room, consultation room, pharmacy, or helpdesk. The system will be integrated with the hospital administration, shroff, and pharmacy simultaneously to streamline the patient journey by reducing waiting time at each stop. Patients will receive live information such as real time queuing status and notification on the mobile device to avoid patients crowding at the waiting area. For service management, key performance indicators like attendances, waiting time and vital parameters will be captured for monitoring purposes.

#### C. Enterprise Resource Planning (ERP)

The ERP of the CMH will streamline and integrate business processes across finance, human resources, procurement etc. Staff functions should be user-friendly. There will also be functions for management control, monitoring & reporting on staff, finance, asset and facilities. In addition, the system will be enhanced through incorporation of Business Intelligence, so that the data in the system is mined, processed and analysed to generate reports to support risk management, forward planning and maximise resource utilisation.

#### D. Other Non-Clinical Patient Support Systems

Non-clinical patient supporting systems will be put in place for supporting patient supportive activities of the CMH. Functions of automatic dispatching, material transfer, inventory and store management, dietetics & catering management, security management etc. will be considered to facilitate efficiency and safety.

### **ABBREVIATIONS**

#### **Abbreviations**

AGV Automatic Guided Vehicle

AIIR Airborne Infection Isolation Rooms

ALOS Average Length of Stay

AV Audio-Visual

CCTV Closed Circuit Television

CM Chinese Medicine

CMCHK Chinese Medicine Council of Hong Kong

CMCTR Chinese Medicine Centre for Training and Research

CMDC Chinese Medicine Development Committee

CMH Chinese Medicine Hospital

CMHPO Chinese Medicine Hospital Project Office

CMP Chinese Medicine Practitioner

CSP Clinical Services Plan
CT Computed Tomography

CTRC Clinical Trial and Research Centre
CUHK The Chinese University of Hong Kong

EG Expert Group

eHRSS Electronic Health Record Sharing System

EOI Expression of Interest

ERP Enterprise Resource Planning

FHB Food and Health Bureau

GMP Good Manufacturing Practice GOPD General Outpatient Department

HA The Hospital Authority
HCE Hospital Chief Executive

HKSAR The Hong Kong Special Administrative Region

ICWM Integrated Chinese-Western Medicine

IRB Institutional Review Board IT Information Technology

MRI Magnetic Resonance Imaging
NGO Non-Government Organisation
NPMO Non-Profit-Making Organisation

### **ABBREVIATIONS**

OPD Outpatient Department

pCM Proprietary Chinese Medicine

PEG Project Executive Group
Plan Clinical Services Plan

PSC Project Steering Committee

PV Photovoltaics QR Quick Response

ROPD Referral Outpatient Department RTLS Real-Time Location Systems

TKO Tseung Kwan O UG User Group

UGC University Grants Committee

Universities Three Universities with School of Chinese Medicine

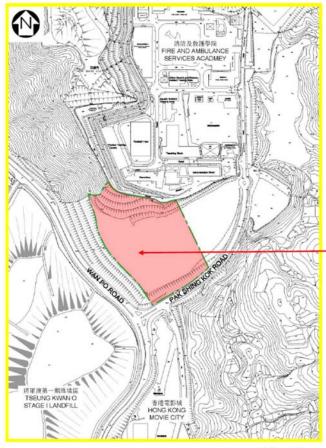
US Ultrasound

WHO World Health Organization

WM Western Medicine

### **Appendices**

#### APPENDIX 1 - SITE MAP OF THE CHINESE MEDICINE HOSPITAL





**Aerial View** 

Location: Area 78 in Pak Shing Kok, TKO Gross site area: About 4.33 hectares Net site area: About 3.02 hectares Site formation level: About 68 mPD Height restriction: 106 mPD

Site Plan

# APPENDIX 2 – MEMBERSHIP AND TERMS OF REFERENCE OF THE STEERING COMMITTEE ON THE DEVELOPMENT OF CHINESE MEDICINE HOSPITAL

(Terms of Reference and Membership as at 1 Mar 2019)
Terms of Reference

- (a) To advise the Secretary for Food and Health on the policies, strategies, targets and deliverables for the development of the Chinese Medicine Hospital ("CMH");
- (b) To advise and report to the Secretary for Food and Health on the progress for selecting (i) a contractor to design the CMH; (ii) a non-profit-making organization for operating the CMH and (iii) a contractor to construct the CMH;
- (c) To ensure the development of the CMH is in line with the Government's relevant policies and in compliance with the relevant prevailing regulatory regimes;
- (d) To provide steer for drawing up tender specifications, issuing tender and identifying suitable parties respectively for the design, construction and operation of the CMH; and
- (e) To oversee the development of the CMH to ensure that all aspects necessary for the smooth launching and operation of the CMH are in place.

#### **Membership**

#### **Chairman:**

Permanent Secretary for Food and Health (Health)

#### **Members:**

#### (1) Food and Health Bureau

Deputy Secretary (Health)1

Deputy Secretary (Health)3\*

Project Director (Chinese Medicine Hospital Project Office)

Principal Assistant Secretary (Health)7 / Head (Chinese Medicine Unit)

Principal Assistant Secretary (Health)2

#### (2) Hospital Authority

**Chief Executive** 

Director (Cluster Services)

Director (Strategy & Planning)

Director (Finance)

#### (3) Department of Health

Deputy Director of Health

Assistant Director (Traditional Chinese Medicine)

#### (4) Education Bureau

Deputy Secretary (Education)1

Principal Assistant Secretary (Higher Education)#

# Alternate to Deputy Secretary for Education (1)

#### (5) Architectural Services Department

**Project Director 2** 

#### **Secretary**

Senior Manager (Chinese Medicine Hospital Project Office)2A

<sup>\*</sup>to attend meeting on a need basis

#### In attendance:

#### (1) Food and Health Bureau

Assistant Secretary (Health)7A Consultant Chinese Medicine Practitioner Senior Manager (Chinese Medicine Hospital Project Office)1A Senior Manager (Chinese Medicine Hospital Project Office)3A

#### (2) Hospital Authority

Chief Manager (Capital Planning)
Chief Manager (Financial Planning & Costing Analytics)
Chief (Chinese Medicine Department)

#### (3) UGC Secretariat

Deputy Secretary-General (2)

#### (4) Architectural Services Department

Chief Project Manager 201 Senior Project Manager 234

# APPENDIX 3 – MEMBERSHIP AND TERMS OF REFERENCE OF THE PROJECT STEERING COMMITTEE

#### **Terms of Reference:**

- 1. To steer the project implementation and monitors progress of the project against a master programme, identify potential delays and decide action to be taken.
- 2. To plan for resource bidding, monitor financial progress against approved budget, identifies variances and initiate remedial action.
- 3. To monitor quality of performance and compliance with requirements, identifies problems and action to be taken.
- 4. To monitor performance of various working groups under the Project Steering Committee and the setting up of relevant sub-groups as required.
- 5. To endorse the project design, including Clinical Services Plan, Project Definition Statement, Functional Brief, Schedule of Accommodation, and Furniture and Equipment submissions.
- 6. To endorse the subsequent variations to the user aspects of project design.
- 7. To plan and oversee the commissioning of CMH.
- 8. To report to the Steering Committee on development of CMH.

#### Membership (as at 1 Mar 2019)

#### **Chairperson:**

Dr. Wai Lun CHEUNG, Chinese Medicine Hospital Project Office

#### **Members:**

#### (1) Hospital Authority

Mr. Benny CHAN, representing Director (Strategy & Planning)

#### (2) User Group

- Chinese Medicine Practitioner (rotate annually)

Ms. Han Dong LI

Mr. Wing Kwong CHAN

- Clinical Services of Hospital Authority

Dr. Man Li TSE

- University (rotate annually)

Prof. Lixing LAO, The University of Hong Kong

Prof. Feng SUN, Hong Kong Baptist University

Prof. Vincent Chi Ho CHUNG, The Chinese University of Hong Kong

#### (3) Architectural Services Department

Ms. Suzanna CHAN

#### (4) Food and Health Bureau

Ms. Irene HO, Chinese Medicine Hospital Project Office

Mr. Stephen HO, Chinese Medicine Hospital Project Office

#### **Secretary**

Mr. Jimmy HUNG, Chinese Medicine Hospital Project Office

Remarks: Mr. Kwok Cheung KING was replaced by Ms. Suzanna CHAN with effect from February 2019.

# APPENDIX 4 – MEMBERSHIP AND TERMS OF REFERENCE OF THE EXPERT GROUP

#### **Terms of Reference:**

- 1. To provide expert advice on policy direction and functional input, particularly on Chinese Medicine related matters, to facilitate preparation of specifications for selection of operator for CMH.
- 2. To work closely with the experts outside Hong Kong.

#### 職權範圍

- 1. 就中醫醫院挑選營運者投標事官,提供中醫藥專業的政策方向和相關意見。
- 2. 與境外專家緊密合作。

#### 成員名單 (Chinese Only. Membership as at 1 Mar 2019)

#### 主席

張偉麟 醫生 食物及衞生局中醫醫院發展計劃辦事處總監

#### (1) 中醫中藥發展委員會 中醫業小組委員會

馮玖 中醫師 主席

朱洪民 中醫師 會內註冊中醫師

羅德慧 中醫師 會內註冊中醫師

董煜 醫生 會內註冊醫生

#### (2) 中醫中藥發展委員會 中藥業小組委員會

范佐浩 先生 主席

陳宇齡 先生 會內成員

#### (3) 醫院管理局

何婉霞 醫生 醫療服務代表

冼藝泉 醫生 質素及安全代表

陳可風 醫生 財務代表

(4) 大學

雷操奭 教授 香港大學醫學院代表

張保亭 教授 香港中文大學中醫學院代表

鄭健剛 博士 香港浸會大學中醫藥學院代表

(5) 食物及衞生局

郭頴詩 女士 食物及衞生局中醫藥處處長

秘書

譚諾雯 女士 食物及衞生局中醫醫院發展計劃辦事處經理

列席

何錦華女士食物及衞生局中醫醫院發展計劃辦事處高級經理

梁玉珍 女士 食物及衞生局中醫醫院發展計劃辦事處高級經理

何有權 先生 食物及衞生局中醫醫院發展計劃辦事處高級經理

境外專家顧問

唐旭東 院長 北京專家,由國家中醫藥管理局提名及推薦

劉清泉 院長 北京專家,由國家中醫藥管理局提名及推薦

沈遠東 教授 上海專家,由國家中醫藥管理局提名,並由上海市衞生

健康委員會(前稱上海市衞生和計劃生育委員會)推薦

| 肖臻 院長 上海專家,由國家中醫藥管理局提名,並由上海市衞生

健康委員會(前稱上海市衞生和計劃生育委員會)推薦

呂玉波 院長 廣州專家,由國家中醫藥管理局提名,並由廣東省衞生

健康委員會(前稱廣東省衞生和計劃生育委員會)推薦

許能貴 校長 廣州專家,由國家中醫藥管理局提名,並由廣東省衞生

健康委員會(前稱廣東省衞生和計劃生育委員會)推薦

#### 註:

吴梓新中醫師於二零一八年十一月四日辭任此委員會成員。

庾慧玲醫生於二零一九年一月十五日起改由何婉霞醫生接替擔任此委員會成員。

黃霏莉中醫師於二零一九年二月四日起改由鄭健剛博士接替擔任此委員會成員。

# APPENDIX 5 – MEMBERSHIP AND TERMS OF REFERENCE OF THE USER GROUP

#### **Terms of Reference:**

- 1. To render professional advice and input in key planning and design issues such as service plan, design concept, Project Definition Statement, Technical Feasibility study, Functional Brief, Schedule of Accommodation, Room Data sheets, design drawings, and Furniture & Equipment, etc, from the perspective of user.
- 2. To work closely with experts outside Hong Kong to carry out the above activities.
- 3. To report to the Project Steering Committee.

#### 職權範圍

- 1. 為籌劃中醫醫院各事項提供專業用家意見如服務計劃、設計理念、定義聲明、 技術可行性研究、功能簡介、設施需求、設計圖、家具和設備等方面
- 2. 與境外專家緊密合作
- 3. 向中醫醫院項目策導委員會報告

### 成員名單 (Chinese Only. Membership as at 1 Mar 2019)

### 主席

張偉麟 醫生 食物及衞生局中醫醫院發展計劃辦事處總監

### (1) 中醫中藥發展委員會 中醫業小組委員會

陳永光 中醫師 會內成員 李捍東 中醫師 會內成員

#### (2) 中醫中藥發展委員會 中藥業小組委員會

張瑞境 先生 會內成員

### (3) 醫院管理局

謝萬里 醫生 醫療服務代表

何錦儀 女士 護理代表

李小碧 女士 專職醫療代表

鄔美儀 女士 醫院行政代表

顏文珊 女士 藥劑代表

### (4) 大學

勞力行 教授 香港大學中醫藥學院代表

鍾志豪 教授 香港中文大學中醫學院代表

孫鋒 中醫師 香港浸會大學中醫藥學院代表

### 秘書

熊元斌 先生 食物及衞生局中醫醫院發展計劃辦事處經理

### 列席

何錦華 女士 食物及衞生局中醫醫院發展計劃辦事處高級經理 梁玉珍 女士 食物及衞生局中醫醫院發展計劃辦事處高級經理 何有權 先生 食物及衞生局中醫醫院發展計劃辦事處高級經理

### 境外專家顧問

唐旭東 院長 北京專家,由國家中醫藥管理局提名及推薦 院長 北京專家,由國家中醫藥管理局提名及推薦 劉清泉 沈遠東 教授 上海專家,由國家中醫藥管理局提名,並由上海市衞生 健康委員會(前稱上海市衞生和計劃生育委員會)推薦 肖臻 院長 上海專家,由國家中醫藥管理局提名,並由上海市衞生 健康委員會(前稱上海市衞生和計劃生育委員會)推薦 呂玉波 院長 廣州專家,由國家中醫藥管理局提名,並由廣東省衞生 健康委員會(前稱廣東省衞生和計劃生育委員會)推薦 許能貴 校長 廣州專家,由國家中醫藥管理局提名,並由廣東省衞生 健康委員會(前稱廣東省衞生和計劃生育委員會)推薦

# APPENDIX 6 – MEMBERSHIP AND TERMS OF REFERENCE OF THE PROJECT EXECUTIVE GROUP

#### Terms of Reference:

- 1. To be responsible for the development of the Clinical Service Plan, Project Definition Statement, Schedule of Accommodation, Functional Brief and Room Data Sheet, etc based on input from the User Group and sub-groups according to the proposed scope of the Chinese Medicine Hospital (CMH).
- 2. To decide, after consultation with appropriate authorities as necessary, on major operational policies in relation to hospital functions.
- 3. To guide and monitor the process of design development.
- 4. To confirm acceptance of developed design and sign off drawings at "Design Freeze".
- 5. To monitor and evaluate requested changes after completion of Design Development and to make subsequent recommendations to the Project Steering Committee (PSC) on all aspects of the Project Design.
- 6. To develop resource bidding plan, review the justifications, cost effect and time effect of all changes requested after award of contract and to recommend to the PSC for decision and endorsement.
- 7. To follow up and monitor the progress of all problem resolving measures initiated by the PSC and to report progress to the PSC.
- 8. To report to the Project Steering Committee of CMH.

### Membership (as at 1 Mar 2019)

### **Chairperson:**

Dr. Wai Lun CHEUNG, Chinese Medicine Hospital Project Office

#### **Members:**

### (1) Architectural Services Department

Ms. Suzanna CHAN

Mr. Ben YEUNG

Mr. Alfrad WONG

Mr. Ka Fung LEUNG

### (2) Electrical and Mechanical Services Department

Mr. Edward LEE

### (3) Food and Health Bureau

Ms. Irene HO, Chinese Medicine Hospital Project Office

Mr. Stephen HO, Chinese Medicine Hospital Project Office

#### **Secretary**

Mr. Jimmy HUNG, Chinese Medicine Hospital Project Office

#### Remarks:

Mr. Kwok Cheung KING was replaced by Ms. Suzanna CHAN with effective from February 2019.

Mr. Dick WAN was replaced by Mr. Alfrad WONG with effect from January 2019.

Mr. Y. H. LEUNG was replaced by Mr. Edward LEE with effect from February 2019.

# APPENDIX 7 – MOST COMMON NON-COMMUNICABLE DISEASES IN HONG KONG AND THE RELATED HEALTHY LIVING ISSUES

### **Alcohol Consumption**

### Situation in Hong Kong

The Behavioural Risk Factor Survey April 2016 reported that among people aged 18 - 64, 17.2% were regular drinkers who drank at least once a week. Drinking was more prevalent among men, 25.0% of males drank at least once a week while only 10.4% of females did so. The survey also revealed that 7.0% of people had binge drinking (consumed five or more glasses or cans of alcoholic drinks in a row) at least once a month, of which people aged 25 - 34 (9.8%) had a higher rate of binge drinking.

### Cancer

#### Burden of cancer in Hong Kong

1. Cancer is one of the major non-communicable diseases in Hong Kong. In 2015, there were 30,318 newly diagnosed cancer cases. The three most commonly diagnosed cancers were those of the colorectum (16.6%), lung (15.7%) and breast (12.9 %).<sup>26</sup> The ten most common cancers in Hong Kong in 2015 are listed Table 1.

Table 1: Ten commonest cancers in Hong Kong in 2015

Both Sexes			Male			Female		
Rank	Site	No.	Rank	Site	No.	Rank	Site	No.
1	Colorectum	5,036	1	Lung	2,930	1	Breast	3,900
2	Lung	4,748	2	Colorectum	2,891	2	Colorectum	2,145
3	Breast	3,920	3	Prostate	1,831	3	Lung	1,818

<sup>&</sup>lt;sup>26</sup> Hong Kong Cancer Registry, Hospital Authority. Leading Cancer Sites in Hong Kong in 2015. Available from: http://www3.ha.org.hk/cancereg/pdf/top10/rank\_2015.pdf.

4	Prostate	1,831	4	Liver	1,356	4	Corpus uteri	978
5	Liver	1,791	5	Stomach	686	5	Thyroid	641
6	Stomach	1,167	6	Nasopharynx	648	6	Ovary etc.	578
7	Non- melanoma skin	1,018	7	Non-Hodgkin lymphoma	562	7	Cervix	500
8	Corpus uteri	978	8	Non- melanoma skin	531	8	Non- melanoma skin	487
9	Non- Hodgkin lymphoma	976	9	Kidney and other urinary organs except bladder	438	9	Stomach	481
10	Nasopharyn x	876	10	Lip, oral cavity and pharynx except nasopharynx	411	10	Liver	435
	All sites	30,318		All sites	15,372		All sites	14,946

2. Cancer is also the top killer in Hong Kong.<sup>27</sup> In 2016, cancer claimed 14,209 lives, accounting for about one third of the total deaths of the population. Among all, lung cancer, colorectal cancer and liver cancer topped the list and took up 52.1% of all cancer deaths. The ten leading causes of cancer deaths in Hong Kong in 2016 could be found in Table 2.

Table 2: Ten leading causes of cancer deaths in Hong Kong in 2016

Both Sexes			Male			Female		
Rank	Site	No.	Rank	Site	No.	Rank	Site	No.
1	Lung	3,780	1	Lung	2,529	1	Lung	1,251
2	Colorectum	2,089	2	Colorectum	1,208	2	Colorectum	881
3	Liver	1,540	3	Liver	1,135	3	Breast	702
4	Stomach	710	4	Stomach	427	4	Liver	405
5	Breast	704	5	Prostate	410	5	Pancreas	310
6	Pancreas	678	6	Pancreas	368	6	Stomach	283
7	Prostate	410	7	Oesophagus	273	7	Ovary	227

<sup>&</sup>lt;sup>27</sup> Department of Health and Census and Statistics Department, HKSAR. Mortality Statistics, 2016.

	8	Non- Hodgkin lymphoma	388	8	Nasopharynx	252	8	Non- Hodgkin lymphoma	152
	9	Oesophagus	335	9	Non-Hodgkin lymphoma	236	9	Cervix uteri	151
	10	Nasophary nx	327	10	Leukaemia	192	10	Corpus uteri	133
Γ		All sites	14,209		All sites	8,447		All sites	5,762

3. Despite a steady decline in the age-standardised incidence rates in the past three decades, the actual number of new cancer cases has continued to rise largely because of the growing and ageing population. Collectively, cancer remains both a major public health threat to our citizen and a heavy burden to our healthcare system.

#### Cerebrovascular Disease

#### Situation in Hong Kong

Classification of diseases and causes of death is based on the International Statistical Classification of Diseases and Related Health Problems (ICD) 10th Revision from 2001 onwards. Figures from 2001 onwards may not be comparable with figures for previous years which were compiled based on the ICD 9th Revision.

Cerebrovascular diseases corresponds to codes 430-438 in ICD-9 and I60-I69 in ICD-10.

CVD claimed about 24500 inpatient discharges and inpatient deaths in all hospitals<sup>28</sup>, and 3259 registered deaths<sup>29</sup> in 2015. It was the fourth commonest cause of deaths in Hong Kong and accounted for 7.0% of all deaths in 2015. The crude death rates were 49.6 for male and 40.5 for female per 100000 population of

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<sup>&</sup>lt;sup>28</sup> Include both inpatient discharges and inpatient deaths in all hospitals with cerebrovascular disease as the **principal diagnosis** in that episode of hospitalisation.

<sup>&</sup>lt;sup>29</sup> Include registered deaths with cerebrovascular disease as the **underlying cause of death**.

respective sex in 2015. Age-standardised death rates were 24.7 for male and 15.6 for female per 100000 standard population in 2015. From early 1980's to 2000, the age-standardised mortality rate for CVD has dropped by almost one-half. The Population Health Survey 2003/04 revealed that 1.1% of people aged 15 and above had doctor-diagnosed CVD.

#### **Diabetes Mellitus**

### Situation in Hong Kong

Classification of diseases and causes of death is based on the International Statistical Classification of Diseases and Related Health Problems (ICD) 10th Revision from 2001 onwards. Figures from 2001 onwards may not be comparable with figures for previous years which were compiled based on the ICD 9th Revision.

Diabetes mellitus corresponds to codes 250 in ICD-9 and E10-E14 in ICD-10.

Diabetes is a major cause of morbidity and mortality in Hong Kong. It claimed about 13700 inpatient discharges and inpatient deaths in all hospitals <sup>30</sup>, and 492 registered deaths<sup>31</sup> in 2015. It was the tenth commonest cause of deaths in Hong Kong, accounting for 1.1% of all deaths in 2015. The crude death rates were 7.2 for male and 6.4 for female per 100000 population of respective sex in 2015. The true number of deaths from diabetes is possibly higher since many deaths can be attributed to its late complications. Age-standardised death rates were 3.8 for male and 2.6 for female per 100000 standard population in 2015. From early 1980's to 2000, the age standardised mortality rate showed a general increasing trend but a decreasing trend from 2001. Based on Population Health Survey 2003/04, 3.8% of people aged 15 and above reported that they had doctor-diagnosed diabetes.

<sup>&</sup>lt;sup>30</sup> Include both inpatient discharges and inpatient deaths in all hospitals with diabetes mellitus as the **principal diagnosis** in that episode of hospitalisation.

<sup>&</sup>lt;sup>31</sup> Include registered deaths with diabetes mellitus as the **underlying cause of death**.

#### **Diet and Nutrition**

### Situation in Hong Kong

The Behavioural Risk Factor Survey April 2016 revealed that 79.2% of people aged 18 - 64 consumed less than 5 servings of fruit and/or vegetable per day, with 74.8% for females and 84.2% for males.

#### **Heart Diseases**

### Situation in Hong Kong

Classification of diseases and causes of death is based on the International Statistical Classification of Diseases and Related Health Problems (ICD) 10th Revision from 2001 onwards. Figures from 2001 onwards may not be comparable with figures for previous years which were compiled based on the ICD 9th Revision.

Heart diseases correspond to codes 390-429 in ICD-9 and I00-I09, I11, I13, I20-I51 in ICD-10. Coronary heart disease corresponds to codes 410-414 in ICD-9 and I20-I25 in ICD-10.

Heart diseases claimed about 77600 inpatient discharges and inpatient deaths in all hospitals  $^{32}$ , and 6190 registered deaths  $^{33}$  in 2015. They were the third commonest cause of deaths in Hong Kong and accounting for 13.2% of all deaths in 2015. The crude death rates due to heart diseases were 99.5 for male and 72.4 for female per 100000 population of respective sex in 2015. Coronary heart disease was the dominating component, making up 66.6% of heart diseases deaths. The crude death rates due to coronary heart disease were 71.5 for male and 43.7 for

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<sup>&</sup>lt;sup>32</sup> Include both inpatient discharges and inpatient deaths in all hospitals with heart diseases as the **principal diagnosis** in that episode of hospitalisation.

<sup>&</sup>lt;sup>33</sup> Include registered deaths with heart diseases as the **underlying cause of death**.

female per 100000 population of respective sex in 2015. Up to 2000, the age-standardised death rates for heart diseases and coronary heart disease have declined by about one-third and one-fifth respectively over the last 20 years. Age-standardised death rates due to heart diseases were 50.5 for male and 26.8 for female per 100000 standard population in 2015. Age-standardised death rates due to coronary heart disease were 36.5 for male and 16.1 for female per 100000 standard population in 2015. Based on Population Health Survey 2003/04, 1.6% of people aged 15 and above had doctor-diagnosed coronary heart disease.

### **Hypertension**

### Situation in Hong Kong

More and more people in Hong Kong are living with hypertension. Surveys conducted by the Census and Statistics Department showed that the proportion of people with known hypertension (as told by practitioners of Western medicine) increased from 9.3% in 2008 to 12.6% in 2014.

Of note is that many adults in Hong Kong actually do not realise they have hypertension. A local large-scale cohort study released in 2012 by the School of Public Health of the University of Hong Kong revealed that among those with hypertension documented in the study (about 32% of adults aged 20 and above), only about half of them (46%) were ever diagnosed as hypertensive by a doctor. This territory-wide study also revealed that the management of hypertensive people is suboptimal. Among those ever diagnosed, 70% were prescribed blood pressure lowering medication, but only 42% of this treated group attained good control of blood pressure. The study confirmed the "rule of halves" in hypertension: roughly only half of all hypertensive cases are diagnosed, half of those diagnosed are treated, and half of those treated are well-controlled.

#### **Mental Health**

Review Committee on Mental Health

In Hong Kong, as in other similarly developed countries or regions, mental health occupies a very prominent position on the current health care agenda. For a cosmopolitan city like Hong Kong, many people are living with different degrees of stress. Without proper management of such stress, mental health concerns that require medical and clinical attention may arise.

According to the Hong Kong Mental Morbidity Survey 2010-2013<sup>34</sup>, the prevalence of common mental disorders among Chinese adults aged between 16 and 75 was 13.3%. The most common disorders were mixed anxiety and depressive disorder (6.9%), followed by generalised anxiety disorder (4.2%), depressive episode (2.9%), and other anxiety disorders including panic disorders, all phobias and obsessive compulsive disorder (1.5%). According to another survey conducted in 2014, 4.8% of the general public aged between 18 and 64 could be classified as having severe non-specific psychological distress<sup>35</sup>. On the other hand, it is also notable that the demand for HA's psychiatric services has been on the rise in recent years, with the number of patients with mental illness under its care rising from about 187 000 in 2011-12 to over 220 000 in 2015-16.

Mental health problem of children and adolescents warrants our particular attention. A local study<sup>36</sup> conducted in 2008 presented the respective prevalence estimates of anxiety disorders (6.9%), oppositional defiant disorder (6.8%), Attention Deficit/Hyperactivity Disorder (AD/HD) (3.9%), conduct disorder (1.7%), depressive disorders (1.3%), and substance use disorders (1.1%) among high

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<sup>&</sup>lt;sup>34</sup> Lam LC, Wong CS, Wang MJ, et al. (2015). Prevalence, psychosocial correlates and service utilisation of depressive and anxiety disorders in Hong Kong: the Hong Kong Mental Morbidity Survey. Soc Psychiatry Psychiatr Epidemiol. Published online first: 2015 Feb 8. DOI: 10.1007/s00127-015-1014-5.

<sup>&</sup>lt;sup>35</sup> Department of Health (2015). Behavioural Risk Factor Survey (April 2014). Hong Kong: Department of Health.

<sup>&</sup>lt;sup>36</sup> Leung PWL, Hung SF, Ho TP, et al. (2008). Prevalence of DSM-IV disorders in Chinese adolescents and the effects of an impairment criterion: a pilot community study in Hong Kong. Eur Child Adolesc Psychiatry. 2008 Oct;17(7):452-461.

school adolescents. The early stage of life presents an important opportunity to promote mental health and prevent mental disorders as up to half of mental disorders in adults surface before the age of 14.

Apart from the increasing trend of the prevalence rate of people suffering from mental illness, the ageing population also draws concerns in the mental health service as it is projected that about one-third of the population will be aged 65 or above by 2041. Dementia is a syndrome that most commonly affects older people. According to different estimates, the prevalence of dementia doubles with every five-year increment in age after 65. Over the years, there have been various studies conducted by academics and service providers attempting to scope the problem of dementia in Hong Kong, with the gloomiest estimates putting our demented population at 100 000<sup>37</sup>, representing almost one-tenth of the elderly population.

### **Obesity**

### Situation in Hong Kong

The Behavioural Risk Factor Survey April 2016 revealed that 38.8% of the population aged 18 - 64 were classified as overweight or obese (BMI  $\geq 23.0$ ), including 20.7% as obese. A higher proportion of males (48.2%) than females (30.5%) were classified as overweight or obese. People aged 55 - 64 had a highest rate (49.4%) of overweight or obesity.

### **Physical Activity**

#### Situation in Hong Kong

<sup>&</sup>lt;sup>37</sup> In Hong Kong, some population-based research (e.g. Challenges of Population Ageing on Disease Trends and Burden conducted by the Chinese University of Hong Kong (CUHK) and the University of Hong Kong in 2010 and Trends in Prevalence and Mortality of Dementia in Elderly Hong Kong Population: Projections, Disease Burden, and Implications for Long-Term Care conducted by the CUHK in 2012) put estimates of our demented population at around 100 000.

Most people in Hong Kong adopt a sedentary life style. The Behavioural Risk Factor Survey conducted in April 2016 revealed that more than a quarter (28.0%) of adult aged 18 - 64 had not done any moderate or vigorous physical activity for at least 10 minutes at a time and only less than half (44.6%) had done some vigorous physical activity during the week before enumeration.

### **Smoking**

### Situation in Hong Kong

According to the General Household Survey and Thematic Household Survey, the percentage of daily cigarette smokers among persons aged 15 and over in Hong Kong decreased steadily from 23.3% in 1982 to 10.5% in 2015 (except for years from 2000 to 2002). The percentage of male daily cigarette smokers was persistently higher than that of females: in 2015, the percentages of male and female daily cigarette smokers were 18.6% and 3.2% respectively. The percentage of female daily cigarette smokers dropped from 5.6% in 1982 to 2.6% in 1990. Then, it rebounded and reached 4.0% in 2005. Afterwards, the percentage dropped to 3.0% in 2010 and increased slightly to 3.2% in 2015.

# APPENDIX 8 – INPATIENT DISCHARGES AND DEATHS IN ALL HOSPITALS CLASSIFIED BY DISEASE, 2015

DISEASE CLASSIFICATION	ATTENDANCE	PERCENTAGE
Diseases of the genitourinary system	260,957	12.7%
Neoplasms	253,985	12.3%
Diseases of the digestive system	205,325	10.0%
Diseases of the respiratory system	169,407	8.2%
Diseases of the circulatory system	156,770	7.6%
Factors influencing health status and contact with health services	130,809	6.4%
Pregnancy, childbirth and the puerperium	114,624	5.6%
Injury, poisoning and certain other consequences of external causes	109,341	5.3%
Diseases of the musculoskeletal system and connective tissue	83,633	4.1%
Certain infectious and parasitic diseases	61,188	3.0%
Endocrine, nutritional and metabolic diseases	47,589	2.3%
Diseases of the eye and adnexa	47,580	2.3%
Diseases of the skin and subcutaneous tissue	39,113	1.9%
Mental and behavioural disorders	37,634	1.8%
Certain conditions originating in the perinatal period	36,629	1.8%
Diseases of the nervous system	34,989	1.7%

Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism	31,775	1.5%
Congenital malformations, deformations and chromosomal abnormalities	11,755	0.6%
Diseases of the ear and mastoid process	9,705	0.5%
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	203,484	9.9%
Unknown diagnosis (refers to uncoded principal diagnosis)	10,529	0.5%
Total	2,056,821	100.0%

 $(Source: Health\ Facts\ of\ Hong\ Kong\ 2017\ Edition.\ Department\ of\ Health,\ Hong\ Kong\ Special\ Administrative\ Region)$ 

# APPENDIX 9 – CHINESE MEDICINE CENTRES FOR TRAINING AND RESEARCH ANNUAL ATTENDANCE BREAKDOWN BY DISEASE TYPE FOR 2017/18

CATEGORY	DISEASE (CHINESE ONLY)	NUMBER OF CASES <sup>38</sup>	PERCENTAGE
內科	內科病(其他)	31,034	2.01%
	內科其他病類	310,533	20.15%
	內科瘤病	1,490	0.10%
	內科癌病	28,350	1.84%
	外感熱病	101,218	6.57%
	心系病	82,638	5.36%
	肝系病	150,561	9.77%
	肺系病	119,367	7.75%
	牌系病	98,428	6.39%
	腎系病	123,770	8.03%
外科	外科其他病	1,749	0.11%
	外科瘤病類	1,744	0.11%
	外科癌病	11,352	0.74%
	皮膚病	112,647	7.31%
	男性前陰病	1,080	0.07%
	肛腸病	2,331	0.15%
	乳房病	1,765	0.11%
	瘡瘍病	1,867	0.12%
	外科病(其他)	1,560	0.10%
	外傷眼病	64	0.00%
	白睛病	516	0.03%
	胞瞼病	911	0.06%
	 眦病	143	0.01%

 $<sup>^{\</sup>rm 38}$  Each patient attendance could have more than one diagnosis

	眼科其他病	1,778	0.12%
	眼科瘤病	29	0.00%
	眼科癌病	12	0.00%
	黑睛病	118	0.01%
	瞳神病	3,080	0.20%
	眼科病(其他)	4,017	0.26%
	耳鼻喉科病(其他)	1,116	0.07%
	耳病	3,050	0.20%
	耳鼻喉瘤病	104	0.01%
	耳鼻喉癌病	2,778	0.18%
	咽喉病	12,014	0.78%
	鼻病	36,062	2.34%
	口齒病	8,068	0.52%
婦科	月經病	59,586	3.87%
	妊娠病	1,962	0.13%
	婦科其他病	9,421	0.61%
	婦科瘤病	1,052	0.07%
	婦科癌病	3,185	0.21%
	帶下病	2,022	0.13%
	產後病	776	0.05%
	婦科病(其他)	2,211	0.14%
兒科	兒科時行病	1,335	0.09%
	兒科癌病	10	0.00%
	兒科蟲病	8	0.00%
	兒科雜病	21,891	1.42%
	新生兒病	6	0.00%
	兒科病(其他)	918	0.06%
骨傷科	手肩/腕/指病症	15,787	1.02%
	各種骨折後遺症	808	0.05%

	Total	1,541,140	100%
其他	蟲病	2	0.00%
	損傷內証病	1,654	0.11%
	骨傷科病(其他)	2,873	0.19%
	臀/股骨病症	547	0.04%
	頭/頸肩病症	37,289	2.42%
	踝關節/跟骨病症	4,775	0.31%
	膝關節病症	27,905	1.81%
	腰椎骨病症	17,620	1.14%
	傷筋病	64,051	4.16%
	創傷病	1,207	0.08%
	脫位病	163	0.01%
	推拿科(其他)	776	0.05%
	骨傷科瘤病	85	0.01%
	骨折病	3,207	0.21%
	胸椎/胸背/肋骨病症	664	0.04%