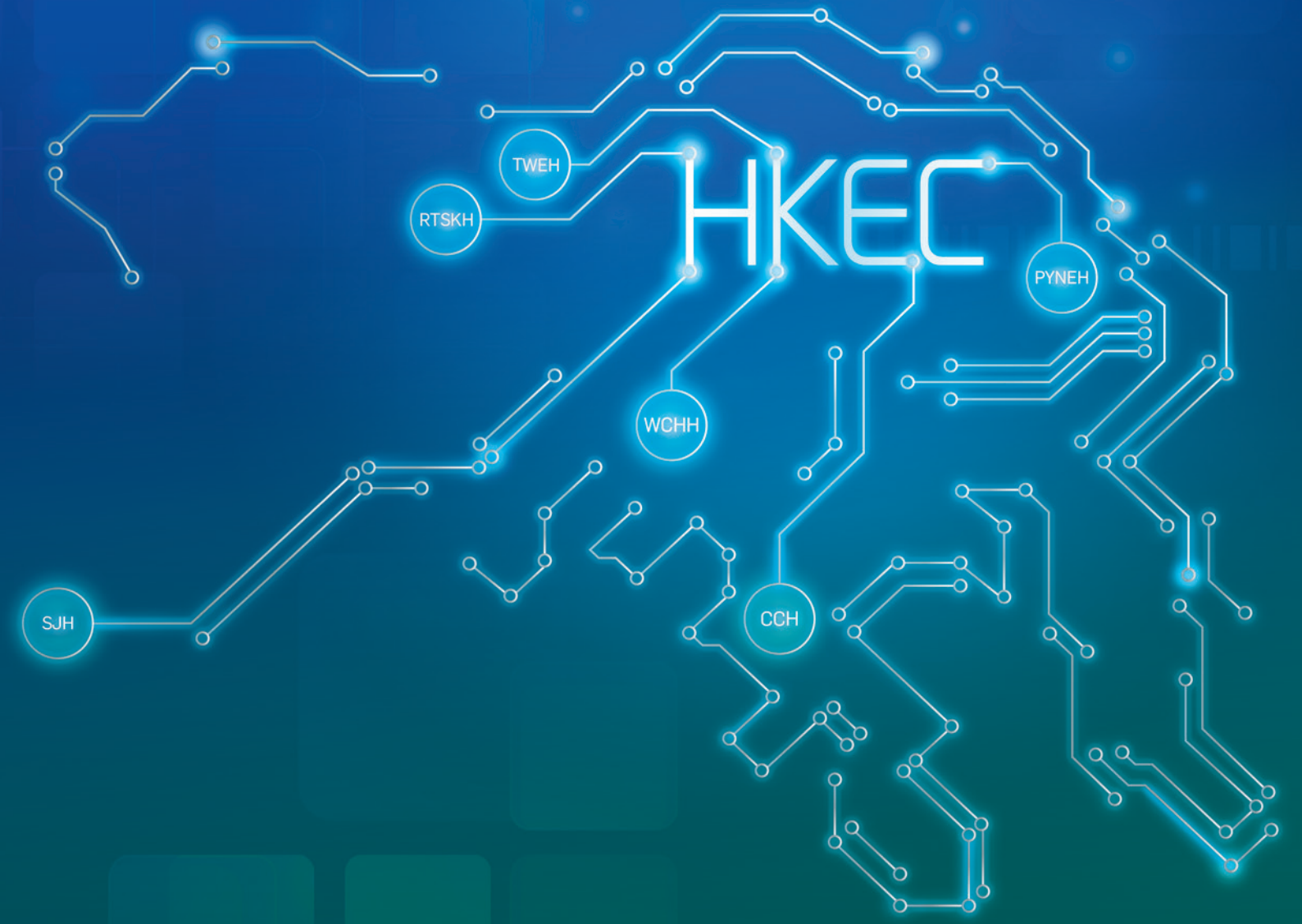
醫院管理局
HOSPITAL AUTHORITY

CLINICAL SERVICES PLAN for the Hong Kong East Cluster



About This Plan

The Clinical Services Plan for the Hong Kong East Cluster is a guiding document to map out future service models and clinical strategies in HKEC for enhancing the service quality and meeting the long-term healthcare needs of the community.

CONTENT

FOREWORD BY CHAIRMAN

The Hospital Authority (HA) is delighted to present the Clinical Services Plan (CSP) for the Hong Kong East Cluster (HKEC). It was jointly formulated by HKEC and the Strategy and Planning (S&P) Division of HA Head Office to set out the future service directions and development in HKEC for the next 10-15 years. It is the seventh CSP formulated in the HA.

HKEC is experiencing a changing landscape in its catchment demographics. Whilst it is facing the challenges of escalating healthcare service demand from its rapidly ageing population, the projected reduction in the population size of children (aged 0-19) and adults (aged 20-64) will impact on the service demand of related services, such as paediatrics and obstetrics. To ensure sustainable service development as well as staff training and development for high quality patient care, innovative service model development is essential. With the strong history of innovation in HKEC, our cluster colleagues have developed new collaborative models of care to address the challenges faced by HKEC, to achieve sustainable and quality healthcare services for the community.

The development of this CSP cannot be accomplished without the collective commitment and staunch support from HA Board, Hospital Governing Committees (HGCs) and clusters' colleagues. With the dedication and professionalism of our staff, I am confident we will see the realisation of this CSP, through which high quality healthcare services will be provided to our patients.

Henry FAN Hung-ling

Chairman
Hospital Authority

FOREWORD BY CHIEF EXECUTIVE

The HKEC CSP illustrates the cluster's determination and strategies for the provision of equitable and timely access to high quality, patient-centred care for the community. With the dedicated commitment and concerted efforts from our healthcare professionals, this CSP portrays the vision of highly collaborative, multi-disciplinary clinical services of the HKEC.

In view of existing service collaborations between HKEC and its neighbouring Hong Kong West Cluster (HKWC), staff from HKWC were also engaged in this CSP formulation process to maximise synergism for service model development. It is exciting to see new cross-cluster collaborative model recommendations, aimed at achieving service improvement and sustainability, the direct product of the thorough consultation process described in this CSP.

Looking ahead, the HKEC CSP informs subsequent capital planning and design process for future potential hospital development and expansion projects within the cluster. The CSP has provided constructive contributions to the planning of the redevelopment of Pamela Youde Nethersole Eastern Hospital in our second 10-year Hospital Development Plan.

My deepest gratitude goes to all fellow colleagues, our external advisors, and members of the HGCs for their invaluable contributions to the development of this CSP. I look forward to the successful implementation of the strategies to provide high quality patient care with your continued support.

Dr Tony KO

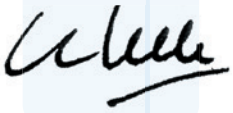
Chief Executive
Hospital Authority

PREFACE

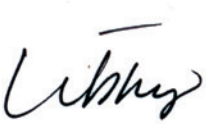
The HKEC CSP brings together the aspirations of clinical staff, executives, governing bodies and patient representatives who are committed to enhancing service quality to meet the long-term healthcare needs of the community. It is a blueprint to guide the future service development directions, role delineation of cluster hospitals, as well as facility planning of HKEC.

The strong history of pioneering and innovation in HKEC is renowned. Areas of contribution include service and training development, as well as technology adoption. Commendable flagship services of HKEC are acknowledged and will continue to be leveraged on. These unique strengths of the cluster, together with the momentum of service model transformation built up in the CSP process, have reinvigorated the spirit of pioneering and innovation in the cluster and will help engage the next generations of clinical leaders to bring the CSP into fruition.

We would like to express our heartfelt appreciation to the large number of frontline healthcare professionals, from both within and outside the cluster, who have dedicated their time and efforts to the development of this CSP. In particular, we would like to thank members of the Clinical Work Groups, from both HKEC and HKWC, for their immense contributions in shaping the future service models. Our earnest appreciation also goes to the members of the Advisory Panel for their staunch support and guidance throughout the formulation of the CSP.



Dr C C LUK, JP
Cluster Chief Executive
Hong Kong East Cluster /
Hospital Chief Executive
Pamela Youde Nethersole Eastern Hospital
Wong Chuk Hang Hospital and
St. John Hospital



Dr Libby LEE
Director
Strategy and Planning Division
Hospital Authority Head Office

EXECUTIVE SUMMARY

OVERVIEW

The Clinical Services Plan (CSP) for the Hong Kong East Cluster (HKEC) is a guiding document to map out future service models and clinical strategies in HKEC for enhancing the service quality and meeting the long-term healthcare needs of the community. The planning horizon is 10 to 15 years. The CSP also delineates the role of individual hospitals in HKEC and facilitates the planning and design of major capital projects within the cluster.

The service development directions and strategies were formulated with staunch support and immense participation by key stakeholders including clinical staff, management staff, and Hospital Governing Committees (HGCs) of every hospital within HKEC. In view of existing service collaborations between HKEC and its neighbouring Hong Kong West Cluster (HKWC), HKWC staff were also engaged in this CSP formulation process to explore new collaborative models.

Overall, the commendable traditions and strengths of HKEC, such as the innovative culture and the established development of medical-social collaboration, are embraced as the cluster's foundation for future development. New collaborative service models, including multi-disciplinary collaborations within HKEC, across clusters between HKEC and HKWC, as well as across medical and social sectors are recommended for improved patient care and service sustainability.

BACKGROUND

The Hospital Authority (HA) commenced the development of HKEC CSP in January 2019 after the completion of CSP for the other six clusters[1]. The CSP development is in line with the "Report of the Steering Committee on Review of Hospital Authority" by the Food and

1. *Including Hong Kong West Cluster, Kowloon Central Cluster, Kowloon East Cluster, Kowloon West Cluster, New Territories East Cluster and New Territories West Cluster.*

Health Bureau, in which HA was recommended to ensure coordinated service development within and between clusters[2].

HKEC provides public healthcare services for Eastern, Wan Chai districts of Hong Kong Island, and the outlying Islands (excluding Lantau Island). With an estimated population of 0.77 million in its catchment districts in 2017, the cluster accounted for around 10.4% of the Hong Kong population[3]. There are seven hospitals in HKEC, Pamela Youde Nethersole Eastern Hospital (PYNEH), Ruttonjee and Tang Shiu Kin Hospitals[4] (RTSKH), St. John Hospital (SJH), Tung Wah Eastern Hospital (TWEH), Cheshire Home, Chung Hom Kok (CCH) and Wong Chuk Hang Hospital (WCHH). There are also seven specialist outpatient clinics (SOPCs) and 12 general outpatient clinics (GOPCs) in the cluster.

Driven by the innovations and aspirations of clusters' staff on future service models, the CSP will address the identified challenges and service gaps in HKEC and inform the planning and design of new facilities in the cluster. The latter includes the Ambulatory Care Block at PYNEH, which is in the pipeline of the Government's Second 10-year Hospital Development Plan.

PROJECT GOVERNANCE

Under the policy directions and guidance of the Medical Services Development Committee (MSDC) and the Directors' Meeting (DM), a Project Committee was set up to oversee the development of the HKEC CSP. The Project Committee was co-chaired by the Cluster Chief Executive (CCE) of HKEC and the Director of Strategy and Planning Division from HA Head Office. Members included senior clinicians and management from HKEC, chairpersons of the HGCs of the cluster hospitals, as well as senior management from HA Head Office. An Advisory Panel was formed to provide advice to the Project Committee.

To administer and coordinate the service plan development, a Planning Team was formed with members from both HKEC and HA Head Office. The Planning Team was supported by an experienced overseas healthcare service planner, engaged as an external consultant to provide consultation and inputs to the planning process.

Clinical Work Groups (CWGs) were formed with multi-disciplinary members from different specialties and hospitals to formulate new models of care and clinical strategies. The service proposals were deliberated at the Cluster Medical Committee involving the Chiefs of Service (COSs) in HKEC.

2. *Report of the Steering Committee on Review of Hospital Authority (July 2015) by the Food and Health Bureau.*
3. *Based on population estimates released by the Census & Statistics Department on 13-Feb-2018, and mid-2017 Distribution of Population by the District Council District provided by the Planning Department.*
4. *The hospital management of Ruttonjee Hospital and Tang Shiu Kin Hospital was integrated in 1998.*

METHODOLOGY

The CSP was developed through a highly interactive and broad engagement approach involving frontline clinical staff, senior management and HGCs' members from HKEC. In addition, staff from HKWC were engaged to explore new, inter-cluster, collaborative service models. The process included vertical specialty-based consultation via questionnaire surveys, face-to-face interviews as well as horizontal, programme-based consultation via 12 multi-disciplinary, cross-specialty and cross-hospital CWGs. Proposals of the CWGs were deliberated at a one-day seminar attended by around 340 participants, including the Chief Executive of HA, CCE and Hospital Chief Executive (HCE) of HKEC, CCEs of other clusters, clinicians, nurses, pharmacists, allied health professionals, as well as HGCs of HKEC hospitals, executives from HA Head Office, and patient representatives.

The draft CSP was made available to around 520 key stakeholders between 29 June and 7 August 2020 to solicit feedback and suggestions. Responses received were carefully reviewed and deliberated by the Project Committee. These responses served as a basis to refine the draft CSP before submission to the DM for endorsement, and to the MSDC for approval.

KEY CHALLENGES

Through analysis of both internal and external environments, a review was conducted to identify key challenges facing the cluster, which are summarised as below.

Forward Service Planning Responsive to Service Needs from Demographic Changes in HKEC Catchment

Both HKEC and HKWC are expected to experience a decrease in catchment population from 2017[5] to 2026[6] by 8% (from 766 000 to 701 000), and 5% (from 516 000 to 491 000) respectively, which is in contrary to the projected population increase by 6% of Hong Kong-wide. The shrinkage in HKEC catchment population is mainly attributed to the decrease in the population of children (aged 0-19) and adult (aged 20-64), by 1% and 21% respectively from 2017[5] to 2026[6]. Service demand for paediatrics, obstetrics, and other related services are expected to be impacted as a result. On the other hand, a significant growth by 33% in the elderly (aged 65 and above) population in HKEC catchment is projected from 2017[5] to 2026[6]. As such, demand for healthcare services for the elderly population is expected to increase

5. *Based on population estimates released by the Census & Statistics Department on 13-Feb-2018, and mid-2017 Distribution of Population by the District Council District provided by the Planning Department.*
6. *Based on "Hong Kong Population Projections 2017-2066" (baseline population projections) and "Projections of Population Distribution 2018-2026" published by the Census & Statistics Department and the Planning Department respectively.*

in HKEC. It is of paramount importance to consider the future service needs respective to different age cohorts of the catchment population as well as the maintenance of adequate staff exposure and training for services with decreasing case volume.

Meeting Public Expectation on 24-hour Timely Access to Life-saving Interventions

Patients and the general public have high expectation of HA to provide time-critical, life-saving interventions in a timely manner, regardless of time of day. However, the access to emergency procedures such as intra-arterial (IA) thrombectomy and emergency primary percutaneous coronary intervention (PCI) in HKEC are currently confined to restricted hours within HKEC hospitals. Even with the decreasing projected population across the Hong Kong Island from 2017 onwards, the current and projected total catchment populations of HKEC and HKWC of around one million are comparable to that of any individual cluster. In view of the relatively small caseload individually[7], collaboration between HKEC and HKWC should be explored to ensure sufficient case volume for sustaining clinical expertise which is crucial for service quality and safety.

Tackling the Potential Surge Demand for RTSKH in Emergency Situations through Inter-hospital Collaboration

RTSKH is centrally located in Wan Chai district and is the public acute hospital closest to many important landmarks, including the Hong Kong Jockey Club Happy Valley Racecourse, the Hong Kong Stadium, embassies and the Central Government Office. It has been facing challenges from potential demand surge resulting from emergency situations of ad-hoc major events such as public gatherings for horse racing, sports events, trade fairs and political demonstrations. Currently, patients requiring tertiary and quaternary services are transferred to PYNEH and Queen Mary Hospital (QMH) depending on availability of the service at the time. Enhanced on-site clinical support in critical care and emergency surgical services would be required through further enhancement in cluster-based service organisation. Contingency plans with cross-hospital and cross-specialty involvement should be available and ready for deployment as required. Pooling of expertise under a cluster-based approach for services such as intensive care and flexible deployment of manpower should be considered.

7. For example, there were about 1 104 episodes of acute ischaemic stroke in HKEC in 2018/19, which was less than 10% of HA overall.

Closing the Gap in Adoption of Contemporary Models of Care across Hospitals / Specialties

Gaps in the adoption of existing ambulatory care model and peri-operative care model across the cluster are identified. For ambulatory care, existing one-stop, multi-disciplinary, day hospital model has predominantly been adopted in the Geriatric Day Hospitals (GDHs) at PYNEH and RTSKH, as well as the ambulatory rehabilitation centres at TWEH. The model has the potential to be extended to chronic disease and offered as management option for suitable acute patients at Accident & Emergency (A&E). For peri-operative care, structured peri-operative care service will be rolled out across the cluster with broader accessible indications for Enhanced Recovery after Surgery (ERAS) programmes. Similarly, there is room for adoption of palliative care (PC) services as an integral part of the care continuum for non-cancer patients under the care of non-PC specialists.

Reinvigorating the Pioneering Spirit to Encourage the Culture of Innovation

HKEC has been recognised of its pioneering and innovative spirit. Examples included the piloting of Patient Support Call Centre (PSCC), elderly-friendly wards and the development of minimally invasive surgery. During the vertical specialty-based consultation, it was suggested that such spirit and developments to be strengthened. To reinvigorate the spirit of pioneering and innovation, the cluster will keep up the momentum in adoption of new models of care as well as exploration of intra-cluster, inter-cluster and inter-sectoral collaborations with engagement of new generations of clinical leaders.

Improving the Outmoded Hospital Facilities and Poor Accessibility

Limited space and outdated physical designs across HKEC hospitals were noted. For instance, the existing hospital facilities in PYNEH are not organised in a zonal concept which facilitates patient flow and hospital operation. Limitations on accessibility by public transport to the hospital site are also noted. The development of Ambulatory Care Block at PYNEH in the Government's Second 10-year Hospital Development Plan will provide an opportunity to conduct a study of the site development potential and accessibility for future improvement of the hospital design, for a better fit with the service model changes and technological advancements in healthcare.

STRATEGIC FRAMEWORK

Taking into account the key challenges faced by HKEC and building on its strengths and potentials, strategies have been formulated to ensure **equitable and timely access to high quality, patient-centred care** for the residents in the HKEC catchment districts according to the four guiding principles identified below.

1. Acknowledge and Strengthen the Culture of Pioneering and Flagship Services of HKEC

HKEC has built a strong history of pioneering and innovation in clinical service, technology adoption, and training. Examples included the piloting of community geriatric outreach service in 1993 which developed into the Community Geriatric Assessment Service (CGAS) in HA and the piloting of the telephone nursing consultation service in 2003 which evolved into the HA PSCC at RTSKH, providing protocol-driven, telephone support service to post-discharged, high-risk, elderly patients and diabetic patients across the entire HA. Such history is recognised as a distinctive strength of the cluster and earmarked for further development.

Some commendable flagship services of the cluster are also acknowledged for their potential for future development. For instance, structure and platform for engaging community partners in providing supports to patients and carers have been established for the development of medical-social collaboration in HKEC. The cluster-based radiology service in HKEC has the shortest waiting time for elective computed tomography (CT) imaging services with the highest throughput per CT machine across all clusters in HA consistently in recent three years from 2017/18 to 2019/20. Different training centres have also been providing a high volume of training courses for HA staff.

2. Foster Multi-disciplinary Collaborations within Cluster, and across Clusters

Multi-disciplinary collaborations and coordination are essential to high quality patient-centred care. Expertise from different members of the multi-disciplinary teams of healthcare professionals are required for addressing various needs of patients, such as in cancer services, PC services, and elderly services. Furthermore, to tackle the escalating service demand from the ageing population, collaborations between geriatricians and other specialties are of paramount importance to provision of high quality, efficient care.

Inter-cluster collaborations between HKEC and HKWC are also explored where appropriate in this CSP, which can help enhance the service accessibility and capacity by pooling of expertise from different hospitals and clusters in some service areas. Staff rotations to maintain staff training and exposure could also be facilitated, especially in services with decreasing

case volume. To achieve such collaboration, relevant stakeholders would participate in the planning to agree on the new collaborative service models and their respective roles in service and training delivery.

3. Embrace the Service Planning Principle of "Localise where Possible, Centralise only when Necessary"

This service planning principle[8] has underpinned the development of the CSP of all clusters and aims to ensure appropriate and quality clinical services are accessible to population in all districts in the HKEC catchment. High-volume and low-complexity services should be provided locally for patients' convenience. In contrast, services requiring specialised clinical expertise and advanced technology, which are relatively low-volume, should be concentrated at accredited centres in the cluster to ensure service quality and safety by pooling of expertise. For highly-specialised services, cross-cluster collaboration should be explored to ensure sufficient case volume for sustaining clinical expertise which is crucial for safe patient care.

4. Integrate Services across Care Continuum from Hospital to Community

To provide holistic care to meet various aspects of patients' needs, seamless and coordinated care between different care settings ranging from hospital, ambulatory care and outpatient settings to the community is essential. Adopting a patient-centred approach, care is designed to enable smooth transitions between different care settings and levels of care to ensure appropriate care is provided at the most suitable setting. The development of medical-social collaboration, one of the flagships of HKEC, can facilitate patients' recovery in the community by leveraging on the support and resources from our community partners.

CLINICAL SERVICE PROGRAMMES

Based on the strategic framework, clinical service programmes have been formulated to address the challenges faced by HKEC. The models of care recommended by the 12 multi-disciplinary, cross-specialty and cross-hospital CWGs are summarised as below.

Innovation in Healthcare

The ultimate aim of innovation in healthcare is to enhance service quality and safety, by improving the efficiency and effectiveness in the delivery of care and better use of manpower

8. This principle was introduced to Hong Kong by Sir Cyril Chantler in the context of the development of proposals for a Centre of Excellence in Paediatrics (which was subsequently named as the Hong Kong Children's Hospital). It was adopted in the development of all clusters' CSP.

resources. The CWG recommends to establish a cluster committee in healthcare innovation in HKEC. The Committee will have a broad representation including clinical, administrative and technical departments in the cluster. It will play an advisory and facilitating role in innovation and training. Potential innovation and training projects for further exploration include autonomous mobile robots for heavy and bulk transport, nursing informatics, tele-medicine, automation in pharmacy and laboratory, and utilisation of virtual reality in simulation training. To better harness new ideas for innovation and coordinate training activities, establishment of a new integrated centre for healthcare innovation in HKEC is recommended.

Medical-social Collaboration

Through the established structures for medical-social collaboration in HKEC, synergistic and coordinated services are provided for the patients through the cluster-based Platforms and the hospital-based Patient Resource Centres (PRCs). Enhancement and further development of medical-social collaboration in HKEC for patients in needs will be made. Subject to the complexity of patients' needs, steering and coordination beyond cluster level may be required. For the process of medical-social collaboration, the CWG recommends close communication and collaboration in co-designing the care processes to meet patients' needs and shared protocols with clear role delineation aimed to minimise service gaps and avoid duplication of services.

Elderly Services

The vision of the CWG is to provide timely access to high quality, patient-centred care to elderly patients across different specialties through enhanced intra-cluster collaborations. To meet the service demand from a rapidly ageing population, elderly services in HKEC will be strengthened through a shared care approach between geriatric teams and parent teams (non-geriatric teams of other partnering specialties). The parent teams will be equipped to provide essential basic geriatric care in accordance with agreed protocols, whilst geriatric teams will provide direct inputs to elderly patients with more complex conditions. To address the existing gap of geriatric support at SJH, geriatric support will be extended to SJH via a shared care model supported by tele-medicine. Riding on the strength of the current GDH service model, GDH will be further enhanced to serve as the hub for relevant cross-specialty collaborations, such as the proposed urology-gynaecology-geriatric collaborative service model. The service coordination and governance at cluster level will also be reinforced by the establishment of cluster elderly services coordinating committee.

Women Services

The CWG aims to ensure service needs of different age cohorts of the women population are met and adequate staff exposure and training are maintained through strengthening of intra-cluster and cross-cluster collaborations in different aspects of obstetrics & gynaecology (O&G) services. In view of ageing population, enhancement of urogynaecology service and gynaecological oncology service are recommended as utilisation in these services increases with age. For instance, intra-cluster collaboration with geriatric team for urogynaecology elderly patients, as well as cross-cluster development of nurse-led urogynaecology service (such as development of care protocols and training for nurses) and gynaecological oncology service (such as joint case conference and operations) are recommended. To address the observed and projected decreasing trends in the size of the population of reproductive age group and the number of deliveries in HKEC, cross-cluster collaboration to enhance obstetric service and training strategies to address the challenge of decreasing number of deliveries (such as simulation training and rotation of trainees to units with higher delivery rate when indicated) are recommended. To improve service accessibility, a combined functional unit for assisted reproductive service between HKEC and HKWC is proposed.

Children Services

In view of the projected decreasing trend in the population of children in the catchment districts of HKEC, as well as the overall Hong Kong, a transformation in the overall model of children services is envisioned along with the service commencement of the Hong Kong Children's Hospital (HKCH), under a hub-and-spoke model. There will be growing collaboration between HKCH and the paediatric department of HKEC in terms of service delivery as well as staff rotation and training. In particular, service development in paediatric PC service will be led by the centralised paediatric PC team in HKCH, working closely with designated care team at local cluster level. The collaborative mechanism of cross-cluster support between HKEC and HKWC for paediatric and neonatal intensive care unit (P/NICU) will be enhanced to improve patient care quality and safety in P/NICU. To streamline the patient journey of critical patients, children presented to the A&E department of the RTSKH requiring surgical input and P/NICU support will be diverted directly to QMH.

The emergency and secondary care services will be refocused as the core paediatric services of HKEC, as one of the spokes in the overall HA paediatric service network. Ambulatory care services should be strengthened to cater for the specific needs of children. A one-stop, comprehensive, multi-disciplinary child and adolescent psychiatry service will also be established in HKEC with collaboration between the paediatric and the psychiatric departments of PYNEH to provide the shared care model for patients with attention deficit hyperactivity disorder.

Neuroscience Services

The CWG recommends that multi-disciplinary patient-centred care at the right time and right place by the right provider should be readily accessible in close vicinity to the patients. Through service networking or collaborative team approach, no patient should be deprived of the neuroscience services required. The provision of 24-hour IA thrombectomy service to all eligible patients in the catchment areas of HKEC and HKWC in a timely manner is recommended. With the availability of 24-hour IA thrombectomy service at QMH of HKWC in the second quarter of 2020, patients in HKEC requiring IA thrombectomy service after office hours will be transferred to QMH by secondary diversion. Subject to the service evaluation and caseload, the proposed provision of 24-hour 7-day IA thrombectomy service in PYNEH will be reviewed and deliberated. For patients with functional neurosurgical diseases, a cross-cluster multi-disciplinary team between HKEC and HKWC should be set up to provide a collaborative and comprehensive service. For neuro-rehabilitation service, evidence-based clinical pathways with multi-disciplinary and cross-specialty inputs as well as medical-social collaboration are recommended. Cross-cluster consultation and collaboration, particularly with MacLehose Medical Rehabilitation Centre of HKWC, will be optimised to facilitate patient access to specific neuro-rehabilitation service.

Cardiac Services

The CWG recommends a multi-disciplinary and integrated care model to provide holistic cardiac services across the care continuum, from the acute life-saving interventions to cardiac rehabilitation and chronic management of cardiac diseases. There has been ongoing planning on the collaboration between HKEC and HKWC to provide round-the-clock access of primary PCI service for the patients in both clusters. Leveraging on this service collaboration development between HKEC and HKWC, the CWG aims to explore the cross-cluster collaborative model for other areas of the cardiac services as appropriate. To strengthen the cross-cluster collaboration for improved patient care and a seamless patient journey, further deliberation with the stakeholders from both clusters will be required to develop details of the collaborative service model, including care protocols and referral mechanisms.

For cardiac rehabilitation service, HKEC will adopt an integrated, multi-disciplinary and patient-centred approach with enhanced collaboration across hospitals to ensure continuity of patient care. The care protocols for cardiac rehabilitation service will be aligned across hospitals for standardised care. Riding on the flagship role of TWEH in the provision of ambulatory rehabilitation services, the hospital will be strengthened as the major service provider of ambulatory cardiac rehabilitation service for patients in HKEC. Medical-social

collaboration for cardiac rehabilitation in the community will be strengthened to facilitate patients' re-integration into the community. Overall, cardiac nurses will take on a coordinating role in the patient journey for cardiac rehabilitation service, such as patient recruitment and medical-social collaboration.

Ambulatory Care Services

The CWG recommends the provision of one-stop, multi-disciplinary, ambulatory care, with timely access to diagnostic workup and therapeutic interventions according to patients' needs and urgency. The ultimate objective is to enhance patient care and experience whilst avoiding unnecessary hospitalisation. The coverage of ambulatory care services ranges from immediate treatment of an acute condition, day surgery and procedures, to the management of chronic diseases. Apart from elective services, suitable patients presenting to the A&E department can also be diverted to receive fast-track, ambulatory care for early assessment and treatment, based on agreed protocols between the A&E department and respective specialties and disciplines. Examples include diabetes service, rheumatology and musculoskeletal service, ophthalmology service, and rehabilitation services.

Palliative Care Services

The CWG aims to provide timely access to high quality PC services in response to the high demand for PC services from the ageing population and the increasing prevalence of chronic life-threatening diseases (both cancer and non-cancer). Three main strategies are envisioned for the cluster-based PC services. These include the expansion of PC service coverage across cluster hospitals through PC consultative service by PC Teams; strengthening of PC services for patients in the community through PC day service, PC home care service, CGAS, medical-social collaborations and development of tele-health; and enhancement on end-of-life care in the hospitals through nurturing a culture amongst staff of "Road of Respect" for the patients' last journey from wards to the mortuary and strengthening of dedicated multi-disciplinary bereavement support in non-PC setting.

Peri-operative Services

The recommended peri-operative model aims to provide multi-disciplinary, protocol-driven, patient-centred care from pre-operative phase to post-operative phase. Engagement of anaesthesiologists should commence early at the pre-operative phase to allow adequate time for assessment, risk stratification and risk modulation. Peri-operative nurses will perform the coordinator role of this service. Surgeons from the parent team will perform risk stratification of patients to one of the three peri-operative care pathways, namely low-risk, intermediate-risk and high-risk, in accordance with the agreed protocols. In particular, for high-risk patients,

early assessment by anaesthesiologists at the peri-operative medicine clinic will be arranged and multi-disciplinary input for optimisation and pre-habilitation will be sought. For post-operative phase, ERAS will be implemented across surgical specialties in accordance with agreed protocols. The recommended model will first be implemented in PYNEH and rolled out across HKEC.

Surgical Services

With increasing service demand, the CWG recommends strengthening of the intra-cluster collaboration between the two surgical units at PYNEH and RTSKH to improve accessibility and quality of surgical services in HKEC. Whilst high-volume, low-complexity surgical services will remain as localised at both PYNEH and RTSKH; low-volume, high-complexity cases will be referred to PYNEH, or to accredited centres in other clusters as indicated, where appropriate expertise or technologies are available for improved patient safety and staff competency. Intra-cluster collaboration between PYNEH and RTSKH to develop common clinical protocols on breast service will ensure standardised treatment across HKEC. A single booking system within the cluster for special outpatient clinic, operation and endoscopy services is proposed to improve efficiency and minimise intra-cluster variations in waiting time. Ambulatory services, such as day surgery service, will be enhanced to reduce reliance on inpatient care. Referral mechanisms to facilitate intra-cluster transfer to extended care setting for rehabilitation will be developed. To enhance service sustainability of vascular surgery service, a single functional unit with two service sites on Hong Kong Island for vascular service is recommended.

Critical Care Services

The CWG recommends cluster-based critical care service which can homogenise service delivery, optimise training opportunities and ensure service sustainability for both ICUs in HKEC. The key features include the provision of 24-hour critical care specialist coverage for both ICUs in the cluster and to facilitate RTSKH ICU to become accredited as a critical care medicine training site. Training and service enhancement in inter-hospital transfer of critically-ill patients are recommended to improve patient safety, as well as facilitate inter-hospital support in case of emergency situations of ad-hoc major events and service collaboration across hospitals for life-saving interventions. With a new Hyperbaric Oxygen Therapy (HBOT) centre being planned in the new acute hospital (NAH) at Kai Tak Development Area, the PYNEH HBOT centre will take on the role of providing training and assistance to the commissioning of the new HBOT centre at NAH.

HOSPITAL ROLE DELINEATION

Underpinned by the planning principles of this CSP, services provided by various clinical specialties and hospitals of the HKEC will move towards a cluster-based service network. Cluster hospitals will contribute to the HKEC service network with their roles summarised as below.

PYNEH will continue to serve as a major acute hospital providing 24-hour emergency and comprehensive secondary service and tertiary services for HKEC. The hospital will continue to provide cluster-based services such as clinical oncology, orthopaedics, urology, anaesthesiology, radiology, and pathology. PYNEH will continue to be the provider of gazette inpatient service under the Mental Health Ordinance for both HKEC and HKWC. The hospital will also continue to serve as one of the two Emergency Radiation Treatment Centres in HA. Leveraging on HKEC's strong tradition of innovation, PYNEH will take on a special role on pioneering of new service models, technology adoption as well as training. For example, with the establishment of HA's first HBOT centre in PYNEH, PYNEH will have a role in providing training and assistance for the commissioning of the new HBOT centre planned in NAH at Kai Tak Development Area.

RTSKH will continue to serve as an acute hospital providing 24-hour emergency and selected specialty services for Wan Chai district. With the solid foundation of comprehensive elderly services, RTSKH will support the development of integrated elderly services in HKEC for the ageing population, such as providing geriatric tele-consultation to SJH, and continue its role in providing cluster-based CGAS for HKEC and PSCC service to support high-risk, elderly patients in HA. Given its geographical location, RTSKH has a special role in the emergency preparedness for emergency situations of ad-hoc major events on the Hong Kong Island. The intra-cluster service collaborations between RTSKH and PYNEH for critical care services and surgical services will be strengthened to support this.

TWEH will continue to serve predominantly as an extended care hospital, providing rehabilitation and convalescent services for HKEC; with a focus on ambulatory care services, including ambulatory ophthalmology service and ambulatory rehabilitation services for HKEC. It will continue to provide selected specialty services including medicine and ophthalmology. The referral criteria and mechanisms will be reviewed and streamlined with relevant stakeholders to improve patient flows from acute settings in the cluster to TWEH for extended care.

WCHH will continue to serve as an extended care hospital providing infirmary service to patients requiring long-term care. Subject to the Government's exploration and planning, the hospital may be handed over to the Government for redevelopment.

CCH will continue to serve as an extended care hospital providing rehabilitation and convalescent services for HKEC, as well as infirmary services for patients requiring long-term care. The hospital's role in providing inpatient rehabilitation and convalescent services for patients stepped down from cluster hospitals will be strengthened and augmented with a review on the referral criteria and mechanisms.

SJH will continue to serve as an acute hospital providing 24-hour emergency services for Cheung Chau. To strengthen the support for elderly patients, common protocols will be set up to facilitate shared care by parent team at SJH, with geriatric support accessible through tele-consultation.

IMPLEMENTATION ENABLERS

To facilitate the implementation of the clinical strategies and delineated roles of cluster hospitals, a number of key drivers will be necessary as enablers of change. Strong clinical leadership, grooming of the next generation of clinical leaders, as well as nurturing of a collaborative culture across clusters and sectors are essential for the development and implementation of the recommended new models of care. Other key enablers include appropriate governance structures, workforce and training, information and communication technology, as well as physical facilities and design.

Overall, a cluster-based service development steering committee led by HKEC CCE, with participation of cluster management and senior clinicians in HKEC, will be formed to oversee the implementation of the CSP. For the inter-cluster collaborations, relevant stakeholders in HKWC will be engaged for coordinated service implementation. The HA annual planning process will be the mechanism to secure the resources required for implementing the strategies.

CONCLUDING REMARKS

Tremendous efforts have been made by the frontline clinical staff to propose and deliberate the future service directions for improved patient care through intra- and inter-cluster collaborations, as well as medical-social collaborations. With HKEC's strong history of innovation and commendable flagship services, the cluster has a solid foundation for the new collaborative models of care recommended. A momentum for changes has been built up to take the planning forward, with a view to addressing the challenges facing the cluster, enhancing service quality and meeting the long-term healthcare needs of the community. Cluster leadership and staff engagement are the keys to successful implementation of the CSP.

摘要

概覽

港島東聯網臨床服務計劃為聯網未來10至15年間的服務模式制定發展路向和臨床策略，以提升服務質素，迎接社區的長遠醫療需求。本計劃亦釐清聯網內各醫院的角色定位，並為聯網未來的大型基本工程項目提供規劃和設計指引。

本計劃獲港島東聯網內的醫療及管理人員和各醫院管治委員會等主要持份者積極參與制訂。由於港島東聯網和毗鄰的港島西聯網在臨床服務上已有合作，因此港島西聯網的人員亦獲邀參與制訂本計劃，一同探索新的協作模式。

總括而言，港島東聯網的優良傳統和優勢，例如具備創新文化和發展成熟的醫社合作等，都為聯網未來發展奠下基石。為提升病人護理質素及服務的持續發展，本計劃建議港島東聯網發展新的跨專業協作服務模式，包括聯網以內、聯網之間（港島東和港島西聯網），以及醫社之間的協作。

背景

醫院管理局（醫管局）至今已完成六個聯網的臨床服務計劃[1]。港島東聯網臨床服務計劃於 2019 年 1 月正式開展制訂工作。因應食物及衞生局的「醫院管理局檢討督導委員會報告」中所提出的建議，醫管局將透過「臨床服務計劃」來協調聯網以內和聯網之間的服務發展[2]。

現時，港島東聯網為東區、灣仔區和離島（不包括大嶼山）的居民提供公營醫療服務。2017 年，港島東聯網服務覆蓋區域的人口約有 77 萬人，佔香港總人口的 10.4%[3]。聯網

1. *包括港島西、九龍中、九龍東、九龍西、新界東及新界西聯網。*
2. *食物及衞生局的醫院管理局檢討督導委員會報告（2015 年 7 月）。*
3. *根據政府統計處 2018 年 2 月 13 日發布的人口估計和規劃署提供的 2017 年中按區議會分區人口分布。*

轄下共有七間醫院：東區尤德夫人那打素醫院、律敦治及鄧肇堅醫院[4]、長洲醫院、東華東院、春磡角慈氏護養院及黃竹坑醫院，另設有七間專科門診及 12 間普通科門診診所。

根據聯網人員對未來服務模式的創新意念和願景，本計劃會回應聯網當前的挑戰和服務落差，且在新設施的規劃和設計上作出指引。這些新設施包括政府第二個十年醫院發展計劃中的東區尤德夫人那打素醫院日間醫療服務大樓。

項目管治

在醫管局的醫療服務發展委員會及總監會議的政策指導下，我們成立了一個項目委員會，負責監督本計劃的制訂過程。此項目委員會由港島東聯網總監及醫管局總辦事處策略發展總監共同領導，成員包括港島東聯網的資深臨床醫療及管理人員、各醫院管治委員會主席，以及醫管局總辦事處的資深管理人員。另外，我們亦設立顧問委員會負責向項目委員會提供意見。

此外，港島東聯網和醫管局總辦事處聯合組成一個工作小組，負責統籌及制訂本計劃。小組並聯同一位擁有豐富醫療服務策劃經驗的海外專家顧問，於本計劃的發展過程中進行諮詢及提供意見。

臨床工作小組由跨專業、跨專科及跨醫院的成員組成，負責制訂服務模式建議及臨床策略。各部門主管亦在聯網醫療服務委員會的會議上討論臨床工作小組的各項服務建議。

制訂方法

本計劃的制訂過程採取互動方式，廣泛邀請主要持份者參與，當中包括聯網的前線醫療人員、管理人員和醫院管治委員會成員。另外，港島西聯網的人員亦獲邀請參與探索新的跨聯網服務協作模式。本計劃制訂過程使用了雙軌諮詢模式：首先推行以專科為本的縱向諮詢，以問卷調查及面談方式蒐集意見；然後再進行跨專科的橫向諮詢，透過成立 12 個跨專業、跨專科及跨醫院的臨床工作小組，制訂各項服務建議。最後，我們舉辦了為期一天的研討會，匯報和討論臨床工作小組的建議。參加者約有 340 人，與會者包括醫管局行政總裁、港島東聯網總監及各醫院行政總監、其他聯網總監、醫生、護士、藥劑師、專職醫療人員、各醫院管治委員會成員、醫管局總辦事處行政人員及病人代表。

我們在 2020 年 6 月 29 日至 8 月 7 日期間，就本計劃的初稿向約 520 位主要持份者蒐集意見和建議。之後交由項目委員會詳細分析和討論，再根據討論結果修訂本計劃，然後提交醫管局總監會議批核，最後由醫療服務發展委員會正式通過。

4. 律敦治醫院與鄧肇堅醫院於 1998 年合併管理。

主要挑戰

我們透過分析港島東聯網的內在和外在環境因素，將聯網所面對的主要挑戰歸納如下：

因應聯網服務人口結構的變化，就服務需求作前瞻性規劃

港島東及港島西聯網的服務地區的人口預計將會減少：由 2017 年[5] 至 2026 年[6]，預計減幅分別為 8%（由 766 000 人減至 701 000 人）及 5%（由 516 000 人減至 491 000 人），與同期的全港人口預計 6% 的增長趨勢相反。當中港島東聯網服務地區的人口萎縮，主要是由於在 2017 年[5] 至 2026 年[6]，當區兒童人口（0-19 歲）及成年人口（20-64 歲）將分別減少 1% 和 21%，以致兒科、產科及其他相關服務的需求因而受影響；同時，當區長者人口（65 歲或以上）將大幅增加 33%，令聯網的長者醫療服務需求有所增加。有見及此，港島東聯網必須考慮服務地區的人口中不同年齡層的未來服務需要，以及當一些服務的病例數目減少時，如何維持員工有足夠的服務經驗和培訓。

滿足市民對 24 小時緊急救治服務的期望

病人和市民大眾對醫管局能夠提供適時的緊急救治服務有殷切期望，然而港島東聯網的醫院現時只能在特定時間提供如動脈取栓術及緊急冠狀動脈介入治療等緊急程序。由於港島區人口由 2017 年開始減少，港島東和港島西聯網現時和未來預計的總服務人口約為 100 萬人，與其他單一聯網相若。換言之，兩個聯網分別的病例數目[7] 相對其他單一聯網少。因此港島東和港島西聯網應探索服務協作，確保有足夠的病例數目，以維持臨床技術和服務質素，保障病人安全。

透過跨醫院協作，應對在緊急情況下律敦治及鄧肇堅醫院面對的服務需求急增

律敦治及鄧肇堅醫院位於灣仔區中心地帶，是多個重要地標（如香港賽馬會跑馬地馬場、香港大球場、多國領事館和政府總部）最鄰近的公立急症醫院。每逢有大型活動如賽馬、體育活動、展覽會及遊行等，均有大量人群聚集；如若出現緊急情況，可能導致突發性的醫療服務需求急增，這是律敦治及鄧肇堅醫院一直面對的挑戰。現時，醫院內需要第三及第四層醫療服務的病人會根據當時的服務提供情況，被轉送至東區尤德夫人那打素醫院或瑪麗醫院。透過進一步提升聯網為本的服務安排，港島東聯網將可以加強於律敦治及鄧肇堅醫院的重症服務和緊急手術服務的臨床支援。聯網應制訂跨醫院和跨專科參與的應變計劃，並在有需要時啟動；另應考慮集中統籌聯網的人手（如深切治療服務的臨床專才），以聯網為本的方式靈活調配人手。

5. 根據政府統計處 2018 年 2 月 13 日發布的人口估計和規劃署提供的 2017 年中按區議會分區人口分布。
6. 根據政府統計處發布的「香港人口推算 2017-2066」（基線人口推算）以及規劃署發布的「人口分布推算 2018-2026」。
7. 以 2018/19 年度為例，港島東聯網約有 1 104 宗急性缺血性中風，佔醫管局整體個案量少於 10%。

拉近不同醫院和專科在採用現代化服務模式方面的差距

聯網內各醫院和專科在採用日間醫療服務模式及圍手術期護理模式方面現存差距。在日間醫療服務方面，東區尤德夫人那打素醫院和律敦治及鄧肇堅醫院的老人科日間醫院，以及東華東院的日間復康中心已採用一站式跨專業的日間醫院模式。日間醫療服務模式可推展至慢性疾病的護理服務，亦可處理急症室內一些適合接受日間醫療服務的急症病人。在圍手術期護理方面，系統化的圍手術期護理服務將推展至整個聯網，「促進術後康復計劃」亦將會被更廣泛地推行。另外，聯網亦有空間將紓緩治療服務融入護理過程中，讓有需要接受紓緩治療的非癌症病人在非紓緩治療專科團隊的照顧下獲得相應的服務。

強化開拓精神，鼓勵創新文化

港島東聯網一向以其勇於開拓、敢於創新的精神見稱，例如率先試行護訊鈴服務、長者友善病房，以及發展微創手術。在進行專科為本的縱向諮詢時，有意見認為聯網需強化其開拓精神和推進發展。為此，聯網將再接再厲，積極採納新的服務模式，並與新一代的臨床領袖一同探索聯網內、跨聯網及跨醫社界別的協作。

提升過時的醫院設施，改善暢達程度

聯網內的醫院均面對空間不足和設計過時的問題，例如東區尤德夫人那打素醫院現有的醫院設施並非按便利病人及醫院運作的區域空間概念設計，可到達醫院的公共交通工具亦有限。藉著政府第二個十年醫院發展計劃中興建東區尤德夫人那打素醫院日間醫療服務大樓的項目，可趁機研究醫院現址的發展潛力和暢達程度，以便日後改善醫院設計，切合服務模式轉變和醫療科技發展。

策略性框架

因應聯網所面對的主要挑戰及其發展優勢和潛力，我們為本計劃訂立了一個策略性框架，以確保聯網服務地區內的居民可**同等享有適時、高質素及以病人為本**的醫療服務。此策略性框架根據以下四個指導原則制訂：

1. 確認和加強聯網勇於開拓的文化和旗艦服務

港島東聯網過往在臨床服務、技術採納和人員培訓方面都勇於開拓和創新。例如於 1993 年試行社區老人科外展服務，其後發展為醫管局的社區老人評估服務；於 2003 年試行電話護理諮詢服務，其後演變為於律敦治及鄧肇堅醫院的醫管局護訊鈴服務，為醫管局內高風險的出院長者和糖尿病患者提供按照規程的電話支援服務。這些服務發展歷史都標誌著聯網的優勢，值得作進一步發展。

聯網一些卓越的旗艦服務亦獲確認有進一步發展潛力，例如聯網已建立發展醫社合作的架構和平台，與社區夥伴合作，為病人和照顧者提供支援。在 2017/18 至 2019/20 連續三個年度，港島東聯網的預約電腦掃描造影服務在醫管局各聯網中輪候時間最短，每台造影機的服務量亦為眾聯網中最高。此外，聯網的各個培訓中心亦一直為醫管局人員提供大量培訓課程。

2. 促進聯網內及聯網之間的跨專業協作

跨專業協作和協調對提供以病人為本的高質素醫療服務是重要的。例如在癌症服務、紓緩治療服務和長者服務方面，跨專業醫療團隊中不同成員具備不同專長，可切合病人的不同需要。此外，為應付人口老化而增加的服務需求，老人科醫生必須與其他專科團隊合作，以提供高質素和高效率的醫療服務。

本計劃亦探討在合適的服務範疇進行跨聯網協作，透過匯聚港島東和港島西聯網的專才，可提升服務便捷度和服務量。這亦有助安排職員輪調，尤其於病例數目正在減少的服務，能夠讓員工有足夠的服務經驗和培訓。為達致協作，相關持份者應參與規劃，商議新的協作服務模式，並就服務與培訓方面議定彼此的角色。

3. 遵照「在可行情況下當區提供，在需要時集中處理」的服務規劃原則

各聯網的臨床服務計劃都以此為服務規劃原則[8]，以確保聯網服務地區的所有居民均獲得適切和高質素的醫療服務。為方便病人，使用量高、複雜性低的服務應在當區提供。而需求量低、需要專門臨床技術及先進科技的服務，則應集中由聯網內已獲取認可的醫療單位提供，從而匯聚專才，以確保服務質素和病人安全。至於高度專門的服務，應探索跨聯網協作，以確保有足夠病例數目去維持臨床技術，保障病人安全。

4. 整合不同層面的服務，以加強醫社服務銜接

為提供全面護理以滿足病人不同方面的需要，醫院服務、日間醫療服務、門診及社區醫療服務各個層面應達致無縫整合。為達致病人為本的服務，服務安排應確保不同醫護單位及診治流程銜接暢順，讓病人在最合適的環境接受適切的醫治。發展醫社合作是港島東聯網的旗艦服務之一，透過善用社區夥伴的資源和支援，協助病人在社區中康復。

8. 此原則由錢卓樂爵士（Sir Cyril Chantler）在制訂「兒童專科卓越醫療中心」（後來命名為香港兒童醫院）建議時引入香港。所有聯網的臨床服務計劃均以此原則制訂。

臨床服務項目

根據上述的策略性框架，聯網制訂了一系列的臨床服務項目以應對當前的挑戰。12 個跨專業、跨專科及跨醫院的臨床工作小組所建議的服務模式概列如下：

醫療創新

醫療創新旨在透過提升醫療服務的效率和成效，以及善用人力資源，從而提升服務質素和安全。工作小組建議聯網成立具廣泛代表性的醫療創新委員會，成員來自臨床、行政和技術部門，就創新及培訓事宜擔當諮詢和協調角色。工作小組建議作進一步探索的創新及培訓項目包括：使用自動化機械人運送重物及作大量運送、護理信息學、視像醫療、在藥劑部和實驗室引入自動化系統，以及透過虛擬實境進行模擬訓練。為推動創新意念和協調培訓活動，工作小組建議聯網成立一所新的綜合醫療創新中心。

醫社合作

藉著聯網成熟的醫社合作架構，包括聯網為本的平台及各醫院的病人資源中心，病人可獲得協調連貫的服務。聯網將繼續提升及發展醫社合作，為有需要的病人提供支援。因應病人所需支援的複雜程度，其醫社合作計劃或須在聯網以外的更高層面進行督導和協調。在醫社合作過程方面，工作小組建議在共同制訂醫護流程時，醫社之間應有緊密溝通和合作，務求切合病人需要；共同的服務規程亦應釐清彼此的角色，以減少服務差距，並避免服務重疊。

長者服務

工作小組期望透過加強聯網內的跨專科合作，讓長者病人在不同專科團隊的照顧下均能適時地獲得病人為本和高質素的長者醫療服務。為應付因人口急速老化而增加的服務需求，港島東聯網會透過老人科團隊與病人的主診團隊（非老人科的其他專科團隊）實行共同護理模式，以加強長者服務。主診團隊將會接受相關培訓，並根據既定的治療規程為長者病人提供基本的老人科長者護理服務；而老人科團隊則負責直接診治情況較複雜的長者病人。透過實行共同護理模式，並配合視像醫療，長洲醫院可獲得老人科服務支援，以填補現時的服務不足。另外，將會利用現有的老人科日間醫院服務模式的優勢，強化老人科日間醫院成為提供跨專科協作服務的中心，例如建議的老人科、泌尿科和婦科協作服務。聯網亦將成立聯網長者老人服務統籌委員會，以鞏固在聯網層面的長者服務協調和管治。

婦女服務

工作小組期望透過加強聯網內和跨聯網的協作，以照顧不同年齡層的婦女人口在不同範疇的婦產科服務的需要，並讓員工有足夠的服務經驗和培訓。工作小組建議加強泌尿婦科和婦科腫瘤科服務，以應付隨著老年人口增加的服務需求。例如與聯網內的老人科團隊合作，為泌尿婦科的長者病人提供服務。工作小組亦建議發展跨聯網的泌尿婦科服務協作（如共同制訂治療規程和安排護士培訓，以發展護士主導的服務）以及跨聯網的婦科腫瘤科服務培訓（如聯合個案會議和手術）。有見於港島東聯網的生育年齡人口和分娩數目正在持續下降，小組建議採用跨聯網協作方式加強產科服務和培訓策略（例如模擬培訓，以及在有需要時安排受訓人員輪調到分娩個案相對較多的部門）。同時建議港島東和港島西聯網成立一個整合的輔助生育服務單位，以提升服務的便捷度。

兒童服務

由於預計港島東聯網以至全港的兒童人口將會減少，並隨着香港兒童醫院啟用，醫管局整體的兒科服務模式將會轉型，以軸輻模式運作。香港兒童醫院與港島東聯網的兒科部門在服務提供、員工輪調及培訓方面將會增加協作。例如，兒科紓緩治療服務發展將由香港兒童醫院的兒科紓緩治療團隊集中統籌，並與聯網的特定醫療團隊緊密合作。港島東和港島西聯網兒科深切治療服務及新生嬰兒深切治療服務均會加強其跨聯網支援協作機制，以提升病人護理質素和安全。為簡化重症病人的診治流程，到律敦治及鄧肇堅醫院急症室求診的兒童如需要接受外科及兒科或新生嬰兒深切治療支援，將直接被轉送至瑪麗醫院。

根據軸輻模式，港島東聯網的兒科服務是醫管局整體兒科服務網絡的輻條之一。港島東聯網兒科服務的重點將會放於緊急及中層醫療服務。聯網應加強日間醫療服務，以照顧兒童的特定需要。聯網亦會設立一站式、跨專業的兒童和青少年精神科服務，由東區尤德夫人那打素醫院的兒科和精神科部門以共同護理模式運作，為患有專注力失調及過度活躍症的兒科病人提供服務。

神經科學服務

工作小組建議應在合適的時間和合適的地點，由合適的服務提供者為病人提供以病人為本的跨專業醫療服務，並以就近病人為要點。透過服務網絡或團隊協作模式，所有病人均可獲得所需的神經科學服務。工作小組建議港島東和港島西聯網適時為服務地區內所有合適的病人提供 24 小時動脈取栓術服務。港島西聯網轄下的瑪麗醫院將於 2020 年第二季開始提供 24 小時動脈取栓術服務，屆時當港島東聯網的病人在港島東聯網的服務時間以外需要動脈取栓術服務，將被轉送到瑪麗醫院接受服務。至於在東區尤德夫人那打素醫院提供每天 24 小時動脈取栓術服務的建議，將根據服務評估及病例數目作出審視和討論。為服務患有功能性神經外科疾病的病人，港島東和港島西聯網應設立跨聯網、

跨專業團隊，提供全面協作服務。在神經康復服務方面，工作小組建議採用以實證為本的臨床流程，配合跨專科、跨專業參與，以及醫社合作；並加強跨聯網診症和協作，特別是與港島西聯網麥理浩復康院的協作，讓病人獲得所需的腦科康復服務。

心臟科服務

工作小組建議採用跨專業的綜合醫療模式，在不同服務層面提供全面的心臟科服務，包括緊急救治以至心臟康復及慢性心臟病治理。港島東和港島西聯網一直在計劃以跨聯網協作方式，為兩個聯網的病人提供 24 小時緊急冠狀動脈介入治療。藉著港島東和港島西聯網發展這項服務協作，工作小組期望探索其他合適的服務範疇，以發展更多跨聯網的心臟科服務和提升病人護理質素。為確保診治流程無縫銜接，港島東和港島西聯網的持份者將會進一步討論，以制訂協作服務模式的細節，包括服務規程和轉介機制。

在心臟康復服務方面，港島東聯網將採用以病人為本的跨專業綜合模式，並加強醫院之間的協作，確保病人獲得協調連貫的服務。聯網將統一各醫院的心臟康復服務規程，以提供醫療標準一致的服務。現時，東華東院在聯網的日間康復服務上已擔當重要角色，亦會加強其日間心臟康復服務，以作為此服務的主要提供者。為協助病人重返社區，聯網會加強社區心臟康復服務的醫社合作。心臟科護士將在整體心臟康復服務流程中擔當協調角色，包括招募病人和醫社合作。

日間醫療服務

工作小組建議聯網提供一站式、跨專業的日間醫療服務，並根據病人的需要和病情緩急，適時提供診斷檢查和介入治療，目標是改善病人護理和服務體驗，同時避免不必要的住院。日間醫療服務的涵蓋範圍包括即時急症治療、日間手術以至慢性疾病管理等。除了預約服務外，根據急症室與相關專科和專業議定的治療規程，合適的急症室病人可獲分流往特快日間醫療服務，以盡早接受評估和治療。日間醫療服務例子包括糖尿病服務、風濕科及肌肉骨骼服務、眼科服務及康復服務等。

紓緩治療服務

工作小組期望聯網提供適時及高質素的紓緩治療服務，以應付因人口老化和慢性危疾（癌症及非癌症）病人數目日增而導致對紓緩治療的殷切需求。聯網為本的紓緩治療服務有三個主要策略，包括加強紓緩治療團隊提供的會診服務，將紓緩治療服務範圍擴展至聯網各醫院；透過紓緩治療日間服務、紓緩治療家居護理服務、社區老人評估服務、醫社合作和發展視像醫療，加強支援在社區生活的病人；以及透過培養職員重視生命最後一程的文化，加強醫院內的晚期照顧服務，讓病人有尊嚴地從病房到殮房走完生命最後一程，並加強跨專業哀傷輔導支援服務予接受非紓緩治療專科團隊照顧的病人。

圍手術期的服務

圍手術期的服務模式旨在於手術前後提供以病人為本及按照臨床規程的跨專業護理。麻醉科醫生應在手術前盡早參與服務，以便有充足時間為病人進行評估、風險分析和調控。在圍手術期的服務模式下，護士會擔當此服務的協調員；而主診團隊的外科醫生則按照議定的臨床規程，為病人作風險分析，因應病人所屬的低、中、高風險等級，界定其所需的圍手術期護理流程。屬高風險等級的病人將被盡早安排至圍手術期診所，及早接受麻醉科醫生的評估，並安排跨專業的手術前復康訓練，以提升病人在手術前的身體狀態。在手術後，各外科專科將按照議定的臨床規程進行「促進術後康復計劃」。以上建議的服務模式將首先在東區尤德夫人那打素醫院推行，然後推展至整個聯網 。

外科服務

隨着服務需求增加，工作小組建議加強聯網內東區尤德夫人那打素醫院和律敦治及鄧肇堅醫院兩個外科部門的協作，以提升聯網外科服務的便捷度和質素。兩間醫院將繼續在當區提供使用量高、複雜性低的外科服務；而需求量低、複雜性高的個案將轉往東區尤德夫人那打素醫院，或按需要轉往其他聯網內具備合適專才或技術的已認可的醫療單位，以提升病人安全和人員技術。東區尤德夫人那打素醫院和律敦治及鄧肇堅醫院應合作制訂通用的乳腺服務臨床規程，確保在聯網提供一致的治療。工作小組建議在聯網內的專科門診、手術和內窺鏡服務分別使用單一的預約系統，以縮短聯網內各醫院服務輪候時間的差距，並提升整體服務效率。聯網將加強日間服務如日間手術服務，以減低對住院服務的依賴；另將制訂聯網內延續護理服務的轉介機制，以便安排病人接受康復服務。為提升血管手術服務的持續發展，工作小組建議在港島區成立一個跨聯網的血管手術服務單位，在港島東和港島西聯網均設有服務。

重症醫學服務

工作小組建議提供以聯網為本的重症醫學服務，以提供一致的服務及增加培訓機會，並確保聯網內兩個深切治療部的服務能夠持續發展。主要建議包括在聯網內兩個深切治療部安排重症醫學專科醫生提供 24 小時服務，以及協助律敦治及鄧肇堅醫院深切治療部獲得重症醫學培訓中心的認證。工作小組建議加強重症病人轉院的運送服務和相關的員工培訓，以提升病人安全；同時亦為在大型活動出現的緊急情況和配合緊急救治服務的跨院服務協作，提供所需的病人轉院運送服務。另外，因應啟德發展區的新急症醫院現正計劃興建一所新的高壓氧治療中心，東區尤德夫人那打素醫院的高壓氧治療中心將發揮培訓和輔助功能，協助這所新的高壓氧治療中心進行服務籌備工作。

醫院的角色定位

按照臨床服務計劃的規劃原則，港島東聯網各醫院及臨床專科所提供的服務將朝聯網為本的服務網絡方向發展。各醫院的角色定位概列如下：

東區尤德夫人那打素醫院作為聯網內的主要急症醫院，為聯網提供 24 小時急症服務，以及全面的中層和第三層醫療服務。醫院提供以聯網為本的服務，例如臨床腫瘤科、骨科、泌尿科、麻醉科、放射科和病理科服務；為港島東和港島西聯網提供根據《精神健康條例》訂明的刊憲精神科住院服務；並繼續作為醫管局轄下兩間緊急輻射治療中心之一。承接港島東聯網勇於創新的優良傳統，東區尤德夫人那打素醫院將會在引進新服務模式、採用新科技及培訓方面領航，例如東區尤德夫人那打素醫院設有醫管局首間高壓氧治療中心，繼而為啟德發展區新急症醫院計劃興建的新高壓氧治療中心提供員工培訓和輔助其服務籌備工作。

律敦治及鄧肇堅醫院作為一所急症醫院，為灣仔區居民提供 24 小時急症及指定專科服務。結合律敦治及鄧肇堅醫院在全面的長者服務方面的穩固基礎，該院將支援聯網發展綜合的長者服務，以應付人口老化；例如為長洲醫院提供老人科視像診症服務，為聯網提供社區老人評估服務，及為醫管局提供全港性的護訊鈴服務，支援高風險的長者病人。鑑於律敦治及鄧肇堅醫院的地理位置，該院須就港島區大型活動的緊急情況作應變準備。東區尤德夫人那打素醫院和律敦治及鄧肇堅醫院的重症醫學服務及外科服務將進行聯網內的跨院協作，以加強在緊急情況下的服務支援。

東華東院作為一所延續護理醫院，為聯網提供康復服務，並主力提供日間醫療服務，包括日間眼科服務和日間康復服務。東華東院將繼續提供包括內科及眼科的指定專科服務。為改善病人由聯網的急症服務轉往東華東院接受延續護理服務的流程銜接，醫院將與相關持份者審視和簡化病人轉介條件和機制。

黃竹坑醫院作為一所延續護理醫院，為需要長期護理的病人提供療養服務。根據政府的研究和規劃，醫院或將由政府接手和進行重建。

春磡角慈氏護養院作為一所延續護理醫院，為聯網提供康復服務，並為需要長期護理的病人提供療養服務。醫院將加強住院康復及療養服務，並審視現有的轉介準則和機制，以接收聯網內其他醫院的病人。

長洲醫院作為一所急症醫院，為長洲居民提供 24 小時急症服務。為加強支援長者病人，醫院的主診團隊將會和老人科專科團隊制訂通用的臨床規程，提供共同護理，並透過視像診症獲得老人科專科團隊的服務支援。

落實推行

要推行各項臨床策略和落實各醫院的角色定位，將有賴多方面的配合，例如卓越的臨床領導、培訓新一代臨床領袖，以及培養跨聯網和跨部門的協作文化，這些皆對發展和落實建議的新服務模式至為重要。此外，合適的管治架構、人力及培訓、資訊及通訊科技，以至醫療設施和醫院設計等，亦十分重要。

港島東聯網將成立一個由聯網總監領導的聯網服務發展督導委員會，成員包括聯網管理層及資深臨床人員，以監察本計劃的推行。在跨聯網協作方面，港島西聯網的相關持份者將參與推行工作，以協調服務發展。透過醫管局周年工作計劃的機制，聯網可申撥所需的資源，實施各項策略。

總結

前線臨床人員盡心竭力，為未來的服務路向提出建議和進行討論，希望透過聯網內及跨聯網的協作和醫社合作，提升病人的醫療服務質素。港島東聯網一直勇於創新，推出了不少卓越的旗艦服務，這個堅實的基礎將有利發展建議的新協作模式。在制訂港島東聯網臨床服務計劃的過程中為聯網已注入求變的動力，期望透過落實此計劃以應對聯網當前的挑戰及提升服務質素，並滿足社區的長遠醫療需求。本計劃的成功落實，將有賴聯網領導層的積極帶領和職員的投入參與。

INTRODUCTION

BACKGROUND AND PURPOSE OF THE PLAN

The Hospital Authority (HA) formulates a Clinical Services Plan (CSP) for each cluster to map out its future service models to enhance the service quality, address the future challenges and meet the long-term healthcare needs of the community. This plan also delineates the role of individual hospitals within the cluster. This is in line with the "Report of the Steering Committee on Review of Hospital Authority", in which the recommendation was made to HA to ensure coordinated development within and between clusters[9]. The CSP has been completed for six clusters[10]. Work on this seventh CSP for the Hong Kong East Cluster (HKEC) commenced in January 2019.

The aim of this CSP is to provide an overarching clinical strategy to guide future service development in HKEC, with a planning horizon of 10 to 15 years. A highly interactive and broadly engaging approach was adopted in the formulation process. Key stakeholders including clinical staff, management staff, and Hospital Governing Committees (HGCs) of every hospital within HKEC have been actively involved in this process.

During the formulation of CSP, commendable traditions and strengths of the cluster were embraced as the foundation for future development of the cluster. For instance, HKEC was well recognised for its long history of pioneering and piloting culture. Examples include the piloting of Patient Support Call Centre (PSCC), the elderly-friendly wards, and the development of minimally-invasive surgeries and simulation training centres. HKEC was also one of the pioneering clusters with established structure and platform for medical-social collaboration.

9. *Report of the Steering Committee on Review of Hospital Authority (July 2015) by the Food and Health Bureau.*
10. *Including Hong Kong West Cluster, Kowloon Central Cluster, Kowloon East Cluster, Kowloon West Cluster, New Territories East Cluster and New Territories West Cluster.*

Challenges faced by HKEC were identified through analysis of the internal and external environment. Among the challenges identified, prospective service planning responsive to the service needs from the changing demographics in the cluster stood out as a priority. Upon studying of the demographic data and the Government's population projection[11], it was noted that whilst the overall Hong Kong population is projected to grow by 6% from 2017 to 2026, the population on Hong Kong Island is projected to shrink. HKEC is the cluster with the most significant shrinkage in the geographical population with a projected shrinkage in its catchment districts by 8%, followed by its neighbouring cluster, the Hong Kong West Cluster (HKWC) with a projected shrinkage of 5%. In the catchment districts of HKEC, the population of children (aged 0-19) and adults (aged 20-64) is projected to decrease, while the population of elderly people (aged 65 and above) is projected to increase. This has significant implications for clinical services planning as service needs differ between different age cohorts.

In view of existing service collaborations between HKEC and its neighbouring HKWC, HKWC was also engaged in this CSP formulation process to maximise potential for synergy and overall service improvement. Options explored included new collaborative models for service areas such as paediatrics, obstetrics and gynaecology service.

Driven by the innovations of clusters' staff for developing future service models, the CSP will address the identified challenges and service gaps in HKEC as elaborated in the subsequent chapter on **Key Challenges**, and inform the planning and design of new facilities in the cluster. The latter includes the Ambulatory Care Block at Pamela Youde Nethersole Eastern Hospital (PYNEH) which is in the pipeline of the Government's Second 10-year Hospital Development Plan.

11. 2017 figures are based on population estimates released by the Census & Statistics Department on 13-Feb-2018, and mid-2017 Distribution of Population by the District Council District provided by the Planning Department. 2026 projected figures are based on "Hong Kong Population Projections 2017-2066" (baseline population projections) and "Projections of Population Distribution 2018-2026" published by the Census & Statistics Department and the Planning Department respectively.

ABOUT THE HONG KONG EAST CLUSTER

The Hong Kong East Cluster (HKEC), the first cluster in HA, was formed on 1 June 2001. Its catchment area covers the Eastern and Wan Chai districts of Hong Kong Island, as well as the outlying Islands (excluding Lantau Island). In 2017, it had an estimated population of 0.77 million, accounted for around 10.4% of the Hong Kong population[12]. Based on current demographic trends, it is projected that the proportion of elderly population in the catchment districts of HKEC will remain as the highest in the territory in the coming years.

The cluster provides a comprehensive range of services including acute, convalescent, rehabilitation, infirmary, ambulatory, primary and community care services to the local residents. There are seven hospitals in the cluster, providing a total of 3 204 beds, including 2 177 for acute, convalescent and rehabilitation care, 627 for infirmary care and 400 for psychiatric care as at 31 March 2019. There are also seven specialist outpatient clinics (SOPCs) and 12 general outpatient clinics (GOPCs) (**Figure 1**).

Patient care services are delivered by a workforce of 8 418 staff[13] as at 31 March 2019. The service throughputs delivered by the cluster in 2018-19 included 214 728 accident & emergency (A&E) attendances, 120 399 inpatient discharge episodes, 69 565 day patient discharge episodes, 847 137 specialist outpatient clinical attendances, 324 074 allied health outpatient attendances, and 659 034 primary care attendances.

The organisational structure of HKEC is presented in **Appendix 1**.

12. Based on population estimates released by the Census & Statistics Department on 13-Feb-2018, and mid-2017 Distribution of Population by the District Council District provided by the Planning Department.

13. Number of full-time equivalent staff.

Figure 1. Map of Healthcare Facilities of the HKEC

	As at 31 March 2019	Hospital	Specialist Outpatient Clinic	General Outpatient Clinic
1	Pamela Youde Nethersole Eastern Hospital	√	√	
2	Ruttonjee Hospital	√	√	
3	Tang Shiu Kin Hospital / Tang Shiu Kin Hospital Community Ambulatory Care Centre / Violet Peel General Outpatient Clinic	√	√	√
4	Tung Wah Eastern Hospital	√	√	√
5	Wong Chuk Hang Hospital	√		
6	Cheshire Home, Chung Hom Kok	√	√	
7	St. John Hospital	√	√	√
8	Anne Black General Outpatient Clinic			√
9	Chai Wan General Outpatient Clinic			√
10	North Lamma General Outpatient Clinic			√
11	Peng Chau General Outpatient Clinic			√
12	Sai Wan Ho General Outpatient Clinic		√	√
13	Shau Kei Wan Jockey Club General Outpatient Clinic			√
14	Sok Kwu Wan General Outpatient Clinic			√
15	Stanley General Outpatient Clinic			√
16	Wan Tsui General Outpatient Clinic			√

HOSPITALS OF THE CLUSTER

Pamela Youde Nethersole Eastern Hospital

Pamela Youde Nethersole Eastern Hospital (PYNEH) was the first new hospital built following the inception of HA in 1990. Situated in the mid-levels of Chai Wan over a 10-hectare site area, PYNEH has commenced service provision on 15 October 1993. It was named after Lady Pamela Youde, the wife of the late Hong Kong Governor, Sir Edward Youde. Its earliest predecessor, the Alice Memorial Hospital, founded over 100 years ago, was the first hospital in Hong Kong to offer services based on Western medical principles to the local Chinese community.

Today, PYNEH is the largest acute hospital in HKEC, providing 24-hour A&E service, and a full suite of specialist services. PYNEH provides a number of cluster-based tertiary services, including anaesthesiology, clinical oncology, neurosurgery, pathology, radiology and urology. As at 31 March 2019, PYNEH managed 1 829 beds with 5 638 staff. The psychiatric gazette wards in PYNEH provide cross-cluster inpatient services to both HKEC and HKWC.

PYNEH provides a number of territory-wide special services in HA. This includes the Hyperbaric Oxygen Therapy (HBOT) centre and one of the two Emergency Radiation Treatment Centres in HA. It also houses one of the five extra-corporeal membrane oxygenation (ECMO) therapy referral centres in HA, providing support for patients with severe respiratory failure or cardiac failure.

The HKEC Training Centre for Healthcare Management & Clinical Technology, together with the Minimal Access Surgery Training Centre (MASTC) and the Nethersole Clinical Simulation Training Centre (NCSTC), provide a platform and facility for training of healthcare professionals in HKEC and other HA staff on clinical technology and healthcare management. These include the introduction of Crew Resource Management (CRM) training in HA, high-fidelity Simulation Operating Room and Endo-Laparoscopic Operating Room. It is one of the four full motion simulation training units in HA.

PYNEH has acquired professional accreditation for various services since 1997. It is the first public hospital awarded a full four-year accreditation status by the Australian Council on Healthcare Standards (ACHS) in September 2010.

Ruttonjee & Tang Shiu Kin Hospitals

Ruttonjee Hospital (RH), formally known as Ruttonjee Sanatorium, was opened in 1949 by the Hong Kong Tuberculosis, Chest and Heart Diseases Association to provide tuberculosis services. It was transformed into a general hospital in 1991, with the major development of its hospital buildings completed in 1994. RH has been one of the pioneers in geriatric services in HA. It piloted community geriatric outreach service in 1993, which subsequently evolved into the Community Geriatric Assessment Service (CGAS) in 1994. In 2002, some clinical services, including A&E department, were relocated from Tang Shiu Kin Hospital (TSKH) to RH, whilst the focus of TSKH was shifted to community ambulatory care services.

As an acute hospital located at the centre of the Hong Kong Island in Wan Chai district, where there is a large volume of commuting population, business activities and major public events (such as public gatherings for horse racing, sports events, trade fairs and political demonstrations), RH continues to play an important role in providing 24-hour A&E service and acute services, supported by specialty services including medicine, geriatrics, critical care, general surgery, orthopaedics and traumatology. RH also provides day surgery, specialist outpatient services, geriatric day hospital (GDH), day rehabilitation programmes, palliative care (PC) services and outreach services, such as CGAS for HKEC.

TSKH was founded in 1969 and named after her benefactor, the late Sir Tang Shiu Kin. In 2005, TSKH was remodelled into a Community Ambulatory Care Centre. The Centre now also houses the HA PSCC and the A&E Training Centre (AETC). The AETC, established in 1994, is the only simulation training centre specialised in emergency training in HA. It provides a diverse range of emergency medical training courses to frontline medical, nursing, allied health and supporting staff of HA.

In 1998, hospital management of RH and TSKH was integrated. As at 31 March 2019, Ruttonjee and Tang Shiu Kin Hospitals (RTSKH) managed 623 beds with a workforce of 1 602 staff.

Tung Wah Eastern Hospital

Tung Wah Eastern Hospital (TWEH) was established in 1929 by the Tung Wah Group of Hospitals (TWGHs). In 1997, the hospital's services were reorganised to focus on community-based primary, specialist and ambulatory services. TWEH now serves as a community hospital, providing primary and selected specialty services including internal medicine, ophthalmology, rehabilitation and convalescent care with comprehensive allied health services. As at 31 March 2019, the hospital managed 265 beds with a workforce of 662 staff.

There is a strong focus on ambulatory care at TWEH. A broad spectrum of ambulatory care services are provided, including ophthalmic day surgery, intra-vitreal injection service, ambulatory rehabilitation services including geriatric, stroke, cardiac and neurological rehabilitation, in addition to facilities for upper and lower limb robotic-assisted rehabilitation.

Wong Chuk Hang Hospital

Wong Chuk Hang Hospital (WCHH) is an integral part of Wong Chuk Hang Complex for the Elderly. While the Social Welfare Department remains the allocatee of the subject land, HA has been vested management and control over the site since 1995.

WCHH provides extended-care, infirmary and rehabilitation services to elderly patients with comprehensive allied health support, community services, and day care services through the GDH and the Dementia Day Care Centre (DCC). The hospital managed 160 infirmary beds, of which 150 were Central Infirmary Waiting List (CIWL) beds, with 199 staff members as at 31 March 2019.

In line with the Government's policy direction of developing social infirmary services in the longer term, the Labour and Welfare Bureau has requested to transform the infirmary unit at WCHH to a social infirmary unit. Subject to the Government's exploration and planning, the hospital may be handed over to the Government for redevelopment.

Cheshire Home, Chung Hom Kok

Cheshire Home, Chung Hom Kok (CCH) commenced service provision in 1962. It is a member of the Hong Kong Cheshire Home Foundation which is affiliated to Leonard Cheshire Foundation International (Hong Kong Region). CCH joined HA in 1991. The hospital has been expanded over the years with a new purpose-built block for service extension and major renovations.

The hospital complex consists of two main buildings, the Cheshire Home, Chung Hom Kok Building (Original Home) and the Jockey Club Cheshire Home Building (New Home). The Original Home provides extended care for patients with physical disabilities while the New Home provides central infirmary care service for people referred from CIWL and rehabilitation and convalescent services for patients stepped down from cluster hospitals. There are a total of 240 infirmary beds.

Major services in CCH include medical, nursing, physiotherapy, occupational therapy, chaplaincy and medical social services. These are provided through a workforce of 190 staff as at 31 March 2019. There are also cluster clinical allied health support services provided at CCH. The medical support at CCH is provided by the Department of Medicine and Rehabilitation of TWEH.

St. John Hospital

St. John Hospital (SJH) was built in 1932 and was donated to the Hong Kong St. John Ambulance Association as a tuberculosis sanatorium in 1934. The casualty service began in the 1950s. Since then, SJH has evolved into an acute hospital on the Cheung Chau Island providing A&E, GOPC, day care and inpatient services, with support from physiotherapy, occupational therapy, dietetic, radiology and pharmacy. As at 31 March 2019, there are a total of 87 beds with a workforce of 129 staff.

A summary list of services offered by the HKEC hospitals is in **Appendix 2**.

PLANNING PROCESS

GOVERNANCE

Under the policy directions and guidance of the Medical Services Development Committee (MSDC) and the Directors' Meeting (DM), a Project Committee was set up to oversee the development of the HKEC CSP. The Project Committee was co-chaired by the Cluster Chief Executive (CCE) of HKEC and the Director of Strategy and Planning Division from HA Head Office. Members included senior clinicians and management from HKEC, chairpersons of the HGCs of the cluster hospitals, as well as senior management from HA Head Office. An Advisory Panel was formed to provide advice to the Project Committee.

To administer and coordinate the service plan development, a Planning Team was formed with members from both HKEC and HA Head Office. The Planning Team was supported by an experienced overseas healthcare service planner, who was engaged as an external consultant to provide consultation and inputs to the project. Recommendations made by the external consultant were reviewed and considered by the Advisory Panel.

Project progress was regularly reported to the Cluster Medical Committee, where the Chiefs of Service (COSs) in HKEC deliberated the service proposals and served as the platform of COS Meeting for this CSP. Clinical Work Groups (CWGs) were formed with multi-disciplinary members from different specialties and hospitals to formulate new models of care and clinical strategies. Further details of the CWGs are elaborated in the subsequent section in this chapter[14].

The overall governance structure of the project is illustrated in **Figure 2**. The membership and terms of reference of the Project Committee and Advisory Panel, as well as the membership of the Planning Team are set out in **Appendix 3**.

14. Under the section of Methodology.

Figure 2. Project Governance Structure

METHODOLOGY

The HKEC CSP was developed through a highly interactive and broad engagement approach. A wide range of stakeholders from the cluster were involved, including frontline clinical staff (e.g. doctors, nurses, pharmacists and allied health professionals), senior management and HGCs' members of all the HKEC hospitals. In addition, clinical staff from the neighbouring HKWC were also engaged in the process to explore new collaborative models of care for selected service areas[15]. A broad range of consultation methods were used and are outlined as follows.

Staff Briefing

In April 2019, a Cluster Staff Briefing Forum was conducted to introduce the CSP development to the cluster staff. Over 500 clinical staff, management and executives from across HKEC attended the forum. They were briefed about the project and invited to participate in the planning process.

Following which, a structured, two-phase consultation was conducted in the subsequent months. This involved the "vertical specialty-based" and "horizontal programme-based" consultations.

15. As mentioned in the chapter, Introduction, under the section of Background and Purpose of the Plan.

Vertical Specialty-based Consultation

This phase of specialty-based consultation involved questionnaire surveys and face-to-face interviews. The aim was to solicit views from key stakeholders on the current service profiles, perceived key service gaps and aspired future development at the hospital and cluster levels. Key challenges of the services were also identified in the process.

Survey

In April 2019, a survey of the clinical units, departments, and key stakeholders in HKEC was conducted; including a small sample from HKWC[16]. The overall response rate was 98% (of the 210 recipients sampled from HKEC and 8 from HKWC). The completed surveys formed the basis of discussions in the subsequent face-to-face interviews.

Face-to-face Interviews

Face-to-face interviews were conducted between May and July 2019. A total of 130 sessions were held with 343 participants (330 from HKEC and 13 from HKWC[17]). Frontline medical, nursing, pharmacy and allied health staff, clinical leaders, hospital management, and chairpersons of the HGCs of HKEC hospitals were involved.

Interviews were also conducted with COSs and hospital department managers, service directors and service coordinators, sub-specialty team heads and their team members. In-depth discussions from a cluster-based service planning perspective were sought from interviews with COSs of the same specialty in the HKEC hospitals. Input was also sought from the chairpersons of the HGCs, the CCEs and the Hospital Chief Executives (HCEs) on the future service development of the HKEC.

Horizontal Programme-based Consultation

The horizontal programme-based consultation was conducted between July and November 2019. Twelve CWGs were formed to provide a platform for stakeholders from different disciplines, specialties and hospitals in HKEC to formulate cluster-based proposals in a collaborative approach. In particular, staff from the HKWC were involved in the CWGs on Children Services, Women Services, Neuroscience Services and Cardiac Services to explore new collaborative models across clusters. The chairmanship of the CWGs were recommended by the Planning Team during the course of face-to-face interviews with inputs from the external consultant, and agreed by the Project Committee. Over 200 frontline staff were engaged in this phase of consultation.

16. Participants included staff from HKWC in Neuroscience, Cardiac, Children, Women, Haematology, Trauma, Cardiothoracic and Surgery services.
17. Participants included staff from HKWC in Neuroscience, Cardiac, Children, Women, Haematology, Trauma and Surgery services.

A one-day seminar was held on 28 November 2019, where the CWGs presented their proposals for deliberations, marking the conclusion of this consultation phase. The seminar was attended by around 340 participants, including the Chief Executive of HA, CCE and HCEs of HKEC, CCEs of other clusters, clinicians, nurses, pharmacists, allied health professionals, as well as HGCs of HKEC hospitals, executives from HA Head Office, and patient representatives. The CWGs' proposals are summarised in the chapter on **Clinical Service Programmes**.

Hospital Role Delineation

Based on the information and deliberations from the two phases of consultation, the future role delineation of the HKEC hospitals were deliberated at the one-day seminar. The role delineation for the cluster hospitals are summarised in the chapter on **Role Delineation of Cluster Hospitals**.

Demand Projection

Projections on the services demand and bed requirements for HKEC were made to 2036. The projections took into account the projected population and demographic changes, past trends of HA-average service utilisation specific to age, gender and specialty, as well as the hospital utlilisation patterns across districts. Details of the projection are documented in the chapter on **Capacity Planning**.

Policy Overlay

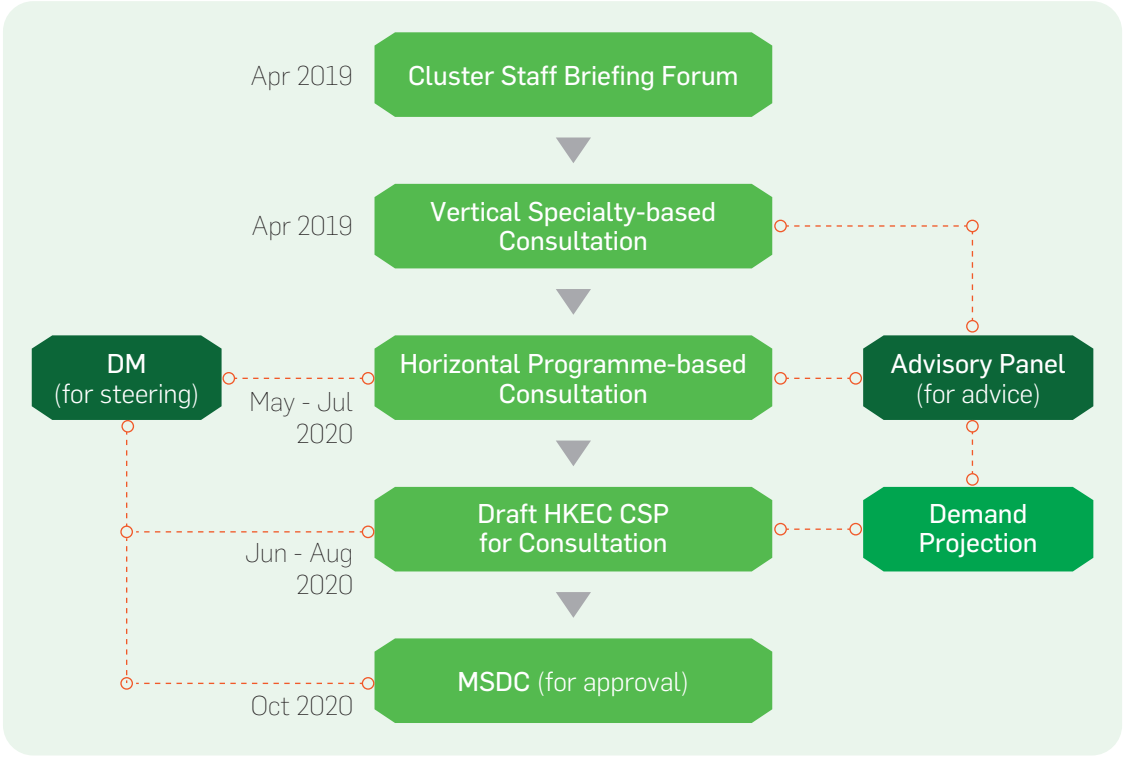
Members of the DM provided policy overlay for the development of the HKEC CSP. This involved decisions at senior management level, incorporating broad considerations of the views of various stakeholders, including relevant government bureaux and the HA Board.

Consultation of the Draft CSP

The draft HKEC CSP was made available to 520 key stakeholders between 29 June and 7 August 2020 to solicit feedback and comments. The stakeholders included clinical and management staff from the HKEC and HKWC, the HGCs of HKEC hospitals, and senior executives from HA Head Office. Responses received were carefully considered and deliberated by the Project Committee. These responses served as a basis to refine the draft CSP before submission to the DM for endorsement and to the MSDC for approval.

An overview of the process and methodology for the formulation of the HKEC CSP is illustrated in **Figure 3**.

Figure 3. Process and Methodology for the Formulation of HKEC CSP



KEY CHALLENGES

At the early phase of the CSP planning process, a review process was conducted to identify key challenges facing the cluster through analysis of both internal and external environments. Inputs from different sources were considered in the planning process. This includes the review findings of the current service delivery models and utilisation patterns, the anticipated effect of population and demographic changes, the major infrastructure development and other town planning initiatives by the Hong Kong Government within the catchment districts, and most importantly, the feedback in the consultation process from cluster staff. Based on the findings of key challenges as set out below, areas and opportunities for service improvement were identified and taken into consideration in the development of this plan.

FORWARD SERVICE PLANNING RESPONSIVE TO SERVICE NEEDS FROM DEMOGRAPHIC CHANGES IN HKEC CATCHMENT

From the Government's population projection from 2017[18] to 2026[19], it is noted that both HKEC and HKWC are expected to experience a decrease in catchment population by 8% (from 766 000 to 701 000) and 5% (from 516 000 to 491 000) respectively, whilst the overall Hong Kong population is projected to increase by 6%, (from 7.39 million to 7.83 million). Within the HKEC catchment, the majority of the population is projected to remain concentrated in the Eastern district, with a projected population of 515 000 in 2026[19] (7% decrease from 2017[18]); 155 000 in the Wan Chai district (15% decrease from 2017[18]) and 31 000 in the Islands district (excluding Lantau Island) (5% increase from 2017[18]) respectively.

The shrinkage in HKEC catchment population is mainly attributable to the decrease in the population of children and adults. The population size of children (aged 0-19) and adult (aged 20-64) cohorts are expected to reduce by 1% and 21% respectively, over the next 10 years from 2017[18] to 2026[19]. This decreasing trend is projected to continue for the next decade beyond 2026[19], with a projected reduction by 33% and 10% respectively, from 2026[19] to 2036[20]. These demographic changes have significant impact on the service demand, in particular services such as paediatrics, obstetrics, and other related services. For services with decreasing case volume, staff concerns regarding impact on exposure and training would need to be addressed.

Nonetheless, HKEC is facing an immense challenge with its ageing population. Despite the overall shrinkage of catchment population, a 33% growth in its elderly (aged 65 and above) population from 2017[18] to 2026[19] is projected. As a result, the proportion of elderly population

18. *Based on population estimates released by the Census & Statistics Department on 13-Feb-2018, and mid-2017 Distribution of Population by the District Council District provided by the Planning Department.*
19. *Based on "Hong Kong Population Projections 2017-2066" (baseline population projections) and "Projections of Population Distribution 2018-2026" published by the Census & Statistics Department and the Planning Department respectively.*
20. *Based on 2014-based population projections sourced from the Census & Statistics Department and the Planning Department.*

among HKEC catchment population is projected to rise from 17% in 2017[18] to 25% in 2026[19] and reaching 35% in 2036[20], whilst the proportion of the elderly in the total Hong Kong population is projected to rise 6% from 23% in 2026[19] to 29% in 2036[20]. As such, demand for healthcare service from the elderly population is projected to increase in HKEC.

Consideration of the future service needs of the projected demography is of paramount importance when future models of care, clinical strategies and service capacity are being planned. This will ensure that the respective service needs of different age cohorts of the catchment population will be met and adequate staff exposure and training will be maintained.

MEETING PUBLIC EXPECTATION ON 24-HOUR TIMELY ACCESS TO LIFE-SAVING INTERVENTIONS

With advances in medical technology, new life-saving interventions have emerged and which are capable of curing conditions such as stroke and heart attack when administered in a timely manner. Patients and the public generally have high expectation of HA to provide these time-critical, life-saving services to all indicated patients regardless of time of day. Currently, access to emergency procedures such as intra-arterial (IA) thrombectomy and emergency primary percutaneous coronary intervention (PCI) in HKEC are confined to restricted hours of service availability within HKEC hospitals.

With the decreasing projected population across the Hong Kong Island from 2017 onwards, the current and projected combined catchment populations of HKEC and HKWC of around one million is comparable to that of any individual cluster. As the caseload of the above mentioned emergency conditions are relatively small individually[21] and generally more complicated than elective cases by nature, collaboration between HKEC and HKWC should be explored to ensure sufficient case volume for sustaining clinical expertise which is crucial for service quality and safety.

TACKLING THE POTENTIAL SURGE DEMAND FOR RTSKH IN EMERGENCY SITUATIONS THROUGH INTER-HOSPITAL COLLABORATION

RTSKH is centrally located in Wan Chai district of Hong Kong Island and is the public acute hospital closest to many important landmarks, including the Hong Kong Jockey Club Happy

18. *Based on population estimates released by the Census & Statistics Department on 13-Feb-2018, and mid-2017 Distribution of Population by the District Council District provided by the Planning Department.*
19. *Based on "Hong Kong Population Projections 2017-2066" (baseline population projections) and "Projections of Population Distribution 2018-2026" published by the Census & Statistics Department and the Planning Department respectively.*
20. *Based on 2014-based population projections sourced from the Census & Statistics Department and the Planning Department.*
21. *For example, there were about 1 104 episodes of acute ischaemic stroke in HKEC in 2018/19, which was less than 10% of HA overall.*

Valley Racecourse, the Hong Kong Stadium, embassies, and the Central Government Office. As a result, ad-hoc events with large number of participants, such as gathering for horse racing, sports events, trade fairs and political demonstrations, are conducted within the hospital's vicinity on a frequent basis. It is acknowledged that this may result in RTSKH facing challenges from potential demand surge resulting from emergency situations arising at these ad-hoc major events.

Currently, patients requiring tertiary and quaternary services are transferred to PYNEH and Queen Mary Hospital (QMH), depending on service availability. To improve emergency preparedness, enhanced on-site clinical support in critical care and emergency surgical services would be required through further enhancement in cluster-based service organisation, especially in emergency situations when large number of casualties are anticipated. Contingency plans with cross-hospital and cross-specialty involvement should be available for deployment as required. Pooling of expertise under a cluster-based approach for services such as intensive care will potentially allow adequate surge capacity and support during these emergency situations. In addition, flexible deployment of manpower will be possible under a cluster-based approach.

CLOSING THE GAP IN ADOPTION OF CONTEMPORARY MODELS OF CARE ACROSS HOSPITALS / SPECIALTIES

While existing examples of ambulatory care model and peri-operative care model are observed in HKEC, there are gaps in the adoption of such models of care in other disease areas and across the cluster. For instance, one-stop multi-disciplinary day hospital model has predominantly been adopted in the GDHs at PYNEH and RTSKH, as well as the ambulatory rehabilitation centres at TWEH. These ambulatory care models should be extended to chronic disease and offered as management options for suitable acute patients at A&E. This will reduce reliance on inpatient service and serial referrals to SOPC services which could potentially induce service demands for SOPCs, fragmented care and prolongation of SOPC waiting time.

For peri-operative care, well-established model of pre-anaesthetic assessment services are currently available, predominantly at PYNEH and to a lesser extent at RTSKH. In spite of that, only a few structured peri-operative programmes for accelerating patients' post-operative recovery (such as Enhanced Recovery after Surgery (ERAS)) are in place. Structured peri-operative care service should be rolled out across the whole cluster with broader accessible indications.

Similarly, it was observed that while PC services are provided by PC specialists for cancer patients and selected non-cancer patients only. There are rooms for adoption of PC services as an integral part of the care continuum, including for non-cancer patients under the care of non-PC specialists.

REINVIGORATING THE PIONEERING SPIRIT TO ENCOURAGE THE CULTURE OF INNOVATION

The strong history of pioneering and innovation in HKEC in technology adoption, service and training development is well acknowledged. Examples included the piloting of PSCC, elderly-friendly wards, as well as the development of minimally invasive surgery. During the vertical specialty-based consultation, it was noted that such development had been slowing down in recent years. In order to reinvigorate the spirit of pioneering and innovation, the cluster needs to keep up the momentum in adoption of new models of care; exploration of new collaborations and engagement of new generations of clinical leaders.

IMPROVING THE OUTMODED HOSPITAL FACILITIES AND POOR ACCESSIBILITY

Limited space and outdated physical designs were noted across HKEC hospitals. Taking PYNEH as an example, dispersed acute care facilities (e.g. Intensive Care Unit (ICU), operating theatres) and day facilities in the hospital campus were observed. The existing hospital facilities are not organised in a zonal concept which facilitates patient flow and hospital operation. In many instances, the infrastructure of hospitals is no longer conducive to the efficient delivery of care. Limitations on accessibility by public transport to the hospital site are also noted. The development of Ambulatory Care Block at PYNEH in the Government's Second 10-year Hospital Development Plan will provide an opportunity to conduct an in-depth study of site development potential and accessibility for future hospital design improvement for a better fit with the service model change and technological advancement in healthcare.

SUMMARY

While the HKEC is facing many challenges from both the external and internal environments, there are also plenty of opportunities for transformation and innovation. Formulation of the CSP offers HKEC the opportunity to map out strategies to address challenges ahead, ultimately to achieve better experience of patients, staff and the community. The service model recommendation and strategies are set out in ensuing chapters.

STRATEGIC FRAMEWORK

Taking into account the key challenges faced by HKEC and building on its strengths and potentials, the HKEC CSP aims to set out strategies to ensure **equitable and timely access to high quality, patient-centred care** for the residents in the HKEC catchment districts. With this goal in mind, an overall framework was formulated to guide the development of service recommendations and clinical strategies in this CSP. The framework provides guidance to all stakeholders, especially for the CWGs. Outlined below are the four guiding principles that are identified as pivotal for the formulation of service recommendations and clinical strategies.

1. ACKNOWLEDGE AND STRENGTHEN THE CULTURE OF PIONEERING AND FLAGSHIP SERVICES OF HKEC

Since its inception, HKEC has built a strong history of pioneering and innovation in clinical service, technology adoption, and training. Examples included the piloting of community geriatric outreach service in 1993 which developed into the CGAS in HA; the piloting of the telephone nursing consultation service in 2003 which evolved into the HA PSCC at RTSKH, providing protocol-driven telephone support service to post-discharged, high-risk elderly patients and diabetic patients across the entire HA; the piloting of CRM training programme in 2009 which were subsequently rolled out to entire HA; and the piloting of the elderly-friendly ward design in acute geriatric ward in 2015. Such history is recognised as a distinctive strength of the cluster and earmarked for further development.

It is also important to acknowledge and embrace the commendable flagship services of the cluster so that future development could ride on the forte. For instance, HKEC has been recognised for its structured development in medical-social collaboration since 2000s, with established structure and platform to engage community partners in providing supports to patients and carers. The cluster-based radiology service in HKEC has the shortest waiting time for elective computed tomography (CT) imaging services with the highest throughput per CT machine across all clusters in HA consistently in recent three years from 2017/18 to 2019/20.

HKEC also houses the NCSTC, MASTC and AETC, which provide a high volume of training courses for HA staff. The HKEC CSP seeks to encourage further strengthening of HKEC's flagship services, as well as identify and nurture emerging clinical priorities for enhancement.

2. FOSTER MULTI-DISCIPLINARY COLLABORATION WITHIN CLUSTER, AND ACROSS CLUSTERS

Multi-disciplinary collaboration and coordination are essential to high quality patient-centred care. In order to address various needs of the patients, especially those with complex needs, expertise from different members of the multi-disciplinary teams of healthcare professionals are required. Some of the illustrative service areas are cancer services, PC services, and elderly services. Furthermore, to tackle the escalating service demand from the ageing population, collaboration between geriatricians and other specialties (such as emergency medicine, surgery, orthopaedics, gynaecology, psychiatry, family medicine, etc.) is of paramount importance to provision of high quality, efficient care.

Apart from intra-cluster collaboration within HKEC, inter-cluster collaboration between HKEC and HKWC is also explored where appropriate in this CSP. For some of the service areas, this can help enhance the service accessibility and capacity by pooling of expertise from different hospitals and clusters. Furthermore, cluster collaborations, both within and between clusters, can also facilitate staff rotation to upkeep staff training and exposure, especially in services with decreasing case volume (such as in the case of obstetric services and paediatric services). To achieve such collaboration, relevant stakeholders would participate in the planning to agree on the new collaborative service models and their respective roles in service delivery.

3. EMBRACE THE SERVICE PLANNING PRINCIPLE OF "LOCALISE WHERE POSSIBLE, CENTRALISE ONLY WHEN NECESSARY"

This service planning principle[22] has underpinned the development of all cluster CSP and aims to ensure appropriate and quality clinical services are accessible to population in all districts in the HKEC catchment. High-volume and low-complexity services should be provided locally for patients' convenience. Examples include most secondary care services for common conditions.

Services that require specialised clinical expertise and advanced technology, which are relatively low-volume, should be concentrated at accredited centres in the cluster to ensure service quality and safety by pooling of expertise. For highly specialised services, cross-cluster collaboration should be explored to ensure sufficient case volume for sustaining clinical expertise which is crucial for safe patient care. The location of centralised service provision should be planned with consideration for factors such as the geographical distribution of target patient groups, convenience of patients, availability of facilities with the required support, as well as availability of clinical expertise.

4. INTEGRATE SERVICES ACROSS CARE CONTINUUM FROM HOSPITAL TO COMMUNITY

To provide holistic care in meeting of various aspects of patients' needs, seamless and coordinated care between different care settings from hospital, ambulatory care, outpatient settings to the community is essential. Adopting a patient-centred approach, care is designed to enable smooth transitions between different care settings and levels of care to ensure appropriate care is provided at the most suitable setting. The development of medical-social collaboration, one of the flagships of HKEC, can facilitate patients' recovery in the community by leveraging on the support and resources from our community partners (such as non-government organisations (NGOs) and patient support groups).

22. This principle was introduced to Hong Kong by Sir Cyril Chantler in the context of the development of proposals for a Centre of Excellence in Paediatrics (which was subsequently named as the Hong Kong Children's Hospital).

CLINICAL SERVICE PROGRAMMES

In the consultation phase of the CSP, 12 multi-disciplinary and multi-specialty CWGs were formed to formulate clinical strategies and future models of care for respective clinical service areas in HKEC. Guided by the strategic framework detailed in the previous chapter, the recommendations from the CWGs aim to address the challenges facing the cluster. In particular, a CWG on Innovation in Healthcare was set up to reinvigorate the culture of pioneering and innovation in HKEC.

Apart from the staff of HKEC, staff from the HKWC were also involved in selected CWGs to explore new collaborative models across the two clusters for service enhancement.

The CWGs are listed below and the memberships of each CWG are listed in **Appendix 4**. The models of care and implementation enablers they recommended are outlined subsequently in this chapter.

1. Innovation in Healthcare
2. Medical-social Collaboration
3. Elderly Services
4. Women Services
5. Children Services
6. Neuroscience Services
7. Cardiac Services
8. Ambulatory Care Services
9. Palliative Care Services
10. Peri-operative Services
11. Surgical Services
12. Critical Care Services

INNOVATION IN HEALTHCARE

Co-chairs

Dr C W LAU	Service Director (Quality & Safety), Hong Kong East Cluster
Dr Natalie LEUNG	Director, Nethersole Clinical Simulation Training Centre & Associate Consultant (Intensive Care Unit), Pamela Youde Nethersole Eastern Hospital

According to the World Health Organisation, "innovation" refers to new or improved services and delivery methods, products and technologies, that improve people's health and wellbeing, respond to unmet public health needs, and improve efficiency, effectiveness, quality, sustainability, safety and/or affordability[23]. HKEC has had a tradition of innovation and training since the 1990s. The AETC was established at TSKH in 1994; the MASTC was pioneered and established at PYNEH in 1995; the CRM training programme was piloted at PYNEH in 2009; and the NCSTC was established at PYNEH in 2012. These facilities are still in operation today. The MASTC continues to service the healthcare education needs and delivers mandatory courses of the College of Surgeons of Hong Kong for higher trainees in general surgery. In 2019/20, NCSTC and AETC delivered 47% of a total of 225 classes of the HA-supported Hong Kong Academy of Medicine mandatory simulation training programmes and cross-specialty simulation training programmes. Over the same period, the NCSTC delivered 48% of a total of 89 classes of the corporate-funded CRM simulation training programmes. The CRM training programme has been rolled out to all clusters of the HA.

23. World Health Organisation. Innovation. Available at: https://www.who.int/topics/innovation/en/

HKEC is also the innovator and pilot site of many new clinical models. To cite a few, as early as in 1999, the Unique Patient Identification system using one-dimensional barcode technology was developed by HKEC to improve blood transfusion safety. The same strategy was adopted by the HA with the launch of two-dimensional barcode technology which has been operational since 2007. A telephone nursing consultation service was piloted in HKEC in 2003, which evolved into the first Community Health Call Centre at TSKH in 2009. The centre was named the PSCC in 2011 with its service rolled out to all clusters in HA. An innovative Endo-Lap Operating Theatre was opened at PYNEH in 2005, which is an important milestone, shedding light to the design of future operating theatre. PYNEH is also the first hospital in Hong Kong to introduce Visual Art in Clinical Oncology in 2000, in line with the Hospital's mission of holistic patient care.

RECOMMENDATIONS

The ultimate aim of innovation in healthcare is to enhance service quality and safety, by improving the efficiency and effectiveness in the delivery of care and better use of manpower resources. Since the pace of innovation is rapid, revolutionary changes in the existing models of idea generation and approval process are required to strengthen and maintain the innovative and training culture in HKEC. Such culture should not be limited within the specific sites, rather, it should be promoted to every level in the cluster. To achieve this, the establishment of a cluster committee in healthcare innovation in HKEC is recommended. The Committee is to have broad representation across clinical, administrative and technical departments in the cluster. It will play an advisory and facilitating role in innovation and training. The aim is to extend channels to gather ideas of innovation and training needs from all levels of staff, and provide advice and facilitation for the subsequent approval process towards ultimate implementation.

Potential innovation and training projects for further exploration include autonomous mobile robots for heavy and bulk transport, nursing informatics, telemedicine, automation in pharmacy and laboratory, and utilisation of virtual reality in simulation training. To better harness new ideas for innovation and coordinate training activities, a new integrated centre for healthcare innovation in HKEC is recommended.

IMPLEMENTATION ENABLERS

Information Technology and Hardware Enhancement

To match the growth in demand, the capacity for accommodation of information technology equipment needs to be enhanced to support the cluster's service development. Infrastructure improvements with optical fibre network installation to improve connectivity is necessary to provide interconnected assets, Internet-of-Things solutions, optimisation and automation, low latency for real time control, greater bandwidth, higher connection density and more extensibility.

MEDICAL-SOCIAL COLLABORATION

Co-chairs

Dr Carolyn KNG	Service Director (Primary & Community Health Care), Hong Kong East Cluster / Consultant (Medicine & Geriatrics) / Head of Division, Geriatrics, Ruttonjee & Tang Shiu Kin Hospitals
Dr Wendy WONG	Associate Consultant (Paediatrics & Adolescent Medicine), Pamela Youde Nethersole Eastern Hospital

Medical-social collaboration aims to deliver healthcare and social care services via an inclusive and coordinated approach which places patients at the heart of services, across the care continuum from hospital into the community. The aim is to achieve better patient outcome and experience, sustainable maintenance of health, reduce service gaps and avoid duplication of services between the medical and social sectors. The target is broad, with a wide range of patients who could benefit from such cross-sectoral collaboration, examples of which include elderly patients, paediatric patients, patients with chronic illness, mental illness, and patients under palliative care. As an illustrative example, **Figure 4** illustrates the medical care and social care that could be offered under medical-social collaboration in end-of-life (EOL) care for an elderly with advanced dementia.

HKEC has started developing various medical-social collaborations since mid-2000s and is one of the pioneering clusters in the area. Leveraging on the experience accumulated, the structure and process established in the cluster for medical-social collaboration, the models of care recommended for further enhancement are as presented below. They embody the spirit of this flagship service of HKEC, the readiness to innovate and walk an extra step for improved patient care.

Figure 4. Illustrative Example of Medical-social Collaboration in EOL Care for Elderly with Advanced Dementia

RECOMMENDED MODEL OF CARE

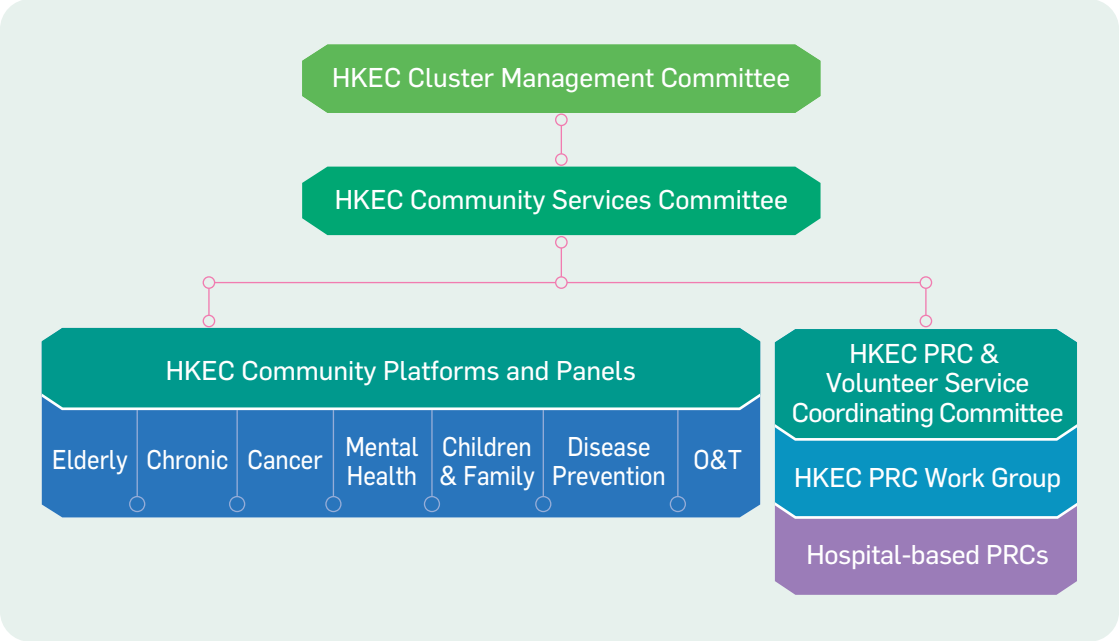
Established Structure for Medical-social Collaboration in HKEC

In HKEC, medical-social collaboration is overseen by HKEC Community Services Committee, which is chaired by the Service Director (Primary & Community Health Care) of HKEC. The Committee has oversight of the HKEC Community Platforms and the Patient Resource Centres (PRCs). A designated Cluster Coordinator of the HKEC Community Platforms ensures synergistic and coordinated services are provided for the patients through the cluster-based Platforms and the hospital-based PRCs (**Figure 5**).

1. **The cluster-based Platforms** are established to build and cement the collaborative care mindset and culture among all the key stakeholders across the medical and social sectors. This is achieved through agreements on role delineation, establishing protocols and mechanisms for patient triage, shared care, service evaluation and improvement. To achieve these objectives, membership of the Platform is multi-disciplinary, cross-sector, and consists of lead clinicians (e.g. geriatricians, psycho-geriatricians, family medicine and orthopaedic specialists for the Elderly Platform), PRCs staff, allied health professionals, community nursing staff and relevant social service providers in respective service areas. Representatives from different hospitals of HKEC are also included to ensure collaborative care is provided to patients across the cluster. **Figure 5** illustrates the seven Platforms established in HKEC to support different patient streams.

2. **The hospital-based PRCs** are the local contact point between hospitals and the community. Their key functions are to empower patients and carers, facilitate patient support through peer groups, develop and coordinate volunteer services, and engage community partners, the main component of which is medical-social collaboration.

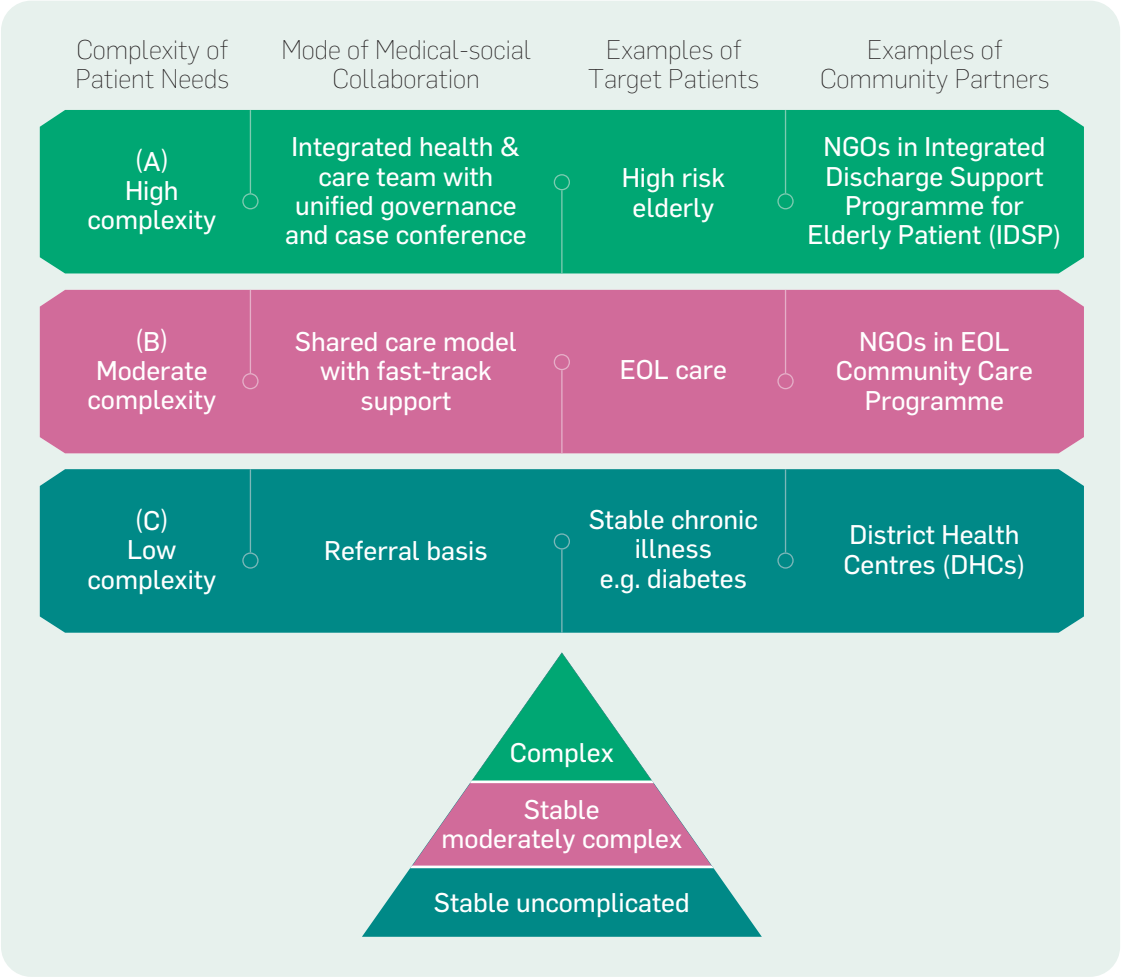
Figure 5. Cluster-based Governance of Platforms and PRCs



Service Development Scope of Medical-social Collaboration in HKEC

Different modes of medical-social collaboration with a continuum of collaboration intensity between stakeholders are designed to meet the different needs of patients along the complexity spectrum of care (**Figure 6**).

Figure 6. Different Modes of Medical-social Collaboration Based on Complexity of Patient Needs



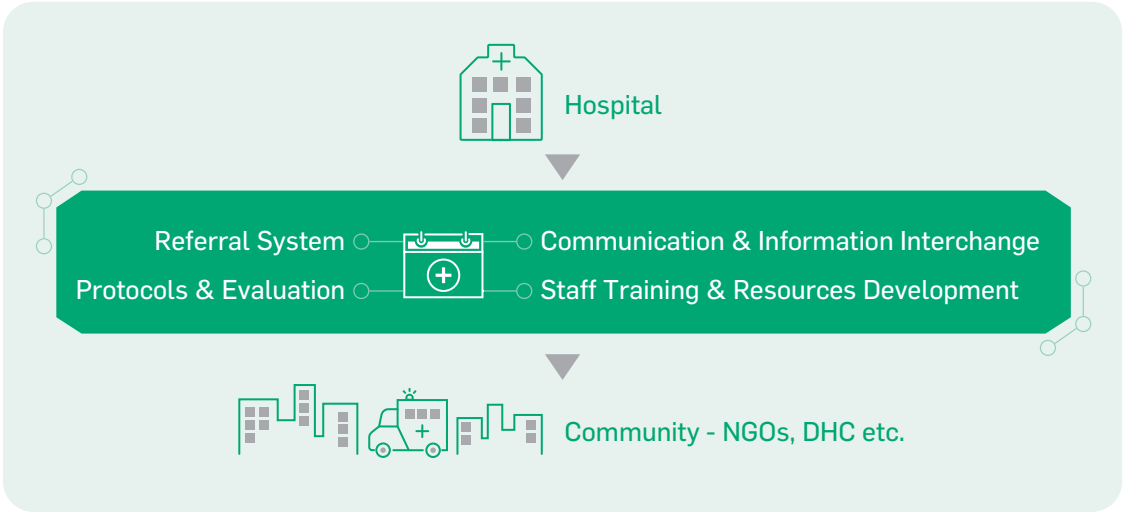
Recommended development of medical-social collaboration in HKEC focuses on stable patients with low to moderate complexity of needs as detailed in (B) and (C) of **Figure 6**. The Platforms and PRCs structure enhances communication between clinicians of HKEC and community partners to develop collaborative service arrangements.

Collaboration programmes for patients with high needs complexity may require higher level of steering and coordination beyond the cluster level. Examples include the IDSP for high-risk elderly patients or those with separate established governance such as the HA PSCC. Nevertheless, close collaboration with these service teams are in place to ensure seamless coordination and operations.

Process of Medical-social Collaboration

The process of medical-social collaboration is illustrated in **Figure 7.** Patient and carer empowerment is the key to achieving patient-centred care. Communication and information exchange, including sharing of patient information is essential for coordinated collaborative care between medical and social care providers. However, this is carefully balanced against respecting patient privacy and observance of the need-to-know principle by requiring informed consent by patients for such exchanges. Teamwork between the two sectors is built by close communication and collaboration in co-designing the care processes to meet patients' needs. Shared protocols with clear role delineation are crucial to harness the strengths of both sectors, minimise the service gaps, and avoid duplication of services as far as practicable.

Figure 7. Process of Medical-social Collaboration



IMPLEMENTATION ENABLERS

Engagement of Key Stakeholders

Among the enablers identified, executive support from management on the medical-social collaboration is crucial for a sustainable service development. Another key enabler is good, collaborative working relationships between community and clinical partners. Strong links between PRCs with community partners and clinical leaders are also pivotal for the collaboration. Patients and carers engagement is also important as their feedback as users provide valuable inputs for service improvement and enhancement. This may be garnered from patient advocates, such as patient groups.

Staff Training

Updated training and development for PRCs and clinical staff in new developments in medical-social collaborative care can catalyse a collective vision for change.

Technology Enhancement

Adoption of technology enhancement, such as hand-held devices, apps and establishment of electronic information sharing platform can facilitate information sharing between medical and social sectors. This could enhance direct and coordinated patient care by improving communication between service providers.

Facility Design

PRCs, where possible, should be located in hospitals with patient friendly access. This should be taken into consideration when new hospitals are planned and will also serve to promote patient-centredness as the new facade of hospitals.

ELDERLY SERVICES

Co-chairs

Dr Jonathan CHAN	Deputy Service Director (Quality & Safety), Hong Kong East Cluster / Associate Consultant (Medicine), Pamela Youde Nethersole Eastern Hospital
Dr Selina CHAN	Associate Consultant (Medicine & Geriatrics), Ruttonjee & Tang Shiu Kin Hospitals

According to the population projection, HKEC is projected to continue as the lead cluster with the highest proportion of elderly population (aged 65 and above) in its catchment districts, increasing from 17% in 2017[24] to 35% in 2036[25]. To meet the service demand from a rapidly ageing population, elderly services in HKEC will be strengthened with the vision of providing timely access to high quality, patient-centred care to elderly patients across different specialties through enhanced intra-cluster collaborations. To achieve this, the CWG recommends a shared care approach between geriatric teams and parent teams[26], extension of geriatric support to SJH, enhancement of the GDHs as the service hub for relevant cross-specialty collaborations, as well as strengthening of medical-social collaboration. The service coordination and governance at cluster level will be reinforced by establishment of the cluster elderly services coordinating committee.

In parallel, there are other ongoing service developments within HA with common objectives. For instance, there are enhancements of the geriatric support at the A&E department, ortho-geriatric collaboration for patients with hip fracture, as well as relevant post-discharge support for high-risk elderly patients, including the Integrated Care Model (ICM), the CGAS, and the HA PSCC which is located at RTSKH. Representatives from these service developments are engaged as key stakeholders in this clinical service planning process to ensure coordinated service development.

24. Based on population estimates released by the Census & Statistics Department on 13-Feb-2018, and mid-2017 Distribution of Population by the District Council District provided by the Planning Department.

25. Based on 2014-based population projections sourced from the Census & Statistics Department and the Planning Department.

26. Non-geriatric teams of other partnering specialties.

RECOMMENDED MODEL OF CARE

Shared Care Approach between Geriatric Teams and Parent Teams

To meet the escalating service demands of elderly care in different specialties including medicine, orthopaedics, surgery, gynaecology and clinical oncology, the recommended care model is based on a shared care approach with agreed inter-specialty, inter-disciplinary protocols between the parent teams and the geriatric teams. The parent teams in different specialties and care settings will be equipped with basic knowledge and skills in geriatric assessment and care. Essential, basic geriatric care could be delivered by the parent teams in accordance with agreed protocols. Link nurses from the parent teams will act as a contact point with the geriatric teams to facilitate the care coordination. The link nurses, in partnership with geriatric nurses, will expedite the identification of at-risk elderly patients and coordinate the necessary multi-disciplinary care, including early discharge planning, support in community and communication with carers in accordance with agreed protocols. For elderly patients with more complex conditions, members of the geriatric teams (e.g. geriatric nurse specialist) will provide direct inputs to patient care. Geriatrician-led care with evidence-based intervention (including focused multi-disciplinary geriatric assessment) will be provided for the most complex, frail, elderly patients with multiple co-morbidities, who will be cared for by skilled multi-disciplinary staff in care environment and with care processes which are elderly-friendly. This tiered approach to care provision will be delivered in accordance with agreed protocols.

Extension of Geriatric Support to SJH

Currently, support from geriatric teams is available in all HKEC hospitals except SJH which services Cheung Chau. A significant proportion of the population in Cheung Chau are elderly, with approximately 23% of the residents recorded as aged 65 or above in 2016[27]. Frail elderly patients with difficulty in travelling to the Hong Kong Island will benefit from the extension of geriatric support to SJH via a shared care model supported by tele-medicine. The parent team at SJH will conduct the geriatric assessment and deliver care as per protocols. Support from the geriatric team, via the geriatric nurses, will be accessible through tele-consultation. Regular tele-case conference led by geriatricians for care planning for cases with selected indications will be conducted. Case selection and care delivery by parent teams will be in accordance with agreed protocols developed as a collaborative effort with geriatric input.

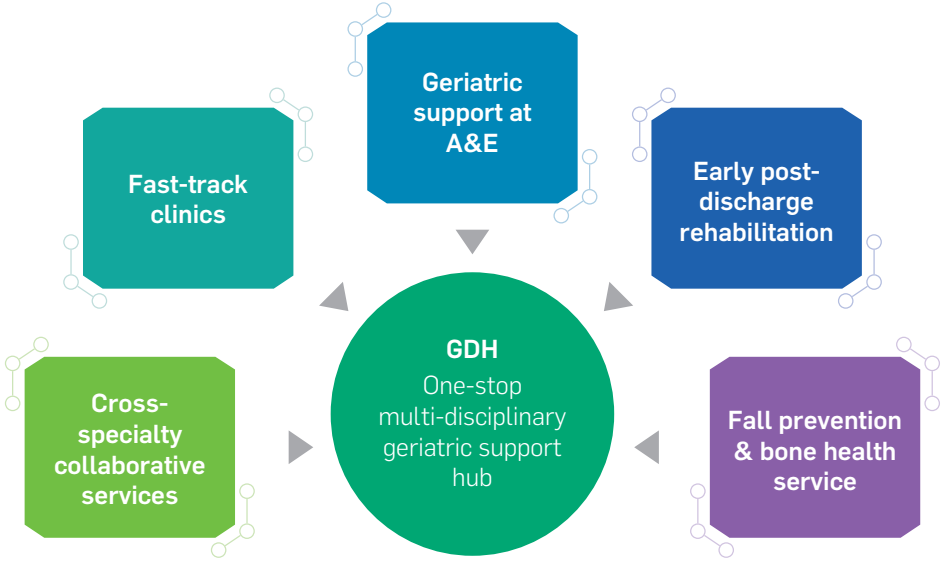
Enhancement of the GDH as Service Hub for Cross-specialty Collaborations

GDH has been providing integrated, multi-disciplinary ambulatory assessment, treatment and rehabilitation services for elderly patients with multi-morbidity and cognitive or physical frailty (e.g. patients with fall, dementia or incontinence). Fast-track clinic is also provided at the GDH to selected groups of elderly patients (e.g. those under the day rehabilitation services or ICM) for fast-track access to geriatric support and minimise unnecessary A&E attendance and admission.

Leveraging on the current GDH service model, its access to multi-disciplinary support and fast-track clinics, GDH can be further enhanced to serve as a key interface, a one-stop, ambulatory hub for supporting relevant collaborative services with the common objective of avoiding unnecessary admissions and supporting early discharges (**Figure 8**). For instance, to support the proposed urology-gynaecology-geriatric collaborative service model for elderly patients with urinary incontinence, acute urinary retention, or genital prolapse in community and ambulatory settings, GDH will be the one-stop service hub where multi-disciplinary care for complicated incontinence patients and fast-track clinic for referral from CGAS or Community Nursing Service (CNS) can be provided. Similarly, multi-disciplinary fall prevention and bone health service can be supported by the GDH for the ortho-geriatric collaboration. Fast-track clinic and rehabilitation services will be explored to support diversion from A&E to reduce admissions and re-attendances.

27. 2016 Population By-census. District Profiles. Available at: https://www.bycensus2016.gov.hk/en/bc-dp.html

Figure 8. GDH as a One-stop Ambulatory Service Hub for Cross-specialty Collaborations



Strengthening of Medical-social Collaboration

In accordance with the recommendations of the CWG on Medical-social Collaboration, collaboration with relevant community partners, including the Residential Care Homes for the Elderly (RCHEs), NGOs, and DHCs, will be strengthened.

IMPLEMENTATION ENABLERS

Setting up of the Elderly Services Coordinating Committee in HKEC

With the wide spectrum of elderly services in HKEC, which involves stakeholders across different disciplines, specialties, and care settings from hospital to community, the establishment of the elderly services coordinating committee in HKEC is essential to provide oversight and guidance to the elderly service development and related trainings in the cluster. It will coordinate cross-specialty and cross-hospital service collaborations to facilitate timely access to the required care across the cluster and integrate elderly services from hospital to community.

Manpower and Training

Structured training programmes will be provided to staff from specialties and disciplines involved in the care of elderly patients. The training will provide knowledge and skills required to deliver comprehensive elderly assessment and care, as well as identification of at-risk elderly patients who would require timely input from geriatric teams. Geriatric teams, especially the nurse consultants and nurse specialists, will play a key role in the planning and provision of training.

Development of Clinical Protocols

Clinical protocols and care pathways play an essential role in multi-disciplinary care and shared care models as they enable care plan integration with clear role delineation. For the collaborative services with relevant specialties and disciplines, elderly-friendly practices can be aligned across the cluster with tailor-made measures to cater for the needs of individual specialty or care setting. Overall, the elderly-friendly holistic care should focus on the comprehensive assessment of patients' needs, proactive multi-disciplinary input, as well as engagement of patients and their family.

Hardware Enhancement

Elderly-friendly facility design and equipment can help avoid hospital-induced functional loss and cognitive decline. Modernisation of GDH design and rehabilitation equipment fitting its service model and patients' needs will improve the overall service delivery.

Information Technology Enhancement

Information technology support can improve efficiency, accuracy and safety in information transfer and communication between disciplines, specialties, and care settings involved in elderly care, from hospital to the community. For example, the use of portable electronic devices with access to patients' data in the Clinical Management System can facilitate the clinical work of CGAS and CNS in the community setting. System enhancements to enable the uploading of clinical photos and recordings will support the development of tele-medicine. For PSCC, system enhancement to support video call may be explored to improve patient experience and communication with patients.

WOMEN SERVICES

Co-chairs

Dr K K TANG	Chief of Service (Obstetrics & Gynaecology), Pamela Youde Nethersole Eastern Hospital
Prof Ernest NG	Chief of Service (Obstetrics & Gynaecology), Queen Mary Hospital

The obstetrics & gynaecology (O&G) department of PYNEH has been providing various O&G services for the women population in the catchment districts of HKEC. Apart from being one of the specialist training centres, it is also an accredited subspecialty training centre in maternal fetal medicine (MFM) under the Hong Kong College of Obstetricians and Gynaecologists. There is also a strong tradition in the collaboration with the O&G department of QMH in the HKWC in terms of clinical services as well as specialist and subspecialist training. The O&G department of QMH is a tertiary referral centre which provides a full range of subspecialty services and accredited training including urogynaecology, gynaecological oncology, reproductive medicine and MFM.

Hong Kong is facing the challenge of an ageing population. This is expected to be more prominent in HKEC. By 2036, approximately one third of the population in the catchment districts of HKEC is expected to be aged 65 or above[28]. To address the service needs of the ageing population, enhancement of urogynaecology service and gynaecological oncology service should be emphasised as utilisation in these disciplines increases with age. On the other hand, a drastic drop is noted in the number of deliveries conducted in HKEC from 4 169 in 2012 to 2 673 in 2013 after the adoption of "zero quota" policy for non-local pregnant women[29]. The annual number of deliveries in HKEC has remained below 3 000 since then, with a downward trend reaching 2 392 in 2019. Such trend is projected to continue in parallel to the shrinkage of the population of reproductive age group.

RECOMMENDED MODEL OF CARE

Through strengthening of intra-cluster and cross-cluster collaborations in different aspects of O&G services, the CWG aims to ensure service needs of different age cohorts of the female population are met with adequate staff exposure and training maintained for service quality and sustainability.

28. Based on 2014-based population projections sourced from the Census & Statistics Department and the Planning Department.

29. Legislative Council House Committee, Subcommittee to Study Issues Relating to Mainland-HKSAR Families. (2016). Paper No. CB(2)1622/15-16(01): Policies and Measures Adopted by the Administration regarding the Use of Subsidised Obstetric Services by Mainland-HKSAR Families.

Cross-cluster Development of Nurse-led Urogynaecology Service

To meet the current and anticipated service demands in urogynaecology service for conditions such as pelvic organ prolapse and urinary incontinence in both clusters, the CWG recommends joint development of protocol-driven, nurse-led urogynaecology service to improve service accessibility and sustainability. Supported by the clinical leadership from urogynaecologists, training and care protocols, nurses will be empowered to provide early assessment, triage and patient education on life-style modification as first-line management. Collaboration with physiotherapists on the patient education of pelvic floor exercises will be strengthened. Case conference between both clusters will be conducted for case discussions.

Intra-cluster Collaboration with Geriatric Team for Urogynaecology Elderly Patients

As mentioned in the recommendations by the CWG on Elderly Services, there will be collaborations between the geriatricians, urogynaecologists and urologists in HKEC to provide a one-stop, multi-disciplinary service at the GDH for selected suitable patients. The collaboration provides an opportunity for skill transfer to Community Geriatric Assessment Team (CGAT) and CNS nurses to perform ring pessary replacement for stable patients at their place of residence, which will greatly improve patient convenience.

Cross-cluster Collaboration in Gynaecological Oncology

The standard of care for gynaecology cancer patients should be led by gynaecological oncologists. Collaboration with HKWC for the management of gynaecological cancer patients will be strengthened. This is especially so for uncommon and complex conditions and provides opportunity to strengthen training in these areas. Regular joint case conference will be conducted for case discussions and operations jointly performed by HKEC and HKWC gynaecologists will be arranged for patients who require expertise from both clusters. This is also in accordance with the strategic directions outlined in the HA Strategic Service Framework for Cancer Services, where multi-disciplinary care approach is recommended for gynaecological oncology service to provide timely diagnosis and treatment, as well as comprehensive survivorship care and PC.

Combined Functional Unit for Assisted Reproductive Service

Whilst tertiary reproductive medicine service and subspecialty training are provided in HKWC, establishment of a combined functional unit for assisted reproductive service between HKEC and HKWC is proposed to improve service accessibility. Common care protocols will be developed for shared care of patients with less complex conditions. Staff rotation and attachment to HKWC will be continued for training and exposure.

Cross-cluster Collaboration to Enhance Obstetric Service

To address the gap in pre-pregnancy counselling service in HKEC for women with co-morbidities or couples with known genetic or genomic diseases who are contemplating pregnancy, referral mechanism to the pre-pregnancy counselling clinic at QMH will be developed and promulgated to relevant specialties to facilitate patients' access to the required service. Subject to the review of case volume, development of joint clinic between HKEC and HKWC may be considered. Trainees of HKEC will be exposed to the service during rotation.

For pregnant patients with co-morbidities, those with complex conditions or unsatisfactory disease control will require multi-disciplinary specialised care and referral to tertiary care will be made as indicated in accordance with agreed triage protocols. For those with common co-morbidities and with satisfactory control or remission, multi-disciplinary care protocols will be developed to improve patient care, including patient education and counselling to ensure compliance to the treatment and monitoring required.

Training Strategies to Address the Challenge of Decreasing Number of Deliveries

Whilst the issue of decreasing number of deliveries and its impact on training will be deliberated at both the HA Coordinating Committee in O&G and the Hong Kong College of Obstetricians and Gynaecologists, simulation training and rotation of trainees to units with higher delivery rate when indicated are recommended by the CWG. Apart from simulation training for the doctors, midwives and nurses within the O&G department, multi-disciplinary simulation training involving related specialties such as A&E and anaesthesiology will facilitate cross-specialty collaboration in emergency clinical settings. Reciprocally, simulation training at HKEC will also be made available for the staff of QMH O&G department.

IMPLEMENTATION ENABLERS

Manpower and Training

Staff training for the multi-disciplinary team members involved in the recommended care models is required for improvement in the women services, including O&G doctors, midwives, nurses, CGAT, CNS nurses, as well as allied health professionals. To ensure adequate staff exposure and training, collaboration with units with higher case volume and opportunities for staff rotation should be explored. Simulation training is also a useful modality to provide multi-disciplinary training for the management of clinical emergencies. Train-the-trainer would be essential to equip more trainers from related specialties the skills to utilise this training modality.

Development of Protocols and Referral Guidelines

To facilitate the recommended intra-cluster and inter-cluster service collaborations, common protocols and referral guidelines will be developed between the stakeholders involved. For instance, this includes peri-operative care protocols including ERAS programme, as well as gynaecological cancer case manager and urogynaecology nurse-led service.

CHILDREN SERVICES

Co-chairs

Dr K P LEE	Consultant (Paediatrics & Adolescent Medicine), Pamela Youde Nethersole Eastern Hospital
Dr S L LEE	Deputy Hospital Chief Executive, The Duchess of Kent Children's Hospital at Sandy Bay / Chief of Service (Paediatrics & Adolescent Medicine), Queen Mary Hospital / Consultant (Paediatrics & Adolescent Medicine), The Duchess of Kent Children's Hospital at Sandy Bay

The paediatrics department of PYNEH has been providing medical services to the children in HKEC. A range of subspecialty services, including neonatology, and paediatric intensive care, are also provided. There are existing service collaborations between HKEC and HKWC for tertiary children services. For instance, children in HKEC are referred to QMH of HKWC under existing service networking arrangements if they require paediatric subspecialty services, such as paediatric immunology service; or subspecialty services of other specialties, such as paediatric cardiac surgery service, paediatric surgery service, and child and adolescent (C&A) psychiatry service.

As elaborated in the chapter of **Key Challenges**, the children population in the catchment districts of HKEC will decrease by 1% between 2017[30] and 2026[31], followed by a further decrease of 33% between 2026[31] and 2036[32]. A decrease in children population is also observed in the catchment districts of HKWC and the overall Hong Kong population between 2026[31] and 2036[32]. Whilst such demographic change will impact on the demand of children services, a transformation in the overall model of children services is envisioned along with the service commencement of the Hong Kong Children's Hospital (HKCH) under a hub-and-spoke model. HKCH serves as the hub, a tertiary referral centre for complex, serious and uncommon conditions; while secondary, emergency and community paediatric care are provided by local paediatric departments.

30. *Based on population estimates released by the Census & Statistics Department on 13-Feb-2018, and mid-2017 Distribution of Population by the District Council District provided by the Planning Department.*
31. *Based on "Hong Kong Population Projections 2017-2066" (baseline population projections) and "Projections of Population Distribution 2018-2026" published by the Census & Statistics Department and the Planning Department respectively.*
32. *Based on 2014-based population projections sourced from the Census & Statistics Department and the Planning Department.*

RECOMMENDED MODEL OF CARE

The CWG recommends a re-organisation of children services in an integrated and coordinated manner, adopting a multi-disciplinary approach through collaboration within HKEC, across clusters with HKCH and HKWC, and beyond hospitals to the community.

Collaboration with HKCH

Since the service commissioning of HKCH in December 2018, some tertiary paediatric services have already been concentrated in HKCH. For instance, all paediatric oncology patients on Hong Kong Island are referred to HKCH instead of QMH. Working closely with the centralised paediatric PC Team in HKCH, designated care team at local cluster level will be trained to provide a continuum of comprehensive PC services from hospitals to community under a single clinical governance. Subject to the ongoing service development of HKCH, there will be growing collaboration between HKCH and the paediatric department of HKEC in terms of service delivery as well as staff rotation and training.

Collaboration between HKEC and HKWC

Whilst there is ongoing service re-organisation and development with HKCH, service referral or shared care for various subspecialty services will be strengthened between HKEC and HKWC to address the service needs. For instance, the collaborative mechanism of cross-cluster support between HKEC and HKWC when capacity of paediatric and neonatal intensive care unit (P/NICU) is under stress will be enhanced to improve patient care quality and safety in P/NICU. Protocols for the support mechanism, communication and workflow, as well as patient transfer will be further deliberated. To streamline the patient journey of critical patients, children presented to the A&E department of the RTSKH requiring surgical input and P/NICU support will be diverted directly to QMH for timely access to the required subspecialty services, as an interim measure before the concerned services are further concentrated at HKCH. Staff training and rotation will be coordinated among PYNEH, QMH and HKCH to optimise training exposure. Alignment of treatment protocol will also be further deliberated.

Strengthening Ambulatory Care Services and Secondary Care in HKEC

Embracing the contemporary model of ambulatory care, ambulatory care services should be strengthened to cater for the specific needs of children to improve patient and family experience. The emergency and secondary care services will be refocused as the core paediatric services of HKEC, as one of the spokes in the overall HA paediatric service network.

The CWG recommends an integrated, multi-disciplinary, one-stop service model for the ambulatory care services. Apart from the existing elective ambulatory services, such as the day procedures and the multi-disciplinary adolescent consultations, diversion from the A&E department to the ambulatory care setting (e.g. fast-track clinic during demand surges) will be planned in accordance with agreed protocols with the paediatric department to provide timely assessment and management without unnecessary hospitalisation. This is in line with the recommendations by the CWG on Ambulatory Care Services.

Development in service areas that are high volume and with mild to moderate complexity, such as asthma, eczema, obesity, will be refocused in HKEC. Structured multi-disciplinary care programmes for various childhood conditions and chronic diseases, including patient and family counselling, education, and empowerment will be strengthened, to improve treatment compliance, disease control and quality of life.

Establishment of Cross-specialty Multi-disciplinary C&A Psychiatry Service

A one-stop, comprehensive, multi-disciplinary C&A psychiatry service will be established in HKEC with collaboration between the paediatric department and the psychiatric department of PYNEH. This will be done in collaboration with allied health disciplines including clinical psychology, occupational therapy, speech therapy and physiotherapy. Taking the management of attention deficit hyperactivity disorder (ADHD) as an illustrative example, a common triage platform and protocol will be set up between the two specialties, such that less complex ADHD patients will be managed by paediatricians and more complex ADHD patients will be managed by psychiatrists. There will be joint case conference for case discussions and common protocol for step-up or down care between both specialties.

Collaboration with Community Partners

Collaboration with community partners, such as NGOs and patient groups, will be strengthened, leveraging on the flagship of HKEC in medical-social collaboration with the concept of "hospital without walls". Referral platform facilitating patients and their family to access their required community services will be enhanced in collaboration with the PRCs in HKEC.

IMPLEMENTATION ENABLERS

Manpower and Training

Anticipating a wave of increase in staff retirement in the coming few years, staff training and succession planning is eminently needed. Staff recruitment and training for the multi-disciplinary team to support the establishment of C&A psychiatry service will be required.

Facility and Information Technology Enhancement

Children and family-friendly design elements should be incorporated in facilities planned for children services. Purpose-built facilities for ambulatory care services will facilitate the implementation of the recommended care model. Enhancement in information technology support will facilitate service collaboration across specialties, disciplines, hospitals and clusters.

NEUROSCIENCE SERVICES

Co-chairs

Dr Michael LEE	Consultant (Neurosurgery), Pamela Youde Nethersole Eastern Hospital
Prof Gilberto LEUNG	Honorary Consultant (Surgery), Queen Mary Hospital

Neuroscience services cover the whole patient journey across the care continuum for a wide spectrum of conditions, from acute conditions such as acute stroke, to malignancies and degenerative diseases. With the ageing population in the catchment districts of HKEC, there would be rising service demand in neurovascular diseases (including acute stroke), and neurodegenerative diseases (including tremor and Parkinson's disease). Whilst HKEC offers 24-hour intravenous thrombolytic service for acute stroke, service gaps are identified in other service areas, such as access to IA thrombectomy service for indicated patients during off hours. Acknowledging the relatively low case volume and high complexity nature of some of the conditions and procedures, the CWG, with members from HKEC and HKWC, explored areas for service collaboration to improve service accessibility, to provide patients with timely and equal access to international standard care.

Overall, the CWG recommends that multi-disciplinary patient-centred care at the right time and right place by the right provider should be readily accessible in close vicinity to the patients. Through service networking or collaborative team approach, no patient should be deprived of the neuroscience services required.

RECOMMENDED MODEL OF CARE

Cross-cluster Collaboration on 24-hour IA Thrombectomy Service

In 2018/19, there were 1 104 and 786 acute ischaemic stroke episodes in HKEC and HKWC respectively, among which, 39 (3.5%) and 45 (5.7%) IA thrombectomy were performed respectively. It was estimated that about 13% of acute ischaemic stroke patients in the Hong Kong population suffered from large vessel occlusion, and might be potentially eligible for IA thrombectomy[33]. The HKEC and HKWC IA thrombectomy figures, together with the HA overall figure (1.8%), are significantly less in comparison, suggestive of possible room for increase in service provision.

The CWG recommends provision of round-the-clock IA thrombectomy service to all eligible patients in the catchment areas of HKEC and HKWC in a timely manner with equitable access right. Currently, IA thrombectomy service is available at PYNEH for patients in HKEC from 8am to 6pm on weekdays, to be extended to 8pm by 2021. With the availability of 24-hour IA thrombectomy service at QMH of HKWC in the second quarter of 2020, patients in HKEC requiring IA thrombectomy service after office hours will be transferred to QMH by secondary diversion. Referral guidelines and workflow will be developed to streamline the patient referral and transfer process across hospitals and clusters to ensure timely patient management. Common care protocols will be set up to improve patient care and outcomes. Regular clinical audits on the performance of these service collaborations, including but not limited to the diversion and referral mechanism, will be used to inform further service improvement and planning. Subject to the service evaluation and caseload, the proposed provision of 24-hour 7-day IA thrombectomy service at PYNEH will be reviewed and deliberated.

33. Tsang, A. C. O. et al. (2020). Burden of large vessel occlusion stroke and the service gap of thrombectomy: A population-based study using a territory-wide public hospital system registry. International Journal of Stroke; 15(1): 69–74.

Multi-disciplinary Team Approach for Functional Neurosurgical Diseases

A multi-disciplinary team comprising neurologists, neurosurgeons, nurses, clinical psychologists, psychiatrists, physiotherapists, occupational therapists and speech therapists should be set up to ensure a collaborative and comprehensive service is provided for patients with functional neurosurgical diseases (such as surgery for movement disorders, epilepsy and intractable pain). One-stop, patient-centred care should be provided to improve the care quality and patient experience. Cross-cluster collaborative approach between HKEC and HKWC will facilitate the upholding of service quality by concentration of expertise and training exposure. New technologies for improved patient care will be introduced through prevailing mechanisms in HA.

Multi-disciplinary Neuro-rehabilitation Service

The demand on neuro-rehabilitation service is increasing with the growing proportion of elderly population in HKEC. There is a need to enhance the evidence-based clinical pathways with multi-disciplinary and cross-specialty inputs to facilitate efficient rehabilitation, safe patient discharge, and patient reintegration into the community. Multi-disciplinary, ambulatory, neuro-rehabilitation service and maintenance rehabilitation in community settings will be strengthened. Collaboration with community partners will be reinforced through medical-social collaboration. For suitable patients determined according to agreed protocols, cross-cluster consultation and collaboration, particularly with MacLehose Medical Rehabilitation Centre of HKWC, will be optimised to facilitate patient access to specific neuro-rehabilitation service, such as spinal cord injury rehabilitation.

IMPLEMENTATION ENABLERS

Development of Common Protocols

Development of common referral guidelines and care protocols with inputs from all stakeholders involved is essential for cross-specialty, multi-disciplinary care across hospitals and clusters. This is especially important for the patient diversion and transfer for IA thrombectomy service in emergency settings. For the multi-disciplinary, peri-operative care of neurosurgical patients, protocols for pre-operative assessment and optimisation, as well as the post-operative care and rehabilitation as recommended by the CWG on Peri-operative Services will be developed with involvement of all stakeholders concerned. Clinical protocols will be developed for suitable neuroscience services to be offered in ambulatory care setting, such as day procedures, to avoid unnecessary hospitalisations.

Manpower and Training

Training and education should be provided to medical, nursing and allied health staff to enhance service quality and sustainability. Cross-cluster collaboration on training will enhance staff exposure and facilitate service collaboration.

Technology Enhancement

Embracing the rapid advancement in medical technology, introduction of new technology for neuroscience services will follow the prevailing mechanism in HA. For advance technology or high complexity services, such as intra-operative Magnetic Resonance Imaging and specialised genetics and genomics services, collaboration with the designated centres in HA will be implemented to enable access to the required services for indicated patients.

Facility Enhancement

When opportunity of hospital redevelopment arises, zoning of cross-specialty facilities for neuroscience service into dedicated functional areas will facilitate the multi-disciplinary model of care and a smoother patient flow which enables increased efficiency, timeliness of diagnosis and care delivery. The zonal concept can be applied for the essential facilities for emergency care, including the A&E department, radiology department, ICU and operating theatres, to be planned in close physical proximity as the hot zone.

CARDIAC SERVICES

Co-chairs

Dr K K CHAN	Chief of Service (Medicine), Pamela Youde Nethersole Eastern Hospital
Prof H F TSE	Honorary Consultant (Medicine), Queen Mary Hospital / Tung Wah Hospital

Cardiac services cover a broad spectrum of services across the care continuum, from the acute life-saving interventions such as primary PCI, to cardiac rehabilitation and chronic management of cardiac diseases. With the ageing population and increasing prevalence of chronic diseases, the disease complexity of cardiac patients as well as the demand for cardiac services are both rising. The rapid advancements in medical technology and cardiac interventional procedures also impact on the timeliness and availability of trained and credentialed expertise to provide the services. For instance, the current primary PCI service in HKEC is facing the workforce shortage challenge with only limited numbers of trained cardiologists available to sustain this time critical, life-saving service. At the time this report was written, 24-hour access to primary PCI service is not yet available in HKEC. There has been ongoing planning on the collaboration between HKEC and HKWC to provide round-the-clock access of primary PCI service for the patients in both clusters for equity of access. Meanwhile, the primary PCI service has also been facilitated by the availability of pre-hospital electrocardiogram on ambulance, which was first piloted in HKWC and was implemented in HKEC in 2019.

Leveraging on the service collaboration developments between HKEC and HKWC on primary PCI service, the CWG aims to explore the cross-cluster collaborative model for other areas of the cardiac services as appropriate, with input from stakeholders from both clusters. For example, patients requiring complex structural heart disease interventions or patients with acute heart failure on veno-arterial extracorporeal membrane oxygenation support may require multi-disciplinary quaternary care in HKWC, such as cardiothoracic surgical support. To strengthen the cross-cluster collaboration for improved patient care and a seamless patient journey, further deliberation with the stakeholders from both clusters will be required to develop details of the collaborative service model, including care protocols and referral mechanisms.

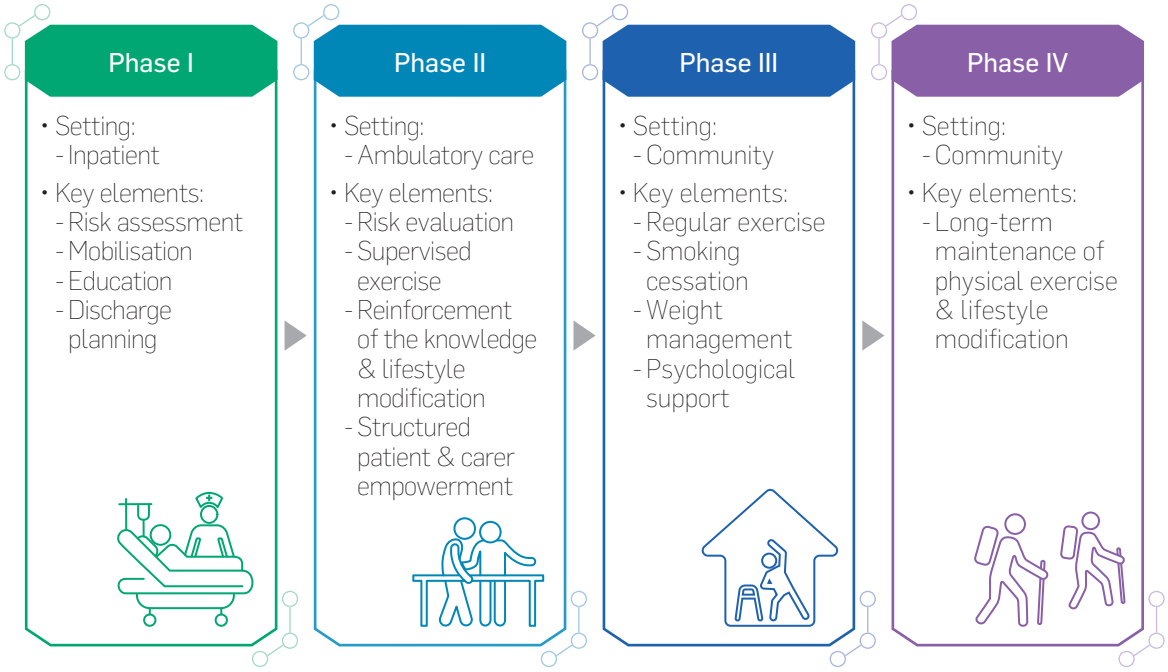
Apart from cross-cluster collaboration, the CWG also aims to strengthen the intra-cluster, multi-disciplinary collaboration for cardiac services. Overall, the CWG recommends a multi-disciplinary and integrated care model to provide holistic cardiac services across the care continuum. As an illustrative example, below is the recommended care model for the cardiac rehabilitation service in HKEC.

RECOMMENDED MODEL OF CARE ON CARDIAC REHABILITATION SERVICE

Background

The cardiac rehabilitation service involves four phases[34] (**Figure 9**). Currently, both PYNEH and RTSKH provide inpatient Phase I cardiac rehabilitation service. For Phase II cardiac rehabilitation service which is provided in ambulatory care setting, all eligible patients from PYNEH are referred to TWEH Cardiac Rehabilitation and Resources Centre (CRRC). It is a one-stop, ambulatory centre led by rehabilitation specialist. Limited Phase II cardiac rehabilitation service is also available for patients at RTSKH, which is provided by its physiotherapy department. Community partnerships for providing Phase III and Phase IV cardiac rehabilitation services are coordinated by the Chronic Illness Platform (Cardiac Panel) under the structure for medical-social collaboration in HKEC.

Figure 9. Four Phases of Cardiac Rehabilitation Service



Recommended Care Model

The cardiac rehabilitation service in HKEC will adopt an integrated, multi-disciplinary and patient-centred approach with enhanced collaboration across hospitals to ensure continuity of patient care. The care protocols for the overall cardiac rehabilitation service will be aligned across hospitals for standardised care. Riding on the flagship role of TWEH in providing ambulatory rehabilitation services, the CRRC will be strengthened as the major service provider of Phase II cardiac rehabilitation service for patients in HKEC, accepting referrals

34. Scottish Intercollegiate Guidelines Network. (2002). Cardiac Rehabilitation: A national clinical guideline

from all HKEC hospitals and GOPCs; while RTSKH will support the Phase II service by serving selected patient groups. Referral guidelines and workflows will be refined to enhance the referral and recruitment of eligible patients. In particular, to improve the compliance to Phase II cardiac rehabilitation service among patients who are active in the workforce, tailored cardiac rehabilitation programme with flexibility to cater for specific patients' needs will be explored. Medical-social collaboration with community partners, such as NGOs and DHCs, for Phases III and IV cardiac rehabilitation will be strengthened to facilitate patients' re-integration into the community. Overall, cardiac nurses will take up a coordinating role in the patient journey of cardiac rehabilitation service, such as patient recruitment and medical-social collaboration.

IMPLEMENTATION ENABLERS

Alignment of Protocol and Referral Guideline

To facilitate the multi-disciplinary collaboration across specialties, hospitals, clusters, and sectors, common care protocols and referral guidelines should be developed with all stakeholders involved. This can streamline the patient journey for timely access to the required service.

Manpower and Training

Training to equip staff with up-to-date knowledge and skills is required for cardiac services. Committed and competent staff is also important for service sustainability.

Technology and Facilities Enhancement

To improve patients' access and compliance to cardiac rehabilitation service, development of tele-rehabilitation will be explored. Facilities and equipment enhancement will also be pivotal for service improvement.

Transport Enhancement

For ambulatory services, such as the Phase II cardiac rehabilitation service, transportation support will enhance patients' compliance to the required service.

AMBULATORY CARE SERVICES

Co-chairs

Dr K H YUEN	Deputy Hospital Chief Executive, Chief of Service (Medicine & Rehabilitation) & Co-ordinator (Quality & Safety), Tung Wah Eastern Hospital
Dr Emmy LAU	Consultant (Medicine), Pamela Youde Nethersole Eastern Hospital

HKEC has been facing an escalating demand for medical services due to ageing population and the increasing burden of chronic diseases. There is an imminent need to develop a sustainable service delivery model which is less reliant on hospital beds and inpatient care. Currently, it is widely recommended that ambulatory care should be considered for every patient unless otherwise indicated[35]. The ambulatory care model recommended by the CWG aims to provide an accessible, patient-centred, coordinated, and comprehensive care to our patients. The proposal involves the re-engineering of patient pathways which minimise the reliance on inpatient care.

RECOMMENDED MODEL OF CARE

The coverage of ambulatory care services ranges from immediate treatment of an acute condition, day surgery and procedures, to the management of chronic diseases. The services entail the provision of one-stop, multi-disciplinary care, with timely access to diagnostic workup and therapeutic interventions according to patients' needs and their respective urgency. Apart from elective services, suitable patients presented to the A&E department can also be diverted to receive fast-track, ambulatory care for early assessment and treatment based on agreed protocols between the A&E department and respective specialties and disciplines. Examples include patients with ambulatory care sensitive conditions, such as diabetic complications and dehydration, that can be managed in ambulatory settings without hospitalisation[36]. The ultimate objective is to enhance patient care and experience and avoid unnecessary hospitalisation. The followings are illustrative examples of the recommended service model of ambulatory care in HKEC, namely (1) diabetes service, (2) rheumatology and musculoskeletal service, and (3) ophthalmology service, and (4) rehabilitation services. A cluster task force on ambulatory care services is recommended to be established to provide oversight to the service development in HKEC.

35. *Future Hospital Commission. (2013). Future hospital: caring for medical patients. A report from the Future Hospital Commission to the Royal College of Physicians.*
36. *Department of Health & Human Services, State Government of Victoria, Australia. Ambulatory Care Sensitive Conditions. Available at: https://www2.health.vic.gov.au/public-health/population-health-systems/health-status-of-victorians/administrative-data-and-reports-health-of-victorians/ambulatory-care-sensitive-conditions*

(1) Diabetes Ambulatory Service

The recommended model of care aims to streamline the current arrangement of multiple hospital appointments for different investigations, diabetic risk assessments, and consultations with different disciplines to a one-stop service in a coordinated manner. For instance, instead of having three to four hospital visits for the two-yearly metabolic risk assessment in current setting, patient will complete all the investigations, such as blood taking, electrocardiogram, fundoscopy, vibration perception threshold testing, and the indicated multi-disciplinary consultations on the same day. Similarly, for cases with poor diabetic control requiring multi-disciplinary assessment and inputs, such as titration of medication by endocrinologists, patient education by diabetic nurses and pharmacists, as well as assessment by allied health professionals (e.g. dietitians and podiatrists), a coordinated one-stop service will be adopted.

For diabetic patients attending the A&E department due to ambulatory care sensitive conditions such as hypoglycaemia and hyperglycaemia fulfilling the agreed case selection criteria, a protocol-driven, fast-track diversion to the ambulatory care centre will be activated so that patients can be assessed and managed in a timely manner. For those requiring admission, the comprehensive diabetes ambulatory service will also support early discharge from hospital after stabilisation.

(2) Rheumatology & Musculoskeletal Ambulatory Service

Similar to the model outlined above, a one-stop multi-disciplinary ambulatory care model will be adopted for patients with rheumatology and musculoskeletal conditions. For instance, patients presenting with joint pain at the A&E department will be diverted to the ambulatory care centre as per agreed protocols. Nurses will act as the first point of contact with these patients in the ambulatory care centre, conducting preliminary examinations and arranging blood and imaging investigations. Patients will be triaged to the appropriate specialty, such as rheumatologists, orthopaedic surgeons, or pain team for subsequent management in accordance with agreed protocol. Procedures such as ultrasonography, joint tapping and injection, biologic infusion, can also be performed in the ambulatory care centre. Physiotherapy and occupational therapy will also be offered as indicated.

(3) Ophthalmology Ambulatory Service

As majority of the ophthalmology patients can be taken care of in an ambulatory setting, the HKEC ophthalmology service will be rationalised to strengthen its ambulatory care service. To facilitate the provision of one-stop ambulatory care, the ophthalmic centre at TWEH will be geared towards an ophthalmic ambulatory centre to focus on providing ambulatory service, such as ophthalmic day surgery and intra-vitreal injection service. Complex ophthalmic operations, operations requiring general anaesthesia and ophthalmic inpatient care will be centralised at PYNEH.

(4) Ambulatory Rehabilitation Services

Patients immediately discharged from acute care after an acute life-threatening event, such as stroke and acute myocardial infarction, are of high risk and are prone to hospital readmission. To support patient's early discharge and maximise patient's recovery potential, timely commencement of ambulatory rehabilitation services after discharge should be ensured. The ambulatory rehabilitation centres at TWEH have a flagship role in the cluster as the established provider of one-stop, multi-disciplinary ambulatory rehabilitation services. The ambulatory rehabilitation has extensive collaborations with community partners, facilitating the ultimate goal of timely re-integration of patients into the community after severe illnesses.

IMPLEMENTATION ENABLERS

Development of Common Protocols and Care Pathways

The development of common protocols and care pathways by multi-disciplinary teams is crucial to the implementation of the recommended models of care. By enabling timely access to diagnostic investigations, therapeutic interventions, medical conditions traditionally requiring inpatient care can be managed safely and efficiently in an ambulatory setting.

Manpower and Training

The ambulatory care model requires the input of competent clinical teams with prompt decision making in clinical management of the patients. Nurses and allied health professionals play an important role in patient care, education and monitoring. Staff training is essential for the implementation of the recommended model.

Transport Enhancement

Transportation support, such as the Non-emergency Ambulance Transfer Service, is an important enabler for the implementation of the ambulatory care model. It will improve timeliness of patient access and utilisation of the ambulatory service, especially for elderly patients and patients with disability.

Facility and Information Technology Enhancement

Purpose-built facilities are required to facilitate the development of one-stop, patient-centred ambulatory services with multi-disciplinary team approach. Improvement in information technology support will enable coordinated appointment arrangement and shorten investigation turnaround time.

PALLIATIVE CARE SERVICES

Co-chairs

Dr S SOONG	Consultant (Clinical Oncology), Pamela Youde Nethersole Eastern Hospital
Dr H C FAN	Consultant (Medicine & Geriatrics) / Head of Division (Respiratory Medicine & Palliative Care), Ruttonjee & Tang Shiu Kin Hospitals

HKEC has been facing a high demand for PC services due to the relatively high proportion of elderly population in the catchment area and the increasing incidence of chronic life-threatening diseases (both cancer and non-cancer). In HKEC, the PC specialist-led service is provided by the medical PC Team of the medical department of RTSKH for both cancer and non-cancer patients, and the oncology PC Team of the clinical oncology department of PYNEH for cancer patients. Further to the cluster plan developed in the HA Strategic Service Framework for Palliative Care (PC SSF) in 2017 on enhancing the service delivery through a cluster-based organisation, the CWG recommends the following model of care with the aim to provide timely access to high quality PC services.

RECOMMENDED MODEL OF CARE

In line with the strategic directions of the PC SSF, the recommended model of PC service in HKEC is to build on the multi-disciplinary collaboration model (**Figure 10**) involving shared care between PC Teams and parent teams of non-PC specialists in the provision of PC service according to the disease complexity and palliative care needs (**Figure 11**). The CWG envisions three main strategies for the cluster-based PC services.

Figure 10. Multi-disciplinary Patient-centred PC Service Model

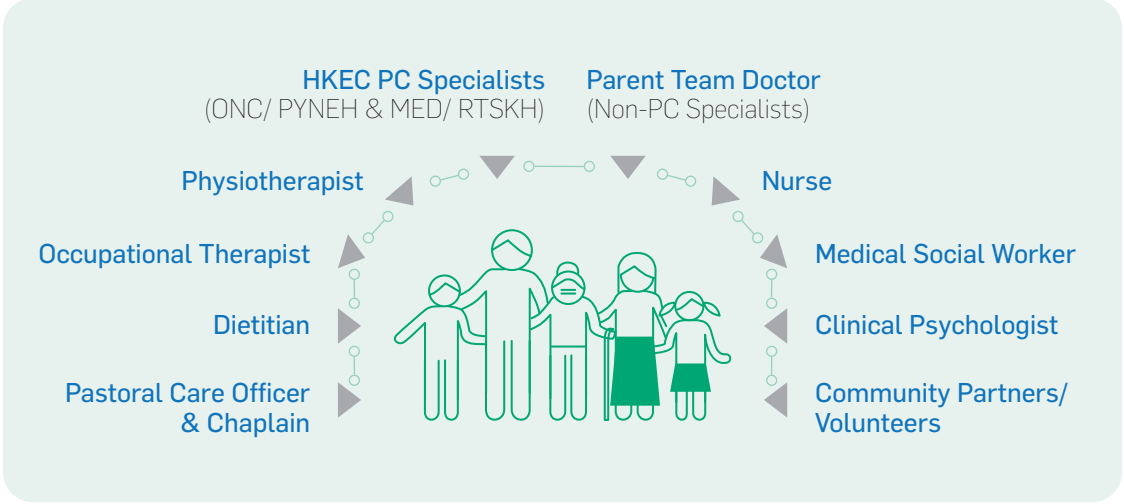
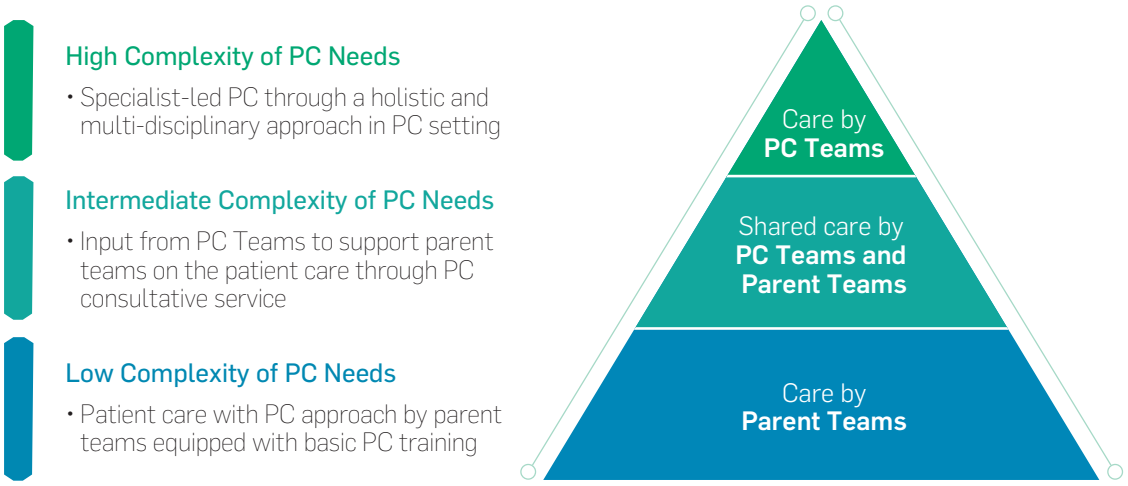


Figure 11. Shared Care Model between PC Teams and Parent Teams for PC Services



(1) Expand the PC Service Coverage across Cluster Hospitals

The PC consultative service by PC Teams will be extended from PYNEH and RTSKH to other hospitals in HKEC by on-site consultative service to TWEH and CCH and tele-consultations to SJH. While the oncology PC Team of PYNEH will serve cancer patients at PYNEH, CCH and SJH; the medical PC Team of RTSKH will cover cancer and non-cancer patients at RTSKH and TWEH, as well as non-cancer patients at PYNEH.

In order to enhance early integration of PC service to acute non-PC wards, such as acute medical wards, link nurses in acute non-PC wards will be identified and trained to identify patients with PC needs and coordinate the care of dying with appropriate referrals to PC teams, pain teams, and bereavement teams. Basic PC training and skill transfer will be provided to the parent teams, including training on advance care planning (ACP) such that ACP conversations can be initiated early by the parent teams with support from PC teams through a shared care approach. Moving forward, RTSKH PC Team will collaborate with the medical department at PYNEH to develop joint PC guidelines for advanced life limiting disease groups, such as end stage renal failure, end stage chronic obstructive pulmonary disease, end stage heart failure, and chronic progressive neurological diseases. **Figure 12** below shows a case illustration of the PC service enhancement and expected outcome for non-cancer PC patients at PYNEH.

Figure 12. Case Illustration of a Non-cancer PC Patient at PYNEH

Case Scenario

- Mr Wong, age 62, with end stage heart failure
- Under the care of medical department at PYNEH, at need of PC

Current Situation

- PC Team at PYNEH is under the clinical oncology department for supporting cancer patients
- No PC service is provided for Mr Wong

Future Scene

Service enhancement

- Education sessions on the disease and ACP / Advance Directives will be provided to Mr Wong and his family by PYNEH medical team and RTSKH medical PC Team
- During Mr Wong's admission to the medical department at PYNEH for exacerbation of heart failure, the link nurse (supported by cluster PC Nurse Consultant) will identify his PC needs, conduct ACP and initiate PC referral as necessary
- Depending on Mr Wong's needs, PYNEH medical team and RTSKH medical PC Team will support the patient with coordinated service through consultative service, clinic, home care and hotline service

Expected outcomes

- Coordinated PC support to Mr Wong along the care journey by parent team and specialist PC team
- Better understanding and preparation for EOL decision making. Mr Wong and his family being involved in the ACP conversation

(2) Strengthen PC Services for Patients in the Community

To enable PC patients to be cared at their usual place of residence in accordance with their preference, PC services in the community setting and ambulatory setting will be strengthened. Apart from home care service provided by the PC Home Care Team at the patients' home, PC Home Care Team and CGAT will have enhanced collaboration for providing PC service to patients living in RCHEs utilising the shared care approach based on the complexity of their needs. Joint protocols and referral guidelines for quality PC care and streamlined workflow will be developed. Regular case conference will be established to facilitate joint case management between teams. Together with enhancement in multi-disciplinary structured PC day service and medical-social collaborations, early discharge from hospital to usual place of residence could be facilitated by post-discharge support, home care service, and community support including EOL care in the community. With advancement in tele-health, symptom tracking such as pain control, medication monitoring and patient empowerment for simple trouble-shooting could be offered to patients at home to minimise unnecessary hospitalisation.

(3) Enhance EOL Care in the Hospitals

The CWG recommends nurturing a culture amongst staff of "Road of Respect" (not "Road of Shame") in delivering care to patients and families during patients' last journey from the hospital wards to the mortuary. Staff training for both clinical and non-clinical staff from wards to mortuary will be provided, covering nursing care, death rituals, and overall staff attitude towards patients' last journey.

Bereavement support in non-PC setting will be enhanced through strengthening of dedicated, multi-disciplinary teamwork from medical social worker, clinical psychologists, chaplaincy and pastoral care staff, to provide a structured acute grief support in non-PC settings. The bereavement service will also be strengthened to provide practical information (such as funeral and cremation information) and documents to patients' families in an organised and empathetic approach whilst streamlining the workflow for the families.

IMPLEMENTATION ENABLERS

Manpower and Training

Training is fundamental to enable cultural change to adopting "Road of Respect" for patients' last journey. This will be facilitated by integrating PC into the care continuum in non-PC settings for all disciplines, including parent team doctors, nurses, allied health professionals and supporting staff.

Information Technology Enhancement

Information technology support will enable tele-consultations, nursing informatics and tele-health, including symptom tracking and monitoring at home, clinical management and communication platform between care teams, such as PC Team, parent team and CGAT.

Transport Enhancement

To facilitate patients' utilisation of PC day service, transportation support for patients should be strengthened. It is also important to facilitate hospital discharge and transfer between hospitals.

Facility Design

One-stop, multi-disciplinary, integrated PC services could be facilitated by improved facility design to smoothen patients' journey. Apart from improvement in PC and non-PC clinical areas, such as provision of single rooms with design features fostering a caring environment to meet the needs of patients at the end of life and their families and carers, design of mortuary would also be improved with consideration on the journey of the deceased patients' families.

PERI-OPERATIVE SERVICES

Co-chairs

Dr Bonnie CHENG	Consultant (Anaesthesia), Pamela Youde Nethersole Eastern Hospital
Dr Y K MAK	Deputy Service Director (Quality & Safety), Hong Kong East Cluster / Associate Consultant (Orthopaedics & Traumatology), Pamela Youde Nethersole Eastern Hospital

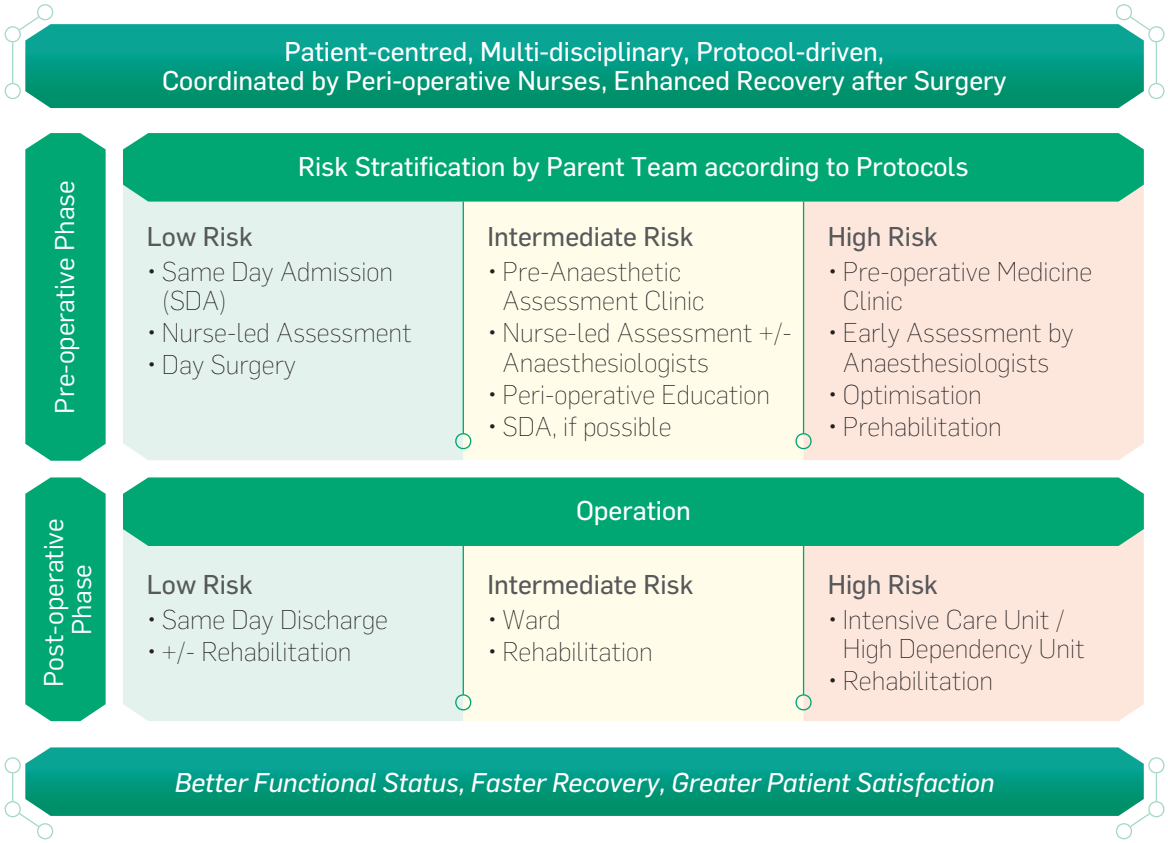
Peri-operative services commence when patients are scheduled to have surgeries until they are discharged in their best functional capacity. The anaesthesia service and pre-operative assessment in HKEC[37] has room for improvement especially with regards to the ageing population. A new model is developed to improve the patients' wellbeing for a wide range of surgical procedures in HKEC. A collaborative, multi-disciplinary team will provide pre-habilitation and optimisation aiming for reduced risk of complications and post-operative length of stay. The service will also work towards increasing patient and family engagement by providing peri-operative education to achieve greater patient satisfaction.

RECOMMENDED MODEL OF CARE

The recommended model illustrated in **Figure 13** aims to provide one-stop multi-disciplinary service for coordinated patient-centred care. Anaesthesiologists' engagement should start early at the pre-operative phase to allow time for assessment, risk stratification and risk modulation. Peri-operative nurses will be the coordinator of this service.

37. *According to the local data in HKEC in 2016-2018, the total number of elective operations in the three cluster hospitals in HKEC was consistently above 15 000 annually. Around 65-70% of the cases were anaesthetist-involved procedures and around 25% of these patients were presented with significant comorbidities. At PYNEH, patients were either assessed on the day before their surgeries or had pre-operative assessment service (PAS) around 1-2 weeks before so those with significant comorbidities had limited time for optimisation. There was limited PAS at RTSKH and advanced age patients scheduled for eye operations at TWEH were only seen on the same day. Two sessions of vascular PAS were scheduled at PYNEH monthly.*

Figure 13. Recommended Model of Peri-operative Care



Risk Stratification of Patients

The service commences when patients are offered and accepted for surgical management at various surgical specialties. Parent team surgeons will perform risk stratification of patients to one of the three peri-operative care pathways according to patients' clinical risk level, based on an agreed protocol. The three pathways are low-risk (green), intermediate-risk (amber) or high-risk (red) patients respectively, as designated in an agreed assessment protocol.

Risk-stratified Peri-operative Patient Journey

Patients in general good health and planned for low-risk operations will follow low-risk pathway with pre-operative assessment and education delivered by the peri-operative nursing team. Patients will be admitted on the day of surgery, known as same day admission (SDA), for day surgery. Intermediate-risk patients will receive nurse-led assessment at the pre-anaesthetic assessment clinic (PAAC) with the aim for SDA if possible. For borderline cases, patient will be reviewed by anaesthesiologists and surgeons with optimisation arranged as appropriate. For those with high-risk surgical or medical factors, the high-risk pathway will

be followed, where patients will be assessed early by anaesthesiologists at the peri-operative medicine clinic (POMC) and multi-disciplinary input for optimisation and pre-habilitation will be sought. Cancer patients will be considered for fast-track peri-operative service whenever necessary.

For the post-operative phase, ERAS for selected patients will be implemented in surgical specialties in accordance with agreed protocols, apart from the existing ERAS for total knee replacement in HKEC. For instance, the pilot for radical cystectomy is in progress and ERAS for gynaecological oncology is undergoing discussion. Post-operative pain control is provided by a team of anaesthesiologists and pain nurses. Prior arrangements with high dependency unit (HDU) or ICU for immediate post-operative care of high-risk patients will be arranged with prior communication with the ICU department, and indicated as such on the operative list. Allied health professionals will follow up patients in the subgroup of borderline intermediate-risk and high-risk, who will be in need of additional post-operative support. The peri-operative nurse will continue to coordinate patients' care among the multi-disciplinary team and arrange for anaesthetic post-operative follow-up as required.

Enhanced Role of Peri-operative Nurses and Allied Health Staff with Protocol-driven Care

Protocols will be designed and used by peri-operative nurses for nurse-led triage and anaesthetic assessment of low-risk and stable, intermediate-risk patients. More comprehensive peri-operative education is to be provided. Intermediate-risk patients who fall outside the protocol-driven, nurse assessment at PAAC will then be triaged to be reviewed by specialist anaesthesiologists or non-specialist anaesthesiologists under supervision. Pre-habilitation and optimisation will be provided to borderline intermediate-risk patients and high-risk patients by allied health professionals with service ranging from pre-operative enhancement of functional status to provision of advice for anticipated post-operative social issues.

Strengthened Multi-disciplinary Collaboration for High-risk Patients

Patients with complex medical conditions are assessed early at POMC by specialist anaesthesiologists whenever possible and physicians will provide fast-track medical outpatient assessment to optimise these patients as required. Clinical guidelines will be developed between anaesthesiologists and physicians for the management of patients with relatively stable chronic conditions (e.g. patients with pacemakers or on dual antiplatelet therapies). Communication among key stakeholders, such as peri-operative nurses, anaesthesiologists and parent surgical team should be enhanced for best patient care.

IMPLEMENTATION ENABLERS

Manpower and Training

As the model aims to improve patients' functional status, anaesthesiologists will play a fundamental role in the assessment of patients with complex medical conditions with support from the physicians. Training for anaesthesiologists on transthoracic echocardiograms and cardiopulmonary test are essential for management of higher risk patients. Anaesthesiologists' involvement will be increased in order to improve the service quality and safety by providing specialist anaesthesiologist service or direct supervision of trainees[38].

Besides anaesthesiologists, peri-operative nurses and allied health professionals are essential for the implementation of the recommended model. Peri-operative nursing teams are required in the setting up of PAAC and POMC. Their roles include management of the protocol-driven patient assessment, as well as care coordinator among the service providers. The pre-habilitation and ERAS will involve a team of allied health staff including occupational therapists, physiotherapists, dietitians, clinical psychologists, medical social workers, podiatrists, prosthetics and orthotics, and speech therapists to enhance their physical status before surgery as well as assist in recovery of functional status and handling of different social issues.

38. According to the local data in PYNEH, PAS service has been implemented in PYNEH for nearly 20 years with an annual caseload of around 3 200 cases. It has first covered gynaecological procedures and general surgery but evolved to cover multiple specialties and patients seen can be scheduled for procedures with various complexities with no triage. Although there are pre-existing guidelines on pre-operative investigations, the type of investigations and timing differs between specialties and sub-specialties. There is also no designated session of PAS for the Department of Anaesthesia. Anaesthesiologists have to be relieved from their elective lists to see the patients. It is inevitable that patients may stay for longer than necessary and is aggravated by the unlimited PAS quota per day. Patients are mostly seen by trainees while specialist anaesthesiologists continue patient care in theatre.

Hardware Enhancement

To streamline the triage and peri-operative education by nurses, pre-habilitation, optimisation and pre-operative anaesthetic assessment, an integrated centre is a key facility to enable the running of the peri-operative service. Multiple peri-operative activities should be carried out at a single centre to ensure most efficient use of manpower resources.

Setting Up of Protocols

The traditional model of care by anaesthesiologist and surgeon will be replaced by collaboration between the multi-disciplinary team. Protocols and guidelines will be developed, reviewed, and updated with multi-disciplinary input. Protocols will cover activities ranging from screening patients into low-risk, intermediate-risk and high-risk pathway by the surgeons, nurse-led anaesthetic triage and assessment guidelines in collaborating with physicians, optimisation of medical conditions including anaemia correction, smoking cessation, weight reduction, and referral for pre-habilitation and social support. Screening and guidelines for referral to appropriate allied health professionals pre-operatively and early identification of post-operative de-functioning are important for faster recovery.

SURGICAL SERVICES

Co-chairs

Dr C N TANG	Clinical Stream Coordinator (Surgical), Hong Kong East Cluster / Deputy Hospital Chief Executive / Chief of Service (Surgery), Pamela Youde Nethersole Eastern Hospital / Director, Hong Kong East Cluster Training Centre for Healthcare Management & Clinical Technology / Director, Minimal Access Surgery Training Centre
Dr Edward HUI	Clinical Coordinator (Quality & Safety) / Chief of Service (Surgery), Ruttonjee & Tang Shiu Kin Hospitals

The two surgical departments at PYNEH and RTSKH operate independently with existing service collaboration in certain areas. For instance, there is collaboration between PYNEH and RTSKH vascular surgeons with cluster-based call list for vascular services, and referral of patients requiring colonoscopy from PYNEH to RTSKH to shorten the waiting time. Among the surgical services, urology service is currently provided by PYNEH urologists for HKEC as a cluster-based service. With increasing service demand, there is a need to further strengthen the intra-cluster collaboration between the two surgical units in order to improve accessibility and quality of surgical services in HKEC. In addition, enhancements on ambulatory services, rehabilitation services, and multi-disciplinary support are recommended to improve overall patient care. Inter-cluster collaboration between HKEC and HKWC on vascular services is proposed to enhance service sustainability.

RECOMMENDED MODEL OF CARE

Role Delineation of Cluster Hospitals on Surgical Services

Overall, the service planning principle of "localise where possible, centralise only when necessary" is observed. High-volume, low-complexity surgical services will remain as localised where services are currently provided at both PYNEH and RTSKH. Low-volume, high-complexity cases will be referred to PYNEH in HKEC, or to accredited centre in other clusters as indicated, where appropriate expertise or technologies are available for improved patient safety and staff competency.

While cluster-based urology service will continue to be provided by PYNEH urologists, there will be increase in regular clinical sessions at RTSKH and TWEH, and skill transfer to the CNS and the CGAS nurses in HKEC through training to improve service accessibility and decrease reliance on inpatient services.

Intra-cluster Collaboration on Surgical Services

Collaboration to develop common clinical protocols on breast service at PYNEH and RTSKH will ensure standardised treatment and continuous improvement in the quality of care across HKEC, further furnishing the service to patients in needs. For the care of cancer patients, a multi-disciplinary care approach should be adopted to provide personalised care to patients. A multi-disciplinary discussion platform involving surgeons, oncologists, radiologists, pathologists, and other relevant specialties and disciplines should be established for regular deliberation on patient care plan. In addition, intra-cluster variations among cluster hospitals in waiting time for surgical SOPC, operation and endoscopy services have been observed. The CWG recommends replacement of the existing systems with a single booking system within the cluster to resolve waiting time discrepancy, as well as improved efficiency in utilisation of physically available and adequately staffed operating theatres and endoscopy suites within the cluster.

Inter-cluster Collaboration on Vascular Surgery Service

Apart from the existing intra-cluster collaboration on vascular surgery service, inter-cluster collaboration between HKEC and HKWC will be enhanced. There will be collaboration between the two clusters on both service provision and training, with a view to developing a single functional unit with two service sites on Hong Kong Island for vascular service to enhance service sustainability.

Ambulatory Services

To provide greater patient convenience and reduce reliance on inpatient care, ambulatory services will be enhanced to enable patients to receive their care or treatment and return home within the same day. For instance, one-stop day surgery service will be developed with enhanced multi-disciplinary support and improvement in facility. Also, for high-volume and low-complexity conditions, such as some of the colorectal and breast services, nurse clinics and integrated care model with doctor and nurse providing alternate consultation will be considered to shorten waiting time.

Rehabilitation Services

Referral mechanisms should be developed to facilitate intra-cluster patient transfer to extended-care setting for rehabilitation. Co-care service model with collaboration between surgical and medical specialties should be adopted to enhance patient care for peri-operative care, especially for elderly patients.

IMPLEMENTATION ENABLERS

Alignment of Protocols and Management

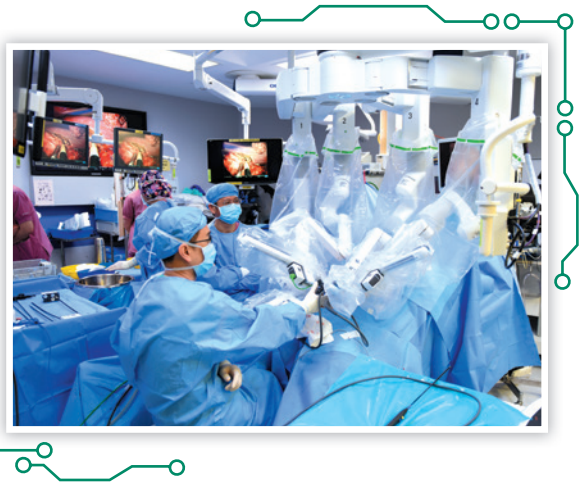
Development of common protocols and care pathways is essential to support multi-disciplinary services, such as cancer surgeries and peri-operative care. This will strengthen collaboration between specialties and disciplines, align standard of care and achieve better patient care.

Manpower and Training

Workforce planning and training to relevant staff, including doctors, nurses, and allied health professionals, are indispensable to achieve the desired outcome. Apart from surgical staff, training and skill transfer to staff in other care settings and specialties, such as extended-care hospitals, CNS, CGAS, and family medicine will also enable safer and more efficient transfer of patients to the most appropriate care settings according to the level of care required.

Technology Enhancement of Clinical Treatment

The provision of accurate diagnosis and clinical treatment (e.g. localisation of lesion in cancer patients and advanced surgical operation equipment) is important to patient care. Advanced endoscopic procedures (e.g. endoscopic ultrasound, endoscopic submucosal dissection etc.) could be developed with appropriate credentialing to ensure safety and efficacy of the procedures.



Facility Enhancement

To facilitate the development of one-stop, day surgery service, facilities for day surgery, endoscopic procedures and related services (such as peri-operative care, pathology and rehabilitation) will be required.

CRITICAL CARE SERVICES

Co-chairs

Dr H P SHUM	Chief of Service (Intensive Care Unit), Pamela Youde Nethersole Eastern Hospital
Dr Axel SIU	Consultant (Accident & Emergency), Ruttonjee & Tang Shiu Kin Hospitals

Currently, the ICU of PYNEH is an independent department whilst the ICU of RTSKH operates under the medical department. As there is only one critical care specialist in the RTSKH ICU, round-the-clock off-site critical care specialist coverage cannot be achieved. Moreover, the RTSKH ICU is not an accredited centre for critical care medicine training, which may affect its trainee uptake. The direction of cluster-based critical care service development in HKEC will bring synergistic effect to enhance specialist coverage, staff training, and inter-hospital support in case of ad-hoc demand surge.

Inter-hospital transfer of critically-ill patients is very common within and across clusters. For example, according to the local data at RTSKH, it was estimated that there was around 2 500 man-hour in the year of 2019 for escorting patients from RTSKH to other hospitals. Most of the inter-hospital transfers are currently performed by staffs from the parent teams (e.g. A&E, medicine or ICU) who may or may not have received specific training on transport medicine. Training and service enhancement in inter-hospital transfers of critically-ill patients can improve patient safety and service quality. This can facilitate inter-hospital support in case of emergency situations of ad-hoc major events and service collaboration across hospitals especially for life-saving interventions.

RECOMMENDED MODEL OF CARE

Cluster-based Critical Care Service in Hong Kong East Cluster

Cluster-based critical care service can homogenise service delivery, optimise training opportunities for medical or nursing trainees and ensure service sustainability for both ICUs within the cluster. The key features include the provision of 24-hour critical care specialist coverage for both ICUs in the cluster and to facilitate RTSKH ICU to become accredited as a critical care medicine training site. Single governance under the intensive care department of HKEC should be considered as a long term objective.

Enhancement of Inter-hospital Transfer of Critically-ill Patients

Personnel with enhanced training in transport medicine may improve patient safety during critical transfer. These specially trained staffs, who usually work at A&E department or ICU, should be readily available to handle emergency transfer requests when necessary. Twenty-four hour inter-hospital critical care transport service should be provided for patients from all departments who have failure of one or more vital organ system(s). Composition of the team will include at least one clinical personnel (registered nurse, advance practice nurse or doctor) who possesses the necessary training, experience, and decision-making skills to assess and support a complex patient with active or potential vital organ system failure.

Hyperbaric Oxygen Therapy Service and Training

The HBOT centre at PYNEH is the first hospital-based HBOT centre in Hong Kong. Emergency service has started since 2018, which provides territory-wide coverage, receiving referrals from all clusters. Provision of elective services to patients from all clusters, extension of daily service duration and installation of monoplane chamber are suggested measures to manage the projected increasing service demand in the near future. As a new HBOT centre is planned in the NAH at Kai Tak Development Area, the PYNEH HBOT centre will take on the role of providing training and assistance to the commissioning of the new HBOT centre at NAH. In long term, the future service model of HBOT will be deliberated at the corporate level.

IMPLEMENTATION ENABLERS

Manpower and Training

Availability of manpower, staff rotation and provision of appropriate training are essential for cluster-based critical care service and enhancement of critical care transport service. For HBOT service, specially trained clinicians (from A&E, ICU, and occupational health), nursing staffs (from A&E and ICU) and technologists are required for service delivery.

Alignment of Clinical Protocols

Alignment of transferral guidelines of critically-ill patients from different departments across the cluster is important for the successful enhancement of the critical care transport service as well as uniformity of care provision across the cluster.

Information Technology and Equipment Enhancement

Installation of a real-time, tele-communication system with computer information system cross-linkage between the two ICUs in HKEC, and rapid laboratory and microbiological diagnostic support are essential components for a successful cluster-based critical care service in HKEC. Installation of new facilities, such as the monoplane chamber and electronic referral system are important enablers for the HBOT service. As driven by the innovation strategy in HKEC recommended by the CWG on Innovation in Healthcare, information technology can be applied to streamline the patient journey in A&E from registration to discharge, such as through the use of mobile applications.

ROLE DELINEATION OF CLUSTER HOSPITALS

This chapter outlines the roles of individual hospitals in HKEC. The overall planning principles, as laid out in the chapter, **Strategic Framework**, aim to foster intra-cluster collaboration and coordination to direct services provided by various clinical specialties and hospitals of HKEC towards a cluster-based service network approach. Services will be made available locally in individual hospitals where possible, and centralised as necessary to concentrate expertise and facility. A summary of the HKEC hospitals' role is illustrated in **Table 1**.

Table 1. Summary of Role Delineation of HKEC Hospitals

Hospital	Roles
PYNEH	A major, acute hospital providing 24-hour emergency, comprehensive secondary and tertiary services for HKEC. It also provides gazette inpatient service under the Mental Health Ordinance for both HKEC and HKWC; with a focus on healthcare innovation and training.
RTSKH	An acute hospital providing 24-hour emergency and selected specialty services for Wan Chai district, with a focus on integrated elderly services. It has a unique role in the emergency preparedness for emergency situation of ad-hoc major events on the Hong Kong Island due to its strategic location.
TWEH	An extended care hospital providing rehabilitation and convalescent services for HKEC; with a focus on ambulatory care services, including ambulatory ophthalmology service and ambulatory rehabilitation services for HKEC.
WCHH	An extended care hospital providing infirmary service to patients requiring long-term care.
CCH	An extended care hospital providing rehabilitation and convalescent services for HKEC, as well as infirmary services for patients requiring long-term care.
SJH	An acute hospital providing 24-hour emergency services for Cheung Chau.

PAMELA YOUDE NETHERSOLE EASTERN HOSPITAL

PYNEH will continue to provide comprehensive secondary services for the population of Eastern district and serve as the tertiary centre for HKEC. For instance, centralised cancer care services for HKEC (e.g. radiotherapy) will continue to be concentrated at PYNEH as the hub with the integrated cluster cancer centre model developed in the HA Strategic Service Framework for Cancer Services, and support other HKEC hospitals in the cluster cancer service network. Cluster-based services, such as anaesthesiology, otorhinolaryngology (ENT), orthopaedics, pathology, radiology, and urology, will continue to be provided by PYNEH. PYNEH will continue to be the provider of gazette psychiatric inpatient service on the Hong Kong Island, supporting both HKEC and HKWC. The hospital will also continue to serve as one of the two Emergency Radiation Treatment Centres in HA.

For services that are of relatively low volume, for which there is insufficient demand within HKEC to service alone, cross-cluster collaborations between HKEC and the neighbouring HKWC will ensure patient's accessibility to the required services as well as adequate staff exposure and training. PYNEH will play a key role in these collaborations. Examples include the ongoing planning between PYNEH and QMH on the Hong Kong Island-wide service network for 24-hour primary PCI service for heart attack, 24-hour IA thrombectomy service for stroke, functional neurosurgery service, vascular surgery service, assisted reproduction service and P/NICU service.

Leveraging on HKEC's strong tradition of innovation, PYNEH will take on a special role in pioneering new service models, technology adoption and training. Innovations are to be piloted at PYNEH for HKEC as well as the entire HA. Examples include the establishment of HA's first HBOT centre at PYNEH, where it will provide training and assistance for the commissioning of the new HBOT centre planned in NAH at Kai Tak Development Area.

RUTTONJEE & TANG SHIU KIN HOSPITALS

RTSKH will continue to provide 24-hour A&E services together with selected specialty services for Wan Chai district. The hospital's strength lies in its role as one of the pioneers in the development of elderly services in HA, such as the CGAS, PSCC and the implementation of elderly-friendly ward design. With the solid foundation of comprehensive elderly services, RTSKH will support the development of integrated elderly services in HKEC for the ageing population, such as providing geriatric tele-consultation to SJH, whilst continuing its role in providing cluster-based CGAS for HKEC and PSCC service to support high-risk elderly patients in HA. The hospital will continue to provide the HA-wide General Infirmary Service.

Given its unique geographical location, RTSKH has a special role in the emergency preparedness for emergency situations of ad-hoc major events on the Hong Kong Island. The intra-cluster service collaborations between RTSKH and PYNEH for critical care services and surgical services will be strengthened. Contingency plans in the management of emergency situations with large number of casualties will be revised.

The existing AETC at RTSKH will become part of the HKEC integrated centre for healthcare innovation to explore novel methods on emergency medical training. This will couple with the development of new service models in ambulatory and community services (particularly in TSKH), as well as the A&E department, including piloting of Smart A&E with application of information technology support to improve patient's journey in the A&E department. The service scope of PSCC would be further expanded to support both the high-risk elderly patients and chronic disease patients in the community across HA.

TUNG WAH EASTERN HOSPITAL

TWEH will continue to serve predominantly as an extended care hospital providing rehabilitation and convalescent services for HKEC with a focus on ambulatory care services. The hospital will continue to provide selected specialty services including medicine and ophthalmology. To improve the patient flow from acute settings in the cluster to TWEH for extended care, the overall referral criteria and mechanisms will be reviewed and streamlined in collaboration with relevant stakeholders.

While TWEH will continue its role to provide cluster-based ophthalmology services for HKEC, it will focus on ambulatory services. Its ambulatory rehabilitation centres will continue to strengthen the flagship role of TWEH in HKEC for ambulatory rehabilitation services, and enhance its collaboration with other cluster hospitals to streamline patients' referral.

WONG CHUK HANG HOSPITAL

WCHH will continue its role as an infirmary hospital for patients requiring long-term care. Subject to the Government's exploration and planning, WCHH may be handed over to the Government for redevelopment. The services provided by the GDH and the Dementia DCC at WCHH will be relocated to other service units in HKEC.

CHESHIRE HOME, CHUNG HOM KOK

CCH will continue to provide rehabilitation and convalescent services to HKEC patients. The hospital's role in providing inpatient rehabilitation and convalescent services for patients stepped down from cluster hospitals will be strengthened with a planned review of referral criteria and mechanisms. Volunteer service support will be reviewed and enhanced to meet projected service scope and need. The hospital will continue to provide both local infirmary service and the HA-wide General Infirmary Service.

ST. JOHN HOSPITAL

SJH will continue to provide 24-hour A&E services for Cheung Chau. To strengthen the support for elderly patients, common protocols between SJH and RTSKH will be set up to facilitate shared care with geriatric support accessible through tele-consultation. The hospital will continue to provide the HA-wide General Infirmary Service for patients requiring long-term care.

SERVICE DEVELOPMENT PRIORITIES

This chapter outlines the short, medium, and long-term service development priorities of HKEC in support of the clinical strategies recommended by the 12 CWGs and the role delineation of hospitals outlined in the preceding chapters on **Clinical Service Programmes** and **Role Delineation of Cluster Hospitals** respectively. The priorities are set based on a range of factors, including the assessment of the clinical service needs of HKEC, the urgency of the improvement measures as well as the readiness for implementation.

SHORT TERM STRATEGIES (1 TO 2 YEARS)

Strengthening the Innovative and Training Culture

A **cluster committee in healthcare innovation** will be established in HKEC to widely collect innovative ideas, facilitate trials of innovative projects, and explore novel methods of staff training. The committee will engage all levels of staff to foster the innovative and training culture of HKEC.

Enhancement of Cluster-based Structures for Service Development

For the development of **medical-social collaboration** as a flagship service in HKEC, the cluster-based Platforms and hospital-based PRCs enhance communication and information exchange between HKEC clinicians and community partners to develop collaborative service arrangements. To cater for the service needs from the ageing population, a **cluster elderly services coordinating committee** will be set up to oversee the development of elderly services in HKEC, with emphasis on cross-department and cross-hospital collaborations.

To enhance patient care and service sustainability, a paradigm shift from the traditional inpatient care model towards an **ambulatory care** model is underway. This model will be adopted for multiple specialties in both medical and surgical streams. To adopt the recommended one-stop, multi-disciplinary ambulatory care model across HKEC, a **cluster task force on ambulatory care services** will be set up to oversee the necessary service development and implementation.

Strengthening of Emergency Preparedness

Acknowledging the ideal geographical location of RTSKH to support its role in emergency preparedness for emergency situations of ad-hoc major events on the Hong Kong Island, **contingency plans for emergency situations** with large number of casualties will be reviewed. **ICU staff rotation** between PYNEH and RTSKH ICUs will be enhanced to strengthen the intra-cluster collaboration on critical care services with cluster-based ICU service considered as a longer term objective, whilst clinical protocols for **inter-hospital**

transfer of critically-ill patients will be developed to improve patient safety during transition. Overall service organisation of trauma service for the Hong Kong Island will continue to be deliberated at relevant platforms.

Enhancement of Cluster-based Services

Clinical protocols for the recommended cluster-based peri-operative care model in HKEC (including risk stratification of patients, the care pathway for respective risk groups and ERAS programmes) will be formulated with inputs across related specialties and disciplines. **Peri-operative medicine clinics** will be set up at PYNEH for the management of high-risk patients.

The cluster-based **urology service** in HKEC will be enhanced by increasing the service sessions at RTSKH and TWEH. The cluster-based **ENT service** will increase ENT operations to the cluster by utilising available operating theatre sessions at RTSKH. **Ophthalmology service** will be reorganised within HKEC to strengthen ambulatory ophthalmology service at TWEH, whilst the emergency and complex ophthalmology service will be concentrated at PYNEH.

To improve the overall **patient flow from acute settings to rehabilitation and convalescent settings** in the cluster, referral guidelines and mechanisms will be reviewed with stakeholders across specialties and hospitals. For **cardiac rehabilitation**, referral guidelines and clinical protocols across HKEC will be reviewed and aligned to enhance patient recruitment.

With the collaborations between the PC Teams in HKEC, on-site or tele-**PC consultative service** will be provided in HKEC hospitals for both cancer and non-cancer patients. **Bereavement support** in non-PC settings will be enhanced by dedicated multi-disciplinary bereavement teamwork. Paediatric PC service will be developed in coordination with the centralised paediatric PC Team in HKCH.

Inter-cluster Collaboration between HKEC and HKWC

Twenty-four hour IA thrombectomy service to the catchment population in both HKEC and HKWC will be provided, with secondary diversion to QMH after service hours. Subject to the service evaluation and caseload, the proposed provision of 24-hour 7-day IA thrombectomy service in PYNEH will be reviewed and deliberated. Collaboration between HKEC and HKWC on **the management of functional neurosurgical diseases** will be taken forward **by setting up a multi-disciplinary team**. For vascular surgery, service sustainability will be enhanced by working towards a single functional unit with two service sites for the **Hong Kong Island-wide vascular surgery service** between HKEC and HKWC.

Cross-cluster P/NICU support between HKEC and HKWC will be enhanced. Diversion of patients at RTSKH A&E to QMH for P/NICU support and surgical input will be implemented to streamline patient journey for critical patients.

A **combined functional unit for reproductive medicine service** will be established between HKEC and HKWC. Case conferences for **urogynaecology** and **gynaecological oncology** will be held between both clusters. **Simulation training** on obstetrics emergencies will be made available at HKEC for the staff of both clusters with trainings to equip a bigger pool of trainers.

MEDIUM TERM STRATEGIES (>2 TO 5 YEARS)

Piloting of Innovative Service Models and New Technology

Innovative service models and new technology, which can improve patient service quality, safety as well as workflow efficiency and effectiveness, will be piloted. Examples may include robotics in materials transport, laboratory automation, pharmacy automation, artificial intelligence in radiology, and tele-medicine. **Tele-medicine** will be adopted in geriatric care, allied health and palliative care. Medical-social collaboration could also be enhanced with information technology support on information management and referral system.

Training for Implementation of New Care Models and Nurturing of Cluster Culture

Staff training will be provided to support the implementation of new service models, including the ambulatory care, peri-operative care, and inter-hospital transfer of critically-ill patients. To facilitate development of medical-social collaboration, training and empowerment to the staff at the PRC will be provided. To nurture a **culture of "road of respect"** with the EOL care for patients on their last journey, training for both clinical and non-clinical staff, from wards to mortuary, will be provided. To strengthen HKEC's **culture of innovation**, relevant staff training will also be provided.

For service areas with low caseloads in HKEC, **staff rotation** in collaboration with other clusters is essential to maintain staff exposure and competencies. For instance, paediatric trainee rotations will be arranged between HKEC, HKWC and HKCH, whilst rotation to other units with higher delivery number will be arranged for O&G trainees as required.

Development of Elderly Services for the Ageing Population

Geriatric support will be extended to SJH by the RTSKH geriatric team via of tele-consultation and tele-case conferences. **GDH will be enhanced to serve as a hub** for cross-specialty multi-disciplinary collaborations in an ambulatory care setting, avoiding unnecessary admission and supporting early discharge. To address the rising service demands in urogynaecology service from the ageing population, there will be collaboration between HKEC and HKWC in the development of **nurse-led urogynaecology service**.

Enhancement of Cluster-based Services

The **cluster-based perioperative care model** will be rolled out to RTSKH and TWEH after piloting at PYNEH. Implementation of **ERAS** programmes will also be extended to more patients in accordance with agreed protocols. For **endoscopy service**, a centralised, single booking system within HKEC will be developed to enable improved efficiency in utilisation of existing facilities and minimise intra-cluster variations in waiting time. Common clinical protocols on **breast services** will be developed to provide standardisation in treatment across HKEC.

Ambulatory care services will be developed for patients across all age groups, with agreed clinical protocols and clinical pathways. **The recruitment criteria for cardiac rehabilitation** service will be expanded to recruit more eligible patients, such as the heart failure patients, with strengthening of TWEH as the major service provider of ambulatory cardiac rehabilitation service in HKEC. **Neuro-rehabilitation service** will be strengthened with multi-disciplinary and cross-specialty inputs, as well as medical-social collaboration. With the establishment of **C&A psychiatry service** in HKEC, shared care model by psychiatrists and paediatricians for ADHD patients will be developed and implemented.

LONG TERM STRATEGIES (>5 TO 10 YEARS)

Establishment of the Integrated Centre for Healthcare Innovation

A new **integrated centre for healthcare innovation** will be established in HKEC. Its role will include coordination and provision of training activities (including simulation training), generation of new ideas for piloting, and enhancement of multi-disciplinary collaborations in the adoption of new care models and technologies.

Improvement in Hospital Facilities

In long term, hospital facilities and its physical design will be improved as opportunities like **renovation and hospital redevelopment or expansion** arise, with the consideration of the service models recommended by the CWGs in mind to facilitate the service implementation. For instance, the development of the **Ambulatory Care Block at PYNEH** has been included in the Government's Second 10-year Hospital Development Plan. With the building of a new block, facilities within the existing hospital campus may be re-arranged with adoption of the zonal concept to improve patient flow and facilitate clinical workflow. PRCs can be planned at patient-friendly locations to improve patients' convenience. Design of mortuary will be improved with consideration on the experience of patients' families.

IMPLEMENTATION ENABLERS

To facilitate the implementation of the clinical strategies and the delineated hospitals' roles outlined in this CSP, a number of key drivers will be necessary as enablers of change. These enablers include **leadership and management, workforce, information and communication technology**, as well as **physical facilities and design**. For many of the clinical initiatives identified, the changes can be implemented without significant additional resources. Such initiatives should be implemented as soon as possible.

LEADERSHIP AND MANAGEMENT

The implementation of the recommended new care models requires strong clinical leadership, a collaborative culture intra- and inter-cluster, as well as across medical and social sectors. Grooming of the current and next generation of clinical leaders and nurturing of this collaborative culture with training are both essential for the service development.

Cluster governance structure, involvement of relevant stakeholders to steer the implementation of the recommendations are key to ensure elements of this plan come to fruition. To facilitate service development involving collaboration across disciplines, specialties and hospitals, respective CWGs have also recommended the establishment of cluster committees to provide oversight and coordination.

WORKFORCE

For the implementation of some of the recommended strategies, manpower and training are essential. The additional resources required for the recruitment and training of staff will be acquired through the annual planning process.

In addition to specialised skills training for specific clinical services, the CWGs have identified generic clinical knowledge and skills as core competencies among healthcare staff across specialties. For instance, basic competencies in elderly care and palliative care to match the needs of the rapidly ageing population. Staff training to facilitate the paradigm shift from the traditional inpatient care model to the ambulatory care model is essential for improved patient care and long term sustainable healthcare service development.

In this CSP, CWGs, such as the CWGs on Elderly Services, Women Services and Peri-operative Services, have proposed nurse-led services or stronger role of nursing professionals in patient care. Trainings will be required to prepare the nursing staff to take up the expanded roles in the new models of care.

INFORMATION AND COMMUNICATION TECHNOLOGY

Many of the CWG proposals have emphasised that information and communication technology (ICT) is crucial in realisation of the recommended new models of care. In particular, to facilitate the adoption of tele-medicine and tele-health, mobile technology should allow seamless, secured communication and sharing of essential clinical information between care teams across different settings. Common electronic platforms should facilitate the shared care models between different levels of care, as recommended by the CWGs on Elderly Services, Palliative Care Services and Medical-social Collaboration. Overall, these guidance are in sync with recommendations by the CWG on Innovation in Healthcare, that adoption of ICT should be one of the priorities to enhance service quality and improve efficiency and effectiveness in the delivery of care.

PHYSICAL FACILITIES AND DESIGN

While some of the clinical strategies proposed in this CSP can be commenced independent of hospital redevelopment, there are new models of care which require dedicated facilities and physical design for effective implementation. Due to the historical, staged approached to hospital facility development of facilities in HKEC, the spatial arrangement and relationship between different functions within the hospitals are suboptimal. Healthcare facility design concepts such as functional zoning and programme floors can be difficult to implement in full within the confines of the existing hospital complex and design.

Future hospitals and clinical facilities should be designed to allow flexible use of clinical space. Facilities with similar or related functions should be co-located to maximise the synergy between services and reduce duplication and inefficiencies. Furthermore, when major redevelopment or facility improvement opportunity arises in HKEC hospitals, the facilities should be designed to meet patients' needs, ranging from convenient way-finding system (e.g. signage, accessibility, culturally appropriate art and symbols), to a calm environment that promotes health and healing (e.g. greening and rehabilitation garden).

With the development of the Ambulatory Care Block at PYNEH in the Government's Second 10-year Hospital Development Plan, a concept plan for this development is underway, underpinned by this CSP. The proposals in this CSP will be translated into a physical design framework to guide the development of the Ambulatory Care Block at PYNEH and the related possible re-arrangement of hospital facilities on the campus.

CAPACITY PLANNING

Alongside the formulation of the clinical strategies, information on the projected capacity requirements of the cluster was also collated in parallel during the planning process, to facilitate the alignment and planning of future services and facilities. The focus of the projected capacity requirements is on the acute, extended and psychiatric care beds required to be provided in the cluster up to 2036. This is based on an overall HA-wide demand projection exercise, using demand modelling techniques, with 2014 as the base year.

The HA-wide demand projection takes into account population growth, demographic changes, chronic disease prevalence, as well as service utilisation specific to age, gender and specialty. It is conducted in close collaboration with clinicians from different clinical specialty committees, cluster management teams, and the Census and Statistics Department (C&SD) of the Government.

The following sections briefly outline the planning parameters and methodology for the demand projection.

DATA SOURCES

Projections are based on data from the following four main data sources:

- Service utilisation data from 2011 to 2014 extracted from the HA Clinical Data Repository, which includes the Integrated Patient Administration System and the Obstetrics Clinical Information System for newborn delivery data;
- Local birth statistics in 2014, and birth projection figures from 2015 to 2036 obtained from C&SD;
- Population projection figures from the C&SD and district-based population projections from the Planning Department of the Government, from 2015 to 2036; and
- Cross-border eligible persons (EPs) are quantified based on the Study on Demand for Public Healthcare Services by Hong Kong People in Guangdong Province led by C&SD, with collaboration with HA and Immigration Department.

PLANNING PARAMETERS

Parameters for the projections are specific to age, gender, and specialty. They comprise a combination of the following dimensions under different cares / specialties:

- For acute care, different age groups by different type of patient sources (emergency ambulance brought-in or emergency walk-in inpatient; elective inpatient and day patient) of 18 specialty groups (anaesthesiology, cardiothoracic surgery, dental and oral maxillofacial surgery, ENT, emergency medicine, gynaecology, hospice, ICU and HDU, medicine, neonatology, neurosurgery, obstetrics, oncology, ophthalmology, orthopaedics, paediatrics, surgery and other / unclassified specialty);
- For O&G specialties, age-specific rates per female population;
- For neonatology, including NICU and special care baby unit (SCBU), the planning parameters are devised from birth data;
- For extended care, including convalescent or rehabilitation care and local infirmary service, the ratio of acute to extended care bed days occupied; and
- For psychiatric care, the specific planning parameters as developed for each of the age- and disease-specific diagnosis groups are considered.

PROJECTION METHODOLOGY

For the projected bed requirements for each clinical specialty, with the exception of obstetrics, neonatology and psychiatry, the volume and mix of expected service demand from residents in each district is first computed taking into account the projected hospital service utilisation rates by age, gender and specialty, and average length of stay (ALOS), as well as population growth and ageing from 2014 to 2036. Scenario modelling is conducted for bed projection to model the impact of changes in service delivery.

Using the base-year data on specialty-specific cross district-cluster flow for acute bed days, the empirical hospital patronage pattern across districts by different type of patient sources (emergency ambulance brought-in or emergency walk-in inpatient, elective inpatient and day patient) is computed.

- For emergency inpatient cases, the empirical hospital patronage pattern is assumed to follow the ambulance catchment defined by Fire Services Department and fine-tuned with reference to the shortest travelling distance based on latest planned road works from the Civil Engineering and Development Department of the Government.

- For other type of patient sources, the hospital patronage pattern is fine-tuned with reference to the base-year empirical patronage pattern and the pattern adjusted based on the assumption that not less than 80% threshold for patients seek services at hospitals in the same cluster of their own district of residence.

The demand for HKEC acute bed days is then derived by applying these hospital patronage patterns specifically for HKEC, i.e. the proportion of residents residing in each district throughout Hong Kong who would use HKEC services.

In addition, since significant growth in the number of cross-border EPs is observed in the past years, the demand from cross-border EPs is also incorporated into the projection. In this regard, it is estimated that the utilisation by cross-border EPs in 2014 was around 1.9% and 0.6% of HA's total patient days for inpatient hospital services in the paediatrics specialty and other specialties respectively[39].

For obstetric services, bed demand is derived from the projected number of births in Hong Kong, including births to local and Mainland mothers. The territory-wide local birth projection figures are distributed across districts, based on the districts' projected female population aged 20 to 39 years, together with the district-age-specific fertility rates. For projected births to local mothers at district level and Mainland mothers at territory-wide level, the respective public hospital share and hospital patronage patterns among the eight HA obstetric units at base year are then applied to derive the projected obstetric bed requirement for HKEC.

With regard to neonatology, the projected births at PYNEH form the basis for estimating the SCBU and NICU service demand, in conjunction with respective utilisation rates. Referrals of infants born in other HA hospitals and selected tertiary paediatric services to be translocated to HKCH are also considered. At the same time the demand for SCBU and NICU from outborns (i.e. infants born in non-HA hospitals) are based on the respective utilisation rates, the total projected births at private hospitals, as well as the relative distribution of outborn admissions among PYNEH and the other SCBU and NICU in HA.

For extended care beds, the projected requirement for HKEC is computed based on the projected acute bed days for HKEC and the HA-wide age-gender-specialty ratio of acute to extended care bed days occupied per linked episode.

For psychiatric care beds, the projection model takes into account population growth and ageing with consideration of age- and disease-specific service utilisation rates (comprising various diagnosis groups as detailed in **Table 2**).

39. Based on the Study on Demand for Public Healthcare Services by Hong Kong People in Guangdong Province led by C&SD, with collaboration with HA and Immigration Department.

Table 2. Age- and Disease-specific Psychiatric Diagnosis Groups Used in the Psychiatry Service Demand Projection Model

Age group (years) [40]	Diagnosis group [41]
<18	• Psychosis (F20-29) • Disorders of psychological development / Mental retardation (F80-89, F70-79) • Affective disorders (F30-39) • Disruptive behavioral disorders (F90-92) • Emotional disorders (F93-94, F40-48) • Others
18-64	• Schizophrenia (F20-29) • Affective disorders (F30-39) • Neurotic, stress-related and somatoform disorders (F40-48) • Mental and behavioral disorders due to psychoactive substance use (F10-19) • Others
≥ 65	• Dementia (F00-03, G30) • Schizophrenia (F20-29) • Affective disorders (F30-39) • Neurotic, stress-related and somatoform disorders (F40-48) • Others

The projection framework for psychiatric care is developed on a headcount basis using 2014 as the base year. Based on the utilisation rate from 2010 to 2014, the model is applied to project the service demand for all the age- and diagnosis-specific groups. The projected headcounts are then applied to the age-disease-specific ALOS to obtain the projected bed days up to 2036.

Similar to other acute care specialties, the hospital patronage pattern is computed using the base-year data on cross-district hospital flow for bed days, as well as the projected population at district level. The demand for psychiatric care beds in HKEC is derived by applying the pattern specifically for PYNEH where inpatient psychiatric beds are provided.

40. For each age group, those with other or unknown diagnoses are considered and separately included in the model.
41. Diagnosis groups based on consultation with representative psychiatrists in Hong Kong, and WHO ICD-10 codes.

MODELLING THE CHRONIC DISEASE BURDEN

A Chronic Diseases Virtual Registry has been developed to quantify the number of patients with selected chronic diseases in HA. In this projection exercise, a total of 13 chronic diseases[42] have been included and defined based on specific diagnoses, procedures, laboratory test results, drug prescription records etc., together with some clinical specialists' input.

By using a stock & flow model, the projected number of patients with 13 chronic diseases in HA up to 2036 are projected based on the following parameters specific to age, gender and disease, from 2011 to 2014 data:

i. new cases per population at risk,

ii. disease progression matrix and

iii. death rate

Population growth and ageing over the same period are also included, as are the projection results of new top five common cancer cases provided by the Hong Kong Cancer Registry.

The projected chronic disease headcounts are then applied to the bed days per patient specific to age, gender and disease that deduced from 2011 to 2014 data in order to obtain the projected bed days for chronic disease patients up to 2036, for selected eight specialties[43] in acute care setting and the whole convalescent or rehabilitation care and local infirmary care settings.

ASSUMPTIONS FOR BED PROJECTION

The projection methodology described above provides a base case scenario to demonstrate the nature and volume of inpatient activities to be expected for HKEC in 2036, assuming the market share of HA as well as the patient volume and mix, referral patterns and policy would remain the same over the projection horizon for the cluster.

42. Selected 13 chronic diseases: top five common cancers (colorectal, breast, lung, liver and prostate), chronic kidney disease (CKD) stage 5, coronary heart disease (CHD), stroke, chronic obstructive pulmonary disease (COPD), hypertension (HT), diabetes mellitus (DM), osteoporosis (hip fracture as approximate), glaucoma.

43. Medicine, surgery, orthopaedics, oncology, ophthalmology, hospice, neurosurgery and cardiothoracic surgery.

The projection covers both inpatient and day-patient bed days. The projected bed days for acute care beds are translated into the number of inpatient acute beds required for each specialty by assuming an 80%-90% occupancy rate, depending on the proportion of emergency caseload. For instance, for ICU, HDU, NICU and obstetrics, a lower occupancy rate of 80% is assumed since these departments generally admit patients on an urgent but random basis, to allow for greater flexibility. As for day beds under acute care and inpatient beds for extended care services, 120% and 90% occupancy rates are assumed respectively.

For psychiatric care, by assuming an 85% occupancy rate, the projected bed days are translated into the number of inpatient beds required.

SCENARIO MODELLING IN BED PROJECTION

Besides the base case scenario, in which the service delivery model is assumed to remain largely unchanged, a different scenario is constructed to address the uncertainties of model assumptions and anticipated changes in service delivery, including reduction in unplanned readmission and pre-operation length of stay, as well as shifting of inpatient to day-patient for elective procedures.

PROJECTED BED REQUIREMENT

The projected bed requirement for HKEC in 2036 are summarised in **Table 3**. According to the demand projection, it is estimated that the cluster would need to provide around 3 600 acute and extended care beds[44], and also 400 beds for psychiatric care.

Table 3. Projected Bed Requirement for HKEC in 2036 under Different Scenarios

Care Category	Projected Bed Requirement for HKEC in 2036
Acute Care [44, 45]	2 500 – 2 600
Extended Care [46]	1 000
Psychiatric Care	400

44. Figures are based on average results according to the empirical patient flow and the adjusted flow with assumed threshold.
45. Excluding A&E observation beds (14 beds as at March 2019) and beds under nursery specialty (36 beds as at March 2019).
46. Including beds for convalescent, rehabilitation and infirmary care, but excluding beds for Central Infirmary Waiting List placement (372 beds as at March 2019).

CONCLUSION

CONCLUDING REMARKS

The HKEC CSP sets out the clinical strategies and future service models for the cluster to address the challenges facing the cluster, enhance the service quality and meet the long-term healthcare needs of the community. Recommendations in this CSP have been founded on the history and culture of the cluster, as well as the collective wisdom of staff from across HKEC and the neighbouring HKWC. Tremendous efforts have been made by the frontline clinical staff to propose and deliberate the future service directions for improved patient care through intra- and inter-cluster collaborations, as well as medical-social collaborations.

The overall strategies and future service directions affirm the role of PYNEH as the tertiary centre for HKEC. Apart from providing emergency and secondary services for the residents of Eastern district, it will continue to provide a wide range of cluster-based services for HKEC, such as anaesthesiology, clinical oncology, ENT, orthopaedics, pathology, radiology and urology. PYNEH will be a key member in various inter-cluster collaboration between HKEC and HKWC, such as the 24-hour primary PCI service and 24-hour IA thrombectomy service, vascular surgery service and P/NICU service.

RTSKH and SJH will continue serving as the acute hospital with 24-hour emergency services for Wan Chai district and Cheung Chau respectively. With the geographical location of RTSKH, its special role in emergency preparedness for emergency situation of major ad-hoc events on the Hong Kong Island is acknowledged. Contingency plans for large number of casualties with collaborations across hospitals and clusters are to be reviewed. With RTSKH's solid foundation in comprehensive elderly services, it will support cluster's development of elderly services to address the challenges of ageing population.

TWEH, CCH and WCHH will continue their roles as extended care hospitals in the cluster. As both TWEH and CCH receive step-down patients from cluster hospitals for rehabilitation and convalescent services, the referral criteria and mechanisms will be reviewed to improve patient flows within the cluster. TWEH will have a special focus on ambulatory care services, such as in ophthalmology and rehabilitation services. Subject to the Government's exploration and planning, WCHH may be handed over to the Government for redevelopment.

WAY FORWARD

A momentum for change has been built up within the cluster in the process of HKEC CSP formulation. The aspiration and enthusiasm of cluster staff to transform the service arrangement with multi-disciplinary collaborative approach to provide high quality medical care for the community are reflected in the strategies and recommendations.

To take the recommendations forward, robust planning on the implementation action plans and enablers requires strong leadership and detailed deliberations within the cluster. To achieve this, a cluster-based service development steering committee, led by the HKEC CCE, with participation of cluster management and senior clinicians in HKEC, will be set up to oversee the CSP implementation. For the inter-cluster collaborations, relevant stakeholders in HKWC will be engaged for coordinated service implementation.

Leveraging on the momentum for change, actions to implement the clinical strategies outlined in the HKEC CSP should begin immediately. This especially applies to those strategies that do not require additional resources. Examples include setting up or alignment of clinical protocols, streamlining of referral mechanisms, and establishment of cluster-based clinical governance structure.

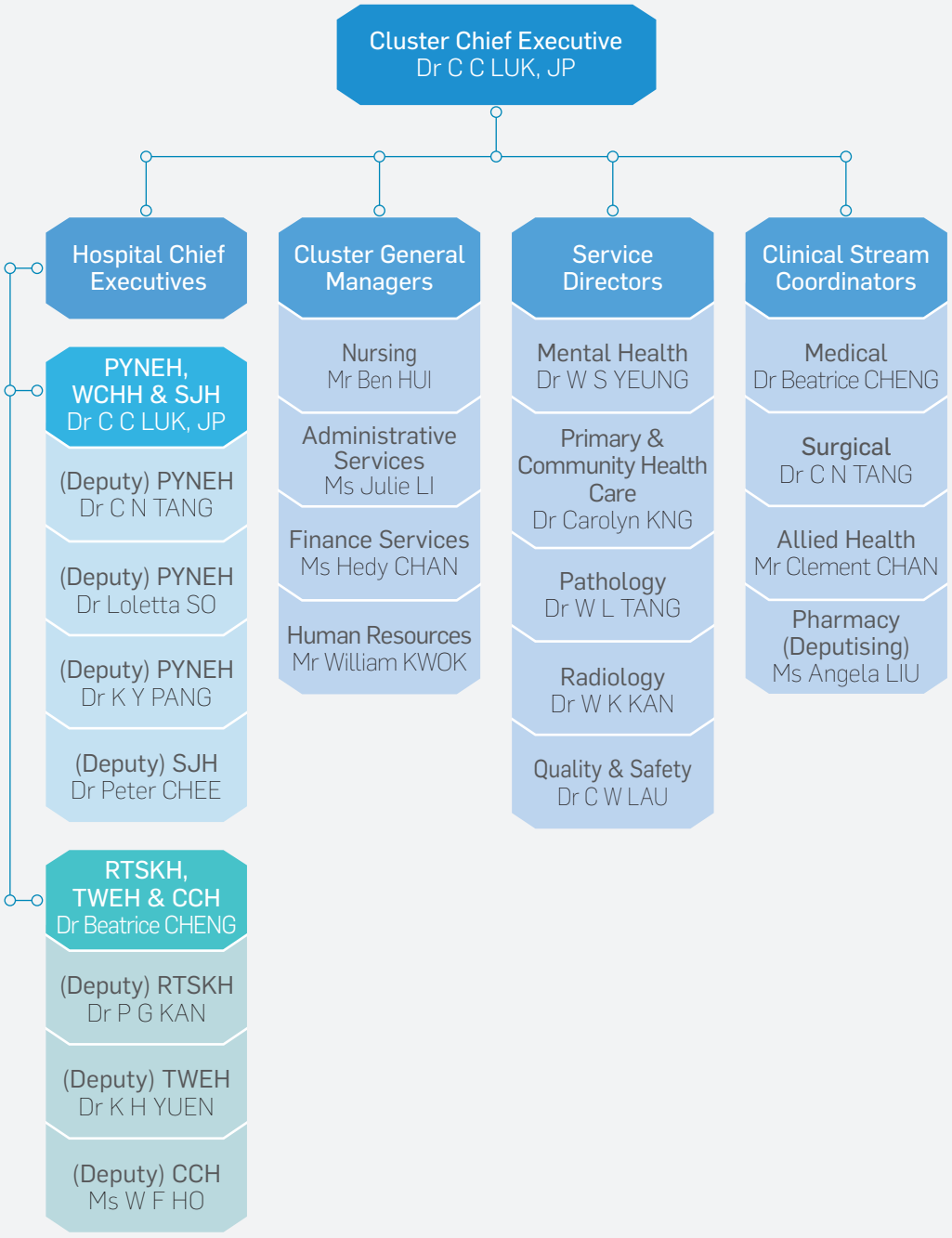
For successful implementation of the HKEC CSP, it counts on the active participation of frontline staff. To this end, continual staff engagement is essential to solicit their feedback and inputs. To sustain the process of change and transformation, an innovative and learning culture is required to be fostered with training and nurturing of emerging leaders in the cluster.

ABBREVIATIONS

A&E	Accident & Emergency
ACP	Advance Care Planning
ADHD	Attention Deficit Hyperactivity Disorder
AETC	Accident & Emergency Training Centre
ALOS	Average Length of Stay
C&A	Child and Adolescent
C&SD	Census and Statistics Department
CCE	Cluster Chief Executive
CCH	Cheshire Home, Chung Hom Kok
CGAS	Community Geriatric Assessment Service
CGAT	Community Geriatric Assessment Team
CIWL	Central Infirmary Waiting List
CNS	Community Nursing Service
COS	Chief of Service
CRM	Crew Resource Management
CRRC	Cardiac Rehabilitation and Resources Centre
CSP	Clinical Services Plan
CT	Computed Tomography
CWG	Clinical Work Group
DCC	Day Care Centre
DHC	District Health Centre
DM	Directors' Meeting
ENT	Ear, Nose & Throat
EOL	End-of-life
EP	Eligible Person
ERAS	Enhanced Recovery after Surgery
GDH	Geriatric Day Hospital
GOPC	General Outpatient Clinic
HA	Hospital Authority
HBOT	Hyperbaric Oxygen Therapy
HCE	Hospital Chief Executive

HDU	High Dependency Unit
HGC	Hospital Governing Committee
HKCH	Hong Kong Children's Hospital
HKEC	Hong Kong East Cluster
HKWC	Hong Kong West Cluster
IA	Intra-arterial
ICM	Integrated Care Model
ICT	Information and Communication Technology
ICU	Intensive Care Unit
IDSP	Integrated Discharge Support Programme for Elderly Patients
MASTC	Minimal Access Surgery Training Centre
MFM	Maternal Fetal Medicine
MSDC	Medical Services Development Committee
NAH	New Acute Hospital
NCSTC	Nethersole Clinical Simulation Training Centre
NGO	Non-government Organisation
O&G	Obstetrics and Gynaecology
P/NICU	Paediatric and Neonatal Intensive Care Unit
PAAC	Pre-anaesthetic Assessment Clinic
PAS	Pre-operative Assessment Service
PC	Palliative Care
PCI	Percutaneous Coronary Intervention
POMC	Peri-operative Medicine Clinic
PRC	Patient Resource Centre
PSCC	Patient Support Call Centre
PYNEH	Pamela Youde Nethersole Eastern Hospital
QMH	Queen Mary Hospital
RCHEs	Residential Care Homes for the Elderly
RH	Ruttonjee Hospital
RTSKH	Ruttonjee & Tang Shiu Kin Hospitals
SCBU	Special Care Baby Unit
SDA	Same Day Admission
SJH	St. John Hospital
SOPC	Specialist Outpatient Clinic
TSKH	Tang Shiu Kin Hospital
TWEH	Tung Wah Eastern Hospital
WCHH	Wong Chuk Hang Hospital

Appendix 1.
Current Organisational Structure



As at May 2020

Appendix 2.
Summary of Current Services

PAMELA YOUDE NETHERSOLE EASTERN HOSPITAL

Clinical Services

- Accident and Emergency Service
- Anaesthesia
- Clinical Oncology
- Clinical Pathology
- Ear, Nose and Throat
- Oral-Maxillofacial Surgery & Dental Services (under Department of Health)
- Family Medicine & Primary Healthcare
- Intensive Care Unit
- Medicine
- Neurosurgery
- Nuclear Medicine
- Obstetrics and Gynaecology
- Ophthalmology
- Orthopaedics and Traumatology
- Paediatrics and Adolescent Medicine
- Psychiatry
- Radiology
- Surgery

Allied Health Services

- Chaplaincy
- Clinical Psychology
- Community & Patient Resource
  - Patient Resource Centres
  - HKEC Community Service Office
- Dietetics
- Medical Physics
- Medical Social Work
- Occupational Therapy
- Physiotherapy
- Podiatry
- Prosthetic and Orthotic
- Speech Therapy

Pharmacy Services

Others

- HKEC Training Center for Healthcare Management & Clinical Technology
- Chai Wan Dental Clinic (under Department of Health)
- Chai Wan Government Families Clinic (under Department of Health)
- Chai Wan Social Hygiene Clinic (Dermatology) (under Department of Health)
- Chinese Medicine Clinic (under tripartite model of collaboration with NGO and university)
- Occupational Health Centre
- Anne Black General Outpatient Clinic
- Chai Wan General Outpatient Clinic
- North Lamma General Outpatient Clinic
- Peng Chau General Outpatient Clinic
- Sai Wan Ho General Outpatient Clinic
- Sok Kwu Wan General Outpatient Clinic
- Shau Kei Wan Jockey Club General Outpatient Clinic
- Stanley General Outpatient Clinic
- Wan Tsui General Outpatient Clinic

RUTTONJEE & TANG SHIU KIN HOSPITALS

RUTTONJEE HOSPITAL

Clinical Services

- Accident and Emergency Service
- Anaesthesia
- Cardiac and Intensive Care Unit
- Clinical Pathology
- Medicine and Geriatrics
- Orthopaedics and Traumatology
- Radiology
- Surgery

Allied Health Services

- Clinical Psychology
- Dietetics
- Medical Social Work
  - Health Resource Centre
- Occupational Therapy
- Physiotherapy
- Podiatry
- Prosthetic and Orthotics
- Speech Therapy

Pharmacy Services

TANG SHIU KIN HOSPITAL

Allied Health Services

- Occupational Therapy
- Physiotherapy

Pharmacy Services

Others

- Accident & Emergency Training Centre
- Chaplaincy
- Chinese Medicine Clinic (under tripartite model of collaboration with NGO and university)
- Family Medicine Training Centre
- Family Medicine Specialist Clinic
- Hospital Authority Staff Clinic
- Patient Support Call Centre
- Violet Peel General Outpatient Clinic

TUNG WAH EASTERN HOSPITAL

Clinical Services

- Ophthalmology
- Medicine
- Rehabilitation
  - Stroke/Neurology/Neurosurgical
  - Pulmonary
  - Cardiac
  - Geriatrics
  - Orthopaedics & Traumatology

Allied Health Services

- Chaplaincy & Pastoral Care
- Clinical Psychology
- Dietetics
- Medical Social Service
  - Patient Resource Centre
- Occupational Therapy
- Optometry
- Orthoptics
- Pathology
- Physiotherapy

- Podiatry
- Prosthetic and Orthotic
- Radiology
- Speech Therapy

Pharmacy Services

Others

- Tseng Hin Pei Rehabilitation Day Hospital
- Tseng Cheng Tseng Pei Integrated Community Rehabilitation Centre
- Siu King Chung Cardiac Rehabilitation and Resource Centre
- Ng Chong Sau Mei Integrated Diabetes Mellitus Research and Training Centre
- Tung Wah Eastern Hospital General Outpatient Department

WONG CHUK HANG HOSPITAL

Clinical Services

- Geriatrics – Infirmary

Nursing Services Division

- Patient Resource Centre

Allied Health Services

- Chaplaincy and Pastoral Care
- Dietetics
- Medical Social Service
- Occupational Therapy
- Physiotherapy
- Podiatry
- Speech Therapy
- X-Ray

Pharmacy Services

CHESHIRE HOME, CHUNG HOM KOK

Clinical Services

- Infirmary Care
- Rehabilitative / Extended Care

Allied Health Services

- Chaplaincy
- Dietetics
- Medical Social Service
  - Patient Resource Centre
- Occupational Therapy
- Physiotherapy
- Podiatry
- Speech Therapy

Pharmacy Services

ST. JOHN HOSPITAL

Clinical Services

- Accident and Emergency Service

Allied Health Services

- Chaplaincy
- Dietetic
- Occupational Therapy
- Physiotherapy
- X-ray

Pharmacy Services

Others

- St. John Hospital General Outpatient Department
  - Patient Resource Centre

Appendix 3.
Project Structure & Governance

HKEC CSP PROJECT COMMITTEE

Terms of Reference

- To plan and guide the development of the HKEC CSP
- To analyse, scrutinise and advise on the principles, assumptions, models of care, capacity planning and key recommendations proposed in the development of the CSP
- To receive the report generated by the external consultancy and produce a final CSP for consideration by members of the Directors' Meeting (DM) and Medical Services Development Committee (MSDC)

Membership

Co-chairs

Dr C C LUK, JP	Cluster Chief Executive, HKEC / Hospital Chief Executive, PYNEH, WCHH & SJH
Dr Libby LEE	Director (Strategy & Planning), HA Head Office

Members

Mr Andrew FUNG, BBS, JP	Chairperson, PYNEH Hospital Governing Committee
Dr Vitus LEUNG, JP	Chairperson, RTSKH Hospital Governing Committee
Mr Vinci WONG	Chairperson, TWEH Hospital Governing Committee (up to 31 March 2019)
Dr Ken TSOI	Chairperson, TWEH Hospital Governing Committee (up to 31 March 2020)
Ms Ginny MAN	Chairperson, TWEH Hospital Governing Committee (from 1 April 2020)
Dr Albert WONG	Chairperson, CCH Hospital Governing Committee
Dr Beatrice CHENG	Clinical Stream Coordinator (Medical), HKEC / Hospital Chief Executive, RTSKH, TWEH & CCH

Dr C N TANG	Clinical Stream Coordinator (Surgical), HKEC / Deputy Hospital Chief Executive, PYNEH / Chief of Service (Surgery), PYNEH / Director, HKEC Training Centre for Healthcare Management & Clinical Technology / Director, Minimal Access Surgery Training Centre
Dr C W LAU	Cluster CSP Planning Team Head & Service Director (Quality & Safety), HKEC
Mr Ben HUI	Cluster General Manager (Nursing), HKEC / General Manager (Nursing), PYNEH
Ms Julie LI	Cluster General Manager (Administrative Services), HKEC / General Manager (Administrative Services), PYNEH
Mr Mico CHOW	Patient Representative
Dr Flora TSANG	Head Office CSP Planning Team Head & Chief Manager (Strategy, Service Planning & Knowledge Management), HA Head Office
Ms Eva TSUI	Chief Manager (Statistics & Data Science), HA Head Office (up to 31 August 2020)
Mr Alan CHEUNG	Chief Manager (Statistics & Data Science), HA Head Office (from 1 September 2020)
Mr Donald LI	Chief Manager (Capital Planning), HA Head Office
Dr Christy LAM	Senior Manager (Strategy & Service Planning), HA Head Office (from 14 October 2019)

Secretary

Ms Nancy WONG	Senior Hospital Administrator (Hospital Accreditation & Training Centre), PYNEH

HKEC CSP ADVISORY PANEL

Terms of Reference

- To review, comment & provide advice to the Project Committee in the development of the HKEC CSP
- To review and provide expert comment and feedback to the Project Committee on the key observations and recommendations proposed by the external consultancy on the HKEC CSP

Membership

Co-Chairs

Dr C C LUK, JP	Cluster Chief Executive, HKEC / Hospital Chief Executive, PYNEH, WCHH & SJH
Dr Libby LEE	Director (Strategy & Planning), HA Head Office

Members

Dr H T LUK	Council Member, Hong Kong Academy of Medicine
Prof Joseph LUI	Clinical Professor of Administrative Medicine Practice, Li Ka Shing Faculty of Medicine, The University of Hong Kong
Ms Susanna LEE	Vice-President, The Hong Kong Academy of Nursing
Ms Connie LOK	Patient Representative, HKEC
Dr Theresa LI	Cluster Chief Executive, Hong Kong West Cluster / Hospital Chief Executive, Queen Mary Hospital & Tsan Yuk Hospital
Dr Flora TSANG	Head Office CSP Planning Team Head & Chief Manager (Strategy, Service Planning & Knowledge Management), HA Head Office

HKEC CSP PLANNING TEAM

Membership

Co-Chairs

Dr C W LAU	Cluster CSP Planning Team Head & Service Director (Quality & Safety), HKEC
Dr Flora TSANG	Head Office CSP Planning Team Head & Chief Manager (Strategy, Service Planning & Knowledge Management), HA Head Office

HKEC

Ms Julie LI	Cluster General Manager (Administrative Services), HKEC / General Manager (Administrative Services), PYNEH
Dr Skyi PANG	Associate Consultant (Surgical), PYNEH
Dr Axel SIU	Consultant (Accident & Emergency), RTSKH
Dr Betty YOUNG	Consultant (Medicine), Deputy Co-ordinator (Quality & Safety) & Infection Control Officer, TWEH
Ms D L CHEONG	Senior Nursing Officer (Service Development), HKEC / SNO (Hospital Accreditation, Service Development), PYNEH
Ms Nancy WONG	Senior Hospital Administrator (Hospital Accreditation & Training Centre), PYNEH

HA Head Office

Dr Christy LAM	Manager (Strategy & Service Planning), HA Head Office (up to 13 October 2019) Senior Manager (Strategy & Service Planning), HA Head Office (from 14 October 2019)
Mr Raymond LI	Manager (Strategy & Service Planning), HA Head Office
Ms Joanne CHAN	Executive Officer (Strategy & Service Planning), HA Head Office
Ms Maisie TAM	Executive Assistant (Strategy & Service Planning), HA Head Office

Secretary

Ms Ceinlys WONG	Hospital Administrator I (Quality & Safety), PYNEH

CLUSTER MANAGEMENT COMMITTEE

Membership

Chairman

Dr C C LUK, JP	Cluster Chief Executive, HKEC / Hospital Chief Executive, PYNEH, WCHH & SJH

Members

Dr Beatrice CHENG	Hospital Chief Executive, RTSKH, TWEH & CCH / Clinical Stream Coordinator (Medical), HKEC
Dr C N TANG	Deputy Hospital Chief Executive, PYNEH / Clinical Stream Coordinator (Surgical), HKEC
Dr K Y PANG	Deputy Hospital Chief Executive, PYNEH
Dr Loletta SO	Deputy Hospital Chief Executive, PYNEH
Dr P G KAN	Deputy Hospital Chief Executive, RTSKH
Dr K H YUEN	Deputy Hospital Chief Executive, TWEH
Ms W F HO	Deputy Hospital Chief Executive, CCH
Dr Peter CHEE	Deputy Hospital Chief Executive, SJH
Ms Julie LI	Cluster General Manager (Administrative Services), HKEC
Ms Hedy CHAN	Cluster General Manager (Finance), HKEC
Mr William KWOK	Cluster General Manager (Human Resources), HKEC
Mr Ben HUI	Cluster General Manager (Nursing), HKEC
Dr Carolyn KNG	Service Director (Primary & Community Health Care), HKEC
Dr C W LAU	Service Director (Quality & Safety), HKEC
Dr W S YEUNG	Service Director (Mental Health), HKEC
Dr W L TANG	Service Director (Pathology), HKEC
Dr W K KAN	Service Director (Radiology), HKEC
Mr Clement CHAN	Clinical Stream Coordinator (Allied Health), HKEC
Ms Angela LIU	Deputising Clinical Stream Coordinator (Pharmacy), HKEC
Mrs Josephine CHIU	Senior Finance Manager (Resources Planning & Management), HKEC
Ms Maggie CHEUNG	Senior Human Resources Manager (Manpower & Remuneration), HKEC
Ms Katherine NGAI	Senior Hospital Administrator, WCHH, SJH & GOPC

Secretary

Ms Mabel CHAN	Senior Hospital Administrator (Corporate Services), PYNEH

PYNEH HOSPITAL GOVERNING COMMITTEE

Membership

Chairman

Mr Andrew FUNG, BBS, JP

Members

Mr Derek CHAN
Mr David CHAU
Dr Eric CHENG, BBS, MH, JP
Mr Roland CHOW
Ms Michelle CHOW
Mr Mico CHOW
Mr Franklin LAM, BBS
Ms K S LAU, BBS
Mr John LI, MH
Mr Wilson MOK
Rt Rev Dr Thomas SOO, JP
Mr Dominic WONG
Mr P K YEUNG, JP

Ex-officio Members

Hospital Authority Chief Executive or his representative	
Dr C C LUK, JP	Cluster Chief Executive, HKEC / Hospital Chief Executive, PYNEH, WCHH & SJH
Hospital Chief Executive or his representative	
Dr Loletta SO	Deputy Hospital Chief Executive, PYNEH

RTSKH HOSPITAL GOVERNING COMMITTEE

Membership

Chairman

Dr Vitus LEUNG, JP

Members

Dr Henry KONG
Mr Steve LAN
Ms Susi LAW
Prof Hon Joseph LEE, SBS, JP
Mr Edwin LEUNG
Dr Carl LEUNG
Mr Norman LO, MH, JP
Mr Terry NG
Mrs Gloria NG WONG, BBS, JP
Mr Burji SHROFF
Mr Neville SHROFF, JP
Mr Noshir SHROFF
Mrs Purviz SHROFF, MH
Mr Robert SHUM
Mr Richard TANG, SBS, JP

Ex-officio Members

Hospital Authority Chief Executive or his representative	
Dr C C LUK, JP	Cluster Chief Executive, HKEC / Hospital Chief Executive, PYNEH, WCHH & SJH
Hospital Chief Executive or his representative	
Dr Beatrice CHENG	Hospital Chief Executive, RTSKH

TWEH HOSPITAL GOVERNING COMMITTEE

Membership

Chairman

Ms Ginny MAN

Members

Ms Maisy HO, BBS
Mrs Katherine MA, BBS
Dr Y L LEE, BBS, JP
Mr Vinci WONG, BBS
Dr Ken TSOI
Mr Kazaf TAM
Mr Philip MA
Mr Herman WAI
Ms Mandy TANG
Mr Orlando HO
Mr Albert SU
Mr Henry LAI
Mr Lincoln TSO
Mr Raymond CHOW, JP
Mr L M KWOK, SBS, CSDSM
Ms Bonnie NG
Ms Winnie NG, JP

Ex-officio Members

Hospital Authority Chief Executive or his representative	
Dr C C LUK, JP	Cluster Chief Executive, HKEC / Hospital Chief Executive, PYNEH, WCHH & SJH
Hospital Chief Executive or his representative	
Dr Beatrice CHENG	Hospital Chief Executive, TWEH

CCH HOSPITAL GOVERNING COMMITTEE

Membership

Chairman

Dr Albert WONG

Members

Mr B W CHAN, SBS, JP
Mr Raymond CHAN
Mrs Shelley M CHOW
Ms Betty KO
Dr Bernard KONG
Ms Janice MORTON
Dr Paul YOUNG, JP

Ex-officio Members

Hospital Authority Chief Executive or his representative	
Dr C C LUK, JP	Cluster Chief Executive, HKEC / Hospital Chief Executive, PYNEH, WCHH & SJH
Hospital Chief Executive or his representative	
Dr Beatrice CHENG	Hospital Chief Executive, CCH

HONG KONG EAST CLUSTER MEDICAL COMMITTEE

Membership

Chairman

Dr C C LUK, JP	Cluster Chief Executive, HKEC / Hospital Chief Executive, PYNEH, WCHH & SJH

Members

Dr Beatrice CHENG	Clinical Stream Coordinator (Medical), HKEC / Hospital Chief Executive, RTSKH, TWEH & CCH
Dr C N TANG	Clinical Stream Coordinator (Surgical), HKEC / Deputy Hospital Chief Executive & Chief of Service (Surgery), PYNEH
Dr Loletta SO	Deputy Hospital Chief Executive / Consultant (Medicine), PYNEH
Dr K Y PANG	Deputy Hospital Chief Executive / Chief of Service (Neurosurgery), PYNEH
Dr P G KAN	Deputy Hospital Chief Executive / Clinical Coordinator / Chief of Service (Accident and Emergency), RTSKH
Dr Peter CHEE	Deputy Hospital Chief Executive / Associate Consultant in-charge (Accident and Emergency), SJH
Dr K H YUEN	Deputy Hospital Chief Executive, Chief of Service (Medicine & Rehabilitation) & Coordinator (Quality & Safety), TWEH
Ms W F HO	Deputy Hospital Chief Executive / Department Operations Manager (Nursing), CCH
Dr W L TANG	Service Director (Clinical Pathology), HKEC / Chief of Service (Clinical Pathology), PYNEH
Dr W S YEUNG	Service Director (Mental Health), HKEC / Chief of Service (Psychiatry), PYNEH
Dr Carolyn KNG	Service Director (Primary & Community Health Care), HKEC / Consultant (Medicine & Geriatrics) / Head of Division, Geriatrics, RTSKH
Dr Michelle WONG	Deputy Service Director (Primary & Community Health Care) / Chief of Service (Family Medicine & Primary Health Care), HKEC
Dr C W LAU	Service Director (Quality & Safety), HKEC
Dr W K KAN	Service Director (Radiology), HKEC / Chief of Service (Radiology), PYNEH
Mr Clement CHAN	Clinical Stream Coordinator (Allied Health), HKEC / Allied Health Coordinator, RTSKH / Department Manager (Physiotherapy), RTSKH
Ms Angela LIU	Deputising Clinical Stream Coordinator (Pharmacy), HKEC / Deputising Department Manager (Pharmacy), PYNEH
Mr Ben HUI	Cluster General Manager (Nursing), HKEC / General Manager (Nursing), PYNEH
Ms Julie LI	Cluster General Manager (Administrative Services), HKEC / General Manager (Administrative Services), PYNEH

Ms Hedy CHAN	Cluster General Manager (Finance), HKEC
Mr William KWOK	Cluster General Manager (Human Resources), HKEC
Ms L K CHAN	Deputy General Manager (Nursing) / Department Operations Manager (Paediatrics & Adolescent Medicine), PYNEH
Mr Harris LAM	General Manager (Nursing), RTSKH
Ms Dora TANG	General Manager (Administrative Services), RTSKH
Mr Michael NG	Coordinator (Occupational Safety & Health) / General Manager (Administrative Services), TWEH
Dr L W CHAN	Chief of Service (Accident and Emergency), PYNEH
Dr M C CHU	Chief of Service (Anaesthesia), PYNEH
Dr Rebecca YEUNG	Chief of Service (Clinical Oncology), PYNEH
Dr Amy Sonya CHEUNG	Chief of Service (Ear, Nose & Throat), PYNEH
Dr H P SHUM	Chief of Service (Intensive Care Unit), PYNEH
Dr K K CHAN	Chief of Service (Medicine), PYNEH
Dr K K TANG	Chief of Service (Obstetrics & Gynaecology), PYNEH
Dr T C KO	Chief of Service (Ophthalmology), TWEH & PYNEH
Dr W Y MOK	Chief of Service (Orthopaedics & Traumatology), PYNEH
Dr Wilson YEUNG	Chief of Service (Paediatrics & Adolescent Medicine), PYNEH
Dr Emmy LAU	Deputy Chief of Service (Medicine), PYNEH / Consultant (Medicine), WCHH
Dr S Y CHIU	Deputy Chief of Service (Orthopaedics & Traumatology), PYNEH
Dr Oliver CHAN	Deputy Chief of Service (Surgery), PYNEH
Dr Jenny LEUNG	Clinical Coordinator / Chief of Service (Medicine & Geriatrics) / Head of Department (Endocrinology and Diabetes), RTSKH
Dr Edward HUI	Clinical Coordinator (Quality & Safety) / Chief of Service (Surgery), RTSKH
Dr W M TSANG	Consultant (Oral-Maxillofacial Surgery), PYNEH
Dr Frankie CHOI	Consultant in-charge (Nuclear Medicine), PYNEH
Ms Katherine NGAI	Senior Hospital Administrator, WCHH, SJH & GOPC
Ms Michelle PANG	Deputising Senior Information Officer, HKEC / Media Relations Person in-charge (Corporate Services), PYNEH

Secretary

Ms Janet LO	Hospital Administrator I (Corporate Services), PYNEH

PYNEH HOSPITAL MANAGEMENT COMMITTEE

Membership

Chairman

Dr C C LUK, JP	Hospital Chief Executive, PYNEH

Members

Dr C N TANG	Deputy Hospital Chief Executive, PYNEH
Dr K Y PANG	Deputy Hospital Chief Executive, PYNEH
Dr Loletta SO	Deputy Hospital Chief Executive, PYNEH
Dr C W LAU	Service Director (Quality & Safety), HKEC
Ms Julie LI	General Manager (Administrative Services), PYNEH
Ms Hedy CHAN	Cluster General Manager (Finance), HKEC
Mr William KWOK	Cluster General Manager (Human Resources), HKEC
Mr Ben HUI	General Manager (Nursing), PYNEH
Ms Marianne LUI	Deputy General Manager (Nursing), PYNEH
Ms Rose YONG	Allied Health Coordinator, PYNEH
Ms Anita O	Senior Finance Manager (PYNEH/SJH/WCHH), HKEC
Ms Mimi TAM	Senior Human Resources Manager (Staff Management & Human Resources Partnership), HKEC

Secretary

Ms Mabel CHAN	Senior Hospital Administrator (Corporate Services), PYNEH

RTSKH HOSPITAL MANAGEMENT COMMITTEE

Membership

Chairman

Dr Beatrice CHENG	Hospital Chief Executive, RTSKH

Members

Dr P G KAN	Deputy Hospital Chief Executive / Chief of Service (Accident & Emergency), RTSKH
Dr Edward HUI	Clinical Coordinator (Quality & Safety) / Chief of Service (Surgery), RTSKH
Dr Jenny LEUNG	Chief of Service (Medical & Geriatrics), RTSKH
Dr Carolyn KNG	Consultant (Medical & Geriatrics), RTSKH
Dr K L LEE	Consultant (Medical & Geriatrics), RTSKH
Dr H C FAN	Consultant (Medical & Geriatrics), RTSKH
Dr Alwin YEUNG	Coordinator (Intensive Care Unit) / Consultant (Medical & Geriatrics), RTSKH
Dr W L TANG	Service Director (Pathology), HKEC
Dr Raymond CHAN	Consultant (Radiology), HKEC
Dr M F LEUNG	Consultant (Orthopaedics & Traumatology), HKEC
Dr S Y CHU	Associate Consultant (Anaesthesia), HKEC
Ms Dora TANG	General Manager (Administrative Services), RTSKH
Mr Harris LAM	General Manager (Nursing), RTSKH
Ms Lily CHUNG	Senior Finance Manager (RTSKH/TWEH), HKEC
Mr Clement CHAN	Allied Health Coordinator / Department Manager (Physiotherapy), RTSKH
Mr P K YICK	Senior Pharmacist (Pharmacy), RTSKH
Ms Dorothy CHEUK	Human Resources Manager (Staff Management & Human Resources Partnership 2), HKEC
Ms Y L LEUNG	Department Operations Manager 1 (Medical & Geriatrics), RTSKH
Ms Angela LEE	Department Operations Manager 2 (Medical & Geriatrics, Intensive Care Unit), RTSKH
Ms Flora MAK	Department Operations Manager 3 (Medical & Geriatrics), RTSKH
Ms Monica NG	Department Operations Manager (Anaesthesia, Operating Theatre, Orthopaedics & Traumatology, Surgery, Combined Endoscopy Unit), RTSKH
Mr C P LEUNG	Department Operations Manager (Accident and Emergency, Specialist Out-patient Department), RTSKH

Secretary

Ms Phyllis MAK	Hospital Manager (Supplies), RTSKH

TWEH HOSPITAL MANAGEMENT COMMITTEE

Membership

Chairman

Dr Beatrice CHENG	Hospital Chief Executive, TWEH

Members

Dr Bonnie CHENG	Consultant (Anaesthesia), PYNEH
Dr W L TANG	Service Director (Pathology), HKEC
Ms April CHENG	Department Manager (Clinical Pathology), PYNEH
Dr W Y MOK	Chief of Service (Orthopaedics &Traumatology), PYNEH
Dr W L TSANG	Consultant (Orthopaedics &Traumatology), PYNEH
Dr Raymond CHAN	Consultant (Radiology), RTSKH
Mr George HUI	Department Manager (Radiology), RTSKH
Dr K H YUEN	Deputy Hospital Chief Executive, Chief of Service (Medicine & Rehabilitation) & Co-ordinator (Quality & Safety), TWEH
Dr T C KO	Chief of Service (Ophthalmology), TWEH
Mr Michael NG	General Manager (Administrative Services), TWEH
Ms Maggie CHAN	General Manager (Nursing), TWEH
Mr Ken LAU	Department Manager (Physiotherapy), TWEH
Ms Lewina CHAN	Senior Occupational Therapist in-charge, TWEH
Ms Ann WONG	Medical Social Worker in-charge, TWEH
Ms Wendy CHAN	Pharmacist in-charge, TWEH
Ms Mimy WOO	Dietitian in-charge, TWEH
Ms S W TANG	Department Operations Manager (Medicine & Rehabilitation), TWEH
Ms S Y SIU	Department Operations Manager (Ophthalmology), TWEH
Ms Lily CHUNG	Senior Finance Manager (RTSKH/TWEH), HKEC
Ms Loretta TANG	Assistant Human Resources Manager (Staff Management & Human Resource Partnership Team 2), HKEC

Secretary

Ms Alice WONG	Hospital Manager, TWEH

WCHH HOSPITAL MANAGEMENT COMMITTEE

Membership

Chairman

Dr C C LUK, JP	Hospital Chief Executive, WCHH

Members

Dr Emmy LAU	Consultant (Medicine), WCHH
Ms Nora KWOK	General Manager (Nursing), WCHH
Mr Harry SUEN	Catering Manager I, HKEC
Ms Anita O	Senior Finance Manager (PYNEH/SJH/WCHH), HKEC
Ms Katherine NGAI	Senior Hospital Administrator, WCHH, SJH & GOPC
Ms Yvonne CHAN	Ward Manager, WCHH
Mr P K YICK	Senior Pharmacist, RTSKH
Ms Menda CHAU	In charge of Occupational Therapy Department, WCHH
Mr William TAM	In charge of Physiotherapy Therapy Department, WCHH
Ms Summer LI	Assistant Human Resources Manager (Staff Management & Human Resources Partnership), HKEC

Secretary

Ms Jolie WAT	Assistant Hospital Administrator, WCHH

CCH HOSPITAL MANAGEMENT COMMITTEE

Membership

Chairman

Dr Beatrice CHENG	Hospital Chief Executive, CCH

Members

Ms W F HO	Deputy Hospital Chief Executive / Department Operations Manager (Nursing), CCH
Dr K C LEUNG	Visiting Consultant / Consultant (Medical & Rehabilitation), TWEH
Mr Michael NG	General Manager (Administrative Services), TWEH
Ms Maple LO	Senior Finance Manager (FO&C/CCH), HKEC
Ms Fanny CHEN	Assistant Finance Manager, HKEC
Ms Loretta TANG	Assistant Human Resources Manager, HKEC
Ms Lily CHOA	Ward Manager, CCH
Ms C M KO	Ward Manager, CCH
Mr Andy LAM	Advanced Practice Nurse, CCH
Ms W Y HO	Advanced Practice Nurse, CCH
Ms Carol HO	Social Work Officer, HKEC
Ms Suki HUI	Occupational Therapist I, CCH
Ms Frances LAW	Physiotherapist I, CCH

Secretary

Ms Rosita LAU	Hospital Administrator I, CCH

SJH HOSPITAL MANAGEMENT COMMITTEE

Membership

Chairman

Dr C C LUK, JP	Hospital Chief Executive, SJH

Members

Dr Peter CHEE	Deputy Hospital Chief Executive & Associate Consultant in-charge, SJH
Ms Amy LAW	Department Operations Manager, SJH
Ms Anita O	Senior Finance Manager (PYNEH/SJH/WCHH), HKEC
Ms Katherine NGAI	Senior Hospital Administrator, WCHH, SJH & GOPC
Ms Yoko HUNG	Occupational Therapist I, SJH
Ms Ruby LAM	Physiotherapist I, SJH
Mr Brian WONG	Pharmacist, SJH
Mr K K LUK	Radiographer I, SJH
Ms Summer LI	Assistant Human Resources Manager (Staff Management & Human Resources Partnership), HKEC

Secretary

Ms Judy CHAN	Hospital Administrator I, SJH

Appendix 4.
Membership of Clinical Work Groups

CWG (INNOVATION IN HEALTHCARE) (As at 28 November 2019)

Co-chairs

Dr C W LAU	Service Director (Quality & Safety), HKEC
Dr Natalie LEUNG	Director, Nethersole Clinical Simulation Training Center / Associate Consultant (Intensive Care Unit), PYNEH

Members

Dr W L TANG	Service Director (Clinical Pathology), HKEC / Chief of Service (Clinical Pathology), PYNEH
Dr P G KAN	Deputy Hospital Chief Executive / Clinical Coordinator 1 / Chief of Service (Accident & Emergency Department), RTSKH
Mr William KWOK	Cluster General Manager (Human Resources), HKEC
Ms Julie LI	Cluster General Manager (Administrative Services), HKEC / General Manager (Administrative Services), PYNEH
Ms McShirley LEUNG	Clinical Stream Coordinator (Pharmacy), HKEC / Department Manager (Pharmacy), PYNEH (up to 22 October 2019)
Ms Angela LIU	Deputising Clinical Stream Coordinator (Pharmacy), HKEC / Deputising Department Manager (Pharmacy), PYNEH (from 23 October 2019)
Dr Jennifer LEE	Associate Consultant (Surgery), PYNEH
Dr T W WONG	Associate Consultant (Medicine & Geriatrics), RTSKH
Dr Gloria ABOO	Senior Nursing Officer (Quality & Safety), HKEC / Senior Nursing Officer (Quality & Safety, Nursing Informatics, Professional Development), PYNEH
Ms Sally LIU	Coordinator (Occupational Therapy), HKEC / Department Manager (Occupational Therapy), PYNEH
Mr L C MOK	Department Operations Manager (Orthopaedics & Traumatology), PYNEH
Mr Joseph LAU	Systems Manager (Information Technology), HKEC
Mr Eric WONG	Cluster Manager (Facilities Management), HKEC

Ms Nancy WONG	Senior Hospital Administrator (Hospital Accreditation & Training Centre), PYNEH
Mr Tony TAI	Biomedical Engineer, HKEC
Mr Tacko TSOI	Advanced Practice Nurse (Nursing Services Division), PYNEH / Nurse Coordinator, Nethersole Clinical Simulation Training Center

Secretary

Ms Ceinlys WONG	Hospital Administrator I (Quality & Safety), PYNEH

CWG (MEDICAL-SOCIAL COLLABORATION) (As at 28 November 2019)

Co-Chairs

Dr Carolyn KNG	Service Director (Primary & Community Health Care), HKEC / Consultant (Medicine & Geriatrics) / Head of Division, Geriatrics, RTSKH
Dr Wendy WONG	Associate Consultant (Paediatrics & Adolescent Medicine), PYNEH

Members

Dr Loletta SO	Deputy Hospital Chief Executive, PYNEH / Consultant (Medicine), PYNEH
Dr Michelle WONG	Deputy Service Director (Primary & Community Health Care) / Chief of Service (Family Medicine & Primary Healthcare), HKEC
Dr Rebecca YEUNG	Chief of Service (Clinical Oncology), PYNEH
Dr C K KAN	Consultant (Psychiatry), PYNEH
Dr K C LEUNG	Consultant (Medicine), TWEH
Mr Ben HUI	Cluster General Manager (Nursing), HKEC
Ms Flora MAK	Department Operations Manager (Medicine & Geriatrics) , RTSKH / Department Operations Manager (Patient Support Call Center / Community Health Services), HKEC
Mr Clement CHAN	Clinical Stream Coordinator (Allied Health), HKEC
Ms Rebecca WONG	Coordinator (Patient Resource Center & Community Services), HKEC
Ms Edith YIM	Coordinator (Medical Social Services), HKEC

Secretary

Ms Hazel FUNG	Community Services Officer (Community Services), HKEC

CWG (ELDERLY SERVICES) (As at 28 November 2019)

Co-Chairs

Dr Jonathan CHAN	Deputy Service Director (Quality & Safety), HKEC / Associate Consultant (Medicine), PYNEH
Dr Selina CHAN	Associate Consultant (Medicine & Geriatrics), RTSKH

Members

Dr Michelle WONG	Deputy Service Director (Primary & Community Health Care) / Chief of Service (Family Medicine & Primary Healthcare), HKEC
Dr W C LAO	Chief of Service (Medicine), PYNEH
Dr W Y MOK	Chief of Service (Orthopaedics & Traumatology), PYNEH
Dr L W CHAN	Chief of Service (Accident & Emergency), PYNEH
Dr Jenny LEUNG	Clinical Coordinator 2 / Chief of Service (Medicine & Geriatrics) / Head of Department (Endocrinology and Diabetes), RTSKH
Dr P G KAN	Deputy Hospital Chief Executive / Clinical Coordinator 1 / Chief of Service (Accident & Emergency Department), RTSKH
Dr Carolyn KNG	Service Director (Primary & Community Health Care), HKEC / Consultant (Medicine & Geriatrics) / Head of Division, Geriatrics, RTSKH
Dr Daniel WONG	Consultant (Obstetrics & Gynaecology) , PYNEH
Dr James LI	Consultant (Surgery), PYNEH
Dr Y P CHAN	Consultant (Medicine), PYNEH
Dr Anna WU	Deputy Service Director (Quality & Safety), HKEC / Consultant (Psychiatry), PYNEH
Dr P P LAM	Associate Consultant (Medicine), TWEH
Mr Clement CHAN	Clinical Stream Coordinator (Allied Health), HKEC
Ms W F HO	Deputy Hospital Chief Executive / Department Operations Manager (Nursing), CCH
Ms Flora MAK	Department Operations Manager (Medicine & Geriatrics) , RTSKH / Department Operations Manager (Patient Support Call Center / Community Health Services), HKEC
Ms Y F LAM	Department Operations Manager (Medicine), PYNEH
Ms W Y WONG	Advanced Practice Nurse (Nursing Services Division), WCHH
Ms McShirley LEUNG	Clinical Stream Coordinator (Pharmacy), HKEC / Department Manager (Pharmacy), PYNEH (up to 22 October 2019)
Mr P K YICK	Senior Pharmacist (Pharmacy), RTSKH

Secretary

Ms Queenie LAW	Deputising Hospital Administrator I (Accreditation & Compliance Office), PYNEH (up to 31 October 2019)

CWG (WOMEN SERVICES) (As at 28 November 2019)

Co-chairs

Dr K K TANG	Chief of Service (Obstetrics & Gynaecology), PYNEH
Prof Ernest NG	Chief of Service (Obstetrics & Gynaecology), QMH

Members

HKEC Representatives:	
Dr C N LEE	Consultant (Obstetrics & Gynaecology), PYNEH
Dr Carmen CHOI	Consultant (Obstetrics & Gynaecology), PYNEH
Dr Daniel WONG	Consultant (Obstetrics & Gynaecology), PYNEH
Ms W L LEUNG	Department Operations Manager (Obstetrics & Gynaecology), PYNEH
Ms M Y YIP	Midwife Consultant (Obstetrics & Gynaecology), PYNEH
HKWC Representatives:	
Dr Paulin MA	Consultant (Obstetrics & Gynaecology) / Coordinator (Quality & Safety), QMH
Dr Noel SHEK	Consultant (Obstetrics & Gynaecology), QMH
Dr Mandy CHU	Consultant (Obstetrics & Gynaecology), QMH
Ms K C CHAN	Department Operations Manager (Obstetrics & Gynaecology), QMH

Secretary

Ms Ceinlys WONG	Hospital Administrator I (Quality & Safety), PYNEH

CWG (CHILDREN SERVICES) (As at 28 November 2019)

Co-chairs

Dr K P LEE	Consultant (Paediatrics & Adolescent Medicine), PYNEH
Dr S L LEE	Deputy Hospital Chief Executive, DKCH / Chief of Service (Paediatrics & Adolescent Medicine), QMH / Consultant (Paediatrics & Adolescent Medicine), DKCH

Members

HKEC Representatives:	
Dr Wilson YEUNG	Chief of Service (Paediatrics & Adolescent Medicine), PYNEH
Dr W T KO	Consultant (Paediatrics & Adolescent Medicine), PYNEH
Dr S M TAI	Associate Consultant (Paediatrics & Adolescent Medicine), PYNEH
Dr Wendy WONG	Associate Consultant (Paediatrics & Adolescent Medicine), PYNEH
Dr Karen CHOY	Associate Consultant (Psychiatry), PYNEH
Ms L K CHAN	Department Operations Manager (Paediatrics & Adolescent Medicine), PYNEH
Ms Jeanie NGAN	Department Manager (Clinical Psychology), HKEC / Senior Clinical Psychologist In-charge, PYNEH
Ms Gigi NG	Occupational Therapist I (Occupational Therapy), PYNEH
HKWC Representatives:	
Dr Stella CHIM	Consultant (Paediatrics & Adolescent Medicine), QMH

Secretary

Ms Ceinlys WONG	Hospital Administrator I (Quality & Safety), PYNEH

CWG (NEUROSCIENCE SERVICES) (As at 28 November 2019)

Co-chairs

Dr Michael LEE	Consultant (Neurosurgery), PYNEH
Prof Gilberto LEUNG	Honorary Consultant (Surgery), QMH

Members

HKEC Representatives:	
Dr C M CHEUNG	Consultant (Medicine), PYNEH
Dr K K YIP	Associate Consultant (Medicine & Geriatrics) / Head of Department (Neurology), RTSKH
Dr Y H LUI	Consultant (Clinical Pathology), PYNEH
Dr Warren LEUNG	Consultant (Radiology), PYNEH
Dr H M CHU	Associate Consultant (Anaesthesia), PYNEH
Dr Mandy AU YEUNG	Associate Consultant (Medicine), PYNEH
Dr H C LEUNG	Associate Consultant (Medicine), TWEH
Ms May MOK	Nurse Consultant (Stroke), HKEC

Mr Ben NG	Ward Manager (Neurosurgery A10), PYNEH
Ms Sharon CHIU	Occupational Therapist I (Occupational Therapy), PYNEH
Ms Jeanie NGAN	Department Manager (Clinical Psychology), HKEC / Senior Clinical Psychologist In-charge, PYNEH
HKWC Representatives:	
Dr Clara POON	Consultant (Anaesthesia), QMH
Dr Raymand LEE	Consultant (Radiology), QMH
Dr Mona TSE	Consultant (Medicine), QMH

Secretary

Ms Ceinlys WONG	Hospital Administrator I (Quality & Safety), PYNEH

CWG (CARDIAC SERVICES) (As at 28 November 2019)

Co-chairs

Dr K K CHAN	Deputy Chief of Service (Medicine), PYNEH
Prof H F TSE	Honorary Consultant (Medicine), QMH / TWH

Members

HKEC Representatives:	
Dr Jenny LEUNG	Clinical Coordinator 2 / Chief of Service (Medicine & Geriatrics) / Head of Department (Endocrinology and Diabetes), RTSKH
Dr L W CHAN	Chief of Service (Accident and Emergency), PYNEH
Dr K L LEE	Consultant (Medicine & Geriatrics) / Head of Department (Cardiology), RTSKH
Dr K C LEUNG	Consultant (Medicine), TWEH
Dr Axel SIU	Consultant (Accident & Emergency), RTSKH
Dr H P SHUM	Consultant (Intensive Care Unit), PYNEH
Dr C P WONG	Associate Consultant (Accident & Emergency), PYNEH
Ms Olivia LAM	Ward Manager (Medicine), PYNEH
Ms Sarbjeet KAUR	Ward Manager (Medicine), TWEH
Mr Terence LEE	Advanced Practice Nurse (Medicine), PYNEH
Ms Cherie OR	Physiotherapist I (Physiotherapy), RTSKH
HKWC Representatives:	
Dr S H TSUI	Chief of Service (Accident & Emergency), QMH

Dr W M CHAN	Chief of Service (Adult Intensive Care Unit), QMH
Prof C S LAU	Chief of Service (Medicine), QMH

Secretary

Ms Ceinlys WONG	Hospital Administrator I (Quality & Safety), PYNEH

CWG (AMBULATORY CARE SERVICES) (As at 28 November 2019)

Co-chairs

Dr K H YUEN	Deputy Hospital Chief Executive, Chief of Service (Medicine & Rehabilitation) & Coordinator (Quality & Safety), TWEH
Dr Emmy LAU	Consultant (Medicine), PYNEH

Members

Dr Jenny LEUNG	Clinical Coordinator 2 / Chief of Service (Medicine & Geriatrics) / Head of Department (Endocrinology and Diabetes), RTSKH
Dr L W CHAN	Chief of Service (Accident & Emergency), PYNEH
Dr K L MOK	Consultant (Accident & Emergency), RTSKH
Dr Michelle WONG	Deputy Service Director (Primary & Community Health Care) / Chief of Service (Family Medicine & Primary Healthcare), HKEC
Dr C Y CHU	Consultant (Radiology), PYNEH
Dr Alan WU	Consultant (Clinical Pathology), PYNEH / Infection Control Officer, RTSKH
Ms April CHENG	Department Manager (Clinical Pathology), HKEC / Department Manager (Clinical Pathology), PYNEH
Mr Clement CHAN	Clinical Stream Coordinator (Allied Health), HKEC
Dr K L LEE	Associate Consultant (Medicine), PYNEH
Dr M C WAN	Associate Consultant (Medicine & Geriatrics), RTSKH / Head of Department (Rheumatology), RTSKH
Dr Edward LIU	Associate Consultant (Medicine), TWEH
Dr W Y MOK	Chief of Service (Orthopaedics & Traumatology), PYNEH
Dr Callie KO	Consultant (Ophthalmology), PYNEH / Consultant (Ophthalmology), TWEH
Ms D L CHEONG	Senior Nursing Officer (Service Development), HKEC / Senior Nursing Officer (Hospital Accreditation, Service Development), PYNEH
Dr Bonnie KHO	Consultant (Medicine), PYNEH

Ms Angela LIU	Deputising Clinical Stream Coordinator (Pharmacy), HKEC / Deputising Department Manager (Pharmacy), PYNEH
Dr S Y CHU	Associate Consultant (Anaesthesia), PYNEH

Secretary

Ms Phoenix IEONG	Hospital Administrator II (Corporate Services), PYNEH

CWG (PALLIATIVE CARE SERVICES) (As at 28 November 2019)

Co-chairs

Dr S SOONG	Consultant (Clinical Oncology), PYNEH
Dr H C FAN	Consultant (Medicine & Geriatrics) / Head of Division (Respiratory Medicine & Palliative Care), RTSKH

Members

Dr Rebecca YEUNG	Chief of Service (Clinical Oncology), PYNEH
Dr L W CHAN	Chief of Service (Accident and Emergency), PYNEH
Dr C K WONG	Associate Consultant (Medicine and Geriatrics), RTSKH
Dr Flora MIU	Associate Consultant (Medicine), PYNEH
Dr H Y CHAN	Associate Consultant (Medicine), PYNEH
Dr Betty YOUNG	Consultant (Medicine) / Deputy Coordinator (Quality & Safety) / Infection Control Officer, TWEH
Dr Annie CHU	Associate Consultant (Anaesthesia), PYNEH
Ms Ellen YEUNG	Nurse Consultant (Palliative Care), HKEC
Ms Maggie CHAN	Department Operations Manager (Clinical Oncology), PYNEH
Ms Eva LO	Department Operations Manager (Medicine), PYNEH
Ms S W TANG	Department Operations Manager (Medicine), TWEH
Ms Edith YIM	Coordinator (Medical Social Services), HKEC
Ms Sally LIU	Coordinator (Occupational Therapy), HKEC / Department Manager (Occupational Therapy), PYNEH
Rev William LAM	Hospital Chaplain In-charge, PYNEH
Ms McShirley LEUNG	Clinical Stream Coordinator (Pharmacy), HKEC / Department Manager (Pharmacy), PYNEH (up to 22 October 2019)
Mr Andy LAM	Mortuary Officer, PYNEH / RTSKH

Secretary

Ms Yvonne CHAN	Hospital Administrator II (Corporate Services), PYNEH

CWG (PERI-OPERATIVE SERVICES) (As at 28 November 2019)

Co-chairs

Dr Bonnie CHENG	Consultant (Anaesthesia), PYNEH
Dr Y K MAK	Deputy Service Director (Quality & Safety), HKEC / Associate Consultant (Orthopaedics & Traumatology), PYNEH

Members

Dr K K TANG	Chief of Service (Obstetrics & Gynaecology), PYNEH
Dr Rosalina IP	Consultant (Clinical Pathology), PYNEH
Dr Callie KO	Consultant (Ophthalmology), PYNEH / Consultant (Ophthalmology), TWEH
Dr James LI	Consultant (Surgery), PYNEH
Dr Alvin CHU	Associate Consultant (Ear, Nose & Throat), PYNEH
Dr K B TANG	Associate Consultant (Intensive Care Unit), PYNEH
Dr H L CHAN	Associate Consultant (Medicine), PYNEH
Dr Johnny HUNG	Associate Consultant (Neurosurgery), PYNEH
Dr C Y TO	Senior Dental Officer (Oral-Maxillofacial Surgery), PYNEH
Dr Y H LING	Associate Consultant (Surgery), RTSKH
Ms Marianne LUI	Department Operations Manager (Anaesthesia), PYNEH
Ms Monica NG	Department Operations Manager (Anaesthesia, Operating Theater, Orthopaedics & Traumatology, Surgery, Combined Endoscopy Unit), RTSKH
Ms Rose YONG	Coordinator (Dietetics), HKEC / Allied Health Coordinator & Department Manager (Dietetics), PYNEH
Ms Rebecca NG	Senior Physiotherapist (Physiotherapy), PYNEH
Mr David CHIN	Senior Occupational Therapist (Occupational Therapy), PYNEH

Secretary

Ms Phoebe CHAN	Hospital Administrator II (Corporate Services), PYNEH

CWG (SURGICAL SERVICES) (As at 28 November 2019)

Co-chairs

Dr C N TANG	Clinical Stream Coordinator (Surgical), HKEC / Deputy Hospital Chief Executive, PYNEH / Chief of Service (Surgery), PYNEH / Director, HKEC Training Centre for Healthcare Management & Clinical Technology / Director, Minimal Access Surgery Training Centre
Dr Edward HUI	Clinical Coordinator (Quality & Service), RTSKH / Chief of Service (Surgery), RTSKH

Members

Dr Raymond CHAN	Consultant (Radiology), HKEC
Dr F HIOE	Consultant (Clinical Pathology), PYNEH
Dr Betty HO	Consultant (Anaesthesia), PYNEH
Dr H P SHUM	Consultant (Intensive Care Unit), PYNEH
Dr W T NG	Clinical Coordinator (Patient Relations), HKEC / Deputy Chief of Service (Clinical Oncology), PYNEH
Dr Esther WONG	Associate Consultant (Radiology), PYNEH
Dr Alwin YEUNG	Associate Consultant (Medicine & Geriatrics), RTSKH / Co-ordinator (Intensive Care Unit) / Head of Department (Critical Care), RTSKH
Ms Marianne LUI	Department Operations Manager (Anaesthesia), PYNEH
Ms Kara LAU	Department Operations Manager (Surgery), PYNEH
Ms Monica NG	Department Operations Manager (Anaesthesia, Operating Theater, Orthopaedics & Traumatology, Surgery, Combined Endoscopy Unit), RTSKH

Secretary

Ms Miranda KWOK	Hospital Administrator I (Corporate Services), PYNEH

Staff invited to input on specific topics

Dr Amy Sonya CHEUNG	Chief of Service (Ear, Nose & Throat), PYNEH
Dr Betty YOUNG	Consultant (Medicine), TWEH / Deputy Co-ordinator (Quality & Safety), TWEH / Infection Control Officer, TWEH
Ms K W MA	Ward Manager (Medicine), TWEH
Ms W Y HO	Advanced Practice Nurse (Infirmary), CCH

CWG (CRITICAL CARE SERVICES) (As at 28 November 2019)

Co-chairs

Dr H P SHUM	Consultant (Intensive Care Unit), PYNEH
Dr Axel SIU	Consultant (Accident & Emergency), RTSKH

Members

Dr L W CHAN	Chief of Service (Accident & Emergency), PYNEH
Dr P G KAN	Deputy Hospital Chief Executive / Clinical Coordinator 1 / Chief of Service (Accident & Emergency Department), RTSKH
Dr Peter CHEE	Deputy Hospital Chief Executive, SJH / Associate Consultant In-charge (Accident and Emergency), SJH
Dr W W YAN	Chief of Service (Intensive Care Unit), PYNEH
Dr Alwin YEUNG	Associate Consultant (Medicine and Geriatrics) / Co-ordinator (Intensive Care Unit) / Head of Department (Critical Care), RTSKH
Dr Jeffrey CHAU	Associate Consultant (Accident and Emergency), PYNEH
Mr P F LAU	Department Operations Manager (Accident and Emergency), PYNEH
Mr C P LEUNG	Department Operations Manager (Accident and Emergency, Specialist Out-patient Department), RTSKH
Ms Eva KWAN	Department Operations Manager (Intensive Care Unit), PYNEH
Ms Angela LEE	Department Operations Manager 2 (Medicine and Geriatrics, Intensive Care Unit), RTSKH
Ms Amy LAW	Department Operations Manager (Neurosurgery), SJH
Dr H M SO	Nurse Consultant (Intensive Care Unit), HKEC / Deputy Director (Nursing), Nethersole Clinical Simulation Training Center
Ms Rebecca NG [Ad hoc member]	Senior Physiotherapist (Physiotherapy), PYNEH
Ms Sally LIU [Ad hoc member]	Coordinator (Occupational Therapy), HKEC / Department Manager (Occupational Therapy), PYNEH

Secretary

Ms Queenie LAW	Deputising Hospital Administrator I (Accreditation & Compliance), PYNEH (up to 31 October 2019)

Enquiry:

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與民攜手
Helping People Stay Healthy
保健安康