醫院管理局
HOSPITAL AUTHORITY

Hospital Authority

Strategic Service Framework for

Cancer Services

Contents

02 **Foreword by Chairman**

03 **Foreword by Chief Executive**

04 **Preface**

06 **Executive Summary**

18 **摘要**

Part One: Setting the Scene

31 Introduction

36 Vision and Scope

37 Planning Process

Part Two: Cancer Services and Strategies

41 Overview of Cancer Services in HA

48 Key Areas Identified for Service Improvement

54 Strategic Service Framework for Cancer Services

75 **Part Three: Cluster Plans**

Part Four: Looking Ahead

119 Implementation and Monitoring

130 Conclusion

131 **Part Five: Abbreviations and Appendices**

Foreword by *Chairman*

Cancer is a major public health burden. It is the second leading cause of death globally. The number of new cancer cases is expected to rise from 17 million in 2018 to 27.5 million in 2040[1]. The escalating demand poses enormous pressure to the sustainability of the existing healthcare systems. National strategies have been developed around the world to address the challenge this poses on cancer services.

In Hong Kong, we are facing the same challenge. Cancer is our top killer, claiming nearly one-third of the total deaths in 2017[2]. It is expected that by 2030, the cancer incidence would rise to approximately 42,000 new cases per year[3]. The Government has recently published the Hong Kong Cancer Strategy, aiming to reduce the cancer burden in the local population and improve the quality of life of cancer patients. In this context, the Hospital Authority (HA) has formulated the Strategic Service Framework for Cancer Services to guide our cancer service development. In tandem with the Government's efforts, HA strives to improve our cancer services throughout the patients' journey from diagnosis, treatment to survivorship care. This goes hand-in-hand with the previously published Strategic Service Framework for Palliative Care which addresses another important aspect of cancer care.

My heartfelt gratitude goes to our clinical colleagues, patient representatives and my fellow Board members for their support and contributions in formulating the Strategic Service Framework for Cancer Services. Successful implementation of the Framework requires the collaborative effort of everyone across HA. I look forward to the realisation of the Framework and to working with you all to better our services.

Prof John LEONG Chi-yan
Chairman
Hospital Authority

1 Cancer Research, United Kingdom. *Worldwide cancer incidence statistics.* Available at: https://www.cancerresearchuk.org/health-professional/cancer-statistics/worldwide-cancer/incidence#heading-One

2 Centre for Health Protection, Department of Health, Hong Kong.

3 The projected number of cancer new cases includes those aged 20 or above only, and excludes non-melanoma skin cancer. *Hong Kong Cancer Registry.*

Foreword by *Chief Executive*

Patients with cancer often face many challenges, worries and uncertainties whilst waiting for diagnosis, coping with complex treatment regimens, and adapting to life after cancer treatment. We understand how difficult the cancer journey can be for our patients and their carers. In line with our core value of 'People-centred Care', our goal is to provide the best possible care and walk with our patients in fighting the disease.

Over the past years, we have continued to improve the quality of cancer services in HA. We have expanded the coverage of cancer drugs in our HA Drug Formulary to enhance patients' access to new cancer drugs. The Cancer Case Manager Programme, covering breast and colorectal cancer patients, has provided better coordinated care. However, the scope and coverage of such programmes have yet to be expanded to benefit more patients of other cancer types. Further, there are still aspects of our cancer services that we need to improve on, in order to enhance our service quality and sustainability in the face of growing service demand.

The Strategic Service Framework for Cancer Services is the blueprint to guide our future service development. It will guide the enhancement of our services, including the timeliness of cancer diagnosis, coordination of cancer treatment across different clinical specialties and disciplines, and care provision for cancer survivors. One key focus in the coming years is to shift from a hospital-based or department-based cancer service, to an integrated, cluster-based network through the establishment of 'Integrated Cluster Cancer Centre', to improve the quality of care. We will set up these cancer centres in new and redeveloped hospitals as one of the key enablers for the provision of integrated cancer service.

I would like to thank all our colleagues and stakeholders who have contributed to the development of this Framework. Through our collective strength and dedication in implementing the Framework, I am confident that we will raise the standards of our cancer services and benefit many patients in need.

Dr Tony KO
Chief Executive
Hospital Authority

Preface

The Strategic Service Framework for Cancer Services brings together the aspirations of our stakeholders, including frontline professionals, cluster and Head Office executives, patient representatives and our Board members. It is an important document to guide the development of HA's adult cancer services in the coming five to ten years, to improve the service quality through service remodelling and building the necessary system infrastructure.

Under the Framework, efforts will be made to strengthen the governance of our cancer services and improve the service organisation in the clusters. Collaboration between different clinical specialties and disciplines will be further promoted with the 'Integrated Cluster Cancer Centre' model, so that patients will receive coordinated and equitable care in accordance with their needs. Along the cancer care pathway, strategies will be put in place to improve the timeliness of cancer diagnosis, quality of cancer treatment, as well as the care provision for cancer survivors. Cancer services will also be monitored for continuous quality improvement. Key enablers identified will be implemented to support effective implementation of the strategies. The Central Committee on Cancer Service and Coordinating Committee in Clinical Oncology will, in partnership with cluster management, work together to realise the new service model outlined in this Framework.

We would like to express our heartfelt gratitude to all the stakeholders who have contributed to developing this Framework. In particular, we would like to thank the members of the Taskforce and Working Groups for their guidance and expert advice, and the cluster colleagues for formulating the Cluster Plans. We would also like to extend our appreciation to everyone who provided suggestions and feedback on the draft Framework. We look forward to your continuing support as we implement the strategies in the coming years.

Dr Libby LEE
Director, Strategy & Planning Division
Hospital Authority Head Office

Dr Deacons YEUNG
Director, Cluster Services Division
Hospital Authority Head Office

Executive Summary

Introduction

As the major public healthcare provider in Hong Kong, the Hospital Authority (HA) provides a comprehensive range of cancer services to serve the needs of the population of Hong Kong. The HA Strategic Service Framework for Cancer Services (the Framework) provides guidance to the planning and development of HA's adult cancer services for 2020 to 2030. This Framework supports HA's vision for cancer services:

> *"All cancer patients receive timely, coordinated and patient-centred care in their cancer journey."*

This Framework outlines the strategies and key enablers required to improve the service model and build the system infrastructure required to achieve this vision.

Cancer is a complex disease. Not only can it occur in different parts of the body for different patients, even the cells within an individual tumour can vary enormously from one another. And cancer does not stand still, but changes over time. As a result, different clinical specialties are involved and care needs vary over time. All of these contribute to the complexity of the cancer care journey from diagnosis, treatment, to survivorship and palliative care.

To provide sustainable quality service, concerted efforts are required from cancer care professionals from different clinical specialties and disciplines, with executive sponsorship from cluster management and HA Head Office. Emphasising on cross-specialty, cross-disciplinary collaboration and the cancer services organisation, this Framework will generate the momentum for all HA staff to work together to achieve HA's vision for cancer services and deliver a better service to all cancer patients in Hong Kong.

Planning Process

The development of this Framework commenced in 2017. Under the policy directions of the Medical Services Development Committee (MSDC) and executive guidance of the Directors' Meeting, a designated Taskforce was established to oversee the development process. Under the Taskforce, Working Groups were formed to discuss and come up with the future cancer service model and system infrastructure, and to formulate Cluster Plans for implementation.

The process commenced with a literature review on international cancer service models. This was supplemented with situation analyses of the existing HA cancer services to identify potential service gaps and room for improvement. A wide range of stakeholders were involved in the Framework development process, including clinical staff, cluster management, HA Head Office executives, and patient groups. Their inputs were sought on a wide variety of issues ranging from improvement opportunities, design of the new service model, recommendations on the strategies, and implementation plans. A highly collaborative approach was adopted for this process, including a workshop with overseas expert; hospital visits and meetings with relevant Coordinating Committees (COCs), Central Committees (CCs), and the Patient Advisory Committee.

The Taskforce formulated a draft Framework including the new service model based on the collective inputs gathered through the comprehensive stakeholder engagement process. The MSDC and Directors' Meeting provided oversight to the development of the draft Framework. The draft Framework was sent to relevant stakeholders for broader consultation in August 2019. The input gathered informed further refining of the Framework by the Taskforce. The final draft of the Framework was submitted to the Directors' Meeting for endorsement and the MSDC for final approval in December 2019.

Strategies for Cancer Services

This Framework sets out five strategic directions for HA to improve adult cancer services. Its scope covers the governance and cluster service organisation, diagnosis, treatment, survivorship and performance monitoring. The strategic directions are outlined below:

- **Cluster-based and networked cancer services**
- **Timely access to cancer diagnostic services**
- **Equitable and integrated cancer treatment services**
- **Seamless transitional care for cancer survivors**
- **Strengthened data-driven performance monitoring and evaluation for continuous quality improvement**

Under each strategic direction, strategies have been formulated to address the identified gaps, improvement opportunities, and anticipated challenges to the implementation of the new service model.

Table 1. Strategic Service Framework for Cancer Services

Key Areas for Improvement	Strategic Directions	Strategies
Governance and Cluster Service Organisation Efficient and effective cancer service organisation	1 Cluster-based and networked cancer services	1.1 Tighten linkage between Corporate and clusters 1.2 Reinforce cluster-based cancer service coordination
Diagnosis Early cancer diagnosis	2 Timely access to cancer diagnostic services	2.1 Stratify patients actively according to their cancer likelihood 2.2 Provide fast-track diagnostic services
Treatment Prompt patient-centred quality cancer treatment	3 Equitable and integrated cancer treatment services	3.1 Apply ‘Integrated Cluster Cancer Centre’ model 3.2 Streamline supportive care pathways 3.3 Improve care coordination with enhanced Cancer Case Manager services
Survivorship Empowered cancer survivorship	4 Seamless transitional care for cancer survivors	4.1 Align survivorship care 4.2 Facilitate transition to primary care 4.3 Support survivors to stay healthy in the community
Performance Monitoring Data-driven service planning and improvement	5 Strengthened data-driven performance monitoring and evaluation for continuous quality improvement	5.1 Collect data systematically along the patient journey 5.2 Identify key domains and develop clinical indicators to evaluate and monitor outcomes and service quality

Strategic Direction 1: Cluster-based and Networked Cancer Services

Opportunities for Improvement

Cancer services are provided by a number of specialties and disciplines at different hospitals. A robust governance structure at both Corporate and cluster levels is essential to lead the service development and enhance coordinated service delivery. At the Corporate level, the Central Committee on Cancer Service (CC(Cancer Service)) oversees HA's cancer service development across specialties and disciplines. COCs provide advice on the cancer services development related to their specialty. However, there are suboptimal linkages between CC(Cancer Service) and the COCs, that only some of the cancer care-related COCs have representatives in the CC(Cancer Service) **(Appendix 8)**.

At the cluster level, only three clusters currently have designated Cluster Cancer Committees for coordinating cancer services. There is room for establishing these Committees in clusters where they do not currently exist, and to enhance their roles and functions in clusters where they do. There is also no existing formal cluster representation in CC(Cancer Service). As a result, gaps are observed within and across clusters in terms of the cancer service coordination, accessibility and alignment across hospitals, specialties and disciplines.

Strategies

The governance of cancer services will be enhanced at both Corporate and cluster levels. The two governance structures will be tightly entwined so that policy direction could be properly disseminated and executed in the clusters. The direction is to drive for cluster-based service provision to improve service accessibility and coordination of care.

Strategy 1.1 – Tighten Linkage between Corporate and Clusters

At the Corporate level, CC(Cancer Service) will continue to oversee the overall cancer service development and monitoring. It will work closely with the COCs and CCs involved in cancer care, including coordinating the formulation of corporate-wide principles and service models. The membership of CC(Cancer Service) will be refined to reinforce its functions and form a close linkage between the CC, COCs and clusters. At the cluster level, Cluster Cancer Committees will be set up to coordinate the cluster-based cancer service development and implement Corporate policies in accordance with the Corporate direction. A 'Cluster Cancer Services Coordinator' will also be assigned to represent each cluster in the CC(Cancer Service), to strengthen the communication.

Strategy 1.2 – Reinforce Cluster-based Cancer Service Coordination

To improve the service accessibility to our cancer patients, we drive towards a cluster-based and networked cancer service provision. An 'Integrated Cluster Cancer Centre' (ICCC) service model will be adopted. Cancer care professionals from relevant disciplines and specialties will be pooled together to form cluster-based, disease-specific multi-disciplinary units e.g. cluster colorectal cancer multi-disciplinary units, cluster breast cancer multi-disciplinary units. These units will be responsible for the coordination and operations of cancer services across the cluster, and to provide equitable, patient-centred cancer services under the oversight of the Cluster Cancer Committee. There will be one ICCC in each cluster, serving as a hub for the cluster-based services. The ICCC model will maximise the use of expertise and facilities, to improve the quality, access and efficiency of cancer services.

Strategic Direction 2: Timely Access to Cancer Diagnostic Services

Opportunities for Improvement

Early diagnosis in cancer is important to avoid treatment delay which may adversely affect patient outcomes. From a system perspective, there is a need to improve the accessibility and efficiency of the diagnostic services in HA. Currently, there are variations in the quality of the referral letters to HA for potential cancer patients, which has a direct impact on the accuracy of patient triage at Specialist Outpatient Clinics (SOPCs). In addition, there is limited buffer capacity and flexibility in the current system to expedite diagnostic services for patients with high suspicion of cancer. This results in avoidable delays for assessment and diagnosis. Moreover, variations are noted in the waiting time even for the same diagnostic investigations both within and across clusters, which reflects the suboptimal coordination in the diagnostic process.

Strategies

To facilitate early diagnosis for cancer patients, the provision of timely access to cancer diagnostic services will be pursued. This is achieved by actively stratifying patients according to their cancer likelihood, and providing fast-track diagnostic services as required, in accordance with agreed protocols.

Strategy 2.1 – Stratify Patients Actively According to Their Cancer Likelihood

An active stratification approach will be adopted to triage patients according to their cancer likelihood, using stratification tools such as questionnaires and nurse-led assessment. Patients triaged with high cancer likelihood will receive expedited access for specialist assessment and referral to diagnostic tests as required to shorten the time to diagnosis. Patients referred for management of confirmed cancer would be channelled directly to the appropriate cancer service for treatment.

Strategy 2.2 – Provide Fast-track Diagnostic Services

Fast-track diagnostic services will be provided to patients who are triaged with high cancer likelihood. Additional buffer capacity with regular reviews will be built in the SOPC case system to accommodate the needs for priority services for these patients.

Streamlined cancer diagnostic process with improved care coordination is also important. Whenever feasible, diagnostic services will be bundled in order to minimise time redundancy by reducing the number of patient visits required. For patients with complicated conditions who require multi-disciplinary inputs for cancer diagnosis, the ICCC model[4] provides a one-stop cluster-based platform to address patients' complex needs.

Strategic Direction 3: Equitable and Integrated Cancer Treatment Services

Opportunities for Improvement

Patients should receive prompt and well-coordinated treatment following cancer diagnosis. Currently, there are variations in patients' access to cancer care services. Depending on the primary location of treatment, the services provided might vary in terms of the care pathways and scope of services, even for patients with similar conditions in the same cluster. Structured assessment of patients' holistic needs and referral to appropriate supportive care services are not widely available. The Cancer Case Manager (CCM) Programme, which aims to improve the coordination of care, is currently limited to patients with breast and colorectal cancers.

Strategies

In view of the complexity of the cancer care process given its cross-specialty and cross-disciplinary nature, a multi-faceted approach is needed to improve the quality of care. The ICCC model forms a basis to transform the existing service organisation to a cluster-based integrated network. Holistic care will also be provided through structured supportive care. CCM services will be enhanced to improve care coordination.

4 Please refer to Strategy 3.1.

Strategy 3.1 – Apply 'Integrated Cluster Cancer Centre' Model

Under the ICCC model, patients will receive integrated cancer services in the cluster-based, disease-specific multi-disciplinary units. Care will be organised with an individualised, patient-centred care approach and delivered by credentialed staff in an equitable manner. The integrated care approach facilitates professionals from different disciplines to work as a team in a complementary manner, with shared goals and objectives. Take planning and administering systemic therapy as an example, the clinical oncologist, medical oncologist[5], clinical pharmacists and other members will work as a team and complement each other to determine the best course of treatment for the patients.

Hospitals within the cluster will be organised to form a cancer service network. The ICCC provides centralised cancer care services (e.g. radiotherapy) as the hub; while local hospitals provide high-volume, low-complexity services (e.g. oncological imaging) and specific cancer care-related services. Via the ICCC model, more consistent, and thus equitable cancer service would be provided and thus improve the quality of care to our cancer patients.

Strategy 3.2 – Streamline Supportive Care Pathways

To provide patient-centred care, patients' needs for supportive care, e.g. rehabilitation services and psychological support will be assessed and addressed in a timely manner, especially at key milestones in the cancer journey. Adopting a step-care approach, all cancer patients will be stratified using simple assessment tools and channelled to appropriate, individualised care in a timely fashion. Complex needs would be addressed by relevant specialists through a structured referral mechanism, while relatively simpler needs would be delivered at the point of assessment.

Strategy 3.3 – Improve Care Coordination with Enhanced Cancer Case Manager Services

CCM plays an important role in the coordination of cancer care, supporting patients and the multi-disciplinary care teams to navigate the treatment journey. The existing CCM services will be enhanced by reinforcing CCM's role as care coordinator along the patient care pathway, aligning the services provided, and refining the reporting line and duty purview of the CCM. The CCM Programme will also be expanded to other cancer types, in addition to breast and colorectal cancer, to benefit more patients during the active treatment phase.

5 Four types of oncologists provide adult cancer services under the Specialist Register of the Medical Council of Hong Kong and certified by the Hong Kong Academy of Medicine (HKAM): clinical oncologist (a HKAM fellow who has completed fellowship training in clinical oncology under the Hong Kong College of Radiologists, which consists of training in non-surgical oncology including delivery of systemic therapy and radiotherapy); gynaecological oncologist (a HKAM fellow who has completed fellowship training in obstetrics, gynaecology, and gynaecological oncology under the Hong Kong College of Obstetricians and Gynaecologists, which includes surgical and non-surgical management of gynaecological cancers); haematological oncologist (a HKAM fellow who has completed fellowship training in advanced internal medicine or geriatrics, haematology and haematological oncology under the Hong Kong College of Physicians, which includes management of blood cancers and lymphomas with systemic therapy and haemopoietic stem cell transplantation); medical oncologist (a HKAM fellow who has completed fellowship training in medical oncology under the Hong Kong College of Physicians, which includes systemic therapy provision and development). For details, please refer to website: www.hkam.org.hk.

Strategic Direction 4: Seamless Transitional Care for Cancer Survivors

Opportunities for Improvement

To help patients transit to a new, normal life after cancer treatment, it is important to provide appropriate support and empower patients in the survivorship care phase of their cancer journey. Currently, most cancer survivors are followed up in HA. Due to a lack of common care pathways and protocols, variations exist at multiple levels in the care of cancer survivors. Primary care providers have limited involvement in survivorship care, which is not conducive to patients' transition back to the community. Cancer rehabilitation programmes which address survivors' needs are not widely available. The level of patient empowerment and community support are also varied among specialties, hospitals, and clusters. All these components are core to successful survivorship.

Strategies

To support cancer survivors to live an empowered life after cancer in the community, HA will move towards the provision of seamless transitional care. Emphasis will be placed on the alignment of survivorship care across clusters, and strengthening the collaboration with primary care providers and community partners to enhance the consistent, high quality and sustainable care.

Strategy 4.1 – Align Survivorship Care

HA will develop corporate-wide disease-specific survivorship care principles and pathways to better align survivorship care across the clusters. Patient care pathways will be tailored to the different needs of survivors for specific cancer types, whilst adhering to general principles of providing needs-based care in a coordinated, step-care manner. Early integration with primary and community care will be fostered, with a focus on patient empowerment measures.

Strategy 4.2 – Facilitate Transition to Primary Care

A shared care model will be adopted by the cancer care teams and primary care providers to facilitate care transition from the hospital back to the community. Survivorship clinics will be an initial interface between cancer care teams and family medicine physicians, where close collaboration is enabled by sharing of care protocols, knowledge exchange, training and development. Utilising a needs-based, risk-stratification approach, survivors will receive individualised care, in accordance with their needs and risks of cancer sequelae. A fast-track back-referral mechanism will be established, so that patients under primary care can have timely access to specialist services if the needs arise. The potential use of nurse clinics to participate in facilitating smooth transitional care will be explored. Nurses could also coordinate interventions for those survivors with complex needs and act as the point of contact between the primary and cancer care teams.

Strategy 4.3 – Support Survivors to Stay Healthy in the Community

To facilitate patients' adaptation to the new, normal life after cancer, the same step-care approach as described previously[6] will be adopted to provide structured, needs-based supportive care. Patients will be reviewed as they enter the survivorship phase and offered structured, supportive, and individualised care. Medical-social collaboration would also be reinforced to better leverage existing community resources. Structured survivorship programmes with emphasis on patient empowerment and partnership with the community will be established to facilitate cancer survivors to adapt to a new life and remain healthy in the community.

Strategic Direction 5: Strengthened Data-driven Performance Monitoring and Evaluation for Continuous Quality Improvement

Opportunities for Improvement

Currently, there is no corporate-wide, systematic data collection to inform about the cancer care process, service utilisation and outcomes. The available data in the system are generally inadequate to measure service gaps and drive service improvement. Currently, key performance indicators (KPIs) are available to monitor the waiting time of the initial treatment for three cancers (breast, colorectal and nasopharyngeal cancer[7]) and radical radiotherapy[8] only.

Strategies

To support quality improvement and performance monitoring, data and quality indicators will be collected systematically across all clusters to provide means to monitor and evaluate patient outcomes and service quality.

Strategy 5.1 – Collect Data Systematically along the Patient Journey

Systematic data collection will be enhanced along the patient journey, to inform the structure, process and outcomes of cancer services.

Strategy 5.2 – Identify Key Domains and Develop Clinical Indicators to Evaluate and Monitor Outcomes and Service Quality

Key domains should also be identified to evaluate and monitor outcomes. When the measurement tools and parameters become mature and widely adopted across HA, they could be developed as clinical indicators and KPIs to evaluate patient outcomes and monitor service quality.

---

6 Please refer to Strategy 3.2.

7 Key performance indicator: Waiting time (days) at 90th percentile for patients with breast, colorectal and nasopharyngeal cancers receiving first treatment after diagnosis. *Hospital Authority Guidebook on Key Performance Indicators 2019/20*.

8 Key performance indicator: Waiting time (days) at 90th percentile from decision to treat to start of radiotherapy (RT) for cancer patients requiring radical RT. *Hospital Authority Guidebook on Key Performance Indicators 2019/20*.

Key Enablers

For effective implementation of the Framework strategies, various key enablers are required to augment the existing system infrastructure for cancer services. These include:

Manpower and training

A cluster-based approach to workforce planning, deployment and rotation needs to be adopted to support delivery of the ICCC model. Training and development of workforce is essential to ensure service quality and sustainability. In particular, trans-disciplinary training is instrumental to promoting seamless integrated cancer care services along the patient journey.

Facilities and infrastructures

To facilitate the implementation of service model changes and allow more streamlined patient flow and coordinated services, the ICCC model will be incorporated into the physical designs in the future hospital development and redevelopment projects. Capacity planning for space and facilities will be coordinated with the growing cancer service demands.

Data and information technology (IT) system support

IT support is crucial in facilitating the workflow, communication and coordination of the cancer care professionals along the cancer patient journey. An automated platform for corporate-wide systematic data collection will facilitate performance monitoring and driving of service improvement.

Implementation and Monitoring

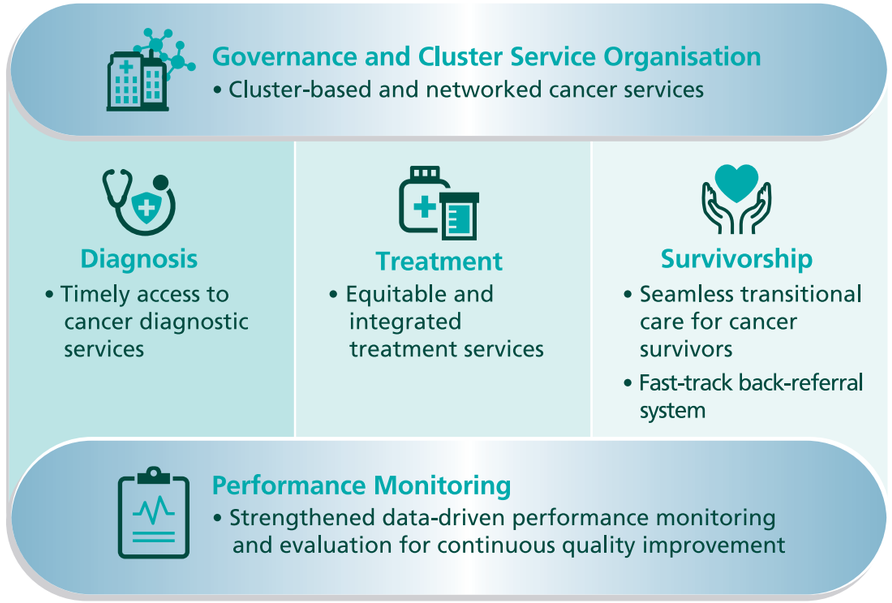
Successful implementation of the Framework will require the concerted efforts of clinical staff and executives. The strategies will be implemented in phases according to the service needs priorities and readiness of the programmes.

The implementation process will be monitored at different levels, including the existing mechanisms of annual plan programme monitoring, operational plans progress review at the cluster and Corporate levels, and the development of HA-wide quality indicators on cancer services.

Conclusion

Although combating cancer can be a difficult experience, quality care that addresses patients' needs can significantly alleviate their suffering during the cancer journey. This Framework highlights the future cancer service model that HA will deliver **(Figure 1)**, and brings together different specialties, disciplines and sectors to support our patients and carers through integrated care. Through our concerted efforts in implementing the Framework, we will continue to raise the quality of HA's cancer services, and benefit many more patients in the years to come.

Figure 1. Future Model of HA Adult Cancer Services



摘要

引言

醫院管理局（醫管局）作為本港最主要的公共醫療服務機構，一直致力為廣大市民提供全面的癌症服務。《癌症服務策略》（服務策略）是一份策略性的藍本，闡述癌症服務發展的策略和所需的配套，為醫管局未來十年（2020 至 2030 年）成人癌症服務的規劃和發展提供指引。我們希望透過改善服務和規劃設施，實踐以下的願景：

> *所有癌症病人均能獲得適時、以病人為本及妥善協調的護理和服務。*

癌症是一種複雜的疾病。細胞可在不同的器官發生變異，變成癌細胞後擴散。就算是同一器官的癌症，不同患者所需的治理也會有差異。癌症病人在各診治階段中，往往需要不同專科的醫護人員協力幫助，以解決他們不同的需要。

要提供可持續的優質癌症服務，我們有賴各專科和專業醫護人員的通力合作，以及聯網管理層和總辦事處的行政支援。本服務策略旨在重點加強醫護團隊之間的合作，以及改善聯網癌症服務的安排，希望透過訂立目標，議定策略，團結醫管局的員工，實現我們的願景，為癌症病人提供更優質的服務。

規劃過程

醫管局正式於 2017 年開始制訂本服務策略。在「醫療服務發展委員會」和「總監會議」的政策發展指導下，我們成立了專責小組，負責監督服務策略的制訂。專責小組轄下設有工作小組，分別就服務模式和基建的發展提供意見，以及制訂七個聯網的癌症服務計劃。

制訂過程中，我們就醫管局現時的癌症服務進行了深度的分析，找出有待改善之處，亦透過閱覽文獻，參考海外癌症服務的相關經驗和發展。為了集思廣益，我們邀請各持份者，包括臨床醫護人員、聯網管理層、總部行政人員及病人組織代表，就癌症服務的不足之處、以及可改善的方向，提出了寶貴的意見。此外，我們亦舉辦了工作坊，邀請海外專家與持份者分享經驗。我們還探訪不同的醫院以了解前線同事的工作，並定期與相關的臨床統籌委員會、中央委員會和病人諮詢委員會作出簡介及收集意見。

專責小組根據「醫療服務發展委員會」和「總監會議」的指引和持份者的意見，擬訂了服務策略的初稿，於 2019 年 8 月進行廣泛的諮詢。專責小組參考各界的意見後再修訂服務策略的內容，提交「總監會議」審批，並於 2019 年 12 月經「醫療服務發展委員會」審議通過。

癌症服務策略

本服務策略訂立了五大策略方向，分別就管治及聯網服務安排、癌症診斷、治療與存活護理，以及服務監察五方面，改善醫管局的癌症服務。五大策略方向概列如下：

促進以聯網為本的癌症服務

提供適時的癌症診斷服務

提供癌症綜合治療服務，公平地為有需要的病人提供治療

為癌症康復者提供無縫的過渡性護理

強化以數據為本的服務監察和評估，以持續改善服務質素

為了改善現有的服務和推行新的服務模式，我們就五大策略方向制訂了相應的措施，內容詳列如下：

表 1. 癌症服務策略

目標	策略方向	策略
管治及聯網服務安排 提高管治和服務安排的效率	1 促進以聯網為本的癌症服務	1.1 加強總辦事處和聯網之間的聯繫 1.2 促進以聯網為本的癌症服務，加強服務的協調性
癌症診斷 及早診斷癌症	2 提供適時的癌症診斷服務	2.1 更有效地評估病人患癌的風險，以改善病人的分流 2.2 為病人提供快速診斷服務
癌症治療 提供適時和以病人為本的癌症治療服務	3 提供癌症綜合治療服務，公平地為有需要的病人提供治療	3.1 推行「聯網癌症綜合治療」的服務模式 3.2 理順支援服務的流程 3.3 加強癌症個案經理所提供的服務，改善服務的協調性
癌症存活護理 加強癌症存活護理服務	4 為癌症康復者提供無縫的過渡性護理	4.1 統一存活護理服務 4.2 協助癌症康復者由專科適切地過渡至基層醫療服務 4.3 協助癌症康復者在社區健康生活
服務監察 推行以數據為本的服務規劃	5 強化以數據為本的服務監察和評估，以持續改善服務質素	5.1 在癌症治理流程的各個階段，進行有系統的數據收集 5.2 確定服務的主要監察範疇和制訂臨床指標，以評估和監察服務的成效和質素

策略方向 1：促進以聯網為本的癌症服務

待改善的範疇

醫管局的癌症服務由不同醫院提供，醫護團隊亦包括不同專科和專業的醫護人員。因此，服務的妥善協調尤其重要。在總辦事處的層面，癌症服務中央委員會負責監督和統籌各專科和專業的癌症服務發展，而各臨床統籌委員會則就其專科的癌症服務提供意見。然而，目前只有部分與癌症相關的臨床統籌委員會在癌症服務中央委員會內設有代表（**附表 8**），兩者之間的聯繫並不足夠。

在聯網層面，現時只有三個聯網設立了聯網癌症服務委員會，負責統籌相關的癌症服務。聯網在總辦事處癌症服務中央委員會亦未有正式的代表，因此未能協調醫院、專科和專業醫護人員的工作，而聯網內和聯網之間癌症服務的協調亦有不足之處。因此，我們將會強化聯網癌症服務委員會的角色和職能，並在其他四個聯網成立相關的委員會。

策略

醫管局總辦事處和聯網必須建立穩固的管治架構，才能協調現有的癌症服務和領導服務的發展。我們會改善總辦事處和聯網的管治架構，加強連繫，讓政策更有效地傳達至聯網。我們亦會透過推行以聯網為本的癌症服務，改善服務的便捷度和協調性。

策略 1.1 – 加強總辦事處和聯網之間的聯繫

在總辦事處的層面，癌症服務中央委員會將繼續監督癌症服務的發展和監察服務成效。我們將會優化癌症服務中央委員會的成員名單，強化委員會的職能，亦會加強委員會與相關的臨床統籌委員會的合作，包括統籌服務指引、制訂服務模式和加強與聯網的連繫。

各聯網亦會成立聯網癌症服務委員會，負責統籌以聯網為本的癌症服務，並按照總辦事處的政策方向推行相應的改善措施。各聯網亦會委任聯網癌症服務統籌主任，代表聯網參與總辦事處癌症服務中央委員會，以加強溝通。

策略 1.2 – 促進以聯網為本的癌症服務，加強服務的協調性

為了讓病人可以獲得更便捷的癌症服務，我們將會建立以聯網為本的服務網絡，並推行「聯網癌症綜合治療」的服務模式。我們將為不同的癌症設立跨專業和跨專科的護理團隊（例如以聯網為本的大腸癌跨專業護理團隊及乳癌跨專業護理團隊），並由相關的醫護人員組成。這些護理團隊將會負責統籌和協調聯網內相關癌症的各種服務，並在聯網癌症服務委員會的監督下，公平地為有需要的病人提供以病人為中心的癌症服務。各聯網將會設置一個「聯網癌症綜合治療」中心，作為聯網癌症服務的中樞機構，負責統籌以聯網為本的癌症服務。透過這個服務模式，我們可更善用人才和設施，從而改善癌症服務的質素、便捷度和效率。

策略方向 2：提供適時的癌症診斷服務

待改善的範疇

若果能夠及早診斷癌症，我們便可以避免因延誤治療而影響醫療成效的發生。因此，醫管局需提升診斷服務系統的便捷度和效率。現時，病人轉介信的質素參差不齊，直接影響了專科門診醫護人員分流病人的準確性。此外，現行的服務系統缺乏緩衝空間和彈性，以致醫護人員難以為患癌風險較高的病人提供快速的診斷服務，因而延誤了病人接受評估和獲得診斷的時間。再者，聯網內和各聯網之間診斷服務流程的協調亦未如理想。因此即使是接受同一類別的診斷檢查，在不同醫院的輪候時間亦不盡相同。

策略

為了及早診斷癌症，我們將致力提供適時的癌症診斷服務。我們將加強病人患癌風險的評估，並根據議定的指引，按病人的需要提供快速診斷服務。

策略 2.1 – 更有效地評估病人患癌的風險，以改善病人的分流

我們會優化病人分流的系統，例如透過問卷或護士評估，加強評估病人的患癌風險。風險高的病人可優先接受專科醫生的診斷和獲安排進行檢查。至於一些獲轉介而又確診患癌的病人，將會直接被安排接受合適的癌症治療。

策略 2.2 – 為病人提供快速診斷服務

我們將會為界定為「患癌風險高」的病人盡快提供診斷服務。我們亦會加強專科門診的服務量並會定期檢視門診分流安排，以配合病人的需要。同時，我們必須理順癌症診斷服務的流程，以及改善服務的協調性。若情況許可，我們會為病人提供一站式的診斷服務，減少他們進出醫院的次數。如病人的情況較為複雜，需要跨專業團隊就診，「聯網癌症綜合治療」的服務模式[9]將會提供一個以聯網為本的一站式平台，以照顧病人的需要。

策略方向 3：
提供癌症綜合治療服務，公平地為有需要的病人提供治療

待改善的範疇

當病人確診癌症後，理應獲得適時和協調的治療。現時，即使在同一聯網內，病情相約的癌症病人所接受的治療及流程亦可能因個別醫院及部門的情況而有所不同。此外，在缺乏有系統的評估服務下，往往未能全面了解病人的需要及適時轉介至合適的支援服務。雖然現時各聯網均設有癌症個案經理計劃，協調有關的治療服務，但計劃暫時只涵蓋乳癌及大腸癌的病人。

策略

由於癌症的治療過程複雜，並涉及不同專科和專業的醫護人員，因此我們需要從多方面著手，以改善服務的質素。我們將以「聯網癌症綜合治療」的服務模式作為基礎，建立以聯網為本的綜合服務網絡。我們會提供有系統的評估及支援服務，務求全面照顧病人的需要。同時，我們亦會加強癌症個案經理的服務，改善服務的協調性。

9 請參考策略 3.1

策略 3.1 – 推行「聯網癌症綜合治療」的服務模式

透過「聯網癌症綜合治療」的服務模式，我們將會設立以聯網為本的跨專業治療團隊，為病人提供綜合的服務。服務將由認可的醫護團隊提供，務求公平地為有需要的病人提供個人化及以病人為中心的護理。這個綜合的服務模式能夠促進不同專科和專業的醫護合作，互動互補。例如，在設計和提供全身性治療療程的時候，臨床腫瘤科和內科腫瘤科[10]的醫生、臨床藥劑師和團隊內的其他醫護人員可共同合作，實踐最佳的治療方案。

在聯網的層面，聯網內的醫院將會組成癌症服務網絡，各師其職。「聯網癌症綜合治療」中心將會作為服務中樞，集中提供某些以聯網為本的癌症服務（如放射治療）。聯網其他醫院則會處理一些服務量高，但複雜性較低的服務（如腫瘤造影檢查）和指定的癌症服務。透過「聯網癌症綜合治療」的服務模式，我們將能夠為癌症病人提供更公平的服務，並改善服務質素。

策略 3.2 – 理順支援服務的流程

為了提供以病人為中心的治理服務，我們將會在治理流程中有系統地評估病人的需要，以便適時地提供所需服務（例如康復服務和心理健康支援）。若病人的需要相對簡單，則可在評估後即時處理；如果其需要較為複雜，則可透過既定的機制獲轉介至相關的專科服務。

策略 3.3 – 加強癌症個案經理服務，改善服務的協調性

癌症個案經理在治理的流程中擔當重要的角色，既作為病人整體護理統籌，亦為跨專業醫療團隊提供支援。我們將會加強癌症個案經理所提供的服務，強化他們統籌的角色，並統一服務的模式和管治架構。我們亦會擴大癌症個案經理計劃的服務範圍，由現時涵蓋的乳癌和大腸癌，擴展至其他的癌症種類，令更多病人受惠。

10 四類獲香港醫學專科學院認可，並已列入香港醫務委員會的專科醫生名冊，而且提供成人癌症服務的腫瘤科專科醫生包括：臨床腫瘤科醫生（已完成香港放射科醫學院的臨床腫瘤科院士訓練課程，當中包括提供全身性治療及放射治療等非外科類別的腫瘤科訓練，並獲頒授香港醫學專科學院院士名銜）；婦科腫瘤科醫生（已完成香港婦產科學院的產科、婦科及婦科腫瘤科的院士訓練課程，當中包括提供外科及非外科的婦科癌症治療，並獲頒授香港醫學專科學院院士名銜）；血液腫瘤科醫生（已完成香港內科醫學院的進階內科或老人科、血液科及血液腫瘤科的院士訓練課程，當中包括為血癌和淋巴癌病人提供全身性治療及造血幹細胞移植服務，並獲頒授香港醫學專科學院院士名銜）；內科腫瘤科醫生（已完成香港內科醫學院的內科腫瘤科的院士訓練課程，當中包括全身性治療的提供和發展，並獲頒授香港醫學專科學院院士名銜）。詳情請參看網頁 www.hkam.org.hk

策略方向 4：
為癌症康復者提供無縫的過渡性護理

待改善的範疇

完成治療後，適當的支援能幫助癌症病人提升自理能力，返回社區，重建新的生活。目前，大部分癌症病人在治療後仍繼續於醫管局轄下醫院內接受不同專科的跟進服務。基層醫療團隊及社區為癌症康復者提供的存活護理相對有限，未能協助他們重過新生活。此外，由於癌症康復服務並不普及，往往未能照顧癌症康復者的需要。不同聯網專科對癌症康復者的跟進各有差異，相關的治理流程和護理指引亦缺乏協調。各個專科、醫院和聯網推行醫社合作和病人賦能的進度均有不同。這些因素都令我們未能為癌症康復者提供優質的存活護理。

策略

為提升癌症病人的自理能力和協助他們在社區重過新生活，醫管局將會致力為癌症康復者提供無縫的過渡性護理。我們將會積極統一聯網之間提供的存活護理，加強與基層醫療團隊及社區伙伴的合作，為病人提供劃一、優質且可持續的服務。

策略 4.1 – 統一存活護理

為了優化病人的存活護理，醫管局將會為不同癌症種類制訂癌症存活護理指引，使病人能夠按需要得到相應和協調的支援服務。我們亦會促進專科與社區醫護服務的銜接，並透過相應的措施，提升病人的自理能力。

策略 4.2 – 協助癌症康復者由專科適切地過渡至基層醫療服務

為協助病人由醫院過渡至社區接受護理，癌症醫療團隊和社區醫療團隊將會採納共同護理的服務模式。我們會設立特定的存活護理診所，作為癌症護理團隊和基層醫護人員合作的平台，透過分享醫療指引、知識交流、培訓和發展，促進雙方的合作。我們會按病人的需要和出現後遺症的風險，為他們提供個人化的護理。此外，我們將會為接受基層醫療跟進服務的病人設立快速轉介機制，讓病人在有需要的時候，能夠盡早接受專科服務。同時，我們亦會探討透過護士診所提供過渡性護理的可行性，護士除了為有複雜需要的病人協調服務外，亦可作為基層醫療和癌症醫療團隊之間的橋樑，作出相應的協調，協助病人由醫院過渡至社區接受護理。

策略 4.3 – 協助癌症康復者在社區健康生活

為協助癌症康復者適應新生活，我們將針對病人的需要提供有系統的支援服務。除了在癌症治療的過程外，當病人完成治療後，我們亦會有系統地評估他們的需要並提供相應的支援服務。我們亦會加強醫社合作，更有效地運用社區的資源。此外，透過推行有系統的存活護理計劃，包括提升病人的自理能力，和加強與社區的協作，我們將會幫助病人建立信心，在社區重建新的生活，並維持身心健康。

策略方向 5：
強化以數據為本的服務監察和評估，以持續改善服務質素

待改善的範疇

現時，醫管局缺乏統一的數據收集系統，未能令我們深入了解癌症診治護理的流程、服務的使用率和成效。醫管局現時只記錄下列與癌症服務有關的主要表現指標：病人接受根治放射治療的輪候時間[11]，以及三類癌症（乳癌、大腸癌和鼻咽癌[12]）病人在醫管局開始接受治療的輪候時間。現時相對有限的數據令我們未能詳細掌握服務不足之處，有礙推動服務發展。

策略

為有效地監察及評估癌症服務，各聯網將更有系統地收集相關的數據和質素指標，以提升服務質素和改善醫療成效。

策略 5.1 – 在癌症治理流程的各個階段，進行有系統的數據收集

我們將有系統地收集及分析癌症治理流程各個階段的數據，從而掌握癌症服務的架構、過程和成效，以推動服務的發展。

策略 5.2 – 確定服務的主要監察範疇和制訂臨床指標，以評估和監察服務的成效和質素

我們會確定主要的服務監察範疇，以評估和監察服務成效。當評估的工具和準則漸趨成熟，並在醫管局內廣泛通用後，可進一步制訂成臨床指標和主要表現指標，以確保成效及質素標準。

11 此主要表現指標是指需要接受根治放射治療的癌症病人由決定治療方案到開始接受治療的第 90 個百分值輪候時間。詳情請參看《醫院管理局主要表現指標指引 2019/20》

12 此主要表現指標是指乳癌、大腸癌及鼻咽癌病人由確診到首次獲得治療的第 90 個百分值輪候時間。詳情請參看《醫院管理局主要表現指標指引 2019/20》

基建和配套

要有效地推行本服務策略，我們需要發展相關的基建和配套，其中包括：

人力資源和培訓

為配合「聯網癌症綜合治療」服務模式的運作，人手規劃和調配應以聯網為本。同時，要確保服務質素和持續性，員工的培訓和發展亦至關重要。跨專業的培訓將有助醫護人員提供綜合的癌症服務。

設施和基建

為改善服務模式、理順病人的治理流程及加強服務協調，未來醫院發展和重建的項目將會配合「聯網癌症綜合治療」的服務模式，加入相關的設計元素。我們會統籌規劃所需要的空間及設備，以應付與日俱增的癌症服務需求。

數據與資訊科技系統支援

資訊科技系統能夠支援醫護人員的工作，包括支援工作的流程、加強溝通和協調。透過建立數據收集系統，我們將能夠更有效地監察服務的質素和作出改善。

推行及監察

要成功推行本服務策略，有賴醫護人員和行政人員的共同努力。我們會因應服務需求的優先次序，以及項目的成熟程度，分階段落實所述的策略。我們會在不同層面監察服務策略的推行，包括透過醫管局的周年工作計劃，聯網和總辦事處檢視項目的進度，以及制訂癌症服務的質素指標。

總結

抗癌路上雖然困難重重，優質而以病人為本的醫療服務，能大大減輕他們在過程中所面對的壓力和痛苦。本服務策略闡述了醫管局未來的癌症服務模式（**圖 1**），希望透過聯繫不同專科、專業和各界別，協助病人和他們的照顧者獲得綜合而優質的癌症服務及支援。透過落實服務策略，我們將會持續提升醫管局的癌症服務質素，惠及更多病人。

圖 1. 醫管局未來的成人癌症服務模式

Part One

Setting the Scene

Introduction

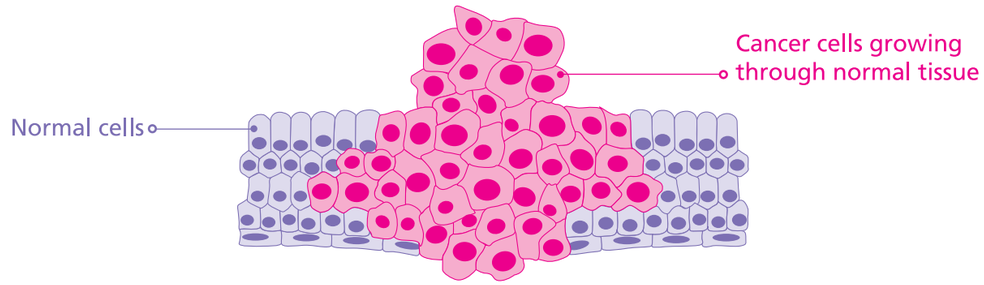
Setting the Scene for Development of the Strategic Service Framework for Cancer Services

What is Cancer?

Cancer is a generic term for a large group of diseases characterised by the growth of abnormal cells beyond their usual boundaries **(Figure 2)**. These cells can then invade adjoining parts of the body and spread to other organs[13], a process known as metastasis.

Cancer can affect almost any part of the body, and there are more than 100 different types of cancers. Many cancers form masses of tissue called solid tumours, while cancers of the blood, such as leukaemia, generally do not form solid tumours[14]. Cancers are classified according to the type of cells that they originate from. Carcinoma, the most common cancer type, originates from epithelial cells, which cover the surfaces of the body (both inside and outside)[15].

Figure 2. The Development of Cancer



13 World Health Organisation. *Fact sheet on cancer.* Available at: http://www.who.int/news-room/fact-sheets/detail/cancer
14 National Cancer Institute. *What is cancer?* Available at: http://www.cancer.gov/about-cancer/understanding/what-is-cancer
15 National Cancer Institute. *What is cancer?* Available at: http://www.cancer.gov/about-cancer/understanding/what-is-cancer

Most cancers arise from random genetic changes that can occur over a person's lifetime. While cancer can develop at any age, the risk of cancer increases with age[16]. In other instances, genetic defects can be inherited, which increases the risk of developing certain cancers.

Cancers are divided into stages based on the location, size, cell type and tumour grade of the primary tumour as well as on the extent that it has spread in the body[17]. The stage of the cancer is a key factor in defining the cancer prognosis as well as determining appropriate treatment for the patient[18].

Cancer in the Global Context

Cancer is a major healthcare burden worldwide. As the second leading cause of death globally, cancer constituted 22% of the deaths from non-communicable (chronic) diseases in 2016[19]. In 2018, there were 9.6 million cancer deaths, meaning that approximately one in every six deaths was due to cancer[20]. The incidence of cancer was 17 million in 2018, and by 2040 there will be a further projected rise of 62%[21].

The cancer care journey is often complex, and comprehensive cancer control includes prevention, screening, early diagnosis, treatment, survivorship care and palliative care[22]. Concerted efforts of professionals from different clinical specialties and disciplines are required to address patients' needs at each stage. Continuing advances are made in cancer diagnostic and treatment modalities, which are becoming increasingly complex and targeted as diagnosis becomes more specific to cell types and tumour markers[23] (genetic and biochemical). These new technologies however, often come with exorbitant prices. With ageing population and increasing cost of healthcare globally[24], decisions to incorporate new technologies need to be made with careful consideration of the opportunity costs and overall healthcare needs of the population.

16 National Cancer Institute. *Age and cancer*. Available at: https://www.cancerresearchuk.org/about-cancer/causes-of-cancer/age-and-cancer

17 American Joint Committee on Cancer. *What is cancer staging?* Available at: https://cancerstaging.org/references-tools/pages/what-is-cancer-staging.aspx

18 Amin, M.B. et al. (2017). *American Joint Committee on Cancer (AJCC) Cancer Staging Manual, 8th Edition.*

19 World Health Organisation (2018). *Non-communicable diseases country profiles 2018.* Geneva.

20 World Health Organisation. *Fact sheet on cancer*. Available at: http://www.who.int/news-room/fact-sheets/detail/cancer

21 Cancer Research, United Kingdom. *Worldwide cancer incidence statistics.* Available at: https://www.cancerresearchuk.org/health-professional/cancer-statistics/worldwide-cancer/incidence#heading-One

22 World Health Organisation (2002). *National cancer control programme: Policies and managerial guidelines (2nd edition).* Geneva.

23 National Cancer Institute. *Tumour markers.* Available at: https://www.cancer.gov/about-cancer/diagnosis-staging/diagnosis/tumor-markers-fact-sheet

24 World Health Organisation (2018). *Public spending on health: A closer look at global trends.* Geneva.

Cancer survival rates are improving due to medical advances including earlier diagnosis and improved treatments[25]. As cancer survival rates improve, there are more cancer survivors than in prior times. Addressing their needs has become an integral part of comprehensive cancer care. Cancer survivors often experience physical and psychological morbidities that are associated with the cancer and its treatment[26]. They need ongoing support, including[27]:

- Prevention of cancer recurrence and other late effects; and of other new cancers;
- Surveillance for cancer spread, recurrence, assessment of late medical and psycho-social effects; and surveillance for predisposed new cancers;
- Intervention for consequences of cancer and its treatment, for example: medical problems such as lymphoedema and sexual dysfunction; symptoms including pain and fatigue; psychological distress experienced by cancer survivors and their caregivers; funtional deconditioning, limitations in activities and participation, and concerns related to employment, healthcare costs, and disability which affect their transition to life after cancer;
- Coordinated care amongst specialists, healthcare professionals and primary care providers to ensure that all of the cancer survivors' health needs are met in a seamless manner.

With the increase in cancer survival, this leads to an overall increase in health needs for which diligent and responsible planning is required.

Cancer in Hong Kong

Similarly, cancer poses a major healthcare burden to the Hong Kong population. As its major public healthcare provider, the Hospital Authority (HA) is challenged to cope with the escalating demand for cancer services.

In 2017, the incidence of cancer in Hong Kong was 33,075[28]. Of these, the five most common cancers were colorectal, lung, breast, prostate and liver cancer, which together comprised 58% of all new cancer cases. By 2030, the incidence is projected to increase by around 35% to more than 42,000 new cases per annum **(Figure 3)**[29]. Cancer is the leading cause of death in Hong Kong, accounting for 14,354 deaths in 2017, or approximately one in three deaths **(Figure 4)**[30].

25 Philips, J.L., Currow, D.C. (2010). Cancer as a chronic disease. *Collegian*; 17, 47-50.

26 Philips, J.L., Currow, D.C. (2010). Cancer as a chronic disease. *Collegian*; 17, 47-50.

27 Hewitt, M., Greenfield, S., and Stovall, E. (Eds.). (2006). *From cancer patient to cancer survivor: Lost in transition*. The National Academies Press, Washington, D.C.

28 Hong Kong Cancer Registry.

29 The projected number of cancer new cases includes those aged 20 or above only, and excludes non-melanoma skin cancer. *Hong Kong Cancer Registry*.

30 Department of Health, Government of the Hong Kong Special Administrative Region (HKSAR).

Figure 3. Number of New Cancer Cases in Aged 20 and over, 1991-2017 and Projection to 2030

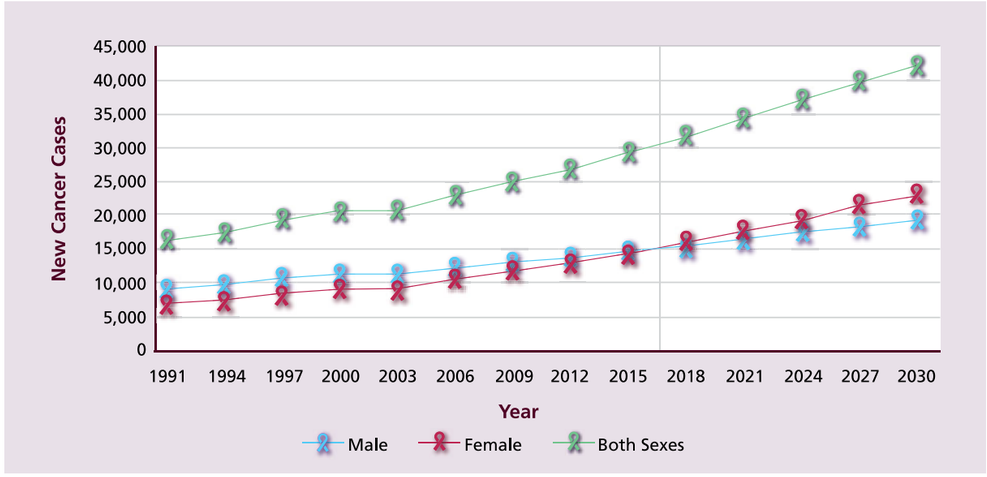
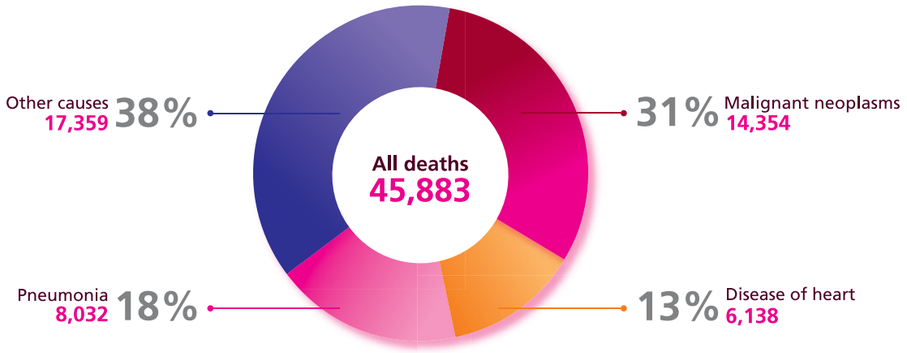


Figure 4. Leading Causes of Death in Hong Kong, 2017



However, cancer survival rates are improving in Hong Kong, which is consistent with the global trend[31]. Between 2007 and 2017, the age-standardised cancer mortality rate has decreased from 100 deaths per 100,000 persons to 84 deaths per 100,000 persons **(Figure 5)**[32]. This trend is expected to continue, resulting in an increasing number of cancer survivors, who require more medical, psycho-social and rehabilitation care and support.

31 Philips, J.L., Currow , D.C. (2010). Cancer as a chronic disease. *Collegian*; 17, 47-50.

32 The age-standardised cancer mortality rate excludes non-melanoma skin cancer. The mortality rate is computed using 'World (Segi 1960) standard population'. *Hong Kong Cancer Registry.*

Figure 5. Age-standardised Cancer Mortality Rate from 2007 to 2017

Impact on HA's Cancer Services

As the major provider of cancer services in Hong Kong, the challenges posed by cancer are expected to have a substantial impact on HA. In 2017, around 90% of the new cancer patients were ever diagnosed or treated in HA facilities within the first six months of cancer diagnosis[33].

With the increasing trend in cancer incidence and cancer survival, HA is challenged with managing the escalating service demand. Data indicates that the growth in number of cancer patients is higher compared to other chronic diseases. For example, between 2012 and 2016, the average growth rate of breast and colorectal cancer patients treated in HA was over 10%, as compared to around 5% growth for hypertension and diabetes mellitus. This is also reflected in the resource utilisation. Cancer contributed to the highest number of patient days in 2017, accounting for 9% of the total.

HA provides a comprehensive range of cancer services to patients, covering the cancer care journey from symptomatic presentation to diagnosis, treatment, survivorship as well as palliative care. Although the care provided is extensive, variations and gaps do exist in the service provision, such as timeliness, accessibility and quality of cancer diagnosis, treatment, and survivorship care. Moreover, cancer care is broad and complex, involving multiple clinical specialties[34] and disciplines[35]. Coordinated planning at the Corporate and cluster levels is required to develop efficient service models and system infrastructure for efficient and comprehensive care.

These areas represent opportunities for growth and improvement. The Framework is developed to provide guidance to the planning and development and to facilitate the coordination of future cancer services in HA, to ensure the service timeliness, access, quality and sustainability, in accordance with HA's vision for cancer services.

33 Hong Kong Cancer Registry.

34 Examples include oncology, surgery and medicine.

35 Examples include doctors, nurses, allied health professionals and pharmacists.

Vision and Scope

What We Aspire and What the Framework Is about

In formulating this Framework, our goal is to improve the health of our patients through improving the accessibility and the quality of cancer services we provide. We believe the care that patients receive should be appropriate to their needs, and should be delivered through the concerted efforts of different healthcare professionals along the care journey in a sustainable manner. With this principle in mind, HA set out the following vision for the cancer services:

Vision for HA Cancer Services

The vision for HA cancer services is that **"all cancer patients receive timely, coordinated and patient-centred care in their cancer journey"**. HA will strive to provide timely, equitable and quality cancer services to our patients.

Scope of the Framework

This Framework sets out the strategic directions to guide the planning and development of the service model and corresponding system infrastructure required for HA's cancer services for 2020 to 2030. It aims to address the existing and anticipated challenges and improve the service quality and sustainability through the refinement of cancer care services in HA. Although specific operational details for implementation are beyond the scope of this Framework, it provides an overarching framework for HA clinicians and executives to align their initiatives on cancer service development.

This Framework is targeted at adult cancer patients in HA. It focuses on HA's role in the cancer care pathway from symptomatic presentation, diagnosis, treatment to survivorship care. In particular, it emphasises on collaboration amongst different specialties and disciplines, as well as the organisation of cancer services at the cluster level.

Palliative care, genetic and genomic services planning, both important aspects of cancer care, have been addressed in separate Strategic Service Frameworks (please refer to the 'Strategic Service Framework for Palliative Care' and the 'Strategic Service Framework for Genetic and Genomic Services' uploaded on the HA Corporate website) and hence will not be included in this Framework.

Planning Process

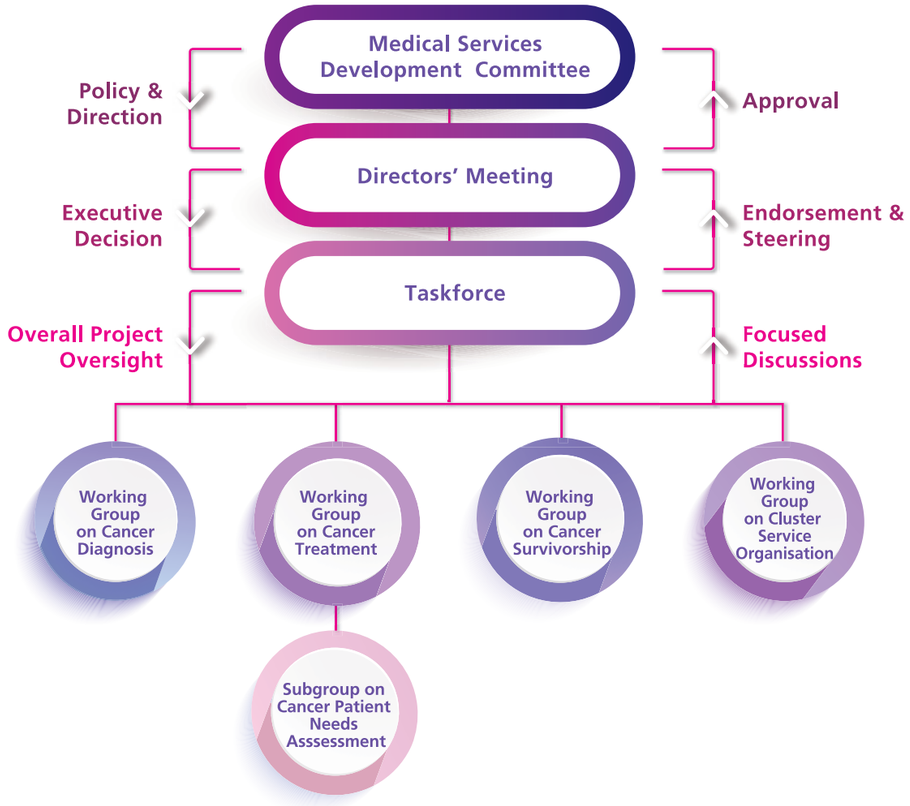
How We Developed the Strategic Service Framework for Cancer Services

Project Governance

Under the policy directions and guidance of the Medical Services Development Committee (MSDC) and Directors' Meeting, a designated Taskforce was set up to oversee the development of the Framework. The Taskforce was co-chaired by the Director of Strategy and Planning Division and the Director of Cluster Services Division of HA. The terms of reference and membership of the Taskforce are set out in **Appendix 1.**

Under the Taskforce, four Working Groups and one subgroup were formed for detailed deliberations on the development of HA cancer services **(Appendix 2-6)**. Three of the Working Groups provided advice on the future service models and related system infrastructure, focusing on different phases of the patient pathway including cancer diagnosis, treatment and survivorship respectively. A subgroup was established under the Working Group on Cancer Treatment to improve the service model to deliver holistic patient care. The fourth Working Group focused on the organisation of cancer services, and the formulation of Cluster Plans which would guide the Framework's implementation in the clusters. The findings and recommendations from all Working Groups were brought back to the Taskforce for deliberation and consideration. A project team from the Strategy and Planning and Cluster Services Divisions provided executive support for the development of the Framework. The project governance structure is illustrated in **Figure 6**.

Figure 6. Project Governance Structure



Formulation Process

The development of the Framework commenced in 2017. The process consisted of review of international best practice and existing HA cancer services, engagement of key stakeholders, formulation and prioritisation of strategies, consultation and approval of the Framework. A wide range of stakeholders were involved in the development process, including clinical staff, cluster management, HA Head Office executives, and patient groups.

A literature review was conducted on the international cancer service models and best practice. Situational analyses were conducted within the HA to review the existing cancer services and to identify potential service gaps and opportunities for improvement.

Stakeholders were recognised as important partners in the Framework development process and their input was sought on cancer service gaps and recommendations on the strategies and implementation plans. They were engaged via a multi-prong approach as outlined below.

A workshop on Strategic Service Framework for Cancer Services was held in November 2017 to identify the current issues in HA cancer services and brainstorm directions for future development and service design. It was attended by HA colleagues including doctors, nurses, allied health (AH) professionals and executives. Prof Robert J S Thomas, the Chair of the Advisory Council of Cancer Australia; Special Advisor on Health to the Victorian Government and University of Melbourne and Deputy Chair of the Victorian Comprehensive Cancer Centre, was invited to share his extensive experiences in cancer services planning and system reform. The workshop provided an opportunity for exchange of knowledge and ideas, and the findings formed the basis for further discussion in the subsequent Working Groups.

In parallel, site visits to all seven clusters were conducted to enhance the depth of understanding of cancer service provision in each cluster, and to provide an opportunity for cluster staff to share their views on the current and future cancer services. Each cluster visit included a survey on cluster cancer service arrangement, meetings with cluster management and clinical staff, site visits to inpatient, ambulatory, outpatient departments, and patient support facilities for cancer care.

Briefings were conducted and input was sought from the relevant Coordinating Committees (COCs), Central Committees (CCs), the Patient Advisory Committee and other relevant Committees on the Framework and to provide them with progress updates. Details on the Committees involved can be found in **Appendix 7**.

Through the stakeholder engagement process, the inputs from stakeholders consulted were put forward to the Taskforce to inform the Framework formulation. Regular reports were made to the Directors' Meeting and MSDC for advice and direction throughout the process.

Consultation on the draft Framework and service model was conducted from August to September 2019 to solicit input and feedback from key stakeholders. These included HA Head Office and cluster management, frontline clinical staff, COCs, CCs, the Patient Advisory Committee and other relevant Committees. Their inputs were carefully considered and deliberated by the Taskforce for inclusion in the Framework. The final Framework was submitted to the Directors' Meeting for endorsement and the MSDC for final approval.

Part Two

Cancer Services and Strategies

Overview of Cancer Services in HA

What We Are Doing Now

Cancer – the Situation in Hong Kong

Cancer is associated with the highest mortality amongst all major non-communicable diseases in Hong Kong. Cancer incidence has been rising, increasing at an annual rate of about 3.1% between 2007 and 2017[36], while the cancer mortality rate in Hong Kong dropped[37].

An Overview of Cancer Services in HA

As the largest healthcare provider for public inpatient services in Hong Kong, HA provides a comprehensive range of medical services (including inpatient, day patient, outpatient and outreach home care) to cancer patients. The scope of our services covers the patient journey from symptomatic presentation, diagnosis, treatment, survivorship, palliative to end-of-life care. Among new cancer patients in Hong Kong, around 90% of them were ever diagnosed or treated in HA in 2017[38]. Cancer care journey is complex, and it requires input from different clinical specialties and disciplines at different stages.

The provision of cancer care services in HA adopts a multi-disciplinary team (MDT) approach to tailor to the multi-faceted needs of patients and their families and carers. Doctors, nurses, medical social workers (MSWs), clinical psychologists, radiation therapists, medical physicists, physiotherapists, occupational therapists, dietitians, other AH professionals, spiritual workers, and volunteers all work as a team to provide holistic care to cancer patients.

36 Hong Kong Cancer Registry.

37 The age-standardised cancer mortality rate excludes non-melanoma skin cancer. The mortality rate is computed using 'World (Segi 1960) standard population'. *Hong Kong Cancer Registry* (Please refer to Figure 5 on P.35)

38 Hong Kong Cancer Registry.

HA currently operates six oncology centres in six clusters as detailed in **Table 2** below. There are plans to establish the seventh centre in the Kowloon East Cluster (KEC) with the redevelopment of United Christian Hospital (UCH), which is targeted for completion in 2023. Besides oncology, clinical specialties such as pathology, radiology, surgery, and medicine are all involved in cancer care provision. Coordinated cross-specialty and cross-disciplinary efforts are essential to meet cancer patients' needs.

Table 2. Oncology Centres in HA by Cluster in 2019

Cluster	Oncology Centre
Hong Kong East Cluster (HKEC)	Pamela Youde Nethersole Eastern Hospital (PYNEH)
Hong Kong West Cluster (HKWC)	Queen Mary Hospital (QMH)
Kowloon Central Cluster (KCC)	Queen Elizabeth Hospital (QEH)
Kowloon West Cluster (KWC)	Princess Margaret Hospital (PMH)
New Territories East Cluster (NTEC)	Prince of Wales Hospital (PWH)
New Territories West Cluster (NTWC)	Tuen Mun Hospital (TMH)

Governance Structure

At the Corporate level, the Central Committee on Cancer Service (CC(Cancer Service)) and Coordinating Committee in Clinical Oncology (COC(Clinical Oncology)) are the two multi-disciplinary platforms to advise HA on cancer service development. The CC(Cancer Service) advises HA on the organisation of cancer services and promotes multi-disciplinary, integrated cancer care, while related COCs[39] advise HA on cancer-related clinical service and care, workforce planning and training, quality and safety, technology, therapeutics and information technology (IT). At the cluster level, the cluster management is responsible for supporting cluster-based service organisation and coordinating cluster cancer services.

39 Appendix 7 lists the COCs and CCs related to cancer services and involved in the Framework's formulation process.

Service Scope

HA currently provides cancer care along the cancer patient journey from symptomatic presentation, diagnosis, treatment, survivorship, palliative to end-of-life care. HA also networks with non-government organisations (NGOs) in providing psycho-social support to cancer patients and their families at the community level. The following sections highlight some major components of the patient journey.

Symptomatic Presentation and Diagnosis

At present, most patients in need of cancer services are referred to the HA Specialist Outpatient Clinics (SOPCs) via referral letter. Referral sources include private sector doctors, primary care, and other clinical specialties within HA, for further investigation and management of suspected or confirmed cancers. HA has been adopting a triage mechanism for new SOPC referrals to offer priority assessment for these patients. Based on the clinical information stated on the referral letter, patients are classified as urgent (Priority 1 case), semi-urgent (Priority 2 case), or stable (Routine case). The target waiting time for consultation at SOPC is two weeks and eight weeks respectively for Priority 1 and Priority 2 cases.

Following specialist assessment in the SOPC, relevant investigations are arranged for diagnosis and staging. Some investigations are organised in cluster-based or inter-cluster manner under established structured diagnostic pathways, whilst others are conducted locally at the hospital in the absence of such pathways. Special diagnostic investigations such as positron emission tomography (PET) scans are only available in a few hospitals in HA. As a result, patients may be required to make multiple visits to different hospitals to complete the required investigations for diagnosis and staging.

Treatment

HA provides a wide and comprehensive range of cancer treatments including radiotherapy, surgery, chemotherapy, targeted therapy, hormonal therapy and immunotherapy to cancer patients in different settings (inpatient, outpatient and ambulatory care, and outreach home care). Currently, key performance indicators (KPIs) are available only for the waiting time for radical radiotherapy[40], and commencement of treatments for breast, colorectal and nasopharyngeal cancers[41].

Cancer Surgery

Surgery is one of the treatment options for cancer. It can be in curative nature or can be for palliation of symptoms, arising from tumour obstruction of relevant organs. Nowadays, surgery can also be offered to selective patients with solitary metastasis. Furthermore, with the increasing survival of cancer patients, reconstructive surgery to restore function and to uphold one's personal body image after the initial surgery for removal of the tumour has become more and more common. As a result, the demand for surgery in cancer care is increasing with time. With colorectal cancer as an example, the number of colorectal cancer-related operations increased from 1,929 in 2010-11 to 2,377 in 2017-18 (increased by 23%).

40 Key performance indicator: Waiting time (days) at 90th percentile from decision to treat to start of radiotherapy (RT) for cancer patients requiring radical RT. *Hospital Authority Guidebook on Key Performance Indicators 2019/20.*

41 Key performance indicator: Waiting time (days) at 90th percentile for patients with breast, colorectal and nasopharyngeal cancers receiving first treatment after diagnosis. *Hospital Authority Guidebook on Key Performance Indicators 2019/20.*

Medical Treatment

Systemic therapy plays a major role in the treatment of cancer. It can be used as a primary treatment with curative or palliative intent, and can also be used as neo-adjuvant or adjuvant therapy before or after surgical removal of the tumour, as well as concurrent with radiotherapy. With the increasing cancer incidence in Hong Kong, it is not surprising for the overall demand on systemic therapy to increase. As technology is advancing, new cancer drugs and treatment modalities, e.g. immunotherapy have become available. Currently, systemic therapy is provided to patients from oncology departments, haematology, gynaecology and in some surgical departments. However, as the variety and complexity of systemic therapy regimens increases and with the primary aim of upholding patients' safety and quality of treatment, systemic therapy services should be provided by credentialed staff. HA has introduced oncology clinical pharmacy services to improve the safety of systemic therapy for cancer patients and enhance pharmaceutical care. Clinical pharmacists play an active role in direct patient care in all oncology centres. They attend ward rounds with clinicians and provide input regarding drug-related issues such as drug administration, drug interaction and pharmacokinetics-related matters. In addition to the verification of systemic therapy protocols and performing clinical screening on treatment regimens for dosing accuracy and clinical appropriateness, they also provide drug counselling and education to patients when they are first started on systemic therapy. Clinical pharmacists also provide follow up on medication-related adverse effects and advice on their management.

Currently, the cancer drugs available in the HA Drug Formulary are comparable with those of reference countries (such as England, Scotland and Australia) in terms of coverage, except for the newest drugs which have yet to demonstrate their efficacy and cost-effectiveness[42]. Under the HA Drug Formulary, drugs are categorised into General Drugs, Special Drugs and Self-financed Items with or without safety net coverage by the Samaritan Fund or Community Care Fund. As of February 2019, the HA Drug Formulary covers 54 cancer drugs for treatment of 24 types of cancers. HA regularly reviews the HA Drug Formulary to include new cancer drugs or reposition existing drugs into a different category.

42 Legislative Council Panel on Health Services Subcommittee on Issues Relating to the Support for Cancer Patients. Prevention and Treatment of Cancer. LC Paper No. CB(2)1247/18-19(01).

Radiotherapy

Radiotherapy is a multi-staged, complex process that requires input from multiple professions. Once the decision for radiotherapy is made, patients will go through radiotherapy planning, moulding for immobilisation as required, simulation, contouring, computer treatment plan generation, quality assurance, pre-treatment verification, and finally treatment delivery and monitoring. Clinical oncologists, radiation therapists, mould laboratory technicians and medical physicists work in a multi-disciplinary approach to ensure that delivery of radiotherapy is accurate, timely and safe. At present, there are 28 linear accelerators (LINACs) in service in HA. To offer better accuracy and precision, all oncology centres are equipped with LINACs that can perform Intensity Modulated Radiation Therapy and Imaged Guided Radiation Therapy. More advanced types of LINACs such as 'Tomotherapy', 'TrueBeam' and 'Versa HD' have been introduced in different centres such as QEH, PWH, PYNEH, QMH and TMH. With the redevelopment of UCH, additional LINACs will be installed in HA. To cater for the increase in demand for radiotherapy, extended-hour service has also been commenced in various clusters.

Cancer Case Manager (CCM) Programme

CCM Programme is an integral part of cancer treatment in HA. CCM assists cancer patients in navigating the complex cancer journey from the confirmation of cancer diagnosis and throughout the radical cancer treatment phase. HA has implemented the CCM Programme in a phased approach since 2010 for patients. In 2019, it provides coverage for patients with complex breast or colorectal cancers. Under this programme, the CCM acts as the single point of contact between patients and doctors. The programme was extended to all clusters in 2014.

The scope of the CCM Programme's coverage is significant. As of March 2018, approximately 14,600 breast cancer and 17,500 colorectal cancer cases were recruited under the programme. Patients also appear to be satisfied with the service. In 2016, a patient satisfaction survey on the CCM Programme demonstrated that all recruited patients (n=433) indicated that the programme was useful and that they were satisfied with the service received. To date, the CCM Programme is yet to be made available to patients with other common cancers.

Supportive Care and Rehabilitation Service

Supportive care and rehabilitation service for cancer patients are important components in the care plan to improve the quality of life of both cancer survivors and their caregivers throughout their cancer journey. Currently, provision of supportive care and rehabilitation in the pre-treatment and treatment phase of the cancer care are limited with variation between clusters.

Survivorship Care

Survivorship care is currently provided through hospital-based specialist services and specific rehabilitation programmes. This is not consistent across the clusters. There is also room for involving primary care, nurse clinics and community services in the transitional care. It is expected that with standardised surveillance and survivorship protocols, the coordination and collaboration in transitional care for survivors especially those with long-term co-morbidities could be improved.

Other Supportive Services

Cancer Patient Resource Centre

HA has partnered with the Hong Kong Cancer Fund to establish Cancer Patient Resource Centre (PRC) in the six oncology centres and UCH. These centres provide free resources and services for cancer patients, including a cancer information library, professional counselling services, rehabilitation workshops, peer support activities; services providing information and assistance to newly-diagnosed patients, as well as rehabilitation or palliative support for those at other stages of the cancer journey. Some of the activities organised by these centres are funded by the Hong Kong Cancer Fund.

Public-Private Partnership Programme for Cancer Services

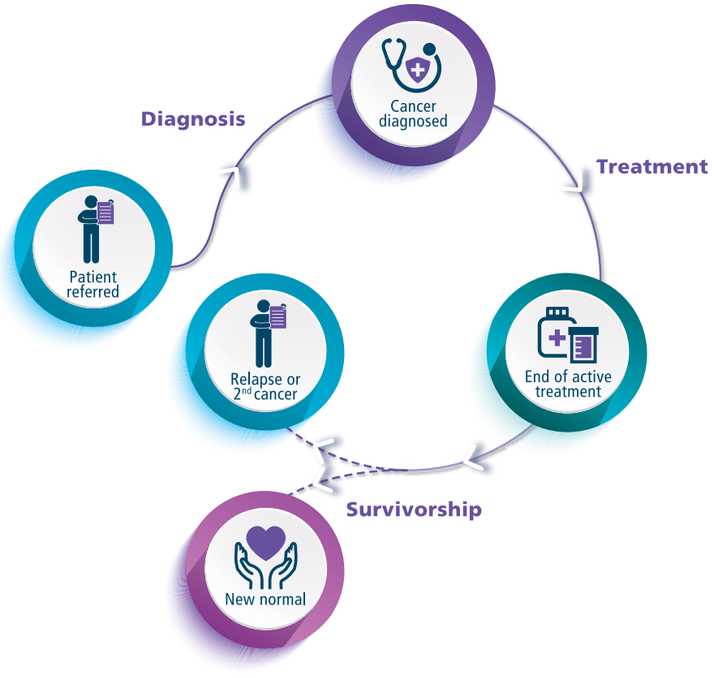
With the increasing demand on disease staging and follow up, HA has implemented the 'Project on Enhancing Radiological Investigation Services through Collaboration with the Private Sector' in May 2012 to provide computed tomography (CT) and magnetic resonance imaging (MRI) examinations for cancer staging for selected cancer patients fulfilling pre-defined clinical criteria. The project has been expanded to cover 11 cancer types since then to assist more patients.

Key Areas Identified for Service Improvement

What We Need to Do Better

Comprehensive review of adult cancer services in HA has been conducted to identify areas for improvement, and to guide the formulation of strategies for service development and enhancement. This chapter delineates the five key areas in HA for further enhancement and improvement: (1) overall cancer service governance and cluster service organisation; services provided along the cancer patient journey, namely (2) diagnosis, (3) treatment, and (4) survivorship care, as well as (5) monitoring of cancer service quality. **Figure 7** illustrates the services provided by HA for patients during their cancer journey.

Figure 7. HA Services for Patients along the Cancer Journey



Governance and Cluster Service Organisation

CC(Cancer Service) is the Corporate platform for coordinating HA's cancer service provision and development across specialties and disciplines. Various COCs[43] such as COC(Clinical Oncology) provide advice on the development of cancer care services, including input to the formulation of this Framework. Only some of the cancer care-related COCs are represented or involved in CC(Cancer Service). There is also a lack of cluster representation in CC(Cancer Service). Hence the existing membership structure is not conducive to HA-wide alignment of the direction in service development and coordination.

At the time the situational analyses were conducted in mid-2017, not all clusters had designated platforms for coordinating cluster cancer service provision and development. Only three clusters had established Cluster Cancer Committees, with varying levels of activity. The differences in their terms of reference reflect the variability in the scope of cancer service coordination even amongst these three clusters. In addition, the Committee membership composition is also varied. Key stakeholders such as cancer care professionals, hospital representatives, and cluster management team are sometimes not represented in the Committees. Hence great variation in accessibility towards diagnostic and staging tests, as well as treatment among different hospitals within the same cluster are not uncommon occurrences.

Without a dedicated cluster platform to oversee and coordinate cluster cancer services, communications and support between disciplines, specialties, as well as community partners are dependent on the initiatives and efforts of individual departments, which results in geographical variations and inequity in service provision. Different departments follow their own protocols or practice in providing cancer care, and face challenges in aligning with other related specialties or disciplines within the cluster to provide consistent services for patients with the same cancer types.

As a result, cancer service development has been piecemeal with variable quality. Good local practices may not be widely publicised and are subject to sustainability challenges. With inadequate coordination, cancer services provision is adversely affected in terms of accessibility and comprehensiveness. These significant gaps, both within and across clusters, are observed in services provided throughout the cancer patient journey as detailed in the following sections.

Efficient and effective cancer service organisation, with strong governance and close linkage between Corporate and clusters are vital to the collaboration of healthcare professions for a consistent, coordinated cancer services.

43 Appendix 7 lists the COCs and CCs related to cancer services and involved in the Framework's formulation process.

Cancer Diagnosis

Timely diagnosis of cancer is important to avoid treatment delay. The timeliness of diagnosis can be affected by a number of factors. They can be disease-related (e.g. the vagueness of cancer symptoms, overlapping with features of benign conditions), patient-related (e.g. awareness of cancer symptoms and health seeking behaviour), or system-related (e.g. accessibility to diagnostic service, efficiency of the diagnostic process, and service capacity). Service accessibility and workflow are reviewed to identify ways of achieving early cancer diagnosis from a system perspective.

The current triage mechanism for outpatient specialist assessment of suspected cancer patients is based on review of referral letters. The quality and sufficiency of information provided on the referral letters is crucial for the doctors conducting referral letter triage. Insufficient information provided makes it challenging to triage accurately and enable timely patient access to cancer diagnostic service.

Following triage, patients considered to have high index of suspicion for cancers would be prioritised to receive early SOPC assessments. Currently, the flexibility to accommodate such priority access is limited. This might lead to delay in diagnosis making and subsequent treatment provision, which will adversely affect patient outcome.

Cancer diagnosis and staging often involves multiple assessments and investigations along the patient journey. In 2018/19, HA's 90th percentile waiting time for routine cases for mammogram, CT scan and MRI was 162, 115 and 116 weeks respectively. There is also a capacity gap in anatomical pathology service. Thus streamlining the diagnostic process and avoiding duplication is vital, from both the patient and system perspectives. Communication and coordination are essential elements to achieve an efficient diagnostic process. Currently, differences in waiting time exist within and across clusters, even for the same type and priority category of diagnostic investigations. This might reflect the suboptimal coordination in the process, leading to disparities in the patient access to timely cancer diagnostic investigations.

To achieve early cancer diagnosis through a systematic approach, strategies are needed to improve the accessibility and workflow of cancer diagnostic services.

Cancer Treatment

Apart from disparities in patient access to diagnostic investigations, variations in first cancer treatment waiting times are also observed across and within clusters. For example, the 90th percentile waiting time for breast cancer patients receiving first treatment after diagnosis in 2017/18 ranged from 46 to 84 days among clusters. Similarly, for the waiting time within clusters for colorectal cancer, the largest range was 34 to 72 days.

Cancer service provision might vary in terms of the care pathways and the scope of services, even for patients with similar conditions. For example, we noticed in occasional circumstances that systemic therapy for adult patients were provided by individual specialties and are not covered by oncology clinical pharmacy services. This is despite the fact that the service has been established in all clusters since 2011. Their scope only covers patients receiving systemic therapy in oncology centres, not all cancer patients.

The current practice mainly focuses on the medical needs rather than holistic needs of cancer patients. Other aspects, particularly psycho-social, spiritual, emotional, pre-habilitation and rehabilitation needs, are not adequately assessed and addressed. Systematic assessments of patient needs and referral to the appropriate supportive care services are practised in a scattered, mostly ad hoc basis. Coordinated, departmental, programme-based protocols are few and far between. There are also considerable variations across hospitals in terms of tools, workflow, and personnel involved in the patient assessments.

Comprehensive care coordination is needed at the patient level, especially when the cancer treatment and care process cuts across multiple specialties, disciplines, and care settings. To improve care coordination of individual cancer patients, HA has implemented the CCM Programme since 2010. This programme, with CCM coordinating the formulation and execution of multi-disciplinary cancer care plans for individual patients, is well received by both patients and healthcare providers. However, its coverage is currently limited only to patients with breast and colorectal cancers who fulfil specific inclusion criteria. Variations are observed in practice and CCM reporting lines across clusters. More detailed description of CCM's role would facilitate the training and development of nurses in cancer care services.

In order to expedite cancer treatment and to cater for our patients' holistic needs in an equitable manner, there is a need to optimise coordination at the Corporate, cluster, and patient levels, so that patients can receive appropriate patient-centred quality cancer care.

Cancer Survivorship

Currently, most HA cancer survivors are followed up in SOPC after cancer treatment. Cancer is now evolved into a chronic disease requiring long-term medical care and monitoring.

At present, patients with the same cancer may be followed up by more than two specialties, such as oncology, surgery, gynaecology, haematology, orthopaedics etc. depending on the cluster. For example, surgery and oncology provide follow up for colorectal cancer patients, where the follow-up intervals and locations may vary without coordinated arrangements or communications between the two specialties involved. Good coordination facilitates survivorship care for patients by avoiding unnecessary patient visits and ensuring complementary treatment plans are in place. Currently, HA patients follow different care plans and different follow up frequencies, depending on where they receive treatment.

Various nurse clinics are in service, but the service models and scope vary with the departmental-based protocols. Integration with various stakeholders (e.g. primary care service providers) would provide an opportunity to enhance services on cancer survivorship. The involvement of primary care service providers in cancer survivorship care is also limited. Currently, there is no structured programme for cancer survivors to transfer from hospital-based cancer specialist care to community-based primary care. The lack of structured back-referral system from primary care to cancer specialists, for assessment of those cancer survivors who are suspected of having cancer sequelae (e.g. cancer recurrence and late onset complications), further contributes to the reluctance of moving transitional care service forward.

One of HA's core values is to provide patient-centred care. To achieve this, it is important to provide support appropriate to our patients' needs and empower them for self-care. Currently, there is a lack of holistic assessment of cancer survivors' needs, which is the pre-requisite for providing appropriate empowerment and support. Similarly, supportive care and cancer rehabilitation programmes are not widely available to address the survivors' needs. The empowerment and community support offered to the cancer survivors is also affected by the extent of collaboration with social resources (e.g. NGOs), which varies depending on the practices of individual hospitals. Some hospitals have structured platforms for communication with community partners, while others rely on informal links with individual departments in the absence of formal channels or mechanisms.

To empower cancer survivors to transit to a new, normal life after cancer treatment, strategies are needed to facilitate the transition in a sustainable and coordinated manner.

Performance Monitoring

Currently, only four cancer-specific KPIs are in existence within HA: waiting time for radical radiotherapy[44], and waiting time for treatment commencement for three specific cancer types (breast, colorectal and nasopharyngeal cancers)[45]. Without a corporate-wide, systematic and specific data collection to measure the entire cancer care process, service utilisation and outcomes, service monitoring would be challenging. As such, the available data in our system are generally inadequate to identify and measure service gaps and bottlenecks.

Therefore, considering the importance of systematic data in driving the continuous quality improvement, there is a need to strengthen the monitoring and evaluation of cancer service performance in a systematic, data-driven manner.

44 Key performance indicator: Waiting time (days) at 90th percentile from decision to treat to start of radiotherapy (RT) for cancer patients requiring radical RT. *Hospital Authority Guidebook on Key Performance Indicators 2019/20*.

45 Key performance indicator: Waiting time (days) at 90th percentile for patients with breast, colorectal and nasopharyngeal cancers receiving first treatment after diagnosis. *Hospital Authority Guidebook on Key Performance Indicators 2019/20*.

Strategic Service Framework for Cancer Services

Where We Are Going and How We Will Get There

Based on the five key areas identified for improvement, a comprehensive strategic service framework is formulated for adult cancer services in HA. One strategic direction is set for each respective key area. These five strategic directions collectively outline HA's general direction for development and improvement of adult cancer services.

Under each strategic direction, strategies are formulated to address the current and anticipated challenges faced by HA. Collectively they map out the steps that HA will undertake to achieve the vision that all cancer patients will receive timely, coordinated and patient-centred care in their cancer journey. **Table 3** summarises the overall strategic framework, while details of the strategic directions and corresponding strategies are outlined subsequently in this chapter.

Table 3. Strategic Service Framework for Cancer Services

Key Areas for Improvement *(what we can do better and what we want to achieve)*	**Strategic Directions** *(where we are going)*	**Strategies** *(how we will get there)*
Governance and Cluster Service Organisation Efficient and effective cancer service organisation	1 Cluster-based and networked cancer services	1.1 Tighten linkage between Corporate and clusters 1.2 Reinforce cluster-based cancer service coordination
Diagnosis Early cancer diagnosis	2 Timely access to cancer diagnostic services	2.1 Stratify patients actively according to their cancer likelihood 2.2 Provide fast-track diagnostic services
Treatment Prompt patient-centred quality cancer treatment	3 Equitable and integrated cancer treatment services	3.1 Apply 'Integrated Cluster Cancer Centre' model 3.2 Streamline supportive care pathways 3.3 Improve care coordination with enhanced Cancer Case Manager services
Survivorship Empowered cancer survivorship	4 Seamless transitional care for cancer survivors	4.1 Align survivorship care 4.2 Facilitate transition to primary care 4.3 Support survivors to stay healthy in the community
Performance Monitoring Data-driven service planning and improvement	5 Strengthened data-driven performance monitoring and evaluation for continuous quality improvement	5.1 Collect data systematically along the patient journey 5.2 Identify key domains and develop clinical indicators to evaluate and monitor outcomes and service quality

Cluster-based and Networked Cancer Services

To keep pace with evolving service needs and to align with policy directions for cancer services, the governance of cancer services will be enhanced at both the cluster and Corporate levels, with the two tightly entwined. The strengthened governance provides a structured platform for enhancing the coordination of cancer service planning and implementation, as well as the collaboration among cancer care professionals across different specialties and disciplines.

To move towards cluster-based and networked cancer service provision, HA cancer service organisation will be re-engineered from the current departmental or hospital-based siloes towards cluster-based or territory-wide service networks in the coming years. This is also in line with the overall Corporate direction as delineated in the HA Strategic Plan 2017-2022. To move further towards cluster-based integrated cancer care, 'Integrated Cluster Cancer Centre' (ICCC) service model will be adopted. Under this model, disease-based, multi-disciplinary cancer care units will be formed to provide integrated cancer care within clusters, and to support units of same disease types across clusters. These two key strategies are outlined below.

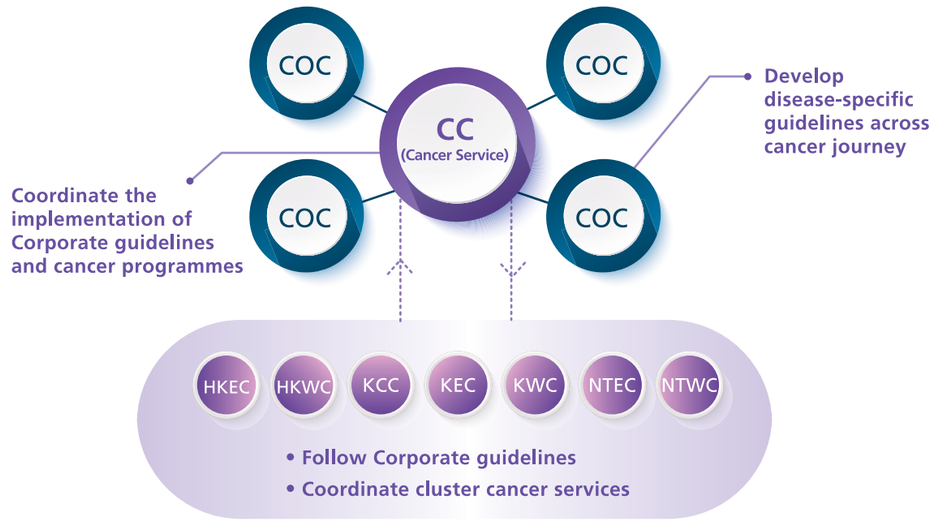
Strategy 1.1: Tighten Linkage between Corporate and Clusters

- Enhance Governance of Adult Cancer Services at Both Cluster and Corporate Levels

At the Corporate level, CC(Cancer Service) will continue its role in oversight and coordination of cancer service development and monitoring. To fulfil its professional advisory and executive functions, it is important that CC(Cancer Service) effectively aligns all relevant key stakeholders with the Corporate direction on cancer services. A refined membership of CC(Cancer Service), with representation of all seven clusters, COCs and CCs relevant to specific service needs, will reinforce its functions by enabling a close linkage between the key stakeholders.

One of the important functions of CC(Cancer Service) is to enhance the development of integrated cancer care. Given the multi-disciplinary and cross-specialty nature of cancer care, COCs and CCs will collaborate on the review and design of service models of cancer types related to their respective specialties and disciplines. CC(Cancer Service) will facilitate the process by, for instance, coordinating the formation of and overseeing the corresponding cross-specialty and cross-disciplinary working groups, which focuses on identifying gaps, collating inputs, and generating models for better service coordination and monitoring corporate wide. The working groups report to their respective COCs and CCs and propose the models to CC(Cancer Service) for deliberation. CC(Cancer Service) aligns and prioritises the agreed operation plans for coordinated implementation across the clusters with the best use of resources, and monitors the performance to maintain service standards. **Figure 8** summarises the relationship between CC(Cancer Service), COCs, and clusters, and their respective key roles.

Figure 8. Relationship between CC(Cancer Service), COCs, and Clusters



At the cluster level, each cluster will have a formal governance structure, namely Cluster Cancer Committee, to oversee and coordinate the cluster-based cancer service development. Each cluster committee has two core, instrumental functions: 1) to align cancer service development within the cluster, in collaboration with cancer care professionals from different disciplines, specialties and hospitals; 2) to work closely with the Head Office, CCs, COCs, other clusters, and community partners. The Committee is responsible for identifying resource and training needs, implementing cluster-based cancer services and monitoring of the services in accordance with the guidelines from COCs and CCs.

A strong governance and membership structure of the Cluster Cancer Committees, aligned across the clusters, is the foundation for effective execution of their roles and responsibilities. The Committee, preferably led by senior cluster management, reports to cluster management or medical committee led by the Cluster Chief Executive. The membership includes both management and clinical representatives from all hospitals that provide cancer services in the cluster, with a 'Cluster Cancer Services Coordinator' assigned to represent the cluster in the CC(Cancer Service).

Strategy 1.2: Reinforce Cluster-based Cancer Service Coordination

- Implement 'Integrated Cluster Cancer Centre' Model

The ICCC model is a service model under which a cancer patient would receive cluster-based integrated cancer care, delivered by a relevant MDT of cancer care professionals according to the patients' needs, in an equitable manner no matter where the patient is in the cluster.

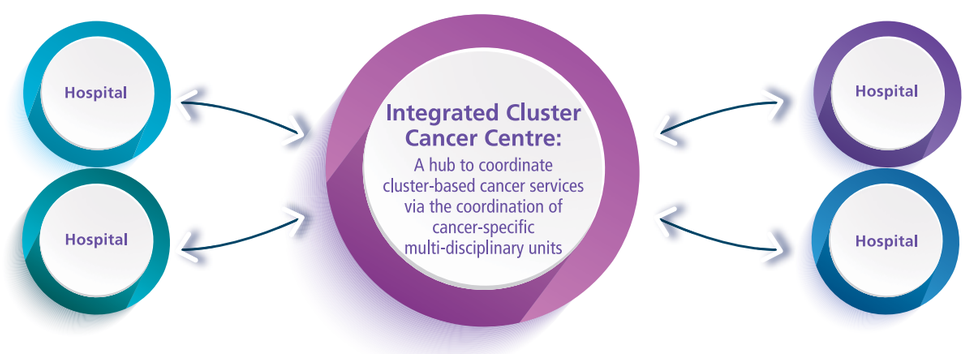
Cancer care professionals from relevant disciplines and specialties are pooled together to form multi-disciplinary units according to cancer types or groups. Each cluster-based, multi-disciplinary unit for a particular cancer is responsible for coordinating and operating the corresponding services for patients for their respective cancer type or group across the whole cluster. Their role is to provide equitable and patient-centred cancer services under the oversight of the Cluster Cancer Committee. The multi-disciplinary unit should work to develop cluster-based patient care pathways and protocols with consideration of the cluster's local settings (e.g. historical and geographical factors), and operationalising services with clear role delineation of the personnel and place providing the services. It should be supported by relevant networks of expertise to address patients' individual cancer care needs.

There will be one ICCC in each cluster, serving as a hub for all the cancer-specific multi-disciplinary units, coordinating and operationalising the cluster-based cancer services. Some facilities and support services (e.g. operating theatre (OT), intensive care unit) would be shared with other services depending on the clusters' situation, in order to optimise the use of these facilities.

In general, cancer services of high complexity and low volume will be centralised in the ICCC, to concentrate expertise and technology for improved staff competency and patient safety. Treatment for patients with rarer or highly complex conditions should be further concentrated through the development of quaternary services by networking the seven clusters. The tight link between the Corporate and cluster governance will assist the acceleration of the networking process and development of the quaternary services. Cancer services with lower complexity and high volume will be localised for better service accessibility. These services will operate under the coordination of the cancer-specific, multi-disciplinary units overseen by the Cluster Cancer Committee.

The ICCC model embraces trans-disciplinary integrated care and transcends traditional departmental and hospital boundaries. It optimises the use of expertise and facilities, and improves equity of service provision. **Figure 9** illustrates the role of cancer-specific multi-disciplinary units in relation to the ICCC and other hospitals in the cluster.

Figure 9. Relationship between the ICCC and Hospitals



Timely Access to Cancer Diagnostic Services

While acknowledging capacity issues of and competitive needs for diagnostic services in HA, cancer services focus on timely access to such services according to the likelihood of having cancer at the patients' entry to HA services. It aims at efficient use of available resources by enhancing allocation efficiency with reference to the patients' needs.

It begins upstream with enhanced referral triage mechanisms, utilising proactive stratification tools that accurately stratify referred patients according to their cancer likelihood, to improve the accuracy in identifying patients with high cancer likelihood. A streamlined diagnostic process will be offered to our patients, especially for those who are assessed to have high cancer likelihood, to reduce the time to diagnosis. These two strategies are outlined below.

Strategy 2.1: Stratify Patients Actively According to Their Cancer Likelihood

- Utilise Proactive Stratification Tools on Referral

Recognising the impact of referral letters on the triage system, efforts such as e-referral have been implemented to expedite the referral process. The impact, however is limited as e-referral is an internal HA process and hence only internal referrals are covered. A more active triaging mechanism is needed to overcome these limitations.

Utilising proactive stratification tools, such as cancer type-specific questionnaires or protocol-driven nurse-led assessment, assists clinicians in gathering relevant key information to stratify patients by likelihood of having cancers, so as to allow more accurate and timely triage and caseload management. Patients referred for management of confirmed cancer will be channelled directly to the cancer treatment service. Patients triaged as having high cancer likelihood will be offered expedited access for diagnostic services and specialist assessment. Patients stratified as low cancer likelihood will also benefit from the process as they will be channelled to the level of care appropriate to their needs.

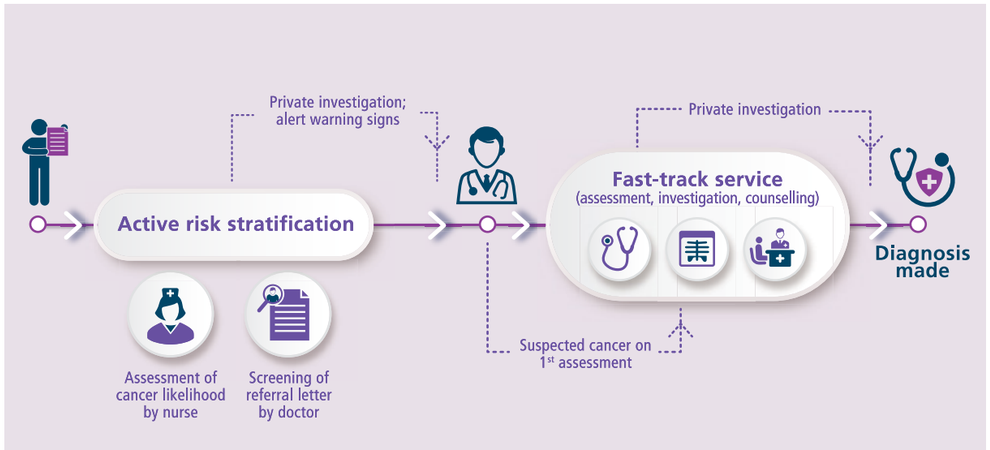
Strategy 2.2: Provide Fast-track Diagnostic Services

- Refine Outpatient Department (OPD) Arrangement and Bundle Diagnostic Services for Patients with High Cancer Likelihood

The SOPC case arrangement needs to be regularly reviewed and adjusted to maintain adequate flexibility in the system, so that expedited access can be ensured for patients who are triaged as high cancer likelihood.

Another key to shorten the diagnostic interval, especially for patients stratified as high cancer likelihood, is through better coordination. Diagnostic services should be bundled wherever feasible in order to save patients from multiple travels and waiting. Such bundled services could be provided, for instance, as diagnostic packages or one-stop diagnostic clinics. Cluster-based application of such bundled service improves the equity of service accessibility. For patients whose complicated conditions require multi-disciplinary inputs for making cancer diagnosis, the ICCC model provides a one-stop, cluster-based platform to address patients' complex needs. All these require close collaboration across specialties with development of common or complementary diagnostic pathways. Specialty nurse could play a role in this service coordination. **Figure 10** summarises the proposed patient pathway from referral to the time of diagnosis.

Figure 10. Proposed Patient Pathway from Referral to Diagnosis



Equitable and Integrated Cancer Treatment Services

A multi-faceted approach is needed to improve the quality of cancer treatment service, given the complexity of cancer care process, which often involves multiple specialties, disciplines, and care settings. The ICCC model forms a basis to transform the HA cancer services from a fragmented hospital or departmental-based service to a cluster-based integrated service.

Under the ICCC model, the cancer-specific multi-disciplinary units of each disease group will offer patient-centred integrated cancer service through concerted team effort, based on the understanding of patients' specific needs. In addition to specific cancer therapies, a holistic approach will also be adopted in the structured supportive care. CCM services will be enhanced to improve the care coordination to deliver the planned treatment and care.

The three strategies under the ICCC model, as described in details below, act synergistically so that patients with similar conditions in the same cluster will receive equitable services according to an integrated-care approach to care delivery.

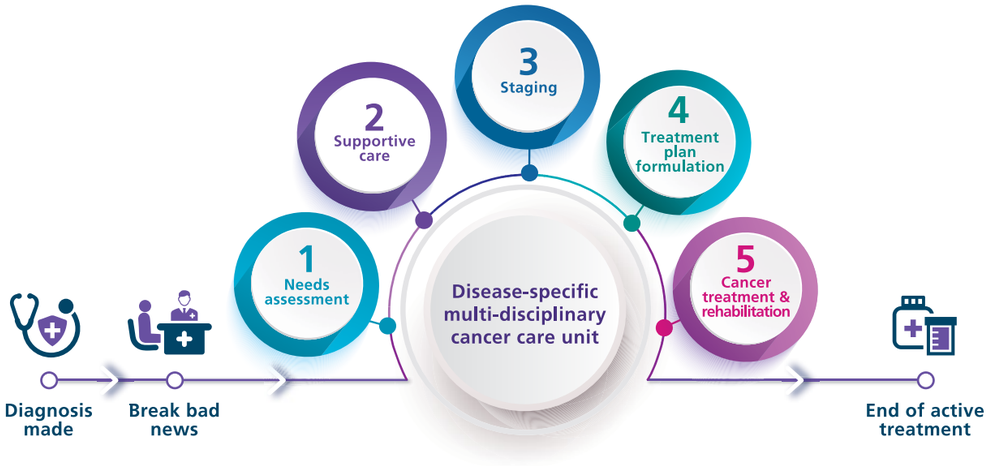
Strategy 3.1: Apply 'Integrated Cluster Cancer Centre' Model

- Provide Quality Integrated Care and Treatment Modalities by Credentialed Staff in an Equitable Manner

With patients as the centre of the unit, the cancer-specific, multi-disciplinary services will be organised around patients' specific needs. Patients will be engaged and empowered to actively participate in decision making about their cancer care plan. The integrated care approach also enables professionals from different disciplines work as a team in a complementary manner with shared goals and objectives. For example, with systemic therapy planning and administration, the clinical oncologist, medical oncologist, clinical pharmacists and other members will work as a team and complement each other to determine the best course of treatment for the patient. Improved coordination through the cancer-specific, multi-disciplinary services expedites management plan formulation, ensures consistent pathway and protocol adoption, and streamlines treatment.

With the ICCC model, cancer-specific multi-disciplinary units in the ICCC model will adopt a pathway-driven approach to streamline the services among different hospitals within the cluster. Close collaboration among hospitals maximises the synergy in service delivery within clusters, particularly in concentrating expertise and maximising facility utilisation to deliver efficient and high quality care. It also facilitates training, development of credentialed staff, through working in or rotating across the cluster hospitals. For example, a cluster-based common care pathway with a cross-hospital surgery booking system enables allocation of cancer surgeries efficiently by minimising waiting time within the cluster. When cancer surgery is considered complex or uncommon, patients can be channelled appropriately to the hospital where the required expertise and facilities are located. CC(Cancer Service) is the platform to facilitate close collaboration between cancer-specific multi-disciplinary units from different clusters. It also provides the platform for future development of cancer services. **Figure 11** summarises the treatment and care process from diagnosis to treatment, which requires multi-disciplinary input.

Figure 11. Multi-disciplinary Treatment and Care Process from Cancer Diagnosis to Treatment



Strategy 3.2: Streamline Supportive Care Pathways

- Assess Patients' Needs Holistically Followed by Structured Supportive Care Including Rehabilitation

Patient-centred care is defined as: 'providing care that is respectful of, and responsive to, individual patient preferences, needs and values, and ensuring that patient values guide all clinical decisions'[46]. Addressing patients' needs in a holistic manner (including the cancer treatment, psychological support, rehabilitation needs during the survivorship phase) improves the overall quality of care as well as the patients' experience. It is important to assess and address patients' needs in a timely manner, especially at key milestones of the cancer journey (e.g. at confirmation of cancer diagnosis and at the commencement of survivorship care following cancer treatment). It is also important to be aware of possible changes in patients' condition and needs at other time points of the cancer journey. Aside from treating the cancer, there is a wide range of cancer patients' needs including physical, emotional, spiritual, psycho-social, family, practical and informational needs as outlined in **Table 4**. A step-care model is adopted in order to triage and better address patients' needs efficiently and effectively. Under this step-care model, simple assessment tools will be administered by nursing staff to screen for individual patients' needs. The assessment tools stratify patients according to the type and level of needs, so that patients can be channelled to the appropriate structured care pathways for supportive care, pre-habilitation, and rehabilitation according to their needs. Patients and family with potential disease-specific needs would have protocol-driven programmes with additional assessments and support as required. For patients with low level of needs, simple interventions may suffice. For patients with higher level of needs, they will be referred to relevant specialists according to established referral criteria and structured mechanisms for care. Patients with anticipated disease-specific needs may benefit from structured, up-front supportive care such as pre-habilitation. Patients may require resources outside HA, in those instances cross-sectoral collaboration with non-HA organisations (e.g. social services, NGOs, patient groups) will be needed. A link person would be necessary to ensure coordination and close communication between the service partners.

Table 4. Examples of Patient's Needs[47]

Physical needs	Pain, nutrition, breathlessness
Emotional needs	Sense of comfort, belonging
Social needs	Work, relationships
Psychological needs	Anxiety, fear, self-esteem
Informational needs	Treatment choice, side effects
Spiritual needs	Hopelessness, concerns about meaning of life
Practical needs	Assistance for completing a task or activity

46 Institute of Medicine. *Crossing the Quality Chasm*: *A New Health System for the 21st Century.* Available at: http://www.nationalacademies.org/hmd/~/media/Files/Report%20Files/2001/Crossing-the-Quality-Chasm/Quality%20Chasm%202001%20%20report%20brief.pdf

47 Cancer Australia. (2016) *EdCaN module: Cancer Supportive Care Principle, V3.*

Strategy 3.3: Improve Care Coordination with Enhanced Cancer Case Manager Services

- Reinforce CCM's Role of Cancer Care Coordinator and Navigator along the Patient Journey
- Expand CCM Programmes to Cover More Cancer Types
- Strengthen Governance of CCM Services

Both the provision of integrated cancer services and structured supportive care involves healthcare professionals from different specialties. The CCM plays an important role in care coordination, supporting patients to navigate through the treatment journey, providing links to supporting services and community resources, and ensuring proper execution of the holistic cancer care plan. More detailed description of the role of CCM would further benefit the patient services. In particular, CCM coordinates cancer services across specialties and navigates the patient along the entire cancer journey. However, the current CCM model only provides cancer service coordination during the active treatment phase. The model has been implemented mainly in breast cancer and colorectal cancer patients. The model will be expanded to patients with different cancers in their active treatment phase, and will be ultimately extended to different phases of their disease, such as the survivorship phase.

Regarding the expansion of the CCM services to other cancer types in addition to breast and colorectal cancer, for patients during their active treatment phase, priority should be given to cancer types which require heavy coordination across multiple specialties or disciplines. As care coordination is also important during other parts of the cancer journey (e.g. for cancer survivors with complex needs), further extension of CCM Programme beyond the cancer treatment phase should be considered as the next step.

Before expanding the existing CCM Programmes and developing new CCM Programmes for other cancer types, it is important that the service models and governance of CCM Programmes are aligned across clusters. This is essential for seamless delivery of the programme, equitable access and high service quality. **Figure 12** summarises CCM's role in the patient-centred cancer care.

Figure 12. CCM's Role in Patient-centred Cancer Care

Seamless Transitional Care for Cancer Survivors

To support patients to live an empowered life after cancer treatment, HA will move towards providing seamless transitional care for cancer survivors. With better leverage of community-based healthcare resources, especially for the low-risk survivors, HA can work synergistically in partnership to allow better focus and role delineation to deliver a more comprehensive cancer service to patients.

To achieve this, HA needs to align the provision of needs-based survivorship care, with a common goal of supporting patients' return to a new, normal life in the community. To facilitate a smooth transition process, collaboration with primary care providers and community partners are important. Cancer patients will require different levels of support during the course of survivorship. Mechanisms that allow smooth and efficient patient flow between hospital, primary and community care, would be helpful to achieve a timely and sustainable survivorship care service. The three strategies are further elaborated below.

Strategy 4.1: Align Survivorship Care

- Developing Corporate-wide Disease-specific Survivorship Care Guidelines

To share the common goal of supporting cancer survivors for new, normal life in the community, HA will develop corporate-wide disease-specific survivorship care principles and pathways. The relevant COCs[48] will play an important role in advising on the patient pathways and guidelines. These patient pathways and principles will be discussed in CC(Cancer Service) and will aim to be implemented across clusters. The patient care pathways would be tailored to the unique needs of survivors of particular cancer types, and would share these common principles:

- To assess survivors' needs holistically[49]
- To triage and address survivors' needs in a coordinated manner[49]
- To streamline the follow-up and supportive care arrangements based on survivors' needs
- To have integration with primary and community care
- To set out the standard of care
- To expand the role of nurses in survivorship care (e.g. screening of patients' needs, linking cancer survivors, cancer care team, primary care providers and community resources)

48 Appendix 7 lists the COCs and CCs related to cancer services and involved in the Framework's formulation process.

49 Please refer to Strategy 3.2.

Strategy 4.2: Facilitate Transition to Primary Care

- Strengthen Collaboration between Cancer Care Teams and Family Medicine (FM) Physicians
- Set up a Fast-track Back-referral System for Specialist Assessment Appropriate to Needs

A shared care model will be adopted between the cancer care teams and primary care providers to facilitate transition care from hospital to community settings. Survivorship clinics will be one of the initial interfaces between cancer care teams and FM physicians in the care of cancer patients, where close communication and collaboration are enabled by sharing of care protocols in relevant COCs and CCs, knowledge exchange, training and development. Utilising a needs-based and risk-stratification approach, survivors will receive different levels of care appropriate to their needs and risks. Those with stable conditions will mainly be under the care of primary care providers, with eventual transition into community settings based on an agreed care pathway specific to the cancer type. A fast-track back-referral mechanism will be established, so that these patients under primary care can have timely access back to specialist services when needs arise (e.g. suspected cancer complications, cancer recurrence, or for specialist palliative services).

The potential of nurse clinics to participate in facilitating smooth survivorship care should be considered. Nurses could also coordinate interventions for those survivors with complex needs and act as the point of contact between the primary and cancer care teams.

Strategy 4.3: Support Survivors to Stay Healthy in the Community

- Enhance Needs-based Supportive and Rehabilitation Care with Structured Pathways
- Empower Patients and Reinforce Medical-social Collaboration

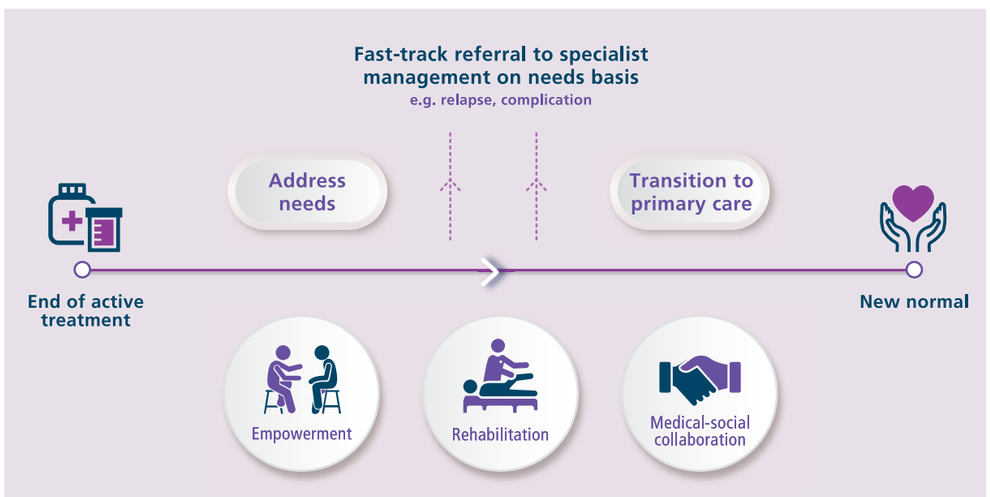
Survivors' needs may change during the cancer journey, especially during key milestones such as upon completion of cancer treatment. To facilitate adaptation to the new life after cancer, the same step-care approach[50] will be adopted to review patients when they enter the survivorship phase. Under the step-care approach, the patients' needs, now in the survivorship phase, as opposed to the specific needs during the treatment phase, will be assessed. Using the simple needs assessment tools, patients will be triaged for supportive care in accordance with their needs. This will facilitate the provision of timely and structured supportive care appropriate for their needs (e.g. rehabilitation, AH intervention).

50 Please refer to Strategy 3.2.

Apart from healthcare support, survivors may also benefit from access to cancer-related community and social resources (e.g. health promotion and self-management support), to be empowered to stay healthy in the community. Medical-social collaboration should be reinforced for better use of the community resources. Structured communication interface or platforms at different levels, spanning across the Corporate, cluster, and operational levels, could be a way to enhance cross-sectoral information sharing and collaboration, patient services, and collect patient feedback on the cancer services.

Under the patient-centred care model, patient's autonomy is a key focus, in addition to their medical needs. Supportive care will be provided according to patients' preference and needs. Patients are expected to take a more active role in leading a new life in the community with the support from both healthcare providers and community partners. Since their readiness to do so may vary, structured survivorship programmes with emphasis on empowerment at different levels will be established to facilitate cancer survivors to adapt to the new life, and also take action to maintain and improve their health. **Figure 13** summarises the proposed general survivorship care model.

Figure 13. Proposed General Survivorship Care Model



Strengthened Data-driven Performance Monitoring and Evaluation for Continuous Quality Improvement

Strategy 5.1: Collect Data Systematically along the Patient Journey

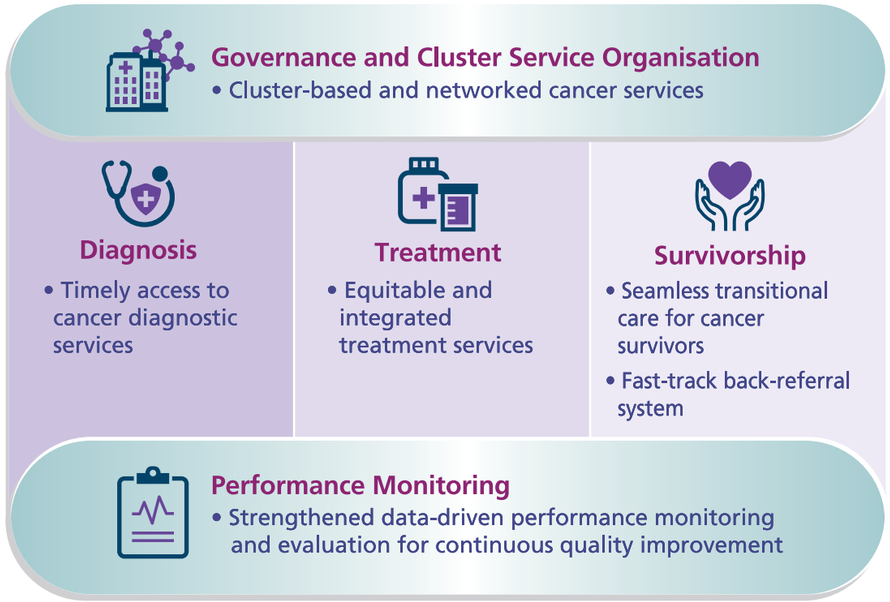
Monitoring of cancer service along the whole patient journey is essential to measure service performance, and quality improvement activities. With platforms available to enable efficient, reliable and sustainable data collection, performance measures and benchmarks[51] can be established. This will enhance the service evaluation and quality improvement. Gaps, should they occur, will be systematically captured and reported. This will allow timely review of root causes and identification of corrective actions needed, including additional resource needs.

Strategy 5.2: Identify Key Domains and Develop Clinical Indicators to Evaluate and Monitor Outcomes and Service Quality

Key clinical indicators and performance measures to monitor service quality and patient outcomes should be deliberated, aligned, and standardised concurrently with the planning phase and implemented at the same time as services are rolled out. This will allow reliable analysis of the service provision and benchmarking across HA. Examples include waiting time for assessment and treatment, care planning, reduction of patient needs after intervention, and patient satisfaction. When these clinical indicators become mature and widely adopted across HA, they could be developed into KPIs to evaluate patient outcomes and monitor service quality. The new service model of adult cancer services in HA is illustrated in **Figure 14**.

51 Details outlined in Strategy 5.2.

Figure 14. Future Model of HA Adult Cancer Services



Key Enablers

The last section of this chapter highlights the key enablers that will facilitate effective implementation of the Framework and the new service delivery models. These include manpower and training, facilities and infrastructures, as well as data and IT support.

Manpower and Training

Committed, competent, and sustainable workforce is vital to the success of cancer service delivery both for now and in the long term. To meet the escalating service demands, detailed workforce planning is essential for medical, nursing, and AH professionals (e.g. anatomical pathologist) **(Table 5)**.

Table 5. List of Some Healthcare Professionals Involved in Adult Cancer Care[52]

• Anaesthesiologist and pain specialist • Chaplain • Clinical psychologist • Clinical pharmacist • Dietitian • Emergency physician • Intensivist • Internist • Genetic counsellor • Gynaecologist • Nurses (Cancer Case Manager, clinical specialist nurse, community nurse, nurse coordinator, nurse consultant) • Occupational therapist • Oncologists[53]	• Pathologist • Palliative and hospice care team • Physiotherapist • Primary care physician • Psychiatrist • Radiation therapy specialists (medical physicist, radiation therapist) • Radiologist • Radiographer • Rehabilitation specialist • Social worker • Speech therapist • Surgeons

During the workforce planning and deployment, a cluster-based perspective should be adopted in order to support the delivery of the ICCC model. Workload estimation across different disciplines along the patient care pathways in both inpatient and ambulatory settings, is important to inform the manpower needs to ensure adequate workforce planning and resource allocation. Role delineation, accountability structures, and career progression paths are also important factors to consider. They are important not only to workforce and service planning, but also training and professional development.

52 The names of the healthcare professionals are listed with reference to the Hong Kong Academy of Medicine. For details, please refer to website: www.hkam.org.hk

53 Four types of oncologists provide adult cancer services under the Specialist Register of the Medical Council of Hong Kong and certified by the Hong Kong Academy of Medicine (HKAM): clinical oncologist (a HKAM fellow who has completed fellowship training in clinical oncology under the Hong Kong College of Radiologists, which consists of training in non-surgical oncology including delivery of systemic therapy and radiotherapy); gynaecological oncologist (a HKAM fellow who has completed fellowship training in obstetrics, gynaecology, and gynaecological oncology under the Hong Kong College of Obstetricians and Gynaecologists, which includes surgical and non-surgical management of gynaecological cancers); haematological oncologist (a HKAM fellow who has completed fellowship training in advanced internal medicine or geriatrics, haematology and haematological oncology under the Hong Kong College of Physicians, which includes management of blood cancers and lymphomas with systemic therapy and haemopoietic stem cell transplantation); medical oncologist (a HKAM fellow who has completed fellowship training in medical oncology under the Hong Kong College of Physicians, which includes systemic therapy provision and development). For details, please refer to website: www.hkam.org.hk

Training and development of workforce is essential for the quality and sustainability of cancer service. The relevant Colleges under the Hong Kong Academy of Medicine, such as the Hong Kong College of Radiologists and Hong Kong College of Physicians, are responsible for the training of their relevant specialists for cancer services. For nurses and AH professionals, training programmes are provided by HA's Institute of Advanced Nursing Studies and Institute of Advanced AH Studies, respectively. In particular, trans-disciplinary training is instrumental in promoting the delivery of seamless integrated cancer care services along the patient journey. It allows sharing of skills and knowledge across specialty and discipline boundaries, enhances the communication and bonding between members of the multi-disciplinary units, and facilitates the provision of effective integrated cancer care. For example, training could be provided to specialty nurses to conduct standardised screening tests to identify cancer patients' needs in supportive care and simple interventions to empower patients and address their needs early.

HA will continue to nurture cancer care specialists-in-training by providing a platform for specialty training, including set up of new training centres and trainee rotations within and across clusters. Respective COCs and CCs would also continue to formulate training plans for medical, nursing, and AH professionals to fill the skill and knowledge gaps and address the cancer service needs. Training of supporting staff as assistants to facilitate cancer service delivery (e.g. basic information gathering and data entry) would also be a means of leveraging the capacities of the skilled workforce.

Facilities and Infrastructures

We often advocate in our Clinical Services Plans the principle of 'function before form' – a principle commonly used in the world of architecture and design. With the ongoing opportunity provided in the Government-supported initiatives of the 10-year Hospital Development Plan, it is possible for us to innovate new service models and incorporate such 'function' into our future hospital designs ('form'). The objective is to implement the ICCC in each cluster which will need to be supported by appropriate facility design. For example, there will be facilities for services with high complexity, especially those that require heavy capital investment (e.g. LINAC), as well as inpatient and ambulatory facilities for complex integrated cancer management. Local facilities would be established for convenient patient access to high volume services. The physical infrastructures will be standardised to enhance the quality and safety of care delivery (e.g. pharmacy logistics for day chemotherapy service).

In addition to the functional design, capacity planning is also an important key enabler to manage escalating cancer service demand in cancer diagnosis, treatment, surveillance, and rehabilitation. There should be adequate provision for inpatient and ambulatory care imaging and interventional radiology services, endoscopy suites, OTs, day chemotherapy clinics, radiotherapy equipment (e.g. planning software and simulators, LINACs), pathology services, pharmacy, and AH support. Regarding medical equipment and technologies (e.g. molecular tests for diagnosis, staging and personalised treatment), the planning, adoption, and implementation should be channelled through the established mechanisms coordinated by the HA Central Technology Office, with input by respective COCs and CCs.

Data and IT System Support

IT support is crucial in enabling the workflow, communication, and coordination of cancer care during the course of the patient journey. A few examples of IT functions that can be considered are listed below:

- Appointment scheduling (e.g. monitoring and adjustment of OPD appointment booking)
- Workflow support (e.g. development of electronic platforms for clinical decision-making tools, such as stratification of cancer likelihood, screening of supportive needs; and automated protocol-driven referrals)
- Care coordination and communication (e.g. documentation of assessments and needs, tracking of care protocol execution, and ongoing review of patient progress, supportive care and patient empowerment via tele-medicine)
- Collaboration with community partners (e.g. sharing of appropriate patient information with due diligence to patient consent, privacy, and security)

IT system support is also essential to provide a centralised, automated, and secure platform which enables reliable, efficient, and sustainable corporate-wide systematic data collection. Ideally, the platform should also be able to help our healthcare staff in their day in and day out management of their patients at the same time. These data do not just provide statistics such as cancer incidence; they also provide important information on the whole cancer care process and outcomes. Such information is instrumental for service planning, quality improvement and dissemination of knowledge and experience across HA. It would also facilitate development of artificial intelligence applications to support the future clinical service and operation in HA.

Part Three

Cluster Plans

Cluster Plans

To address the challenges and improve the quality of adult cancer services, each cluster has formulated a service plan in accordance with the overall strategic directions of this Framework. The plans set out the clusters' local priorities to facilitate implementation of the strategic directions, with a focus on enhancing service delivery through cluster-based organisation. Each cluster has also prepared a case illustration to demonstrate the improvement in the services after implementation of the strategies, as follows:

- **Hong Kong East Cluster**
- **Hong Kong West Cluster**
- **Kowloon Central Cluster**
- **Kowloon East Cluster**
- **Kowloon West Cluster**
- **New Territories East Cluster**
- **New Territories West Cluster**

Hong Kong East Cluster

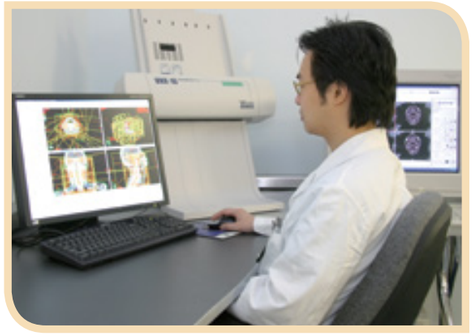
1. Pamela Youde Nethersole Eastern Hospital +
2. Ruttonjee Hospital +
3. Tang Shiu Kin Hospital
4. Tung Wah Eastern Hospital
5. St. John Hospital +
6. Cheshire Home, Chung Hom Kok
7. Wong Chuk Hang Hospital

Hospitals with A&E service are marked with the symbol +

Current Cluster Cancer Services Arrangement

Pamela Youde Nethersole Eastern Hospital (PYNEH) and Ruttonjee Hospital (RH) are the two main hospitals offering cancer services in the Hong Kong East Cluster (HKEC). Cluster-based cancer services are mainly provided at PYNEH. These include oncology (including radiotherapy and chemotherapy), radiology, pathology and nuclear medicine services. Although both PYNEH and RH provide medical and surgical services for cancer patients, the scope of services provided in PYNEH is more comprehensive, covering gynaecology, neurosurgery, ear, nose and throat (ENT) and haematology services as well. Both hospitals have facilities for cancer operations and endoscopy, but PYNEH has a greater patient load, service capacity and comprehensiveness in terms of service scope. RH mainly offers surgery for breast and colorectal cancer. Selected surgical cancer services including cardiothoracic and musculoskeletal cancer surgeries are not available in HKEC. Patients requiring such services will be referred to the quaternary centre at Queen Mary Hospital (QMH) in the Hong Kong West Cluster.

MDT services are provided in PYNEH for selected conditions (including colorectal cancer, breast cancer, head and neck cancer, gynaecology cancer and liver cancer) but not at RH. CCM Programme is available for breast and colorectal cancer at both PYNEH and RH.



Planning for cancer radiotherapy treatment

HKEC has the highest proportion of and greatest growth in the elderly population. The projected proportion of population aged 65 years old or above in HKEC would increase from 17% in 2017 to 25% in 2026 while that of overall Hong Kong will only increase from 16% to 23% for the same period[54,55]. Challenges faced by HKEC include rising cancer demand and inadequate service capacity, particularly in diagnostic services, inpatient and day patient capacity. In addition, there is a lack of on-site oncology service to other HKEC hospitals, in particular at RH. This may delay the access to oncology treatment and lead to service fragmentation. Better cross-cluster coordination is also needed to improve the waiting time for quaternary services.

Proposed Cancer Implementation Strategies

Diagnosis

Triage mechanism will be enhanced to stratify patients according to their cancer likelihood and prioritise diagnostic investigations based on results from proactive stratification tools. Accordingly, Cluster pathology and radiology services will be enhanced. OPD arrangement will be refined. Effective fast-track diagnostic service will be provided to hasten the diagnosis making process for patients with high cancer likelihood. This includes the enhancement of radiologist participation in MDT diagnostic activities, for better communication with clinicians.

Treatment

Cluster-based treatment protocols will be implemented across HKEC. On-site cancer support to other HKEC hospitals, in particular RH, will be developed. CCM services will be expanded to cover more cancer types. Supportive care pathways will be streamlined.

Administration of chemotherapy

54 Census and Statistics Department, Government of the HKSAR.
55 Planning Department, Government of the HKSAR.

For patients who may be indicated for quaternary cancer surgeries, regular liaison platforms will be established to facilitate cross-cluster collaboration. For example, for patients who might be indicated for cardiothoracic cancer surgery, treatment plan will be devised in conjunction with cardiothoracic surgeons in QMH via teleconference by the Cluster MDT. The expansion of radiotherapy services will also be explored.

Survivorship

HKEC will develop cluster-based follow-up protocols for common cancers and coordinated survivorship programme. Aligning with the corporate-wide disease-specific survivorship principles, the role of specialty nurse will be strengthened to run the nurse-led clinic for cancer survivors according to the follow-up protocols. A coordinated survivorship programme of supportive and rehabilitation care will be developed to support patients' needs as appropriate. Collaboration between cancer care teams and FM physicians will be strengthened, following the collaboration model between cancer care teams and primary care physicians for transitional care developed at the Corporate level. This includes the establishment of a structured fast-track back-referral system for patients from primary care back to the cancer care team when cancer sequelae is suspected. Partnership with PRCs / NGOs will be explored to further develop survivorship programmes.

Governance and Cluster Service Organisation

Currently there is a Cluster Cancer Services Coordinating Committee in HKEC. It serves to coordinate multi-disciplinary cancer services, to steer future development of cancer services, and to monitor the service standard in the Cluster. The structure and membership of the HKEC Cluster Cancer Services Coordinating Committee will be reviewed to be in line with Head Office directions, and a senior management from HKEC will be appointed as co-chair. Cluster-based approach to cancer services will be implemented under the oversight of the Committee. Corporate-wide KPIs will be incorporated when available, and parameters and indicators of the Cluster cancer services will be developed and utilised, to strengthen the performance monitoring and identify areas of further improvement in cancer services in HKEC.

Prioritisation of Implementation Plans

(S) Short Term (<3 years) (M) Medium Term (3-5 years) (L) Long Term (6-10 years)

Governance and Cluster Service Organisation	(S) Review membership of Cluster Cancer Services Coordinating Committee and appoint a senior management as co-chair of the Committee (S) Incorporate KPIs (M) Implement cluster-based approach to cancer services
Diagnosis	(S) Enhance triage mechanism to stratify patients' cancer likelihood (S) Refine OPD arrangement (S) Set up fast-track assessments and investigations (S) Enhance radiologist participation in MDT (L) Enhance radiology service (L) Enhance Cluster pathology services
Treatment	(S) Develop cluster-based treatment protocols (S) Establish on-site cancer service support in RH (S) Explore platform to establish regular liaison with QMH cardiothoracic surgery unit (e.g. MDT via teleconference) (M) Expand CCM services to cover different cancer types (M) Streamline supportive care pathways (L) Explore the expansion of radiotherapy services
Survivorship	(S) Set up cluster-based follow up protocol (S) Establish coordinated survivorship programme (S) Set up fast-track referral system from primary care back to cancer care team (M) Establish nurse-led clinic for follow up of cancer survivors (M) Partner with PRCs / NGOs to develop survivorship programmes (L) Strengthen collaboration between cancer care teams and FM physicians

Case Illustration: Liver Cancer

Patient Background

Mr Lam is a 67-year-old gentleman. He is a hepatitis B carrier. Investigations conducted in the private sector show elevated liver enzymes, suspicious of hepatocellular carcinoma (HCC).

1 Diagnosis

He is referred by general practitioner (GP) to RH surgical department. He will be triaged as an urgent case, and assessed as a new case within two weeks. Fast-track imaging will be arranged within HKEC (including ultrasound / contrast CT scan, MRI, dual tracer PET scan). Diagnosis of HCC will be established as quickly as possible, likely to be within one month from presentation. The tumour is found to be localised at the left side of the liver.

2 Treatment

Mr Lam's case will be discussed at the cluster-based MDT meeting. Standardised patient pathway will be prescribed across PYNEH and RH. During the planning for surgery, he will be assessed for robotic surgery. CCM will be in charge of coordinating investigations and services.

3 Survivorship

He will be followed up under cluster-based standardised survivorship programme, with enhanced patient support and rehabilitation. Fast-track referral system from primary care back to the cancer care team will be provided as required.

Expected Outcomes	How the Service Model of the Case Illustration Could Achieve the Expected Outcomes
Timely access to cancer diagnostic services	• Fast-track imaging arranged under HA
Equitable and integrated cancer treatment services	• CCM to coordinate investigations, with services and logistics streamlined • Cluster-based MDT meeting with standardised patient pathway at PYNEH and RH
Seamless transitional care for cancer survivors	• Cluster-based standardised survivorship programme • Enhanced patient support and rehabilitation
Cluster-based and networked cancer services	• Cluster-based protocol and MDT

Hong Kong West Cluster

1. Queen Mary Hospital +
2. Tung Wah Hospital
3. Grantham Hospital
4. Tung Wah Group of Hospitals Fung Yiu King Hospital
5. The Duchess of Kent Children's Hospital at Sandy Bay
6. Tsan Yuk Hospital
7. MacLehose Medical Rehabilitation Centre

Hospitals with A&E service are marked with the symbol +

Current Cluster Cancer Services Arrangement

Cancer service provision in the Hong Kong West Cluster (HKWC) is mainly centralised in Queen Mary Hospital (QMH), which includes diagnostic radiology, pathology, endoscopy, surgery, radiotherapy, chemotherapy and palliative care. There are some diagnostic radiology and endoscopy services provided at both Tung Wah Hospital (TWH) and Grantham Hospital (GH), as well as palliative care for cancer patients at GH.

QMH also provides quaternary services for the whole HA, namely allogenic haemopoietic stem cell transplant, total body irradiation, liver transplant, musculoskeletal and cardiothoracic cancer surgeries, and phase one clinical trials.

MDT clinics and meetings are offered for selected cancer types, and existing CCM services provide coverage for breast and colorectal cancers in accordance with current guidelines.

Key challenges include lack of stratification tools to stratify patients according to their cancer likelihood to facilitate timely diagnosis, and incomplete coverage of CCM and MDT management for all cancer types. There is room to enhance AH support. There is also a lack of unified surveillance and survivorship protocols, and specific rehabilitation for patients with long-term morbidities, which will be crucial in the light of the ever-increasing number of cancer survivors.

Multi-disciplinary team for breast cancer

Cancer systemic treatments are offered by clinical oncologists, medical oncologists and other specialties in HKWC, while palliative care for cancer patients is offered by both oncology and medical palliative care teams. There is room for enhancement of collaboration among the relevant specialties, and exploration of integrated patient care and treatment approach for cancer patients, to streamline patient care and optimise resource utilisation.

Improvement in current cancer services in HKWC requires enhancement in pathology and radiology support, both in terms of manpower provision as well as facilities and new techniques backup.

Proposed Cancer Implementation Strategies

Diagnosis

Stratification tools and assessment paths will be developed in HKWC to triage patients according to their cancer likelihood in respective cancer types. High suspicion cases will be directed to fast-track diagnostic paths. Fast-track diagnostic and imaging paths will be provided for cancer diagnosis and staging for appropriate patients. Waiting time will be monitored and outpatient clinic arrangements will be adjusted for cancer and suspected cancer cases in accordance with agreed guidelines and cancer likelihood for specific cancers. Service coverage by various disciplines will be enhanced, and early screening for identification and referral for psycho-social intervention in preparation for treatment will be explored.

In the redevelopment of QMH and GH, consideration will be given to measures to improve the whole diagnostic process. Examples include enhancement in imaging facilities, and provision of modern genetic and genomic tests for diagnosis, prognosis and personalised treatment.

Treatment

Clinical oncology nurse clinic in QMH

HKWC will establish cluster-based integrated management principles to coordinate and align cancer services across the Cluster. This will facilitate implementation of an ICCC model within the Cluster; align services among different specialties; and enhance cluster-based MDT services for common cancers. OT sessions will be reorganised according to the clear role delineation of the HKWC hospitals.

Coordinated care pathways and services for cancers other than breast and colorectal cancer will also be enhanced. CCM services will be extended to other cancer types when available. This will be conducted in line with Corporate direction.

To streamline supportive care pathways, AH services will be strengthened, and an integrated oncology and palliative care approach will be developed.

With the redevelopment plans in HKWC, including that of GH which will include the establishment of a new cancer centre in replacement of the outdated facilities at QMH, cancer treatment delivery will be optimised to meet the service needs of the Cluster.

Survivorship

In order to align survivorship care, mutually agreed surveillance protocol will be set up within HKWC, and corporate-wide disease-specific survivorship care guidelines will be adopted when they become available.

With the aim to facilitate transition to primary care, corporate-wide survivorship care guidelines on collaboration with primary care will be adopted when they become available.

HKWC will work to develop rehabilitation programmes for those patients in need, and will employ measures to empower patients to stay healthy in the community, with medical-social collaboration reinforced.

Governance and Cluster Service Organisation

The HKWC Cancer Service Coordinating Committee has been established, which comprises clinical specialists actively involved in cancer treatment, nursing and AH staff. To strengthen the governance and enhance the executive and administrative support for service development, senior Cluster management is also included in the membership of the Committee. The Cancer Service Coordinating Committee will coordinate the development of cancer services within the Cluster, such as CCM services, MDT, cancer referral, pharmaceutical care, survivorship, transition to primary care, and AH services. It will also coordinate the redevelopment plans of QMH and GH in HKWC, with consideration given to streamlining and enhancing radiology, endoscopy, pathology, surgical operation, radiotherapy and chemotherapy services.

Linkage between HKWC and Corporate will be tightened by introducing HKWC Cancer Service Coordinating Committee representation in the CC(Cancer Service).

Prioritisation of Implementation Plans

(S) Short Term (<3 years) (M) Medium Term (3-5 years) (L) Long Term (6-10 years)

Governance and Cluster Service Organisation	(S) Establish Cluster Cancer Coordinating Committee (S) Tighten linkage between HKWC and Corporate with Cluster representation in CC(Cancer Service) (L) Establish an ICCC in GH
Diagnosis	(S) Monitor waiting time and adjust OPD arrangement for cancer and suspected cancer cases (M) Establish fast-track, one-stop paths for selected cancer types (M) Establish needs-based assessment and enhance psycho-social support when appropriate (L) Take into consideration to improve diagnostic processes during the QMH and GH redevelopment
Treatment	(S) Establish cluster-based integrated clinical guidelines for common cancers (S) Strengthen oncology-palliative care consultative services (M) Enhance cluster-based MDT services for common cancers (M) Enhance the collaboration of medical oncologist and clinical oncologist (M) Streamline support care pathways and strengthen AH services as part of Enhanced Recovery After Surgery Programme (L) Rearrange OT services with the hospital redevelopment plans in HKWC • TWH and GH: for straightforward major, intermediate and minor operations • QMH: for ultra-complex operations
Survivorship	(S) Empower patients and reinforce medical-social collaboration (e.g. patient support groups and NGOs) (S) Strengthen AH services (M) Develop cluster-based structured rehabilitation programmes and supportive care for those in need (M) Collaborate with and enhance the role of primary care

Case Illustration: Colorectal Cancer

Patient Background

Mr Cheng, aged 55, presented with suspicious bowel symptoms, is referred by General Outpatient Clinic (GOPC) to QMH Department of Surgery.

1 Diagnosis

Mr Cheng will be triaged according to a prescribed stratification tool. Being stratified as high cancer likelihood, fast-track clinic will be arranged to facilitate early colonoscopy. Following this, diagnosis of locally advanced rectal cancer is confirmed.

2 Treatment

Mr Cheng will be managed under the cluster-based management protocol. His case will be discussed at the MDT meeting and he will be referred to QMH Department of Clinical Oncology for neoadjuvant chemoirradiation followed by surgery.

Oncology pharmacist will review and optimise his medication treatment for cancer and co-morbidities. Neoadjuvant chemoirradiation will be administered in accordance with protocol.

Stoma nurse will provide appropriate stoma education and care, to help relieve associated psychological stress if any. Physiotherapist will assess his physical fitness in the pre-operative period and facilitate post-operative recovery accordingly. Dietitian will offer pre-operative nutritional assessment and provide dietetic advice. Blood bank technician will be involved in processing the blood sampling for type and screen taken in pre-operative assessment clinic.

Operation sessions within the Cluster will be rearranged with clear role delineation in different HKWC hospitals, to provide timely OT sessions with efficient use of resources. Supportive care pathways at the peri-operative period will be enhanced. CCM will coordinate appointments for Mr Cheng and provide pre-operative education and psychological preparation.

3 Survivorship

Mr Cheng will be followed up according to the cluster-based surveillance and survivorship care protocols when available, aligning with Corporate direction, and will be transited to primary care at appropriate time. Continued surveillance with interval colonoscopy will be provided, along with fast-track referral back to HA cancer services for further management if required. He will also benefit from rehabilitation programme developed for patients with specific needs.

Expected Outcomes	How the Service Model of the Case Illustration Could Achieve the Expected Outcomes
Timely access to cancer diagnostic services	• The use of the pre-set stratification tool facilitates a more accurate triage • The provision of fast-track diagnostic service reduces the time for cancer diagnosis
Equitable and integrated cancer treatment services	• Use of cluster-based management protocol and enhanced cluster-based MDT services ensure equitable and integrated cancer treatment services within the Cluster • Enhanced supportive care pathways at the peri-operative period ensures improved care along the whole care process
Seamless transitional care for cancer survivors	• Coordinated care allows smooth transition to primary care in accordance with corporate-wide survivorship care guidelines
Cluster-based and networked cancer services	• Cancer service provision of the Cluster will be under Cancer Service Coordinating Committee's coordination, to achieve the ICCC model, and optimise treatment delivery to meet patients' needs

Kowloon Central Cluster

1. Queen Elizabeth Hospital +
2. Kowloon Hospital
3. Hong Kong Buddhist Hospital
4. Kwong Wah Hospital +
5. Our Lady of Maryknoll Hospital
6. Tung Wah Group of Hospitals Wong Tai Sin Hospital
7. Hong Kong Children's Hospital
8. Hong Kong Eye Hospital
9. Hong Kong Red Cross Blood Transfusion Service

Hospitals with A&E service are marked with the symbol +

Current Cluster Cancer Services Arrangement

Kowloon Central Cluster (KCC) has been facing increasing demand for cancer services in recent times. Apart from serving our own Cluster, KCC clinical oncology team also closely collaborates with the Kowloon East Cluster (KEC) clinical oncology team in providing cancer services to patients in KEC, until the full commencement of cancer services in KEC when the United Christian Hospital (UCH) is redeveloped. Although only 16% of the population of Hong Kong resided in KCC in 2017, about 28% of newly diagnosed cancer patients in 2016 have sought services in KCC within one month preceding or following diagnosis at KCC hospitals[56].

KCC provides comprehensive cancer services from diagnosis, through staging, treatment to rehabilitation, palliative care and survivorship, with close collaboration between various clinical units and support from diagnostic departments across the Cluster hospitals.

56 Hong Kong Cancer Registry.

Cancer diagnostic services are available in five Cluster hospitals, namely Queen Elizabeth Hospital (QEH), Kwong Wah Hospital (KWH), Our Lady of Maryknoll Hospital (OLMH), Kowloon Hospital (KH) and Tung Wah Group of Hospitals Wong Tai Sin Hospital (WTSH), while definitive cancer treatments are centralised in three Cluster hospitals (QEH, KWH and OLMH). Surgical treatment services are provided in all three hospitals and non-surgical cancer treatments are provided by the clinical oncology centre and medical oncology unit at QEH. In contrast to cancer rehabilitation and survivorship which are predominantly delivered by each respective clinical units, designated palliative care services are mainly provided by the palliative care teams of OLMH, WTSH, Hong Kong Buddhist Hospital (HKBH) and the clinical oncology centre of QEH.

Currently, many major hospital redevelopment projects are being undertaken in KCC, which is impacting on the service delivery at QEH, KWH, HKBH and OLMH. Prior to the redevelopment, KCC has been challenged with significant constraints in physical capacity, which will be addressed with this redevelopment.

Overall, KCC faces many key challenges that could put at risk the quality of cancer services such as manpower shortage, long waiting times for diagnostic workup, specialist consultation and surgical cancer treatments, low coverage of MDTs with limited support from radiologists, lack of on-site non-surgical cancer service at some KCC Cluster hospitals (such as KWH and OLMH), and limited psycho-social support to cancer patients and their families during the cancer journey.

Tomotherapy machine in QEH

Proposed Cancer Implementation Strategies

Diagnosis

Currently, for patients in KCC with a suspected diagnosis of cancer, their first point of contact is predominantly at OPD of the respective specialists for evaluation and diagnosis. To ensure timely assessment and earlier diagnosis, specialties across KCC will strategically establish effective triage systems with the use of stratification tools to determine cancer likelihood when applicable. Waiting time to specialist appointments will be monitored and OPD appointment times will be adjusted accordingly. Cluster-based clinical guidelines for common cancers will be developed to facilitate proper referral and a cluster-based management approach.

MDT will be enhanced to improve the coordination of cancer diagnostic services across KCC. Possible measures to reduce waiting time for various diagnostic investigations will be explored, such as providing imaging quotas to cancer patients and increasing the endoscopy sessions. Such quotas, when strategically bundled with the new case OPD appointments, will streamline the workflow and thus reduce the waiting time for cancer diagnosis. In the long term, the Cluster's capacity for cancer diagnostic services will be increased following completion of the hospital redevelopment projects and commissioning of the new acute hospital (NAH) in Kai Tak Development Area.

Treatment

Gynaecology Cancer Case Manager

Given the medical advancements and increasing complexity of cancer treatment, KCC strives for a cluster-based integrated cancer service model to make the best use of its resources to ensure effective and efficient cancer treatment services across the Cluster.

Cluster-based clinical guidelines on treatment for common cancers will be developed. Regular MDT meetings will be held as appropriate to ensure multi-modality treatments being delivered in a timely and coordinated manner. The CCM Programme will be extended in a phased approach to include coverage for haematological malignancies, lung cancer and gynaecological cancer. Manpower shortages and inadequate facilities will need to be addressed to reduce the waiting time for treatment. Pre-habilitation, psycho-social and spiritual support during the cancer treatment will also be enhanced.

Recognising the insufficient on-site non-surgical oncological services at KWH and foreseeing the future relocation of the clinical oncology service from QEH to the ICCC in NAH in Kai Tak Development Area, KWH will gradually build up its on-site integrated oncology services through collaboration between various specialists including surgeons, medical oncologists and clinical oncologists, to strengthen its role in the cluster-based cancer service network. An integrated oncology centre for medical treatment will be established in KWH's Phase II Redevelopment Project. In the long term, commissioning of the NAH in Kai Tak Development Area can further increase the capacity of KCC in the provision of cancer treatment.

Survivorship

With the increasing cancer survival rates, rehabilitation and survivorship have become integrated components in a comprehensive cancer service. The existing unit-based rehabilitation and survivorship service model in KCC is at risk of fragmented transition from specialty to primary care service and minimal engagement of community partners. The model will be reviewed with an aim to gradually transforming the existing service to a cluster-based one with vast engagement of family doctors and participation of community partners. KCC will explore setting up a fast-track back-referral system for specialist assessment appropriate to the survivors' needs.

Governance and Cluster Service Organisation

To ensure equitable and timely access to cluster-based cancer services, the clinical units of the Cluster should be networked. In 2018, the Cluster Cancer Committee was formed. It comprises representatives from cancer service providers and the management of Cluster hospitals, with an aim to coordinate the planning, development and provision of cancer services in the Cluster, and monitor and review. The Committee also has a role to facilitate networking of the clinical units across the Cluster.

Prioritisation of Implementation Plans

(S) Short Term (<3 years) (M) Medium Term (3-5 years) (L) Long Term (6-10 years)

Governance and Cluster Service Organisation	(S) Establish Cluster Cancer Committee (L) Establish an ICCC in NAH (L) Review the networking of the cluster-based cancer services
Diagnosis	(S) Establish cluster-based clinical guidelines for common cancers (S) Establish effective triage systems in various clinical units (S) Monitor waiting time and adjust OPD arrangement accordingly (S) Increase MDT coverage as appropriate (M) Enhance on-site cancer services (e.g. clinic or inpatient consultation service) in KWH (M) Increase MDT coverage (L) Commission cancer service at KWH Ambulatory Cancer Centre (ACC) and NAH
Treatment	(S) Establish cluster-based clinical guidelines for common cancers in a phased approach (S) Increase the MDT coverage as appropriate (S) Expand the CCM coverage to haematological malignancies, lung and gynaecological cancers (M) Enhance on-site cancer services (e.g. inpatient clinical oncology consultation and oncology clinic sessions) in KWH (M) Provide pre-habilitation assessment or intervention and specific psycho-social, spiritual support programmes throughout the cancer journey (L) Commission cancer service at KWH ACC and NAH
Survivorship	(S) Establish cluster-based clinical guidelines for common cancers (S) Enhance post-treatment rehabilitation and survivorship programmes (M) Engage KWH Gynaecology Department to follow up gynaecological cancer patients (M) Engage FM physicians to facilitate the transition of care to the community (M) Engage community partners for patient empowerment (M) Explore establishing a fast-track back-referral system for specialist assessment

Case Illustration: Gynaecological Cancer

Patient Background

Ms Cheung, a 50-year-old premenopausal lady, was referred from KWH to QEH for suspected ovarian cancer.

1 Diagnosis

In accordance with cluster-based clinical guidelines, KWH gynaecologist will directly arrange private CT scan before referring Ms Cheung to the QEH Gynaecological Oncology Clinic according to her cancer likelihood. This will reduce the waiting time for the cancer diagnosis. Review of her case will also be conducted by a MDT.

2 Treatment

Ms Cheung's treatment programme will be determined promptly at the MDT session by the attending specialists and radiologists. As gynaecological cancers will have its own CCM Programme, a CCM will coordinate all treatment logistics and provide prompt psycho-social support to the patient.

3 Survivorship

After treatment, Ms Cheung will be recruited into the Gynaecological Cancer Rehabilitation Programme to facilitate her return to the community. Under a cluster-based follow-up protocol, Ms Cheung will be alternatively followed up by QEH or KWH gynaecology and clinical oncology at QEH or KWH as appropriate for the first three to five years. Her care will then be transferred to family physician in accordance with agreed protocols. A fast-track back-referral system for specialist assessment will be in place should the need arise. Ms Cheung will also be encouraged to join disease-specific patient group.

Expected Outcomes	How the Service Model of the Case Illustration Could Achieve the Expected Outcomes
Timely access to cancer diagnostic services	• Cluster-based guidelines / protocols are in place to facilitate early workup and referral to the MDT meeting
Equitable and integrated cancer treatment services	• CCM Programme to coordinate the treatment arrangement • MDT meeting as appropriate with input from radiologists, gynaecological oncologists and clinical oncologists to ensure provision of integrated cancer treatment
Seamless transitional care for cancer survivors	• Cluster-based follow-up protocol, gynaecological cancer rehabilitation programme, and engagement of family physician and patient groups to facilitate the transition of gynaecological cancer survivors to community care
Cluster-based and networked cancer services	• Throughout the cancer journey, Ms Cheung will receive coordinated, protocol-driven cancer services from relevant clinical units from both KWH and QEH, family doctors and community partners across the Cluster

Kowloon East Cluster

1 United Christian Hospital +
2 Tseung Kwan O Hospital +
3 Haven of Hope Hospital

Hospitals with A&E service are marked with the symbol +

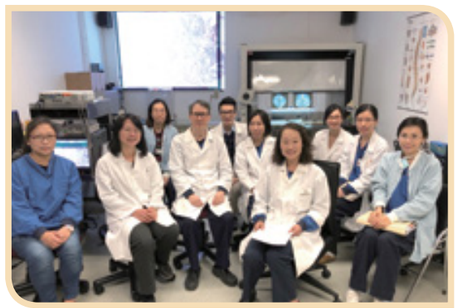
Current Cluster Cancer Services Arrangement

Kowloon East Cluster (KEC) currently provides inpatient and day chemotherapy, target therapy and immunotherapy by clinical oncologists, medical oncologists and haematological oncologists. CCM services are available for breast and colorectal cancers only.

The majority of patients requiring chemotherapy from Tseung Kwan O Hospital (TKOH) and Haven of Hope Hospital (HHH) will be referred to Queen Elizabeth Hospital (QEH) at KCC for treatment, while only a very limited number of patients are referred to United Christian Hospital (UCH) for treatment.

Key challenges currently faced by KEC include the need to reduce the SOPC waiting time so that patients with high cancer risk could see cancer specialists in a timely manner; to provide prompt diagnostic workups for high-risk patients with limited capacity in some diagnostic service in KEC.

Currently, there is a gap between the limited cancer service provision in KEC and the increasing demand from cancer patients within the Cluster. In addition, there is a mismatch between demand and the limited access to CCM services (currently offered for breast and colorectal cancers only). Chemotherapy centre is only available at UCH. As the formulation of treatment options should involve different specialties, a multi-disciplinary approach is an optimal solution.



Multi-disciplinary team supporting one-stop diagnostic service

Proposed Cancer Implementation Strategies

Diagnosis

Specialty nurses will assess cancer likelihood with stratification tools. The use of the stratification tools facilitates more in-depth assessment at triage. Following this, patients will then be triaged by specialist doctors to appropriate clinic according to their cancer likelihood for further investigations and treatment. Cluster-based disease-specific diagnostic services will be introduced to improve the timeliness of diagnosis for patients with highly suspected cancer. HCC will be the first cancer covered. The cluster-based HCC diagnostic services will start with nurse-led assessment. From there, patients with high cancer likelihood will receive bundled, fast-track investigations for diagnosis. The patients will be followed up at quota-reserved, fast-track clinics for subsequent management. Referral guidelines for quaternary services in KEC will be formulated to simplify cross-cluster referral system so as to minimise patients' travelling and optimise the time to intervention.

Treatment

An ICCC with disease-specific MDT will be developed. This will optimise resource utilisation and ensure provision of appropriate and efficient patient care.

Complex cancer surgery would be performed by designated, cluster-based surgical teams instead of individual hospitals. Cluster Service Coordinator (CSC) will be responsible for coordinating the optimal use of resources. Expansion of the breast cancer care pathway from UCH to TKOH as a cluster-based service will be conducted under the coordination of CSC. The CSC will report to the Cluster Committee on Cancer Services, the newly formed governing body in KEC, which oversees the coordination of cancer services in the Cluster. Depending on the caseload of the ICCC, satellite chemotherapy centre may be established in TKOH to support cancer services within the Cluster.

The scope of CCM services will be expanded to provide coverage for cancer types in addition to breast and colorectal cancers. Psycho-social supportive care and rehabilitation services will be coordinated in accordance with patients' needs to enhance their rehabilitation and recovery journey.

Survivorship

Empowerment programme for cancer patients

Corporate-wide disease-specific survivorship care guidelines will be adopted to align survivorship care across the Cluster.

Shared care programmes and fast-track back-referral systems will be developed between the cancer care team and primary care physicians trained in cancer survivorship support. The fast-track back-referral system and disease-specific exit guidelines will minimise referral time and ensure smooth patient transition to primary care and back as required.

Rehabilitation services provided at an on-request basis, enhanced medical and social service in collaboration with NGOs and related patient groups will be established to support survivors staying healthy in the community. Collaboration with social service organisations will pave the recovery journey for our survivors.

Governance and Cluster Service Organisation

Cluster Committee on Cancer Services will be established to coordinate and steer the cancer service development in KEC. An ICCC model will be implemented to optimise the provision of care to cancer patients. Cancer surgery and chemotherapy services at both UCH and TKOH will be developed with clear delineation of tertiary and secondary service development.

The cancer care teams in UCH and TKOH will collaborate with the palliative care teams in UCH and HHH to provide holistic service to patients. Clinical services support (e.g. anatomical pathology, diagnostic and interventional radiology) will be strengthened in developing a comprehensive approach to treatment.

The linkage between KEC and Corporate will be tightened with Cluster representations in CC(Cancer Service) to facilitate inter-specialty and multi-disciplinary collaboration among the clusters when formulating service guidelines and implementing workflow.

Prioritisation of Implementation Plans

(S) Short Term (<3 years) (M) Medium Term (3-5 years) (L) Long Term (6-10 years)

Governance and Cluster Service Organisation	(S) Establish Cluster Committee on Cancer Services (M) Implement ICCC model (M) Develop ICCC with disease-specific MDT in UCH (M) Tighten linkage among clusters and Corporate
Diagnosis	(M) Assess cancer likelihood by specialty nurse through executing assessment tools to stratify cancer likelihood (M) Establish cluster-based multi-disciplinary HCC diagnostic services, including nurse-led assessment and fast-track investigation (L) Establish combined cancer clinics
Treatment	(M) Provide complex cancer surgery by cluster-based surgical team and coordinated by CSC (M) Extend breast cancer care pathway to TKOH as a cluster-based service coordinated by CSC, with support of cluster-based training programme (M) Coordinate psycho-social supportive care and rehabilitation services according to patients' needs (L) Establish satellite chemotherapy centre in TKOH depending on caseload of the ICCC
Survivorship	(M) Adopt corporate-wide disease-specific care guidelines (M) Develop exit policy and fast-track referral guidelines (M) Collaborate with social service organisations to strengthen survivors' support

Case Illustration: Breast Cancer

Patient Background

Ms Li, aged 50, presented with a left-sided breast lump. She consulted GP and was referred to the Breast Clinic of TKOH for suspected breast cancer.

1 Diagnosis

Ms Li will be triaged by a breast surgeon. Specialty nurses facilitate triage by conducting cancer likelihood stratification using the validated stratification tools. If Ms Li is triaged as an urgent (Priority 1) case, she will be assessed by the surgeon within two weeks of referral. Priority 1 quota is regularly adjusted according to the caseload of these priority cases. Ms Li will be assessed by the breast surgeon in the designated one-stop diagnostic clinic. Breast surgeon will assess the patient and conduct bedside ultrasound screening. If she is identified as a highly suspicious case for cancer after this assessment, she will receive mammogram and ultrasound on the same day and a biopsy within a week. A diagnosis of left breast cancer is confirmed for Ms Li within one to two weeks of consultation.

2 Treatment

Ms Li will be seen at the ICCC within one week after the diagnosis is made. Treatment planning is based on a MDT approach. She will be assessed by both the surgeon and oncologist at Combined Breast Oncology Clinic which will facilitate personalised and timely cancer treatment. CCM will coordinate the care from surgery, chemotherapy, radiotherapy, peri-operative counselling, wound and drain care, and psycho-social support as required. Ambulatory care with same day surgery, if required, will be performed in conjunction with a structured early discharge programme and rehabilitation programme.

3 Survivorship

On completion of her treatment, Ms Li will be regularly followed up by both surgeons and oncologists in a coordinated manner. Survivorship care will be provided by MDT. Hotline access, walk-in support and fast-track referral systems are facilitated by Breast Cancer Centre for investigation of new symptoms, treatment complications and / or psycho-social problems. Needs-based supportive and rehabilitation care will enable smooth transition of Ms Li to primary care. Empowerment programme through collaboration with survivor volunteers, patient groups and NGOs will enable Ms Li's re-integration into the community.

Expected Outcomes	How the Service Model of the Case Illustration Could Achieve the Expected Outcomes
Timely access to cancer diagnostic services	• Active cancer likelihood stratification with appropriate allocation of new case appointment according to likelihood of having cancer • Fast-track diagnostic services shortens the waiting time for diagnostic services
Equitable and integrated cancer treatment services	• ICCC model with combined breast clinics allows personalised and timely cancer treatment • Patient-centred, multi-disciplinary, holistic care are coordinated by CCM • Structured and integrated early discharge programme and rehabilitation programmes are offered
Seamless transitional care for cancer survivors	• Coordinated survivorship care is aligned with MDT approach • Needs-based supportive and rehabilitation care enables transition to primary care • Empowerment programme enables community re-integration
Cluster-based and networked cancer services	• Governance at Cluster level is enhanced • Patient care by KEC breast cancer MDT care team is developed • One-stop diagnostic service at Cluster level is provided with complex surgery performed by cluster-based surgical team • Cluster-based surgical team training programme • Coordinated psycho-social supportive care and rehabilitation services are provided

Kowloon West Cluster

1. Princess Margaret Hospital +
2. Caritas Medical Centre +
3. Yan Chai Hospital +
4. Kwai Chung Hospital
5. North Lantau Hospital +

Hospitals with A&E service are marked with the symbol +

Current Cluster Cancer Services Arrangement

Princess Margaret Hospital (PMH), Yan Chai Hospital (YCH) and Caritas Medical Centre (CMC) are all involved in providing cancer services to residents in the Kowloon West Cluster (KWC). Cluster-based services are mainly provided at PMH, which includes oncology, gynaecology, neurosurgery and haematology, while cluster-based ENT service is provided by YCH. Diagnostic imaging, pathology, medical and surgical services are provided by individual Cluster hospitals, whilst chemotherapy and radiotherapy are centralised at PMH (with the exception of the satellite day chemotherapy centre in CMC). CCM is available for breast and colorectal cancers at all three hospitals. Cardiothoracic and orthopaedic cancer surgery is not available in KWC. Patients requiring such services will be transferred to KCC.

The main challenge for the Cluster cancer services is the wide intra-cluster variation of surgical practices, and prolonged waiting time for diagnostic and treatment services which are related largely to the high demand and suboptimal coordination among Cluster hospitals and departments.

Radiotherapy Centre in PMH

Proposed Cancer Implementation Strategies

Diagnosis

Cluster-based triage systems for major cancers with the use of pre-set stratification tools will be set up by disease-specific MDT at the Cluster level. It is to stratify patients actively according to their cancer likelihood. OPD allocation for cancer cases will be up-adjusted to accelerate review of patients with high cancer likelihood. One-stop diagnostic service will be set up to provide fast-track diagnostic services for patients with high suspicion of selected cancers, starting with those patients with lung cancer. This service will be extended to more cancer types in the medium term. Nurses among major specialties (e.g. medicine, surgery and oncology) will facilitate patient transition between diagnosis and treatment for various cancers, especially for patients diagnosed in Cluster hospitals other than PMH.

Treatment

An ICCC model will be adopted and PMH will serve as the hub of the centre under the coordination and governance of the Cluster Cancer Committee. The disease-specific MDT, consisting of oncologists, physicians and surgeons from each Cluster hospital, will work together to establish cluster-based guidelines and MDT clinics, especially for major cancers. Clinical oncologists and medical oncologists will be integrated in the ICCC where integrated cancer clinics and joint cancer ward rounds will be conducted in close collaboration. Support from PMH to the other cluster hospitals will be strengthened by scaling up of the satellite cancer centre at CMC and provision of on-site services to all Cluster hospitals. CCM Programmes will be expanded to more cancer types under the direction from CC(Cancer Service). Pharmacists and nurses will participate in the integrated chemotherapy assessment clinics to provide holistic assessment of patients undergoing chemotherapy. In the medium term, AH pre-habilitation, reconditioning and outreach services will be implemented to streamline supportive care pathways. Moreover, the ICCC will seek to have its training centre status for medical oncology reaccredited, so that the Cluster can provide training to both clinical oncologists as well as medical oncologists within KWC.

Chemotherapy service

Survivorship

Cluster-based guidelines will be developed to align survivorship care and remove unnecessary duplication of care process within the Cluster so that cancer survivors will receive appropriate and timely follow up. Survivors with low cancer recurrence risk will be assessed at cancer survivor nurse clinics. Community partners will also be engaged as appropriate to facilitate the transition to primary care. In the medium term, long-term cancer survivors may be cared for by FM to optimise their medical care in the community. A fast-track back-referral mechanism will allow survivors to be referred back to the ICCC for assessment whenever necessary. Enhancement of psycho-social support and AH outreach services will also be explored in the longer term.

Governance and Cluster Service Organisation

In order to reinforce cluster-based cancer service coordination and provide oversight, a Cluster Committee on Cancer Services has been established in 2019. Disease-specific MDT for major cancers will be formed under the Committee. The Committee will be charged with developing cluster-based guidelines on major cancers to standardise the triage system, treatment protocols and survivorship policy within the Cluster. The Committee reports to the Kowloon West Management Committee (KWMC) and Corporate governing bodies regularly to enhance the governance of cancer service in the Cluster and tighten the linkages. In the medium term, the Committee will utilise statistics on major cancers (e.g. new case incidence, waiting times at different cancer service points and cancer patient outcomes) to strengthen performance monitoring of the service provided by the Cluster and to identify bottlenecks and gaps for further improvement.

Prioritisation of Implementation Plans

(S) Short Term (<3 years) (M) Medium Term (3-5 years) (L) Long Term (6-10 years)

Governance and Cluster Service Organisation	(S) Establish Cluster Cancer Committee (S) Establish disease-specific MDT for major cancers (S) Report regularly to KWMC and Corporate governing bodies (M) Monitor waiting times at different service points (M) Monitor outcome of cancer patients (coordinated by CC(Cancer Service)) (M) Review the networking of the cluster-based cancer services
Diagnosis	(S) Enhance cluster-based triage mechanism (S) Adjust OPD arrangement for cancer cases (S) Establish coordinating teams among major specialties (S) Establish one-stop diagnostic service for selected cancer types (M) Establish one-stop diagnostic service for more cancer types
Treatment	(S) Develop cluster-based treatment guidelines (S) Improve MDT clinic arrangement (S) Establish integrated chemotherapy assessment clinic by pharmacists and nurses (S) Enhance the satellite chemotherapy centre in CMC (S) Provide on-site new case and consultative services to all Cluster hospitals (S) Set up integrated cancer services led by both clinical and medical oncologists (S) Expand CCM Programmes under the coordination of CC(Cancer Service) (S) Enhance MDT pre-habilitation, reconditioning and intervention for patients (S) Achieve training centre status for medical oncology (M) Enhance AH outreach services to facilitate early discharge following major cancer surgery
Survivorship	(S) Develop cluster-based survivorship policies and guidelines (S) Establish nurse transition clinics for cancer survivors (S) Enhance engagement of community partners (S) Establish multi-disciplinary symptom management day service (M) Engage FM in provision of survivorship care (M) Explore feasibility of multi-disciplinary complication screening day service (M) Explore feasibility of developing community-based partnership network and collaborative programmes

Case Illustration: Inter-specialty Partnership

Patient Background

Ms Wong is a 50-year-old lady with multiple medical morbidities including chronic renal impairment, and ischemic heart disease. She is also a hepatitis B carrier. She is referred by her GP to the Department of Medicine of YCH with a speculated right upper lobe lung mass and widening of mediastinum on chest x-ray.

1 Diagnosis

Ms Wong will be triaged according to a pre-set stratification tool. She will be identified as a patient with high cancer likelihood with multiple pre-morbidities. She will then be scheduled for assessment at the one-stop lung cancer diagnostic clinic in PMH within two weeks. Fast-track diagnostic tests and procedures including blood tests, bronchoscopy, imaging and lung function test will be arranged at around the same time. Once diagnosis of lung cancer is confirmed, Ms Wong will be enrolled into the lung cancer CCM Programme to facilitate the patient journey from cancer diagnosis to treatment.

2 Treatment

Ms Wong will be assessed at the integrated multi-disciplinary clinic at PMH. A management plan with radical chemoradiotherapy will be devised in accordance with cluster-based protocols in conjunction with cardiothoracic surgeons at QEH via video-conference by the cluster disease-based MDT. CCM will coordinate psycho-social support for Ms Wong as required and ensure effective coordination among different members of the MDT. Ms Wong will also be enrolled by AH into the lung cancer pre-habilitation programme. During the entire treatment period at PMH, she will be regularly assessed and managed jointly by clinical oncologists and medical oncologists at joint clinics or integrated ward rounds. Ms Wong will also receive expert care and advice from pharmacists and nurses at the integrated chemotherapy assessment clinic whilst receiving chemotherapy treatment. If admission via Accident & Emergency (A&E) Department to YCH is required for chemoradiotherapy complications, on-site inpatient consultation will be provided by oncologists from PMH.

3 Survivorship

In the early post-treatment, Ms Wong will be monitored at the KWC integrated cancer clinic led by clinical and medical oncologists, in accordance with the Cluster follow-up guidelines to avoid duplication of follow up. Subsequently, Ms Wong will be assessed at nurse and AH transition clinics with engagement of community partners, until her care is finally transferred to FM as a cancer survivor in accordance with established protocols. A fast-track referral system is available for timely referral back to oncologists when necessary.

Expected Outcomes	How the Service Model of the Case Illustration Could Achieve the Expected Outcomes
Timely access to cancer diagnostic services	• The use of the pre-set stratification tool facilitates more accurate triage • The provision of fast-track, one-stop diagnostic service reduces the waiting time for diagnostic services
Equitable and integrated cancer treatment services	• Early entry into CCM Programme facilitates transition between cancer diagnosis and treatment • Basing on the ICCC model, the formation of cluster disease-specific MDT (with members from all Cluster hospitals) for major cancers and the provision of on-site inpatient cancer consultation by oncologists allows equitable access to standardised treatment for all patients in the Cluster • Integrated cancer treatment services jointly provided by clinical oncologists and medical oncologists facilitates seamless and holistic care for patients • Integrated chemotherapy assessment clinic by pharmacists and nurses provides holistic care to patients undergoing chemotherapy • The enhancement of the roles of CCM and AH enables patient to navigate the treatment path more seamlessly
Seamless transitional care for cancer survivors	• The adoption of cluster-based guidelines and networking arrangements provides timely follow up and avoids duplicated effort • Integrated cancer clinic by clinical oncologists and medical oncologists allows better management of post-treatment long-term side effects and medical co-morbidities • The introduction of nurse and AH clinics for survivors with early engagement of community partners allows smooth transition to primary care and community rehabilitation • Fast-track referral system allows FM doctors to refer cancer patients back to the ICCC for further assessment when necessary
Cluster-based and networked cancer services	• The formation of disease-specific MDT for major cancers based on the ICCC model allows better coordination, networking, and implementation of cluster-based policies to reduce intra-cluster variations

New Territories East Cluster

1 Prince of Wales Hospital +
2 North District Hospital +
3 Alice Ho Miu Ling Nethersole Hospital +
4 Tai Po Hospital
5 Shatin Hospital
6 Bradbury Hospice
7 Cheshire Home, Shatin

Hospitals with A&E service are marked with the symbol +

Current Cluster Cancer Services Arrangement

Cancer services are jointly delivered by five hospitals in the New Territories East Cluster (NTEC) including Prince of Wales Hospital (PWH), North District Hospital (NDH), Alice Ho Miu Ling Nethersole Hospital (AHNH), Shatin Hospital (SH) and Bradbury Hospice (BBH). The cluster oncology centre is based at PWH. PWH, NDH and AHNH provide outpatient and inpatient services ranging from diagnosis, treatment to survivorship. Post-treatment inpatient rehabilitation programme is mainly provided by SH. Inpatient hospice care is supported by both SH and BBH while outpatient service is available at SH.

Diagnosis

All referral letters received by SOPCs for suspected and confirmed cancers are screened by senior clinicians. Some cancers are designated to multi-disciplinary clinics.

Diagnostic workup is largely provided by radiology, pathology, surgery and medicine. NTEC is currently facing tremendous challenges because of the limited existing capacity. Some up-to-date diagnostic tools are not available and the quality of imaging performed under Public-Private Partnership pilot programme is highly variable.

Treatment

Clinical oncology and medical oncology[57], blood cancer service, head and neck surgery, and selected interventional radiology procedures (e.g. transarterial chemoembolisation) are concentrated at PWH while hospice care is provided by SH and BBH. MDT clinics and meetings for selected cancers have been formed.

The following issues need attention: the staging process, the waiting time for cancer treatment and radiology assessments of treatment response are too long. The radiotherapy and systemic treatment service capacities of oncology are saturated. The scope of CCM Programme is limited and various paramedical support need enhancement.

Radiotherapy service

Survivorship

Apart from clinicians, CCM and nurse specialist's follow-up clinics are available. Both Radiology and Endoscopy Units provide surveillance and workup for suspected recurrence or metachronous lesions. A broad spectrum of symptomatic and supportive care is provided for patients and sometimes for their families.

NTEC is facing the following challenges. Firstly, the capacities of monitoring modalities are limited. Secondly, there are no mutually agreed imaging surveillance protocols. The current survivorship model largely focuses on detection of recurrence while other aspects lack resources to manage. Furthermore, the workload of CCM is too heavy and AH resources are lacking.

Proposed Cancer Implementation Strategies

Diagnosis

NTEC propose cluster-wide strategies to stratify patients actively according to their cancer likelihood and provide fast-track diagnostic services.

To actively stratify patients according to their cancer likelihood, the role of nurses in stratifying patients' cancer likelihood will be enhanced by increasing nurse assessment clinics. Inter-departmental guidelines for fast-track referral will be established. Also, workflow arrangements for highly suspicious cases for early assessment will be optimised.

To provide fast-track diagnostic services, the radiology guidelines and protocols will be established and reinforced. These will be established as a combined effort amongst the relevant specialties. Designated radiology quota and reassessment of specific cancers will be arranged. For instance, under protocol specification, the diagnostic thoracic

57 Clinical oncology and medical oncology are two different specialties under Hong Kong College of Radiologists and Hong Kong College of Physicians respectively. Clinical oncologists undergo broad-based training in non-surgical oncology which includes delivery of radiotherapy, systemic therapy as well as palliative care. Medical oncologists are physicians who specialise in the management and treatment of cancer, but in particular in the administration of systemic therapies. The paradigm of cancer care is shifting from treating a single, homogenous and organ-based disease to a systemic, heterogeneous and molecularly complex disease. The rising cancer incidence in an ageing population, coupled with the dramatically expanding indications in systemic therapy for cancer has increased the demand for medical oncology in the future cancer care model. Many medical complications may occur during the course of cancer treatment. In addition, many cancer patients have co-morbid medical conditions which may complicate cancer treatment. Medical oncologist, with solid foundation training in internal medicine, is uniquely positioned in managing these medical conditions. At NTEC, it is a strength that both medical oncologists and clinical oncologists work in the Department of Clinical Oncology. Clinical oncologists focus on delivering radiotherapy service while also provides systemic therapy and palliative care service. Medical oncologists manage all systemic cancer treatment, independently and collaboratively with clinical oncologist. They share common treatment protocol and inpatient and outpatient service in integrated site-specific clinics.

CT scan can be booked directly by primary care doctors for patients who are highly suspicious of having lung cancers.

Treatment

Clinical oncology nurse clinic in PWH

NTEC will implement an ICCC model, which will help enhance CCM services and streamline supportive care pathways. To implement the model, the inter-departmental referral guideline on imaging for treatment monitoring will be established. The fast-track pre-general anaesthesia medical assessment and anaesthetic assessment will be enhanced.

To enhance CCM services, NTEC will expand CCM services to cover more cancer types in the medium term in addition to the current ones available.

The service capacity of oncology services will be enhanced. The number of radiotherapy contouring workstations will be increased to improve working efficiency. In the medium term, plans will be made for the installation of the 6th LINAC for radiotherapy treatment. Establishing NDH Satellite Systemic Therapy Centre will also be explored to increase service capacity.

In order to streamline supportive care pathways, staff levels will be increased for oncology nursing services. Rehabilitation programme will be established. Psychological support and clinical psychology service will be enhanced by establishing designated programmes for cancer patients planning for and undergoing treatment. Also, AH support will be enhanced including providing services designated for cancer patients. Early integration of palliative care service in parallel to anti-cancer treatment will be strengthened.

Survivorship

NTEC will align Cluster survivorship care services, facilitate transition to primary care and support survivors to stay healthy in the community.

To improve alignment of survivorship care, the inter-departmental referral guidelines and protocols on imaging for surveillance, monitoring and suspected recurrence will be established. Evidence-based survivorship care follow-up guidelines will be established across NTEC. This will facilitate proactive detection of recurrence, screening and management of long-term treatment complications. The role of specialty nursing in survivorship care will also be strengthened.

To facilitate transition to primary care, the role of nursing in survivorship will be enhanced in the short term. For instance, they will be involved in providing survivor education to empower survivors to deal with the late treatment toxicities from cancer treatments. Enhanced collaboration with primary care will be explored by establishing survivorship shared care clinic model and fast-track back-referral mechanism from primary care. In the longer term, stable survivorship follow-up model will be explored with FM involvement.

To support survivors to stay healthy in the community, the psychological support for patients will be further enhanced. Besides, the medical-social collaboration for cancer survivors with NGOs will also be enhanced.

Governance and Cluster Service Organisation

NTEC currently has established Cluster Cancer Services Committee to oversee services for selected, common cancers. The terms of reference include the formation and operations of MDTs, protocol-driven integrated patient-centred care, and service performance and development.

The linkage between CC(Cancer Service) and Cluster Cancer Services Committee will be tightened at both the Cluster and Corporate levels.

Prioritisation of Implementation Plans

(S) Short Term (<3 years) (M) Medium Term (3-5 years) (L) Long Term (6-10 years)

Governance and Cluster Service Organisation	(S) Establish NTEC Cancer Services Committee
Diagnosis	(S) Refine and realign existing triage mechanisms for referrals of high suspicion of cancers (L) Implement through Annual Plan resource allocation exercise (RAE) bid when appropriate
Treatment	(S) Revise, refine and realign inter-departmental referral guideline on imaging for treatment monitoring (S) Increase contouring workstations to improve radiotherapy planning efficiency (M) Plan for the 6th LINAC for radiotherapy at NTEC (M) Set up satellite systemic therapy centre at NDH (M) Expand CCM services (L) Implement through Annual Plan RAE bid when appropriate
Survivorship	(S) Revise, refine and realign inter-departmental referral guidelines on imaging for cancer surveillance (S) Implement stable survivorship follow-up model (designated nurse clinics operated by trained nurse specialist) (L) Explore stable survivorship follow-up model with FM involvement (L) Implement through Annual Plan RAE bid when appropriate

Case Illustration: Lung Cancer

Patient Background

Mr Ho is a 46-year-old construction site worker and a chronic smoker. He presented to GOPC with a one-month history of haemoptysis (blood stained sputum). A chest x-ray conducted at the GOPC revealed a 4 cm shadow in the right lung highly suspicious of lung cancer.

1 Diagnosis

The patient will be triaged as Priority 1 case (seen within two weeks) and an expedited CT scan according to pre-defined protocol will be arranged. Referral to respiratory team of a regional hospital will also be made.

Following review of the CT scan, the respiratory physician confirms high likelihood of cancer. Further investigations including early bronchoscopic biopsy (within two weeks), lung function test, blood tests and a PET CT scan will be arranged in accordance with pre-defined protocols. Biopsy confirms diagnosis of stage IIIA, squamous cell carcinoma of the lung.

2 Treatment

Mr Ho's case will be discussed at the MDT meeting, and surgery will be prescribed in accordance with pre-defined protocols. Mr Ho's treatment will be coordinated by the CCM. He will be channelled to the ICCC for fast-track pre-operative assessment and surgery, following which he will be referred to oncology for adjuvant treatment post-operatively.

In accordance with pre-defined protocols, chemotherapy will be prescribed by a medical oncologist along with pre-chemotherapy counselling by oncology specialty nurses. Psycho-social support will be provided by MSW. Radiotherapy will be administered following completion of chemotherapy.

3 Survivorship

Mr Ho will be provided with regular follow up (oncology and cardiothoracic surgery) in accordance to pre-defined protocols. Complications including chronic wound pain and recurrence exclusion, should they occur, will be managed in accordance with pre-defined protocol by oncology team and pain team.

As part of the transition care programme, Mr Ho will be referred to nurse clinic for services including smoking cessation education and treatment, following recovery from his lung cancer treatment.

Expected Outcomes	How the Service Model of the Case Illustration Could Achieve the Expected Outcomes
Timely access to cancer diagnostic services	• The use of the agreed stratification tools facilitates more appropriate triage • The provision of fast-track diagnostic imaging service reduces the waiting time for diagnostic services
Equitable and integrated cancer treatment services	• The use of MDT clinics and meetings facilitates the treatment decision making processes and expedites the treatment provision
Seamless transitional care for cancer survivors	• The use of protocol-driven care facilitates care transition of cancer survivors and avoids duplication of services
Cluster-based and networked cancer services	• Cancer diagnosis is established in regional hospital and the cancer treatments are delivered by the ICCC. Patient care is coordinated and orchestrated between regional hospital and the ICCC

New Territories West Cluster

1 Tuen Mun Hospital +
2 Pok Oi Hospital +
3 Tin Shui Wai Hospital +
4 Castle Peak Hospital
5 Siu Lam Hospital

Hospitals with A&E service are marked with the symbol +

Current Cluster Cancer Services Arrangement

Most cancer services in the New Territories West Cluster (NTWC) are cluster-based, and centralised at Tuen Mun Hospital (TMH). Pok Oi Hospital (POH) and Tin Shui Wai Hospital (TSWH) provide some localised services such as selected diagnostic procedures and cancer surgeries. MDT are currently in place for different cancer types, which include gastrointestinal (GI) (upper and lower), hepatobiliary, breast, lung and cardiothoracic, urological, plastic surgery, ENT, neurosurgery, orthopaedics (spine), neuroendocrine and gynaecological malignancy. Currently, only patients with GI and breast cancers are covered by CCM Programmes. The current challenges include long waiting time for pathology, diagnostic procedures, radical treatments, and radiology assessment of treatment response. Areas in need of future investment include advanced diagnostic tools (e.g. PET scans) or alternative resources (e.g. Public-Private Interface), MDT coverage and enhancements to nursing role.

Radiotherapy treatment room in TMH

At POH and TSWH, expansion of on-site cancer specialists and support for patients not fit for transfer to TMH in accordance with current protocols across NTWC, cancer specific rehabilitation and survivorship programmes, palliative care beds and psycho-social support are also areas for growth.

Proposed Cancer Implementation Strategies

Diagnosis

NTWC will deploy nursing staff to stratify patients with the stratification protocol according to cancer likelihood. This will allow for appropriate and timely diagnosis and fast-track referral for high cancer likelihood cases.

Fast-track diagnostic services will be provided by reallocating new SOPC (Priority 2 / Routine) cases and enhancing old cases arrangement. In order to adopt MDT approach, the team composition will be re-constructed to serve its purposes. Support will be coordinated on a cluster-basis, following the protocol-based booking and guidelines. Nurses will be deployed to support the patient and team, including coordination of meeting and investigations bookings, as well as engaging and educating patients.

Treatment

A MDT approach will be employed to implement an ICCC model. The team composition will be re-visited to serve its purpose, and will include CCM. Services including arrangement of OPD appointments will be protocol-based and governed by guidelines.

CCM Programmes will be expanded to cover more cancer types. The role of the CCM will also be expanded to support most MDT and to coordinate the supportive care pathways.

Protocol-based referrals to AH for pre-habilitation and rehabilitation will be developed along agreed supportive care pathways.

Survivorship

A MDT approach will be employed to implement survivorship care across NTWC. For low-risk patients, a longitudinal model will be adopted for transition to primary care. Care will be transferred from specialist to primary care provider after one to five years, in alignment with the Corporate guidelines, with fast-track back-referral system for specialist assessment as required. For high-risk patients, a shared care model between specialist and primary care providers will be implemented. Severe complications will be managed through integrated care including AH services.

Specialty nurse will facilitate survivorship care, which includes providing support to most MDT and FM. Their role will include facilitating referrals, and providing guidance and education to patients. Patients will be empowered through medical-social collaboration e.g. NGOs and partnership with patient support group.

Cancer Patient Resource Centre in TMH

Governance and Cluster Service Organisation

NTWC Cancer Services Committee, chaired by the Chief of Service of Clinical Oncology and the Cluster Chief Executive, was established in 2013 to oversee and monitor cancer services including paediatric cancer and palliative care services in the Cluster. A Cluster Cancer Services Coordinator has also been appointed to oversee the cancer services within NTWC. Care pathways for different cancer types will be developed. Services provided, including arrangement of OPD appointments, will be protocol-based and governed by guidelines.

Roles of different NTWC hospitals will be delineated and support from primary care and NGOs will be strengthened. Radiology and pathology services, treatments (surgery, radiotherapy, and systemic treatment), and support from nurses, pharmacists, and AH will be reviewed and expanded in a phased approach. Practices will be kept up-to-date after consensus is made amongst the stakeholders.

NTWC Cancer Services Coordinator will participate as a Cluster representative in CC(Cancer Service). Cluster cancer services will be regularly reviewed and discussed under corresponding platforms (COC, Cluster Planning & Performance, Cancer Services Committee).

Prioritisation of Implementation Plans

(S) Short Term (<3 years) (M) Medium Term (3-5 years) (L) Long Term (6-10 years)

Governance and Cluster Service Organisation	(S) Restructure the existing Cancer Services Committee and assign a 'Cluster Cancer Services Coordinator' to oversee the cancer services within the Cluster (S) Refine care pathway for colorectal, breast, nasopharyngeal and prostate cancers (M) Develop more care pathways for other cancer types (M) Coordinate planning and development of cancer services (see new services under corresponding sections)
Diagnosis	(S) Review services in Cancer Services Committee (e.g. Pathway) (S) Reshuffle OPD new (Priority 2 / Routine) and old cases' arrangement (S) Provide nurse coordinator support to FM and A&E including setting up stratification protocol and providing appropriate and fast-track referral (S) Enhance radiology services (M) Provide bundle assessments and investigations (L) Develop Cluster pathology services

Prioritisation of Implementation Plans

(S) Short Term (<3 years) (M) Medium Term (3-5 years) (L) Long Term (6-10 years)

Treatment	(S) Review services in Cancer Services Committee to enhance cluster-based MDT, pathway and CCM (S) Enhance CCM support (S) Extend oncology services in collaboration with A&E at TSWH (S) Explore feasibility of extended chemotherapy services at TSWH (S) Explore inpatient consultative services of palliative care (cancer) at POH and TSWH (S) Explore the feasibility of pharmacist-led chemotherapy clinics (M) Build OT extension block (M) Explore further up-to-date surgical services (L) Establish protocol-based referral to AH for pre-habilitation and rehabilitation (L) Explore the expansion of radiotherapy services
Survivorship	(S) Establish nasopharyngeal cancer survivorship programme (S) Strengthen patient empowerment and support from NGOs (M) Explore more survivorship programmes in other cancer types (M) Explore the feasibility of collaboration with FM (L) Align survivorship care and transfer low-risk cancer patients to FM (L) Set up protocol-based fast-track back-referral system

Case Illustration: Prostate Cancer

Patient Background

Mr Chan is a 72-year-old male patient with diabetes mellitus, hypertension and lower urinary tract symptoms. He was referred from GP for investigation of lower urinary tract symptoms and very elevated serum prostate specific antigen.

1 Diagnosis

Mr Chan will be referred to the urology clinic for urgent assessment following triage with the stratification protocol. Accelerated access to MRI will be arranged through the urology clinic. The nurse in charge of his case will coordinate the arrangement of image-guided biopsy following consultation with radiologist. Following this, a diagnosis of prostate cancer is confirmed.

2 Treatment

A cluster-based MDT will work together to prescribe the appropriate treatment plan for Mr Chan, in accordance with agreed treatment guidelines. The planning will include the assessment of fitness for robotic surgery. If suitable, he will be treated with robotic radical prostatectomy. He will also receive pre-habilitation and rehabilitation, as well as social support, all of which will be coordinated by CCM with the support from relevant patient groups. Anticipating the possibility of developing complications such as temporary urinary incontinence and erectile dysfunction, CCM will also coordinate the monitoring of the complications, and the corresponding diagnosis and treatment should they arise, in accordance with agreed treatment guidelines. The delivery of care will be streamlined through coordination among different disciplines by the CCM.

3 Survivorship

Following treatment, clinic attendances will be streamlined to meet Mr Chan's survivorship and rehabilitation needs. Stable survivors will be followed up at FM clinic, in accordance with the Corporate guideline. He will receive regular review including prostate specific antigen monitoring at FM clinic. In case cancer recurrence is suspected, he will be channelled back to urology clinic through the established fast-track back-referral system. He will be reviewed at the urology clinic, where investigations would be coordinated by nurse, and assisted by MSWs if the investigations involve self-financed items (e.g. PET scan). Once recurrence is detected, second-line treatment and / or palliative radiotherapy will be arranged. He will be assisted by the MSWs as required, for financial support of the second-line treatment.

Expected Outcomes	How the Service Model of the Case Illustration Could Achieve the Expected Outcomes
Timely access to cancer diagnostic services	• The use of the pre-set stratification tool facilitates more accurate triage • Shortened waiting time for diagnostic services is enabled via coordination by nurse coordinator in a MDT approach
Equitable and integrated cancer treatment services	• The expanded CCM services strengthens the coordination between different clinics to offer an integrated service model
Seamless transitional care for cancer survivors	• Bundled clinic attendances for improved survivorship needs and rehabilitation is enabled by the protocol-driven survivorship programme • Cases are followed up by FM clinic with a pre-set mechanism for fast-track back-referral to urology clinic as required
Cluster-based and networked cancer services	• The cluster-based MDT approach enables a holistic approach in arranging staging workup and determining treatment plan

Part Four

Looking Ahead

Implementation and Monitoring

How We Are Going to Realise the Strategic Service Framework

The Framework outlines the strategies and key enablers required to improve the service model and build up the system infrastructure, to deliver a more sustainable and high quality adult cancer service in HA over the next five to ten years. Concerted cross-disciplinary efforts at the cluster and Corporate levels, involving doctors, nurses, pharmacists, and other AH professionals, are required to develop operational plans to implement the Framework in a phased approach.

Following the account of the clusters' service plans based on the directions of this Framework, this chapter focuses on the plan at the Corporate level, to steer the actualisation of this Framework, to coordinate the development and implementation of operational plans, and to achieve continuous service improvement through monitoring and evaluation.

The prioritisation of service needs and the readiness of the programmes will be some of the major considerations during the implementation phase of the strategies. Some strategies could be delivered through better refinement of workflow and stakeholders' collaborations without great implications on resources while others require additional resource inputs, which will be sought through the HA annual planning process.

Table 6 summarises the roadmap for strategy implementation at the Corporate level. The implementation plans specific to nursing, AH and pharmacy services are also outlined in the subsequent sections.

Table 6. Corporate Roadmap for Strategy Implementation

Strategic Directions	Short Term (<3 years)	Medium Term (3-5 years)	Long Term (6-10 years)
Cluster-based and networked cancer services	Revamp CC(Cancer Service) membership		
	Strengthen the linkage between CC(Cancer Service), COCs, and clusters	→	
Timely access to cancer diagnostic services	Develop stratification tools for triage and formulate triage protocols	→	
	Conduct baseline assessment and develop checklists for bundled diagnostic service		
Equitable and integrated cancer treatment services	Develop specifications for patient needs screening and supportive care pathways		
		Corporate-wide implementation of needs-based supportive care	→
	Expand clinical oncology pharmacist programmes	→	
	Refine current and plan for new CCM Programmes	→	
	Roll out new CCM Programmes for more cancer types	→	
Seamless transitional care for cancer survivors	Conduct baseline evaluation and develop corporate-wide survivorship pathway		
	Develop collaboration model between cancer care and primary care team with structured back-referral mechanism	→	
	Develop integrated nurse clinics model for cancer services	Pilot transitional care programmes	Roll out transitional care programmes
	Develop a general policy direction of medical-social collaboration	→	
Strengthened data-driven performance monitoring and evaluation for continuous quality improvement	Monitor service deliverables tied in with resources bidding through the HA annual planning process	→	→
	Regularly review progress on the key implementation milestones	→	→
	Develop performance indicators	→	→

Corporate Implementation Plans Aligning with Strategic Directions

Strategic Direction 1: Cluster-based and Networked Cancer Services

Strengthening the governance of HA cancer services is the key first step to successful implementation of the Framework. At the Corporate level, the first step will be to review the role of CC(Cancer Service) to revamp its membership structure to reinforce its oversight and coordination function for service development and provision across specialties and disciplines; and to enhance stakeholder alignment with the Corporate direction on cancer services. Representation from all clusters in the CC(Cancer Service) especially when discussing the adoption of HA-wide cancer-related protocols and guidelines or the implementation and roll-out plans of cancer-related strategies will be of paramount importance. This will strengthen the linkage between Corporate and clusters and improve service alignment across HA.

Besides strengthening the linkage between CC(Cancer Service) and clusters, the partnership between CC(Cancer Service) and cancer-related COCs should also be enhanced. CC(Cancer Service) will take the lead to facilitate cross-specialties discussion of cancer services, while individual COCs assume their advisory and coordination role for cancer services provision in individual specialties. The governance and networking of cancer services will be regularly reviewed and refined.

Strategic Direction 2: Timely Access to Cancer Diagnostic Services

As previously elucidated in the chapter 'Overview of Cancer Services in HA', our current triage mechanism for outpatient specialist assessment of suspected cancer patients is through screening of referral letters. The information obtained from these referral letters are important. The development of validated stratification tools aims at improving the timeliness and accessibility of cancer diagnostic services for new referrals by cancer likelihood. This is another urgent Corporate priority. A standardised assessment format of the stratification tools and agreed triage protocols formulated by the COCs will be necessary.

Current systems do not capture sufficient data to inform the extent of service gaps in cancer diagnostic process across the clusters. A baseline evaluation at the Corporate level will be conducted in the short term to address this gap. This will be followed by other actions including exploring ways to develop fast-track diagnostic services through better coordination between specialties and disciplines, to develop rapid diagnostic pathways for selected cancer types, and to bundle diagnostic services.

These Corporate initiatives will facilitate the adoption of the enhanced triage mechanisms with proactive patient stratification and streamlined workflow across clusters in the short to medium term.

Strategic Direction 3: Equitable and Integrated Cancer Treatment Services

The revamped CC(Cancer Service) will work closely with COCs to coordinate the development of cross-specialty and multi-disciplinary cancer services. They will be rolled out across all clusters concurrently with the cluster implementation of the ICCC model. This will be done over the short to medium term.

To achieve patient-centred care, the short-term goal is to formulate care pathways to address patients' needs with a holistic approach. Central coordination will be needed as different disciplines will be involved to address the generic needs such as physical, emotional, psycho-social and practical needs, as well as disease-specific needs for patients. In order to assess the types and levels of patients' needs in a timely and efficient manner, standardised assessment tools will be identified or developed. Specifications of screening assessment will be determined in terms of scope, content and the critical time points of assessment. Structured supportive care pathways, including pre-habilitation and rehabilitation will also be developed for patients with disease-specific needs or higher levels of generic needs. This will be conducted in line with the Corporate directions including those set out in other relevant HA Strategic Service Frameworks (e.g. the Strategic Service Framework for Rehabilitation Services).

The target is to achieve corporate-wide implementation of the service model and its adaptations in the next three to five years. With the corresponding enhancement of the roles of AH professionals in providing supportive care, a holistic and patient-centred integrated cancer care could be achieved in the long term.

For coordination of cancer treatment and care, the CCM Programmes for breast and colorectal cancers will be expanded to provide coverage for more cancer types. These programmes have been proven to improve care coordination during the complex cancer journey and have been well received by patients and staff. Before developing new CCM Programmes, CC(Cancer Service) and COC(Nursing) will review the role of CCM for better cross-specialty coordination and improved patient care efficiency. CCM should act as the contact point between the patient and cancer care team and be responsible for coordinating and monitoring the formulation and execution of the patient's care plan. CCM will also have their reporting lines aligned for better support and development opportunities.

Care pathways of existing CCM Programmes will also be reviewed and aligned with the new programmes. This will allow effective service monitoring across clusters and evaluation of the corresponding resource needs at the Corporate level. Currently, CCM Programmes are targeted for patients with confirmed cancer receiving active treatment. Clear entry and exit criteria will be defined for CCM Programmes to serve targeted patients. These programmes, with their defined entry and exit criteria, will be rolled out to different types of cancers.

In the short term, CC(Cancer Service) and COC(Nursing) will work closely together with COCs to develop care pathways and monitoring parameters for CCM Programmes. With due consideration of the complexity, caseload and clusters' readiness, roll out of new CCM Programmes for more cancer types is expected to be achieved within the coming two to five years. In the long term, service delivery model would be further reviewed and explored to cover survivorship care and support after cancer treatment.

Strategic Direction 4: Seamless Transitional Care for Cancer Survivors

Current systems do not capture sufficient data on survivorship care service to inform the extent of service gaps and consistency across clusters. A baseline evaluation will be conducted in the short term, followed by the development of corporate-wide, disease-specific survivorship pathways and principles. This will also provide an opportunity for building consensus on the standard of care, which will support clusters in developing coordinated cluster-based survivorship care in alignment with Corporate directions.

The development of collaboration model between cancer care team and primary care physicians is a goal for the coming two to three years. This will be conducted through the engagement of COCs, COC(Family Medicine) in particular, to facilitate transitional care of cancer survivors. A structured, back-referral mechanism will be established to fast track patients from primary care to the cancer care team for specialist assessment as needs arise (e.g. cancer relapse or complications). This model of structured back-referral mechanism will be piloted in the medium term. Pilot results will be utilised to refine transitional care programmes, which will then be implemented in a phased approach.

Nurses play a key role in provision of transitional care to cancer survivors. In addition to enhancing the role of primary care physicians in survivorship care, clearly defined roles for nurses' contribution to survivorship care (e.g. integrated nurse clinics for cancer survivors) will be explored through engagement of COC(Nursing) and relevant stakeholders in the medium to long term.

To support cancer survivors to improve their quality of life and stay healthy in the community, a similar needs-based structured, supportive and rehabilitation care will be implemented as described in the previous section for Strategy 3.2. A similar timeframe will also be expected, with corporate-led pathways development followed by rolling launch in the short to medium term, and achieving holistic and patient-centred integrated cancer care in the long term.

Medical-social collaboration at the cluster level will be reinforced to attain better leverage on community resources for cancer survivors. In addition, a general policy direction of medical-social services will be developed to empower patients and engage community partners in the short to medium term.

Strategic Direction 5: Strengthened Data-driven Performance Monitoring and Evaluation for Continuous Quality Improvement

The implementation of this Framework is a continuous development and improvement process for cancer services in HA. Monitoring the process is the key to ensuring proper implementation of the strategies and effective use of resources. At the Corporate level, the monitoring will be conducted for the following:

- Progress on the key implementation milestones as stated in the Corporate and Cluster Plans of the Framework will be regularly reviewed over the next five to ten years by the CC(Cancer Service).
- Monitoring parameters and KPIs will be developed for benchmarking, accountability reporting and continuous quality improvement of the overall cancer services in HA.
- Service deliverables committed will be monitored through the existing established mechanisms.

Implementation Plan of Nursing Services

Nurses play an important role in providing clinical and holistic care to cancer patients as well as overall coordination of integrated cancer services. Professional nursing input, both in terms of clinical care and service coordination, is integral to the patient journey at multiple points from diagnosis, treatment to survivorship. Nurses trained in related specialties constitute a major workforce in cancer care provision. They can function in various advanced nursing practice roles (e.g. CCM and specialty nurse in nurse clinic) and contribute to future service development to meet the specific needs of patients along the continuum of cancer care.

Timely access to cancer diagnostic service for patients is one of the key objectives of this Framework. Nurses can have a fundamental role in optimising risk stratification and coordinating referrals through enhanced nursing assessment services.

In the treatment phase, nurses also play an important role, especially in treatment coordination via the CCM Programmes. Nurses, as the patient navigator through pre-defined treatment pathway, coordinates multi-disciplinary service and acts as the single contact point between the patient and clinicians. Such coordination increases the efficiency of the multi-disciplinary service, facilitates better treatment outcome and enhances patients' experience. The role of nurses in the CCM Programme and the required practice development in relevant specialties will be further refined and implemented across different cancer types across HA. Further, with pre-set clinical protocols, nurses can contribute to enhance patient care though the Integrated Model of Specialist Outpatient Service and nurse clinics.

In the rehabilitation and survivorship phases, structured supportive care and treatment pathways with nursing elements will be developed to provide holistic care with a patient-centred approach. Nurses will work closely with the MDT along the cancer care pathways to enhance support in late effect management and referral coordination, risk assessment and patient education. The number of cancer survivors is increasing rapidly, in parallel with long-term care needs, concurrent co-morbidities management and care complexity of this population. Nurses who work in multiple care settings will provide holistic care to our patients throughout the care continuum.

In addition, nurses have an important role in the governance of cancer services. As active key stakeholders in the delivery of cancer services, nursing representatives in COC(Clinical Oncology) and CC(Cancer Service) will work closely with members from other disciplines. Participation of nurses in these committees will provide a strong link between fellow nurses and other stakeholders across grades and clusters, contributing to the continuous enhancement of cancer services in HA.

Faced with the rapidly expanding and challenging cancer patient service, the role and the continuous efforts of nurses at multiple positions in the care of cancer patients remain crucial and of strategic importance in realising the goals of this Framework.

Implementation Plan of Allied Health Services

AH professionals play an integral role throughout the cancer patient care pathway. Personalised treatment and support provided by AH professionals has a significant impact on improving the health and well-being of patients across the whole pathway from diagnosis, active treatment, to cancer survival[58]. Their roles are especially important in the treatment and survivorship phases. Recognising the importance of pre-habilitation and rehabilitation in optimising patient outcomes and reducing hospital costs[59], timely initiation of AH services is essential.

In the treatment and rehabilitation phases, structured needs assessment of both patients and carers will be established to identify patients' physical, functional, and psycho-social care needs to enhance holistic care to patients. Initial needs assessment could be done by the CCM or any member of the clinical team, including AH professionals. The agreed, standardised needs assessment tools will be used across the clusters. Patients with different levels of needs require different intensity levels of therapeutic input by the AH team. Patient care pathways will be enhanced through the evidence-based, protocol-driven intervention, alongside with the proposed service models for different cancers. These will be developed as a collaborative effort between AH professionals, CC(Cancer Service) and related clinical COCs.

In the survivorship phase, to avoid variation in access to treatment and integrated care, AH professionals will actively participate in the establishment of cluster-based, disease-specific care pathways. Service gaps will be identified and opportunities to leverage on community resources will be maximised to facilitate smooth transitional care. AH professionals will participate in the development of structured, cluster-based rehabilitation and supportive care programmes for the transition of care to the community.

In addition, the standardisation of clinical pathways and alignment of care protocols across clusters also allows process and outcome data on AH services to be captured systematically and analysed for benchmarking, accountability reporting and continuous quality improvement across HA. Last but not least, the sustainability of the AH services in cancer care is dependent on detailed workforce planning for AH professionals to ensure a sufficient, quality workforce is available to meet the escalating service demand.

58 National Health Service (2018). *Quick Guide: The role of allied health professionals in supporting people to live well with and beyond cancer*.

59 Silver, J.K. (2015). Cancer prehabilitation and its role in improving health outcomes and reducing healthcare cost. *Seminars in Oncology Nursing*; 31, 13-30.

Implementation Plan of Pharmacy Services

Rapid medical technological advances have brought in many new drugs to the market every year. Market dynamics affect the pricing strategies of different pharmaceutical companies. These have contributed to the complexity facing clinicians in choosing the most appropriate drug treatment for cancer patients. Further, individual differences in clinical conditions and response to drug treatment further add to the complexity of decisions on appropriate treatment cycles and duration.

Pharmacy services play a significant role in cancer treatment. High-alert medications including cytotoxic drugs and hazardous preparations such as intrathecal injections, epidural injections and biologics, which are frequently used in cancer treatments, are prepared centrally by Pharmacy under the Central Aseptic Dispensing Service to minimise the risk of contamination and dilution errors during the manipulation process. Training specific to oncology pharmacy has been provided to equip pharmacists to assure safe handling and preparation of these drugs.

Oncology clinical pharmacists are members of the cancer services multi-disciplinary care team. They provide comprehensive medication management and support a variety of functions along the patient care journey including clinical screening for systemic cancer therapy prescriptions, drug counselling for new systemic cancer therapy cases, systemic cancer therapy treatment protocols review and standardisation of medication administration records.

Oncology clinical pharmacists work with the healthcare team in both inpatient and outpatient settings. Their involvement includes participation in clinical ward rounds, contribution to clinical decision making, providing appropriate drug treatment advice, reviewing treatment regimens and providing counselling specific to patients' concurrent medications on compliance, drug dosages, and evaluating therapies for their effectiveness according to individual patients' current conditions.

In the treatment phase, Pharmacy will play an active role in adopting the ICCC Model. Oncology pharmacist clinics under MDT approach will be established in hospitals with oncology centres. Cancers with well-established treatment regimens and agreed clinical protocols will be selected for initial implementation. Prescribing protocols will be developed and implemented in a phased approach. This will be further expanded to cover other cancer types. The number of oncology pharmacist clinics will be increased to provide more patient coverage as the need arises. This will be achieved in the short to medium term.

Cancer prevention and survivorship is one of the biggest challenges in the years to come in association with the availability of more choices in treatment options. Clinical pharmacists are one of the key resources of health education about systemic cancer therapy. Further, they have an especially invaluable role in keeping patients informed about the multi-drug usage in ambulatory care setting as well as continuity of care for patients after discharge. Giving the right drug information, explaining the treatment goals, possible adverse effects, safe and successful use of medications and with suitable self-care advice, clinical pharmacists are in the position to empower patients to adopt a more active and positive role in the treatment and recovery process.

Clinical pharmacists will have an increased presence in the cancer care pathway with this new Framework. HA has been developing a skilled workforce of oncology clinical pharmacists. These newly trained pharmacists with specialty knowledge and oncology training will contribute to improve patient outcomes. This will assist in relieving the workload of frontline clinicians and provide support to meet the challenges of service demands.

Conclusion

Having cancer is a difficult experience, for both patients and their loved ones. Patients are often faced with many challenges along their cancer journey. Patients have multi-faceted needs during this journey. It starts from dealing with the anxiety during waiting for disease confirmation, coping with complex treatment regimens, to adjusting to a new life after cancer. These needs should be addressed if we strive for quality care.

Our vision for HA's cancer services is that all cancer patients can receive timely, coordinated and patient-centred care throughout their cancer journey. The care should meet the patients' needs, and should be delivered through the concerted efforts of the various healthcare professionals in a sustainable manner.

This Framework describes our directions and strategies for achieving this vision. With enhancements in the governance and organisation of our cancer services, implementation of new workflows and service models for cancer diagnosis, treatment and survivorship care, as well as strong data-driven performance monitoring, we strive to achieve better cancer care for our patients in the coming five to ten years.

To successfully implement this Framework, the concerted efforts from HA Head Office, cluster management and our healthcare professionals across specialties and disciplines are of utmost importance. We will work together to achieve our vision for HA's cancer services for our cancer patients.

Part Five

Abbreviations and Appendices

Abbreviations

A&E	Accident & Emergency
AH	Allied Health
CC	Central Committee
CCM	Cancer Case Manager
COC	Coordinating Committee
CSC	Cluster Service Coordinator
CT	Computed Tomography
ENT	Ear, Nose and Throat
FM	Family Medicine
GOPC	General Outpatient Clinic
GP	General Practitioner
HA	Hospital Authority
HCC	Hepatocellular Carcinoma
HKSAR	Hong Kong Special Administrative Region
ICCC	Integrated Cluster Cancer Centre
IT	Information Technology
KPI	Key Performance Indicator
LINAC	Linear Accelerator
MDT	Multi-disciplinary Team
MRI	Magnetic Resonance Imaging
MSDC	Medical Services Development Committee
MSW	Medical Social Worker
NAH	New Acute Hospital
NGO	Non-government Organisation
OPD	Outpatient Department
OT	Operating Theatre
PET	Positron Emission Tomography
PRC	Patient Resource Centre
RAE	Resource Allocation Exercise
SOPC	Specialist Outpatient Clinic

Appendices

Appendix 1: Taskforce on the HA Strategic Service Framework for Cancer Services

Terms of Reference

- To review the current and future service needs for cancer services in HA
- To advise on the future service model(s), system infrastructure and monitoring of HA cancer services to address the existing issues and guide the service development over the next five to ten years
- To identify priority areas and develop strategies to enhance the quality and outcome of HA cancer services
- To formulate a strategic service framework for HA cancer services for consideration by the members of the Directors' Meeting and MSDC

Membership (as at November 2019)

Co-chairs	
Dr Libby LEE	Director (Strategy & Planning), HA Head Office
Dr W L CHEUNG	Director (Cluster Services), HA Head Office (up to 31 March 2018)
Dr Tony KO	Director (Cluster Services), HA Head Office (from 1 April 2018 to 31 July 2019)
Dr Deacons YEUNG	Director (Cluster Services), HA Head Office (from 1 August 2019)
Members	
Dr Judy HO	Consultant (Surgery), Queen Mary Hospital – *Representative of CC (Cancer Service)* (up to 21 June 2018)
Dr Miranda CHAN	Consultant (Surgery), Kwong Wah Hospital – *Representative of CC (Cancer Service)* (from 22 June 2018)
Dr Roger NGAN	Chief of Service (Clinical Oncology), Queen Elizabeth Hospital – *Representative of CC (Cancer Service)* (up to 21 June 2018)
Dr K H WONG	Chief of Service (Clinical Oncology), Queen Elizabeth Hospital – *Representative of CC (Cancer Service)* (from 22 June 2018)
Dr Ashley CHENG	Cluster Clinical Coordinator (Health Informatics), Kowloon West Cluster & Princess Margaret Hospital / Chief of Service (Clinical Oncology), Kowloon West Cluster – *Representative of COC (Clinical Oncology)*
Dr Rebecca YEUNG	Chief of Service (Clinical Oncology), Pamela Youde Nethersole Eastern Hospital – *Representative of COC (Clinical Oncology)*
Prof Anthony CHAN	Cluster Coordinator (Clinical Oncology), New Territories East Cluster / Chief of Service (Clinical Oncology), Prince of Wales Hospital / Professor (Clinical Oncology) – *Representative of COC (Internal Medicine)*
Dr Albert LIE	Honorary Consultant (Medicine), Queen Mary Hospital – *Representative of COC (Internal Medicine)*
Dr T H CHEUNG	Consultant (Obstetrics & Gynaecology), New Territories East Cluster – *Representative of COC (Obstetrics & Gynaecology)* (up to 3 September 2018)
Dr W H LI	Chief of Service (Obstetrics & Gynaecology), Queen Elizabeth Hospital – *Representative of COC (Obstetrics & Gynaecology)* (from 4 September 2018)
Dr Y L LAM	Consultant (Orthopaedics & Traumatology), Queen Mary Hospital & Hong Kong Children's Hospital – *Representative of COC (Orthopaedics & Traumatology)*
Prof Paul LAI	Professor (Surgery), Prince of Wales Hospital – *Representative of COC (Surgery)*
Dr Michael CHAN	Cluster Coordinator (Pathology), New Territories East Cluster / Consultant (Chemical Pathology), Prince of Wales Hospital – *Representative of COC (Pathology)* (up to 17 February 2019)
Dr T L QUE	Chief of Service (Clinical Pathology), Tuen Mun Hospital & Pok Oi Hospital & Tin Shui Wai Hospital – *Representative of COC (Pathology)* (from 18 February 2019)
Dr Y C WONG	Deputy Hospital Chief Executive, Tuen Mun Hospital / Chief of Service (Diagnostic Radiology & Nuclear Medicine), Tuen Mun Hospital & Pok Oi Hospital – *Representative of COC (Radiology)*
Dr J LIANG	Cluster Coordinator (Family Medicine & Primary Health Care), New Territories West Cluster / Chief of Service (Family Medicine & Primary Health Care), New Territories West Cluster – *Representative of COC (Family Medicine)*
Ms W Y CHOY	Advanced Practice Nurse (Case Manager of Breast Cancer), Princess Margaret Hospital – *Representative of Nursing Grade*

Members	

Members	
Mr W M LING	Nurse Consultant (Clinical Oncology), Hong Kong East Cluster – *Representative of Nursing Grade*
Dr Damaris HUNG	Clinical Psychologist in-charge (Clinical Psychology), Grantham Hospital / Clinical Psychologist & Communication Ambassador, Queen Mary Hospital – *Representative of Allied Health Grade*
Mr Y M LIU	Senior Physiotherapist (Physiotherapy), Princess Margaret Hospital – *Representative of Allied Health Grade*
Mr Benjamin KWONG	Senior Pharmacist (Chief Pharmacist's Office), HA Head Office – *Representative of Pharmacy Grade*
Dr Linda YU	Chief Manager (Integrated Care Programmes), HA Head Office (up to 14 January 2019)
Dr Sara HO	Deputising Chief Manager (Integrated Care Programmes), HA Head Office (from 15 January 2019 to 19 May 2019)
Dr Frank CHAN	Chief Manager (Integrated Care Programmes), HA Head Office (from 20 May 2019)
Mr Lawrence POON	Chief Manager (Nursing) / Chief Nurse Executive, HA Head Office
Ms Eva TSUI	Chief Manager (Statistics & Workforce Planning), HA Head Office
Dr Leo WAT	Chief Manager (Strategy, Service Planning & Knowledge Management), HA Head Office (up to 17 August 2018)
Dr Flora TSANG	Chief Manager (Strategy, Service Planning & Knowledge Management), HA Head Office (from 20 August 2018)
Dr Sharon WONG	Senior Manager (Strategy & Service Planning), HA Head Office (up to 2 October 2017) – *Secretary*
Dr Jasperine HO	Senior Manager (Strategy & Service Planning), HA Head Office (from 3 October 2017 to 28 June 2018) – *Secretary*
Dr Anne KWOK	Senior Manager (Strategy & Service Planning), HA Head Office (from 29 June 2018 to 1 Oct 2019) – *Secretary*
Dr Wilson KWAN	Senior Manager (Strategy & Service Planning), HA Head Office (from 2 Oct 2019) – *Secretary*

Appendix 2: Working Group on Cancer Diagnosis

Terms of Reference

- To advise on future service model for HA cancer services, covering the cancer care pathway from symptoms presentation, diagnosis, staging to treatment planning, with focus on the collaboration across specialties
- To advise on the related system infrastructure and monitoring of HA cancer services
- To report the recommendations to the Taskforce on the HA Strategic Service Framework for Cancer Services for consideration and formulation of strategies

Membership (as at November 2019)

Co-chairs	
Dr Leo WAT	Chief Manager (Strategy, Service Planning & Knowledge Management), HA Head Office (up to 17 August 2018)
Dr Flora TSANG	Chief Manager (Strategy, Service Planning & Knowledge Management), HA Head Office (from 20 August 2018)
Dr Linda YU	Chief Manager (Integrated Care Programmes), HA Head Office (up to 14 January 2019)
Dr Frank CHAN	Chief Manager (Integrated Care Programmes), HA Head Office (from 20 May 2019)
Members	
Dr K H WONG	Chief of Service (Clinical Oncology), Queen Elizabeth Hospital – *Representative of COC (Clinical Oncology)* (up to 15 August 2018)
Dr K T YUEN	Consultant (Clinical Oncology), Princess Margaret Hospital – *Representative of COC (Clinical Oncology)* (from 16 August 2018)
Dr Judy HO	Consultant (Surgery), Queen Mary Hospital – *Representative of CC (Cancer Service)* (up to 15 August 2018)
Dr K H WONG	Chief of Service (Clinical Oncology), Queen Elizabeth Hospital – *Representative of CC (Cancer Service)* (from 16 August 2018)
Dr Y K LAM	Consultant (Medicine & Geriatrics), United Christian Hospital – *Representative of COC (Internal Medicine)*
Dr June LAU	Consultant (Medicine), Queen Elizabeth Hospital – *Representative of COC (Internal Medicine)*
Dr Johnny CHAN	Deputy Hospital Chief Executive (Professional Service) & Chief of Service (Medicine), Queen Elizabeth Hospital – *Representative of COC (Internal Medicine)*

Members	
Dr S K HUI	Consultant (Obstetrics & Gynaecology), Princess Margaret Hospital – *Representative of COC (Obstetrics & Gynaecology)*
Dr Y L LAM	Consultant (Orthopaedics & Traumatology), Queen Mary Hospital & Hong Kong Children's Hospital – *Representative of COC (Orthopaedics & Traumatology)*
Dr Miranda CHAN	Consultant (Surgery), Kwong Wah Hospital – *Representative of COC (Surgery)*
Dr W LUK	Chief of Service (Family Medicine & Primary Health Care), Kowloon West Cluster – *Representative of COC (Family Medicine)*
Dr C H CHENG	Cluster Coordinator (Major Incident Control Centre), New Territories East Cluster / Chief of Service (Accident & Emergency), Prince of Wales Hospital – *Representative of COC (Accident & Emergency)* (from 1 August 2018)
Dr Alex CHAN	Service Director (Pathology), Kowloon Central Cluster / Chief of Service (Pathology), Queen Elizabeth Hospital – *Representative of COC (Pathology)*
Dr Michael CHAN	Cluster Coordinator (Pathology), New Territories East Cluster / Consultant (Chemical Pathology), Prince of Wales Hospital – *Representative of COC (Pathology)*
Dr W K KAN	Service Director (Radiology), Hong Kong East Cluster / Chief of Service (Radiology), Pamela Youde Nethersole Eastern Hospital – *Representative of COC (Radiology)*
Dr T K AU YONG	Consultant in-charge (Nuclear Medicine), Queen Elizabeth Hospital – *Representative of COC (Radiology)*
Prof Dennis LO	Professor (Chemical Pathology), Prince of Wales Hospital – *Representative of CC (Genetic Services)*
Mr W M LING	Nurse Consultant (Clinical Oncology), Hong Kong East Cluster – *Representative of Nursing Grade*
Ms Penny CHOI	Dietitian (Dietetic), Tuen Mun Hospital – *Representative of Allied Health Grade*
Dr Jasperine HO	Senior Manager (Strategy & Service Planning), HA Head Office (up to 3 May 2018) – *Secretary*
Dr Anne KWOK	Senior Manager (Strategy & Service Planning), HA Head Office (from 4 May 2018 to 1 Oct 2019) – *Secretary*
Dr Wilson KWAN	Senior Manager (Strategy & Service Planning), HA Head Office (from 2 Oct 2019) – *Secretary*
Dr Eric ZIEA	Senior Manager (Integrated Care Programmes), HA Head Office

Appendix 3: Working Group on Cancer Treatment

Terms of Reference

- To advise on future service model for HA cancer services, covering the different modalities of cancer treatment, with focus on the collaboration and role delineation across specialties
- To advise on the related system infrastructure and monitoring of HA cancer services
- To report the recommendations to the Taskforce on the HA Strategic Service Framework for Cancer Services for consideration and formulation of strategies

Membership (as at November 2019)

Co-chairs	
Dr Leo WAT	Chief Manager (Strategy, Service Planning & Knowledge Management), HA Head Office (up to 17 August 2018)
Dr Flora TSANG	Chief Manager (Strategy, Service Planning & Knowledge Management), HA Head Office (from 20 August 2018)
Dr Linda YU	Chief Manager (Integrated Care Programmes), HA Head Office (up to 14 January 2019)
Dr Frank CHAN	Chief Manager (Integrated Care Programmes), HA Head Office (from 20 May 2019)
Members	
Dr Ashley CHENG	Cluster Clinical Coordinator (Health Informatics), Kowloon West Cluster & Princess Margaret Hospital / Chief of Service (Clinical Oncology), Kowloon West Cluster – *Representative of COC (Clinical Oncology)* (up to 7 August 2018)
Dr W T NG	Cluster Coordinator (Patient Relations) & Deputy Chief of Service (Clinical Oncology), Pamela Youde Nethersole Eastern Hospital – *Representative of COC (Clinical Oncology)* (from 8 August 2018)
Dr Judy HO	Consultant (Surgery), Queen Mary Hospital – *Representative of CC (Cancer Service)* (up to 7 August 2018)
Dr Ashley CHENG	Cluster Clinical Coordinator (Health Informatics), Kowloon West Cluster & Princess Margaret Hospital / Chief of Service (Clinical Oncology), Kowloon West Cluster – *Representative of CC (Cancer Service)* (from 8 August 2018)
Dr Y K LAM	Consultant (Medicine & Geriatrics), United Christian Hospital – *Representative of COC (Internal Medicine)*

Members	
Dr June LAU	Consultant (Medicine), Queen Elizabeth Hospital – *Representative of COC (Internal Medicine)*
Dr C K MOK	Deputy Hospital Chief Executive, Tuen Mun Hospital / Consultant (Medicine & Geriatrics), Tuen Mun Hospital – *Representative of COC (Internal Medicine)*
Dr Assumpta WONG	Consultant (Obstetrics & Gynaecology), Queen Elizabeth Hospital – *Representative of COC (Obstetrics & Gynaecology)*
Dr Y L LAM	Consultant (Orthopaedics & Traumatology), Queen Mary Hospital & Hong Kong Children's Hospital – *Representative of COC (Orthopaedics & Traumatology)*
Dr K H KWOK	Chief of Service (Surgery), Queen Elizabeth Hospital – *Representative of COC (Surgery)*
Dr K Y YAM	Chief of Service (Neurosurgery), Tuen Mun Hospital – *Representative of COC (Neurosurgery)*
Dr Joseph CHUNG	Associate Consultant (Ear, Nose & Throat) & Coordinator (Quality & Safety), Queen Mary Hospital – *Representative of COC (Ear, Nose & Throat / Otorhinolaryngology)*
Dr Steven WONG	Information Security & Privacy Officer, Kowloon Central Cluster / Deputy Hospital Chief Executive (Corporate Affairs) & Chief of Service (Anaesthesiology & Operating Theatre Services), Queen Elizabeth Hospital – *Representative of COC (Anaesthesiology)*
Dr W Y LAM	Service Director (Pathology), Kowloon West Cluster / Chief of Service (Clinical Pathology), Caritas Medical Centre – *Representative of COC (Pathology)* (from 26 February 2018)
Dr Johnny MA	Chief of Service (Radiology), Caritas Medical Centre & Kwai Chung Hospital & North Lantau Hospital & Princess Margaret Hospital & Yan Chai Hospital – *Representative of COC (Radiology)*
Dr Macy TONG	Consultant (Clinical Oncology), Prince of Wales Hospital – *Representative of CC (Genetic Services)*
Ms N F SHUM	Advanced Practice Nurse (Surgery), Queen Mary Hospital – *Representative of Nursing Grade*
Ms W C LI	Manager (Nursing) / Chief Nursing Officer, HA Head Office – *Representative of Nursing Grade* (from 18 November 2018 to 7 August 2019)

Members	
Dr M LEUNG	Manager (Nursing) / Chief Nursing Officer, HA Head Office – *Representative of Nursing Grade* (from 8 August 2019)
Ms Y K TSOI	Department Manager (Medical Social Service), United Christian Hospital – *Representative of Allied Health Grade* (from 7 March 2018)
Ms Grace YOUNG	Senior Pharmacist (Pharmacy), New Territories West Cluster – *Representative of Pharmacy Grade*
Dr Jasperine HO	Senior Manager (Strategy & Service Planning), HA Head Office (up to 10 April 2018) – *Secretary*
Dr Anne KWOK	Senior Manager (Strategy & Service Planning), HA Head Office (from 11 April 2018 to 1 Oct 2019) – *Secretary*
Dr Wilson KWAN	Senior Manager (Strategy & Service Planning), HA Head Office (from 2 Oct 2019) – *Secretary*
Dr Eric ZIEA	Senior Manager (Integrated Care Programmes), HA Head Office

Appendix 4: Working Group on Cancer Survivorship

Terms of Reference

- To advise on future service model for HA cancer services, covering the cancer care pathway of post-treatment follow up care, with focus on the collaboration across specialties and disciplines, as well as with community partners
- To advise on the related system infrastructure and monitoring of HA cancer services
- To report the recommendations to the Taskforce on the HA Strategic Service Framework for Cancer Services for consideration and formulation of strategies

Membership (as at November 2019)

Co-chairs	
Dr Leo WAT	Chief Manager (Strategy, Service Planning & Knowledge Management), HA Head Office (up to 17 August 2018)
Dr Flora TSANG	Chief Manager (Strategy, Service Planning & Knowledge Management), HA Head Office (from 20 August 2018)
Dr Linda YU	Chief Manager (Integrated Care Programmes), HA Head Office (up to 14 January 2019)
Dr Frank CHAN	Chief Manager (Integrated Care Programmes), HA Head Office (from 20 May 2019)
Members	
Dr Rebecca YEUNG	Chief of Service (Clinical Oncology), Pamela Youde Nethersole Eastern Hospital – *Representative of COC (Clinical Oncology)*
Ms Maggie CHAN	Department Operations Manager (Clinical Oncology), Pamela Youde Nethersole Eastern Hospital – *Representative of CC (Cancer Service)*
Dr Y K LAM	Consultant (Medicine & Geriatrics), United Christian Hospital – *Representative of COC (Internal Medicine)*
Dr W C LAO	Chief of Service (Medicine), Pamela Youde Nethersole Eastern Hospital – *Representative of COC (Internal Medicine)*
Dr M C CHAN	Associate Consultant (Obstetrics & Gynaecology), Tuen Mun Hospital – *Representative of COC (Obstetrics & Gynaecology)*
Dr Y L LAM	Consultant (Orthopaedics & Traumatology), Queen Mary Hospital & Hong Kong Children's Hospital – *Representative of COC (Orthopaedics & Traumatology)*

Members	
Dr Kenny YUEN	Chief of Service (Surgery), Tseung Kwan O Hospital – *Representative of COC (Surgery)*
Dr Y C LI	Chief of Service (Family Medicine & General Outpatient Clinic), Kowloon Central Cluster – *Representative of COC (Family Medicine)*
Dr Cissy CHOI	Senior Manager (Rehabilitation & Patient Empowerment), HA Head Office (from 30 July 2018 to 31 March 2019)
Dr Tony HA	Chief Manager (Primary & Community Services), HA Head Office (from 24 July 2019)
Dr W L TANG	Service Director (Pathology), Hong Kong East Cluster / Chief of Service (Clinical Pathology), Pamela Youde Nethersole Eastern Hospital – *Representative of COC (Pathology)*
Dr W K KAN	Service Director (Radiology), Hong Kong East Cluster / Chief of Service (Radiology), Pamela Youde Nethersole Eastern Hospital – *Representative of COC (Radiology)*
Ms W Y CHOY	Advanced Practice Nurse (Case Manager of Breast Cancer), Princess Margaret Hospital – *Representative of Nursing Grade*
Ms W L MA	Department Manger (Occupational Therapy), Queen Elizabeth Hospital – *Representative of Allied Health Grade*
Ms Margaret SUEN	Cluster Coordinator (Medical Social Work), Kowloon West Cluster / Department Manager (Medical Social Work / Health Resource Centre & Volunteer Service Coordinator), Caritas Medical Centre – *Representative of Allied Health Grade* (from 6 August 2018)
Dr Jasperine HO	Senior Manager (Strategy & Service Planning), HA Head Office (up to 9 May 2018) – *Secretary*
Dr Anne KWOK	Senior Manager (Strategy & Service Planning), HA Head Office (from 10 May 2018 to 1 Oct 2019) – *Secretary*
Dr Wilson KWAN	Senior Manager (Strategy & Service Planning), HA Head Office (from 2 Oct 2019) – *Secretary*
Dr Eric ZIEA	Senior Manager (Integrated Care Programmes), HA Head Office

Appendix 5: Working Group on Cluster Service Organisation

Terms of Reference

- To advise on the governance, organisation and integration of HA cancer services at the cluster level
- To formulate Cluster Plans according to the strategic service framework for HA cancer services
- To report the recommendations to the Taskforce on the HA Strategic Service Framework for Cancer Services for consideration and formulation of strategies

Membership (as at November 2019)

Co-chairs	
Dr Leo WAT	Chief Manager (Strategy, Service Planning & Knowledge Management), HA Head Office (up to 17 August 2018)
Dr Flora TSANG	Chief Manager (Strategy, Service Planning & Knowledge Management), HA Head Office (from 20 August 2018)
Dr Linda YU	Chief Manager (Integrated Care Programmes), HA Head Office (up to 14 January 2019)
Dr Frank CHAN	Chief Manager (Integrated Care Programmes), HA Head Office (from 20 May 2019)
Members	
Dr C C LAU	Cluster Chief Executive, Hong Kong East Cluster / Hospital Chief Executive, Pamela Youde Nethersole Eastern Hospital & Wong Chuk Hang Hospital & St John Hospital – *Representative of Hong Kong East Cluster* (up to 30 September 2018)
Dr Beatrice CHENG	Clinical Stream Coordinator (Medical), Hong Kong East Cluster / Hospital Chief Executive, Ruttonjee and Tang Shiu Kin Hospitals & Tung Wah Eastern Hospital & Cheshire Home, Chung Hom Kok – *Representative of Hong Kong East Cluster* (from 1 October 2018)
Dr Rebecca YEUNG	Chief of Service (Clinical Oncology), Pamela Youde Nethersole Eastern Hospital – *Representative of Hong Kong East Cluster*
Dr M Y LUK	Chief of Service (Clinical Oncology), Queen Mary Hospital – *Representative of Hong Kong West Cluster*
Dr Dacita SUEN	Consultant (Surgery), Queen Mary Hospital – *Representative of Hong Kong West Cluster*
Dr K H WONG	Chief of Service (Clinical Oncology), Queen Elizabeth Hospital – *Representative of Kowloon Central Cluster*
Dr Miranda CHAN	Consultant (Surgery), Kwong Wah Hospital – *Representative of Kowloon Central Cluster*
Dr K M LI	Chief of Service (Accident & Emergency) & Service Director (Complaints Management & Emergency Preparedness) & Deputy Hospital Chief Executive, United Christian Hospital / Deputy Service Director (Primary & Community Health Care), Kowloon East Cluster – *Representative of Kowloon East Cluster*
Dr K N KUNG	Chief of Service (Medicine & Geriatrics), United Christian Hospital / Cluster Service Coordinator (Medicine), Kowloon East Cluster – *Representative of Kowloon East Cluster*
Dr Ashley CHENG	Cluster Clinical Coordinator (Health Informatics), Kowloon West Cluster & Princess Margaret Hospital / Chief of Service (Clinical Oncology), Kowloon West Cluster – *Representative of Kowloon West Cluster*
Dr David SUN	Chief Manager, Kowloon West Cluster / Deputy Hospital Chief Executive (Operations), Princess Margaret Hospital / Deputy Hospital Chief Executive, North Lantau Hospital – *Representative of Kowloon West Cluster* (up to 3 April 2018)
Dr Michael WONG	Chief Manager, Kowloon West Cluster / Deputy Hospital Chief Executive (Operations), Princess Margaret Hospital / Deputy Hospital Chief Executive, North Lantau Hospital – *Representative of Kowloon West Cluster* (from 4 April 2018)
Prof Anthony CHAN	Cluster Coordinator (Clinical Oncology), New Territories East Cluster / Chief of Service (Clinical Oncology), Prince of Wales Hospital / Professor (Clinical Oncology) – *Representative of New Territories East Cluster*
Dr Janet LEE	Deputy Chief of Service (Surgery), Shatin Hospital / Deputy Chief of Service (Surgery) & Consultant (Surgery), Prince of Wales Hospital – *Representative of New Territories East Cluster*
Dr C S WONG	Cluster Coordinator (Quality & Safety), New Territories West Cluster / Chief of Service (Clinical Oncology), Tuen Mun Hospital – *Representative of New Territories West Cluster*

Members	
Dr C C CHEUNG	Consultant (Surgery), Tuen Mun Hospital – *Representative of New Territories West Cluster*
Ms Kithelia LAI	Department Operations Manager (Clinical Oncology), Queen Mary Hospital – *Representative of Nursing Grade* (up to 20 August 2019)
Mr C Y IP	Department Operations Manager (Clinical Oncology), Queen Mary Hospital – *Representative of Nursing Grade* (from 21 August 2019)
Mr Y M LIU	Senior Physiotherapist (Physiotherapy), Princess Margaret Hospital – *Representative of Allied Health Grade*
Dr Jasperine HO	Senior Manager (Strategy & Service Planning), HA Head Office (up to 29 May 2018) – *Secretary*
Dr Anne KWOK	Senior Manager (Strategy & Service Planning), HA Head Office (from 30 May 2018 to 1 Oct 2019) – *Secretary*
Dr Wilson KWAN	Senior Manager (Strategy & Service Planning), HA Head Office (from 2 Oct 2019) – *Secretary*
Dr Eric ZIEA	Senior Manager (Integrated Care Programmes), HA Head Office

Appendix 6: Subgroup on Cancer Patient Needs Assessment

Membership (as at November 2019)

Members	
Dr C S WONG	Cluster Coordinator (Quality & Safety), New Territories West Cluster / Chief of Service (Clinical Oncology), Tuen Mun Hospital – *Representative of COC (Clinical Oncology)*
Dr Kenny YUEN	Chief of Service (Surgery), Tseung Kwan O Hospital – *Representative of COC (Surgery)*
Dr Johnny CHAN	Deputy Hospital Chief Executive (Professional Service) & Chief of Service (Medicine), Queen Elizabeth Hospital – *Representative of COC (Internal Medicine)*
Ms W C LI	Manager (Nursing) / Chief Nursing Officer, HA Head Office – *Representative of Nursing Grade* (up to 18 November 2018)

Members	
Ms Vivian CHAN	Manager (Nursing) , HA Head Office – *Representative of Nursing Grade*
Ms Carol LAM	Advanced Practice Nurse (Clinical Oncology), Pamela Youde Nethersole Eastern Hospital – *Representative of Nursing Grade*
Ms N F SHUM	Advanced Practice Nurse (Surgery), Queen Mary Hospital – *Representative of Nursing Grade*
Ms K LAM	Advanced Practice Nurse (Clinical Oncology), Queen Elizabeth Hospital – *Representative of Nursing Grade*
Ms O K CHUN	Nurse Consultant (Surgery), Kwong Wah Hospital – *Representative of Nursing Grade*
Ms K Y WONG	Ward Manager (Surgery), United Christian Hospital – *Representative of Nursing Grade*
Ms Selina CHEUNG	Nursing Officer (Case Manager of Colorectal Cancer), Princess Margaret Hospital – *Representative of Nursing Grade*
Ms Y K HUNG	Advanced Practice Nurse (Clinical Oncology), Prince of Wales Hospital – *Representative of Nursing Grade*
Ms W F TSANG	Advanced Practice Nurse (Breast Care), Pok Oi Hospital – *Representative of Nursing Grade*
Ms Y K TSOI	Department Manager (Medical Social Service), United Christian Hospital – *Representative of Allied Health Grade*
Dr Leo WAT	Chief Manager (Strategy, Service Planning & Knowledge Management), HA Head Office (up to 17 August 2018)
Dr Flora TSANG	Chief Manager (Strategy, Service Planning & Knowledge Management), HA Head Office (from 20 August 2018)
Dr Anne KWOK	Senior Manager (Strategy & Service Planning), HA Head Office (from 30 May 2018 to 1 Oct 2019)
Dr Eric ZIEA	Senior Manager (Integrated Care Programmes), HA Head Office

Appendix 7: List of Committees Involved in the Briefings on the Strategic Service Framework for Cancer Services

1. COC (Accident & Emergency)
2. COC (Anaesthesiology)
3. COC (Clinical Oncology)
4. COC (Clinical Psychology)
5. COC (Dietetics)
6. COC (Ear, Nose and Throat / Otorhinolaryngology)
7. COC (Family Medicine)
8. COC (Intensive Care)
9. COC (Internal Medicine)
10. COC (Medical Social Service)
11. COC (Neurosurgery)
12. COC (Nursing)
13. COC (Obstetrics & Gynaecology)
14. COC (Occupational Therapy)
15. COC (Orthopaedics & Traumatology)
16. COC (Pathology)
17. COC (Pharmaceutical Services)
18. COC (Physiotherapy)
19. COC (Radiology)
20. COC (Speech Therapy)
21. COC (Surgery)
22. CC (Cancer Service)
23. CC (Genetic Services)
24. CC (Palliative Care)
25. CC (Rehabilitation Services)
26. Central Renal Committee
27. Patient Advisory Committee

Appendix 8: HA Central Committee on Cancer Service

Membership (as at November 2019)

Chairperson	
Dr Ashley CHENG	Cluster Clinical Coordinator (Health Informatics), Kowloon West Cluster & Princess Margaret Hospital / Chief of Service (Clinical Oncology), Kowloon West Cluster
Co-chair	
Dr Frank CHAN	Chief Manager (Integrated Care Programmes), HA Head Office
Service Manager	
Dr Eric ZIEA	Senior Manager (Integrated Care Programmes), HA Head Office
Members	
Dr Ashley CHENG	Cluster Clinical Coordinator (Health Informatics), Kowloon West Cluster & Princess Margaret Hospital / Chief of Service (Clinical Oncology), Kowloon West Cluster
Dr Rebecca YEUNG	Chief of Service (Clinical Oncology), Pamela Youde Nethersole Eastern Hospital
Dr K H WONG	Chief of Service (Clinical Oncology), Queen Elizabeth Hospital
Dr Miranda CHAN	Consultant (Surgery), Kwong Wah Hospital
Dr K H KWOK	Chief of Service (Surgery), Queen Elizabeth Hospital
Dr Harold LEE	Consultant (Medicine & Geriatrics), Princess Margaret Hospital
Dr June LAU	Consultant (Medicine), Queen Elizabeth Hospital
Prof Y S NGAN	Chair Professor & Head of Department (Obstetrics & Gynaecology), The University of Hong Kong / Honorary Consultant (Obstetrics & Gynaecology), Queen Mary Hospital
Dr Benjamin FONG	Consultant (Orthopaedics & Traumatology), Queen Elizabeth Hospital & Hong Kong Children's Hospital

Members	
Prof Godfrey CHAN	Chief of Service (Paediatrics), Hong Kong Children's Hospital / Honorary Consultant (Paediatrics), Queen Mary Hospital / Head of Department (Paediatrics), The University of Hong Kong
Dr Annie KWOK	Consultant (Medicine & Geriatrics), Caritas Medical Centre
Dr Alex CHAN	Service Director (Pathology), Kowloon Central Cluster / Chief of Service (Pathology), Queen Elizabeth Hospital
Dr P T HO	Consultant (Psychiatry), Division I, Kwai Chung Hospital
Dr W K KAN	Service Director (Radiology), Hong Kong East Cluster / Chief of Service (Radiology), Pamela Youde Nethersole Eastern Hospital
Ms Carenx LEUNG	Department Operations Manager (Clinical Oncology), Queen Elizabeth Hospital
Dr Damaris HUNG	Clinical Psychologist in-charge (Clinical Psychology), Grantham Hospital / Clinical Psychologist & Communication Ambassador, Queen Mary Hospital
Ms Y K TSOI	Department Manager (Medical Social Service), United Christian Hospital
Mr Benjamin KWONG	Senior Pharmacist (Chief Pharmacist's Office), HA Head Office
Prof Ava KWONG	Professor (Surgery), The University of Hong Kong / Division Chief (Surgery), Queen Mary Hospital & Tung Wah Hospital
Prof Anthony CHAN	Cluster Coordinator (Clinical Oncology), New Territories East Cluster / Chief of Service (Clinical Oncology), Prince of Wales Hospital / Professor (Clinical Oncology)
Ms Rosita AU	Manager (Integrated Care Programmes), HA Head Office – *Secretary*

Enquiry:

Strategy and Planning Division
Hospital Authority Head Office
Hospital Authority Building
147B Argyle Street
Kowloon, Hong Kong

Email: str.planning@ha.org.hk
Website: www.ha.org.hk

Special thanks to colleagues for the photographs on the inside pages.


與民攜手
Helping People Stay Healthy
保健安康