Cancer Treatment Services in Public Hospitals

HKACS Symposium on Cancer Challenge in Hong Kong
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Health Statistics in Hong Kong

~7.39 million population

0.8% annual growth

6% Health Expenditure (2014/15):
HK$ 137,488 million

50% 68,713
50% 68,775

Public
Private

General Outpatient attendance:
6.1 million
Specialist Outpatient attendance:
7.7 million

Inpatient Discharges and Deaths (2016):
2.1 million

Female (87.7 years)  Male (81.7 years)

Cancer Statistics in Hong Kong

Rising Cancer Incidence

No. of new cancer cases in Hong Kong from 2006 to 2015, and projection to 2030

Source: Hong Kong Cancer Registry
^ Projection based on current disease patterns
Projected number of cancer new cases include those aged 20 or above only, and exclude non-melanoma skin cancer

45-64 year age group: 16% rise in cancer incidence rate (2006-2015)
Cancer Statistics in Hong Kong

Improving survival

Age-standardised cancer death rate in Hong Kong (per 100,000 persons)

→ Increasing number of patients living with consequences of cancer

Source: Hong Kong Cancer Registry
Projections of new cancer cases by sex (aged 19+)

Reversal of gender difference of new cancer cases is happening

Observed no.

Projected no.

*Cancers in children and adolescents (≤19 yrs) were excluded due to the rarity in cancer (<1%) and different classification scheme. Non-melanoma skin cancers were also excluded in making projection as most cases could be easily treated and cured.

Source: Hong Kong Cancer Registry
Health Statistics in Hong Kong

Outpatient Care
- Private Doctors: 49.5%
- Private Practitioners of Chinese Medicine: 18.1%
- Others: 0.5%

Secondary and Tertiary Care
- Hospital Authority/Department of Health: 31.8%
- Private Hospitals: 10%

Sources:
(1) Outpatient care:
(2) Inpatient (Secondary and Tertiary care) share:
   Public/private share by Inpatient Bed Day Occupied in 2016, HA and Dept of Health.
Cancer Statistics in Hong Kong

In 2015,

- Cancer is the **top killer** in HK, causing nearly 1 in 3 deaths
- **30,318** new cancer cases diagnosed
- Top 5 cancers comprised over **57.1%**

Source: Hong Kong Cancer Registry
Hospital Authority (HA)

- HA is responsible for managing HK's public hospitals services since December 1991

- HA is accountable to the HK Government through the Secretary for Food and Health, who formulates overall health policies for HK

- HA manages 43 hospitals/institutions, 48 Specialist Out-patient Clinics and 73 General Out-patient Clinics in 7 clusters

- As of 31 March 2018, HA has a workforce of around 76,000 and 28,000 beds
Cancer Statistics in HA

Key Statistics of Clinical Oncology Specialty in HA (Jul 2017 - Jun 2018):

- 400,000 Specialist Out-patient Clinics attendances
- 23,000 Inpatient discharges and deaths
- 89,000 Day patient discharges and deaths

~90% of new cancer cases were diagnosed or treated in HA
Challenges faced

- Ageing population and growing demand
- Increasing treatment complexity
- Technological advancement
- Cancer as a chronic disease requiring long term management
Challenges faced

Cancer care journey is complex

- Multiple diagnostic / treatment modalities
- Different specialties, disciplines and care settings
- Long term follow-up for some patients

Overseas Cancer Care Model

Key elements of international good practice:

- Established strategies with structured service organisation and networking
- Defined service model to enhance early access and coordination
- Emphasis on technology adoption and translational research for effective care
- Standardised treatment for better care consistency
- Outcome monitoring for continuous quality improvement
Key elements of international good practice:

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Service organisation and networking

In HA, cancer service is organised and operated through:

- **6 cluster-based clinical oncology centres** and each of which is networked with other intra-cluster hospitals and clinics
- **Coordinated cross-specialty** (including oncology, medicine, surgery, radiology, pathology etc.) and **cross-disciplinary service system**
Governance

- **Corporate level:** Coordinating Committee (COC) and Central Committee (CC) to advise on overall direction and organisation of Clinical Oncology service/Cancer service

- **Cluster level:** Cluster Committee to support cluster-based service organisation and coordinate cluster cancer service
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Improving access and coordination

Cancer Case Manager (CCM) Programme

Background

- Launched since 2010/11 and rolled out to all HA clusters by 2014/15, targeting patients with complicated breast or colorectal cancer

Objective

- CCM as single contact point between patients and multi-disciplinary team to streamline patients’ care pathway, support patients’ needs and improve coordination
Cancer Case Manager (CCM) Program

Patient journey

- New Patients
- Case Manager: Initiate & Organize
- Management plan based on CPG
- Pathologist
- Radiologist
- Oncologist
- Surgeon
- Integrated Cancer Care Module
  - Integrated appointment; Rx schedule ...
  - Ensure clinic follow up, outcomes tracking ...
  - Follow up patient journey, patient support ...
  - Case Manager

- Program evaluation conducted in 2016 on patient satisfaction and quality of life showed positive result

As of December 2017, a total of ~13,900 breast cancer new cases and ~16,600 colorectal cancer new cases benefited from the program
Improving access and technology adoption

Challenge
- Growing demand for different diagnostic tests (e.g., CT, MRI, endoscopy, and pathology etc.)

HA’s service
- Cluster-based approach to increase capacity and upkeep technological advancement in the following ways:
  - Establish the 2nd PET centre in Pamela Youde Nethersole Eastern Hospital in 2012
  - Install additional CT/MRI machines
  - Implement the Radi Public Private Partnership program (Radi PPP)
  - Enhance capacity of molecular diagnostic services and tests for different types of cancer
  - Review available genetic tests annually
  - Add colonoscopy sessions and OGD sessions

Radiology
Pathology
Endoscopy
Radi Collaboration PPP

- HA has implemented the “Project on Enhancing Radiological Investigation Services through Collaboration with the Private Sector” (Radi Collaboration) since May 2012

- Target patients from 11 selected cancer groups* (subject to clinical eligibility screening) are offered a choice to receive CT/MRI examinations from participating service providers under full subsidy

- As at 31 December 2017, a total of 66,345 scans were performed

*Selected cancer: colorectal cancer, breast cancer, nasopharyngeal cancer, lymphoma, prostate cancer, stomach cancer, cervix cancer, corpus uteri cancer, head and neck cancer, sarcoma and germ cell tumor
Improving access and technology adoption

Challenge

- Growing demand and increasing treatment complexity for Surgery (~13% of all operations in HA are related to cancer cases)

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<thead>
<tr>
<th></th>
<th>2010</th>
<th>2016</th>
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<tbody>
<tr>
<td>No. of hospital inpatient discharges and deaths due to neoplasms</td>
<td>~166,000</td>
<td>~30%~217,000</td>
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<tr>
<td></td>
<td>2009/10</td>
<td>2016/17</td>
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<tr>
<td>No. of colorectal operations</td>
<td>~1,900</td>
<td>~22%~2,400</td>
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- New technology in surgery (e.g. Minimally Invasive Surgery (MIS), robotic surgery, endoscopic submucosal dissection (ESD) etc.)

HA’s service

- **Open** additional operating theatres and provide additional operation sessions by building up facilities and increasing manpower
- **Adopt** appropriate new technology (e.g. robotic surgery for radical prostatectomy and laparoscopic total mesorectal excision (TME) for rectal cancer)
Improving access and technology adoption

Challenge

• Growing demand and increasing treatment complexity for **Radiotherapy**
  • 28 linear accelerators (LINACs) are providing RT service in HA
  • Marked increase in high and ultra complex RT treatments requiring longer treatment time

HA’s service

• **Perform** extended-hour RT service
• **Plan** for additional LINACs in hospitals (e.g. United Christian Hospital and a new acute hospital)
• **Provide** RT related care by nurse clinic
• **Modernise** RT technology (e.g. Volumetric-modulated arc therapy (VMAT), Tomotherapy, Stereotactic Ablative Radiotherapy (SABR) etc.)
Improving access and standardised treatment

Challenge

- Cancer as a chronic disease requiring **survivorship care/long term management**
- Increasing no. of patients living with consequences of cancer

HA’s service

- **Run** Patient Resource Centres (PRCs) and Cancer PRCs to provide educational talks, rehabilitation and psychosocial programs
- **Collaborate** with non-government organisations (NGOs) to provide psychosocial support to patients and their families
- **Explore** on data monitoring related to cancer survivorship, **enhance** protocols for follow up, and **facilitate** collaboration among specialties
Improving access: Anti-cancer drugs

Challenge

- Growing demand and increasing treatment complexity for Chemotherapy
  - Attendances increased from around 47,000 in 2008 to around 124,000 in 2017

HA’s service

- Expand chemotherapy services in hospitals gradually with increased manpower and other resources
- Perform training and credentialing for chemotherapy service
- Review and introduce new anti-cancer drugs into HA Drug Formulary
- Provide financial assistance for needy patients to purchase anti-cancer drugs

Annualised Growth Rate 11%

Cancer incidence rising at ~2.9% per annum
Improving access: Anti-cancer drugs

- Under the HA Drug Formulary (HADF), cancer drugs are categorised into General Drugs, Special Drugs and Self-Financed Items (SFI) with or without safety net coverage by the Samaritan Fund (SF) or Community Care Fund (CCF)

- The HA has been widening the HADF to currently cover 44 cancer drugs for treatment of 24 types of cancers

- The HA regularly reviews the HADF to include new cancer drugs or reposition existing drugs into a different category

Translational research for effective care
Clinical Pharmacist Program

Background
- HA has deployed additional clinical pharmacists under the designated Clinical Pharmacist Program to all HA clusters since 2011/12 to improve quality and safety of chemotherapy services for cancer patients

Roles and Responsibilities
- Working group on protocol review
- Clinical Round
- Counseling
- Clinical Screening
- Solving reconstitution issue
- Drug advice to nurse
Key elements of international good practice:

- Established strategies with structured service organisation and networking
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- Outcome monitoring for continuous quality improvement
Outcome monitoring for continuous quality improvement

- **Key Performance Indicators (KPIs) e.g.**
  - Waiting time (day) from decision to treat to start of radiotherapy (RT) for 90\textsuperscript{th} percentile of cancer patients requiring radical RT
  - Waiting time (day) at 90\textsuperscript{th} percentile for patients with colorectal/breast/nasopharynx cancer receiving first treatment after diagnosis

- **Audit e.g.**
  - Compliance audit on imaging QA for H&N radiotherapy
  - Compliance audit on Prolonged Radiotherapy Treatment Time

- **Guidelines e.g.**
  - Chemotherapy Safety Guidelines
  - Nasopharyngeal Carcinoma Clinical Practice Guidelines
HA provides **integrated palliative care (PC) services** in all clusters in HA through multi-disciplinary teams of professionals, including doctors, nurses, medical social workers, clinical psychologists, physiotherapists, occupational therapists, etc.

- The following PC services are included to address physical, psychosocial and spiritual needs of patients and their families
  - In-patient service (over 360 PC beds)
  - Ambulatory service (home care, out-patient, day hospice)
  - Bereavement service
In 2017, HA published the **Strategic Service Framework for Palliative Care** to guide the development of HA’s PC services over next five to ten years, for both adult and paediatric patients.
Background

- HA is developing the Strategic Service Framework for Cancer Service to address existing issues and improve service quality

Scope

- **Target** at adult cancer patients in HA, covering cancer care pathway from symptoms presentation, diagnosis, treatment to survivorship
- **Set** out future service model for cancer services, with focus on cross-specialty and cross-disciplinary collaboration, related system infrastructure and performance monitoring
- **Focus** on organisation of cancer services at the Cluster level
- **Guide** the development of HA cancer service over next five to ten years
Strategic Service Framework for Genetic and Genomic Service

Background

- HA is developing the Strategic Service Framework for Genetic and Genomic Service to address existing issues and improve service quality

Scope

- **Focus** on the organisation and development of human genetic services, as the significant component of HA’s genetic and genomic service provision
- **Set** out the strategies and future service model for clinical genetic and genomic services in HA, and the associated supporting services, system infrastructure and performance monitoring
- **Use** cancer genetic services as one of the illustrative examples for the strategic service framework
- **Guide** the development of HA genetic and genomic services over next five to ten years
Looking Forward...

- HA will continue to implement initiatives to augment service capacity and quality along cancer patient journey covering diagnosis, treatment, survivorship, rehabilitation, palliation and end-of-life care through:

  - 7th oncology centre in United Christian Hospital
  - Children cancer service in Hong Kong Children Hospital
  - Cancer Centre in Grantham Hospital
  - 10-year Hospital Development Plan
  - Cost-effective treatment and personalised medicine
  - IT application for quality patient care
  - Strategic Service Framework for Cancer Service
  - Strategic Service Framework for Genetic and Genomic Service

- HA will collaborate with government departments, non-governmental organisations and private stakeholders to support patients and carers throughout patient journey
THANK YOU!