Colorectal Cancer Screening Pilot Programme

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Outline

1. Background
2. Preparation
   - Duty visit to Australia
   - Local KAP Study
3. Colorectal Cancer Screening Pilot Programme
4. Role of Primary Care
5. Are you ready?
BACKGROUND
Colorectal cancer (CRC) burden

- CRC is no. 1 cancer in 2011
  - 4,450 new cases (overtook lung cancer)

Number of annual registered colorectal cancer and lung cancer cases in Hong Kong, 1992-2011

Source: Hong Kong Cancer Registry, Hospital Authority, Department of Health, Census and Statistics Department
Most people diagnosed of Colorectal Cancer at age 50 or above
Lifetime risk before age 75
- 1 in 22 men; 1 in 35 women
~50% of CRC patients in stage III or IV

Source: Hong Kong Cancer Registry
Age-standardised incidence rates* of CRC in Hong Kong, 1983-2012†

† Figures from 2001 onwards are classified according to ICD-10 and thus may not be comparable with figures for previous years classified according to ICD-9. Colorectal cancer corresponds to codes 153-154 in ICD-9 and C18-21 in ICD-10.
Source: Hong Kong Cancer Registry, Hospital Authority, Department of Health, Census and Statistics Department
Age-standardised mortality rates* of CRC in Hong Kong, 1981-2013†

† Figures from 2001 onwards are classified according to ICD-10 and thus may not be comparable with figures for previous years classified according to ICD-9. Colorectal cancer corresponds to codes 153-154 in ICD-9 and C18-21 in ICD-10.
Source: Hong Kong Cancer Registry, Hospital Authority, Department of Health, Census and Statistics Department
Comparison of estimated age-standardised incidence and mortality rates of CRC in Hong Kong and other countries, 2012

Notes:
1. For comparison purpose, the age-standardised rates for Hong Kong are calculated using the same age-standardisation method adopted by GLOBOCAN 2012, in which the age-standardised rates are calculated based on the World Standard population modified by Doll et al. (1966) from that proposed by Segi (1960), and are calculated using 10 age-groups.
2. Hong Kong data are the actual figures, while GLOBOCAN 2012 are the projected ones. The reference year of Hong Kong incidence rates is 2011, while that of GLOBOCAN 2012’s is 2012.
3. Source: GLOBOCAN 2012, IARC, WHO
Site Distribution of CRC

- Right hemicolon: 4.6%
- Transverse colon: 5.8%
- Left hemicolon: 2.3%
- Ascending colon: 8.6%
- Descending colon: 5.6%
- Recto-sigmoid junction: 6.6%
- Caecum: 5.7%
- Appendix: 0.4%
- Sigmoid colon: 22.9%
- Rectum: 31.7%
- Anal canal: 1.1%
The Cancer Expert Working Group on Cancer Prevention and Screening (CEWG) recommends individuals aged 50-75 years should consider CRC screening by either:
- annual or biennial faecal occult blood test (FOBT); or
- flexible sigmoidoscopy every 5 years; or
- colonoscopy every 10 years

2014 Policy Address
- Government is developing the first ever, subsidised, population-based CRC screening programme
- DH, in collaboration with HA, primary care doctors and other healthcare providers
- First pilot on specific age groups to gather local experience from user and provider perspectives
Taskforce

- Set up in January 2014
- To oversee the overall planning, implementation, promotion and evaluation of the pilot programme
- Taskforce members derived from within the Government, Hospital Authority, Academy Colleges, medical associations, primary care sector, academia, public and private sector health service providers and non-governmental organisation
Taskforce and Working Groups

- Under the Taskforce, four working groups have been set up to discuss and consider options in relation to
  1) Use of Faecal Immunochemical Test
  2) Colonoscopy and assessment
  3) Screening registry
  4) Promotion and publicity
- The Taskforce and working groups have been meeting regularly and achieving good progress
PREPARATION
- AUSTRALIA’S EXPERIENCE
- LOCAL STUDY
Duty visit to Australia – Experience sharing

- To collect experience from National Bowel Screening Programme of Australia

- Visited Dept. of Health of Melbourne and Canberra, private endoscopy clinic, Canberra hospital and public and private pathology laboratories in April 2014

- National Bowel Screening Programme of Australia:
  - Launched in 2006, now in Phase III
  - Screening ages include 50/55/60/65/70/74
  - Send mail package includes 2 quantitative FIT tubes to all eligible persons
Lessons learnt

1. Role of primary care in screening programme
   - Participants invited according to age on Medicare list by mail
   - No exclusion criteria (except age), and may include ineligible persons
   - Information giving relies heavily on information booklet
   - Australia is considering to involve primary care practitioners to a greater extent in programme
   - Implication: Primary care based

2. Importance of data collection
   - Manual input by staff after submission of handwritten forms from participants and health care providers labour intensive
   - Low rate of form return due to lack of motivation or not aware of patient/ specimen was from program
   - Poor data collection
   - Developed “Patient FU function” to call patients to find that 80% of defaulters was due to missing data
   - Australia is exploring more automated form of data collection
Lessons learnt

3. Communication strategy

• Explanation for eligible age group to the general public needs to be clear

• Communication strategy would be important, other than instruction sheet e.g., cartoon video of procedure of stool collection

• Peer, family and primary care provider were the most trusted source of information

• Effective means of motivating primary care provider – simple data entry and processes, financial incentives, data feedback

➢ Implication: Clear communication strategy
Local KAP (Knowledge, Awareness, Perception) survey on CRC screening

- **Aim:** To inform policy making on a population-based CRC screening programme and formulate health promotion and education strategies
- **Objectives:** To examine public knowledge, awareness and attitude of CRC and CRC screening; public practice, intention, facilitators and barriers of having FOBT and colonoscopy
- **Methodology:**
  - Territory-wide, cross-sectional telephone survey
  - Conducted in April and May 2014
  - HK residents aged 50-75 who spoke Cantonese, Putonghua or English were interviewed
  - 2,012 subjects were interviewed (Response rate 40%)
Knowledge & Awareness

- Respondents possessed fair knowledge of CRC
- Most common source of CRC screening: Newspaper (38%), television (30%), healthcare professional (24%), family/friend/colleague (19%)
- Knowledge on FOBT & Colonoscopy as means of CRC screening

- FOBT: 38%
  - 12% unprompted
  - + 26% prompted

- Colonoscopy: 66%
  - 32% unprompted
  - + 34% prompted
Perception, Attitude & Practice

Perception & Attitude

- Most respondents perceived themselves having certain chance of getting CRC and need of CRC screening in future.
- Most respondents had positive attitude towards doctor’s screening recommendation.

76% respondents reported they would be very likely or likely go for CRC screening if their doctors advised them.

Practice

- Some respondents had ever had FOBT or colonoscopy.
- Having symptom or discomfort, tests included in body check-up package, and advised by healthcare professional were main reasons for the tests.
**Intention**

- Respondents had **high intention** of taking free FOBT offered by the Government, and **very high intention** of taking further assessment by colonoscopy if needed.

Facilitator and barriers were:

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<thead>
<tr>
<th></th>
<th>Facilitator</th>
<th>Barrier</th>
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<tbody>
<tr>
<td>Free FOBT</td>
<td>• detection for CRC</td>
<td>• perceived unnecessary or unimportant test</td>
</tr>
<tr>
<td></td>
<td>• free screening</td>
<td>• not high risk groups or low chance of getting CRC</td>
</tr>
<tr>
<td></td>
<td>• perceived necessary or important test</td>
<td></td>
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<tr>
<td>Further colonoscopy</td>
<td>• doctor’s advice</td>
<td>• perceived unnecessary or unimportant test</td>
</tr>
<tr>
<td></td>
<td>• detection for CRC</td>
<td>• physical discomfort or pain</td>
</tr>
<tr>
<td></td>
<td>• perceived necessary or important test</td>
<td>• risk or safety</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• cost of colonoscopy</td>
</tr>
</tbody>
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COLORECTAL CANCER SCREENING PILOT PROGRAMME
Aims

- Gather local experience
- Fill knowledge gaps surrounding CRC screening
- Evidence based findings and recommendations can be developed to consider if screening should be extended to cover a wider population
Essentials of a screening programme

- Primary care
- Scientifically based protocols (FIT test and clinical management)
- Target well defined and most able to benefit
- Clearly defined screening pathway/referral
- Adequate facilities for testing, diagnosis and treatment
- Database to support call and recall, track process and outcome, monitor and evaluate operation
- Overall benefits outweigh harms
Key design features

1. **Primary care – based**
   HK Reference Framework for Preventive Care for Older Adults in Primary Care Settings
   
   [Image of HK Reference Framework]
   
   [Link: http://www.pco.gov.hk/]

2. Quality and safety – assured; screening principles

3. Participant confidentiality and autonomy; opt-in

4. Acceptability, accessibility, affordability, equity

5. Auditing functions incorporated

6. Service monitoring and evaluation
Key design features

7. Ride on Electronic Health Record Sharing System (eHRSS) to facilitate data sharing;
   - Facilitates timely, streamlined and accurate data collection and analysis
   - Supports clinical, administrative and financial management of the Pilot Programme
   - Riding on territory-wide electronic Health Record Sharing System (eHRSS)
     ◦ enables participants to be served by healthcare providers comprising the primary care doctor, colonoscopist, radiologist and pathologist based on shared data
   - Provides important reminder functions for service providers and recall functions for participants
   - Simple to use and user friendly
Key design features

8. Three year pilot programme
9. Screening tool:
   - Quantitative faecal immunochemical test (FIT)
   - Biennial
   - Subsidy with co-payment
10. Diagnostic tool:
    - Colonoscopy
    - Public Private Partnership (PPP) model
    - Subsidy with copayment
Proposed workflow

Eligible persons
- Enroll eHR and CRC Programme

Participants
- Advice on FIT
- Attended clinic for advice
- Counselling
- Consent
- Issue/Receive FIT

1. Primary Care Doctors
- Positive FIT result
- Negative FIT result

2. Laboratory for FIT test

3. Colonoscopists
- Positive colonoscopy finding
- Negative colonoscopy finding
- Failed colonoscopies

4. Histopathology laboratory

5. Radiologists for CT colonography

Central Registry

FIT result notification
- Input participant’s clinical data and management

FIT collection points

Recall participants for next FIT

6. HA for management and follow up

Refer participants with positive colonoscopy findings to HA/private sector

Input colonoscopy data

Input histopathology data

Input CT colonography data

HA’s management results
# Workload estimation

## 3-year biennial FIT for eligible persons

<table>
<thead>
<tr>
<th>CRC screening pilot programme</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
<th>Total estimation for 3-phase</th>
</tr>
</thead>
<tbody>
<tr>
<td><em><em>Projected number of participation</em> for FIT in person-time</em>* (30% participation rate for first time FIT participation and 10% drop off rate for repeated FIT are assumed)</td>
<td>51,000</td>
<td>72,840</td>
<td>154,205</td>
<td>278,045</td>
</tr>
<tr>
<td><strong>Positive FIT results</strong> (#4.5% for the first year, and 1.8% for subsequent years are assumed)</td>
<td>2,295</td>
<td>3,278</td>
<td>5,755</td>
<td>11,328</td>
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<tr>
<td><strong>Projected participation of Colonoscopy with +ve FIT</strong> (^88.7% for aged 63-65 and 88.6% for aged 66-70 Colonoscopy participation rate is assumed)</td>
<td>2,033</td>
<td>2,906</td>
<td>5,104</td>
<td>10,043</td>
</tr>
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<td><strong>Adenoma</strong> (#detection rate is 27%)</td>
<td>549</td>
<td>784</td>
<td>1,379</td>
<td>2,712</td>
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<td><strong>Advanced adenoma</strong> (#detection rate is 16.3%)</td>
<td>332</td>
<td>473</td>
<td>831</td>
<td>1,636</td>
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<td><strong>CRC</strong> (#detection rate is 2.9%)</td>
<td>59</td>
<td>85</td>
<td>148</td>
<td>292</td>
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**Remarks:**
- * Each participation will receive 2 FIT. For each participant with negative FIT result, he/she will have next FIT 2 years later. For example, the same participant will normally have FIT on Year 1 and Year 3 if his/her FIT results are negative on Year 1.
- # The assumption is based on the findings of the 5-year CRC screening project conducted by CUHK from May 2008 to Oct 2012.
- ^ The assumption is based on the survey findings on 456 community dwelling elderly aged 66-75 conducted by DH in July 2013.
Inclusion criteria for FIT screening

- Hong Kong ID card or certificate of exemption certificate holders within specified age range

- Eligible individuals within the target age range will be invited to screening in phases starting from the oldest age groups, extending over 3 years to the youngest within this age range (more details on next slide)

- Participants must first enroll in both eHRSS and CRC screening pilot programme, giving consent to a primary care doctor who has enrolled in eHRSS and CRC screening pilot programme to access his/her relevant clinical history
Target age group

- To offer FIT screening to individuals aged 61-70 (at the time of programme launch) by phases over 3 years

- Phase 1
  - Individuals aged 68 to 70

- Phase 2
  - Individuals aged 65 to 70

- Phase 3
  - Individuals aged 61 to 70

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<tr>
<th>Age</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
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<td>70</td>
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Eligible age group

Eligible participants who have not enrolled in previous year can also enrol in subsequent years

Repeat testing for previous FIT –ve individuals
Exclusion criteria for FIT screening

- Persons with symptoms of colorectal cancer
- Persons who have recently received colorectal cancer screening
  - FIT screening within 2 years
  - Colonoscopy within 10 years
- Persons whose medical conditions making them unlikely to benefit from screening or more prone to suffer from risks or complications of colonoscopy
ROLE OF PRIMARY CARE
What does CRC screening mean for Primary Care Doctors?

- Keep abreast with screening evidence
- Practice preventive medicine and good primary care
- Offer FIT screening more widely to eligible persons
- Contribute to systematic and cost-effective population-based screening
- Reduce morbidity and mortality from CRC
- Improve population health
PCD roles and responsibilities

- Enrol suitable persons on CRC programme
- Explain screening procedures
- Brief counselling
- Issue FIT tubes
- Educate participants on stool collection by FIT tubes
- Attend to FIT kits rejected by lab
- Remind patient to submit unreturned kits
- Inform participant of FIT result
- FU on FIT positive result (referral and more)
- Keep connected through CRC IT system
Primary care doctors play an important role in screening programme
ARE YOU READY?
To enrol

Health Care Provider (HCP) must first enroll in eHRSS before joining the CRC screening programme

- Enrolment procedure:
  1. Online and paper enrolment available
  2. Complete and sign the Application Forms
  3. Provision of supporting documents (e.g. business registration certificate, annual practising certificate, copy of bank accounts etc.)
Are you ready?

- Pilot programme – Launch in mid 2016 the earliest
- Recruitment of PCDs – Public announcement on the details in Q1 2016
- PCDs are encouraged to
  - familiarise with concept of CRC screening
  - watch out for operational details of the screening programme
  - enroll in the CRC screening pilot programme

Let’s make history for Hong Kong and fight Colorectal Cancer together!
Q & A Session

Information presented here is still in its draft stage. Please do not treat as final or quote !!