BACKGROUND

• Colorectal Cancer (CRC) is the 2nd leading cause of cancer-related deaths among men and women in the US.

• CRC screening is effective in reducing both incidence and mortality.

• In 2005, the CDC initiated the Colorectal Cancer Screening Demonstration Program (CRCSDP) to promote CRC screening for underserved populations in 5 sites across the US.
OBJECTIVE

To elucidate themes from the implementation of the CRCSDP to inform relevant organizations in planning or implementing CRC screening programs.

STUDY DESIGN

• A longitudinal, multiple case study to analyze program implementation processes
• Qualitative methods
  • 82 interviews with 100 stakeholders
  • >125 observations
  • review of 19 documents
  • 1 group interview at each of the sites
• 2 time points
  • Program start-up
  • Program implementation phase
SCREENING MODALITY

As recommended by the US Preventive Services Task Force (USPSTF)

- Annual fecal occult blood test FOBT
- Sigmoidoscopy or double contrast barium enema every 5 years
- Colonoscopy screening every 10 years

in average risk adults, beginning at age 50 years and continuing until age 75 years

ANALYSIS

Qualitative data analysis methods

- 2 coders with inter-rater reliability of 86%
- identified common ideas among the responses of staff first within and then across sites
- classified codes and corresponding quotations into themes
VALIDATION

To make sure trustworthiness of reported observations, generalizations, and interpretations

- triangulation of data
- negative case analysis
- member checking
- maintenance of a detailed audit trail

5 THEMES EMERGED
COMPLEXITY 1

1. Multiple screening test types available

A single test or a combination of tests can be used: including colonoscopy, fecal occult blood test (FOBT), fecal immunochemical test (FIT), sigmoidoscopy, computed tomography (CT) colonography, and fecal deoxyribonucleic acid (DNA) testing

Each program chose among 4 different test types and dealt with the sequelae of their choice(s)

Some test choice made CRCSDP implementation more laborious

COMPLEXITY 2

2. Complexity in assessing potential colorectal cancer symptoms

Symptoms of colorectal cancer (e.g. rectal bleeding, abdominal pain, a change in bowel habits, and weight loss) can be difficult to distinguish from symptoms of other conditions (e.g. hemorrhoids)

“We needed someone with medical skills to handle the telephone assessment and making sure (to) refer (patients who are not eligible) to the appropriate source. . . .”
COMPLEXITY 3

3. Patients’ difficulties with completing colorectal cancer screening

Especially true for colonoscopy, which can involve a patient’s having a pre-colonoscopy medical examination, taking time off work to prepare the bowel, for the colonoscopy itself, and arranging for an escort to and from the procedure.

More intensive support services, i.e. patient navigation is needed.

5 THEMES EMERGED

- Complexity of Colorectal Cancer Screening
  - Multiple Screening Test Types Available
  - Complexity in Assessing Potential Colorectal Cancer Symptoms
  - Patients’ Difficulties with Completing Colorectal Cancer Screening
- Teamwork and Collaboration
  - High-Functioning Team
  - Designated Program Staff
  - Collaborative Partnerships
- Integration into Existing Systems
  - Integration into Other Public Health Programs
  - Integration into Clinical Settings
- Wisdom at the Local Level
  - Flexibility at the Program Level
  - Knowledge of Local Culture
  - Clinical Autonomy
- Social Norms
  - Taboo Associated with Colorectal Cancer Screening Procedures
  - The "Ick Factor"
TEAMWORK 1

1. High-functioning team

Exhibiting “good communication skills, teamwork, team building, encouraging and supporting one another, validating successes, and (discussing) problems . . . in a way that preserves the integrity of the people who are involved.”

“Each team member brought (his or her) own skills and abilities to the broader program”

A well defined division of labor, and clear communication

TEAMWORK 2

2. Designated program staff

Having one or more designated staff, as part of their teams

Otherwise, felt pulled in several directions when working across multiple public health programs

Funding staff in these clinics fostered clinic-level program integration and ensured oversight and accountability
TEAMWORK 3

3. Collaborative partnerships

Collaborative partnerships were essential in meeting the CDC’s mandate to secure resources for treatment of patients diagnosed with cancer.

Partnerships also advanced the program’s stature in the community, providing both tacit and active endorsement and furthering the program’s credibility among a wider audience.

5 THEMES EMERGED

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INTEGRATION 1

1. Integration into existing public health programs

Building on these existing relationships helped the CRCSDP *gain legitimacy* in the medical community and *fostered provider interest* in working with this new program.

Nevertheless, integration with existing programs did not always facilitate implementation.

In some instances, integration across screening programs led to *confusion* among clients and providers.

INTEGRATION 2

2. Integration into clinical settings

Site staff members’ understanding of provider sites’ systems and processes, such as patient flow processes, data collection systems and related forms, and treatment plans.

Some site staff had first-hand clinical knowledge and experience.

Integration into existing systems, although fundamental to furthering program implementation, *took time, demanded careful consideration, and required support*. 
5 THEMES EMERGED

WISDOM 1

1. Flexibility at the program level

Staff across all sites commented that it was useful to have “enough flexibility to let go of things that weren’t necessary” and to change things that were not working

The importance of “tailoring what they’re doing to their own situation, their own resources, their own strengths”
WISDOM 2

2. Knowledge of local culture

A shared decision making model

To encourage a discussion between patient and provider about whether the patient preferred FOBT or colonoscopy, as opposed to having providers impose a particular test.

WISDOM 3

3. Clinical autonomy

Site staff and provider site coordinators, many of whom were nurses, described feeling uncomfortable with questioning a gastroenterologist’s decision while trying to enforce CDC program Guidelines.

At times, adhering to program policies meant challenging a physician’s clinical autonomy.
1. The taboo associated with colorectal cancer screening procedures

**Awkwardness** in directly discussing bowel movements with patients

Some respondents described a stronger reaction… taboo around having something inserted into the anus, particularly for men

Another directly and poignantly addressed the aversion to colonoscopy because of an individual’s history of sexual abuse
SOCIAL NORMS 2

2. The “ick factor”

“People don’t want to do (FOBT). They’re messy.”

This site staff member compared previous shifts in social norms about breast cancer screening to currently shifting social norms about CRC screening.

Challenging the social norms that undermine the social acceptability of CRC screening was imperative to successful CRCSDP implementation, a concept that developed throughout the course of the program.

DISCUSSIONS (1)

Some interacting themes

- Social norms, including taboos around human eliminatory functions and the “ick factor” in the screening procedures, interact with the clinical complexity to further complicate program implementation.

- Teamwork and collaboration interact with each of the other themes.
DISCUSSIONS (2)

• **Patient navigation** services (or similar patient support services) needed

• **Transdisciplinary** approach to the implementation of a complex public health program like the CRCSDP is preferable to multidisciplinary or interdisciplinary approaches

DISCUSSIONS (3)

• While capitalizing on existing program infrastructure often enhances the implementation of a new public health program, especially during the start-up phase, it cannot be assumed that wholesale integration is feasible or even preferable

• **Assimilation**—not necessarily integration—may be a more meaningful goal

• If social norms associated with CRC screening procedures are not addressed, then they remain a strong, invisible force against improved screening prevalence
LIMITATIONS

As with other qualitative research studies, findings should not be interpreted in any quantitative sense.

The study only captured the feedback among a small yet relevant sample of people with the pre-defined background who were invited to participate in the discussion.

But, rigorous methods and checking have been done as far as possible.

COMMENT

Results provide valuable insights for the implementation of similar efforts in the future.

Although some of the implementation issues faced by the CRCSDP were unique to CRC screening, many of the themes identified may be applied to other types of screening programs and perhaps to other chronic disease programs.
WHAT ABOUT HONG KONG?

HONG KONG

研全民腸癌篩查 料年涉2億
擬先針對年長高危族 最快明年底推

【獨家】研全民腸癌篩查 料年涉2億
擬先針對年長高危族 最快明年底推

大腸癌將成香港癌症新頭號癌症，據悉港府正研究以公帑資助推行全民大腸癌篩查，但礙於醫管局難以負擔，擬先推針對某年齡層的先導計劃，如60至60歲或60至70歲，最快明年底推；專家料年公帑開支約兩億元。
腸癌料超肺癌 成頭號殺手
隨着港人生活愈趨富裕和飲食西化，香港癌症資料統計中心預測，大腸癌可能已在前年超越肺癌成為頭號癌症，數據年底公布。有專家指年過50歲後，大腸癌風險會以倍數增加，故國際建議50至75歲人士接受篩查。

港府擬年斥2億 全民查大腸癌
大腸癌將超越肺癌成港頭號癌症。據悉，港府正研究公帑資助全民大腸癌篩查。擬先針對某個年齡層推行先導計劃，最快明年底實行。專家料公帑開支年約兩億元。
按醫管局香港癌症統計中心的預測，即將在今年底公布的2011年癌症發病數字，腸癌會超過肺癌，成為本港頭號癌症。
在亞洲四小龍中，暫時香港仍未推行大腸癌篩查助市民預防腸癌。一旦腸癌最新數據數月後公布，港府料將面對政治壓力。
據悉，新政府曾討論以公帑推行全民大腸癌篩查，但計劃不能一次覆蓋50至75歲、有需要檢驗的全部市民，故擬先進行針對某年齡層的先導計劃，如50至60歲或60至70歲。
HONG KONG

1. Population-based CRC screening for HK?
2. What are some of the considerations?
   • Wilson & Jungner’s screening principles?
   • Cancer incidence and mortality?
   • Cancer trend?
   • Screening modality? Test performance?
   • Acceptance to the general public?
   • Adverse effect?
   • Cost-effectiveness?
   • Impact on health care system? Public/Private?

Source: HK Cancer Registry
HONG KONG

Colorectal Cancer in 2010
2010年大腸癌統計數字

<table>
<thead>
<tr>
<th></th>
<th>Incidence</th>
<th>Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male 男</td>
<td>Female 女</td>
</tr>
<tr>
<td>Number of cases registered</td>
<td>2,493</td>
<td>1,877</td>
</tr>
<tr>
<td>Rank</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Proportion of all cancers</td>
<td>17.9%</td>
<td>15.0%</td>
</tr>
<tr>
<td>Male:Female ratio</td>
<td>1.3</td>
<td>1</td>
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<tr>
<td>Median age (years)</td>
<td>70</td>
<td>72</td>
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<tr>
<td>Crude rate</td>
<td>75.7</td>
<td>50.3</td>
</tr>
<tr>
<td>Age-standardized rate (World)**</td>
<td>47.0</td>
<td>30.1</td>
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<tr>
<td>Lifetime risk before age 75 (1-22)</td>
<td>1 in 22</td>
<td>1 in 34</td>
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<tr>
<td>Mortality:Incidence ratio (2006-10)</td>
<td>0.41</td>
<td>0.37</td>
</tr>
</tbody>
</table>

Source: HK Cancer Registry

Incidence of Colorectum Cancer from 1983-2010

Source: HK Cancer Registry
HONG KONG

Mortality of Colorectum Cancer from 1983-2010

Source: HK Cancer Registry

HONG KONG

Age-specific Incidence and Mortality Rates for Colorectal Cancer in 2010

Source: HK Cancer Registry
Stage I & Stage II accounts for 35% of all CRC cancers

Source: HK Cancer Registry
所謂預防勝治療，要在港推行大腸癌全民篩查，專家料年耗兩億，約等於醫管局每年開支1%。但無論政府內部及研究有關問題的專家均指，考慮是否推行重點不是錢，而是醫管局承受能力引發的政治風險。據悉，...

公院腸鏡檢查 排期等一年
現時公院為有徵狀患者進行腸鏡檢查，需輪候半年至一年，其中威爾斯醫院的非急症個案，最長更需排逾一年半。有公院醫生直言，患者病況於輪候期間惡化，「每周都在發生」。50多歲的文先生因腹痛求醫，被...

**IMPLICATIONS**

- Take up rate --- ?pilot
- Positive results
- Age 50-75 years?
- Age 60-70 years?
- Out of pocket ➔ Positive results
SCREENING CRITERIA
(WILSON & JUNGNER) --- (1)

10 “principles” for screening

1. The condition sought should be an important health problem
2. There should be an accepted treatment for patients with recognized disease
3. Facilities for diagnosis and treatment should be available
4. There should be a recognizable latent or early symptomatic stage
5. There should be a suitable test or examination
### 10 “principles” for screening

<table>
<thead>
<tr>
<th></th>
<th>Principle</th>
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</thead>
<tbody>
<tr>
<td>6</td>
<td>The test should be acceptable to the population</td>
</tr>
<tr>
<td>7</td>
<td>The natural history of the condition, including development from latent to declared disease, should be adequately understood</td>
</tr>
<tr>
<td>8</td>
<td>There should be an agreed policy on whom to treat as patients</td>
</tr>
<tr>
<td>9</td>
<td>The cost of case finding (including diagnosis) should be economically balanced in relation to possible expenditure on medical care as a whole</td>
</tr>
<tr>
<td>10</td>
<td>Case finding should be a continuing process and not a “once and for all” project</td>
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