Putting evidence into practice: Developing reference frameworks for primary care in Hong Kong

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Our starting point: Primary care

The first level of contact of individuals, the family and the community with the national health system, bringing health care as close as possible to where people live and work.


Now More Than Ever, Geneva 2008
Why primary care?

* Compared to specialty care
  * Lower morbidity & mortality
  * More equitable distribution of health
  * Provides holistic continuous care

* Good primary-care experience
  * Reduces the adverse association of income inequality with general health
  * especially beneficial in areas with highest income inequality

* Primary care physician acts as “gate-keeper”
  * Reducing both unnecessary procedures & adverse events
  * Better health outcomes at lower costs & greater satisfaction

Macinko J, Starfield B, Shi L. The contribution of primary care systems to health outcomes within Organization for Economic Cooperation and
Enhance primary care

- Developing primary care conceptual models and clinical protocols
- Setting up a Primary Care Directory
- Devising feasible service models to deliver enhanced primary care services
Way forward: Enhance Primary Care

- **Promote the family doctor concept** which emphasizes continuity of care, holistic care and preventive care
- **Put greater emphasis on prevention** of diseases and illnesses through public education and through family doctors
- **Encourage and facilitate professionals** to collaborate with each other to provide coordinated services
Reach all primary care providers

- **Western doctors**: 70% private + 30% GOPCs (public)
- **TCM doctors** also provide primary care
- **DH provider** of primary care via clinics e.g. MCH, elderly
- **NGOs**
Policy Agenda 2008-09:

- Strengthening support for care of chronic disease patients in both public and private sectors
- Establishment of the Working Group on Primary Care

Policy Agenda 2009-10:

- Allocate resources to implement the recommendations of the Working Group on Primary Care including:
  - Developing conceptual model and reference frameworks for managing chronic diseases, and promoting these frameworks to the patients through healthcare professionals in the public and private sectors
Policy Agenda 2010-11:

- Develop primary care conceptual models and reference frameworks for specific diseases and age/gender groups

Policy Agenda 2011-12:

- Map out a long-term development strategy in collaboration with healthcare professions
  - Extend the Elderly Health Care Voucher Pilot Scheme and doubling the voucher value
- Implement pilot projects with voluntary agencies to provide health screening services for the elderly to enhance preventive care
Where are we now in Hong Kong?
Research tells us…

* The GOPC users were mainly aged >60 years (35.0%) or middle-aged (40-60 years, 36.0%)

* A shift toward older patients was observed among HT (66.2% > 60 years and 32.5% 40-60 years) & DM patients (63.2% >60 years and 35.0% 40-60 years).

* Among **patient with URTI**: even age distribution across deciles

* Among **patients receiving CSSA**, a high proportion were aged >60 years (45.1%)

* **Few cross-cluster visits**: all clusters were serving their patients in their designated districts
  * Martin Wong et al
**GOPC users with chronic conditions** had significantly higher PCAT scores with respect to:

* first contact – utilization;
* coordination (information system);
* comprehensiveness of care;
* the overall scores

These findings were also supported by findings from the in-clinic GOPC survey

* Samuel Wong et al
Research: PCAT (2)

* Patients attending private GPs had better primary care experiences compared to GOPC users
  * better interpersonal continuity of care
  * Better accessibility of care

* A high degree of doctor shopping in Hong Kong
  * 80% of respondents who identified either GOPC or private GPs as their main PCPs reported having visited another primary care providers in the prior 12 months
Research tells us:

* the WTP for private services in general was low among the elderly
* WTP for chronic conditions and preventive care both fell below the current market prices.
* Subgroup analysis showed higher WTP among healthier and more affluent elderly
* concerns over affordability and uncertainty (of price and quality) in the private sector were associated with this low level of WTP.
* most elderly, who are heavy users of health services but with limited income, may not use more private services without seeing significant reduction in price.
* Financial incentives for consumers alone may not be enough to promote primary care or public-private partnership.
* Public education on the value of prevention and primary care, as well as supply-side interventions should both be considered

* Yam, Lu and Griffiths 2011
Implications

* The GOPCs of the HA were serving their target primary care service recipients in 2007, namely
  * the elderly;
  * the patients with chronic disease;
  * Patients with lower socioeconomic status (CSSA recipients)
  * the Government servants
The need for action:
Hong Kong’s Ageing Population

Total HK Population in thousands: 7,090
Annual population growth rate (%): 0.5
Life expectancy (years): 82

Source: Hong Kong Population Projections 2008-2036: Census and Statistics Department, HKSAR
Increasing costs of care

Source: Botman D & Porter N. The Macroeconomic Impact of Healthcare Financing Alternatives: Reform Options for Hong Kong SAR.
Putting theory into action

Primary Care Development in Hong Kong
Strategy Document

December 2010
Taking Action

Health and Medical Development Advisory Committee

- Chaired by SFH
- Members: public and private sectors, academia, healthcare professionals, patient representatives

Working Group on Primary Care

- Task Force on Conceptual Model and Preventive Protocols
- Task Force on Primary Care Directory
- Task Force on Primary Care Delivery Models
- Task Force on Primary Dental Care and Oral Health
Develop age-group and disease specific primary care conceptual models and management protocols in the form of reference frameworks:

- To tackle major health risks of different population groups and common diseases, especially chronic diseases
- To be used as common reference for coordinating different healthcare disciplines, empowering patients and their careers, and fostering evidence-based and continuity of care

Published a web-based version of the reference frameworks for the Diabetes and Hypertension

Aims of the reference framework

* Promote health, prevent disease and tackle major health risks in the population
* Recommend interventions which are evidence-based and appropriate to primary care settings
* Use as common reference for co-ordinating different healthcare disciplines across Hong Kong
* Empower patients and their careers
Principles

* Systematic
* Population based
* Delivered by Multidisciplinary team
* Covering prevention, treatment and continuing care
* Including primary, secondary and tertiary prevention
* Adopting integrated and lifestyle approach
* Identifying high risk groups
* Monitored for outcomes
Guiding principles on the basic model

**Life-course approach**
- cover every stage during the lifespan and devise appropriate primary care services including preventive care for each stage of life.

**Holistic health**
- take into account not only physical health, but also psychosocial, emotional, behavioural and functional health.

**Essential**
- to cover essential elements of primary care including assessment of health risks, screening of health problems, health education and primary prevention. Not only for prolonging life but also for functional independence, with the aim of attaining optimal health outcomes and ensuring a healthy active aging with quality.

**Evidence-based**
- based on empirical evidence (local and/or international data) on their efficacy, efficiency and cost-effectiveness.

**Need and risk based**
- based on professional assessment of need having regard to risks, and intervention preceded by assessment.
The risk of NCDs accumulates with age and is influenced by factors (socioeconomic, lifestyle, other diseases) acting at all stages of the life span.

- To develop **age- and sex-specific** preventive care protocols for different at risk groups.
Primary Care: Role at Different Levels of Prevention

* **Primary prevention** - prevent the onset
  * Health education, immunisation
  * Risk factors & unhealthy lifestyle assessment & modification

* **Secondary prevention** – stop the progression
  * Screening
  * Early detection of disease & intervention

* **Tertiary prevention** – minimize disability/complications
  * Continue rehabilitation in the community level, maintain the quality of life of the frail and disabled
Disease Management Pathways (Conceptual Models, Guidelines)

Lifestyle advice → Risk assessment, Screening → Therapeutic treatment → Investigations → Treatment of complication → Rehabiliation

- Drugs
- Non-drug
- Monitoring of Disease progress
- Co-morbidities/ complications

Different Combos of System/Organisation Pathways (Delivery Models)

Different combination of providers
- Public
- Private
- Public/ Private
- Non-profit making org.

Locations
- Co-locate e.g. CHCs
- Different locations, networking

Different disciplines & levels of care

Incentives

For What: Which part(s) of the disease management pathway?
How: Financial/ Non-financial? To Whom?

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The Product

Hong Kong Reference Framework for Diabetes Care for Adults in Primary Care Settings

2010

Hong Kong Reference Framework for Hypertension Care for Adults in Primary Care Settings

2010

Hypertension guidelines

* Designed at population level
* Drawn from international examples
* Can be used to structure a framework for providing national objectives of improving health and management of a common disease
* Implications: new approaches
Indicators for Monitoring & Control

* Blood Pressure Level
* HbA1C
* Lipid profile
* Practice/ Process indicators
Just the beginning...

“The guidelines/ modules are just the beginning, the implementation will need to be carefully planned, coordinated, monitored and evaluated with outcome through collaboration between the private and public sectors as well as between community and hospital-based care providers”

* Quote from a senior clinician
Moving on…

Older People

Children
Why we need to develop reference framework for preventive care for older adults?

- **Promote and maintain** healthy active lives
- **Stay well** in their communities and avoid hospital admission
- **Reduce** avoidable morbidity
- **Reduce** health costs to themselves as well as society
Aims of the Reference Framework

* Promote health, prevent disease and tackle major health risks of older adults
* Recommend interventions which are evidence-based and appropriate to primary care settings
* Use as common reference for co-ordinating different healthcare disciplines, empowering patients and their careers
Proposed Presentation for the Reference Framework for Preventive Care for Older Adults in Primary Care Settings

Core Document

- Conceptual Model – Life Course Approach

Health domains

- Population-based Approach
- High-risk Approach

Modules

- Public health importance
  - Health improvement
  - Health protection
  - Health service delivery and quality
- Evidence based best practice
- Local situation (Epidemiology and services provision)
- Role of primary care providers
- Other related issues (optional)
<table>
<thead>
<tr>
<th>Determinants of Health</th>
<th>Service Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Individual Lifestyle Factors</strong></td>
<td><strong>Physical and Psychological Factors</strong></td>
</tr>
<tr>
<td>Adults aged 65 years old and above</td>
<td>• Healthy eating habit</td>
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<td>• Regular physical activity</td>
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<td>• Weight management</td>
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<td>• Smoking cessation if smokers</td>
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<td>• Prevention of alcohol related problems</td>
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<td>• Oral health</td>
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<td>• Quality sleep</td>
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Source: Department of Health, Hong Kong

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Presentation of Health Domains: SIGNPOST and MODULES

* Signposting in the Core Document

* Presentation of health domains in the form of modules
<table>
<thead>
<tr>
<th>Problems identified</th>
<th>Assessment tool</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>HT</td>
<td>Blood pressure</td>
<td>Lifestyle modification +/- drug</td>
</tr>
<tr>
<td>DM</td>
<td>Fasting blood glucose</td>
<td>Lifestyle modification +/- drug</td>
</tr>
<tr>
<td>Hyperlipidemia</td>
<td>Fasting lipid profile</td>
<td>Lifestyle modification +/- drug</td>
</tr>
<tr>
<td>Overweight or obesity</td>
<td>BMI and waist circumference</td>
<td>Weight management</td>
</tr>
<tr>
<td>Lack of physical activities</td>
<td>History</td>
<td>Health promotion patient education</td>
</tr>
<tr>
<td>Smoking</td>
<td>History</td>
<td>Smoking cessation advice</td>
</tr>
<tr>
<td>Excessive drinking</td>
<td>History</td>
<td>Drinking advice</td>
</tr>
<tr>
<td>Musculoskeletal problems disturb daily activities</td>
<td>History and physical examination</td>
<td>Patient education +/- refer physiotherapy</td>
</tr>
<tr>
<td>No previous Flu/Pneumococcal vaccination</td>
<td>History</td>
<td>Arrange Influenza and/or pneumococcal vaccination according to GVP</td>
</tr>
<tr>
<td>No regular Pap smear</td>
<td>History</td>
<td>Pap smear advice with appropriate action</td>
</tr>
<tr>
<td>No previous colorectal cancer screening</td>
<td>History</td>
<td>Fecal occult blood test (FOBT)</td>
</tr>
</tbody>
</table>
Reference framework for children
## Conceptual Models for Preventive Care for Children and Youth in Primary Care Settings (1)

### Determinants of Health

<table>
<thead>
<tr>
<th>Stage</th>
<th>Hereditary factors</th>
<th>Individual Lifestyle Factors</th>
<th>Family and Social Factors</th>
<th>Community and Environmental Factors</th>
<th>Service Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prenatal</strong></td>
<td>• Genetic and metabolic diseases</td>
<td>• Maternal drugs: alcohol, smoking, drugs</td>
<td>• Family and social support</td>
<td>• Physical environment</td>
<td>• Health Service</td>
</tr>
<tr>
<td></td>
<td>• Congenital anomalies</td>
<td>• Maternal nutrition: iron, vitamins, Iodine, etc</td>
<td></td>
<td>• Housing</td>
<td>• Preconception counseling service</td>
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<tr>
<td></td>
<td>• Maternal infections</td>
<td>• Maternal diseases: diabetes mellitus, mental health medical</td>
<td></td>
<td>• Water</td>
<td>• Genetic disease screening</td>
</tr>
<tr>
<td></td>
<td>• Maternal drugs</td>
<td>diseases hyperthyroidism etc</td>
<td></td>
<td>• Environmental risk factors (e.g. exposure to infective agents, toxic or radioactive substance)</td>
<td>• Congenital anomaly screening</td>
</tr>
<tr>
<td></td>
<td>• Maternal nutrition</td>
<td></td>
<td></td>
<td>• Neighbourhood environment</td>
<td>• Congenital infection screening</td>
</tr>
<tr>
<td></td>
<td>• Maternal drugs</td>
<td></td>
<td></td>
<td>• Poverty and social status</td>
<td>• Metabolic diseases screening</td>
</tr>
<tr>
<td></td>
<td>• Maternal nutrition</td>
<td></td>
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<td>• Injury prevention</td>
<td>• Newborn exam and hearing screening</td>
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<td></td>
<td>• Maternal diseases</td>
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<td></td>
<td>• Discrimination</td>
<td>• Antenatal care (e.g. education)</td>
</tr>
<tr>
<td><strong>Infancy (0-1)</strong></td>
<td>• Genetic and metabolic diseases</td>
<td>• Breast feeding and appropriate introduction of complementary</td>
<td>• Family relationship and positive responsive</td>
<td>• Physical environment</td>
<td>• Education and literacy</td>
</tr>
<tr>
<td></td>
<td>• Congenital anomalies</td>
<td>feeding</td>
<td>parenting considering parent’s education, literacy</td>
<td>• Housing</td>
<td>• Employment</td>
</tr>
<tr>
<td></td>
<td>• Growth problems</td>
<td>• Weaning: Feeding and nutrition</td>
<td>• Culture / ethnicity socio-economic status</td>
<td>• Water</td>
<td>• Social Support</td>
</tr>
<tr>
<td></td>
<td>• Developmental disorders</td>
<td>• Oral health education to parents</td>
<td>• Detection of child abuse</td>
<td>• Environmental risk factors (e.g. exposure to infective agents, toxic or radioactive substance)</td>
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<tr>
<td></td>
<td>• Visual and hearing problems</td>
<td>• Prevention of injuries</td>
<td>• Detection of psychosocial trauma</td>
<td>• Neighbourhood environment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Prevention of infections</td>
<td>• Sleep problems</td>
<td></td>
<td>• Poverty and social status</td>
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<td>• Injury prevention</td>
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Involvement of other government departments

- Social Welfare Department, Education Bureau
- Chinese medicine practitioners, clinical psychologists, nurses, dietitians and teachers

Collaboration and interfacing of service providers in the community

Synergy of different resources in the community, e.g. through sign-posting

Integration of health records between private and public sectors, and also between the service providers in Hong Kong and the Mainland

Streamlining referral procedures among service providers in different sectors

Training and empowerment of healthcare providers, parents, teachers and careers
Involving the:

Professions

Public

Press

Politicians
“Knowing is not enough; we must apply. Willing is not enough; we must do”

Johann Wolfgang von Goethe (1749–1832)
Thank you!

Website: http://www.sphpc.cuhk.edu.hk