Adoption of Reference Framework for Preventive Care for Children in Primary Care for Children in Primary Care: A Survey of Practices, Barriers, and Enablers Among Hong Kong Physicians

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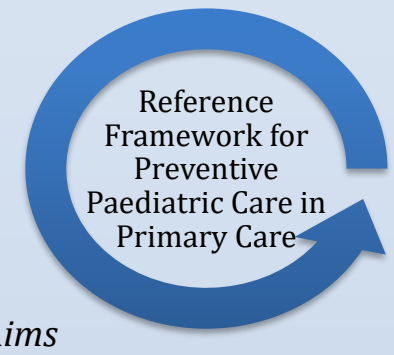
Introduction

- Practice of clinical guidelines on child health issues helps improve clinical outcomes, early detection, and management of childhood illnesses, and promotion of proactive preventive behaviors
- In Hong Kong, children's health is a serious issue, both physically and mentally
  - Obesity, physical inactivity, dental caries, myopia, and injuries requiring emergency care are common.
- Reference Framework for Preventive Paediatric Care in Primary Care (RF)
  - First published and developed by Government in 2012;
  - 5 modules included:



- Immunisation
- Development
- Childhood Injury Prevention
- Physical Growth
- Parent Empowerment

Aims

- *(1) Assess the level of awareness and utilization of the RF*
- *(2) Identify factors that facilitate or hinder the adoption of RF*

Methods

Study Design

- A cross-sectional study

Eligible Participant

- All PCPs who is offering preventive care to children in Hong Kong

Sample Size Calculation

- A total of 385 valid responses are required to achieve a precision level of 0.05, assuming 50% (proportion p) of participants reported the outcome of interest.
- [$N=1.96^2 \times p(1-p)/precision^2$]

Survey Instruments

- Adoption of the recommendation in RF
- Implementation outcome (Appropriateness/Acceptability/Feasibility)
- Guideline/Patient/PCP/External environment-related enablers and barriers

Statistical Analysis

- Count and percentage were computed to perform the descriptive data analysis
- Chi-square tests were utilized to examine the difference in adoption between PCPs in private and public setting.
- Univariable and Multivariable logistic regression were adopted to identify factors associated with implementation outcomes

Results

❖ *Participants Characteristics*

- A total of 485 PCPs were included in this study
  - **Practice type**: 241 (49.7%) from private setting and 244 (50.3%) from public setting
  - **Sex:** 276 male; 209 female
  - **Age group:** 227 (46.8%) aged between 36 and 50
  - **Year of practice**: Balanced distribution was observed
    - ❑ 36.9% less than 16 years of practice
    - ❑ 35.1 % years of practice between 16 and 25
    - ❑ 28.0% more than 25 years of practice

❖ *Enablers and Barriers for RF Adoption*

Key enablers

- Role in improving patient knowledge (92.2%)
- Inclusion of sufficient local information (90.7%)
- usefulness in obesity screening for children (90.7%)

Key barriers

- Limited consultation time (94.6%)
- Inadequate resources (91.1%)
- Need for tailored care (84.7%)

❖ *Adoption of Recommendation*

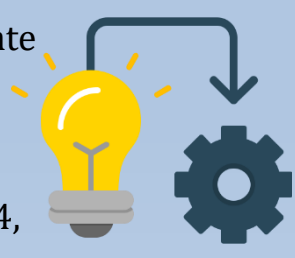
- A higher adoption level was observed among PCPs from private compared with PCP from public settings.
- The recommendations with the **highest adoption are:**
  - **Education on acute disease management (72.0%)**
  - **Advice on quitting smoking for parents (71.1%)**
  - **Perform childhood immunization (70.5%)**
- The recommendations with the lowest adoption are:
  - Provide newborn hearing screening (22.5%)
  - Provide newborn vision screening (23.9%)
  - Identify the mental/ psychological/ behavioral/social problem of the patient (26.8%)

Table 1. Attitude toward the appropriateness, acceptability, and feasibility of RF

	Overall (N= 485)	Private (N= 241)	Public (N= 244)	p
Appropriateness of the RF	234 (48.2)	129 (53.5)	105 (43.0)	**0.026**
Acceptability of the RF	291 (60.0)	156 (64.7)	135 (55.3)	**0.043**
Feasibility of the RF	218 (44.9)	130 (53.9)	88 (36.1)	**<0.001**

❖ *Attitude towards the implementation of RF*

Most of the PCPs recognized RF as acceptable (60.0%), while less than half of the PCPs agreed that RF is appropriate (48.2%) as well as feasible (44.9%). (Table 1)



❖ *Factor association with the implementation outcomes of RF*

PCP with a daily patient volume of ≥60 were significantly less likely to perceive the RF as appropriate (aOR = 0.464, 95% CI: 0.268–0.801, p = 0.006) or feasible (aOR = 0.464, 95% CI: 0.268–0.803, p = 0.006), compared with those seeing fewer than 30 patients per day

Conclusion

- The adoption of the RF is suboptimal, especially among PCPs in public settings, highlighting the time and resource requirements for RF adoption.
- The adoption rate of RF's recommendations was highly variable, with recommendations related to prevalent conditions being implemented more frequently and recommendations for less common problems being adopted less frequently.

Ethical approval: Survey and Behavioural Research Ethics Committee, CUHK(SBRE-23-0157).
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