

**CENTRAL POLICY UNIT
HONG KONG SPECIAL ADMINISTRATIVE REGION**

**A PILOT STUDY FOR PUBLIC HEALTH POLICY MODEL
AND DEVELOPMENT INDICATOR
FOR CHILD HEALTH IN HONG KONG**

**THE CHINESE UNIVERSITY OF HONG KONG
DECEMBER 2008**

2. Executive Summary

2.1. Introduction

2.1.1. The World Health Organization (WHO) defines health as “a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity”. Although children’s health encompasses all these considerations, children’s health needs differ in comparison with the general adult population. For their daily well-being, children depend on their caregivers as well as access to resources. Literature shows that, children are particularly vulnerable to socioeconomic and health risks posed by the environment. These cumulative health risks may have lifelong adverse health and social impacts. From a life-course perspective, childhood serves as the cornerstone stage for health, material access and socioeconomic circumstances for their adult life. To safeguard their well-being and protect our population from health challenges that may accumulate from childhood, it is essential to have an appropriate framework that captures the important determinants of children’s well-being. Hence, relevant and appropriate child health monitoring indicators should be developed to track how children are doing in our society.

2.1.2. This research project was commissioned by Central Policy Unit, of the Government of Hong Kong Special Administrative Region in August, 2007. It aimed to develop a child public health policy framework and to propose relevant child health monitoring indicators that may be relevant to the local context. The study period was from September 2007-November 2008.

2.2. Background

2.2.1. Currently, in Hong Kong, there is neither an agreed upon conceptual basis for child health policy nor a defined scope of children’s well-being indicators. Whilst a report by The Boys’ and Girls’ Clubs Association of Hong Kong (BGCHK 2006) have shown various indicators collected by community stakeholders, most of these efforts were independent and piecemeal in nature. There are major gaps in understanding of children’s well-being as well as a general lack of discussion on

how to reach consensus regarding child health and well-being monitoring indicators in Hong Kong.

2.2.2. The objectives of this project are to: 1) review international literature and child health models and to identify relevant health monitoring indicators currently used for children's populations, 2) propose a relevant child public health model that is based on the consensus of multidisciplinary local stakeholders, and 3) suggest a set of child health surveillance indicators for monitoring children's well-being in Hong Kong.

2.2.3. The following guiding public health concepts have been used in building the child health model framework:

- Viewing health from a public health perspective
- Understanding child health determinants
- Adopting the life-course approach
- Identify continuous monitoring indicators that may track and safeguard the wellbeing of children
- Balancing population-wide versus individual-based approaches
- Considering health disparity

2.3. Methodology

To achieve the research objectives, the study is divided into three phases: 1) a literature review, 2) expert panel roundtable discussions, and 3) a Delphi consensus building process. The three phases are detailed below:

2.3.1. Phase I: The research team underwent a literature review to examine evidence-based child health determinants. Relevant indicators in Hong Kong were also studied to identify information gaps within the system. Taking into account the local context and applicability, the research team suggested a public child health policy model and proposed a list of child health indicators.

2.3.2. Phase II: Round table discussions were conducted with a consultative panel of multi-disciplinary experts. The expert panel examined the proposed child health policy model and evaluated the local relevancy of the proposed child health indicators. Based on the results of the roundtable discussion, a Delphi study questionnaire was developed to facilitate a structured exchange and communication between relevant stakeholders. Delphi participants were nominated

based on their expertise in children's affairs and were categorized into 2 main study panels, namely: health and non-health sector.

2.3.3. Phase III: Three rounds of e-mail based questionnaires were conducted. The two participating panels voted anonymously during each Delphi round on the importance of each proposed indicators. Importance ratings for each indicator and consensus between health and non-health panels were evaluated and examined.

2.4. Results

2.4.1. Phase I: From the literature review, 1167 articles were found, 242 were evaluated in depth and 95 were reviewed in detailed to examine evidence that are currently available regarding child health determinants in published literature. As a summary of the literature review findings, we found that child health is viewed as a product of complex, dynamic, accumulative (longitudinal) process produced by interaction of both biological, behavior and external influences (such as family, social and physical environment). As children are rapidly changing and developing, the developmental process plays an important role in shaping and determining their health. Children's well-being assessment thus requires a comprehensive review of children's functioning in multiple domains in addition to physical well-being and ongoing physical development. For instance, the relevant framework should consider children dependency on adults and on other relevant social and economic systems.

2.4.2. Based on the literature review findings, the research team proposed a child health model based on seven domains: demographics, health and safety, social behavior and individual lifestyle, education, social system, family and economic. A total of 130 accompanied indicators were also proposed.

2.4.3. Phase II: A template Delphi study questionnaire was developed based on findings from the literature review, expert opinion results, and the modified policy framework. The expert panel was consulted to test the wording, flow, and structure of this preliminary instrument. Based on feedback from the expert consultative panel, appropriate changes were made and a final version was drafted. In order to obtain a comprehensive perspective of child health, experts from many disparate fields related to child health were required for the Delphi process. A purposive sampling strategy was employed to identify potential Delphi participants from a

variety of professional and community sectors. Of the 30 participants whose opinions were solicited, half were to be recruited from the medical health sector (e.g. doctors, nurses, physical therapists) while the other half were to be recruited from non-health sectors (e.g. social welfare, education)

2.4.4. Phase III: The first round of the anonymous questionnaire was completed by 26 respondents (12 respondents from the health sector and 14 from non-health sector). Based on participant feedback and responses from the round 1 Questionnaire, appropriate changes were made to the indicators. A second round of the Delphi process was completed by 22 respondents, 10 from the health sector, and 12 from non-health sector. Based on participant feedback and responses from the 2nd round of Delphi study results, appropriate changes were made to the indicators.

2.4.5. The results of the Delphi process revealed that three indicators were rated as being the most important indicators of children's well-being with a very high level of consensus among the experts. These three indicators were Infant mortality rate, teenage pregnancy rate and morbidity associated with top 5 preventable diseases. Other indicators were examined and their rating reflected stakeholders' opinions towards their importance and relevance.

2.4.6. The Delphi process revealed that there was high consensus among the health sector experts than among non-health sectors experts. This was particularly true for items in the Social Behavior and Individual Lifestyle domain (Domain 3 in the conceptual model) where health sector experts agreed on the importance of 11 indicators, while those from the non-health sector only agreed on two. Overall, for all domains, health sector experts agreed on the importance of 57 indicators compared to 27 indicators agreed upon by non-health sector experts.

2.5. Policy Implications

2.5.1. A child public health policy framework and 130 monitoring indicators were proposed in this study. The proposed model and monitoring indicators were critically examined by a multidisciplinary based expert panel. A pilot Delphi study involving health and non-health stakeholders were conducted in attempt to initiate consensus building among community stakeholders. Whilst further study would be necessary to consult a wider scope of stakeholders who are involved in children affairs in Hong Kong, results of this research project has highlighted that all child

health related stakeholders involved in the study process believed a conceptual framework and indicators are necessary and important to be developed to safeguard well-being of children in Hong Kong.

2.5.2. There was different level of agreement regarding the importance of the proposed indicators. This may reflect stakeholders may place emphasis in different aspect of child health and well-being. Nevertheless, our findings also indicated that none of the monitoring indicators were considered as trivial but more expressed concerned regarding how to implement this monitoring indicators. Further investigation and mapping of current child health data collection in the community might be necessary to address this issue.

2.5.3. The differences found between health and non-health sectors reveal the need for a multi-sectorial consensus building approach in developing a comprehensive and relevant child health policy in Hong Kong. Open consultation with community stakeholders (e.g. roundtable discussions and workshops) might be necessary for such a multi-sectorial collaboration and development of a child health framework.

2.5.4. Major research gaps highlighted in this study that require further study include children's health behavior, the effect of migration patterns on children's well-being and health status, specific health-related issues (e.g., abnormal spine) that have long-term implications on children's health, children requiring special rehabilitation services, and the impact of poverty on children. In addition, further research is needed to develop guidelines for data interpretation and algorithms to identify potential policy implications of each indicator proposed.

2.5.5. Issues with implementation include a required commitment in surveillance and actions. Whilst the study proposes a framework and a panel of indicators for children well-being monitoring, a potential strategy is to gather information for child health monitoring by coordinating among community and government stakeholders and re-structuring relevant existing information into a user-friendly and publicly accessible format.

2.6. Conclusion and Way Forward

This study serves as a pilot study to provide the scientific basis for building a child public health policy model. It highlights research and knowledge gaps in child health-related issues and identifies key child well-being monitoring indicators. Future work

should focus on building consensus among stakeholders, evaluating issues related to implementation of relevant monitoring indicators, and ensuring political commitment in surveillance and actions.

December 2008