

For discussion on
12 July 2021

Legislative Council Panel on Home Affairs
Territory-wide Physical Fitness Survey for the Community

Purpose

This paper reports to Members on the progress on the implementation of the Territory-wide Physical Fitness Survey for the Community (Survey).

Background

2. A healthy lifestyle (including regular and appropriate amount of exercise) is conducive to enhancing physical fitness while good physical fitness improves the quality of life. In this connection, the Leisure and Cultural Services Department (LCSD) carried out the Territory-wide Physical Fitness Tests for the Community in 2005-06 and 2011-12 respectively under the steer of the Advisory Committee of the Physical Fitness Test for the Community (AC) under the Community Sports Committee (CSC), where data on the physical fitness of the public (particularly the correlation between individual's physical abilities and physical fitness, etc.). The report for the 2011-12 Survey indicates that majority of the public was physically inactive and that men in general performed better than women in physical fitness tests. The report also made recommendations on sport activities that are suitable for people of different ages.

3. To develop benchmarking data and continuously monitor the physical condition of the public, the Home Affairs Bureau (HAB) proposed in 2018 to carry out the Survey again, aiming to facilitate the formulation of measures for promoting sports in the community through a regular standardised territory-wide physical fitness survey. Upon the inclusion of the proposal as one of the new initiatives in the Chief Executive's 2018 Policy Address, preparatory work for the Survey commenced in 2019, while the data collection and related work will be carried out between July 2021 and January 2022. It hoped that the Survey can achieve the following objectives:

- i. To enable the individuals participating in the Survey to have a general understanding of their own physical fitness condition;
- ii. To continue building up a database of the physical fitness of Hong Kong people and compare the data with those collected in 2011-12 in order to understand how the physical fitness of the public has changed over time;
- iii. To identify the relationship between the physical exercise pattern and the physical fitness of Hong Kong people; and

- iv. To identify priority areas for improvement so as to enhance the overall physical fitness of the public.

Physical Fitness Survey for the Community

4. At the meeting held in October 2019, CSC agreed to establish an advisory committee to advise on the preparation for the Physical Fitness Survey, implementation details, publicity and promotional strategies, community involvement and monitoring of data collection and submission of report by the professional agent to be commissioned. AC was formally set up in November 2019, the membership of which includes two representatives from CSC (as the convenor and vice-convenor of AC), three representatives from professional organisations in related fields (including the Hong Kong Centre for Sports Medicine and Sports Science, the Hong Kong Jockey Club Sports Medicine and Health Sciences Centre and Physical Fitness Association of Hong Kong, China), and representatives from the Government including the Department of Health, the Education Bureau (EDB), HAB and LCSD. To gauge a wider spectrum of views from academics on the implementation of the Physical Fitness Survey, AC invited a number of professionals in the academic field to attend the second and the third meetings to provide valuable advice. In the meetings, the academics and AC Members discussed in depth the survey methodology and expressed their views. AC then proceeded with the relevant work, including the examination of proposals, preparation for tender, implementation strategy and publicity programmes. in an orderly manner. LCSD, under the steer of AC, continues undertaking the implementation work.

Modes of Implementation

5. Having drawn reference from the experiences gained in the last two Physical Fitness Tests and in light of the prevalent situation of the society, the two parts of the Survey (i.e. the questionnaires and physical fitness tests) will be conducted concurrently. Companies/organisations will be invited as participating parties in the Survey. 8 500 Hong Kong residents aged between 7 and 79 will be selected by random sampling for data collection for analysis. The Survey sample will be based on the “Projected Mid-year Population by Age Group 2020” published by the Census and Statistics Department (C&SD) on 8 September 2017. The sample sizes required in various age groups in the Survey are calculated in accordance with the population proportion in Hong Kong (method of proportional allocation), after deducting the infants and toddlers aged between 0 and 6 and the population over 80. The sample groups are as follows:
 - i. Aged 7 to 16: Drawn from the data just recently collected by EDB in the Surveys on Physical Fitness of School Pupils.

ii. Aged 17 to 79:

- Working population: The economic groups provided by C&SD are adopted as a framework while the companies concerned were sampled and invited to join the survey;
- Non-working population (including university students, home-makers, retirees and the unemployed/job seekers) were sampled and surveyed through universities or the Social Welfare Department/organisations under the Hong Kong Council of Social Service.

6. The overall preparatory work has been affected to different degrees due to the COVID-19 pandemic. LCSD rolled out the open tender process in accordance with the modes of implementation and areas of work finalised by AC and in March 2021 commissioned the Chinese University of Hong Kong (CUHK), the Physical Fitness Association of Hong Kong, China (PFAHK) and the Dragon Creative Media Limited to provide consultancy, data collection, information technology and supporting services respectively. In May 2021, the contractors concerned conducted four pilot tests according to the work schedule. About 80 members of different ages were invited by CUHK, the Lingnan University and the Hong Kong Stretching Exercise Association to participate in the tests held at the University Sports Centre of CUHK and Tsuen Wan Sports Centre of LCSD. The items for testing included the online registration system, contents of the questionnaire, items of the physical fitness tests and test workflow, etc. The contractors concerned completed the report on the trial tests in June 2021. After the review, test workflow was improved to prepare for the data collection work scheduled between July 2021 and January 2022. Details of the physical fitness tests are set out in **Annex I**. Collation and analysis of the data collected for the Physical Fitness Survey are expected to be conducted and completed in the first half of 2022. Please refer to **Annex II** for the work schedule summary.

Publicity Strategies

7. To enable the target interviewees to have a deeper understanding of the implementation details of the Survey and to encourage active participation of companies/organisations, a series of publicity activities will be rolled out and the details are as follows:

- (a) A Launching cum Charter Signing Ceremony was held at Tsuen Wan Sports Centre on 30 June to officially kick-off the Survey, at which the Secretary for Home Affairs and the chairman of CSC attended to sign the charter with the companies/organisations representing different groups to show support for the launching of the Survey. A list of the organisations who pledged support to the charter is at **Annex III**. Details of the Survey and items of the physical fitness tests were presented at the ceremony;

- (b) A dedicated webpage on the Survey will be launched in July 2021 and the selected participants from the invited companies/organisations may register for the physical fitness tests via the dedicated webpage. The contents of the webpage will also include the details of the Survey, details of the physical fitness tests, reference information on exercise and health, etc. so that the participating companies/organisations as well as members of the public may have timely access to the latest information about the Survey;
- (c) An information kit containing promotional CD-ROMs, posters and leaflets introducing the physical fitness tests and copy of the signed charter, etc., will be distributed to the invited companies/organisations. In addition, the posters and brochures already produced will also be put up at and distributed to the participating companies/organisations/post-secondary colleges; and
- (d) Arrangement will be made to show publicity video clips at LCSD's venues and dedicated webpage to encourage active participation of the invited members of the public.

Findings of the Survey

8. The full report on the findings of the Survey is expected to be released in the fourth quarter of 2022 through the following channels:

- (a) holding a press conference and issuing press releases;
- (b) publishing the report on the Survey and highlights leaflets;
- (c) uploading the report on the Survey onto the dedicated webpage; and
- (d) placing an advertorial about the findings of the Survey on newspapers.

Advice Sought

9. Members are invited to note the contents of this paper and welcomed to offer their views on the contents and implementation of the Territory-wide Physical Fitness Survey.

Home Affairs Bureau
Leisure and Cultural Services Department
July 2021

Annex I

Territory-wide Physical fitness Survey for the Community Survey Summary

Target

The survey covers 8 500 people of Hong Kong aged between 7 and 79, who are divided into 6 categories by age group (aged 7-11, 12 -16, 17-19, 20-39, 40-59, and 60-79). Based on the Population Projection of the Census and Statistics Department (C&SD), the sample sizes required for various age groups in the Survey are calculated based on the population proportion in Hong Kong (method of proportional allocation), after deducting the population aged between 0 and 6 and over 80.

Sampling Method

Different types of companies/organisations are invited to participate in the Survey through random sampling on a pro rata basis based on the economic groups framework provided by C&SD for working population, as well as information of the social welfare organisations for non-working population. Staff members of the invited companies/organisations may register and make appointments to participate in the Survey through the online booking system via their companies/organisations. They may also choose to participate at the suitable venues provided by the invited companies/organisations. The Survey consists of two parts: the questionnaire and physical fitness test. As the physical fitness conditions and characteristics of different age groups vary, participants of different age groups will take part in different physical fitness test items.

Physical fitness test items for the age group 17-59

Item	Test Item
1.	Resting Blood Pressure/ Heart Rate
2.	Height
3.	Weight
4.	Bioelectrical Impedance Analysis (BIA)
5.	Waist Circumference
6.	3-minute Step Test (Immediate Post-exercise Heart Rate)

7.	Sit-and-Reach Test
8.	Hand Grip Test
9.	1-minute Sit Up Test
10.	Plank
11.	Vertical Jump
12.	Single Leg Balance Test (With Eyes Closed)

Physical fitness test items for the age group 60-79

Item	Test Item
1.	Resting Blood Pressure/ Heart Rate
2.	Height
3.	Weight
4.	Bioelectrical Impedance Analysis (BIA)
5.	Waist Circumference
6.	2-minute Step Test
7.	Chair Sit-and-Reach Test
8.	Back Scratch
9.	Hand Grip Test
10.	Arm Curl Test
11.	Chair Stand
12.	8-Foot Up and Go
13.	Single Leg Balance Test (With Eyes Open)

Implementation of Fitness Performance Test Items

Resting Blood Pressure/Heart Rate

The subject is required to take off heavy clothing and sit with arm slightly bent and rested on a table. Tester will measure his/her resting blood pressure/heart rate using an arm style blood pressure monitor.

Height

Tester will measure the height of the subject using a stadiometer. The subject is required to take off his/her shoes and heavy clothing and stand on the stadiometer with socks only.

Body Weight and Bioelectrical Impedance Analysis (BIA)

Tester enters the height and age of the subject in the bioelectrical impedance analyser. The subject is required to take off his/her shoes, socks and

heavy clothing, and stand on the four point sensors of the analyser, holding on to the handle to maintain balance. Tester will print out the measurement record when the reading is considered stable. (Subjects with electronic or metal implants are not suitable for this test.)

Waist Circumference

The subject is asked to take off heavy clothing and roll up his/her upper garment. Stand in a natural position with shoulders and arms relaxed. Tester will measure his/her waist circumference.

(Male tester will only take measurement for male subjects, and female tester for female subjects.)

3-minute Step Test

The subject is asked to put a pulse oximeter on the index finger and step onto and off of a stepper for three minutes following the beat. Tester will immediately register the subject's post-exercise heart rate on the oximeter when he/she completed the exercise and manually measure his/her pulse rate after exercise for one minute within five seconds.

2-minute Step Test

The subject is asked to warm up and then stand facing the wall. On the tester's command "Go", the subject lifts up each leg alternately to the height of the mark on the wall. Each time the left and right legs reach the marked height is counted as one time. Any lifting of leg which fails to reach the marked height will not be counted. Repeat the movement for two minutes. Tester will record the number of steps.

Sit-and-Reach Test

The subject is asked to sit on the floor with his/her legs straight out, shoes off. Put soles of his/her feet against the sit-and-reach box with feet about shoulder width apart. Both arms reach forward with the thumbs interlocked. Put the palms on the box and creep the fingers forward gradually. Reach as far forward as far as possible and hold for one second. Perform the movement smoothly without jerky or ballistic movements. Repeat the test three times. Tester will record the best result.

Chair Sit-and-Reach Test

The subject is asked to sit on the edge of a chair and bend one leg with heel on the floor. Keep the ankle bent to 90 degrees and extend the other leg straight out. Keep both arms straight with palms overlapped and maintain the right breathing pattern when bending forward gradually. Reach as far forward as far as possible to touch the toes with middle fingers and hold for two seconds. Repeat the test

twice. Tester will record the best result.

Back Scratch

The subject is asked to raise one hand and reach down the back and place the other hand up the back from the waist. Touch the fingers of both hands. Tester will measure the distance between the middle fingers of both hands. Repeat the test twice. Tester will record the best result.

Hand Grip Test

The subject stands and holds the handgrip dynamometer with one hand at the thigh level, adjusting the handle. The screen faces outwards. The subject is then asked to squeeze the handle tightly with arm straight for 2 seconds without moving his/her body and hand. Repeat the test three times with alternate hands. The subject may rest for 30 seconds between successive trials. Tester will register the reading of each trial and record and aggregate the best result for each hand.

Arm Curl Test

The subject sits on a chair and holds the dumbbell using the dominant hand, with the arm at the side and the palm facing inwards. On the tester's command "Go", the subject lifts the dumbbell by curling the arm up and rotating the forearm, with the palm facing upwards. Then place the arm at the side. Curl the arm as many times as the subject can within 30 seconds.

1-minute Sit-up Test

The subject is asked to lie on a mat with bent knees. Tester holds the subject's feet on the ground to keep his/her knees bent to 90-120 degrees. The subject then crosses arms over the chest and puts the palms on the shoulders with the chin on the chest. On the tester's command "Go", the subject curls the upper body off the ground until the elbows touch the thighs, then returns to the supine position with the back touching the mat again. The subject is required to repeat the movement continuously within 1 minute.

Plank

The subject begins in a prone position, keeping legs close together and maintaining a straight line from the head through the neck to the legs with face down. On the tester's command "Go", the subject begins in a plank position. His/her elbow joints should be placed directly underneath the shoulder joints so that the arm muscles will not be overburdened. The test ends as soon as the head, neck and legs are not aligned. Tester will record the hold time.

Chair Stand

The subject is asked to sit in the middle of a chair with arms crossed over the chest and feet flat on the ground. On the tester's command "Go", the subject rises to a full standing position without support from the arms and then sits back down. Repeat the movement as many times as the subject can within 30 seconds.

Vertical Jump

The subject keeps both feet on the ground and stands upright in a natural position. Reach up with one hand and mark the vertical jump tester with the tips of the fingers. Tester will mark the position where the fingertips touch the vertical jump tester. The subject is then asked to bend knees and crouch down, swinging his/her arms back as far as they can go and then upwards quickly. Leap with both feet vertically as high as possible and touch the vertical jump tester at the highest point of the jump. Leap twice.

8-Foot Up and Go

A cone is placed 8 feet in front of a chair. The subject is asked to sit upright on the chair with hands on thighs and feet flat on the ground. On the tester's command "Go", the subject stands immediately and walks to and around the cone, returns to the chair and sits down. Repeat the test twice. Tester will register the best result.

Single Leg Balance Test (with Eyes Closed)

The subject is asked to stand with eyes closed, then crosses arms over the chest and puts the palms on the shoulders. Raise one leg and stand on the other leg. Test administrator will start the stopwatch as soon as the subject closes his/her eyes. The test ends once the subject's supporting leg moves or his/her non-supporting leg touches the ground. Repeat the test twice. Test administrator will record the best result.

Single Leg Balance Test (with Eyes Open)

The subject is asked to stand with eyes open, then crosses arms over the chest and puts the palms on the shoulders. Raise one leg and stand on the other leg. Test administrator will start the stopwatch immediately. The test ends once the subject's supporting leg moves or his/her non-supporting leg touches the ground. Repeat the test twice. Test administrator will record the best result.

Annex II

Implementation Timetable of the Physical Fitness Survey		
Date	Work	Remarks
October 2019	Formation of the Advisory Committee (AC)	
November 2019 to April 2020	AC set specific targets for the Physical Fitness Survey and finalised work details including the test indicators, items, target groups, sampling methodology and the operation of the Physical Fitness Survey	
April to December 2020	AC worked out the details and contents of the Survey and commissioned a professional agent through open tender to take forward the work in relevant areas, including consultancy services on the Survey, data collection services and information technology and supporting services, etc.	The Chinese University of Hong Kong began providing consultancy services in November 2020 and immediately commenced the work
January to April 2021	The commissioned contractors designed and worked out the contents and details under their respective purview based on the contents and details prescribed by AC for the Survey. Relevant follow-up actions were taken after consultation with and approval by AC	The Physical Fitness Association of Hong Kong, China undertook the data collection service contract in March 2021 while the Dragon Creative Media Limited undertook the information technology and supporting service contract in February 2021
May 2021	<ul style="list-style-type: none">● Testing of system and training of working staff● Conducting of pilot test● Collation and	

	analysis of data and operation of the Survey	
30 June 2021	Launching and Charter Signing Ceremony	
July 2021 to January 2022	Commencement of data collection and related work for the Physical Fitness Survey	
February to July 2022	Collation and analysis of data of the Physical Fitness Survey	
August 2022	Compilation of Survey Report	
September 2022	Examination of the findings and report of the Survey by AC	
October 2022	Release of the Survey findings	

Territory-wide Physical Fitness Survey for the Community
The list of organisations/companies supporting the Charter

(The list is not presented in particular order)

Industry	Name of Organisation/Companies
Manufacturing Industry	The Chinese Manufacturers' Association of Hong Kong
Construction Industry	Costruction Industry Council
	Hong Kong Construction Association
Import/ Export, Wholesale and Retail Trades Industry	The Chinese General Chamber of Commerce
Public Administration, Education, Human Health and Social Work Activities Industry	Hong Kong Federations of Education Workers
	Association of Hong Kong Nursing Staff
	Hong Kong Medical Association
Transportation, Storage, Postal and Courier Services Industry	Hong Kong Asssociation of Freight Forwarding and Logistics LTD.
Accommodation and Food Services Industry	Hong Kong Catering Industry Association
Financing and Insurance Industry	Hong Kong Association of Banks
Real Estate, Professional and Business Services Industry	Real Estate Developers Association of Hong Kong
Miscellaneous Social and Personal Services Industry	Hong Kong Council of Social Service
Other Industry	Hong Kong Federation of Trade Unions
	Hong Kong Chinese Civil Servants' Association