香港人口轉化為「全世界最長壽」的解讀

Hong Kong’s journey to become the world’s longest living population
Life Expectancy

When
- life expectancy gains in Hong Kong took place
- Joinpoint analysis

Why
- Comparative mortality study
- Truncated cross-sectional average of life (TCAL)
- Smoking-attributable mortality

Who and What
- age- and disease-groups contributed
- Arriaga's decomposition

Life expectancy of migrants vs. natives
Joinpoint analysis
Life Expectancy and Ranking
1960-2020
Leveraging big data sources

1,424,522
dead records from Hong Kong’s Census & Statistics Department since 1979

>30 countries in the Human Mortality Database & WHO Mortality Database since 1835

263 million deaths around the world
Mass migration from Mainland China to Hong Kong

Hong Kong Population Size

- 0.5M (1911)
- 0.8M (1941)
- ~1.5M (1946)
- ~0.6M (Year unspecified)
- 6.3M (Year unspecified)
- 7.4M (Year unspecified)

Migrant Composition

- Born in Mainland China
- Born in Hong Kong
- Other Migrants

Bar chart showing the percentage of each migrant category from 20-24 years old to 75 years old.

**Life expectancy in Hong Kong by migrant status in 2016**

<table>
<thead>
<tr>
<th>Region</th>
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<th>Life expectancy at age 50</th>
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Arriaga’s decomposition
Age group-specific contributions to life expectancy gains among men and women
1976-1985
Arriaga’s decomposition
Age group-specific contributions to life expectancy gains among men and women

1986-1995
Arriaga’s decomposition

Age group-specific contributions to life expectancy gains among men and women

1996-2005
Arriaga’s decomposition
Age group-specific contributions to life expectancy gains among men and women

2006-2019
Arriaga's decomposition
Disease group-specific contributions to life expectancy gains among men and women

1976-1997

Contributions to life expectancy gains (years)
Arriaga’s decomposition

Disease group-specific contributions to life expectancy gains among men and women

1998-2019

Contributions to life expectancy gains (years)
Relative gains in longevity in Hong Kong compared to high-income countries
Truncated Cross-sectional Average Length of Life (TCAL)

Truncated Cross-sectional Average Length of Life (TCAL) is a summary measure for all of the available mortality history of cohort populations, and is the closest measure to the true average longevity of populations. Here we used TCAL to identify the cohorts, ages and causes of death contributing to differences in survival between Hong Kong and high-income countries.

Interactive data visualisation

https://longevity.sph.hku.hk/
Hong Kong’s survival advantage due to:-

- Lowest mortality for cardiovascular diseases
- One of the lowest mortality for neoplasms in females
- Lowest mortality for transport accidents
Life Expectancy

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age- and disease-groups contributed
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Why
Comparative mortality study
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Smoking-attributable mortality
Contributions to premature mortality

- Genetic' predisposition: 30%
- Behavioral' patterns: 40%
- Social' circumstances: 15%
- Environmental' exposure: 5%
- Health'care: 10%

On average, smokers die 10 years earlier than non-smokers

Smoking is the single largest cause of preventable death
Smoking-attributable mortality in Hong Kong and high-income settings
Number of smoking-attributable deaths (per 100,000 population per year)

Smoking-attributable deaths per 100,000 population

- 20 - 39
- 40 - 59
- 60 - 79
- 80 - 99
- 100 - 119
- 120 - 139
- 140 - 159
- ≥160

Hong Kong SAR
Singapore
Japan and South Korea
Why lower cardiovascular and female cancer mortality?

• Underpinned by Hong Kong’s successful tobacco control

• HK achieved the lowest smoking-attributable mortality in high-income settings

• Contributed to 50.5% and 34.8% of Hong Kong’s survival advantage over males and females in high-income countries, respectively.
To maintain Hong Kong’s world-leading life expectancy, stronger tobacco control policies are needed.
Allowing Heated Tobacco Products (HTPs) will lead to:-

- Rapid re-normalisation of tobacco use
- Substantial increase in youth smoking of HTPs and cigarettes
- Rising morbidity and mortality.
Implications for Smoking (Public Health) Amendment Bill

• Heated Tobacco Products and electronic cigarettes are very harmful but very attractive to young people.

• Parents, education, health and social welfare sectors and a great majority of the population have provided the strongest support for a total ban of heated tobacco products.

• Urge the Legislative Council to support a total ban as soon as possible.