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1951 年至 2015 年香港嬰兒死亡趨勢
Trends of Infant Mortality in Hong Kong, 1951 to 2015

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本文載述 1951 年至 2015 年期間香港嬰兒死亡的趨勢，並分析嬰兒死亡的性別差異和主要死因。

在香港，嬰兒死亡率由 1951 年的每千名登記活產嬰兒有 91.8 人，顯著下降至 2015 年的 1.5 人，可媲美其他已發展國家。

在過去 60 多年間，男嬰和女嬰死亡率的差異逐漸減少。在 2001 年至 2015 年期間，男嬰和女嬰的平均死亡率分別為每千名登記活產男嬰 2.0 人和每千名登記活產女嬰 1.8 人，平均死亡率相差為 0.2 人。

This article describes the trends of infant mortality in Hong Kong from 1951 to 2015. Sex differences in infant mortality and major causes of infant deaths are also analysed.

In Hong Kong, there was a significant decline in infant mortality rate (IMR), from 91.8 per 1 000 registered live births in 1951 to 1.5 in 2015, which compares favourably with other developed countries.

The difference in infant mortality rates between the two sexes was diminishing throughout the past 6 decades. Between 2001 and 2015, the male average IMR was 2.0 per 1 000 registered male live births whereas the female average IMR was 1.8 per 1 000 registered female live births. The difference in average IMR was 0.2.

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Statistics presented in this article are based on the data source from the Department of Health. Enquiries on this article may be directed to the Health Statistics Section, Department of Health
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1951 年至 2015 年香港嬰兒死亡趨勢
Trends of Infant Mortality in Hong Kong, 1951 to 2015

1. 引言

1.1 嬰兒死亡是指 1 歲以下嬰兒的死亡，而嬰兒死亡率是指在該年每千名登記活產嬰兒在一年內的登記嬰兒死亡人數。嬰兒死亡率被視為可以顯示一般人口健康狀況的其中一項最有用的指標。導致嬰兒死亡率低的因素有下述各項：社會經濟進步、良好的教育、營養及衞生的改善、和醫療及健康服務的發展。事實上，世界衞生組織曾經指出，嬰兒死亡率不僅是顯示嬰兒健康狀況的有用指標，同時亦可顯示整體人口健康狀況及他們生活的社會經濟狀況。

1.2 本文旨在研究 1951 年至 2015 年間香港嬰兒死亡的趨勢，並根據所得數據分析嬰兒死亡的性別差異和主要死因。

2. 嬰兒死亡趨勢

嬰兒死亡率

2.1 在香港，嬰兒死亡率由 1951 年的每千名登記活產嬰兒有 91.8 人，顯著下降至 2015 年的 1.5 人。事實上，自 2000 年以來，香港的嬰兒死亡率一直低於千分之三的水平，可媲美日本、新加坡和瑞典等其他已發展國家。（圖 1 及表 1）

1. Introduction

1.1 Infant mortality refers to death of those aged below 1 year old. Infant Mortality Rate (IMR) is the number of registered infant deaths that occur in a year for every 1 000 registered live births in that year. IMR has been well accepted as one of the most useful indicators of the health status of the general population. A low IMR may be attributed to a number of factors, including the result of socio-economic progress, better education, improvement in nutrition, hygiene and sanitation, and the development of medical and health services. In fact, the World Health Organisation has indicated that IMR is a useful indicator of the health status not only of infants, but also of the whole population and of the socio-economic conditions under which they live.

1.2 The purpose of this article is to study the trends of infant mortality in Hong Kong from 1951 to 2015. Different profiles of infant mortality by sex and major causes of infant deaths are also analysed, subject to available data.

2. Trends of infant mortality

Infant mortality rate

2.1 In Hong Kong, there was a significant decline in IMR, from 91.8 per 1 000 registered live births in 1951 to 1.5 in 2015. In fact, IMR of Hong Kong has been below 3.0 per 1 000 registered live births since 2000, which compares favourably with other developed countries, such as Japan, Singapore and Sweden. (Chart 1 and Table 1)

圖 1　1951 年至 2015 年香港嬰兒死亡率
Chart 1　Infant mortality rate in Hong Kong, 1951 to 2015

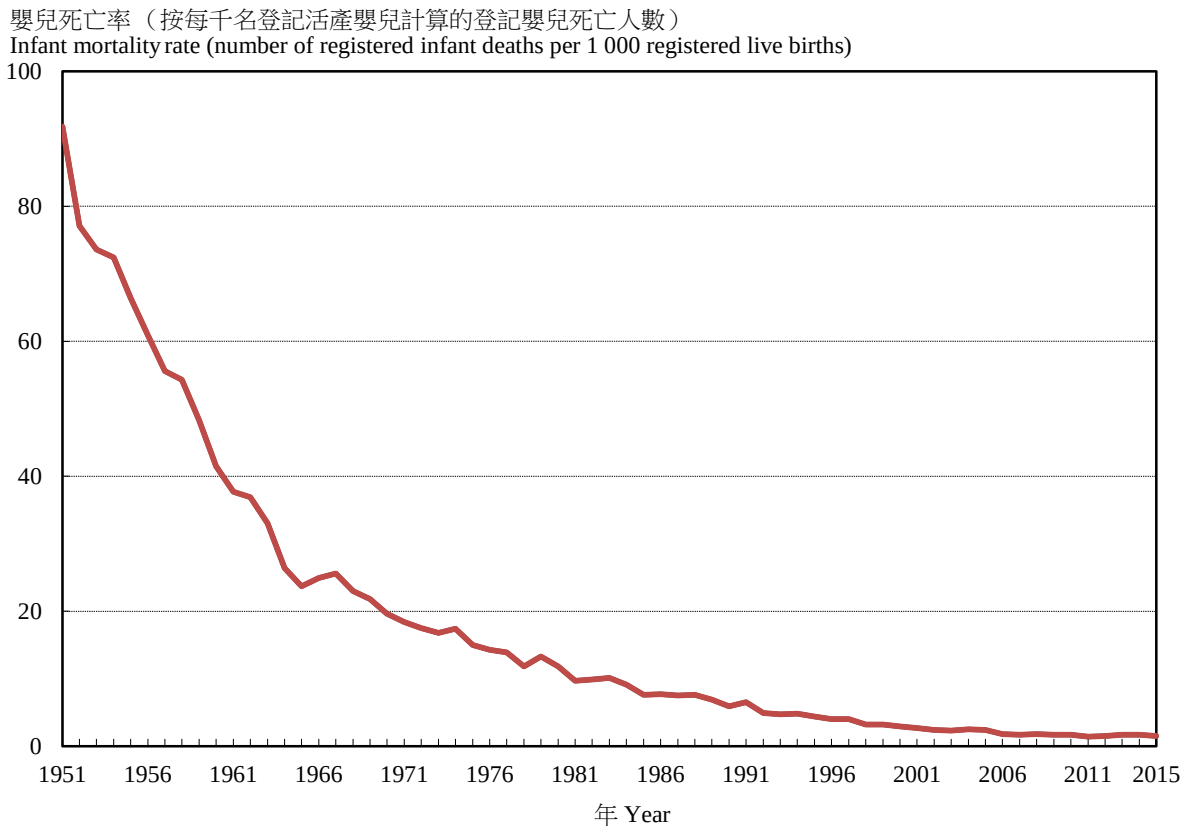


表 1　2006 年至 2015 年選定經濟體系的嬰兒死亡率
Table 1　Infant mortality rate in selected economies, 2006 to 2015

按每千名活產嬰兒計算的嬰兒死亡人數
Number of infant deaths per 1 000 live births

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
香港[1] Hong Kong[1]	1.8 (1.8)	1.8 (1.7)	1.8 (1.8)	1.7 (1.7)	1.7 (1.7)	1.3 (1.4)	1.5 (1.5)	1.8 (1.7)	1.7 (1.7)	1.4 (1.5)
中國內地 The mainland of China	17.2	15.3	14.9	13.8	13.1	12.1	10.3	9.5	8.9	8.1
日本[2] Japan[2]	2.6	2.6	2.6	2.4	2.3	2.3	2.2	2.1	2.1	1.9
新加坡[3] Singapore[3]	2.6	2.1	2.1	2.2	2.0	2.0	1.8	2.0	1.8	1.7
瑞典 Sweden	2.8	2.5	2.5	2.5	2.5	2.1	2.6	2.7	2.2	2.5
英國 United Kingdom	5.0	4.8	4.7	4.6	4.3	4.3	4.1	3.9	3.9	3.9
美國[4] United States of America[4]	6.7	6.8	6.6	6.4	6.1	6.1	6.0	6.0	5.8	5.9

註釋：(1) 數字是按每千名所知活產嬰兒計算的所知嬰兒死亡人數，而括號內的數字是按每千名登記活產嬰兒計算的登記嬰兒死亡人數。

(2) 數據只涵蓋日本籍人士。

(3) 數據指新加坡居民。

(4) 數據不包括非美國居民的出生及嬰兒死亡人數。

Notes : (1) Figures denote number of known infant deaths per 1 000 known live births whereas figures in the brackets denote number of registered infant deaths per 1 000 registered live births.

(2) Data only cover persons of Japanese nationality.

(3) Data refer to Singapore residents.

(4) Data exclude births and infant deaths of non-residents of the United States of America.

新生兒及新生兒後期死亡率

2.2 嬰兒在出生後第 1 年內的不同時期，死亡率有很大差異。在嬰兒出生後最初幾個星期，可能危害其性命的主要因素均與胎兒在母親子宮內的發育及出生過程有關，例如先天性畸形、變形和染色體異常、與妊娠期長短和胎兒生長有關的病患、新生兒呼吸窘迫和胎兒及新生兒出血性和血液學疾患，而後期方面的主要原因包括先天性畸形、變形和染色體異常、循環系統疾病、消化系統疾病和敗血病。為方便進行分析，可將嬰兒死亡率分為新生兒及新生兒後期死亡率兩類。前者是指以 1 年計算，出生不足 28 日而夭折的登記嬰兒死亡人數與該年登記活產嬰兒人數的比率，而後者則指出生 28 日至 1 歲以下而夭折的登記嬰兒死亡人數與該年登記活產嬰兒人數的比率。

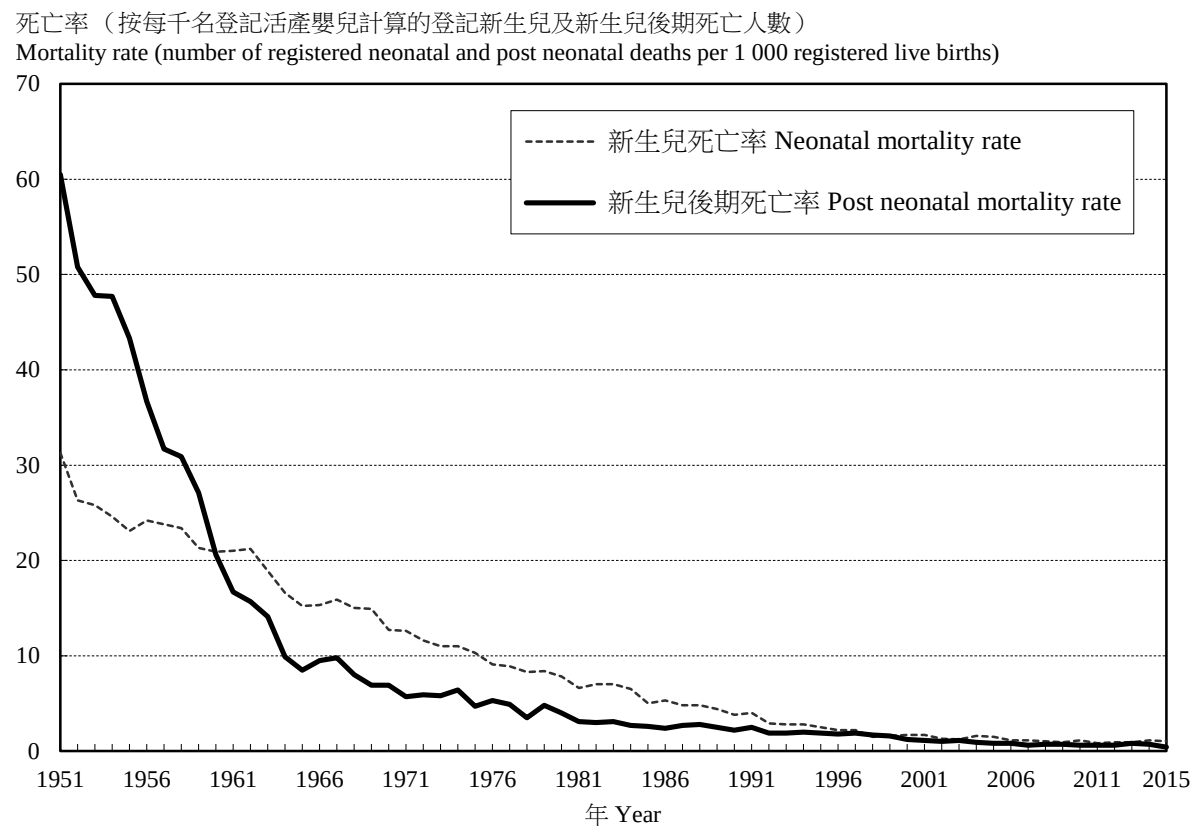
2.3 新生兒死亡率從 1951 年每千名登記活產嬰兒有 31.3 人，大幅下跌至 1981 年的 6.6 人。其後，有關死亡率進一步下跌至 1991 年的 4.0 人和 2001 年的 1.7 人，2011 年更錄得 0.8 人的最低記錄。另外，新生兒後期死亡率亦由 1951 年每千名登記活產嬰兒有 60.5 人，顯著下跌至 1981 年的 3.1 人。其後，有關死亡率在 1991 年進一步下跌至 2.5 人，到 2001 年已下跌至 1.1 人，2015 年的新生兒後期死亡率為 0.4 人。事實上，新生兒後期死亡率的趨勢，與多年來嬰兒死亡率的趨勢十分相似。在 1951 年至 1971 年期間，新生兒後期死亡率大幅下降。在 1951 年至 1959 年期間，新生兒後期死亡率較新生兒死亡率為高，但其後新生兒後期死亡率一直較新生兒死亡率為低，1998 年和 1999 年則除外。（圖 1 及圖 2）

Neonatal and post neonatal mortality rate

2.2 The mortality rate varies remarkably within different periods in the first year of life. The predominant risks in the early weeks of life are those associated with the development of foetus in the womb and the birth process itself, such as congenital malformations, deformations and chromosomal abnormalities, disorders relating to length of gestation and fetal growth, respiratory distress of newborn, and haemorrhagic and haematological disorders of fetus and newborn. At a later stage, they include congenital malformations, deformations and chromosomal abnormalities, diseases of the circulatory system, diseases of digestive system, and septicaemia. To facilitate analysis, IMR is divided into neonatal and post neonatal mortality rates. The former relates the number of registered infant deaths aged under 28 days in a year to the number of registered live births in that year whilst the latter covers registered infant deaths aged 28 days to under one year.

2.3 The neonatal mortality rate declined markedly from 31.3 per 1 000 registered live births in 1951 to 6.6 in 1981. It further dropped to 4.0 in 1991 and 1.7 in 2001. In 2011, it hit a record low of 0.8. Besides, the post neonatal mortality rate also decreased prominently from 60.5 per 1 000 registered live births in 1951 to 3.1 per 1 000 registered live births in 1981. It further decreased to 2.5 in 1991 and down to 1.1 in 2001. In 2015, the figure was 0.4. In fact, the trend of the post neonatal mortality rate resembled that of IMR over the years. The post neonatal mortality rate decreased significantly during 1951 to 1971. The level of the post neonatal mortality rate was higher than the neonatal mortality rate between 1951 and 1959, and then became consistently lower than the level of the neonatal mortality rate thereafter, except in 1998 and 1999. (Chart 1 and Chart 2)

圖 2　　1951 年至 2015 年新生兒及新生兒後期死亡率
Chart 2　　Neonatal and post neonatal mortality rates, 1951 to 2015



早期及晚期新生兒死亡率

2.4　利用現行的數據搜集方法，可將出生 28 日以下的登記嬰兒死亡人數作進一步分項。新生兒死亡率可進一步分為早期新生兒死亡率和晚期新生兒死亡率兩類。早期新生兒死亡率是指出生 7 日以下而夭折的登記嬰兒死亡人數與該年登記活產嬰兒人數的比率，而晚期新生兒死亡率則指出生 7 日至 28 日以下而夭折的登記嬰兒死亡人數與該年登記活產嬰兒人數的比率。

2.5　1951 年的早期新生兒死亡率為每千名登記活產嬰兒有 17.6 人，這個比率在 1981 年下跌至 5.4 人。其後，有關死亡率進一步下跌至 1991 年的 3.1 人和 2001 年的 1.3 人，2015 年的死亡率為 0.7 人。晚期新生兒死亡率的下降趨勢更為急劇，由 1951 年每千名登記活產嬰兒有 13.7 人下跌至 1981 年的 1.2 人。有關

Early and late neonatal mortality rate

2.4　The existing data collection system permits further breakdown on number of registered infant deaths by age under 28 days old. The neonatal mortality rate can be further divided into early and late neonatal mortality rates. Early neonatal mortality rate relates the number of registered infant deaths aged under 7 days to the number of registered live births in that year whilst late neonatal mortality rate covers registered infant deaths aged from 7 days to under 28 days.

2.5　Early neonatal mortality rate was 17.6 per 1 000 registered live births in 1951 and decreased to 5.4 in 1981. It further dropped to 3.1 in 1991 and 1.3 in 2001. In 2015, the figure was 0.7. As for late neonatal mortality rate, it exhibited a much faster declining trend, from 13.7 per 1 000 registered live births in 1951 to 1.2 in 1981. It then decreased continuously to 0.9 in 1991 and 0.4 in 2001. The

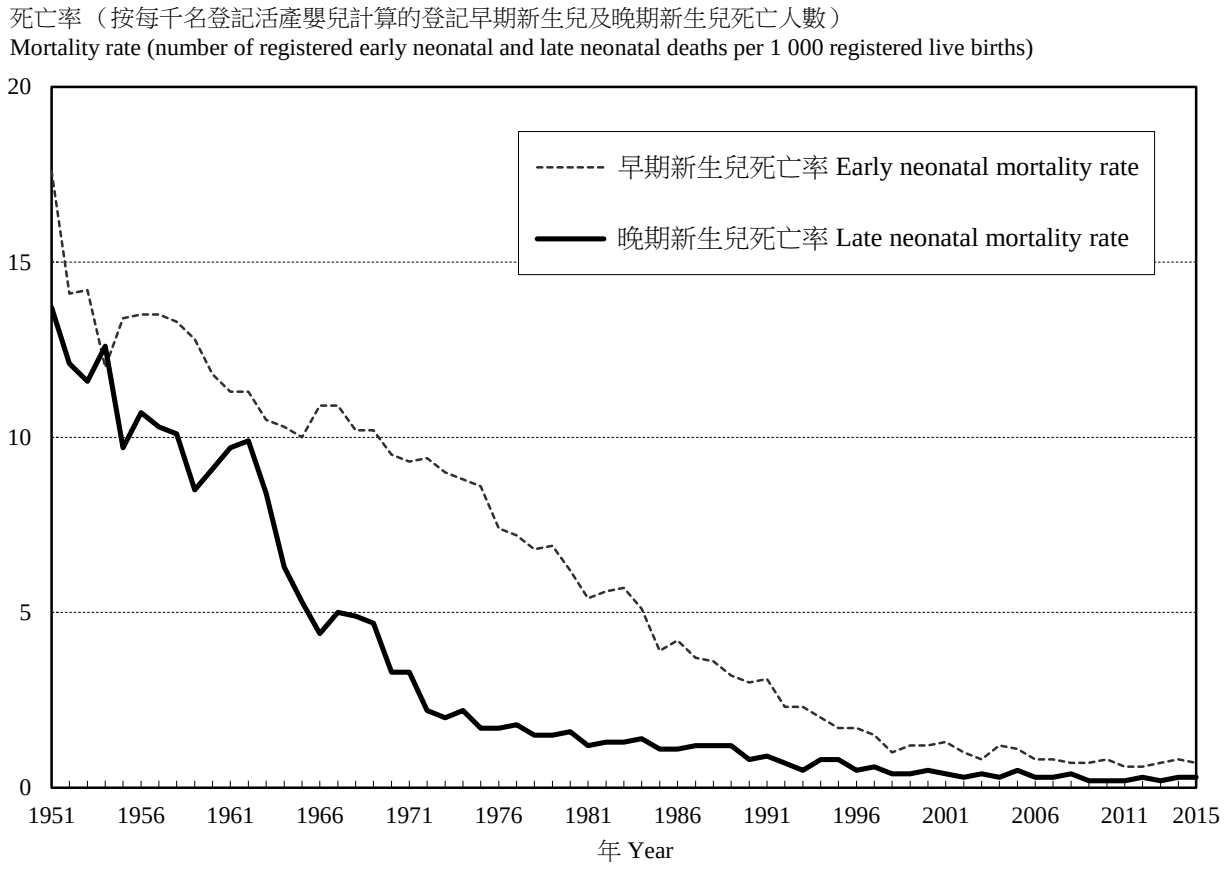
死亡率其後持續下跌至 1991 年的 0.9 人和 2001 年的 0.4 人。其後下跌的趨勢放緩，至 2015 年的死亡率為 0.3 人。（圖 3）

declining trend then slowed down and the figure for 2015 reached 0.3. (Chart 3)

2.6 一般來說，嬰兒死亡率下降主要是由於新生兒後期死亡人數有較大的跌幅。1951 年，新生兒後期的登記死亡人數有 4 144 人，佔登記嬰兒死亡人數的 65.9%。在 2015 年，新生兒後期的登記死亡人數大幅下跌至 27 人，佔登記嬰兒死亡人數的 30.3%。另一方面，新生兒死亡人數佔嬰兒死亡人數的比率明顯增加。根據進一步研究發現，在新生兒死亡率中，早期新生兒死亡率較晚期新生兒死亡率為高。自 1964 年以來，在新生兒死亡總數中，早期新生兒死亡所佔比率逾 60%，2015 年的比率約為 69%。嬰兒死亡率會否進一步下跌，要視乎早期新生兒死亡人數會否進一步下降。

2.6 Generally speaking, the decline in IMR was mainly due to a substantial decrease in the number of post neonatal deaths. In 1951, there were 4 144 registered post neonatal deaths, accounting for 65.9% of registered infant deaths. In 2015, the number of registered post neonatal deaths tremendously decreased to 27 which accounted for 30.3% of registered infant deaths. On the other hand, neonatal deaths apparently increased its share of infant deaths. Further examination revealed that early neonatal mortality played a more contributing role to neonatal mortality than late neonatal mortality. Early neonatal mortality has been accounting for more than 60% of neonatal deaths since 1964. In 2015, it represented about 69% of neonatal deaths. Further decline in IMR will depend on the further lowering of the number of early neonatal deaths.

圖 3　　1951 年至 2015 年早期及晚期新生兒死亡率
Chart 3　　Early and late neonatal mortality rates, 1951 to 2015



3. 嬰兒死亡的性別差異

按性別劃分的嬰兒死亡率

3.1 按性別劃分的嬰兒死亡率，是指個別性別的登記嬰兒死亡人數相對於每千名相同性別的登記活產嬰兒人數的比率。男嬰死亡率由 1951 年的每千名登記活產嬰兒有 87.8 人下降至 1981 年的 10.3 人。這個比率進一步下跌至 1991 年的 6.5 人，到 2001 年已下跌至 3.1 人。有關比率自 2002 年起維持在 3.0 人以下的水平，至 2015 年則為 1.5 人。女嬰死亡率的下跌趨勢較男嬰迅速，由 1951 年的 96.0 人下跌約 9 成至 1981 年的 9.0 人。這個比率在 1991 年進一步下跌至 6.3 人，自 2000 年起維持在 3.0 人以下的水平，至 2015 年則為 1.4 人。（圖 4）

3.2 在 1951 年至 1954 年期間，男嬰死亡率較女嬰死亡率低，而在 1955 年至 1991 年期間，男嬰死亡率則較女嬰死亡率為高。其後在 1992 年、1994 年、1995 年、2004 年、2008 年、2012 年及 2014 年，女嬰死亡率較男嬰死亡率稍高。在過去 60 多年間，男嬰和女嬰死亡率的差異逐漸減少。在 80 年代，男嬰和女嬰的平均死亡率分別為每千名登記活產男嬰 9.4 人和每千名登記活產女嬰 8.1 人，平均死亡率相差為 1.3 人。在 90 年代，男嬰和女嬰的平均死亡率分別為 4.7 人和 4.4 人，差距收窄至 0.3 人。在 2001 年至 2015 年間，男嬰和女嬰的平均死亡率分別為 2.0 人和 1.8 人，差距為 0.2 人。（圖 4）

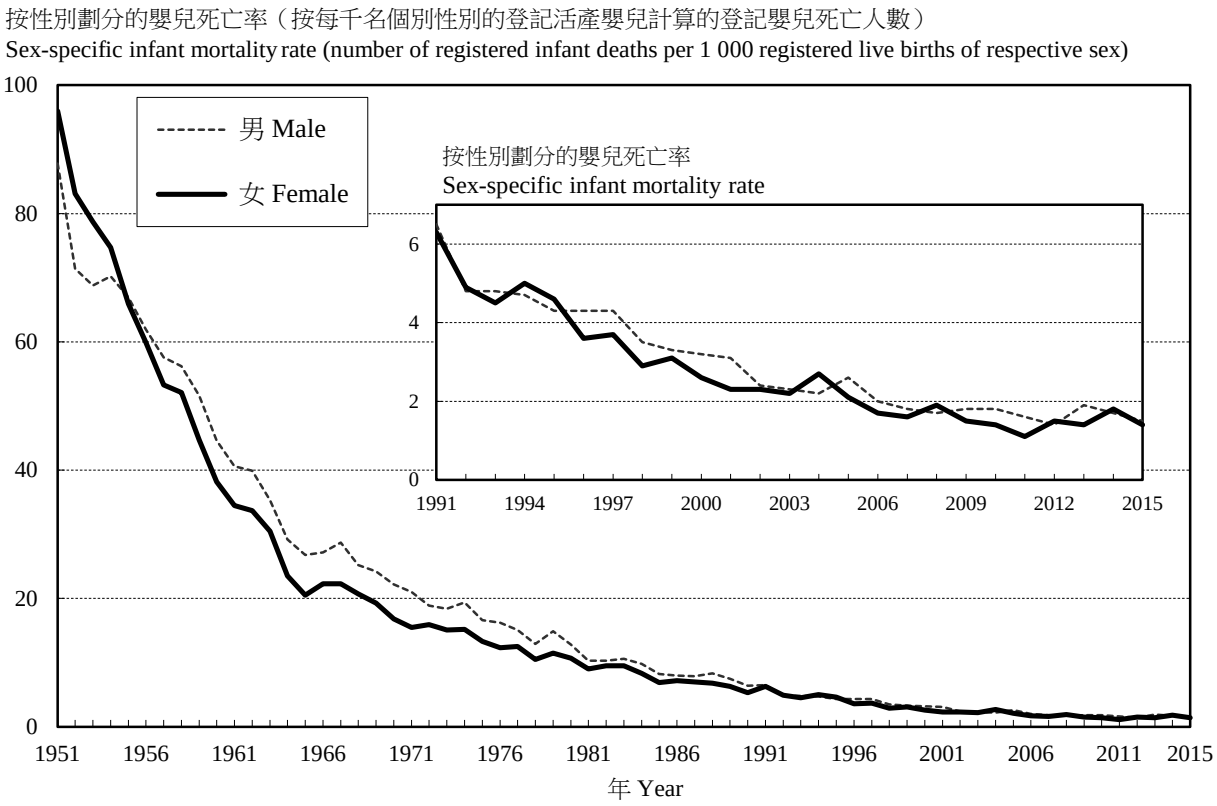
3. Sex differences in infant mortality

Infant mortality rate by sex

3.1 The sex-specific infant mortality rate relates the number of registered infant deaths of each sex to the number of registered live births of the same sex. The male IMR decreased from 87.8 per 1 000 registered live births in 1951 to 10.3 in 1981. It further went down to 6.5 in 1991 and reached 3.1 in 2001. It remained at the level below 3.0 since 2002 and the figure in 2015 was 1.5. The female IMR experienced a faster decreasing trend than that of the male IMR, from 96.0 in 1951 to about its one-tenth in 1981 at 9.0. It further declined to 6.3 in 1991 and stayed at the level under 3.0 since 2000. The figure for 2015 was 1.4. (Chart 4)

3.2 The male IMR was lower than the female IMR between 1951 and 1954. It then became higher than the female rate between 1955 and 1991. Thereafter, the female IMR was slightly higher than the male IMR in 1992, 1994, 1995, 2004, 2008, 2012 and 2014. Throughout the past 6 decades, the difference in infant mortality rates between the two sexes was diminishing. In the 80s, the male IMR on average was 9.4 per 1 000 registered male live births whereas the female IMR on average was 8.1 per 1 000 registered female live births. The difference in average IMR was 1.3. In the 90s, the male IMR on average was 4.7 whereas the female IMR on average was 4.4, and the difference in average IMR tapered off to 0.3. Between 2001 and 2015, the male average IMR was 2.0 whereas the female average IMR was 1.8. The difference in average IMR was 0.2.
(Chart 4)

圖 4　1951 年至 2015 年按性別劃分的嬰兒死亡率
Chart 4　Infant mortality rate by sex, 1951 to 2015



按性別劃分的新生兒及新生兒後期死亡率

3.3　雖然男嬰和女嬰的新生兒死亡率均有下降趨勢，但在分析所包括的年份期間，男嬰死亡率普遍較女嬰的死亡率為高。在 1979 年至 2015 年期間，男嬰和女嬰的新生兒後期死亡率有逐漸下降的趨勢。不過，在分析所包括的年份期間，新生兒後期死亡率似無多大性別差異。在對按性別劃分的早期和晚期新生兒死亡率進行的研究中，亦得出相似的結果。（圖 5 及圖 6）

Neonatal and post neonatal mortality rate by sex

3.3　Though both of the neonatal mortality rates for male and female exhibited a downward trend, the one for male was generally higher than that for female during the study period. As regards the post neonatal mortality rates for both sexes, they showed a gradual decreasing trend between 1979 and 2015. Nevertheless, there appeared to have not much difference between the two sexes on post neonatal mortality in the study period. Similar findings are observed on early and late neonatal mortality rates by sex. (Chart 5 and Chart 6)

圖 5　1979 年至 2015 年按性別劃分的新生兒及新生兒後期死亡率
Chart 5　Neonatal and post neonatal mortality rates by sex, 1979 to 2015

按性別劃分的死亡率（按每千名個別性別的登記活產嬰兒計算的登記新生兒及新生兒後期死亡人數）
Sex-specific mortality rate (number of registered neonatal and post neonatal deaths per 1 000 registered live births of respective sex)

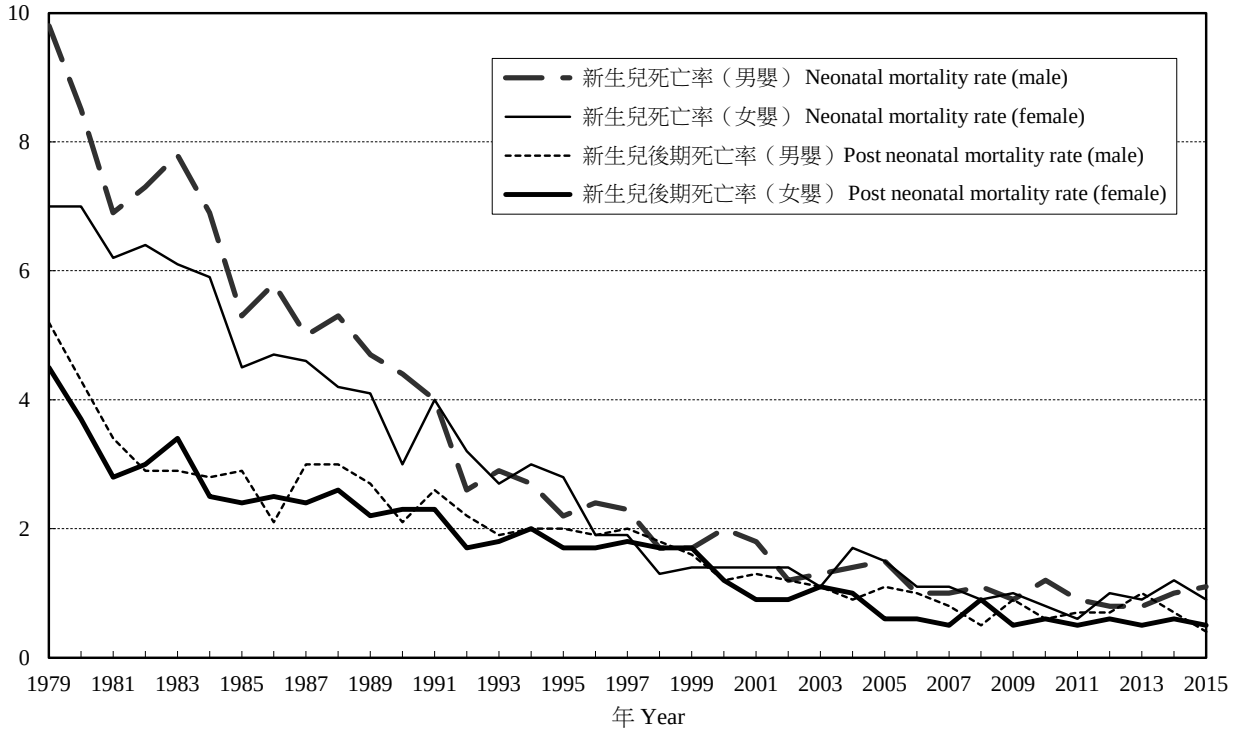
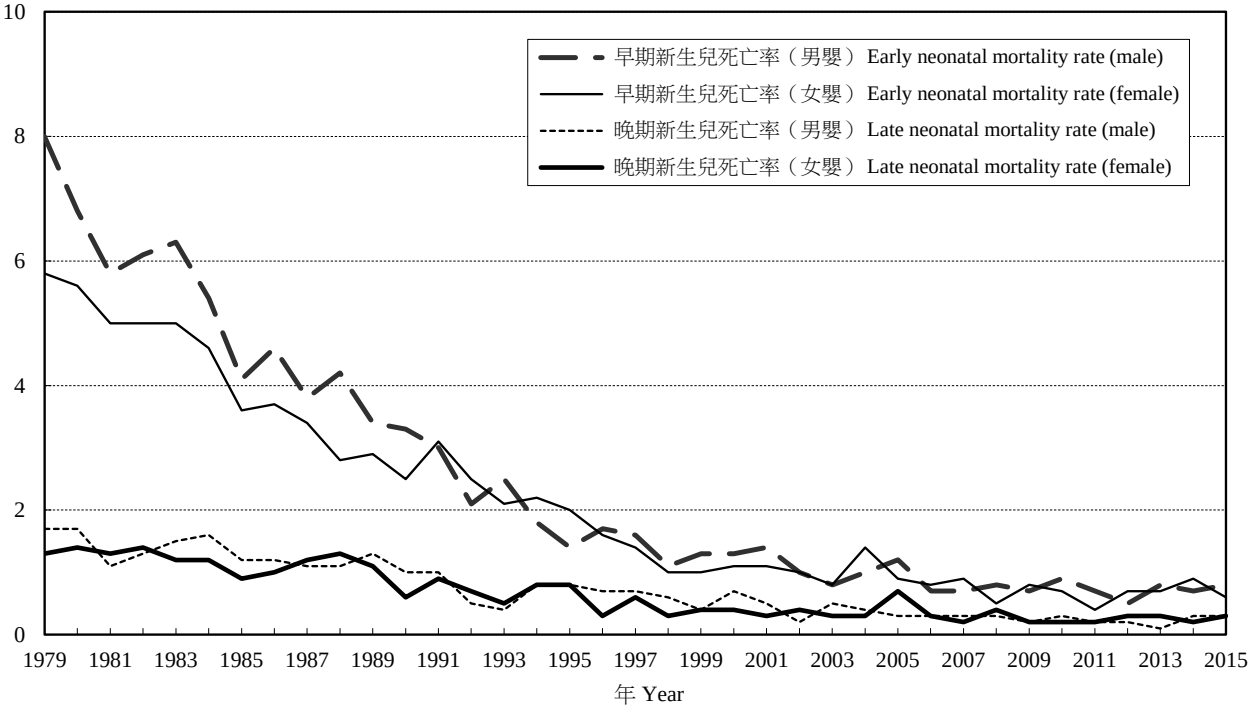


圖 6　1979 年至 2015 年按性別劃分的早期及晚期新生兒死亡率
Chart 6　Early and late neonatal mortality rates by sex, 1979 to 2015

按性別劃分的死亡率（按每千名個別性別的登記活產嬰兒計算的登記早期新生兒及晚期新生兒死亡人數）
Sex-specific mortality rate (number of registered early neonatal and late neonatal deaths per 1 000 registered live births of respective sex)



4. 導致嬰兒死亡的主因

4.1 與致死原因[1]統計有關的指標共有兩類，其一是比例死亡率。比例死亡率是用以衡量因某一原因而死亡的個案在所有死亡個案中的相對重要性，表達形式是某一年內因某項原因死亡的嬰兒人數在該年的嬰兒死亡總數所佔的百分比。

4.2 由於自 2001 年生效的「疾病和有關健康問題的國際統計分類」（國際疾病分類）第 10 次修訂本與其以前的分類系統（即國際疾病分類－第 7 次、第 8 次和第 9 次修訂本）不可以互相比較，因此 1951 年至 2000 年期間的比例死亡率和 2000 年以後的比例死亡率的分析結果會分別載列。

4.3 首先分析 1951 年至 2000 年期間因某項選定原因致死的登記嬰兒死亡人數的比例死亡率趨勢。在 1951 年，導致嬰兒死亡的主因是肺炎（37.9%）、腸胃炎及結腸炎[2]（23.5%）和早產（15.9%），而先天性異常（1.1%）和缺氧症[3]（1.3%）則並不普遍。在 2000 年，因肺炎致死的百分比（2.5%）大幅下降，而且亦無嬰兒因腸胃炎及結腸炎致死，但因先天性異常（33.8%）和缺氧症（10.8%）致死的比例死亡率則有所增加。在 2000 年，因早產致死的嬰兒在嬰兒死亡總數中佔 13.4%，而在分析所包括的年份期間，早產一直是導致嬰兒死亡的主因之一。（圖 7.1）

1 致死原因是按「國際疾病、傷害及死因統計分類」第 7 次（1951 年至 1968 年）、第 8 次（1969 年至 1978 年）及第 9 次（1979 年至 2000 年）修訂本，以及「疾病和有關健康問題的國際統計分類」第 10 次修訂本（由 2001 年起）來分類。

2 腸胃炎及結腸炎指「並非因感染而導致的潰瘍性腸胃炎及結腸炎」。

3 缺氧症指「缺氧症、出生時窒息及呼吸問題」。

4. Major causes of infant deaths

4.1 There are two kinds of indicators related to cause-of-death[1] statistics. One is proportional mortality which measures the relative importance of deaths due to a particular cause among all deaths, and is expressed as a percentage of infant deaths due to a specific cause in a year out of the total number of infant deaths in that year.

4.2 Owing to incompatibility of the International Statistical Classification of Diseases and Related Health Problems 10th Rev. (ICD-10) which has come into effect since 2001 with its previous classification systems (viz. ICD-7, ICD-8 and ICD-9), results of the analyses of proportional mortality for years between 1951 and 2000, and those after 2000 are presented separately.

4.3 The trend of proportional mortality of selected causes of registered infant deaths from 1951 to 2000 is analysed first. In 1951, the major causes of infant deaths were pneumonia (37.9%), gastro-enteritis and colitis[2] (23.5%), and immaturity (15.9%) while congenital anomalies (1.1%), and hypoxia[3] (1.3%) were not common. In 2000, the proportion of deaths due to pneumonia (2.5%) dropped substantially and no case was caused by gastro-enteritis and colitis. Instead, the proportional mortality due to congenital anomalies (33.8%), and hypoxia (10.8%) increased. Immaturity which accounted for 13.4% of total infant deaths in 2000 remained one of the main infant killers throughout the years under study. (Chart 7.1)

1 Causes of death are grouped according to the International Statistical Classification of Diseases, Injuries and Causes of Death, 7th Rev. (1951-1968), 8th Rev. (1969-1978), and 9th Rev. (1979-2000), and the International Statistical Classification of Diseases and Related Health Problems 10th Rev. (from 2001 onwards).

2 Gastro-enteritis and colitis refers to "gastro-enteritis and colitis, except ulcerative of non-infectious origin".

3 Hypoxia refers to "hypoxia, birth asphyxia and respiratory conditions".

4.4 在 1951 年至 2000 年期間，「其他原因」在所有嬰兒死亡人數中佔頗大比例。「其他原因」包括胎兒出血及初生嬰兒出血、出生前後受感染、出生前後消化系統紊亂、神經系統疾病及因不明原因突然死亡。（圖 7.1）

4.5 在 2001 年至 2015 年期間，先天性畸形、變形和染色體異常在比例死亡率中排行首位。同期，與妊娠期長短和胎兒生長有關的病患、循環系統疾病和新生兒呼吸窘迫亦是導致嬰兒死亡的主因。在 2015 年，由四大死因導致的嬰兒死亡佔嬰兒死亡總數逾 40%。（圖 7.2）

4.4 "Other causes" of infant deaths accounted for a considerable proportion of all infant deaths throughout the study period from 1951 to 2000. These "other causes" included fetal and neonatal haemorrhage, infections specific to the perinatal period, perinatal disorders of digestive system, diseases of the nervous system and sudden death of unknown cause. (Chart 7.1)

4.5 For the period from 2001 to 2015, it is observed that congenital malformations, deformations and chromosomal abnormalities ranked top on the proportional mortality. Disorders relating to length of gestation and fetal growth, diseases of the circulatory system and respiratory distress of newborn also played significant roles during the period. In 2015, the proportional mortality due to the four leading causes of infant deaths accounted for more than 40% in total. (Chart 7.2)

圖 7.1 1951 年至 2000 年嬰兒主要死因分布
Chart 7.1 Mortality pattern of infants, 1951 to 2000

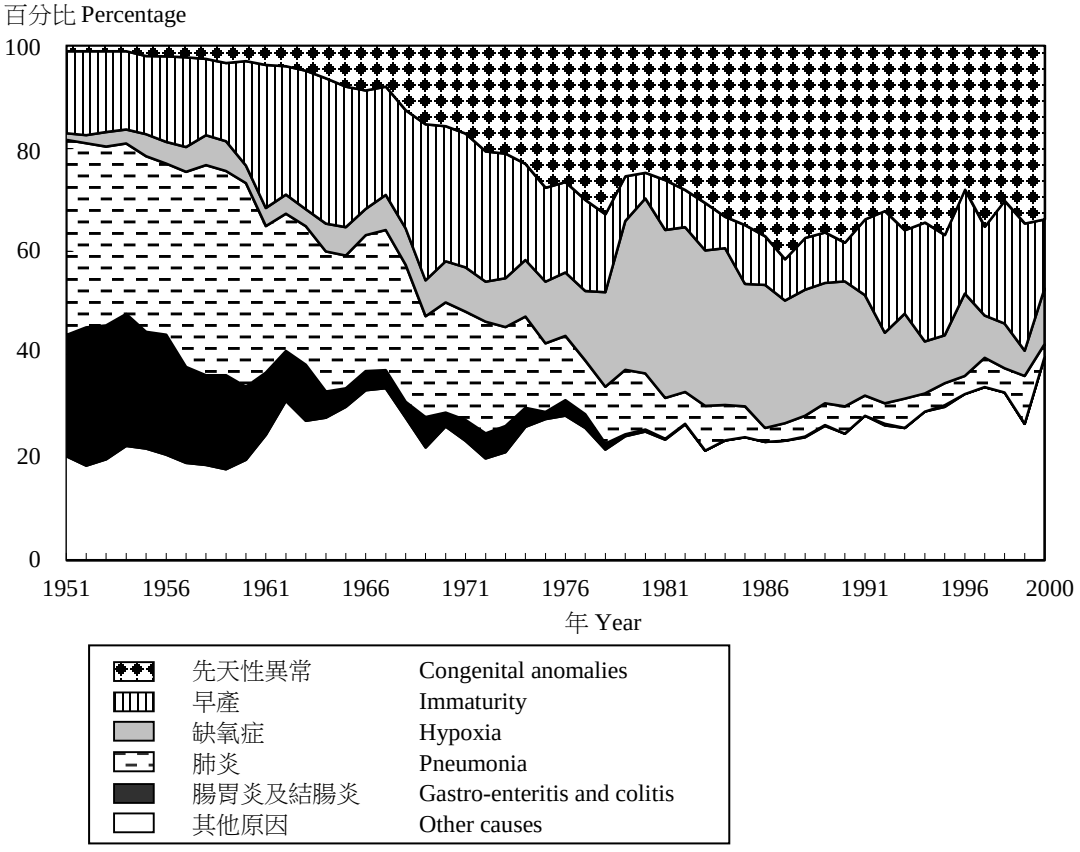
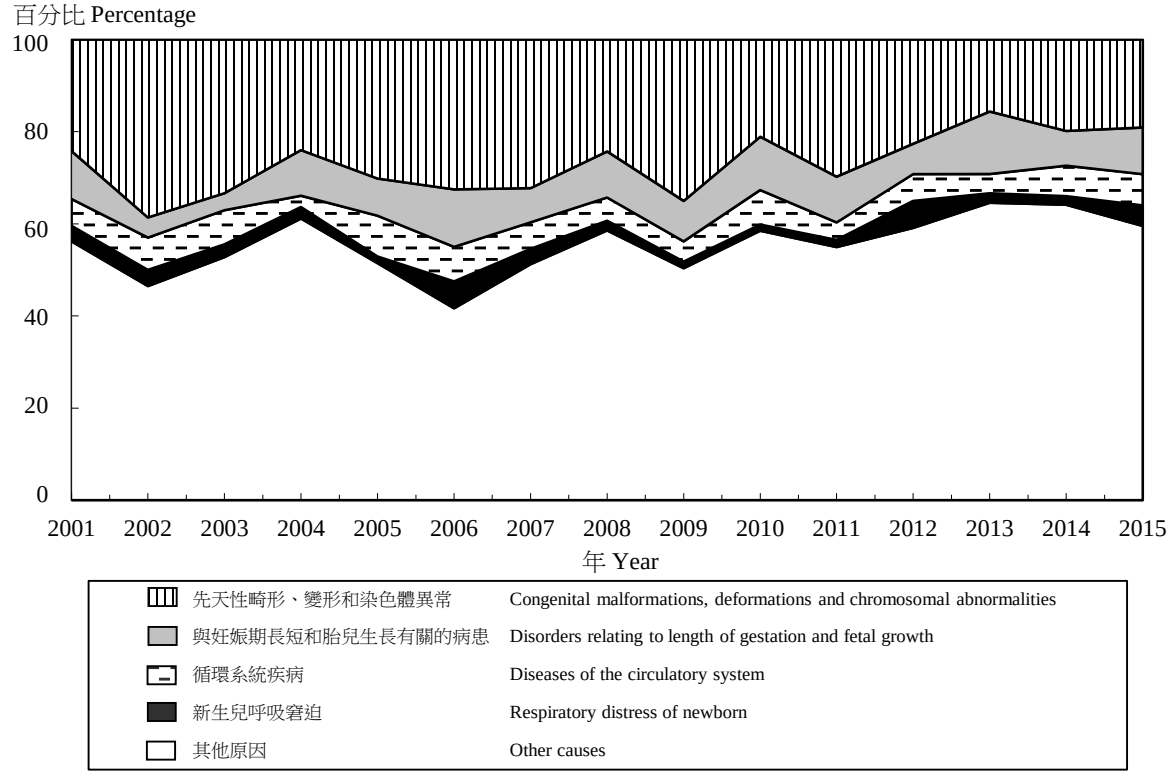


圖 7.2　　2001 年至 2015 年嬰兒主要死因分布
Chart 7.2　　Mortality pattern of infants, 2001 to 2015



4.6　另一個與致死原因統計有關的指標是按死因劃分的嬰兒死亡率。按死因劃分的嬰兒死亡率反映嬰兒可能會因某種原因而死亡的風險，表達形式是某一年內每千名登記活產嬰兒之中因某種原因而死亡的登記嬰兒死亡人數。與分析比例死亡率一樣，1951 年至 2000 年期間按性別及死因劃分的死亡率，及 2001 年至 2015 年期間的相應數字均分別作出分析。（表 2.1 及表 2.2）

4.6　Another indicator related to cause-of-death statistics is the cause-specific infant mortality rate which reflects the risk of death from a particular cause, and is expressed as the number of registered infant deaths due to a specific cause in a year per 1 000 registered live births in that year. Same as the proportional mortality rate, the cause-sex-specific mortality rates from 1951 to 2000 and the corresponding figures for years 2001 to 2015 are analysed separately. (Table 2.1 and Table 2.2)

4.7　在 1951 年至 2000 年期間，除少數情況外，大部分按死因劃分的男嬰死亡率都較女嬰為高。值得注意的是，雖然因先天性異常而死亡的比例死亡率大幅上升，但同期先天性異常所致的死亡率則保持不變（男嬰方面：1951 年為 1.1 人，2000 年為 1.0 人；女嬰方面：1951 年為 1.0 人，2000 年為 1.0 人）。（圖 7.1 及表 2.1）

4.7　For the period from 1951 to 2000, with a few exceptions, most cause-specific mortality rates for male were higher than those for female. It is interesting to note that the mortality rate due to congenital anomalies remained at the same level (i.e. 1.1 in 1951 and 1.0 in 2000 for male; and 1.0 in 1951 and 1.0 in 2000 for female), despite its significant increase in proportional mortality during the same period. (Chart 7.1 and Table 2.1)

表 2.1　1951 年至 2000 年按死因及性別劃分的嬰兒死亡率
Table 2.1　Cause-sex-specific infant mortality rates, 1951 to 2000

按每千名個別性別的登記活產嬰兒計算的登記嬰兒死亡人數
Number of registered infant deaths per 1 000 registered live births of respective sex

年份 Year	先天性異常 Congenital anomalies		早產 Immaturity		缺氧症 Hypoxia		肺炎 Pneumonia		腸胃炎及結腸炎 Gastro-enteritis and colitis		其他原因 Other causes		所有原因 All causes		
	男嬰 Male	女嬰 Female	男嬰 Male	女嬰 Female	男嬰 Male	女嬰 Female	男嬰 Male	女嬰 Female	男嬰 Male	女嬰 Female	男嬰 Male	女嬰 Female	男嬰 Male	女嬰 Female	合計† Overall†
1951	1.1	1.0	16.2	12.8	1.4	1.0	32.4	37.5	19.3	24.1	17.5	19.6	87.8	96.0	91.8
1956	1.7	0.9	10.3	9.9	2.8	2.3	19.8	20.7	13.3	15.2	14.0	10.9	61.9	59.9	60.9
1961	1.7	1.2	11.1	9.8	1.6	1.0	11.2	10.2	5.1	3.9	9.8	8.5	40.6	34.5	37.7
1966	1.9	2.4	6.1	5.3	1.3	1.2	7.2	6.0	1.0	0.9	9.7	6.6	27.2	22.3	24.9
1971	3.3	3.0	6.2	3.2	1.7	1.4	4.0	3.7	0.8	0.7	5.0	3.4	21.0	15.5	18.4
1976	4.2	3.4	2.9	2.2	2.2	1.3	2.1	1.5	0.4	0.4	4.5	3.5	16.2	12.3	14.3
1981	2.7	2.4	1.0	0.9	3.3	3.0	0.8	0.7	§	0.0	2.4	2.1	10.3	9.0	9.7
1982	2.9	2.5	0.8	0.6	3.2	3.1	0.6	0.7	0.0	§	2.7	2.5	10.3	9.5	9.9
1983	3.1	3.1	0.8	1.1	3.9	2.1	0.8	1.0	0.0	0.0	2.1	2.3	10.6	9.5	10.1
1984	3.4	2.6	0.6	0.5	3.2	2.3	0.5	0.7	0.0	0.0	2.1	2.2	9.8	8.3	9.1
1985	2.8	2.5	1.0	0.7	2.0	1.6	0.5	0.5	0.0	0.0	1.9	1.7	8.2	6.9	7.6
1986	2.8	2.8	0.9	0.6	2.3	2.0	0.2	0.3	0.0	0.0	1.9	1.6	8.0	7.2	7.7
1987	3.4	2.8	0.7	0.5	2.0	1.5	0.2	0.3	0.0	0.0	1.6	1.9	7.9	7.0	7.5
1988	2.9	2.8	1.0	0.5	2.2	1.5	0.3	0.3	0.0	§	2.0	1.7	8.3	6.8	7.6
1989	2.7	2.3	0.7	0.6	1.8	1.4	0.3	0.3	0.0	§	1.9	1.7	7.5	6.3	6.9
1990	2.4	2.1	0.6	0.3	1.7	1.2	0.2	0.4	0.0	0.0	1.6	1.3	6.4	5.3	5.9
1991	2.3	1.9	0.7	1.2	1.4	1.2	0.3	0.2	0.0	0.0	1.9	1.8	6.5	6.3	6.5
1992	1.6	1.5	0.9	1.4	0.8	0.5	0.2	0.2	§	0.0	1.2	1.4	4.8	4.9	4.9
1993	1.5	1.8	0.7	0.8	0.9	0.6	0.2	0.3	0.0	0.0	1.5	0.9	4.8	4.5	4.7
1994	1.4	1.9	1.1	1.2	0.6	0.3	0.2	0.2	0.0	0.0	1.4	1.4	4.7	5.0	4.8
1995	1.4	1.9	0.8	1.0	0.6	0.2	0.3	0.1	0.0	§	1.3	1.3	4.3	4.6	4.4
1996	1.1	1.2	1.1	0.5	0.6	0.6	0.2	0.1	0.0	0.0	1.4	1.2	4.3	3.6	4.0
1997	1.6	1.2	0.7	0.7	0.4	0.2	0.2	0.3	0.0	0.0	1.4	1.3	4.3	3.7	4.0
1998	1.0	1.0	0.9	0.5	0.4	0.2	0.2	0.1	0.0	0.0	1.0	1.1	3.5	2.9	3.2
1999	1.1	1.1	0.8	0.7	0.2	0.1	0.3	0.3	0.0	0.0	0.9	0.8	3.3	3.1	3.2
2000	1.0	1.0	0.5	0.2	0.4	0.3	0.1	0.1	0.0	0.0	1.3	1.0	3.2	2.6	2.9

註釋： 由於四捨五入關係，個別數字加起來可能與總數不符。

† 包括性別不詳者。

§ 少於 0.05。

Notes : Figures may not add up to total due to rounding.

† Include unknown sex.

§ Less than 0.05.

4.8 在 2001 年至 2015 年期間，因先天性畸形、變形和染色體異常所致的嬰兒死亡率，遠較因其他個別死因所致的相應比率為高。在 2015 年，上述男嬰及女嬰的死亡率均為每千名個別性別的登記活產嬰兒中有 0.3 人。（表 2.2）

4.8 For the period from 2001 to 2015, it is noted that the infant mortality rates due to congenital malformations, deformations and chromosomal abnormalities were much higher than the corresponding rates due to other individual causes. In 2015, the said infant mortality rates for both male and female were 0.3 per 1 000 registered live births of respective sex. (Table 2.2)

表 2.2 2001 年至 2015 年按死因及性別劃分的嬰兒死亡率
Table 2.2 Cause-sex-specific infant mortality rates, 2001 to 2015

按每千名個別性別的登記活產嬰兒計算的登記嬰兒死亡人數
Number of registered infant deaths per 1 000 registered live births of respective sex

年份 Year	先天性畸形、變形和染色體異常 Congenital malformations, deformations and chromosomal abnormalities		與妊娠期長短和胎兒生長有關的病患 Disorders relating to length of gestation and fetal growth		循環系統疾病 Diseases of the circulatory system		新生兒呼吸窘迫 Respiratory distress of newborn		其他原因 Other causes		所有原因 All causes		
	男嬰 Male	女嬰 Female	男嬰 Male	女嬰 Female	男嬰 Male	女嬰 Female	男嬰 Male	女嬰 Female	男嬰 Male	女嬰 Female	男嬰 Male	女嬰 Female	合計 † Overall †
2001	0.9	0.6	0.4	0.3	0.2	0.2	0.2	§	1.4	1.3	3.1	2.3	2.7
2002	0.8	1.1	0.1	0.1	0.2	0.1	0.1	§	1.2	1.0	2.4	2.3	2.4
2003	0.7	0.8	0.1	§	0.2	0.2	0.1	§	1.3	1.1	2.3	2.2	2.3
2004	0.6	0.6	0.1	0.4	§	0.1	0.1	§	1.4	1.7	2.2	2.7	2.5
2005	0.8	0.7	0.3	§	0.2	0.3	§	§	1.3	1.1	2.6	2.1	2.4
2006	0.6	0.6	0.3	0.2	0.2	0.1	0.1	0.1	0.8	0.7	2.0	1.7	1.8
2007	0.5	0.6	0.1	0.2	0.1	0.1	0.1	0.1	1.0	0.7	1.8	1.6	1.7
2008	0.4	0.5	0.3	0.1	0.1	§	§	0.1	0.8	1.3	1.7	1.9	1.8
2009	0.5	0.6	0.1	0.2	0.1	§	§	§	0.9	0.7	1.8	1.5	1.7
2010	0.3	0.4	0.2	0.1	0.1	0.1	§	§	1.1	0.8	1.8	1.4	1.7
2011	0.4	0.4	0.2	§	0.1	§	§	0.0	0.9	0.6	1.6	1.1	1.4
2012	0.3	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.9	0.8	1.4	1.5	1.5
2013	0.3	0.2	0.2	0.2	0.1	0.1	§	§	1.3	0.9	1.9	1.4	1.7
2014	0.3	0.4	0.2	0.1	0.2	0.1	0.0	0.1	1.1	1.1	1.7	1.8	1.7
2015	0.3	0.3	0.2	0.1	0.0	0.2	0.1	0.0	0.9	0.8	1.5	1.4	1.5

註釋： 由於四捨五入關係，個別數字加起來可能與總數不符。
† 包括性別不詳者。
§ 少於 0.05。

Notes : Figures may not add up to total due to rounding.
† Include unknown sex.
§ Less than 0.05.

5. 進一步改善的範疇

5.1 嬰兒死亡的各種趨勢均清楚顯示，要將嬰兒死亡率進一步降至低於現時一個根據國際標準已是很低的水平，會是日後的一項挑戰。有關的措施可集中在減少主要致死原因（即先天性畸形、變形和染色體異常、與妊娠期長短和胎兒生長有關的病患和循環系統疾病）而導致的嬰兒死亡人數，例如可集中改善為準母親所提供的產前護理及遺傳輔導的服務。隨着醫學技術的進一步發展及醫療服務的改善，現時的嬰兒死亡率或可再進一步得到改善。

5. Scope for further improvement

5.1 The various trends in infant mortality have clearly indicated that further improvement in infant mortality below the present level, which has already been very low by international standards, will be a challenge in the future. Measures can be directed towards reducing infant deaths due to the major causes of deaths (i.e. congenital malformations, deformations and chromosomal abnormalities, disorders relating to length of gestation and fetal growth, and diseases of the circulatory system). For example, efforts can be focused on improving the scope and coverage of antenatal care and genetic counselling services to prospective mothers. Coupled with further advances in medical technology and provision of better medical services, the present infant mortality rate could probably be further improved.