

## Health

1.1 Health care goes beyond hospitals and doctors, important as they are. It also involves people staying healthy for as long as possible, how to ensure proper care when people fall sick and how to die well (Lim 2009).

1.2 Among Singapore residents aged 18 to 69 years, 66.7% rated their overall health as “very good” or “good”, 31.8% “moderate” and 1.4% “bad” or “very bad”. The proportion of Singapore residents who rated their overall health to be “very good” or “good” declined with age.

1.3 The proportion of residents who rated their overall health to be “very good” or “good” of 66.7% in 2007 is a fall from 77.2% in 2001.

1.4 Poor self-rated health is linked to higher subsequent mortality and greater use of healthcare resources (MOH 2007b).

1.5 Singapore’s under-five children mortality rate (3 per 1000 live births) is among the lowest in the world. However, the chances of youths being afflicted with obesity, sexually transmitted infections or type II diabetes are higher. Harmful lifestyle habits eg smoking, binge drinking and casual sex are on the rise (Khaw 2009).

1.6 A rapidly ageing population has implications on healthcare, such as chronic diseases, rehabilitation, recovery assistance and mental deterioration. In many aspects of healthcare management such as management of chronic diseases, patients could be better treated outside of tertiary hospitals. This requires closer links with step-down institutions, general practitioners and voluntary welfare organisations (Yong, 2007).

## 2 Issues

2.1 The leading causes of ill health and death are major non-communicable diseases such as cancer, coronary heart diseases, strokes, pneumonia, diabetes, hypertension and injuries. In 2006, cancer, cardiovascular diseases and stroke accounted for about 60% of the total causes of death (MOH 2007a).

a. Cancer: colorectal cancer is the most common cancer among men and the second most common cancer among women in Singapore. For the five year period from 2002 to 2006, the incidence of colorectal cancer was 42.5 per 100,000 men and 35.6 per 100,000 women per year. Breast

cancer is the leading cancer affecting women in Singapore. During the period from 2002 to 2006, the incidence of breast cancer in the resident population was 73.6 per 100,000 women per year. An average of 324 women died from the disease each year (MOH 2007b); almost one per day.

b. Cigarette smoking: about 13.6% of Singapore residents aged 18 to 69 years smoked cigarettes daily, about the same proportion as in 2001. Smoking is “the largest cause of preventable death in the world”. Smoking-related diseases include cancer, heart disease and stroke, which are among Singapore’s leading causes of death. The main reason cited by daily smokers for smoking was for relaxation, stress relief or helping to cope with problems (MOH 2007b).

c. High blood cholesterol: 12.5% of Singapore residents aged 18 to 69 years reported that they had been told by a doctor that they had high blood cholesterol. Older adults aged 60 to 69 years had the highest reported prevalence (38.8%). The prevalence of reported high blood cholesterol among Singapore residents aged 18 to 69 years increased from 4.1% in 2001 to 12.5% in 2007. Elevated blood cholesterol may increase the risk of coronary heart disease (MOH 2007b).

d. Hypertension: 12.0% of Singapore residents aged 18 to 69 years reported that they had hypertension and were on prescribed medication. The prevalence of reported hypertension was highest in the 60-69 age group (48.0%). The prevalence of reported hypertension among Singapore residents aged 18 to 69 years increased from 7.5% in 2001 to 12.0% in 2007. Hypertension is a major risk factor for coronary heart disease and stroke (MOH 2007b).

e. Arthritis and chronic joint symptoms: 10.1% of Singapore residents aged 18 to 69 years reported that they had been told by a doctor that they had arthritis and also had pain, aching, stiffness or swelling in or around a joint on most days for at least one month. Arthritis and chronic joint symptoms were most prevalent in older adults aged 60 to 69 years (19.8%). Arthritis and other rheumatic conditions are major causes of physical disability, especially among older adults. The burden from these conditions is expected to increase as the population ages (MOH 2007b).

f. Mental health: using the General Health Questionnaire (GHQ-12) instrument, the prevalence of poor mental health was 10.0% among Singapore residents aged 18 to 69 years. The prevalence of

poor mental health was highest among older adults aged 60 to 69 years (13.8%). Poor mental health can also be a risk factor for mental illnesses such as depression (MOH 2007b).

g. **Obesity:** 5.7% of Singapore residents aged 18 to 69 years were obese based on self-reported height and weight information. Obesity was most common in older adults aged 60 to 69 years (11.0%). As these figures are based on self-reported height and weight values, they are likely to be understated. The prevalence of obesity increased significantly between 2001 and 2007 (5.7% in 2007 vs. 4.3% in 2001). Obesity increases the risk of developing many health problems, including non-insulin-dependent diabetes mellitus, stroke, coronary heart disease, hypertension and gallstones. Obesity also raises the risk of certain types of cancer and has been implicated in increased risk for degenerative joint disease (MOH 2007b).

h. **Diabetes mellitus:** 4.6% (about 1 in 22) of Singapore residents aged 18 to 69 years reported that they had diabetes and were on prescribed medication. There was no significant change in the overall prevalence of reported diabetes mellitus between 2001 and 2007. Prevalence of reported diabetes mellitus increased with age. Residents in the 60-69 age group reported the highest prevalence (17.3%). These estimates, based on reported use of medication for diabetes mellitus, are likely to be understated as a large proportion of diabetics are undiagnosed. In the National Health Survey 2004, 49.4% of Singapore residents who had diabetes had not been previously diagnosed. Without proper management, diabetes may result in serious complications such as coronary heart disease, stroke, blindness, kidney failure, nerve problems and limb amputations (MOH 2007b).

## 2.2 Selected statistical indicators

### a. Life expectancy (MOH 2007a)

Life expectancy (years) of Singapore residents at birth.

	2005	2006	2007
Male	77.6	77.8	78.2
Female	82.5	82.6	82.9

### b. Deaths (MOH 2007a).

	2005	2006	2007
Total no. of deaths	16,215	16,393	17,140

## 3 Services and solutions

3.1 Effective health care “starts with prevention”. If Singaporeans “start young and lead more healthy lifestyles”, there should a healthier population with a lower rate of chronic diseases and disabilities. Health promotion efforts “need to lead to changes in behaviour, sustained over years” and even with the best efforts, “some people will still fall sick, become frail and require care”. Some will become terminally ill and will need palliative care (Lim, 2009).

3.2 Health care is provided through *primary services* (eg outpatient polyclinics and private medical clinics), *hospital services* (including national specialty centres for cancer, cardiac, eye, skin, neuroscience and dental care) and *intermediate and long-term care* (MOH 2007c)<sup>1</sup>.

3.3 Intermediate and long-term care comprises:

- a. Residential services eg nursing homes and community hospitals, and inpatient hospice care, and .
- b. Community-based services. These may be centre-based which allows people to attend the centres during the day (such as day rehabilitation centres, and day care centres for dementia and psychiatric care). They may also be home-based (provided at home such as home medical, home nursing or home hospice care) (MOH 2007c).

## 4 Financials

### *Intermediate and long-term care organisations*<sup>2</sup>

4.1 **Nursing homes:** there are about 20 organisations. In terms of annual income, these organisations range in size from thousands to millions of dollars. Some may have annual deficit of several hundred thousand dollars while others may have surpluses of hundreds of thousands of dollars.

<sup>1</sup> This brief is intended to cover non-profit organisations and excludes public hospitals and dental services, private sector healthcare, endowment and research funds, and colleges for medical practitioners.

<sup>2</sup> Number of organisations: some organisations provide more than one service and would appear more than once in listings of residential care and community-based care organisations. An organisation may also operate in more than one location, in which case it is counted as one entity. Financial records: where organisations provide multiple services, their published records may be consolidated figures of all services.

4.2 Community hospitals: there are six. In terms of annual income, these organisations are multi-million dollar operations. Some have deficits of over a million dollars and the rest have surpluses of about a million dollars or more.

4.3 Hospices: there are six organisations in this space, including development and coordination of hospice care. These organisations are usually multi-million dollar operations in terms of annual income. Surpluses may be a million dollars or more.

4.4 Day rehabilitation: there are about 20 organisations providing this service. In terms of annual income, these organisations range in size from hundreds of thousands to millions of dollars. Deficits may range from a hundred thousand dollars or less, while surpluses if any may be a few hundred thousand dollars.

4.5 Home-based care: there are more than 10 organisations that provide such care. They are usually multi-million dollar operations in terms of annual income. They may have deficit of tens of thousands or surplus of several hundred thousand dollars.

4.6 Special interest groups: these include support groups and financial assistance for people with certain medical conditions. There are over 40 such organisations. Income ranges from tens of thousands to millions of dollars. Deficits may range from a hundred thousand dollars or more, while surpluses if any may be a million dollars or more.

4.7 Traditional Chinese medicine: there are about 10 such charities. Where financial information online is available, income ranges from tens of thousands to millions. They may have deficits of tens of thousands of dollars, or surpluses of hundreds of thousands or more.

4.8 Others: there are about ten various other groups, such as medical institutes with charity status, for development of medical practitioners and research. Many of them do not publish financial information online.

## References

- Khaw, BW (2009). "No Child Shall Die in the Dawn of Life". Retrieved 31 Jul 09 from <http://www.moh.gov.sg/mohcorp/speeches.aspx?id=21192>
- Lim, BH (2009). "Health Care Challenges For An Ageing Population: Managing Health Care and End of Life Decisions." Retrieved 22 Jul 09 from <http://stars.nhb.gov.sg/stars/public/viewHTML.jsp?pdfno=20090605001>
- Ministry of Health (MOH) (2007a). Health Facts Singapore. Retrieved 22 Jul 09 from <http://www.moh.gov.sg/mohcorp/statistics.aspx?id=240>
- Ministry of Health (MOH) (2007b). National Health Surveillance Survey 2007. Retrieved 22 Jul 09 from <http://www.moh.gov.sg/mohcorp/uploadedFiles/Publications/Reports/2009/nhss2007.pdf>
- Ministry of Health (MOH) (2007c). Healthcare Services. Retrieved 22 Jul 09 from <http://www.moh.gov.sg/mohcorp/hcservices.aspx?id=108>
- Yong, YI (2007). "Priorities and Challenges for Women's and Children's Health In Singapore". Retrieved 31 Jul 09 from <http://www.moh.gov.sg/mohcorp/speeches.aspx?id=16696>