

## **MEDIA RELEASE**

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### **Incremental cost of common mental disorders in Singapore estimated to be S\$1.7 billion per year**

1. For the first time, Singapore has established the economic burden – or societal cost – of six common mental disorders here, namely major depressive disorder, general anxiety disorder, bipolar disorder, obsessive compulsive disorder, alcohol abuse and alcohol dependence. A recent analysis of health services utilisation and cost of mental disorders estimates the average annual excess costs per person<sup>1</sup> associated with any of these mental health conditions to be S\$3938.90. That is, the health system or society would be expected to incur S\$3938.90 more in total costs per year for this individual than someone without a mental disorder. Based on a 13.9% prevalence rate<sup>2</sup> of common mental health conditions among adults aged 18 and above, this is likely to cost our society an estimated S\$1.7 billion per year in terms of healthcare resource utilisation and productivity loss.
2. These findings were derived from the second Singapore Mental Health Study (SMHS), initiated in 2016, which examined the prevalence of common mental disorders here, their associated factors, treatment gap of the disorders, as well as the local adult population's help-seeking behaviour. The SMHS was led by the Institute of Mental Health (IMH) in collaboration with the Ministry of Health (MOH) and Nanyang Technological University (NTU), and funded by MOH and Temasek Foundation.
3. "All of us incur costs that are borne by the health system or society when we are unwell and use healthcare resources. Excess costs refer to the additional costs that are incurred when an individual has a particular health condition – and in our study the focus was on the excess costs of common mental disorders," says Dr Mythily Subramaniam, Assistant Chairman Medical Board, Research, IMH. "This is one of the most important analyses we have done on the data collected from SMHS 2016 as little is known about the economic burden of mental disorders in Singapore. Studies like this help us understand both the medical costs as well as other costs, such as productivity-related loss, that may be unique to mental health disorders and provide information that will be useful in future planning of intervention approaches."

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<sup>1</sup> Refers to additional costs (in terms of healthcare resource utilisation and productivity loss) incurred by an adult aged 18 and above with any of the six common mental health conditions per year.

<sup>2</sup> This is estimated to be equivalent to over 433,000 adults in the Singapore population.

## About the study

4. The study involved face-to-face interviews with 6,126 participants representing the general population between 2016 and 2018. Besides establishing the prevalence of common mental disorders in Singapore and help-seeking behaviour, it also collected data on healthcare resource utilisation among participants during the past 3-month period before the interview, their physical health conditions, including hypertension, cardiovascular disorders, chronic pain, cancer and diabetes, as well as socio-demographic information.
5. To establish costs, the study took a broad societal perspective, focusing on four components:
  - a) **Direct medical care:** refers to care provided by healthcare professionals in the public or private sector, in the outpatient or inpatient setting, including hospitalisation and visits to accident & emergency (A&E).
  - b) **Intermediate and long-term care (ILTC) services:** care provided in day care centres, respite care, and nursing homes.
  - c) **Indirect medical care cost:** represents the time spent by family members or friends in travelling with respondents to use the services, and in accompanying them during the duration of the consultation.
  - d) **Productivity loss:** comprises the costs of absenteeism and presenteeism. Absenteeism refers to the number of days out of the past 30 when individuals were “totally unable to work or carry out normal activities due to problems with physical health, mental health, or use of alcohol or drugs”. Presenteeism refers to the number of days they had to “cut back on the type or quantity of work due to problems with physical health, mental health, or use of alcohol or drugs”.
6. The key findings of the study are:
  - a) The unadjusted total costs incurred by a person with mental disorders were S\$4619.30 per year. After adjusting for socio-demographic factors (e.g. age, gender, ethnicity and marital status), physical health conditions and the interaction effects among mental disorders, socio-demographic variables and comorbid physical health conditions, the average annual excess costs are S\$3938.90 per person per year.
  - b) The average annual excess costs incurred by a person with comorbid mental and chronic physical conditions were higher than the annual excess costs incurred by a person with mental disorders alone or a person with chronic physical conditions alone.
  - c) The main drivers of costs for individuals with mental disorders were direct medical care (54.8%) and loss of productivity (43.8%).

- d) Compared to individuals without any mental disorders, those with mental illness tend to incur lower costs for visits to primary care doctor (polyclinic doctor), restructured hospital allied health worker (e.g. physiotherapists, nurses and medical social workers), dentists, and traditional healer (e.g. traditional Chinese medicine), but incur higher costs for visits to the restructured hospital doctor, and other private allied health workers. In terms of services, they incur lower costs for hospital admissions, but incur higher costs for A&E as well as ILTC services compared to those without any mental disorders.
- e) The cost of productivity loss in terms of absenteeism (S\$1091.60) and presenteeism (S\$931) per year appears to be much higher in those with mental disorders than those without mental disorders (absenteeism is S\$597.90 and presenteeism is S\$302.90 for those without a mental disorder).
7. “Our findings show a substantial economic burden of mental disorders on our society – both in terms of direct medical costs and loss of productivity costs – and this is similar to studies done overseas,” says Dr Edimansyah Bin Abdin, Principal Biostatistician, Research Division, IMH. “However, the total cost estimate of S\$1.7 billion is likely to be an underestimate of the true cost as the study did not include costs associated with caregiver burden, the use of justice system, peer support services, medications, supported (re)employment programmes, other social services, and loss of earnings associated with unemployment. Also, our analysis in this study is limited to the six common disorders in Singapore and did not include other disorders such as schizophrenia.”
8. “The prevalence of common mental disorders in Singapore increased from 12% in 2010 to 13.9% in 2016. Based on global trends, this prevalence is likely to increase in the future, and will in turn result in a higher incremental cost to society. No country in the world can afford a steep escalation in healthcare costs or productivity losses. This further strengthens the case for prevention, early treatment and ancillary support services,” says Dr Mythily.
9. “Mental health literacy and de-stigmatisation efforts are crucial for early intervention, while right siting of care and use of evidence-based practices will help manage the cost of healthcare utilisation. A focus on occupational rehabilitation and workplace mental health support can help mitigate productivity losses,” she adds.

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**About the Institute of Mental Health (IMH)**

The Institute of Mental Health (IMH), a member of the National Healthcare Group, is the only tertiary psychiatric care institution in Singapore. Located on the sprawling 23-hectare campus of Buangkok Green Medical Park in the north-eastern part of Singapore, IMH offers a multidisciplinary and comprehensive range of psychiatric, rehabilitative and therapy services in hospital-based and community-based settings. The 2000-bedded hospital aims to meet the needs of three groups of patients – children and adolescents (aged below 19 years), adults and the elderly. Besides providing clinical services, IMH also leads in mental health research and training the next generation of mental health professionals in Singapore. For more information, please visit [www.imh.com.sg](http://www.imh.com.sg).