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Supplementary material

A review of the economic impact of mental illness

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Table S1: Summary table of included studies

Mental disorder	First author, yr published	Country	Aim of study	Perspective	Costing approach	Costs valued	Data collection/methods	Key findings / recommendations	Rating
ADHD	Schlander, 2007	UK, Germany	Estimate future trends of attention deficit hyperactivity disorder (ADHD)-related drug expenditures from the perspectives of the statutory health insurance in Germany and National Health Service (NHS) in England for ages 6 to 18 years	Health sector	Modelling	Prescription costs	Model inputs were derived from demographic and epidemiological data, a literature review and an analysis of new drugs in development for ADHD. Conducted scenario analysis	Annual ADHD pharmacotherapy expenditures for children and adolescents will further increase. During this period, overall drug spending by individual physicians may increase 2.3- to 9.5-fold. Even for an extreme low case scenario, a more than sixfold increase of pharmaceutical spending for children and adolescents is predicted	N/A
Anxiety	Waghorn, 2005	Australia	To ascertain at a population level, patterns of disability, labour force participation, employment and work performance among people with anxiety disorders in comparison to people without	Workforce	N/A	N/A	Survey data from the Survey of Disability, Ageing and Carers, Australia. All health conditions of at least six months duration were coded to ICD-10	Compared to controls, more people with anxiety disorders were: not in the labour force, fewer were employed, worked in agriculture, forestry or fishing, and in transport and storage industries; received Government pensions or allowances; 59.1% with anxiety disorders reported receiving treatment while 40.9% did not	N/A
Cognitive function	Henderson, 2011	UK	To test the relationship between childhood cognitive function and long-term sick leave in adult life and whether any relationship was mediated by educational attainment, adult social class or adult mental ill-health	N/A	N/A	N/A	Data from the 1946, 1958 and 1970 British birth cohorts	In all three cohorts, a clear dose response effect whereby lower childhood cognitive ability was more strongly associated with long-term sick leave. Education is an important policy response	N/A
Conduct disorder	Scott, 2001	UK	Compares the cumulative costs of public services used through to adulthood by individuals with three levels of antisocial behaviour in childhood (no problems, conduct problems and conduct disorder)	Society	Bottom-up	Education, residential, health, crime – 1998 prices	Applied costs to data from the inner London longitudinal study, an epidemiological study of psychiatric problems and attainment in people from a disadvantaged inner London borough	By age 28, the cost of conduct disorder was ten times more than the no problems group and the conduct problem group over three times more. The extra costs of both conduct groups were not only due to crime but also to higher use of services across all domains. Crime was the costliest domain in all the groups and constituted almost two thirds of the total cost in the conduct disorder group. A well-coordinated multiagency approach that used interventions of proved effectiveness could considerably reduce the costs of antisocial children when they are grown up	Good

Depression	Parker, 2000	Australia	Examined the cost impact of referral to a Mood Disorder Unit (MDU) by comparing pre-service and post-service costs between MDU and control - after initial assessment or treatment at MDU, patients are referred back to their clinician for ongoing management	Society	Bottom-up – 1998 prices	Direct and indirect financial costs; social costs (loss of friends/ contacts); relationship costs; personal costs	A cost questionnaire was embedded in an MDU intake assessment protocol	Overall group costs in our MDU-assessed tertiary referral were reduced (despite increased costs for electroconvulsive therapy (ECT) and social welfare) by nearly 40% – most by reduction in hospitalisation costs. Despite increased hospitalisation costs for those admitted, the percentage hospitalised dropped from 45% to 15%, resulting in a saving of more than $700,000. MDU may have improved the outcome trajectory of those with the more 'biological' depressive disorders presumably achieved by review and modification of pharmacological treatments, recommendations for ECT for some, and attention to second-order factors through pointers to treatments such as cognitive behaviour therapy (CBT) and strategies such as anxiety management	Good
Depression	Access Economics, 2002	Australia	Conducted an analysis of the burden of bipolar disorder and related suicide in Australia	Society	Combination, human capital – 2003 prices	Direct costs (mental health and social services); indirect costs (morbidity, mortality, tax foregone)	The prevalence estimates are obtained from two data sources, the Low Prevalence Disorders Study (LPDS) and Australian Bureau of Statistics (ABS) National Health Survey 1995. Health services utilisation and expenditure for specific diseases and disease groups in Australia based on ICD-9	Real financial costs total $1.59 billion in 2003 – $16,000 for each of nearly 100,000 Australians with the illness. Direct health system costs are estimated at $298 million in 2003, including two-thirds being hospital expenditure. Indirect costs are estimated at $833 million, including $464 million of lost earnings from people unable to work due to the illness	Good
Depression	Goldney, 2007	Australia		Society	Bottom up using survey results –2004 prices	Direct and indirect costs	A face-to-face Health Omnibus Survey was conducted in 2004 in random and representative sample of the South Australian population, and this was compared with a survey conducted in 1998 that used the same methodology	The total excess cost was estimated to be $9,751 for those with other depression, and $17,593 per annum for those with major depression. For those having major depression, when compared with those with no depression, they were more than three times as likely to have visited a GP, 18-fold more likely to have visited a mental health professional and 2.7-fold more likely to have used hospital services. Immediate economic gains can probably be made by simply raising the proportion of depressed individuals on treatment	Good

Depression	Schofield, 2011	Australia	Estimates the extent to which those who exit the workforce early due to mental health problems have less savings by the time they reach retirement age	Individual	Modelling	Retirement savings	Microsimulation model of health and disability and the associated impacts on labour force participation, personal income, savings and government revenue and expenditure	Both males and females who were out of the labour force due to depression or other mental health problems had at least 97% less savings and retirement income by age 65 that those who remained employed full-time. Supporting elderly people with mental health problems in retirement will place a large burden upon government finances. There is thus an additional argument for governments to invest in mental health services and prevention and support measures, to stem these costs and improve the quality of life of people suffering from these conditions	N/A
Depression	Schofield, 2012	Australia	This paper quantifies, for the 45 to 64 year old Australian population, the amount of income available to those who have retired early due to depression and also for those with other mental health conditions, the amount of taxation revenue these individuals pay to the Australian Government, and the amount of government benefits paid to these individuals	Society	Modelling	Personal income, taxation revenue, welfare payments, gross domestic product (GDP) loss	Micro simulation model of health and disability and the associated impacts on labour force participation, personal income, savings and government revenue and expenditure	25,200 and 32,200 individuals not in the labour force due to depression and other mental health conditions, respectively. Individuals who retired early due to depression and other mental health problems personally have 73% and 78% lower income then their full-time employed counterparts. The national aggregate cost to government due to early retirement is $278 million in lost income taxation revenue, $407 million in additional transfer payments and around $1.7 billion in GDP in 2009	N/A
Depression	Paradise, 2012	Australia	Examined the association of heart disease, depression and ill health retirement	N/A	N/A	N/A	Data from the 45 and Up Study	Nearly one in five of the participants retired early due to ill health. A prior diagnosis of depression was associated with a threefold increase in the risk of IHR. Highlights the need to consider gender in future studies examining the relationship between depression, heart disease and psychosocial outcomes. Clinicians working in consultation-liaison settings or rehabilitation should be aware of gender differences in the effects of depression, when trying to optimise outcomes for their patients	N/A
Depression	Dewa, 2011	Canada	Examined the association of depression and its treatment and work productivity	N/A	N/A	N/A	A large-scale community telephone survey of employed and recently employed people in Alberta. Using the World Health Organization's (WHO's) Health and Work Performance Questionnaire	Three significant trends. First, severe depression has a significant negative association with productivity. Second, a significant proportion of workers who had moderate and severe depressive episodes did not have mental health treatment. Third, compared with people with moderate or severe depressive episodes who did not receive treatment, those who did were significantly more likely to be in the highly productive group	N/A

Depression	Slomp, 2012	Canada	Estimated the depression care costs of patients with a depression diagnosis	Health sector	Bottom-up – 2007–2008 prices	Healthcare costs	Administrative health care records	Total cost of treating depression in this group of Albertans (208,167 people) was $114.5 million, an average of $550 per treated person. The costs ranged from $29 for the lowest decile to $25,826 for the highest 1%. Within the highest decile, hospital costs becoming increasingly prominent contributors to the total cost. Further analysis is warranted to ascertain the degree to which homogenous care is provided to patients with depression with similar levels of severity	Good
Depression	Thomas, 2003	UK	To calculate the total cost of depression in adults in England during 2000	Society	Prevalence based approach, human capital -–2000 prices	Direct costs (in and outpatient, GP, drugs), indirect costs (morbidity and mortality)	Recorded data on health service use, sickness benefit claims and the number of registered deaths of patients with depression	The total cost of adult depression was estimated at over £9 billion, of which £370 million represents direct treatment costs. There were 109.7 million working days lost and 2615 deaths due to depression in 2000	Good
Depression	Luppa, 2007	UK	Reviews of published cost of illness studies of depression worldwide	N/A	Combination, human capital	Various	Systematic literature search	Twenty four studies in the final review. All studies had methodical differences. Summary estimates from the studies for the average annual costs per case ranged from $1,000 to $2,500 for direct costs, from $2,000 to $3,700 for morbidity costs and from $200 to $400 for mortality costs. Methodological quality limited comparison	
Depression	Young, 2011	UK	Estimated the annual cost associated with bipolar disorder to the UK healthcare system	Health sector	Bottom-up – 2009–2010 prices	Medical resources (inpatient and outpatient)	Retrospective cohort study, the IMS Disease analyser was used to examine primary care resource use; Hospital episode statistics supplemented with Mental Health Minimum Dataset Statistics to quantify resource use in outpatient and community mental health	The total annual NHS cost was estimated to be £342 million at 2009/2010 prices, of which hospitalisations (admissions and day care) accounted for £207 million (60%), outpatient and community mental health contributed £91 million (27%), and medication contributed £25 million (7%) of the overall direct costs of care. Contrary to the anticipated positive impact of introducing the NICE bipolar guidelines and the Quality and Outcomes Framework, the cost of managing this illness to the NHS has increased	Good
Eating disorder	Deloitte, 2012	Australia	In 2012 Deloitte Access Economics was commissioned by the Butterfly Foundation to examine the economic and social costs of eating disorders in Australia	Society	Combination, human capital – 2012 prices	Health system, productivity costs, other financial	Australian Institute of Health and Welfare (AIHW) + survey	In 2012, there were an estimated 913,986 people with an eating disorder in Australia. In 2012, there were 913,986 people with an eating disorder in Australia with a total socioeconomic impact of $69.7 billion (financial cost $17.18 billion + burden of disease BOD estimates $52.6 billion). Lost productivity accounts for the 88% of financial	Good

						costs, transfer costs		costs. There is a need to collect better information, particularly in relation to tracking prevalence, mortality and health system costs, and better defining less well known eating disorders	
Eating disorder	Simon, 2005	UK	Review of available evidence on the resource use and cost of different eating disorders, taking into account cost to different health care sectors and also broader social costs	Health/ society	N/A	N/A	Bibliographic electronic databases	The cost of eating disorders is a greatly under researched area compared to that of many other mental disorders. Eating disorders represent a considerable cost burden to the society. The results suggest that effective treatments and the consequent prevention of chronicity would not just improve the outcomes of eating disorders, but could greatly reduce their economic burden. To be able to estimate the net cost arising from these trends, more comprehensive data on the current healthcare resource use pattern of patients with eating disorders and more trials with good health economic components are urgently required	N/A
Mental disorder	Lim, 2000	Australia	Several aims but main one is to examine whether different types of disorder have a greater impact on work impairment in some occupations than others	Workplace	N/A	N/A	Data were based on full-time workers identified by the Australian National Survey of Mental Health and Wellbeing (NSMHWB)	Nearly 11% of the full-time work force had suffered from a mental disorder in the past month. Personality disorders were the most common, followed by substance, anxiety and affective disorders. In the past month, having a current mental disorder was associated with an average of one lost day from work and three days of reduced performance	N/A
Mental disorder	Productivity Commission , 2006	Australia	This study by the Productivity Commission responds to a request to report to Council of Australian Governments (COAG Senior Officials on the potential economic and fiscal impacts of the National Reform Agenda	Society	Quantitative modelling	Competition, regulatory reform and improvement s to human capital	Economy-wide general equilibrium model	Reductions in the prevalence of chronic disease (of which mental illness was one) are likely to have relatively small workforce effects. An outer-envelope scenario suggests that by 2030, national reform agenda (NRA) consistent health initiatives could increase the participation rate by around 0.6 of a percentage point. On average, these new entrants to the workforce are likely to be around 80% as productive as existing members of the workforce. The authors suggest that despite the relatively small workforce effects, cost-effective improvements in health promotion and disease prevention are likely to lead to significant gains in the quality of life for many individuals	Good
Mental disorder	Laplagne 2007	Australia	Examines the potential economic benefits of better health and education	Workplace	N/A	N/A	Uses data from Household, Income and Labour Dynamics in Australia (HILDA) to model the marginal effects of a health or	Better education leads to a better overall self-assessed health status, which, in turn, leads to higher labour force participation. In the health area, the largest impact is obtained through the prevention of a lasting mental health or nervous condition. Results can provide an	N/A

							education variable by preventing or averting six conditions including mental/nervous condition	improved basis for cost-benefit analyses of possible changes in specific health or education policies	
Mental disorder	Morgan, 2011	Australia	The second Australian national survey of psychotic illness was conducted in 2010. The aim was to provide updated information on the lives of people with psychotic illness who receive public specialised mental health services	Society	N/A	N/A	Survey of 1,825 adults with psychotic illnesses aged 18–64 years in contact with public specialised mental health services as well those receiving mental health services from government funded NGO	In March 2010, an estimated 3.1 cases per 1,000 population aged between 18 and 64 years had a psychotic illness and were in contact with public specialised mental health services. The most common psychotic disorder was schizophrenia (47.0%). Two thirds of people experienced their first episode before the age of 25 years. Education attainment was lower in sample. Most (91.6%) people were taking prescribed medications in the previous four weeks, with four-fifths (81.6%) taking antipsychotics. Government pensions were the main source of income for 85.0% of people and 30.5% were employed on a full-time basis. Main changes include: decrease in hospital admissions, increase in community rehabilitation increase use of drugs and case managers	N/A
Mental disorder	Bruce, 2012	Australia	Commissioned study to undertake a longitudinal, mixed method evaluation of Housing and Accommodation Support Initiative (HASI) program: effectiveness of support for consumers; benefits and limitations of the service model; and the cost of the program	Society	Top down costing	Program costs	The data analysed in the evaluation were interviews with consumers, families and HASI partners and data from secondary sources	Overall, HASI consumers had significantly fewer and shorter mental health hospital admissions after joining HASI. The HASI program has achieved its aim of stable housing for most HASI consumers. HASI consumers were continuing to participate in education and work. The annual cost of HASI per person ranges between $11,000 and $58,000, plus project management costs of between $200 to $500	Good
Mental disorder	Degney, 2012	Australia	Analyses the cost and impact on the Australian economy from poor mental health among young men	Society	Bottom-up and human capital – modelling - 2011 prices	Government; other sectors (welfare, educational services etc.); personal; productivity costs	Various sources including ABS. Developed an economic model	Mental illness in young men aged 12-25 costs the Australian economy $3.27 billion per annum or $387,000 per hour across a year in lost productivity. On average they have an additional 9.5 days out of role per year. Young men with mental illness have much lower rates of educational attainment compared to their peers, further limiting their skills development and long term reduced earning potential by $559 million per year. A coordinated response from all sectors of the community holds the promise of considerable economic and individual benefits	Good
Mental disorder	Leach, 2012	Australia	Examined the impact of early onset affective, anxiety and substance use disorders on the early termination of secondary school education in Australia	Education	N/A	N/A	Used data from those aged between 20 and 34 in the 2007 Australian NSMHWB	Early onset mental disorders are significantly associated with the subsequent early termination of education in Australia. Policies and interventions promoting prevention and early intervention and offering educational support	N/A

								for young people with psychiatric illness and substance use problems, should intervene prior to the middle years of high school to help prevent adverse social and economic consequences	
Mental disorder	Latimer, 2001	Canada	Review of the economic impacts of supported employment (SE)	N/A	N/A	N/A	Studies reporting some service use or monetary outcomes of adding SE programs were identified.	Eight studies found – all US studies and outside timeframe of rapid review. Overall service costs tend to be lower, but differences are not significant. Conversion of existing day treatment or less effective vocational rehabilitation programs into SE can be cost-neutral or cost-saving from a budgetary point of view and should be carried out in such cases	N/A
Mental disorder	Stephens, 2001	Canada	Provide a comprehensive estimate of the economic burden of mental health problems in Canada	Society	Bottom-up and human capital – 1998 prices	Direct and indirect costs	1996/1997 National Population Health Survey (NPHS)	Total cost=$14.389 billion (direct of $6.26 billion and indirect of $8.13 billion). Costs have increased 71% between 1993 and 1998. What is needed is a different kind of investment to promote the population's mental health – developing individual and community resourcefulness and promoting resilience among individuals of all ages	Good
Mental disorder	Dewa, 2004	Canada	Discussion paper that explores the evidence on the prevalence of mental illness and its effect on the working population	Workplace	Review	Productivity issues	Various Canadian sources	Results from an Ontario study suggest about 8% of the working population have a diagnosable mental disorder. About one-third of society's depression related productivity losses can be attributable to work disruptions. Canada annually loses about $4.5 billion from this decreased productivity. More research is required to better understand mental illness among occupational groups and industry sectors	N/A
Mental disorder	Mitton, 2005	Canada	Examined the relationship between continuity of care and healthcare costs	Health sector	Bottom-up	Healthcare costs	Service use events and costs were tracked through self-reported and administrative data	Cost to the system for 437 patients over 17-month study period was $10.5 million. Results suggest that poorer continuity of care is related to higher hospital costs and lower community costs, or, conversely, better continuity is related to lower hospital costs and higher community costs	Good
Mental disorder	Lim, 2008	Canada	Estimates the incremental economic burden of mental illness in Canada	Society	Bottom-up, indirect methods – 2003 prices	Medical, productivity, Health related quality of life (HRQOL)	2003 Canadian Community Health Survey. QALYs were multiplied by a figure of $50,000	The total incremental burden for of mental illness was $51 billion, with close to 30% of the cost incurred by the undiagnosed mentally ill population. Loss of health accounted for more than 50% of the total burden. The value of work loss from absenteeism was about 10% higher than the value of work loss from unemployment and together they account for about 35% of the burden. Better data in the area of institutional care, community care, and pharmaceuticals are needed	Good

Mental disorder	Lim, 2008	Canada	Authors present what is known about public mental health spending (in Canada) and the economic burden, and what current techniques are being used to answer the question, “How much should we spend?”	Society	N/A	N/A	Review	The economic impact of mental and substance use disorders are substantial. Used Lim et al. (2008) and Jacobs et al. (2010). Using the Benchmark Approach, estimate that starting with a base of $5.6 billion we should spend $6.4 billion annually to bring the ratio to 7% of total health spending. Using the Budgeting Approach, we estimated that about $6.3 billion in additional resources are required to shift services to a community base for those currently treated as hospital inpatients and to provide services to 50% of the currently untreated - more than doubling what we are currently spending to 12.9% of total health spend	N/A
Mental disorder	Jacobs, 2010	Canada	Report was carried out at the request of the Mental Health Commission of Canada, who wanted to determine the economic scope of mental health services in Canada	Society	Top down – 2007–2008 prices	Direct costs	Range of sources – Canadian Institute for Health Information’s national databases, IMS Health database, Human Development and Resources Canada, Revenue Canada’s T3010 annual returns	Total service cost of $14.3 billion – largest component was pharmaceuticals ($2.8 billion) and then hospitalisation ($2.7 billion). Of the total reported costs, about $10.6 billion was for services and $3.7 billion was for disability payments. In an international context, Canada spends less than most developed countries; the ratio of government mental health to all government health spending is 7.2%, several points lower than the UK and Sweden	Good
Mental disorder	Cawthorpe, 2011	Canada	To compare the health costs of groups with and without psychiatric diagnoses (PDs) using nine years of physician billing data	Health sector	Bottom-up	Medical costs	Billing records submitted by physicians to Alberta Health and Wellness both for patient and for comparison patient groups	Results show a positive association between mental health and overall health care use and cost. For the patient PD group, the average cost per patient accumulated during the period from 1994 to 2003 was $3,437; $3,265 for the comparison patient PD group; and $1,345 for the patient–comparison patient non-PD group	Good
Mental disorder	Smetanin, 2011	Canada	Estimate the health and economic impact of major mental illnesses in Canada, beginning in 2011 and annually over the next three decades	Society	Prevalence-based and frictional cost approach to indirect costs	Direct and indirect costs	RiskAnalytica’s Life at Risk simulation model: mood disorders, anxiety disorders, schizophrenia, disorders of childhood and adolescence, .cognitive impairment including dementia, and substance use disorders	Mental illness was estimated to cost the Canadian economy over $42.3 billion dollars in 2011 in direct costs (50% due to direct cost). Approximately two of every nine workers (or 21.4% of the working population) are estimated to suffer from a mental illness that potentially affects their work productivity -translates to an annual wage based productivity impact of over $6.3 billion dollars. Total annual economic costs associated with mental illness are expected to exceed $306 billion by 2041. In 2011 present value terms, the total cumulative costs over the next 30 years could exceed $2.5 trillion dollars	Good

Mental disorder	Gibb, 2010	NZ	Examines whether the extent of common psychiatric disorder between ages 18 and 25 is associated with negative economic and educational outcomes at age 30	N/A	N/A	N/A	Longitudinal data. Data collected using a combination of semi-structured interviews, standardised tests and teacher reports. Data were fitted with regression models	Increasing episodes of psychiatric disorder during young adulthood were significantly associated with a range of negative life outcomes: decreased likelihood of being in paid employment; decreased likelihood of being in full-time employment; fewer hours worked per week; higher likelihood of being welfare dependent; lower total personal income; lower likelihood of owning a home; lower economic living standards; lower likelihood of attaining a university degree; lower likelihood of attaining a tertiary qualification; and, lower overall highest educational achievement	N/A
Mental disorder	McCrone, 2008	UK	King's Fund commissioned a review to estimate mental health expenditure in England for the next 20 years, to 2026	Society	Bottom-up and human capital – 2007 prices	Service costs and total costs	Typical service packages were defined from survey data and individual studies and costs were calculated. These were then combined with the numbers of people in each disorder group to measure the overall costs of services	The number of people in England who experience a mental health problem is projected to increase by 14.2% – dementia biggest problem. Current service costs, estimated to be £22.50 billion, are projected to increase by 45% to £32.6 billion in 2026 (at 2007 prices). A series of recommendations are made	Good
Mental disorder	Stansfeld, 2011	UK	Examined the association of common mental disorders and long spells of psychiatric and non-psychiatric sickness absence	Workforce / economy	N/A	N/A	Longitudinal Whitehall II Study of British Civil Servants, common mental disorders were measured using the 30-item General Health Questionnaire	Clinical but not sub-threshold common mental disorders were associated with increased risk of long spells of psychiatric sickness absence for men, but not for women, after adjusting for covariates. Risk of psychiatric sickness absence was associated with recent common mental disorders and disorder present on two occasions. Public health and clinical services should focus on the identification of workers with elevated mental health symptoms	N/A
Psychological distress	Hilton, 2008	Australia	Examined the relationship between employee psychological distress, employee type and productivity	Workplace	Bottom-up using survey results	Absenteeism, presenteeism	Utilised the Health and Performance at Work Questionnaire	Comparison of white-collar workers absenteeism rates by low and high psychological distress reveals no statistically significant difference. The same comparison for blue-collar workers reveals that high psychological distress results in an 18% increase in absenteeism rates. Overall high psychological distress increases absenteeism by 1.7%, decreases employee performance at work by 6.1% resulting in a net productivity loss of 6.7%. This translates into the cost estimates for psychological distress in the UK of £4.3 billion and in Australia $2.7 billion	Good

Psychological distress	Hilton, 2010	Australia	Estimated employee work productivity by mental health symptoms while considering different treatment-seeking behaviours	Workplace	Bottom-up using survey results	Absenteeism, presenteeism	Utilised the Health and Performance at Work Questionnaire	Psychological distress produces a $5.9 billion reduction in Australian employee productivity per annum. Increasing psychological distress from low to moderate then to high levels is associated with increasing productivity decrements (6.4%, 9.4% and 20.9% decrements, respectively) for employees in current treatment. Effective treatment for mental health problems yields substantial increases in employee productivity and would be a sound economic investment for employers	Good
Schizophrenia	Access Economics, 2002	Australia	Conducted an analysis of the burden of schizophrenia and related suicide in Australia	Society	Combination bottom-up and top down, human capital – 2001 prices	Direct and indirect costs	The prevalence estimates are obtained from two data sources – the LPDS and ABS National Health Survey 1995. Health services utilisation based on ICD-9	Real financial costs of illness totalled $1.85 billion in 2001, about 0.3% of GDP and nearly $50,000 on average for each of more than 37,000 Australians with the illness. Direct health system costs were $661 million in 2001, including 60% hospital costs. Real indirect costs were $722 million, including $488 million of lost earnings from people unable to work due to the illness	Good
Schizophrenia	Carr, 2003	Australia	Estimate the costs associated with the treatment and care of persons with psychosis	Government / society	Prevalence-based bottom-up, indirect costs estimated using human capital (HC) (base year 2000)	Healthcare sector; patient and family; and other sectors	LPDS	Annual societal costs for the average patient with psychosis are of the order of $46,200 – $1.45 billion and $2.25 billion from govt and societal perspective. Mental health care costs amount to $841 million and $867 million, government and social. Inpatient costs account for 77% of mental health care costs (ALOS=13.41 weeks). Costs of lost time/productivity estimated at $570 million and $1.34 billion, government and social	Good
Schizophrenia	Carr, 2004	Australia	To identify the predictors of direct mental health care costs and indirect or time-loss costs in psychotic disorders and to discuss their implications for future interventions	Government / society	Bottom-up, human capital approach – 2000 base year	Direct and indirect costs	LPDS	Schizophrenia involved greater costs than other psychotic disorders.On average, each treated patient with psychosis cost the Australian government and society $29,600 and $46,200 per annum, respectively. From the societal perspective indirect costs contributed 60% to total costs. Non completion of high-school education and chronicity of illness course were predictive of higher costs across all categories	Good
Schizophrenia	Fitzgerald, 2007	Australia	Estimated the direct and indirect costs associated with schizophrenia	Government / society	Bottom-up, indirect methods using human capital (HC)	Direct and indirect costs	Schizophrenia care and assessment program (SCAP) – a prospective, longitudinal, study of global health outcomes for 347 people with schizophrenia	The average annual societal cost of treatment was $32 160 (productivity costs=$14,776) during the first year decreasing to $29 181 (productivity costs=$14,453) in the third year. Only 24% (9% full-time and 15% part-time) of men and 11% (2% full-time and 9% part-time) of women were in paid work. Identification of those factors contributing to high costs should provide insights into	Good

								potential interventions to improve the efficiency of overall service delivery	
Schizophrenia	Fitzgerald, 2009	Australia	Quantified the costs and resource utilisation associated with a relapse of schizophrenia or schizoaffective disorder	Health sector	Bottom-up	Direct	A two-year retrospective analysis based on the case notes (inpatient and outpatient medical records plus the hospital's morbidity and clinical costing systems) of 200 patients with schizophrenia or schizoaffective disorder	Hospitalisation due to relapse is associated with an increase in the use of inpatient and outpatient healthcare resources which appears to persist over a 12-month period of time. The average 12-month post-admission healthcare cost accrued was estimated at $11,246. Future research should intensively examine strategies to enhance adherence, thereby reducing relapse in patients with schizophrenia and related disorders	Good
Schizophrenia	Goeree, 2004	Canada	Estimated the financial burden of schizophrenia in Canada in 2004	Society	Prevalence-based and friction cost approach for productivity – 2004 prices	Direct and indirect costs	Review of the literature, published reports and documents; secondary analysis of administrative datasets	The total cost of schizophrenia in Canada in 2004 was estimated at $6.85 billion with over two thirds attributed to productivity. Health and non-healthcare costs amounted to $2.02 billion - acute and non-acute hospital care at 23% and 38% of total health and non-healthcare costs, prescription medications 7% of total health and non-healthcare costs. $4.83 billion was attributed to schizophrenia productivity losses due to morbidity or premature mortality	Good
Schizophrenia	Munro, 2011	UK	Assessed the cost of a schizophrenia relapse admission	Health sector	Bottom-up	Direct costs	Information was obtained from the patients and the trust database	The mean inpatient cost of relapse was £25,852 and varied from £1,270 to almost £120,000. More than 97% of the costs were attributable to hospital care costs and less than 3% related to pharmacological treatment. Treatment non-adherence was implicated in 76% of relapses. Strategies for improving treatment adherence may reduce the rate of relapse	Good