

IHE Report

Review of Mental Health Economics Evaluation Studies

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IHE

INSTITUTE OF
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■ REVIEW OF MENTAL HEALTH ECONOMICS EVALUATION STUDIES

Prepared by:

Arto Ohinmaa

Institute of Health Economics

Carolyn Dewa

Centre for Addiction and Mental Health

Patricia Chatterley

Institute of Health Economics

Phil Jacobs

Institute of Health Economics

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■ INTRODUCTION

The mental health economics evaluation literature was reviewed more than ten years ago by Evers et al. (1997). (1997Evers, Van-Wijk, and Ament 161-77) The study involved searches of the MEDLINE and PSYCHLIT databases for economic evaluations in mental health among adults excluding substance abuse studies from 1966 to 1995. The initial search found 113 articles which were reduced to 99 articles after initial review. They concluded that there were only a few high quality full economic evaluation studies in mental health when using an item checklist that included a general part (e.g., financed by, perspective, disease category), an epidemiologic part (e.g., design characteristics, blinding, results), and an economic part (e.g., economic evaluation design, cost and consequences identification, measurement and valuation, discounting, sensitivity analysis, and incremental analysis). This was attributed to the difficulty of measuring effectiveness in mental health, and the unreliability of diagnosis and lack of consensus about the etiology and appropriate treatment for many psychological illnesses.

In this study we are updating the review of Evers et al. (2000)(Evers, Van-Wijk, and Ament 161-77) by looking at all mental health economic evaluation studies that were published since 1998. The search strategy and exclusion and inclusion criteria are described in the methods section. Due to the expectedly high number of studies in the area, the review was primarily completed using only titles and abstracts of articles. Articles were then categorized into key mental health diagnosis categories and also into basic types of economic evaluation analyses, including cost-effectiveness analysis, cost-utility analysis, cost of illness studies, cost analysis, etc.

The database developed from this review will serve as a reference for researchers. It is intended to be updated every year to maintain its accuracy and thus provide the best available material for researchers who would like to do quick scans in their topic area without reviewing a large number of non-economic evaluation studies. Since the inclusion criteria were set to target a very wide range of the economic evaluation and mental health literature, the data includes some studies that are only loosely connected to the study topic area. It is also possible that in some narrow sub-specialties we may not have found all relevant literature based on the search terms used.

METHODS

In September 2007, literature searches were conducted with the Cochrane Library, Medline, Centre for Reviews and Dissemination, Embase, PsycINFO, and EconLIT databases. The searches were designed to retrieve economic evaluations related to mental health in general, and to specific disorders such as anxiety, depression, schizophrenia, substance abuse, dementia and Alzheimer's disease. The search was updated in May 2008. The searches were limited to articles published between 1997 and May 2008. No language limits were applied. For an example of the terms and strategies used, see Appendix 1.

Since the search terms were set relatively widely the first searches in September 2007 identified over 11,000 abstracts. After the filtering of unrelated abstracts, such as abstracts about "economic depression", the final database included 10,063 abstracts. In May 2008 the update of the search identified 1427 new abstracts and titles, bringing the total of references to 11,490.

The literature was then reviewed by a senior health economist to identify studies that were from the field of mental health (primary diagnosis or primary research topic in other chronic diseases, like cost of depression in a diabetes population) and that included some sort of economic analysis. The selection of abstracts followed the subsequent process. First, the reviewer identified if the title and/or abstract had been written about a mental health topic. Since mental health is a co-morbidity for many diseases and is often included as a symptom or outcome measure in many articles in different specialties, the data included a lot of irrelevant and "loosely" mental health related articles. For example, heart disease, stroke and other neurological disorders, HIV, incontinence, vaccines, anesthesia, "drugs" generally, and many others created a lot of hits that were assessed not to be primarily mental health issues.

The abstracts that included mental health topics were then reviewed to see if they included any economic issues. If the abstract or title included an economic analysis (cost of mental health, cost-effectiveness, economics of depression, etc) the abstract was included in the data base. If the title did not include economics or it was uncertain, the abstract was read by the reviewer. Abstracts were excluded if they simply referred to the "need for more cost-effectiveness studies" or otherwise indicated that no actual economic evaluation results, review of economic studies or data were included in the article.

The review process was completed using Reference Manager 11. The references for non-mental health and non-economic studies were deleted directly from the database. The first review was finished in mid-March and that data set included 3457 abstracts. The May 2008 update resulted in 693 references with the merged database including 4150 references. After reviewing for duplicates, the final number of studies in the data set is 4005 (July 15, 2008).

The selected references were then sorted using Reference Manager 11 word selection procedures that can be used to identify studies that include the specified key words either in the title, or in the abstract. The key words reported in this study include cost-effectiveness, cost-utility, cost-benefit, cost of illness, and burden of illness and their variations. These searches were done using the titles and abstract fields from all references. The list of key words was not used since these lists are often too inclusive and may not well reflect the words used by the authors in the study.

■ RESULTS

The selected 4005 abstracts were distributed among chosen disorder categories in the following way:

- Alzheimer/Dementia studies: 435 references
- Anxiety studies: 297 references
- Depression studies: 988 references
- Schizophrenia studies: 646 references
- Substance Abuse (alcohol, drugs, tobacco, gambling studies): 1091 references
- Suicide studies: 116 references
- Bipolar diseases: 99 references
- Non-categorized studies: 989 references

Since several references were assigned to multiple categories, like the “economic evaluation of a substance abuse program in schizophrenia patients,” the total number of references in the sub-files is 4675. That is, references are not mutually exclusive to disorder categories. That exceeds the number of accepted references by 662 references.

Main Types of Economic Analysis

To determine the types of economic evaluation studies that were included in the database a Reference Manager search was done to determine the frequency of the most common terms and types of studies. The search was conducted in the titles and abstract fields only, since during the initial review the list of key words was seen to include economic terms more often than was warranted based on the contents of the abstracts and titles.

Of all the final studies (N=4013), the term “cost” was mentioned in 3426 of them (85.4%). This is not surprising since most economic evaluation studies include some costs. Cost analysis was mentioned only in 125 studies (3.1%) and the cost minimization analysis was mentioned in 11 studies (0.3%).

Searches were conducted for cost-effectiveness analysis (CEA) studies using both “cost-effectiveness” and “cost effectiveness” as search terms. Cost-Utility Analysis (CUA) studies were searched using “cost-utility” and “cost utility” as the first search terms. Since many economic evaluation studies may utilize Quality Adjusted Life Years (QALY) that is the outcome measures in CUA,

a second search was added to the first using the term “QALY”. Economic burden of mental health studies were searched using terms “burden of” and “economic burden”, and cost of illness studies were searched using “cost of illness”, “cost of key words of each subcategory (depression, anxiety, etc.)” as the search phrase (in all abstracts mental health and psychiatric were added). The final search was conducted to identify Cost-Benefit Analysis (CBA) studies; for this search we used both terms “cost-benefit” and “cost benefit”.

Table 1 summarizes the results of the initial search for specific economic studies in the database. Analyses of the disorder subgroups showed that the most frequently used economic evaluation method was CEA with 27% of studies in using the term “cost-effectiveness”. Adding a term “cost effective/cost-effective” would add about 30% additional references to current 1055. CUA was used in 78 studies. An additional 81 studies included the term QALY in the abstract or title. This indicated that the study might include some sort of CUA or modelling using QALY results. The term “cost-benefit” (CBA) was included in 152 studies; that is about twice the number of CUA studies. However, it is likely that the term CBA is used incorrectly in the selected studies and the true number of CBA studies is substantially smaller. Since the number of studies in these groups is relatively small, it will be possible to assess the accuracy of the terms used in their groups in the future.

Table 1. Frequency of the key economic evaluation methods in different sub-files of the chosen abstracts (N=4,005)

| Sub-data | N | CEA | CUA (QALY*) | Burden of | Cost of illness | CBA | Total |
|-------------------------|------|------|-------------|-----------|-----------------|-----|------------|
| Alzheimer/Dementia | 435 | 101 | 4 (+17) | 28 | 37 | 13 | 183 (+17) |
| Anxiety | 297 | 93 | 3 (+9) | 33 | 8 | 10 | 147 (+9) |
| Depression | 988 | 315 | 30 (+26) | 103 | 31 | 26 | 505 (+26) |
| Schizophrenia | 646 | 191 | 15 (+11) | 35 | 28 | 13 | 282 (+11) |
| Substance abuse | 1091 | 267 | 11 (+21) | 54 | 15 | 47 | 394 (+21) |
| Suicide | 116 | 29 | 2 (+2) | 17 | 10 | 0 | 58 (+2) |
| Bipolar | 99 | 24 | 1 (+1) | 14 | 7 | 0 | 46 (+1) |
| Non-categorized | 989 | 226 | 20 (+8) | 36 | 11 | 54 | 347 (+8) |
| Total in sub-categories | 4675 | 1246 | 86 (+95) | 320 | 147 | 163 | 1962 (+95) |
| All abstracts | 4005 | 1055 | 82 (+81) | 251 | 42** | 152 | 1582 (+81) |

CEA= Cost-Effectiveness Analysis, CUA = Cost-Utility Analysis, CBA = Cost Benefit Analysis;

* Number of QALY studies in parenthesis;

** cost of illness and cost of mental health only.

The number of burden of illness/economic burden of illness studies was relatively high (251) although the cost of illness studies were not as frequent (147 articles in all subcategories). If the two categories are combined, from 7 to 10% of all the studies included economic burden of illness elements. For the most part, the economic evaluation methods were distributed fairly evenly among the disorder categories considering their relative size (Table 1). Probably the biggest gaps in the economic studies are in small disorder sub-groups such as suicide and bipolar diseases that included only 3 studies in the CUA class and no CBA studies. The CUA studies were also rare in the anxiety and Alzheimer/Depression subcategories, while the CBA was most frequent in non-categorized and substance abuse groups (Table 1).

Publications over time

Table 2 shows the change in the number of publications over time. In 1997 the data set includes 246 publications and after that the number of economic publications in mental health increased to 377 in 1999, followed by two less publication years in 2000 and 2002. After that the number of publications has increased slowly to 419 in 2007.

The distribution of the CUA and the CEA studies by publication year is shown in Table 2. In both economic evaluation methods the number of studies increased over time. In 1999 when there was a sudden increase in the number of economic studies that was due to a peak in the number of CEA studies. The same happened to the CUA studies in 2001.

Table 2. Abstracts by year of publication

| Year | Abstracts by year | CUA per year | CEA per year |
|---------|-------------------|--------------|--------------|
| 1997 | 246 | 8 | 66 |
| 1998 | 308 | 4 | 74 |
| 1999 | 377 | 3 | 110 |
| 2000 | 307 | 4 | 77 |
| 2001 | 376 | 11 | 87 |
| 2002 | 305 | 3 | 61 |
| 2003 | 356 | 4 | 83 |
| 2004 | 358 | 6 | 94 |
| 2005 | 382 | 9 | 118 |
| 2006 | 402 | 13 | 117 |
| 2007 | 419 | 10 | 114 |
| 2008* | 91 | 5 | 27 |
| Total** | 3927 | 80 | 1028 |

* Includes data from the first months of the year

** Few publications are either out of the study period or do not include proper year sector

Figure 1. Cost-effectiveness studies by year in different mental health categories between 1997 and 2007

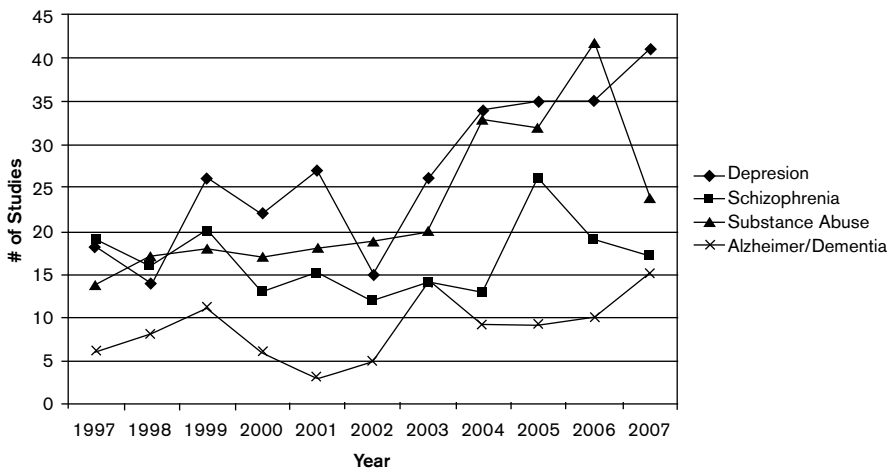


Figure 1 shows that the steepest growth in the CEA literature has been in the area of depression studies with only year 2002 having a substantial decrease in the publications. The CEA studies in schizophrenia started from the same level (n=19) as depression studies, but they went down between 2000 and 2004 after which their number increased during one year and then it came back closer to starting point numbers. Substance abuse studies were for a long time between 14 and 20 studies and then they suddenly increased to 33 studies in 2004 and 42 studies in 2006, and then came down to 24 in 2007, which is the biggest one year change during the study period. The studies in Alzheimer and dementia have had the lowest number of studies per year. Since 2002 their numbers have shifted up for the rest of the study period.

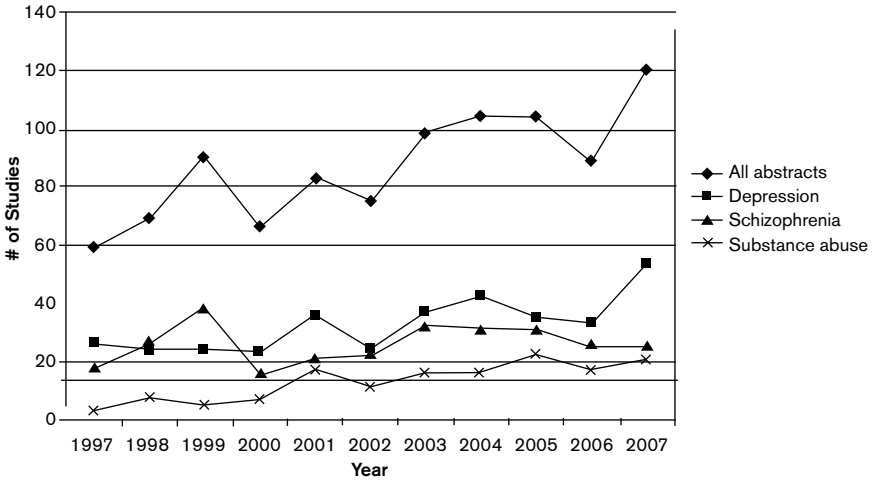
Therapies

The studies that include some sort of pharmacoeconomic analysis were searched using terms pharmacoeconomic, pharmaceutical and drug therapy in their titles, keywords and abstracts. Between 1997 and 2007 a total of 958 studies were identified and about two-thirds of them were found by using drug therapy in the keywords section. From among the subspecialties 358 abstracts were from depression, 288 were from schizophrenia, and 145 from substance abuse.

Figure 2 shows the pharmacoeconomic and drug therapy studies in all abstracts and in the major subcategories. In all abstracts the number of studies started from 59 in 1997 and increased gradually to level of 100 and over during the last years. The same slow increasing pattern can be seen in the number of

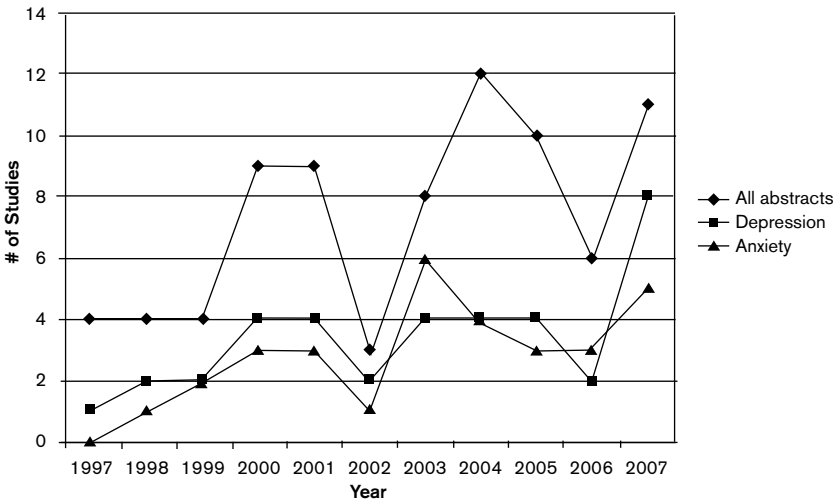
studies in depression and substance abuse studies. However, the number of pharmacoeconomic schizophrenia studies has been relatively stable at between 20 and 30 studies per year until a decline in the last two years.

Figure 2. Pharmacoeconomic and drug studies by year in different mental health categories between 1997 and 2007



The second therapy that we reviewed was cognitive-behavioral/behaviour therapy/treatment (CBT). Combinations of the terms were used in the search of titles, abstract and keywords. The search from all studies found 87 CBT studies of which 80 were published between 1997 and 2007. These studies were distributed to the following sub-categories: 32 studies in anxiety, 41 in depression, 17 in substance abuse, and 13 non-categorized. Notice that in several studies the anxiety, depression and substance abuse diagnostic groups were referred to in combination with other terms.

Figure 3. Cognitive behaviour therapy studies by year in different mental health categories between 1997 and 2007



Quality of categories

The quality of the categorized articles is not very high: although Reference Manager reliably identifies studies which we identified by using the selected terms, such as cost-effectiveness, it does not necessarily mean that the study actually includes any economic analyses related to that particular area. This occurs because economic terms are not used consistently by authors and the journals. In addition, the selected papers included a substantial number of studies that were deemed “uncertain,” meaning that they possibly included some economic data but did not necessarily use the concept stated in the title or abstract. More detailed assessments can be done only after reading the whole article, which was beyond the purpose of this review.

To see how reliable the data in different categories are, we further analyzed selected small disorder sub-groups. From 99 bipolar disease articles, 24 articles included cost-effectiveness in their title or abstract. Of these 24 studies, only 13 included some cost-effectiveness data. However, of those articles, some may not be considered full cost-effectiveness analysis after a closer review of the published article. From the excluded studies e.g., et al. (2007) seems to be a cost of illness study although it refers to cost-effectiveness in the abstract.

■ DISCUSSION

The search identified that about 11,500 studies have been published since 1998 that included reference to some area of mental health and includes a reference to economic analysis. However, after the initial review by a health economist, the final number of abstracts was reduced to 4005. This number indicates a marked productivity of research in the area since the review of Evers et al (1997) who found only 91 full economic evaluation analyses in the specialty of mental health. The most frequently used/referred to economic evaluation method was cost-effectiveness analysis with over 1/3 of studies mentioning it in either the abstract or title. Relatively few studies were cost-utility analyses although there were nearly as many studies referring to QALYs as an outcome measure (81). Within the sub-samples, the biggest disorder groups were substance abuse (n=1091) followed by depression (n=988), and the smallest being bipolar disorders (n=99).

The search strategy used in the study was relatively “inclusive”. That is, it included a number of studies that upon inspection, were not deemed to be from mental health economics. Although the broad approach substantially increased the reviewing time, we can be more confident that we identified most of the relevant literature in the field for the study period. However, a limitation of the review process was that the judgments for the inclusions and exclusions were done by only one reviewer. It is possible that another reviewer would have included or excluded some articles from the file. However, due to very substantial time commitment to review 11,500 articles the one reviewer approach can be considered a feasible approach.

The initial analysis of the data shows that the database can serve as a tool to do directed searches in the mental health economics field to find relevant literature for both research and decision making purposes. This database will serve as a basis for the future mental health economics studies at the Institute of Health Economics. It will be updated once new literature is published.

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Revicki, D. A., et al. "Effectiveness and medical costs of divalproex versus lithium in the treatment of bipolar disorder: results of a naturalistic clinical trial." *Journal of Affective Disorders* 86(2-3) (2005): 183-93.

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■ APPENDICES

Appendix 1. Literature Search Summary: Economic Evaluations of Mental Health

General Information

The search strategy outlined below retrieved articles published from 1998 to 2007.

Medical Subject Headings (MeSH) terms relevant to this topic include: Mental Health; Mental Disorders; Costs and Cost Analysis; Cost-Benefit Analysis

Table A.1

| Database | Edition or date searched | Search Terms ** |
|---|--------------------------|--|
| Core Databases | | |
| The Cochrane Library http://www.thecochranelibrary.com | Issue 3, 2007 | mental health or mental disorder* or mental disease* or alzheimer* or dementia* or schizophreni* or schizoid or anxiety or depressi* or suicid* or alcohol or drug dependenc* or drug abuse or addiction* or alcoholism or substance abuse in Title, Abstract or Keywords and cost-benefit or cost analysis or cost analyses or economic evaluat* or economic analys* or cost-effectiv* or cost utility or cost minimization or cost minimisation or cost consequence or "cost of illness" in Title, Abstract or Keywords, from 1998 to 2007 |

| Database | Edition or date searched | Search Terms ^{††} |
|--------------------------|--------------------------|---|
| Core Databases | | |
| Medline (Ovid Interface) | Sept. 20, 2007 | <ol style="list-style-type: none"> 1 Mental Health/ 2 exp Mental Health Services/ 3 (mental health or mental disorder\$ or mental disease\$).mp. 4 exp Mental Disorders/ 5 Depression/ 6 exp Self-Injurious Behavior/ 7 exp Anxiety/ 8 exp Community Mental Health Centers/ 9 Psychiatric Nursing/ 10 exp Psychiatry/ 11 Psychiatric Department, Hospital/ 12 exp Dementia/ 13 or/1-12 14 "Costs and Cost Analysis"/ 15 Cost-Benefit Analysis/ 16 "cost of illness"/ 17 (economic evaluat\$ or economic analys\$ or economic study or economic studies or economic assess\$ or economic consequence\$).mp. 18 ((cost-benefit or benefit-cost or cost effectiv\$ or cost utility) adj2 (analys\$ or evaluat\$ or assess\$ or study or studies)).mp. 19 (cost minimization or cost minimisation or cost consequence\$ or cost offset\$).mp. 20 ((cost or costs) adj2 analys\$).mp. 21 ("cost of illness" adj4 (analys\$ or evaluat\$ or assess\$ or study or studies or framework\$)).mp. 22 cost of illness.ti. 23 or/14-22 24 13 and 23 25 (comment or editorial or historical article or letter or newspaper article or published erratum).pt. 26 24 not 25 27 limit 26 to yr="1998 - 2007" |

| Database | Edition or date searched | Search Terms ^{††} |
|--|--------------------------|---|
| Core Databases | | |
| CRD Databases (DARE, HTA & NHS EED) | Sept. 24, 2007 | <ol style="list-style-type: none"> 1 MeSH Mental Health 2 MeSH Mental Health Services EXPLODE 1 2 3 MeSH Mental Disorders EXPLODE 1 4 "mental health" OR "mental disorder" OR "mental disorders" OR "mental disease" OR "mental diseases" 5 MeSH Depression EXPLODE 1 6 MeSH Self-Injurious Behavior EXPLODE 1 7 MeSH Anxiety EXPLODE 1 8 MeSH Community Mental Health Centers EXPLODE 1 9 MeSH Psychiatric Nursing 10 MeSH Psychiatry EXPLODE 1 2 3 11 MeSH Psychiatric Department, Hospital 12 MeSH Dementia EXPLODE 1 2 13 #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 14 MeSH Costs and Cost Analysis 15 MeSH Cost-Benefit Analysis 16 MeSH Cost of Illness 17 "economic evaluation" OR "economic evaluations" OR "economic analysis" OR "economic analyses" OR "economic assessment" OR "economic assessments" OR "economic study" OR "economic studies" OR "economic consequence" 18 "cost-benefit analysis" OR "benefit-cost analysis" OR "cost-benefit analyses" OR "benefit-cost analyses" 19 "cost-effectiveness analysis" OR "cost- effectiveness analyses" OR "cost utility analysis" OR "cost utility analyses" 20 "cost minimization" OR "cost minimisation" OR "cost consequence" OR "cost analysis" OR "cost analyses" 21 "cost of illness" 22 #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 23 #13 and #22 RESTRICT YR 1998 2007 |

| Database | Edition or date searched | Search Terms ** |
|-------------------------|--------------------------|--|
| Core Databases | | |
| EMBASE (Ovid interface) | Sept. 20, 2007 | <ol style="list-style-type: none"> 1 exp mental health/ 2 exp mental health care/ 3 exp psychiatry/ 4 mental health center/ 5 exp Mental Disease/ 6 alcohol abuse/ 7 Anxiety/ 8 social psychiatry/ 9 psychiatric department/ 10 suicide/ 11 alcohol abuse/ 12 exp Drug Abuse/ 13 or/1-12 14 economic evaluation/ or "cost benefit analysis"/ or "cost effectiveness analysis"/ or "cost minimization analysis"/ or "cost utility analysis"/ 15 "cost of illness"/ 16 (economic evaluat\$ or economic analys\$ or economic study or economic studies or economic assess\$ or economic consequence\$).mp. 17 ((cost-benefit or benefit-cost or cost effectiv\$ or cost utilii\$) adj2 (analys\$ or evaluat\$ or assess\$ or study or studies)).mp. 18 (cost minimization or cost minimisation or cost consequence\$ or cost offset\$).mp. 19 ((cost or costs) adj2 analys\$).mp. 20 ("cost of illness" adj4 (analys\$ or evaluat\$ or assess\$ or study or studies or framework\$)).mp. 21 cost of illness.ti. 22 or/14-21 23 13 and 22 24 limit 23 to yr="1998 - 2007" 25 (editorial or erratum or letter or note).pt. 26 24 not 25 |

| Database | Edition or date searched | Search Terms ** |
|-----------------------|--------------------------|---|
| Core Databases | | |
| PsycINFO | Sept. 20, 2007 | <ol style="list-style-type: none"> 1 exp mental health/ 2 exp mental health services/ 3 (mental health or mental disorder\$ or mental disease\$).mp. 4 exp psychiatry/ 5 community mental health centers/ 6 community mental health/ 7 exp mental disorders/ 8 ANXIETY/ 9 Psychiatric Patients/ 10 exp psychiatric hospitalization/ 11 Atypical Depression/ 12 exp SUICIDE/ or SUICIDE PREVENTION/ 13 exp Alcohol Abuse/ 14 exp Drug Abuse/ 15 ALZHEIMERS DISEASE/ 16 or/1-15 17 "costs and cost analysis"/ 18 (economic evaluat\$ or economic analys\$ or economic study or economic studies or economic assess\$ or economic consequence\$).mp. 19 ((cost-benefit or benefit-cost or cost effectiv\$ or cost utili\$) adj2 (analys\$ or evaluat\$ or assess\$ or study or studies)).mp. 20 (cost minimization or cost minimisation or cost consequence\$ or cost offset\$).mp. 21 ((cost or costs) adj2 analys\$).mp. 22 ("cost of illness" adj4 (analys\$ or evaluat\$ or assess\$ or study or studies or framework\$)).mp. 23 cost of illness.ti. 24 or/17-23 25 16 and 24 26 (comment or editorial or erratum or letter).dt. 27 25 not 26 |

| Database | Edition or date searched | Search Terms ^{††} |
|-----------------------|--------------------------|---|
| Core Databases | | |
| EconLIT | To September 2007 | ("mental health" or "mental disease" or "mental disorder" or "mental illness" or depression or depressant* or suicid* or anxiety or schizo* or alzheimer* or dement* or addict* or alcoholism) and ((cost N3 analys*) or (cost N3 evaluation*) or (cost N3 assess*) or (economic N3 evaluation*) or (economic N3 analys*) or (economic N3 assess*) or costs) |

Note

†† “*”, “# “, and “?” are truncation characters that retrieve all possible suffix variations of the root word e.g. surg* retrieves surgery, surgical, surgeon, etc.

Searches separated by semicolons have been entered separately into the search interface

■ IHE Publications

- Cost-effectiveness in the detection of syphilis
- The use and benefit of teleoncology services
- Screening newborns for hearing
- Screening newborns for cystic fibrosis
- The use of nitric oxide in acute respiratory distress syndrome
- Routine preoperative tests – are they necessary?
- Consensus statement on self-monitoring in diabetes
- Consensus statement on how to prevent low birth weight
- Evidence of benefit from telemental health: a systematic review
- Economics of childhood immunizations in Canada
- Health technology assessment on the net
- Mental health economic statistics
- World in your pocket
- The use of videoconferencing for mental health services
- Risk assessment tools for predicting spousal violence
- Using fetal fibronectin to diagnose pre-term labour
- Air ambulance with advanced life support
- Effective dissemination of findings from research
- The importance of measuring health-related quality of life
- How much should we spend on mental health?
- Review of mental health economics evaluation studies
- CT and MRI services in Alberta
- Consensus statement on depression in adults

The mental health economics literature review shows that about one third of the articles found in the search did not include any or just minimal economic information. The database of 4005 references can be used to analyze the mental health economic literature e.g. by diagnosis, type of economic analysis, treatment, publication year and target population.



INSTITUTE OF
HEALTH ECONOMICS
ALBERTA CANADA

Institute of Health Economics
1200 - 10405 Jasper Avenue
Edmonton AB Canada T5J 3N4

Tel. 780.448.4881 Fax. 780.448.0018
info@ihe.ca

www.ihe.ca

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