The value of mental health care at the system level: the case of treating depression


Record Status
This is a critical abstract of an economic evaluation that meets the criteria for inclusion on NHS EED. Each abstract contains a brief summary of the methods, the results and conclusions followed by a detailed critical assessment on the reliability of the study and the conclusions drawn.

Health technology
Acute-phase treatment of major depression.

Type of intervention
Treatment.

Economic study type
Cost-effectiveness analysis.

Study population
A large, privately insured population.

Setting
Hospital. The study was carried out in the USA.

Dates to which data relate
Effectiveness data were derived from insurance claims data collected from 1991 to 1996, from studies previously published between 1975 and 1998, and from expert opinion. The time period during which resource use and costs data were collected and the price year were not stated.

Source of effectiveness data
Effectiveness data were obtained from an insurance claims database and expert opinion.

Modelling
No modelling was used.

Outcomes assessed in the review
The following outcomes were assessed in the review: International Classification of Diseases, Ninth revision, diagnoses; Current Procedural Terminology, Fourth Edition, procedure codes; prescription drug claims; and outpatient and inpatient claims on all enrollees.

Study designs and other criteria for inclusion in the review
Effectiveness data were based on insurance claims data from four firms collected by MEDSTAT. To identify new acute episodes of depression, a period of eight weeks with no treatment for depression prior to diagnosis of depression was required. The authors considered all care given in the four months following initiation of care for depression. The
authors excluded all episodes beginning in the last four months of calendar year 1996.

**Sources searched to identify primary studies**
MEDSTAT.

**Criteria used to ensure the validity of primary studies**
Not stated.

**Methods used to judge relevance and validity, and for extracting data**
Individual data were used.

**Number of primary studies included**
Not applicable.

**Methods of combining primary studies**
Not combined.

**Investigation of differences between primary studies**
Not applicable.

**Results of the review**
The MEDSTAT data yielded 13,098 uncensored episodes that began eight weeks after 1 January 1991 and ended before 31 August 1996. Each episode was classified by both treatment class and patient type, which generated 120 patient/treatment combinations involving 7,719 episodes of treatment.

**Methods used to derive estimates of effectiveness**
A group of 10 experts (four practising psychiatrists, two primary care physicians and four psychologists) were surveyed regarding the expected benefits of each treatment for each patient type. A two-stage modified Delphi process was used, consisting of a mailed survey followed by a face-to-face meeting of the participants. The participants were provided with a summary of results of the randomised and controlled trials of acute ambulatory treatment of major depressive disorder. Treatment effectiveness was elicited from the experts using the Hamilton Depression Rating Scale (HDRS).

**Estimates of effectiveness and key assumptions**
All patients were assumed to have the same degree of major depression at treatment initiation. The probability of being depression-free at the end of sixteen weeks was 0.16 for 1 psychotherapy visit, 0.26 for 3-9 psychotherapy visits, 0.17 for 1 office visit, 0.19 for 2-3 office visits, 0.28 for SSRIs without psychotherapy visits, 0.28 for SSRI with 1-4 psychotherapy visits, 0.33 for SSRIs with 4-9 psychotherapy visits, 0.34 for SSRIs with 10-24 psychotherapy visits, 0.26 for other more than no treatment, 0.15 for other less than or equal to no treatment, unspecified treatment and no treatment.

**Measure of benefits used in the economic analysis**
The probability of being depression-free after sixteen weeks of treatment, using the median estimates of probability, was used as the measure of benefits. Benefit estimates were based on expert panel ratings and aggregated across patient types and some treatments.
Direct costs
Costs were not discounted given the short time frame of the study (less than 1 year). Quantities and costs were not reported separately. Direct costs included all costs of health care given in the four months following the initiation of care for depression. The quantity/cost boundary adopted was that of the health service. The estimation of quantities and costs was based on actual data. Cost estimates were based on insurance claims data from four firms collected by MEDSTAT. The price year was not reported.

Statistical analysis of costs
Not reported.

Indirect Costs
Not included.

Currency
US dollars ($).

Sensitivity analysis
Not reported.

Estimated benefits used in the economic analysis
The probability of being depression-free at the end of sixteen weeks was 0.16 for 1 psychotherapy visit, 0.26 for 3-9 psychotherapy visits, 0.17 for 1 office visit, 0.19 for 2-3 office visits, 0.28 for SSRI without psychotherapy visits, 0.28 for SSRI with 1-4 psychotherapy visits, 0.33 for SSRI with 4-9 psychotherapy visits, 0.34 for SSRI with 10-24 psychotherapy visits, 0.26 for other more than no treatment, 0.15 for other less than or equal to no treatment, unspecified treatment and no treatment.

Cost results
The costs per episode were: $136 for 1 psychotherapy visit, $561 for 3-9 psychotherapy visits, $52 for 1 office visit, $276 for 2-3 office visits, $305 for SSRI without psychotherapy visits, $502 for SSRI with 1-4 psychotherapy visits, $1,059 for SSRI with 4-9 psychotherapy visits, $1,054 for SSRI with 10-24 psychotherapy visits, $787 for other more than no treatment, $15 for other less than or equal to no treatment, and $740 for unspecified treatment.

Synthesis of costs and benefits
The incremental costs per depression-free case were: $13,600 for 1 psychotherapy visit, $5,095 for 3-9 psychotherapy visits, $2,545 for 1 office visit, $6,864 for 2-3 office visits, $2,351 for SSRI without psychotherapy visits, $3,932 for SSRI with 1-4 psychotherapy visits, $5,876 for SSRI with 4-9 psychotherapy visits, $5,549 for SSRI with 10-24 psychotherapy visits, and $7,174 for other more than no treatment.

Authors' conclusions
The absolute level of spending for the acute-phase treatments with the highest expected outcomes is still relatively modest. The mental health service system devotes a large portion of funds to treatments that accomplish little more than would be accomplished by no treatment. Overall, the analysis suggests that changes in clinical science and the delivery system appear to be yielding improvements in the efficiency of acute-phase treatment for major depression.

CRD COMMENTARY - Selection of comparators
The rationale for the choice of the comparators was clear. You, as a user of this database, should verify whether these health
technologies are relevant to your setting.

**Validity of estimate of measure of benefit**

The probability of being depression-free after sixteen weeks was used as the measure of benefit. The authors did not report the probability of having mild depression, having moderate depression, or of experiencing no improvement after sixteen weeks of treatment. The benefit estimates were based on expert opinion.

**Validity of estimate of costs**

Direct costs falling to the insurance company were included. Indirect costs, such as productivity loss, lost earnings and costs falling to friends and family were excluded. It is unclear to what extent insurance claims represent true opportunity costs. Given that the cost estimates were based on claims data from four firms, costs are likely to be specific to the local setting.

**Other issues**

Sensitivity analysis was conducted and the generalisability of the results to other settings or countries was not discussed. No comparisons with similar studies were made.

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**Other publications of related interest**


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