Physical health and mental health: the economic case for integrated care

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The scale of physical and mental health co-morbidities

Long term conditions: 30% of population of England (approximately 15.4 million people)

Mental health problems: 20% of population of England (approximately 10.2 million people)

30% of people with a long-term condition have a mental health problem (approximately 4.6 million people)

46% of people with a mental health problem have a long-term condition (approximately 4.6 million people)
The cost of physical and mental health co-morbidities

- About 4.6 million people in England have a long-term physical condition and co-morbid mental health problem.

- Co-morbidities are associated with poorer clinical outcomes, lower quality of life, reduced ability to manage physical symptoms effectively and significantly increased costs of care.

- Co-morbid mental illness increases the cost of treating physical illness by around 60% per case, or £2,400 a year.

- Aggregate NHS cost of physical/mental health co-morbidities = £11 billion a year.
Medically unexplained symptoms

- MUS are physical symptoms that do not have a readily identifiable medical cause or are disproportionate to the severity of any underlying medical illness.

- Best understood as the physical representation of psychological distress (somatisation).

- Broad spectrum of presentations.

- Prognosis is good for less serious cases but poor for complex cases, especially functional somatic syndromes (e.g. IBS, CFS).
Prevalence is high in all healthcare settings (e.g. 25% of people in GP surgeries, up to 60% in some hospital outpatient departments)

Use of health services by people with MUS is 2-3 times higher than the national average

Excess use of health services by people with MUS costs the NHS over £3 billion a year (adults of working age only)

Average NHS cost per case = £700 a year, rising to £3,500 a year among the most costly 5%
How much does mental illness cost the NHS?

Costs of mental health care £14 bn.

Extra costs of physical health care £14 bn.
  - co-morbidities £11 bn.
  - MUS £3 bn.

Total cost = £28 billion a year (25% of the NHS budget)
Where do the costs fall?

- 55% on community-based services including primary care
- 45% on general hospitals
- The extra costs in hospital represent 15% of total expenditure in this setting, or £25 million a year for a typical 500-bed general hospital
The evidence base for integrated care

- not a well-researched area, particularly from an economic perspective; the evidence base is incomplete or inconclusive in major respects

- not an easy area to research (complex interventions, heterogeneous groups of patients, multiple outcomes, attribution problems etc.)

- tentative conclusion: integrated care interventions typically achieve only modest improvements in health outcomes but can in some cases produce significant savings in health service costs
About 50% of all inpatients in acute hospitals have diagnosable mental health conditions (most commonly dementia, delirium or depression).

Many of these conditions typically go undetected and untreated (half or more).

In the absence of effective intervention they lead to poorer health outcomes and significantly increased costs of care.
Integrated care in the acute hospital (2)

- Some evidence that a RAID-type liaison psychiatry service (generic, rapid response, 24/7) can significantly reduce bed use, leading to financial savings that exceed the cost of intervention.

- Economic case is strongest in relation to elderly patients, who account for 65% of all inpatient bed-days, with 60% prevalence of co-morbid mental health problems.

- Average length of stay for an elderly patient with mental health co-morbidities is 10 days; good evidence that liaison psychiatry services can reduce this by 2-5 days.

- Limited evidence on the impact of liaison psychiatry services in A&E.
Liaison psychiatry services vary greatly in scale and methods of service delivery, although some evidence of convergence in recent years.

Total NHS spending on these services is currently around £70m a year; in comparison, DH estimate that provision in line with national guidance would cost around £180m a year.

How should these services be funded?
Collaborative care model recommended by NICE for supporting people with long-term conditions and co-morbid depression

Systematic team-based care, including: case management; a structured care management plan; systematic patient management based on protocols and the tracking of outcomes; delivery of care by a multi-disciplinary team including a liaison psychiatrist; and collaboration between primary and specialist care.

Over 100 trials, mainly in the US but some in NHS settings
US modelling based on a systematic evidence review shows that from a societal perspective every $1 invested in collaborative care yields benefits of around $5.

NICE modelling suggests a cost per QALY gained of only around £4,000.

Evidence base is strongest for diabetes and depression; US studies show some net savings in health service costs.

Small local studies of integrated care in this country show promising results for coronary heart disease and COPD as well as diabetes.

Collaborative care is a relatively low-cost intervention, with an annual cost of around £600 per patient.
Improved management of medically unexplained symptoms (1)

Intervention studies provide:

- some evidence that GP training can improve the management of MUS, but little evidence of a positive impact on patient outcomes
- strong evidence that CBT and other structured psychological interventions are consistently effective in improving patient outcomes, including for functional somatic syndromes
- some evidence that psychological treatment can lead to reduced use of health services, but not always fully offsetting the cost of intervention
Primary Care Psychotherapy Consultation Service:

- Outreach service supporting GPs in two London boroughs in the management of patients with MUS and related complex needs

- Provides (1) training and case discussions, and (2) psychological interventions of up to 16 sessions

- Evaluation shows: moderate to large improvements in patient outcomes across a range of measures; an estimated cost per QALY of around £11,000; NHS cost savings of over £460 per patient after 12 months, equivalent to about a third of the cost of treatment; and very high levels of GP satisfaction
The mortality rate among mental health service users is 3.6 times higher than in the general population, equivalent to a gap in life expectancy of 15-20 years.

Most excess mortality is from diseases that are the major causes of death in the general population (circulatory diseases, respiratory diseases, cancer).

Risk factors include smoking, obesity, poor diet, illicit drug use, physical inactivity and long-term anti-psychotic use.

Poor detection and treatment of physical ill-health among people with severe mental illness lead to heavy use of emergency care (3.2 times more A&E attendances and 4.9 times more unplanned inpatient admissions than among population controls).
Improving the physical health of people of severe mental illness (2)

- Improvements require a mix of service-level responses and increased provision of specific interventions
- Medical liaison in psychiatric inpatient facilities (West London; Highgate)
- Annual physical health checks in primary care (Bradford)
- Smoking cessation services:
  - just as effective as in the rest of the population
  - low cost (£450 for a multi-component intervention)
  - cost saving over time for the NHS
  - gain in life expectancy of 7 years per successful quitter