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

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The scale of physical and mental health co-morbidities

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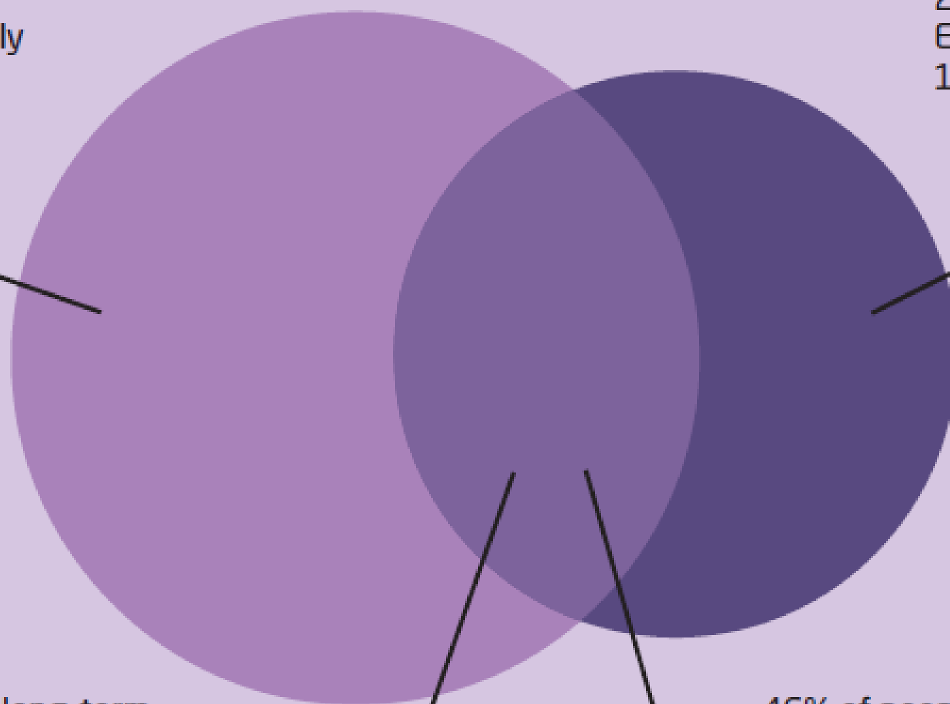
Long term conditions:
30% of population of England (approximately 15.4 million people)

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

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- 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

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- 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)

Scale and cost of MUS

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- 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?

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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?

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- 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

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- 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

Integrated care in the acute hospital (1)

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- 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)

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- 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

Integrated care in the acute hospital (3)

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- 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?

Integrated care in the community (1)

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- 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

Integrated care in the community (2)

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- 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)

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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

Improved management of medically unexplained symptoms (2)

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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

Improving the physical health of people with severe mental illness (1)

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- 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)

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- 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