KING'S College LONDON

INSTITUTE OF PSYCHIATRY,
PSYCHOLOGY & NEUROSCIENCE

Module:
Mental Health in the Community

Week 3:
The epidemiology and burdens of mental disorder

Dr Frank Holloway

Topic 3:
The societal burden of mental ill-health

Topic list

This week, we will be looking at the following topics:

- Topic 1: Epidemiology of mental disorder

- Topic 2: The burden of mental ill-health for the individual

- *Topic 3: The societal burden of mental ill-health*

Click **Next** to continue

The societal burden of mental ill-health

Previously we discussed:	In this lecture we will discuss the societal burden of mental health
• The burden of mental illness on the individual • The disability-adjusted life year (DALY)	• The WHO Global Burden of Disease (GBD) headlines • Epidemiology revisited • The economic impact of mental disorder • The Global Burden of Disease (GBD) and Mental Health Revisited

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WHO global burden of disease: The headlines

Mental disorders are **a leading cause of disability** across the world – not usually fatal but cause long-term disability.
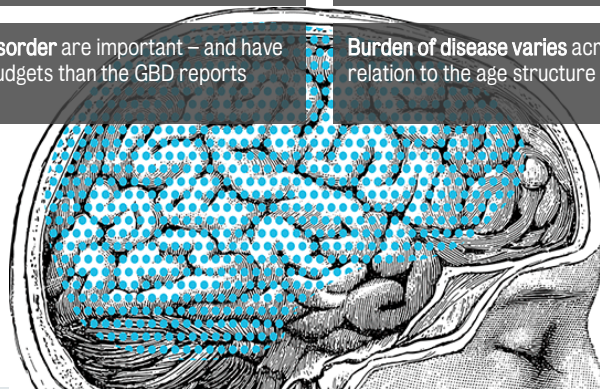
WHO uses the **"Disability Adjusted Life Year"** as an index of disability.

The most disabling mental disorder is **depression** (because it's common and disabling).

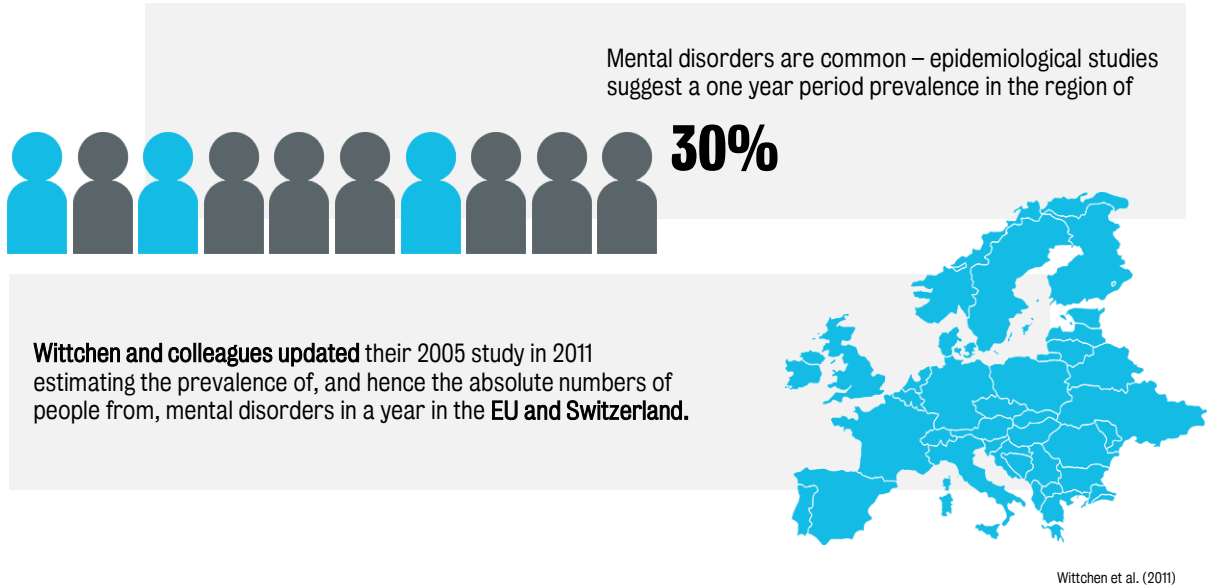**Dementia** will come an ever larger source of disability.

Schizophrenia and **bipolar disorder** are important – and have a greater impact on health budgets than the GBD reports acknowledge.

Burden of disease varies across countries – particularly in relation to the age structure of the population.

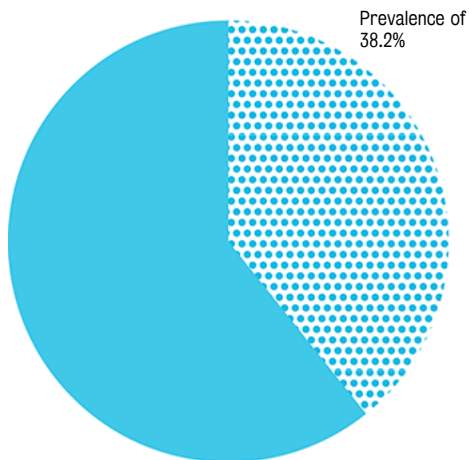Mathers et al. (2008)

Epidemiology revisited (1)

Mental disorders are common – epidemiological studies suggest a one year period prevalence in the region of

30%

Wittchen and colleagues updated their 2005 study in 2011 estimating the prevalence of, and hence the absolute numbers of people from, mental disorders in a year in the **EU and Switzerland.**

Wittchen et al. (2011)

Epidemiology revisited (2)

Prevalence of 38.2%

Estimates went up between 2005 and 2011 because they widened the age range considered and scope of disorders.

Headline figure: 1 year period prevalence of 38.2% - taking into account childhood disorders, personality disorders and dementia – a total of 164.8m EU and Swiss citizens.

Wittchen et al. (2011)

Wittchen et al. (2011)

Condition	One-year prevalence (%)
Psychosis	1.2
Bipolar	0.8
Major depression	6.9
Anxiety disorders	15
Dementia	1.2
Autism/PDD	0.6
Mental retardation	1.0

Highly-detailed study.

Provides percentage and absolute number of people with mental disorders in the EU and Switzerland.

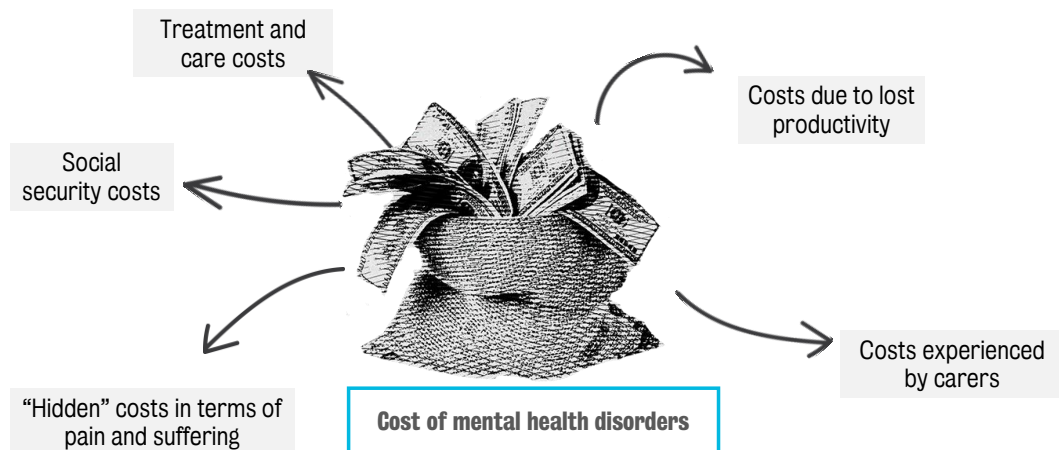These are best estimates based on available data.

Wittchen et al. (2011)

Economic impact of mental health disorders (1)

Treatment and care costs

Costs due to lost productivity

Social security costs

Costs experienced by carers

"Hidden" costs in terms of pain and suffering

Cost of mental health disorders

Bloom et al. (2011); Insel (2011)

Economic impact of mental health disorders (2)
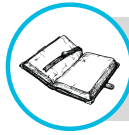
World Economic Forum: Global Economic Burden of Non-communicable Diseases (2011)

Estimates global cost of mental illness at nearly $2.5T (two-thirds indirect costs) in 2010, with a projected increase to over $6T by 2030.

Thomas Insel:
What does $2.5T or $6T mean?

- Entire global health spending in 2009 was $5.1T

- The annual GDP for low-income countries is less than $1T

- Entire US overseas development aid over past 20 years < $2T

Bloom et al. (2011); Insel (2011)

homas Insel

Methods of measuring prevalence

How to do we measure prevalence?

We have a number of studies estimating the burden of mental disorders by different working groups using differing methodologies.

Broadly speaking, you:
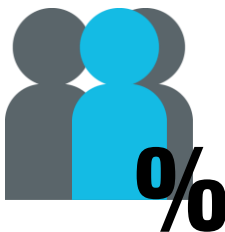
Estimate prevalence

Weight disorders

Account for premature mortality

Disability-adjusted life years (DALYs)

$$DALY = (\text{Prevalence} \times \text{Weighting*}) + \text{Years of Lost Life}$$

Disability-adjusted life years:
YLL + YLD

Years Lived with Disability (YLD):
prevalence of disorder x disability weight for condition*

Years of Lost Life (YLL):
impact of premature mortality

The conceptual opposite of utility – perfect health gives a weight of 0 – extreme ill-health a weight of 1

Whiteford et al. (2015)

Summary statistics from global mental health studies (1)

	DALYs (millions)	% mental health DALYs, world	Disorder	Proportion of mental, neurological, and substance use DALYs (%)
All neuropsychiatric disorders	**199**			
Unipolar depressive disorders	65	32.9	Major depression	24.5
Bipolar affective disorder	14	7.2	Bipolar disorder	5.0
Schizophrenia	17	8.4	Schizophrenia	5.3
Epilepsy	8	3.9		
Alcohol use disorders	24	11.9	Alzheimer's dementia	4.4
Alzheimer and other dementias	11	5.6		
Parkinson disease	2	0.9		
Multiple sclerosis	2	0.8		
Drug use disorders	8	4.2		
Post-traumatic stress disorder	3	1.7		
Obsessive-compulsive disorder	5	2.6		
Panic disorder	7	3.5		
Insomnia (primary)	4	1.8		
Migraine	8	3.9		

Take a moment to study the table. Then, click **Next** to continue

Bloom et al. (2011); Whiteford et al. (2015)

Summary statistics from global mental health studies (2)

TABLE 1 | GLOBAL BURDEN OF MENTAL, NEUROLOGICAL AND SUBSTANCE-USE (MNS) DISORDERS*

Rank	Worldwide Cause	DALYs[‡] (millions)	High-income countries[†] Cause	DALYs (millions)	Low- and middle-income countries Cause	DALYs (millions)
1	Unipolar depressive disorders	65.5	Unipolar depressive disorders	10.0	Unipolar depressive disorders	55.5
2	Alcohol-use disorders	23.7	Alzheimer's and other dementias	4.4	Alcohol-use disorders	19.5
3	Schizophrenia	16.8	Alcohol-use disorders	4.2	Schizophrenia	15.2
4	Bipolar affective disorder	14.4	Drug-use disorders	1.9	Bipolar affective disorder	12.9
5	Alzheimer's and other dementias	11.2	Schizophrenia	1.6	Epilepsy	7.3
6	Drug-use disorders	8.4	Bipolar affective disorder	1.5	Alzheimer's and other dementias	6.8
7	Epilepsy	7.9	Migraine	1.4	Drug-use disorders	6.5
8	Migraine	7.8	Panic disorder	0.8	Migraine	6.3
9	Panic disorder	7.0	Insomnia (primary)	0.8	Panic disorder	6.2
10	Obsessive–compulsive disorder	5.1	Parkinson's disease	0.7	Obsessive–compulsive disorder	4.5
11	Insomnia (primary)	3.6	Obsessive–compulsive disorder	0.6	Post-traumatic stress disorder	3.0
12	Post-traumatic stress disorder	3.5	Epilepsy	0.5	Insomnia (primary)	2.9
13	Parkinson's disease	1.7	Post-traumatic stress disorder	0.5	Multiple sclerosis	1.2
14	Multiple sclerosis	1.5	Multiple sclerosis	0.3	Parkinson's disease	1.0

*Data from ref. 1. Examples of MNS disorders under the purview of the Grand Challenges in Global Mental Health initiative.
[†]World Bank criteria for income (2009 gross national income (GNI) per capita): low income is US$995 equivalent or less; middle income is $996–12,195; high income is $12,196 or more.
[‡]A disability-adjusted life year (DALY) is a unit for measuring the amount of health lost because of a disease or injury. It is calculated as the present value of the future years of disability-free life that are lost as a result of the premature deaths or disability occurring in a particular year.

Take a moment to study the table. Then, click Next to continue

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Wittchen et al. (2011) revisited (1)

Provides European context for the global burden of mental disorder

The size and burden of mental disorders and other disorders of the brain in Europe 2010

669

Males: Total neuropsychiatric: 23.4%

Females: Total neuropsychiatric: 30.1%

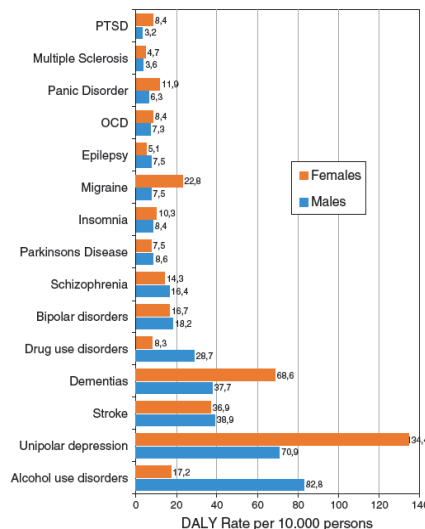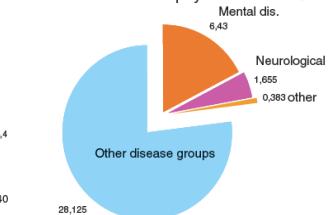### Major disorders in Europe:

1. Unipolar depression
2. Dementias
3. Schizophrenia
4. Bipolar disorder

Wittchen et al (2011)

Take a moment to study the table. Then, click Next to continue

Wittchen et al. (2011) revisited (2)

Conclusions:

"The DALY analyses presented in this report provide considerably improved measures that are specific for the EU and that should be used as a future standard reference."

The new estimates:

Confirm that **disorders of the brain** are the major contributor to the total EU disease burden.

Show that there are **tremendous diagnosis-specific differences**, and highlight that even seemingly "less serious" disorders are associated with substantial degree of disability.

Reveal that **depression** – in contrast to the previous projections – is already now **the most important single contributor** to the total disease burden.

Confirm the existence of substantially different disability **differences between females and males**.

Wittchen et al. (2011)

Importance of GBD data

Global Burden of Disease (GBD) data is important because:

Helps policy-makers understand the impact of mental disorder at a population level.

Shows us that mental disorders constitute the most important category of non-communicable disease (NCD) in terms of burden of disease.

Provides an argument for investment in mental health research and mental health services.

World Economic Forum (2011) conclusions

"Economic policy-makers are naturally concerned about economic growth. The evidence presented in this report indicates that it would be illogical and irresponsible to care about economic growth and simultaneously ignore NCDs. Interventions in this area will undeniably be costly. But inaction is likely to be far more costly"

WORLD ECONOMIC FORUM WEF

WEF, 2011
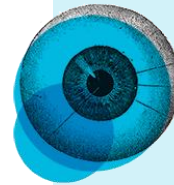
Mental disorders are the most significant NCDs.

This is a "call to arms" for investment in provision, services and research into intervention.

Bloom et al. (2011)

What to do about the societal burden

In the face of the combination of individual suffering and societal burden…

What do we do?
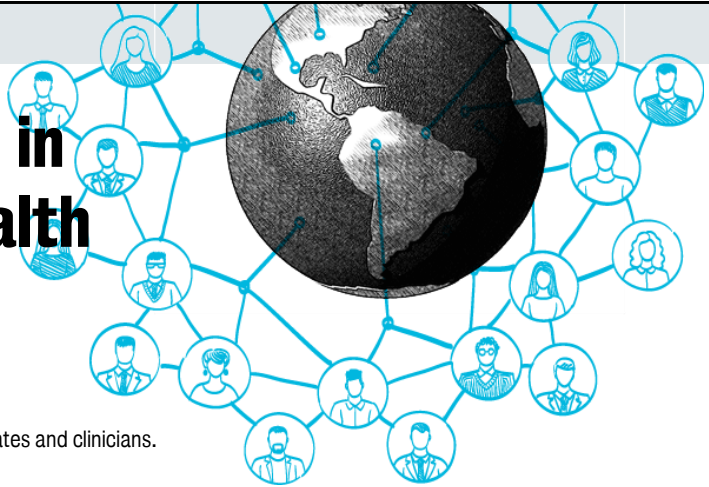
Research agenda   **Policy agenda**   **Practice agenda**

Grand Challenges in Global Mental Health

Grand Challenges in Global Mental Health

Launched in 2010.

Is a consortium of mental health researchers, advocates and clinicians.

Announced, in a 2011 Nature paper, a series of research priorities for improving the lives of people with mental illness around the world.

Calls for urgent action and investment to tackle global mental health issues.

Set out a series of challenges, detailed research issues and goals.

Collins et al. (2011)

Grand challenges in global mental health: Goals

Identify root causes, risk and protective factors.

Advance prevention and implementation of early interventions.

Improve treatments and expand access to care.

Raise awareness of the global burden.

Build human resource capacity.

Transform health-system and policy responses.

GOALS

Collins et al. (2011)

The way forward

What's the Way Forward? My Personal View:

Mental health problems are important at a global level.

1 Relatively simple interventions can have a very positive impact on outcomes.

> Though the jury is still out on the real-world efficacy of the English IAPT model, which promises psychological therapy for all.

2 Some experience severe and enduring "mental health problems" that do not respond well to simple interventions.

> These people should generally be treated by specialist services.

3 Despite policy emphasis towards prevention and early intervention, there is rather little evidence that it works.

> Though it is having a profound effect on Child and Adolescent Mental Health Services in England.

4 Further research into "potentially modifiable risk factors" is needed.

> Examples of risk factors: exposure to child sexual abuse, substance misuse, unemployment (a significant precipitant of suicide).

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End of topic