Population Studies in Mental Disorders: Unmet Needs and Perspectives for Service Planning

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October 25, 2007

Population studies provide information about

- prevalence and distribution of untreated disorders
- societal costs of these disorders
- modifiable barriers to treatment
- types of treatment received

Why are population studies especially important in psychiatry?

- Greater psychological barriers to seeking treatment for mental than physical disorders
- Much greater variety (and quality) of treatments than for physical disorders

WHO World Mental Health (WMH) Survey Consortium

- Consortium of parallel mental health needs assessment surveys in 28 countries
- All regions of the world
- Over 200,000 interviews

Overview of presentation

- Review WMH prevalence findings

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- Compare treatment rates for mental and physical disorders

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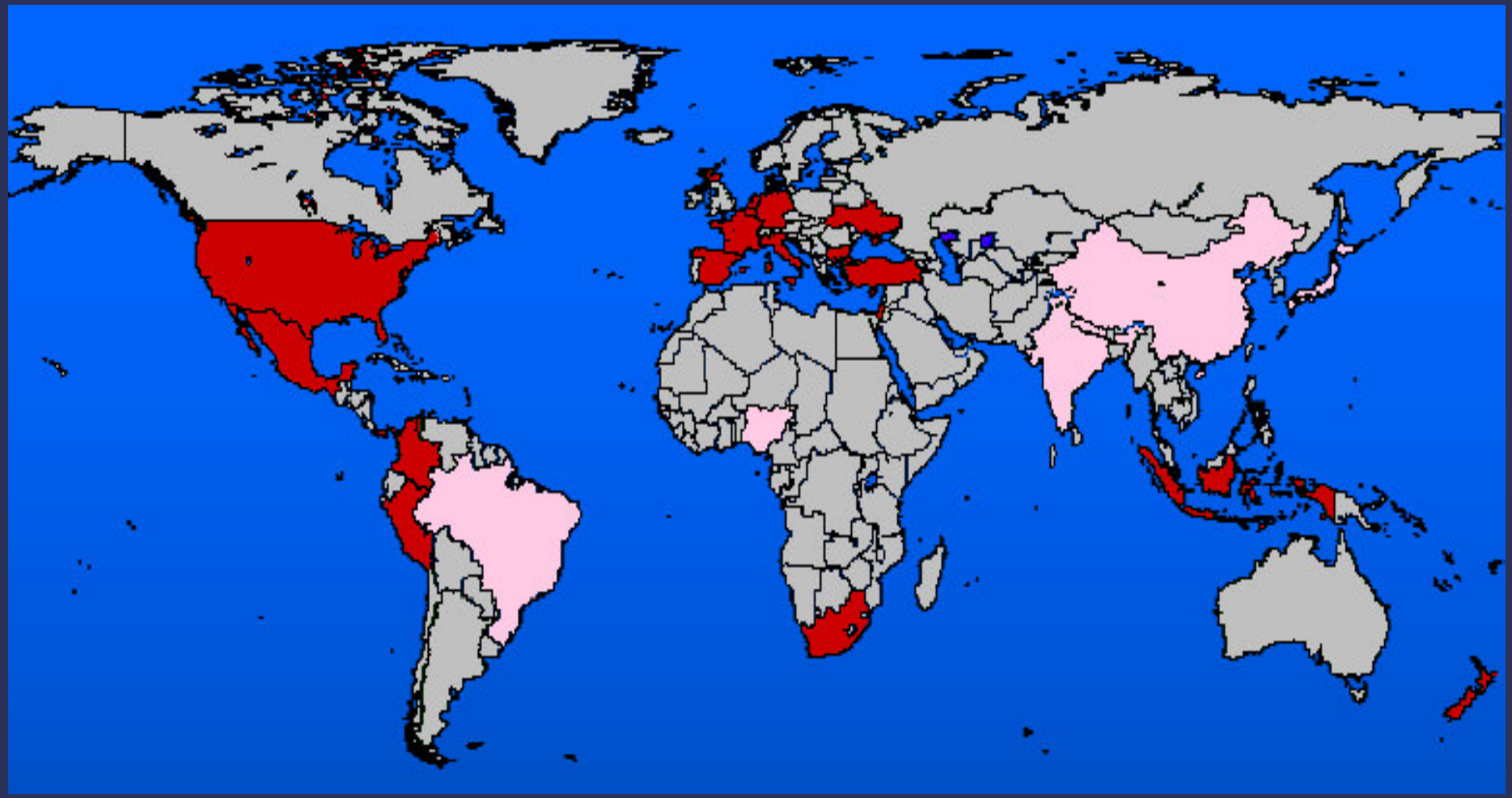
- Review WMH prevalence findings
- Compare treatment rates for mental and physical disorders
- Compare societal costs of mental and physical disorders
- Examine treatment adequacy and cost-effectiveness

WMH countries



National Probability Sample

Regional Probability Sample

The WMH study design

- Nationally or regionally representative household surveys
- Adults 18 and older
- Subsamples of spouses of target respondents
- Standardized interviewer training and monitoring
- Standardized face-to-face interviews

The WMH study design

- Sample of at least 5000 interviews per country
- Both CAPI and PAPI versions
- Shared training, quality control, and data processing protocols

Unique aspects of WMH

- Large scale, worldwide
- Same design, translation methods, training, and quality control protocols
- CIDI enhancements
- Clinical follow-up

The core descriptive goals of WMH

To estimate…

- Prevalence of mental disorders
- Societal burdens of mental disorders
- Comparative burdens of physical and mental disorders
- Rates of unmet need for treatment
- Rates of treatment adequacy

The core analytic goals of WMH

To examine…

- Modifiable risk factors for onset and course of mental disorders
- Barriers to seeking treatment
- Predictors of treatment dropout
- Predictors of treatment adequacy

Core nosological goals

To support changes in DSM-V and ICD-11 by…

- Searching for evidence of taxonicity
- Examining effects of threshold variation on external validators

The social policy audiences of WMH

- Government policy makers
- Employers
- Citizens

Initial WMH findings

- Mental disorders are highly prevalent.
- They are often seriously impairing.
- They affect not only the people with the disorders, but also their families, friends, and coworkers.

Twelve-month prevalence of selected DSM-IV disorders in the WMH countries

	Developed	Developing
ADHD	0.7	0.2
Bipolar	1.4	0.7
Depression	5.7	5.2
GAD	2.4	1.4
IED	1.1	1.8
ODD	0.2	0.2
Panic disorder	1.6	0.7
PTSD	2.3	0.9
Social phobia	4.1	1.9
Specific phobia	6.9	3.4

WMH definitions of severity

Severe	NAP, BPI, physiological substance dependence syndrome, serious suicide attempt, severe role impairment in multiple roles (GAF < 50)
Moderate	Any disorder with serious role impairment (GAF < 60)
Mild	Any other

Proportion of 12-month cases that are severe

I. Americas

Colombia, Mexico, United States	29-30%

II. Europe

Belgium, France, Germany, Italy, Netherlands, Spain, Ukraine	11-24%

III. Middle East and Africa

Lebanon, Nigeria	9-27%

IV. Asia

Japan, People's Republic of China (Beijing and Shanghai)	10-26%

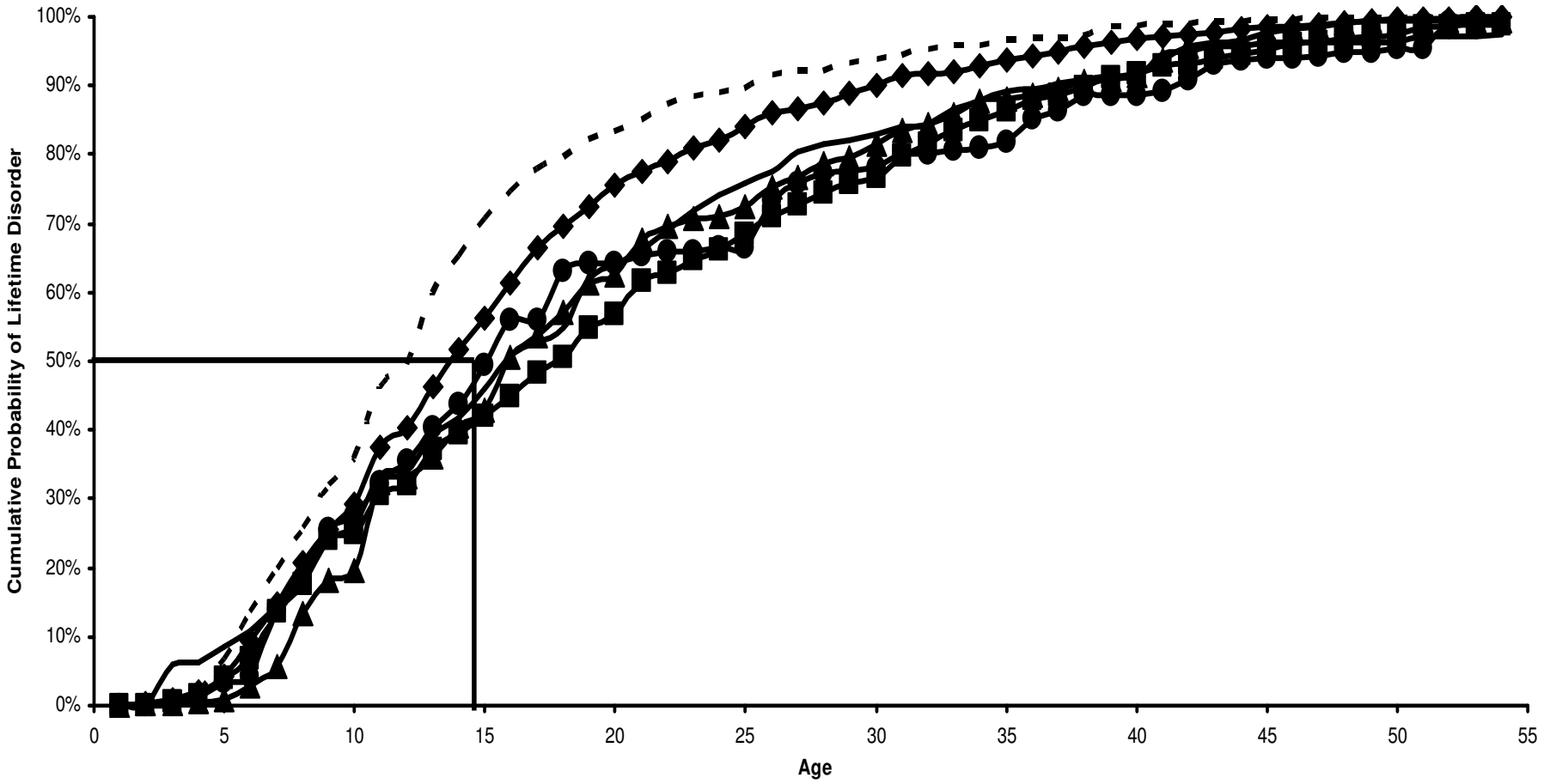
WMH severity and days out of role

Severe	32 - 81
Moderate	9 - 19
Mild	0 - 4

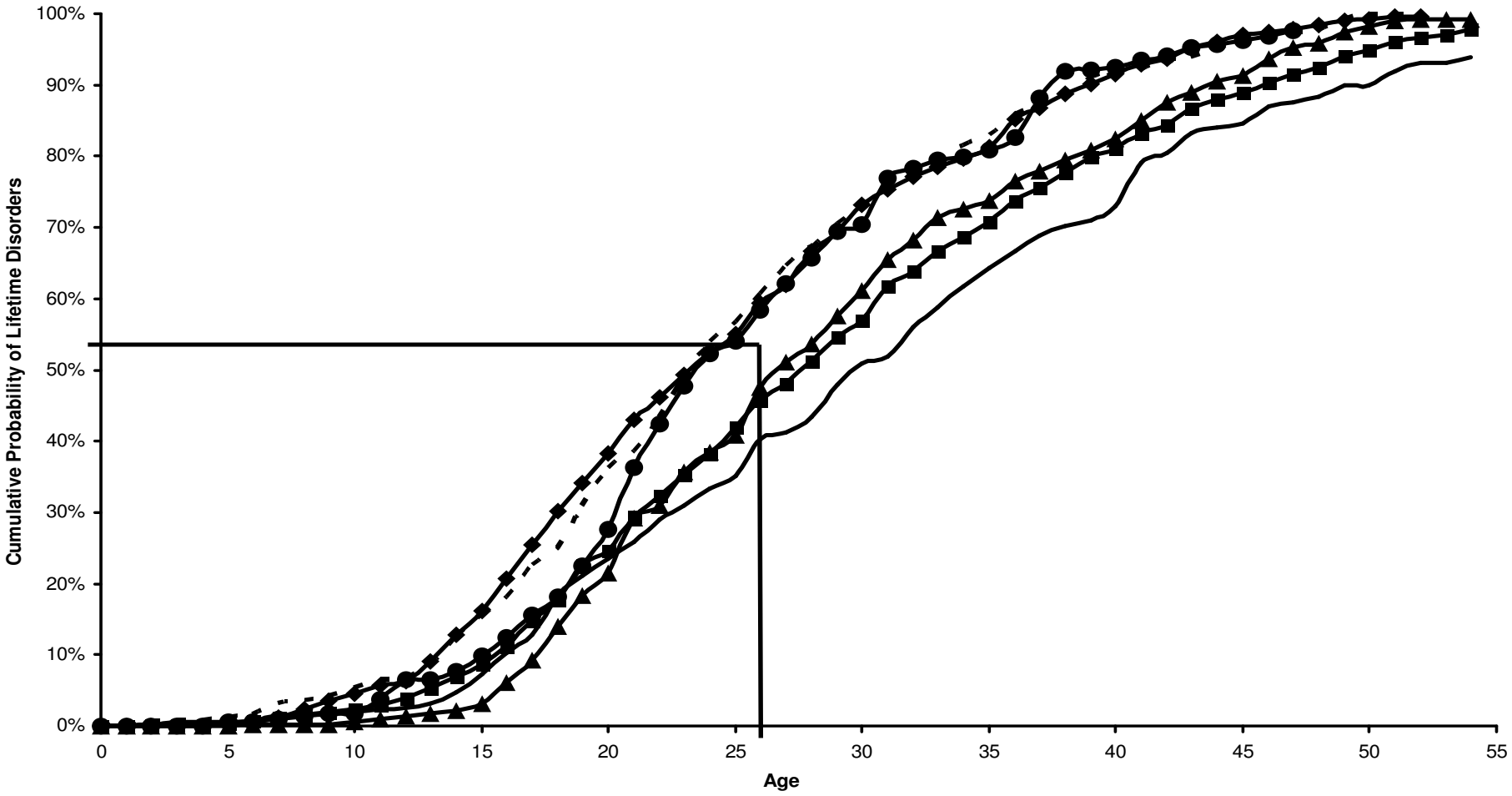
Initial WMH findings (cont.)

- The most serious mental disorders usually begin in childhood or adolescence.
- They are usually not severe when they begin.
- More typically, they become severe over time.

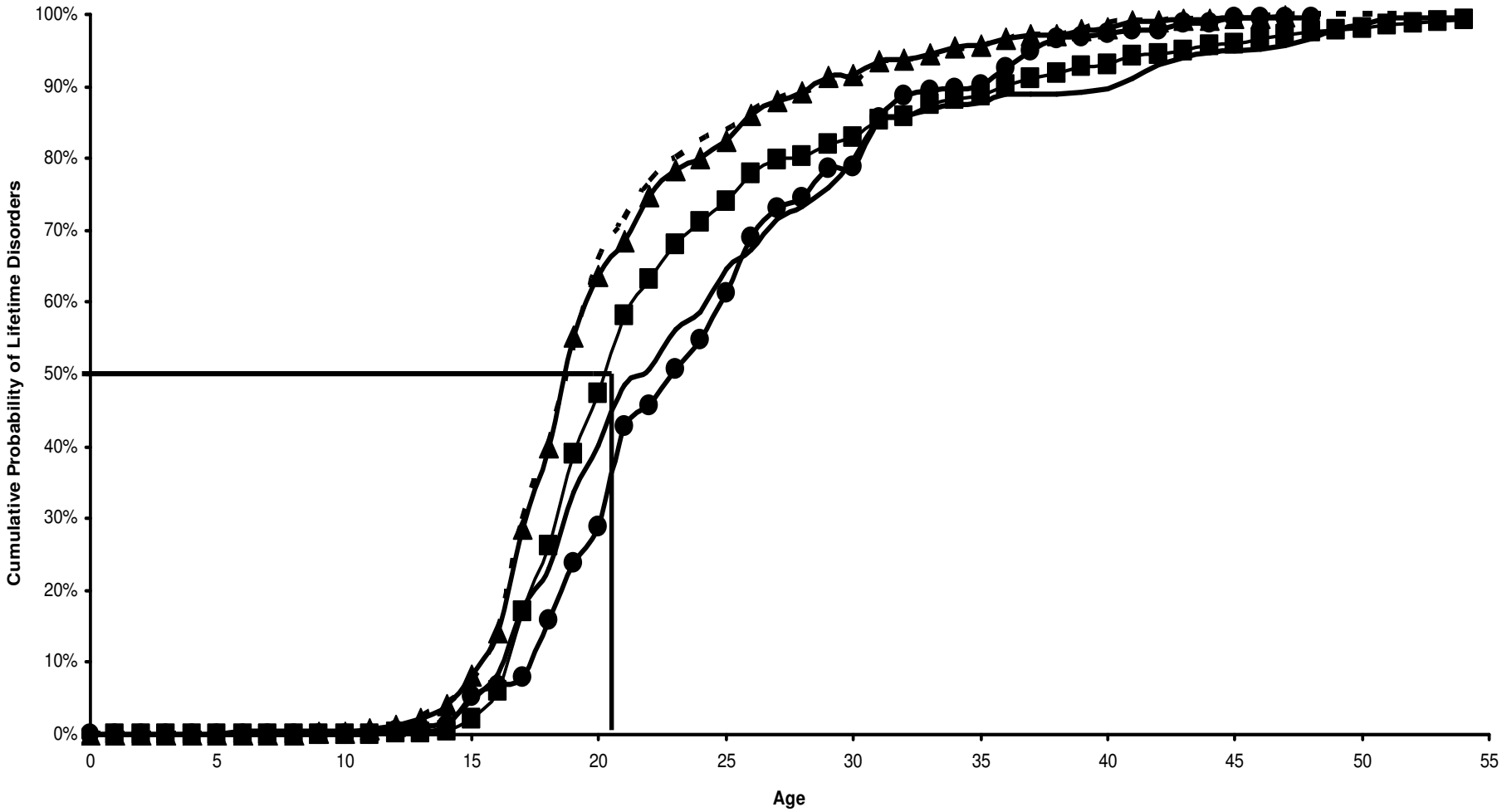
AOO distributions – anxiety disorders



AOO distributions – mood disorders



AOO distributions – substance disorders



Associations (odds-ratios) between 1992 illness severity and 2002 outcomes

	Hospitalization	Suicide Attempt	Any[1]
	OR	OR	OR
Severe	29.7*	11.7*	15.1*
Moderate	3.0*	2.9*	3.8*
Mild	2.7*	2.0	2.4*
Non-Cases	1.0	1.0	1.0

[1] Hospitalization, work disability, suicide attempt, or serious mental illness.

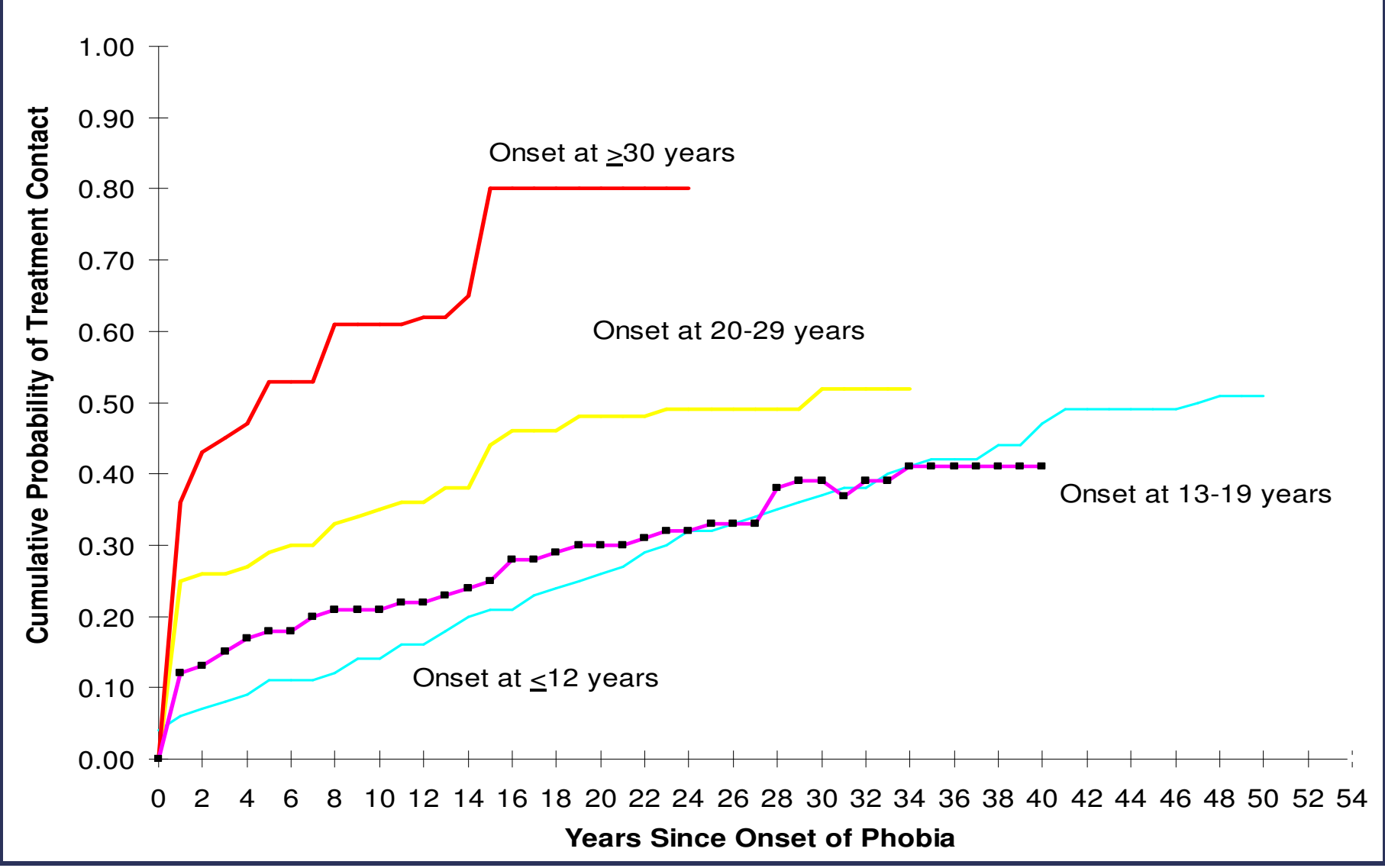
Initial WMH findings (cont.)

- Most chronic cases eventually get treatment.
- Treatment delays are pervasive.
- Treatment quality is often poor.
- Demonstration projects show that treatment quality can be improved.

Lifetime treatment percent and median years between onset and treatment

	Treatment %	Median Delay
Panic Disorder	70-90	1-4
GAD	60-82	4-6
Major Depression	63-92	5-8
Addictive Disorder	35-51	10-14

Speed of initial treatment contact by age at onset (phobias)



Adequacy of 12-month treatment by severity, US 2002

	Total Sample	Treatment Sample
	%	%
Severe	32.7	47.4
Moderate	14.5	35.0
Mild	10.3	28.8

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- We need to develop school-based early screening, outreach, and treatment programs.

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- Long-term evaluations of developmental effects.

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- Quality assurance programs need to be embraced by payers.

How can purchasers be motivated to invest in quality treatment of mental disorders?

- Documentation of high societal cost

How can purchasers be motivated to invest in quality treatment of mental disorders?

- Documentation of high societal cost
- Documentation of treatment cost-effectiveness

The workplace costs of mental disorders

- The WMH data show that mental disorders are among the most costly conditions to the workplace in terms of sickness absence, low productivity on the job, disability, and accidents-injuries

- These indirect workplace costs substantially exceed the costs of treatment for commonly occurring and impairing conditions such as major depression, bipolar spectrum disorder, and adult ADHD

Disorders in the comparative analysis of impairments in physical and mental disorders

Physical	Mental
Arthritis	ADHD
Asthma	Bipolar
Back/neck	Depression
Cancer	GAD
Chronic pain	IED
Diabetes	ODD
Headaches	Panic disorder
Heart disease	PTSD
High blood pressure	Social phobia
Ulcer	Specific phobia

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- Parallel information was collected about each of the 10 mental disorders.
- Physical-mental comparisons were made both in the aggregate and in within-person paired analyses.

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- This pattern held whether we examined all disorders, those in treatment, or physical disorders in treatment compared to all mental disorders.
- The higher impairment of mental than physical disorders was more pronounced for social and personal relationships than for productive role functioning.
- Despite the higher impairments, only 11.9% of the seriously impairment mental disorders were treated in the developing countries vs. 64.0% of comparably impairing physical disorders. In the developed world, the comparable proportions were 35.3% mental disorders vs. 77.6% physical disorders.

But is treatment cost-effective in reducing these burdens?

Example: Change in Benefit Design for Mental Disorders

Change in Sick Days 1993-1995

	% Change in sick days
Mental health users	21.9%
Non-mental health users	1.4

Rosenheck et al. (1999)

Example: Change in Benefit Design for Mental Disorders (cont.)

Change in Non-Mental Health Care Costs
1993-1995

	% Change
Mental health users	36.6%
Non-mental health users	1.4

Rosenheck et al. (1999)

Example: Change in Benefit Design for Mental Disorders (cont.)

Change in Total Health Costs 1993-1995

	% Change
Mental health users	$355
Non-mental health users	-54

Rosenheck et al. (1999)

The Cost-Effectiveness of a Model Depression Disease Management Program

- HRA screening for depression
- Care manager outreach calls
- Stages of change recruitment and retention
- Best practices treatment

Wang et al. (2007)

Telephone screening, outreach, and care management for depressed workers and impact on clinical and work productivity outcomes: a randomized controlled trial

Philip S. Wang MD, DrPH, Gregory E. Simon MD, MPH, Jerry Avorn MD, Francisca Azocar PhD, Evette J. Ludman PhD, Joyce McCulloch MS, Maria Z. Petukhova PhD, Ronald C. Kessler PhD

JAMA, 298(12), 1401-1411.

The Cost-Effectiveness of a Model Depression Disease Management Program (cont.)

- Positive ROI within six months
- “Profit” on investment continues to grow at 12 months

Wang et al. (2007)

What can we learn from population studies?

- Mental disorders are highly prevalent

What can we learn from population studies?

- They are often seriously impairing

What can we learn from population studies?

- Even mild disorders often become more serious over time and should be treated before they become seriously impairing

What can we learn from population studies?

- The percent of cases in treatment is low

What can we learn from population studies?

- Treatment is often of low quality

What can we learn from population studies?

- Treatment resource allocation in most countries is out of line with the high societal burden of mental disorders

What can we learn from population studies?

- Treatment expansion, when coupled with quality improvement initiatives, can have a positive return on investment from a societal perspective

What can we learn from population studies?

- Treatment demonstration programs linked to epidemiological surveys are needed to demonstrate the value to employers and to society of expanding treatment of common mental disorders

www.hcp.med.harvard.edu/wmh