Research to Improve Lives

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National Institute of Mental Health

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Transforming the understanding and treatment of mental illnesses through basic and clinical research, paving the way for prevention, recovery, and cure.

New US Clinical Data on Mental Disorders

A new clinical study provides national data on past-year prevalence of specific mental disorders in adults.

Read More
We envision a world with…

• Equity in mental health care and status regardless of geography, sex, gender, race, ethnicity, or socioeconomic status

• A vibrant, diverse mental health research workforce in the US

• Equitable collaborations for the conduct of mental health research globally
Challenge: 

*Reduce the burden of mental illness worldwide.*
Top 10 Leading Disease/Disorder Categories Contributing to Global YLDs (2010)

1. Neuropsychiatric Disorders: 22.7%
2. Musculoskeletal Disorders: 21.3%
3. Other Non-communicable Diseases: 11.2%
4. Diabetes, Urogenital, Blood, and Endocrine Diseases: 7.3%
5. Nutritional Deficits: 6.4%
6. Chronic Respiratory Diseases: 6.3%
7. Unintentional Injuries (Other than Transport Injuries): 3.4%
8. Neglected Tropical Diseases and Malaria: 2.9%
9. Cardiovascular and Circulatory Diseases: 2.8%
10. Diarrhea, Lower Respiratory Infections, Meningitis, and Other Common Infectious Diseases: 2.6%

Percentage of years lived with disability (YLDs) by 21 major cause groupings and region for 2010

Challenge:

Deliver mental health care that is adequate and equitably distributed worldwide.
### Inequity in Investments and Staffing

#### Median mental health DALYs and expenditures per capita (USD) by World Bank income group

<table>
<thead>
<tr>
<th>World Bank Income Group</th>
<th>Mental Health DALYs</th>
<th>Median Mental Health Expenditures per Capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>19,999</td>
<td>0.2</td>
</tr>
<tr>
<td>Lower-Middle</td>
<td>69,653</td>
<td>0.59</td>
</tr>
<tr>
<td>Upper-Middle</td>
<td>69,609</td>
<td>3.76</td>
</tr>
<tr>
<td>High</td>
<td>40,234</td>
<td>44.84</td>
</tr>
</tbody>
</table>

*2004 figures from World Health Organization [4].

**2011 figures from World Health Organization Mental Health Atlas [5].

#### Median rate of mental health providers per 100,000 people

<table>
<thead>
<tr>
<th>World Bank Income Group</th>
<th>Psychiatrists</th>
<th>Psychologists</th>
<th>Psychiatric Nurses</th>
<th>Social Workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>0.05</td>
<td>0.02</td>
<td>0.42</td>
<td>0.01</td>
</tr>
<tr>
<td>Lower-middle</td>
<td>0.54</td>
<td>0.14</td>
<td>2.93</td>
<td>0.13</td>
</tr>
<tr>
<td>Upper-middle</td>
<td>2.03</td>
<td>1.47</td>
<td>9.72</td>
<td>0.76</td>
</tr>
<tr>
<td>High</td>
<td>8.59</td>
<td>3.79</td>
<td>29.15</td>
<td>2.16</td>
</tr>
</tbody>
</table>
Grand Challenges in Global Mental Health

Top 5 challenges:

- Screening & core services in primary care
- Affordable & available supply of effective medications
- Effective & affordable community-based care & rehabilitation
- Greater access to evidence-based care for children in LMICs
- Better mental health training for all health-care providers

Mental Health Innovations Underway

Brain Disorders in the Developing World
Mental Health & Poverty Project
Collaborative Hubs
PRIME
EMERALD
Integrated Care
Grand Challenges Canada
Expanding access to mental health care globally ...

Collaborative Hubs for International Research on Mental Health

- **AFFIRM**: South Africa*, Ethiopia, Ghana, Malawi, Uganda, Zimbabwe
- **Pam-D**: Nigeria*, South Africa, Kenya, Ghana, Liberia
- **SHARE**: India*, Pakistan, Afghanistan, Bangladesh, Nepal, Sri Lanka
- **RedeAmericas**: Chile*, Brazil, Argentina, Colombia

* indicates countries with a presence or focus.

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*The real challenge is not to invent but to implement.*

Challenge:

*Develop mental health care that is a lot — not just a little — more effective.*
RAISE Study Reveals More Effective Way To Treat Schizophrenia: How The Treatment Works

Results from the Recovery After an Initial Schizophrenia Episode (RAISE) study, published Tuesday in the American Journal of Psychiatry and spearheaded by the National Institute of Mental Health (NIMH), suggested …

Tech Times · 10/21/2015

'SGame-Changer' Study Says There's A Better Way To Treat Schizophrenia

A groundbreaking new study adds to a growing body of evidence that people with schizophrenia can do much better if they get the right treatment at … as the name suggests, is to reach patients shortly after they first …

The Huffington Post · 10/21/2015

Schizophrenia is Best Treated with Combination of Meds & Psychotherapy

Going against decades of conventional wisdom, new, robust research from the National Institute of Mental Health suggests that schizophrenia ... started the combined treatment after that first episode, the better they did …

Psych Central · By John M. Grohol · 10/23/2015

New Approach Advised to Treat Schizophrenia

More than two million people in the United States have a diagnosis of schizophrenia ... The sooner people started the combined treatment after that first episode, the better they did, the study found. The average time …

New York Times · By Benedict Carey · 10/20/2015
Delivering the right care at the right time …

On-line Resources for Coordinated Specialty Care:

- Webinars
- Guides, Manuals, Program Resources
- Videos
- Interactive Planning Tool

Integrating mental health and other health care …

Mental Health and Chronic Disease Care in Low-Resource Settings

- **Tanzania** - Healthy Options: Group psychotherapy for HIV-positive depressed perinatal women
- **India** - Integrated care for co-morbid depression and diabetes in India
- **China** - The depression hypertension COACH study
- **South Africa** - COBALT: Comorbid Affective Disorders, AIDS/HIV, and Long Term Health
- **China** - Integrating depression care for heart patients in low-resource hospitals in China
- **India** - Improving mental health through integration with primary care in rural Karnataka
Building evidence for taking action to prevent suicide...

A Prioritized Research Agenda for Suicide Prevention: An Action Plan to Save Lives
Research Prioritization Task Force

www.suicide-research-agenda.org

SOURCES: Bureau of Justice Statistics (homicide data); Centers for Disease Control and Prevention (suicide data); National Action Alliance: http://actionallianceforsuicideprevention.org/
Reducing suicide in circumpolar communities …

RISING SUN
Reducing the Incidence of Suicide in Indigenous Groups – Strengths United through Networks

Sources: National statistical agencies including the National Center of Health Statistics (USA), Statistics Canada, Statistics Iceland, Statistics Norway, Socialstyrelsen (Sweden), Statistics Finland and Rosstat (Russia); and international databases (NOMESCO, Eurostat).

Challenge:

**Improve the health and longevity of people with severe mental illness.**
Improving health for people with severe mental illnesses …

• Self-Management Training and Automated Telehealth to Improve SMI Health Outcomes

• Extended Care for Smoking Cessation Following Psychiatric Hospitalization

• Trial of Integrated Smoking Cessation, Exercise, and Weight Management in SMI

• Peer-Led Healthy Lifestyle Program in Supportive Housing

• Fixed Dose Intervention Trial of New England Enhancing Survival in SMI Patients
Challenge:
Collaborate to find better solutions faster.
Mapping the circuits of the brain ...

The human brain has 86 billion neurons along with other cells that make more than 100 trillion connections.
Building precision medicine...

**NIH opens precision medicine study to nation**

Panel's plan would allow anyone living in the United States to join million-strong effort

By Josephine Katz

The White House has a plan to carry out the study of more than 1 million people for what may become the world's largest study of how genes influence disease risks and drug responses. Plans for the study came into focus last week with the release of a blueprint from a panel of human geneticists, medical researchers, and other experts. It means that NIH will recruit participants not only through academic medical centers and health care organizations, but also by using an open invitation to anyone living in the United States.

NIH Director Francis Collins, the project, known as the Precision Medicine Initiative (PMI) Cohort Program, brings an idea that several years ago I am so excited to see this dream come to life,” Collins said in a statement released after he accepted the recommendations. Outside researchers also approve. “I think the working group really got this right with the concept that this is a new way to do precision medicine, and the results will be better,” says pharmacogenomics researcher Dan Kasten of Vanderbilt University in Nashville, Tennessee. For whether NIH can design and effectively manage such a massive endeavor remains an open question. It recently unveiled a large-scale, multi-year study of 100,000 children after ethics doubts (Science, 30 December 2016, p. 1441). President Obama gave Collins a boost in January when he called for the United States to join the project, the world's single largest research effort on human health.

A New Initiative on Precision Medicine

Francis S. Collins, M.D., Ph.D., and Harold Varmus, M.D.
Developing better treatments ...

On average, a psychiatric drug works for about half the people who take it. One reason is the artificial grouping of different syndromes with different pathophysiology into one disorder, such as "depression."

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**Research Domain Criteria Matrix**

**Challenges and opportunities for drug discovery in psychiatric disorders: the drug hunters’ perspective**

Erik H. F. Wong, Frank Yocca, Mark A. Smith and Chi-Ming Lee

1 CNS & Pain Discovery Research, AstraZeneca Pharmaceuticals, Wilmington, DE, USA
2 Early Clinical Development, AstraZeneca Pharmaceuticals, Wilmington, DE, USA
3 Translational Science, AstraZeneca Pharmaceuticals, Wilmington, DE, USA

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**Cognitive Systems**
- Attention
- Perception
- Working memory
- Declarative memory
- Language behavior
- Cognitive (effortful) control

**Systems for Social**
- Affiliation/attachment
- Social communication
- Perception/understanding of self
- Perception/understanding of others

**Arousal/Modulatory Systems**
- Arousal
- Biological rhythms
- Sleep-wake

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No health without mental health

Thank You