SUMMARY  The overwhelming shortage of human resources for management and delivery of essential mental health care, particularly in low- and middle-income countries (LMICs), is well recognized. The current status, the human resource needs, cost to eliminate the shortage, and evidence on effective service delivery models are less understood.

- A review of the current state of human resources for mental health, needs, and strategies for action, was conducted.
- Mental health care can be delivered effectively in primary care and community settings. Non-specialist health professionals such as family physicians, nurses, social workers and occupational therapists with appropriate training and adequate supervision have been shown to be able to detect, diagnose, treat and monitor individuals with mental disorders and reduce caregiver burden. Lay health workers, affected individuals and caregivers with psycho-education and brief training have also demonstrated their ability to detect and intervene earlier, improved treatment compliance, better understand the illness and cope better.
- Human resources for mental health (HRMH) in LMICs face serious shortages that are likely to worsen unless Ministries invest substantially and implement effective HRMH strategies.
- The specific composition of the mental health human resources will vary across settings according to varying population needs, mental health system structures and available resources.
- Mental health specialists continue to play essential roles in service delivery and training of non-specialist workers.
- Effective leadership and management of human resources for mental health will be essential in addressing key challenges such as mobilization of financial resources, recruitment, and retention, and equitable distribution of human resources.

The human resource challenges to scale up mental health services are complex, and a systemic and multisectoral approach such as WHO’s Human Resources for Health Action Framework is essential to make sustainable impact.

PRIME’s goals are to:

1. Develop evidence on the implementation & scaling-up of mental health treatment in primary & maternal health care, in low resource settings.
2. Enhance the uptake of its research evidence amongst key policy partners and relevant stakeholders.

Programme for improving mental health care
Evidence on scaling-up mental health services for development
The World Health Report 2006\textsuperscript{1} focused global attention on the shortage of health workers. Many LMIC countries face a health crisis in terms of human resources, and the scarcity of human resources and training is similarly overwhelming for mental health.\textsuperscript{3,5,6} Practical guidelines to assist policy makers, health planners, and educators to address shortfalls in human resources for mental health are available;\textsuperscript{7,8} efforts are increasing to focus on this issue; and evidence from LMIC countries is emerging that will have many implications for policy on human resources for mental health.

**Figure 1**

![Figure 1](image1.png)

*Figure 1 (left) shows the median number of human resources for mental health reported in Atlas 2011,\textsuperscript{4} separated by income groups of countries. Globally, nurses were the largest human resources category in the mental health system, with a median of 4·95 nurses per 100 000 population, followed by psychiatrists (1·27 per 100 000 population). Although numbers of psychologists and social workers were much smaller, occupational therapists were especially rare, with not one occupational therapist working in the mental health system in at least 50% of low-income countries. Psychiatrists were far more prevalent in high-income countries, with the median number 172 times greater than in low-income countries.*

**Figure 2**

![Figure 2](image2.png)

*Figure 2 (right) and Table 1 (below) show changes in human resources for mental health over the years. Between Atlas 2005\textsuperscript{3} and Atlas 2011,\textsuperscript{4} the median change in number of psychiatrists was greatest in high-income countries, with a median increase of 0·65 per 100 000 population, whereas in low-income countries the number fell by 0·01 per 100 000 population.*

**Table 1**

<table>
<thead>
<tr>
<th></th>
<th>Psychiatrists</th>
<th>Nurses*</th>
<th>Psychologists</th>
<th>Social workers</th>
<th>Occupational therapists</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low</strong></td>
<td>0.06 0.05 0.05 0.16 0.16 0.42 0.04 0.04 0.02 0.03 0.04 0.01</td>
<td>- -</td>
<td>- -</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td><strong>Lower middle</strong></td>
<td>0.90 1.05 0.54 1.00 1.05 2.93 0.60 0.60 0.14 0.30 0.28 0.13</td>
<td>- -</td>
<td>- -</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td><strong>Upper middle</strong></td>
<td>2.40 2.70 2.03 5.70 5.35 9.72 0.70 1.80 1.47 1.42 1.50 0.76</td>
<td>- -</td>
<td>- -</td>
<td>0.23</td>
<td></td>
</tr>
<tr>
<td><strong>High</strong></td>
<td>9.00 10.50 8.59 33.50 32.95 29.15 26.70 14.00 3.79 25.50 15.70 2.16</td>
<td>1.51</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>World</strong></td>
<td>1.00 1.20 1.27 2.00 2.00 4.95 0.40 0.60 0.33 0.30 0.40 0.24</td>
<td>0.06</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Number</strong></td>
<td>182 183 178 164 172 158 164 173 147 147 157 129</td>
<td>- -</td>
<td>119</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\* Defined as psychiatric nurse in Atlas 2005 and as nurses in a mental health setting (broader) in Atlas 2011

**Methodology**

Medline and PubMed databases were searched to identify peer-reviewed publications from 1990 to December, 2010, on effectiveness of mental health care and training for various service providers. Our search methodology incorporated three validated strategies to capture publications related to 1) health services and policy; 2) mental health and 3) LMICs combined with selected index-text and free-text terms relating to non-specialist health workers and mental health. We also hand-searched relevant journals (Human Resources for Health, Bulletin of the World Health Organization, Health Research in Policy and Systems, and International Journal of Mental Health Systems) and scanned reference lists of relevant publications and websites of pertinent organisations (eg, WHO, Global Forum for Health Research). Brief case examples from three countries—**Sri Lanka, India, and Indonesia**—were also developed to show how shortages in human resources for mental health are being addressed in these settings. To gain an historical perspective on mental health care in India, mental health experts and senior bureaucrats were interviewed by one of us.
Policy recommendations: increasing mental health human resources

Task Shifting

Task shifting is defined as “delegating tasks to existing or new cadres with either less training or narrowly tailored training.” It is an essential response to shortages in human resources for mental health and involves shifting tasks among cadres within and across sectors.

- Non-specialist physicians and nurses to assess, diagnose and treat mild and moderate cases of mental disorders so that mental health specialists can focus on severe and complex cases;
- Supporting community health workers and family carers to follow and monitor recovery;
- Deployment of mental health care providers in different sectors such as social sector and industry;
- Intersectoral collaborations with other professionals such as teachers and prison staff to strengthen mental health awareness, detection of mental disorders, referral’s and service delivery

Examples of task shifting

Development of a wide range of cadres with the appropriate and complementary skills is therefore essential to strengthen HRMH. Training should be relevant to the mental health needs of the population and include in-service training and strengthening of institutional capacity to implement training programmes effectively.

Education of mental health service providers

% of countries with training programmes for Psychiatrists

- Low income: 55%
- Lower middle income: 69%
- Upper middle income: 60%

Scale-up costs to remove shortages in human resources

$814

- Total
- Psychiatrists: $420
- Nurses: $314
- Psychosocial care providers

Mobilisation of financial resources to develop human resources for mental health is one of the biggest challenges for development of effective mental health systems. All countries of low and middle income have inadequate funding for mental health. Cost-effectiveness studies for scaling-up of non-specialist health workers are scarce, and further studies are necessary to inform planning of human resources for mental health.

India

Collaboration between government and non-governmental organisations and private practitioners could help to achieve greater and more diverse human resources for mental health. The Karuna Trust in Karnataka, Ashagram in Guwahati, and The Banyan in Chennai have shown the feasibility of delivering community-based mental health care outside the public primary care setting, using lay health workers and families.

Indonesia

The provincial and district governments of Aceh, continuously supported by the Indonesian Ministry of Health, have shown exemplary leadership in their sustained commitment to development of the most comprehensive community-based mental health system in Indonesia. Many of the key people involved in building up of the Acehnese mental health system have received training from the international mental health leadership programme based in Melbourne, Australia. The whole enterprise of building a community-based mental health system, and a community mental health workforce, has been a series of partnerships including: provincial and district governments of Aceh; the Indonesian Ministry of Health; Acehnese, other Indonesian, and international universities; UN agencies, including WHO, UNICEF, and the International Organization for Migration; and local and international non-governmental organisations.

Sri Lanka

Findings of a study in three districts in the southern province of Sri Lanka showed that community support officers had referred more than half of all inpatients, and this proportion rose to 75% in areas where no psychiatric services had previously existed. During the month of the study, 128 community support officers (in addition to other duties) were case-managing more than 1500 people with mental disorders in the community. More than 80% of patients remained involved with the service and adhered to treatment. Referral sources included family members (40%), friends (21%), and the affected individual (15%). Community support officers were well connected with and managed by the primary health care system, had regular meetings with staff from this system, and were technically accountable to the medical officer of mental health. All districts had developed a highly organised system of coordination at the primary health care level.
**Retention and equitable distribution of HRMH remain a key challenge.** Emigration of mental health workers from lower to higher income countries and from rural to urban settings, often due to professional isolation and better training and career opportunities, significantly constrain HRMH development. Local training programmes, development of innovative incentive strategies (e.g. financial, career development and personal growth opportunities) and favorable workplace conditions will contribute towards minimizing attrition.

**Recruitment**

Even when training programmes are available, recruitment of students and health professionals into a specialization in mental health is a challenge due to misconceptions about mental disorders, fear, perceived low status of mental health professionals. **Educational interventions to increase knowledge and improve attitudes** toward mental illnesses are beginning to have some impact on recruitment. Further studies however are necessary to gain a better understanding of the issues and inform the development of an effective recruitment strategy.

**Poor leadership** has significant detrimental effects on the efficiency and effectiveness of mental health systems, including HRMH. Recent initiatives to strengthen leadership such as the Leadership in Mental Health programs in Australia, India, Indonesia and Nigeria are beginning to demonstrate its positive impact. Systematic evaluation of such initiatives are necessary to determine how best to further strengthen HRMH development capacities.

**Resources**


**About**

PRIME is a Research Programme Consortium (RPC) led by the Centre for Public Mental Health at the University of Cape Town (South Africa), and funded by the UK government’s Department for International Development (UKAID). The programme aims to develop world-class research evidence on the implementation, and scaling-up of treatment programmes for priority mental disorders in primary and maternal health care contexts, in low resource settings.

Partners and collaborators include the World Health Organization (WHO), the Centre for Global Mental Health (incorporating London School of Hygiene & Tropical Medicine and King’s Health Partners, UK), Ministries of Health and research institutions in Ethiopia (Addis Ababa University), India (Public Health Foundation of India), Nepal (TPO Nepal), South Africa (University of KwaZulu-Natal & Human Sciences Research Council) and Uganda (Makerere University & Butabika Hospital); and international NGOs such as BasicNeeds, Healthnet TPO and Sangath.

**PRogramme for Improving Mental health care (PRIME)**

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**Management of Attrition**

**Leadership**

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