WHO MENTAL HEALTH GLOBAL ACTION PROGRAMME (mhGAP)

SITUATION ANALYSIS OF PRIMARY HEALTHCARE SYSTEM

PAKISTAN

Dec 2016

PREFACE

Mental, neurological, and substance use disorders are common in all regions of the world, affecting every community and age group across all income countries. While these disorders increase the global burden of disease, most of the people affected do not have access to the treatment they need.

The WHO Mental Health Gap Action Programme (mhGAP) aims at scaling up services for mental, neurological and substance use disorders for countries especially within low- and middle-income settings where the treatment gap is enormous. The programme asserts that with proper care, psychosocial assistance and medication, people could be treated for mental, neurological and substance disorders; and begin to lead normal productive lives– even where resources are limited.

Pakistan is a signatory member of the World Health Organization and the EMRO Regional Framework. The Ministry of National Health Services, Regulations & Coordination (NHS R&C) has been working to implement the WHO-EMRO Regional Framework and is included in the Non-Communicable Diseases & Mental Health National Plan of Pakistan (NCD&MH 2014-2024), which will be rolled out at the Provincial level.

This report describes findings of the situation analysis carried out to inform the planning of mhGAP implementation in Pakistan within pilot districts across all provinces. This report quantifies the burden of mental, neurological and substance disorders. This report identifies the baseline information for subsequent integration of mhGAP at the level of primary healthcare system. The results of this report aim to bring under one cover the findings from the pilot districts from all the provinces of Pakistan to help plan the implementation and scale up of mhGAP at the primary health care level in the country.

Ministry of National Health Services Regulations and Coordination (M/o NHS R&C) Team:

Dr. Assad Hafeez
Director General (Health)
Ministry of National Health Services, Regulation And Coordination (M/o NHS R&C)

Dr. Malik Muhammad Safi
Director (Programs)
Ministry of National Health Services, Regulation And Coordination (M/o NHS R&C)

Dr. Samra Mazhar
Deputy Director (P-II)
Ministry of National Health Services, Regulation And Coordination (M/o NHS R&C)

Dr Ahsan M Ahmad
Consultant - Health Planning System Strengthening & Information Analysis Unit – HPSIU
Ministry of National Health Services, Regulation & Coordination (M/o NHS R&C)

Human Development Research Foundation (HDRF) Team:

Dr. Siham Sikander,
Ph.D (UK), FCPS (Pak), MB.BS (Pak)
Director of Research
Human Development Research Foundation (HDRF)
Islamabad, Pakistan

Dr. Syed Usman Hamdani
Deputy Director
Human Development Research Foundation (HDRF),
Islamabad, Pakistan

Other team members:
Anam Jamil (Research Assistant)
Ayesha Zubair (Research Assistant)
Umbreen Akhtar (Research Assistant)

ACKNOWLEDGEMENTS

The Situation Analysis of Pakistan for the Mental Health Gap Action Programme was a unique collaborative endeavor undertaken across 5 districts of Pakistan with active engagement and dedicated efforts of multiple teams. The project was conducted for the World Health Organization (WHO); supported and supervised by Ministry of National Health Services, Regulations and Coordination, Government of Pakistan and carried out by the Human Development Research Foundation (HDRF).

M/o NHS R&C and HDRF would like to acknowledge all the individuals and team members from the BasicNeeds Pakistan for their contributions to this report.

We would also like to acknowledge the support and guidance of all individuals, teams, institutions and organizations contributing, participating and facilitating the undertaking of this situation analysis at different levels:

- Institute of Psychiatry, WHO collaborating Center, Rawalpindi, Pakistan.
- Dr. Mobin Memon, Additional Director, DG Health office, Hyderabad.
- Dr. Shaheen Afridi, Deputy Director(PH), DG Health office, Peshawar.
- Dr. Hazrat Ali Khan, Senior Registrar, Psychiatry, Bolan Medical College, Quetta.
- Dr. Shahnawaz Dal, Sir Cowasjee Institute of Psychiatry, Hyderabad.

We also express our deepest gratitude to all facility In-charges and representatives in pilot districts who managed to take time out of their busy schedules to provide information/data for this this situation analysis.

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This report describes findings of a situation analysis carried out to inform the planning of mhGAP implementation in the provinces. The report covers the background, key objectives, methodology, mental health policy and strategy, human resource, delivery of care in specialized and non-specialized health settings and awareness and understanding of public about Mental Neurological and Substance use (MNS) disorders.

2. BACKGROUND:

Mental, neurological, and substance use (MNS) disorders are prevalent in all regions of the world and are major contributors to morbidity and mortality, but treatment gap between the need for and availability of services for MNS disorders is enormous.

In order to reduce the treatment gap and enhance the capacity of Member States to respond to the growing challenge, the World Health Organization (WHO) launched the Mental Health Gap Action Programme (mhGAP) in 2008. mhGAP provides health planners, policy-makers and donors with a set of clear and coherent activities and programmes for scaling up care for priority conditions (which are - depression, psychosis, bipolar disorder, epilepsy, developmental disorders, behavioural disorders, dementia, alcohol use, drug use, suicide/self-harm.

Pakistan is a signatory of the World Health Organization's Global Mental Health Plan. The Ministry of National Health Services has been working with WHO-EMRO to adapt this plan for the region and the framework is included in the Non-Communicable Diseases & Mental Health National Plan of Pakistan (NCD&MH) from 2014-2024, which is starting to be implemented at the provincial level.

3. AIMS AND OBJECTIVES:

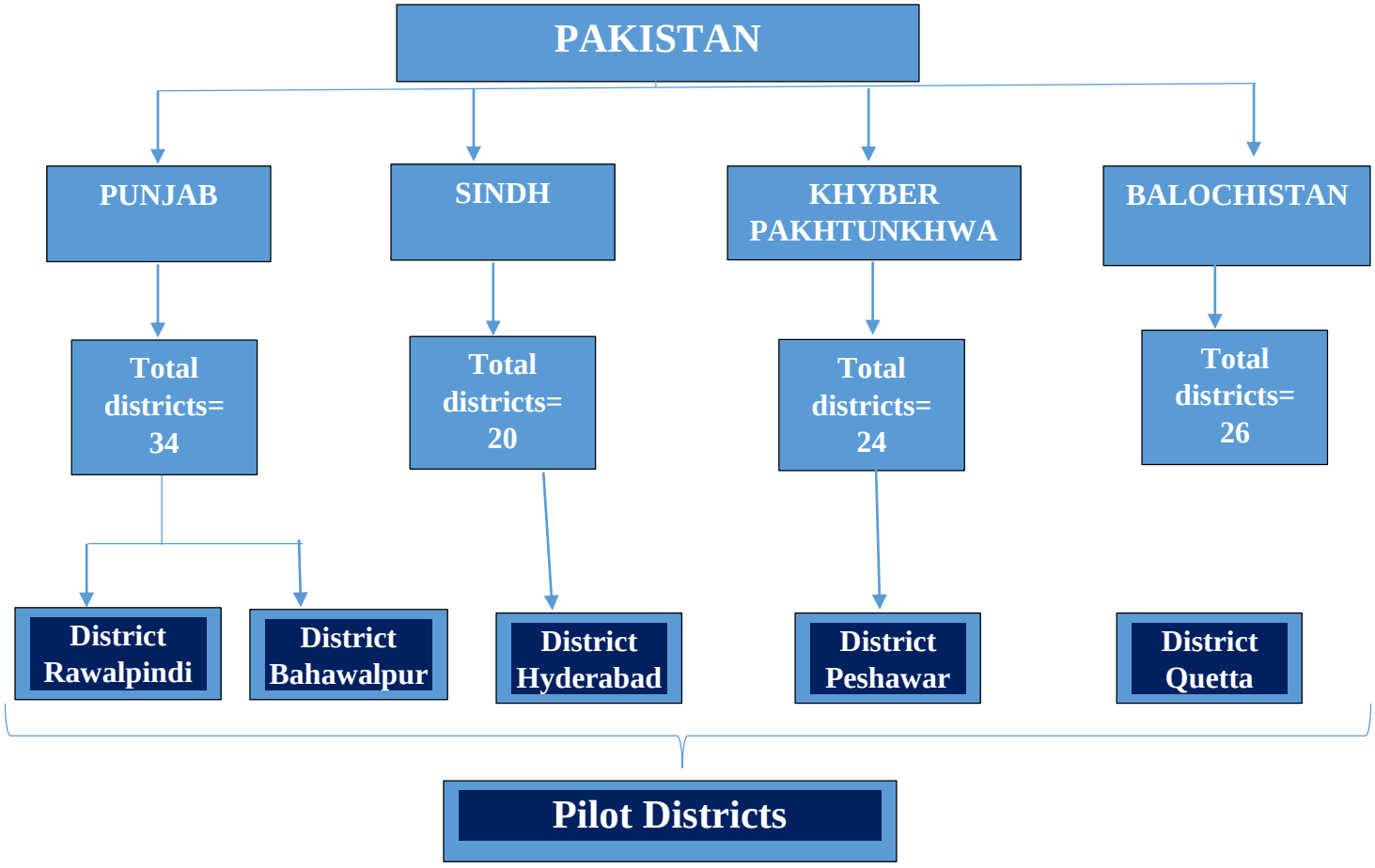
The overall aim of the situation analysis was to gather national, provincial, district and facility level information on existing policies and strategies, human resource, delivery of care at the health systems level related to Mental Neurological and Substance use (MNS) disorders. This eventually will help inform planning of the piloting and roll-out phase of mhGAP implementation in selected districts of Pakistan (namely Hyderabad, Peshawar, Quetta, Bhawalpur and Rawalpindi). To inform the situation analysis we explored the following;

- Burden of MNS disorders for Pakistan, its provinces and selected districts and their facilities.
- Current policies that are relevant to MNS disorders and the status of their implementation, any current spending on mental health disorders.
- Human, and material resource requirements taking into account existing health sector plans and development strategies.

4. METHODOLOGY:

Pakistan is a federation of four provinces, a capital territory and a group of federally administered tribal areas. The sub-provincial tier of government has a further three-tiered system of local government that comprises of districts, tehsils and union councils with an elected body at each tier. For conducting the situation analysis of mhGap five districts were selected; one from each province, while 2 from Punjab (One from north Punjab, one from south Punjab). These districts were selected after the mutual consultation of the stakeholders; which included focal persons from ministry of NHS R&C and focal persons of NCD & mental health in each province. At each union council there are mainly 4 types of primary health care facilities i.e. BHUs, RHCs, MCHCs and dispensaries. A health systems research approach was taken for selecting facilities to help representativeness of the sample for this situation analysis. Thus, 25% of all BHUs, 75% of all RCHs, 75% of all MCHCs and 75% of all the dispensaries at each district were selected randomly from the 5 pilot districts.

Figure 1: Selection of pilot districts for mhGAP situation analysis



To carry out this situation analysis, we used the World Health Organization's Situation Analysis Toolkit (1). This toolkit contains guidelines on how to use and adapt questionnaires to individual contexts to help assess the current capacity and needs of a country for NMS disorders. The toolkit takes into account 4 levels starting from National to Facility level information gathering – we also followed the same principle in gathering information from our 4 levels i.e i) National, ii) Provincial, iii) District & iv) Facility.

4.1 Customization of the tools:

The tools provided by WHO were translated and adapted into Urdu - Pakistan's national language. The items were reviewed keeping in mind the relevance of content, feasibility, cultural appropriateness, understanding, simplicity and thoroughness.

4.2 Selection of Sites:

Before data collection for situation analysis started, districts and facilities for mhGAP situation analysis were selected.

The details of districts and facilities are as follows:

Table 1: Districts selected for mhGAP situation analysis

Provinces	Selected Districts
Baluchistan	Quetta District
Khyber Pakhtunkhwa	Peshawar District
Sindh	Hyderabad District
Punjab	Rawalpindi District (north Punjab)
	Bahawalpur District (south Punjab)

As mentioned above the facility level sample was based on health systems research approach. Since primary care includes BHUs, RHCs, MCH Centers & Dispensaries and within each group the numbers varies – e.g. 33 BHUs vs 3 RHCs in one of the Tehsil's of District Rawalpindi. A smaller proportion of BHUs were sampled compared to RHCs, MCH Centers and Dispensaries. For each district 25% of BHUs, 75% of RHCs, 75% of dispensaries and 75% of MCHC were selected. Table below outlines the proportionate sampling at various levels of primary health care facilities.

Table 2: Number Primary Health Care Facilities Selected for Situation Analysis

Districts	Number of Primary Health Care Facilities (BHUs, MCH Centers, dispensaries & RHCs)	Number of Selected Primary Health Care Facilities(BHUs, MCH Centers, dispensaries & RHCs)
Quetta	60	27
Peshawar	92	45
Hyderabad	57	34
Rawalpindi	127	48
Bahawalpur	100	49
Total	**436**	**203**

4.3 Levels of Data Collection

1. **National-level:** This level is intended to give a general health and systems assessment of the country and specific activities associated with MNS disorders. Items of the tool at this level assess political and administrative structure, economic indicators, demographic characteristics, political structure, budget and financing, general health indicators, and indicators relevant to MNS disorders.

   Methods of Data Collection: This was desk review based data collection. The desk review was based on, published literature, unpublished literature, WHO/UN/other sources of information including country reports of the World Bank and national documents e.g. census report etc.

2. **Provincial-level:** Province is defined as the first formal administrative subdivision of the country. Provincial-level data provide a more specific understanding of the provinces that contain selected sites for the situation analysis. The items on this level assess similar aspects as those at the national-level, but are specific to the selected province. Furthermore, additional items assess treatment guidelines for MNS disorders, availability of diagnostic equipment, psycho-social aspects of MNS disorders, and community resources from the presence of any informal health care for MNS disorders.

   Methods of Data Collection: This level of analysis was also based on desk review. Apart from the desk review also had key informant interviews with all the provincial focal persons appointed for mental health.

3. **District-level:** District is defined as a division within the administrative division for the country below the provincial level. The goal is to provide details that cover the district and factors that impact general health and MNS disorders. In addition to demographical

information about the specific district, items on this level ask specifically about MNS disorders information systems, MNS disorders medication and treatment, psychosocial aspects of MNS disorders, educational resources, human resources, health service structure, pathway of care, and community resources.

Methods of Data Collection: This was based on desk review which included examining DHIS reports. Apart from the desk review key informant interviews with all the relevant district level personnel were conducted.

4. **Facility-level:** The facility-level items assess information about MNS disorders care at the level of health facility. Items at this level include questions on health services, MNS disorders referrals, human resources, MNS disorders care and training, information systems, and community linkages with the specific facility.

   Methods of Data Collection: Since this was the most crucial level of data collection it involved multiple modes of data collection. Detailed desk review of district level information was carried out, which included examining and analyzing District Health Information Systems (DHIS) reports. Apart from the desk review key informant interviews with all the relevant district level personnel were conducted as well to gather the information. To contact facilities in order to obtain primary health care level information, selected facilities were visited and Facility In-charges were interviewed to fill out the facility level tool/form.

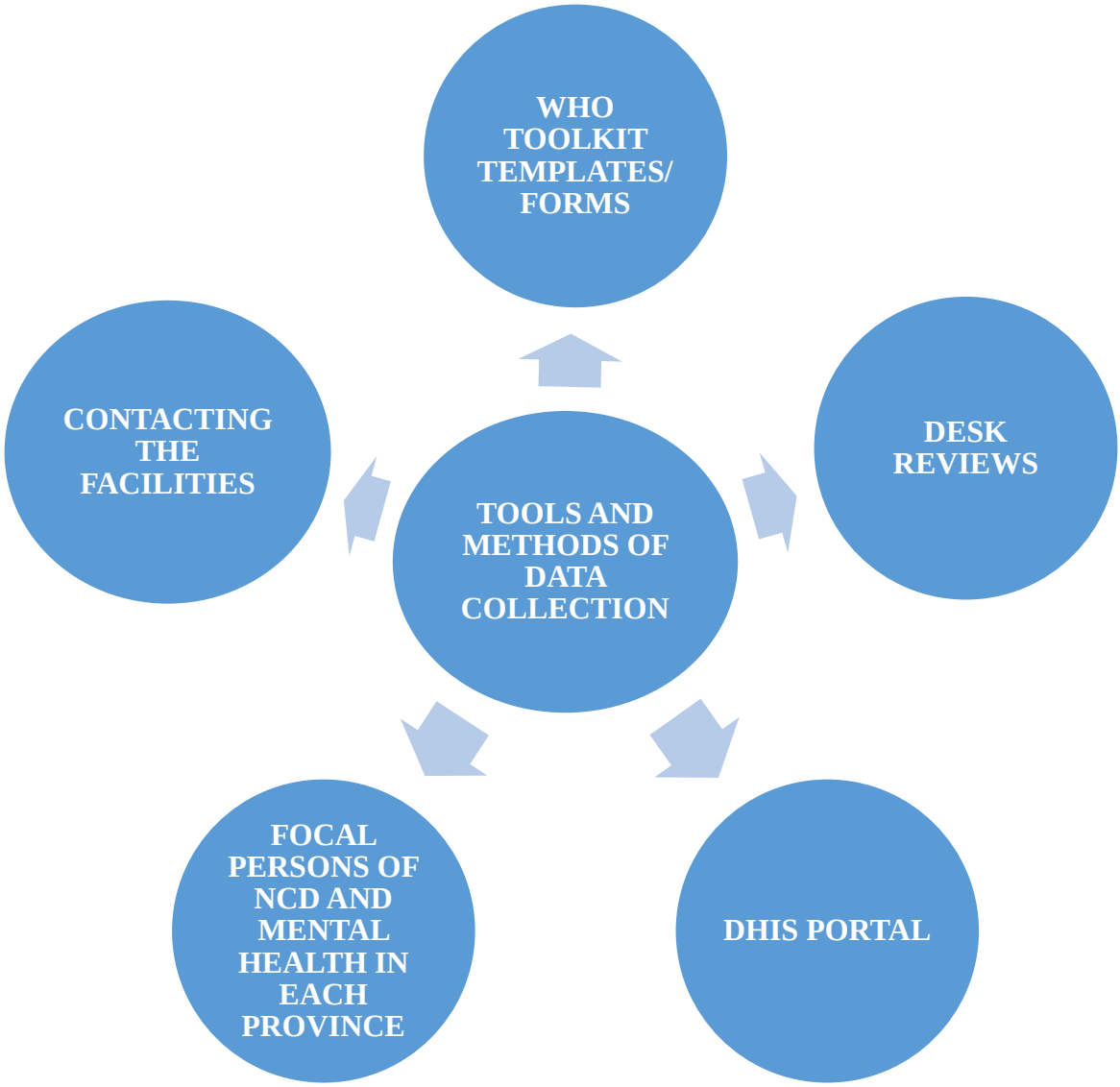


Figure 2: Methods and tools for data collection

5. OVERVIEW OF COUNTRY PROFILE:

5.1 Area and Population:

Pakistan is a country with an approximate geographical area of 803,940 square kilometres and a population of 185,132,925 (2), with population density being 240 per sq. km (3). Approximately 68 % of the population is rural based while 38% is urban based (4). 43% of the population falls under 14 years of age and 7% is above 60 years. A significant number of this population lives below poverty line, and faces social deprivation. A recently conducted survey (2011), indicated that about 30% of the population in Pakistan faced multiple deprivations including health, education, housing quality, housing services and economic deprivation. 13.3% of urban population was indicated to be deprived and 37.7% rural population was deprived (5). The details of population of provinces and chosen districts from each province is mentioned in tables below (6).

Table 3: Provincial Population

Provinces	Punjab	Sindh	Baluchistan	Khyber Pakhtunkhwa
Population	89,315,875	15,600,031	4,997,105	17,743,645
Urban %	32.50 %	48.75%	23.89%	16.88%
Rural %	68.70%	51.25%	76.1%	83.12%
Density (per sq. km)	358.5 per sq. km	216 per sq. km	19 per sq. km	238 per sq. km

Table 4: Population of the Five Pilot Districts

Districts	Rawalpindi	Hyderabad	Quetta	Peshawar	Bahawalpur
Population	3,363,911	2,891,488	759,941	2,026,851	2,433,091
Urban %	53.16%	50.8%	74.4%	48.5%	27.3%
Rural %	46.84%	49.2%	25.6%	51.5%	72.7%
Density(per sq.km)	636 per sq. km.	524 per sq. km.	286 per sq. km.	1,612 per sq. km.	98 per sq. km.

Source: Pakistan Bureau of Statistics, 2006

Refugees in Pakistan:

Pakistan happens to be one of the countries in the region, to have been holding large number of Afghan refugees since the last 3 decades and over the last decade have also seen large numbers of internally displaced persons (secondary to natural calamities and military operations). According to UNHCR 2011 report, about 1,752,533 refugees from Afghanistan and another 624 from other countries were present in Pakistan. The highest number of refugees being present in the province of Khyber Pakhtunkhwa that is 1,086,185; followed by Baluchistan 357,225; Punjab 192,020; Sindh 74,424; Islamabad 35,563 and Azad Jammu Kashmir 7,116. Number of internally displaced persons in Pakistan was reported to be 1016559 in August 2014(7).

5.2 Context of Mental Health Care:

Pakistan is strategically important country in South Asia which is known for its geographic importance, its political situation and a rich culture. From 1947, when Pakistan came into being, to 2016, almost 69 years have passed since the independence of the country. In these 69 years, the situation of health particularly mental health has improved, albeit at a very slow pace (8).

Infrastructure of Mental Health in Pakistan:

Mental health has been under-resourced in terms of finances, human resource and infrastructure. Over the years, the number of mental health professionals has increased yet a long way to go in order to narrow the huge treatment gap. For example the total number of psychiatrists at the moment in Pakistan are 342, and these too are concentrated around metropolitan cities. Other types

of mental health services like forensic psychiatry is almost non-existent, very small number of child psychiatrists, psychotherapists are available, and no geriatrics, addiction, rehabilitation, learning disability or liaison psychiatrists (9, 10).

About 0.4% is being allocated to mental health out of the total health care budget (which is around 2.6% of total GDP). At the moment mental health services are not part of the Primary Health Care (PHC). These services are only available in a number of tertiary care hospitals/teaching hospitals (11). Table below gives an overview of the health facilities in Pakistan:

Table 5: Number of Health Care Facilities in Pakistan

Types of Facilities	Number
Hospitals	946
Dispensaries	4554
Basic Health Units	5290
Mother and Child Care Centres	907
Rural Health Centres	552
TB Centres	289

History of Mental Health at Tertiary Care Level:

At the time of independence in 1947, there were three asylum-like hospitals one each at Hyderabad, Lahore and Peshawar with a total of 2000 beds. These hospitals had no mental health professionals and were managed by medical officers only. These hospitals were called "Mad Houses" and patients were often brought in chains. This went on for a number of years until the government decided to establish the first psychiatric units within teaching hospitals like the Jinnah Postgraduate Medical Centre, Karachi (in Sindh Province) and Government Mayo Hospital, Lahore (in Punjab Province) back in 1965 and 1967 respectively. Over time, it was realized that there was a need for development of individual psychiatric units in all government hospitals which were attached with medical colleges(12).

Significant improvement in mental health services was witnessed especially in Lahore where the old Lahore Mental Hospital was re-designated as a full institute named Government Hospital for Psychiatric Diseases in 1996, which was later upgraded to Punjab Institute of Mental Health, Lahore in 2002. Sir Cowasji Institute at Hyderabad was elevated to a teaching hospital and major teaching hospitals were upgraded. Peshawar also made some progress over the years, while Quetta (Baluchistan) lagged behind in progress.

Mental health in Private Sector:

Many small psychiatric hospitals opened in private sector throughout the country which were run by non-psychiatrists and allied mental health professionals. A number of such units in teaching hospitals were established, but had shortage of mental health professionals for these units. Karachi (Sindh) has shown significant progress in private sector with active psychiatric units (12).

5.3 Cultural Practices for Mental Health:

A shaman in Pakistan is popularly known as "baba" or "pir". The other type of healer which is a religious healer is known as "sufi" who does not fall into the category of shamans but is well respected in the community and brings relief through holy verses and some other religiously sanctioned rituals. They are the disciples of saints and a large number of people have faith in their healing powers, hence shrines and other holy places are flocked by the masses, irrespective of educational or ethnic background, seeking cure especially for mental illness. It is also believed that Sufi saints were effective healers and even after their death had spiritual influence by virtue of which they can cure or provide relief. The shamans however, have no prescribed qualifications; their spiritual powers are either conferred upon or acquired through meditation, elaborate religious

rituals or lengthy spiritual training. The number of practicing shamans is very high, only in Karachi, there are about 400 such practitioners. They practice at their residences, clinics, shrines or mosques and explain mental illness on the basis of possession by the evil spirit, by jinni or by magical influences cast by enemies (13). The treatment given includes amulets, spiritually treated water, burning incense or reciting incantations(14). In Pakistan, where there is a dearth of psychiatrists, prevalent stigma for mental illness, poor socio-economic conditions and vast majority of population living in rural areas depend more on shamanic treatment who have conferred benefits to patients suffering from grief reactions, reactive depression, psychosomatic disorders and anxiety neurosis(15). Only 5-10% of the patients reach the psychiatrist mainly for the reasons of stigma, low awareness and cost factors (11).

Many shamans in Pakistan also act as medicine-men and would prescribe some medications. Despite resentment by the mental health professionals, the shamans enjoy the acceptance of large masses of people who approach them for their mental health problems with less fear of stigma, low cost and easy accessibility. The current number of psychiatrists cannot effectively deal with the magnitude of mental health problems existing in the country and hence these shamans are sharing the burden though unofficially and unethically. A recent doctoral study, made the recommendation of collaboration between shamans and psychiatrists may go a long way in addressing the mental health problems of the country – as part of task-sharing. However, this needs regulation and monitoring without which this is liable to be abused leading to, untoward incidents eg adverse reactions to drugs, delays in getting appropriate medical treatment in cases of organic pathologies and even death during the rituals (16). However there is evidence that shamans act as good counsellors and psychotherapists and can be very useful for masses keeping in mind the dearth of professionals for a very large population.

6. AWARENESS AND UNDERSTANDING OF THE PUBLIC ABOUT MNS DISORDERS

The reach and accessibility of MNS care requires further expansion as indicated in previous sections. To help this there have been some efforts both by the public and private sectors. At the national level, there have been awareness and advocacy movements or programs on mental health going on in Pakistan. Government agencies (e.g., Ministry of Health or Department of mental health services), NGOs, professional associations, private trusts, and Foundations, International agencies have promoted public education and awareness campaigns regarding mental health in the last decade. These campaigns have targeted the general population; children, adolescents, women, trauma survivors, ethnic groups and other vulnerable groups. In addition, there have been public education and awareness campaigns targeting professional groups including health care providers (conventional, modern, and allopathic), complimentary/ alternative/ traditional sector, teachers, social services staff, and other professional groups linked to the health sector. The prime goal of these campaigns, apart from general awareness raising and promoting treatment through medication or counseling/psychotherapy and/or both, has been to address stigma attached with mental illnesses and its treatment.

In terms of support for child and adolescent health, only 3% of primary and secondary schools have a part-time or full-time mental health professional, and none of the primary and secondary schools have school-based activities to promote mental health and prevent mental disorders. Regarding mental health for imprisoned persons, it is reported that up to 20% of prisons encounter at least one imprisoned person a month in need of a mental health professional. However the health practitioners in jails either have no or minimal training regarding detecting and treating MNS disorders. The same situation prevails across police department and judicial fraternity.

In terms of financial support for users, no mental health facilities have access to programs outside the mental health facility that provide outside employment for users with severe mental disorders (11).

Few years back, some campaigns were also launched on the awareness of drug abuse. The major aim of these campaigns was to raise public awareness on drugs and their harmful effects on individuals, families and society at large with a special focus on youth in the educational institutions, teachers, parents and religious leaders. The United Nations Office on Drugs and Crime (UNODC), in collaboration with the Ministry of Interior and Narcotics Control and supported by the Bureau of International Narcotics and Law Enforcement Affairs (INL) of the US State Department is implementing a drug prevention campaign in nine cities located in the Province of Sindh. The Anti-Narcotics Force deals with interdiction of narcotics and carries out demand reduction activities as well as promote international collaboration. It works for preparation and implementation of projects/programs in relation to drug prevention/demand reduction as well as do seminars in universities to orient and raise awareness about drug use (17).

More awareness raising is needed for the general public on detection, diagnosis and treatment of MNS disorders to help reduce stigma and taboos attached to it. For example consulting for sexual problems is considered immoral and is a taboo. The existing hospital-based psychiatric services are under-utilized because of social stigma attached with the psychiatric patients and popular misconception about mental illnesses. Many individuals with mental disorders report not using health services for their mental disorder(18).

The campaigns for the promotion of mental health awareness lack impact mainly due to limited coverage, magnitude and frequency. There are many organizations in public and private sector (especially university psychology and behavioral sciences schools/departments) that work to educate masses on MNS disorders however most of them independently target small audiences at small scale. Thus institutions should collaborate and join hands to use their resources and efforts to launch effective campaigns with greater magnitude covering larger populations.

Awareness programs regarding MNS disorder that are more relatable to public and their needs are required in the country. Most projects that raise awareness regarding MNS are operating at national and provincial levels (19). There is, however, a gap regarding awareness and education programs at more basic levels (eg union council level). Also most awareness raising programs focus on treatment aspects of MNS disorders. There is need for programs that target other aspects including prevention, recognition of signs/symptoms, reducing stigma, helping MNS patients and their families to cope and increasing involvement at the community level.

7. PREVALENCE OF MNS DISORDERS:

Pakistan has never carried out a national mental health survey which covers prevalence and risk factors of mental health disorders within its population. Other countries in the WHO EMRO region not only have done mental health surveys but some have even repeated it after a decade's time (20-22). Mental health is neither covered in the Pakistan Demographic Health Survey (PDHS) nor in any other nationally representative surveys. This in turn reflects, by proxy, the level of recognition and commitment a country has in addressing its mental health needs. However as a signatory, Pakistan did take part in the recent WHO EMRO Region mental health atlas related survey 2014.

In order to understand the burden and situation of mental disorders in Pakistan other sources of information has to be taken in consideration eg systematic reviews on mental disorders conducted in which Pakistan is included or systematic reviews based on within the country studies. A number of such systematic reviews have been conducted and sheds light on the prevalence of some mental disorders in Pakistan. The focus of these systematic reviews has either been on the common mental disorders within South Asian countries. Thus ascertaining prevalence and burden of specific mental health issues in Pakistan, as one of the countries. Apart from these systematic reviews, small individual studies from different parts of Pakistan have also been published which also helps understanding the overall scenario of mental health status within specific sets of population in Pakistan.

Globally it is estimated that 1 in 4 families have a member with a mental disorder.

Mental, neurological and substance use disorders combined account for a considerable proportion of the disease burden and as much as a fifth of years of life lived with disability. The vast majority of people with a mental disorder do not receive any treatment – thus the huge treatment gap even in the High Income Country (HIC) settings exists (23). World Health Organization (WHO) estimates about 450 million people in the world suffer with neuropsychiatric disorders; while the treatment gap globally for many of the mental disorders is substantially high (23). It is estimated that in the LMIC the treatment gap amounts to more than 90% in LMIC. WHO lists certain mental disorders as the priority conditions, which are namely, i) depression, ii) psychosis, iii) bipolar disorder, iv) epilepsy, v) developmental disorders, vi) behavioral disorders, vii) dementia, viii) alcohol use, ix) drug use, and x) suicide/self-harm. Following section provides prevalence for disorders on which data is available either from published reports or journal articles in Pakistan.

Table 6: Treatment Gap for some mental disorders

Mental Disorders	Treatment Gap
Major depression	56.3%
Bipolar disorder	50.2%
Panic disorder	55.9%
Generalized Anxiety Disorder	57.5%
Obsessive Compulsive Disorder	59.5%
Schizophrenia and other non-affective psychoses	32.2%
Alcohol abuse and dependence	78.1%

A systematic review on the prevalence of anxiety and depression in Pakistan conducted in 2004 reports overall prevalence of these disorders to be 34%. The prevalence among women aged 15 to 49 being 28.8% and up to 33% among men aged 18-45 years (24). As usual the risk factors included age, low level of education, financial problems, and relationship problems.

Women are especially vulnerable to developing anxiety and/or depression (also known as Common Mental Disorders) during pregnancy and in the first year postpartum (known as perinatal depression). A recent systematic review on prevalence of perinatal depression lists Pakistan as one of the countries with the highest rates in the South Asian region, that is 31% of perinatal depression (25). While studies from rural settings of Pakistan report up to a 26% of clinical depression of mild to moderate severity, based on diagnostic criterion; furthermore perinatal depression tends to be recurrent and chronic (26-28). While postpartum anxiety and depression, in urban settings, has been reported to be 28.8%. Up to a 25.8% of antenatal depression persisted in 38.3% women during the post-natal period as well (29). All of these studies clearly show more than a quarter of women suffer with perinatal depression in Pakistan.

Overall prevalence of epilepsy in Pakistan is estimated to be 9.99 per 1000 population. Highest prevalence seen in younger than 30 years of age. A slight decrease in prevalence has been noted among 40 and 59 years of age. Rural population seems to have a higher prevalence. Etiology of epilepsy is more commonly identified in pediatric population. Like other mental disorders, epilepsy too has a huge treatment gap. Only 27.5% epileptic persons in urban areas and 1.9% in the rural areas seemed to be treated with anti-epileptic drugs (AEDs). Clearly the burden of epilepsy in Pakistan is not fully understood and the knowledge about epilepsy and its care is reported to be extremely low (30).

In 2012, United Nations Office on Drugs and Crime (UNODC) reported approximately 6% of the population of Pakistan, or 6.7 million people had used any controlled substance including misuse of prescription drugs in the year preceding the survey (31). Cannabis was the most commonly used drug, with a prevalence of 3.6% in the population, equivalent to four million users nationwide. Around 4.25 million drug users in Pakistan are considered dependent on substances and require some form of structured intervention for treatment of their drug use disorder (12, 31). This amounts to more than 99% of treatment gap for people with addictions.

Stats around alcohol use and consumption in Pakistan are not readily available. However WHO published a report in 2014 with a specific focus on Pakistan regarding alcohol consumption trends from 1961 to 2010. The report stated an overall prevalence of alcohol use disorder among men and women aged 15+ at 0.5 and 0.1% respectively. Similarly prevalence of alcohol dependence among men and women aged 15+ being 0.3% and 0.1% respectively (http://www.who.int/substance_abuse/publications/global_alcohol_report/profiles/pak.pdf). While a study from the province of Punjab reported a high incidence of alcohol use among labor and middle class with a higher rural distribution (32).

Behavioral problems in children effect their academic, social and personal functioning. There seem to be an increase in its prevalence in HIC settings (33). However, studies in the developing countries are reporting a higher prevalence of behavioral problems among children. There is a dearth of studies from Pakistan. Only few studies have been carried out to assess prevalence of behavioral problems in children. Prevalence of behavioral problems is reported to be around 9-10% and up to 34.4% parents and 35.8% teachers reporting children to be exhibiting some form of behavioral problems. Clear gender differences exist; where boys are more likely to externalize problems and girls to internalize problems. It seems parents in Pakistan are becoming increasingly aware of pediatric physical health of their children but are still neglecting their children's mental; which can be attributed to stigma and lack of awareness. This is compounded by the scarcity of mental health facilities, specifically for child and adolescent mental health, makes it harder to get timely and appropriate services for children with behavioral problems (34-36)

Psychosis & bipolar disorders fall under the psychoses spectrum of mental disorders. These disorders generally have a lower prevalence. There are very few studies, which are mainly based in hospital settings, are available to provide exact information for Pakistan. Based on studies from the hospital show that there seems that psychoses is increasing in numbers. Of note these studies were conducted on metropolitan city hospitals or done as screening for psychoses among medical students. A high percentage (14.3%) of students screened showed a predisposition to Bipolar disorder (37, 38). What is evident from these studies, apart from prevalence or predisposition towards psychoses, is the delay in seeking care and only sought when severity of illness increases (39).

Children born in low- and mid-income countries are at a high risk of developing disabilities, yet estimates of Pakistan population-based prevalence are sparse. What little information that is available shows Pakistan to have one of the highest rates of childhood intellectual disabilities or developmental disorders in the world. The prevalence estimates vary from 19.1/1000 for serious intellectual disability to 65/1000 for mild intellectual disability (40-42).

Pakistan is one of the few countries to have incorporated disability data within its population census. The 1998 National Census of Pakistan reported disability in 2.5% of the total population. This was further categorized as visual impairment (8.1%), hearing impairment (7.4%), physical impairment (19%), 'mental handicap' (6.4%), 'mental impairment' (7.6%), multiple disabilities (8.2%), and 'others' (43.3%). Fifty-five per cent of disabled people in Pakistan were found in Punjab, followed by 28.4% in Sindh; there were more males than females in both rural and urban areas. These data are limited in their use.

The few cross-sectional studies (mostly urban) conducted in Pakistan give an estimated prevalence of disability varying from 2.8 to 6.2% (41-45).

Pakistan does not have official data on self-harm and/or suicide. Data on suicide is not included in the national annual mortality statistics. Thus national rates on suicide are neither known nor are reported (including to the WHO). In recent years a large number of patients in Pakistan have been admitted to medical wards with self-harm (also known as deliberate self-harm)(46). Globally suicide is now considered a major public health problem, especially in low income countries.

A systematic review identified the risk factors and causes of deliberate self-harm and suicide in Pakistan - a Muslim, South Asian country. Risk factors for deliberate self-harm included being young (less than 35 years), being female, being housewives, being married and having a low socio-economic status; while reported risk factors for suicide included being young at age (less than 35 years), being a male, being married and of low socio-economic status. The common method of choice for deliberate self-harm were medication overdose, while firearm, hanging and organophosphorus poisoning were more frequent means for suicide. The most common reported cause for both outcomes was interpersonal conflicts. There is accumulating evidence that deliberate self-harm and suicide have increased over the recent years in Pakistan. There is a need for greater attention and in-depth studies to elaborate on causative mechanisms for these serious public health issues and formulate preventive interventions (47-49).

Dementia prevalence is not known for Pakistan. However with increasing life expectancy, the incidence of dementia is seen to be increasing globally; same trend would hold for Pakistan. Currently Pakistan is the 6th most populous country of the world (50). Our aging population and its geriatric burden will compound into a public health issue with cases of dementia on the rise. Our geriatric burden of 65+ years is around 8 million and is projected to become 27 million by the year 2050. Similarly the old age dependence ratio[1] will increase from 8.8/100 to 23.7/100 in 2060(50). With this, it is projected that the most common form of dementia which is Alzheimer's will increase from its current prevalence of 5-7% (51).

Having presented National level information about the burden of WHO defined priority mental health conditions; tables below give proportions of some mental health conditions province wise (12). Also given are the cases reported from different Primary Health Care Facilities in the five pilot districts of the mhGAP roll out. These are cases that were recorded by these facilities as part of their DHIS record keeping in a last six months (Jan-Jun 2016) preceding the situation analysis.

[1] Old-age Dependence Ratio: Number of 65+ years old individuals for every hundred working-individuals aged 24-64

Table 7: Provincial Prevalence Rates of Mental Disorders

	Sindh		Punjab		Baluchistan		KPK	
Mental Illnesses	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Depression	8%	9%	8%	9%	4%	2.5%	5%	3%
Schizophrenia & similar psychoses	2.5%	2%	2.5%	2%	1%	1%	2%	2.5%
Seizure disorder	2%	2%	2%	2%	2%	2%	2.5%	2%
Substance abuse & related disorders	6%	3%	6%	3%	8%	4%	8%	8.5%

Note: Not all priority conditions related data/studies available province wise

Table 8: Frequency of MNS disorders reported by Primary Health Care across Pilot Districts

District	Facility Type	MNS Disorders		
		Drug dependence	Epilepsy	Depression
Quetta	BHU	0	29	204
	RHC	0	33	0
	MCHC	0	1	143
	Dispensary	40	28	505
	Total	40	91	852
Peshawar	BHU	4	13	770
	RHC	0	55	2641
	MCHC	40	0	248
	Dispensary	15	12	1151
	Total	59	80	4810
Hyderabad	BHU	2	4	100
	RHC	0	5	176
	MCHC	0	2	9
	Dispensary	0	12	1229
	Total	2	23	1514
Rawalpindi	BHU	13	1	140
	RHC	5	12	349
	MCHC	0	0	27
	Dispensary	1	0	34
	Total	19	13	550
Bahawalpur	BHU	0	0	374
	RHC	0	0	3209
	MCHC	0	0	41
	Dispensary	0	0	7
	Total	0	0	3631
Grand Total		120	207	11,357

NOTE: Based on DHIS data from Jan-June 2016

8. POLICY AND STRATEGY:

8.1 Current Mental Health Policy:

In 1997, Pakistan, after 50 years, entered among the group of 60% countries of the world which had a mental health policy (52). The mental health programme, which is part of the general health policy of Pakistan, was formulated in 1986 and was implemented in 2001.

The government of Pakistan passed Mental Health Ordinance in 2001. The Mental Health Ordinance 2001 entails the availability of better provision of care and treatment of the mentally-challenged persons, community care, and promotion of mental health and prevention of mental disorders with an emphasis on human rights. Pakistan's mental health policy was last revised in 2003 and includes the following components:

1. Developing community mental health services,
2. Downsizing large mental hospitals,
3. Developing a mental health component in primary health care,
4. Human resources,
5. Involvement of users and families,
6. Advocacy and promotion,
7. Human rights protection of users,
8. Equity of access to mental health services across different groups,
9. Financing, and
10. Monitoring system for mental health.

Also in 1997, a substance abuse policy was formulated which included interventions for both the reduction of supply and demand. In addition, a list of essential medicines is present. These medicines include Antipsychotics, Antidepressants, Mood stabilizers and Antiepileptic drugs. The last revision of the mental health plans was in 2003. This plan contains the same components as the mental health policy but also includes reforming mental hospitals to provide more comprehensive care, and quality improvement with an aim to work towards adoption of biopsychosocial model, integration of mental health at all levels of health care. In addition, a budget, a timeframe and specific goals are identified in last mental health plan. A disaster/emergency preparedness plan for mental health is also present and was last revised in 2006.

Following the 18th amendment in the constitution of Pakistan, health was made a provincial subject. On 8th April 2010, the Federal Mental Health Authority was dissolved and responsibilities were devolved to the provinces, and it became their task to pass appropriate mental health legislation through their assemblies. So far, only Sindh province has made significant progress in this regard.

The Sindh Mental Health Ordinance 2013 has been endorsed by the Sindh Assembly (Government of Sindh, 2013). However, the 'Rules and Regulations' and necessary 'Forms' which will ensure implementation in daily practice, have not yet been processed.

While the Punjab provincial government enacted the Punjab Mental Health Act in 2014. The act itself is the modification of the 2001 mental health ordinance; it substitutes the words 'Federal Government' with 'Government' as reported by the Law and Parliamentary Affairs Department (53). Recently, the Chief Minister of Punjab has conferred approval to constitute Punjab Mental Health Authority in pursuance of the Mental Health Act, 2014 (http://dailytimes.com.pk/punjab/09-Dec-16/punjab-mental-health-authority-given-go-ahead). The authority shall advise the government on all matters pertaining to promotion of mental health, prevention against mental disorders and establishment of new national standards for care and treatment for mental health patients. The authority shall also recommend measures to improve existing mental health services, besides setting up child, psycho-geriatric, forensic, learning disability and community-based services, and prescribing procedures with respect to setting up and functioning of the mental health services and facilities.

The situation in the provinces of Baluchistan and Khyber Pakhtunkhwa remains unclear. The Mental Health Ordinance Pakistan 2001 has lapsed, and there has been no new act from the provincial parliament to remedy this (53).

In 2008, WHO launched the mhGAP mental health global action program. In 2013, World Health Assembly adopted the Global Mental Health Action Plan 2013-2020 to which all member states including Pakistan signed a commitment. Pakistan is now a signatory of the World Health Organization's Global Mental Health Plan. The Ministry has been working with WHO-EMRO to adapt this plan for the region and the framework is included in the Non-Communicable Diseases

& Mental Health National Plan of Pakistan (54). Following this, in 2015, United Nations member states adopted the sustainable development agenda 2030. Pakistan being a member of UN adopted this agenda which entails sustainable development goals (SGDs). The SDGs sets, for their signatory countries, development targets in different sectors including health and well-being (55). Since mental health has a human rights angle attached to it, Pakistan has a national human rights review body. It has the authority to oversee regular inspections under taken at the mental health facilities, review involuntary admission and discharge procedures; review complaints investigation processes; and the review body has the authority to impose sanctions (e.g. withdraw accreditation, impose penalties, or close facilities that persistently violate human rights). All of the mental hospitals in Pakistan have had at least one review/inspection of human rights protection of patients in 2008. However only 6 % of community-based psychiatric services and or any community residential facilities have had such a review.

Budgetary allocations is another important aspect to help implement policies. About 0.4% of the total health care expenditures of Pakistan (which is approx. 2-3% of the national GDP) are allocated to mental health. These funds are grossly short for the enormity of the mental health burden pf Pakistan. Furthermore of all the expenditures in mental health, 11% are devoted to mental hospitals. The rate of our spending on mental hospitals is much lower compared to other low and middle income countries. One reason could be that Pakistan did not inherit a larger number of mental hospitals at indo-pak partition (4).

8.2 Barriers to Effective Policy:

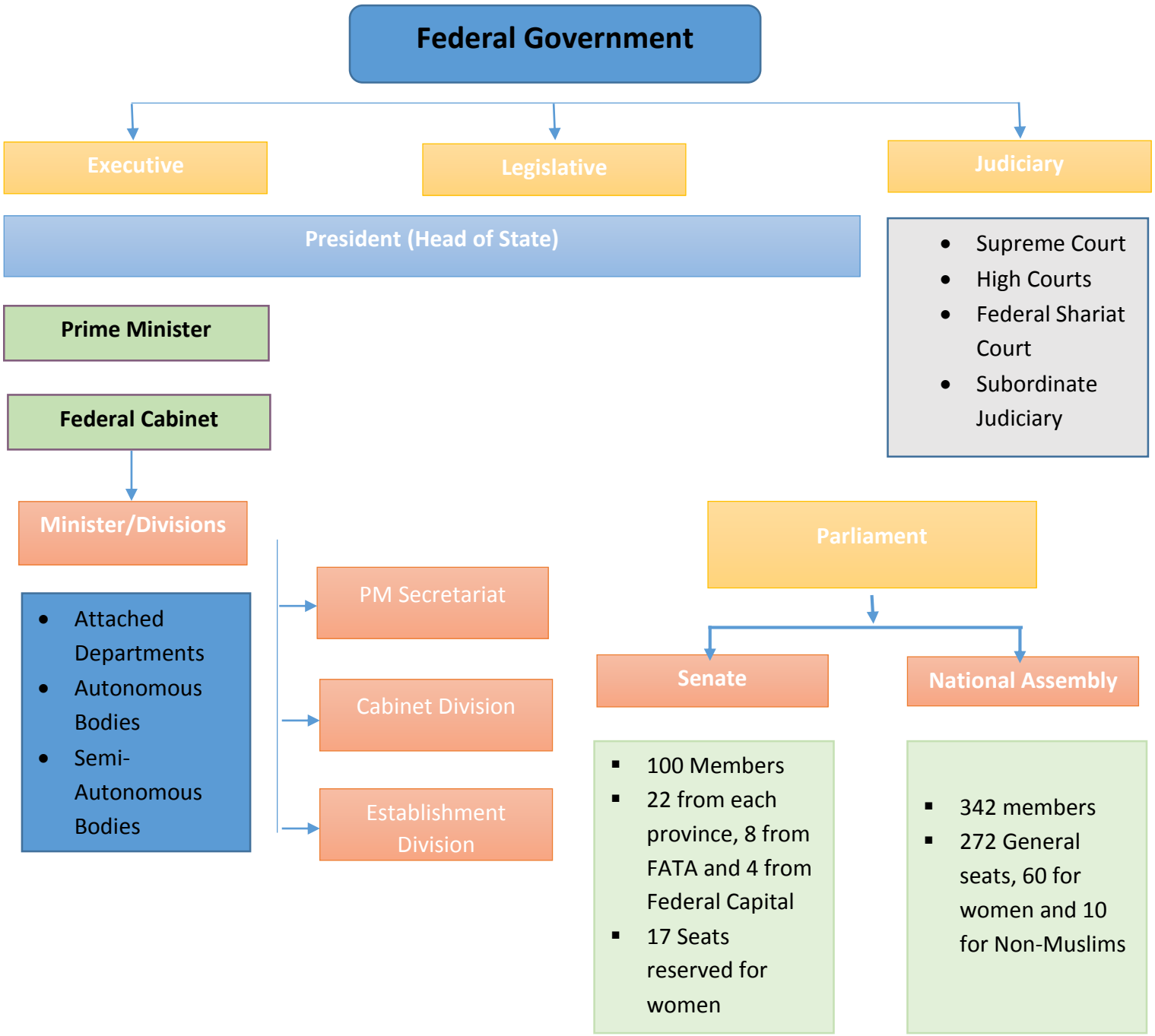
Unfortunately, despite development and existence of mental health policy, there are several factors that cause hindrance in way of its effective implementation. However, the problem is not solely implementation. The mental health policy of Pakistan was originally developed in the backdrop of lacking national level mental health data (52). Due to the non-availability of basic research like national mental health morbidity data, there was very little evidence on which to base this policy. Furthermore, absence of evaluative studies of previous plans and programmes and lack of Information Management Systems made it even more difficult to fully understand the reasons of failure and/or achievements of previous plans and policies to help build on that to develop new policies.

Lack of human resource and political will to improve mental health appears to be another variable acting as a barrier to effective designing and implementation of mental health policy. Also lacking is an effort to map out all the stakeholders and take them on board for consensus building and decision making and its implementation (52). Thus it becomes impossible to draw a holistic picture of mental health issues and so the vision, values, principles and objectives of the mental health policy start lacking grounds for implementation. Lack of evidence about the needs of the population, allocation of a meagre mental health budget and a non-existing national health systems are among the factors that lead to gaps in developing and implementing the mental health policy.

8.3 Government of Pakistan:

The constitution of the Islamic Republic of Pakistan, 1973 provides for a federal parliamentary system with the President as head of state and Commander in Chief of the Pakistani Armed Forces and an elected Prime Minister as the head of government. Government in Parliamentary Democracy is headed by the Prime Minister, who is assisted by his Cabinet Ministers heading various Ministries, Divisions and by his Advisors (56).

Figure 3: Pakistan's Federal Government Structure



8.4 Structural and Administrative Barriers to Mental Health:

Pakistan went through devolution of its services related public sectors including health sector with the 18th amendment in its constitution effective from June 28, 2011. The Federal Ministry of Health (MoH) was dissolved and the overall responsibility for health services policy direction and planning was devolved to the provinces. The introduction of devolution led to changes in roles of different stakeholders from top to bottom, thus re-distributing the power at various levels. As a result of which provinces and provincial authorities gained more control over health sector legislation. These stakeholders include representatives from Ministry of Health, Secretariat, District Health Managers (Executive District Officers), Managers at sub-district level and Healthcare Workers.

This devolution brought some challenges for Pakistan (57); especially as a result of this devolution Pakistan lost the Federal Mental Health Program. Currently Mental health is represented by the Provincial Non-Communicable Diseases (NCD) focal person. Thus, it being not being a specific mental health representative at the provincial level. Since devolution, the major health related challenges included reorganization of the human resource regulatory function in health sector and establishment of linkages and coordination between the Federation and the Provinces in terms of formulation and regulation of policies in health sector and decisions regarding mental health at the federal level (58). To overcome these challenges, certain achievements were made in which all regulatory bodies were exempted from devolution and a new ministry i.e. Ministry of National Health Services, Regulation and Coordination was created, with the aim to enhance the regulation and accreditation of health sector including mental health.

8.5 Key Mental Health Stakeholders:

Successful and sustained mental health efforts are only achieved through support from the community-at-large, as well as organizations, institutions, and other stakeholders interested in mental health, substance abuse, or the overall wellbeing of the population.Stakeholders for mental health generally include consumer and family groups; general health and mental health workers; health care providers; government agencies; academic institutions; professional institutions; traditional health workers; and religious organizations. Unfortunately most of these stakeholders do not have adequate representation in the policy making and implementation due to which mental health policy lacks effectiveness.

9. HUMAN RESOURCE FOR MENTAL HEALTH SERVICES IN PAKISTAN

Human resource working in the field of mental health is less than optimal compared to the needs of population thus adding to the gap between burden of disease and treatment. The total number of human resource working in mental health facilities or private practice per 100,000 population is 203.07(4). The breakdown according to profession is as follows:

Table 9: Human Resource for Mental Health

Mental Health Professionals	Numbers	Rate per 100,000 population
Psychiatrists	342	0.20
Other Medical Doctors (not Specialized in Psychiatry)	25782	15.37
Nurses	13643	8.13
Psychologists	478	0.28
Social Workers	3145	1.87
Occupational Therapists	22	0.01

Alarmingly, the number of mental health professionals is not increasing with time. The number of professionals graduated in academic and educational institutions with at least 1 year training in mental health care per 100,000 is as follows (59);

Table 10: Mental Health Professionals in Educational Institutions

Mental Health Professionals	Numbers per 100,000 population
Psychiatrists	0.002
Other Medical Doctors (not Specialized in Psychiatry)	1.894
Nurses	1.328
Psychologists	0.067
Social Workers	0.004
Occupational Therapists	0.002

Up to 20% of psychiatrists in Pakistan immigrate to other countries within five years of the completion of their training, thus increasing the void of availability of human resource for mental health needs.

The magnitude of refresher training related to mental health care of the existing staff is almost nonexistent. In the year 2008-2009 the percentage of human resource for mental health that received two days of refresher training regarding rational use of drugs, psychosocial interventions and child mental health issues is given below:

Table 11: Percentage of Mental Health Professionals Receiving Refresher Trainings

Trainings	Psych.	MD	Nurses	Psychosocial	Other
Rational Use Of Drugs	2%	3%	2%	N/A	0%
Psychosocial Interventions	2%	2%	1%	1%	0%
Child Mental Health Issues	1%	0%	0%	1%	0%

9.1 Human Resource at Primary Health Care Level:

The distribution of human resource in the public health sector is disproportionate between urban and rural areas. The density of psychiatrists in or around the metropolitan cities is 2.29 times greater than the density of psychiatrists in the entire country. The density of nurses is 0.15 times greater in the largest city than the entire country (4). This leads to absence of mental health staff available at primary health care level; and in most places, secondary level of health care as well. In the current times of management of mental illnesses, deinstitutionalization has shifted the focus of care from hospitals to community based care units to manage mentally ill clients. However, its accessibility particularly in a developing country like Pakistan is not yet implemented. Although, the primary health care is established in Pakistan, mental health services are only established and available at tertiary care hospitals in urban areas only. Despite vast public sector network, it is observed that many of the health facilities remain non-functional due to non-availability of human resource. Due to rapidly growing population, the existing number of public and private health institutions, facilities and services are not sufficient to cope with the demand of health care provision (10).

On average a primary health care centre covers the population of 18,000-20,000 individuals. The average number of people seeking treatment from these facilities is 800-1200 per month. To cover the needs of this population in a primary health care centre the workforce (including both health care providers and support staff) comprises of 9-15 personnel. The number of health workforce (health care providers) is limited to 5-7 persons per facility on average comprising typically of 1 medical officer, 1-2 Lady health visitors, and lady health workers varying from 2-5 in numbers. Aside from these, the staff includes technician, dispenser, vaccinator and mid-wife. The health care staff in all facilities is equipped to deal with maternal and child health issue and general health problems (60).

Table below summarises the current situation of human resource in the 5 pilot districts at the primary health care level. This information was collected from the provincial offices and at the facility level during survey interviews. As it can be seen that Rawalpindi (Northern Punjab), faces huge challenges in terms of human resource where more than one third (32%) of the total positions in the primary health care facilities are vacant. In Hyderabad (Sindh) and Bahawalpur (Southern Punjab) 22% and 7% of the sanctioned positions are vacant. (NOTE: Data on HR from the district

was not available for Peshawar - however a similar picture to that of Rawalpindi emerged when individual facilities were inquired about the health staff vacancies)

Table 12: Human Resource at Primary Health Care in Pilot Districts

Districts	Facility Type	Human Resource	
		Sanctioned	Vacant
Quetta	BHU	36	0
	RHC	0	0
	MCHC	12	0
	Dispensary	0	0
	Total	**48**	**0 (0%)**
Hyderabad	BHU	21	6
	RHC	0	0
	MCHC	0	0
	Dispensary	33	6
	Total	**54**	**12 (22.2%)**
Rawalpindi	BHU	332	130
	RHC	306	78
	MCHC	21	4
	Dispensary	43	13
	Total	**702**	**227 (32.3%)**
Bahawalpur	BHU	562	46
	RHC	903	66
	MCHC	187	3
	Dispensary	44	2
	Total	**1696**	**117 (6.9%)**

NOTE: District level human resource information for primary healthcare facilities in Peshawar was not available.

During the administration of the facility based questionnaire the health care staff was inquired about any mental health training they had received before or after they were appointed at the facilities.

Providing MNS care facilities at primary health care level requires training and skills to address at least the WHO priority mental health disorders. The facility staff records diagnoses of all the patients that present at the facility as part of the DHIS monthly requirement. DHIS does have the category of mental disorders mentioned in DHIS SoP document. However the requisite training of facility staff is not mentioned nor any definition of these conditions. Thus any entry and the diagnosis entered into the registers is solely dependent upon the understanding of the facility in-charge making it. Thus it was identified that facilities require training to adequately identify, diagnose and treat patients with mental health issues.

The current level of skills and training of health workforce in MNS disorders at primary health care level is lacking. The curriculum of primary care health staff does entail MNS disorders related skills and training. Health staff at these facilities have never been given any training for MNS disorders and/or MNS emergency situations. Currently there is no provision of psychosocial services, interventions, psychotherapy counselling and/or psycho-education for the patients of MNS disorders and their families. However, the health staff in these facilities are usually local residents who understand the needs of community and mode of communication, and are very familiar with the stigma associated to mental health in their respective communities. These characteristics will make it easier for patients and their families to approach and discuss mental health issues if the staff at the primary health care level is equipped in dealing with these disorders and MNS related services are provided at primary health care level.

Integrating mental health (including both mental health and substance use disorders) at primary health care level requires training of health care teams for both mental health and medical services. The primary health workforce needs to have both skills and training to address a broad spectrum of mental and physical health care needs – which is a challenge. This will need mechanisms to ensure continual supervision of the workforce is available at the district level. The transformation will take time and resources, with support (including data and analysis, planning, policies, and funding) needed at the national, provincial, district and community level.

10. DELIVERY OF CARE IN NON-SPECIALISED AND SPECIALISED HEALTH SETTINGS

10.1 Current Service Resources:

The Pakistani health system is divided into public and private sectors. The Government is by far the major provider of services in rural areas, and it is also the main provider of preventive care throughout the country. PHC facilities include Basic Health Units (BHUs) and Rural Health centers (RHCs) mainly for preventive and outpatient care and also manages outreach and community-based activities, which focus on immunization, sanitation, malaria control, maternal and child health and family planning; the Secondary Health Care Facilities of Tehsil Headquarters Hospital (THQH) and District Headquarters Hospital (DHQ Hospitals) for inpatient and outpatient care; and tertiary care hospitals are for more specialized care which comprise of teaching hospitals mostly located in big cities. In addition, Pakistan military, railways and airlines also have their own health care services available for their employees and families. Private health sectors are well organized bodies offering services, but on charge basis. The private health services sector is dominated by "clinics", the small office- based practices of general practitioners. Other private sector facilities include maternal and child health centers (maternity homes), dispensaries and diagnostic laboratories (61). The health expenditure per capita in Pakistan is reported to be 750-800 (US $ 12-13). It is estimated that 25% of this is contributed by public sector and rest of the 75% is invested by private service fee system.

10.2 Current Public Sector Service Resources

In Pakistan the government health care facilities consist of 1096 hospitals, 5527 basic health units, 650 rural health centers and 5310 dispensaries approximately. The most basic part of PHC a BHU is located at Union Council and serves a catchment population of up to 25,000. Services provided at BHU are promotive, preventive, curative and referrals to the next level. Outreach/community based services are part of the package provided by the BHU. BHU provides all PHC services along with integral services that include basic medical and surgical care, CDD, CDC, ARI, malaria and TB control. MCH services are also part of the services package being provided at BHU. BHUs provide first level referral to patients referred by LHWs. BHUs refer patients to higher level facilities as and when necessary. The BHU also provides clinical, logistical and managerial support to the LHWs. It also serves as a focal point, where community and the public sector health functionaries may come together to resolve issues concerning health.

The RHCs have 10-20 inpatient beds and each serves a catchment population of up to 100,000 people. The RHCs provide promotive, preventive, curative, diagnostic and referral services along with inpatient services. The RHCs also provide clinical, logistical and managerial support to the BHUs, LHWs, MCH Centers, and Dispensaries that fall within its geographical limits. RHCs provide medico-legal, basic surgical, dental and ambulance services.

Of note – no mental health services at primary and even secondary level are available. The staff of PHCs is not equipped with mental health skills to diagnose treat or manage mental health patients nor are they provided with guidelines for making referrals. Similarly they do not have facilities (eg psychotropic drugs) for the management of mental disorders. The services provided at PHCs are mostly for common communicable diseases, seasonal infections and maternal and child health. Due to the lack of facilities, the users directly approach go to the tertiary care facilities even for routine care let alone in cases of psychiatric emergencies.

10.3 Provision of Drugs at Primary Health Care:

Recently the Drug Regulatory Authority of Pakistan and the Ministry of National Health Services Regulations and Coordination with the support of USAID and WHO revised and updated the National Essential Medicines List (NEML) in 2016 after the devolution in June 2011 (Link:http://202.83.164.29/drap/userfiles1/file/National%20ESSENTIAL%20MEDICINES%20LIST%202016%20reduced.pdf). This was part of Pakistan government's commitment to have its public laws and policies consistent to the obligations to the international treaties. Furthermore the NEML forms a tool to provide general public access to essential medicines. And the provinces can use this to develop their own lists, formularies for its effective implementation. The NEML provides the following categories of drugs used for mental health and provides guidance as to which level of health care system these ought to be available.

1) **Antipsychotic**s: Includes Haloperidol in injection, tablet and suspension form. With 0.5mg, 2mg and 5mg strength and to be available at the Secondary and Tertiary levels
2) **Antidepressants**: Amitriptyline 10mg and 25mg tablet form available at the Tertiary level. Fluoxetine 20 mg in capsule form to be available at all three levels (Primary, Secondary and Tertiary).

3) **Antiepileptic Drugs (AEDs)**: Carbamazepine and Valproic Acid in tablet and suspension form available at all three levels (Primary, Secondary and Tertiary). While Injectable Valproic Acid only available at Tertiary care level. Both these drugs are also used as Mood Stabilizers in Bipolar Disorder. While Diazepam which is both an AED and a sedative is available at all three levels

During the facility based inquiry within the 5 pilot districts, specific questions on the availability of psychotropic drugs was asked. It was seen that most of Basic Health Units were under stocked with general medicines and the facility in-charge were not fully aware of the essential drug list (even its previous versions). All of the BHU based staff reported that psychotropic medicines were not part of list of drugs that were regularly supplied to them. The same was true at the DHIS level regarding the information of drugs stock out and none of the drugs listed in the DHIS had psychotropic medicines in it. This has ramifications for the mhGAP roll out in the 5 pilot districts and their facilities. This is another reason that most patients, instead of primary care services, access services at secondary and tertiary care centers directly (62).

10.4 Referral System

As mentioned above the health care delivery system has three levels and referrals are supposed to be made from lower to higher level facilities. As part of the facility based inquiry during the situation analysis, detailed information was gather from facility in-charges about referrals were made. Facility in-charges were not aware of any written and/or standardized protocols for referrals. One of the aspects highlighted was that if referrals were made to a higher facility, due to the lack of services at the facility being referred to, patients generally prefer not going or going to the tertiary care directly or prefer seeking care from the private sector. Feedback and follow up mechanism of referrals also has gaps - the staff is not follow up with the referred facility nor the patient. Mapping and definition of referral catchment area of health facilities are currently unavailable.

10.5 Health Management Information System (HMIS)

The Health Management Information System (HMIS) is crucial for evidence-based policy-making, informed decision-making during planning, implementation and evaluation of health programs; and for appropriate use of resources at all levels of the health system. Before the launch of standard National Health Management Information System (NHMIS) in 2000, there had been acute paucity of reliable and timely health information in Pakistan. Health Departments had no choice but to resort to estimates or carry out expensive community based surveys to determine the disease incidence.

After the development and deployment of NHMIS, District Health System is reshaping itself based upon the regular information now available for a large number of priority health problems and more frequent. This is system is now offering tremendous opportunities for promoting evidence based decision making and improvement of expanded health care structure. This effort led to putting in place a standard system of data collection and transmission from roughly 13,000 public health services (both urban and rural). The new system is now able to promptly locate pockets of vulnerable communities reporting high disease incidence. WHO has very closely been associated with both development and launch of National Health Information Systems (63).

Recently published Pakistan's National HIS Report-2013 has made some alarming revelations and provided a comprehensive overview of National Disease profile. This report was developed after the analysis of estimated 118 million visits made to health services during 2013 in 110 districts out of a total of 140 districts of Pakistan. Out of 43 reportable diseases, 22 diseases were communicable in nature. This system is providing some useful information not only to the District Health Managers, but also to Managers of Public Health Programs (e.g. Malaria (DOTs), EPI Tuberculosis, Hepatitis, AID.HIV, EPI.)(63).

The NHIS information is gathered right from peripheral health facilities on monthly basis and reports sent to District Information Centers before its onward transmission to Provincial/National HIS Units. This includes information from both rural facilities and district hospitals on standard format and software. Since the devolution, all responsibilities pertaining to the health care delivery are now a provincial subject. The hierarchy at the provincial level goes through the Provincial Director General Health who is the head regulatory person; under whom comes the Divisional Director Health and following that is the Executive District Officer- Health (EDO-H) and lastly the Medical Superintendents (MS) of hospitals (8). Both BHUs and RHCs have standard HMIS reporting instruments and plans for submission of reports to the EDO office. Currently HMIS is covering only OPDs of THQ and DHQ hospitals. Hospitals send annual Abstract Report to EDO-H, which in turn is sent to the HMIS cell in Director General Health Services (DGHS) office.

The health information system does not provide much information on NCDs. The 203 facilities of the current situation analysis were also part of the DHIS reporting system. As mentioned above, pertaining to mental health, NCDs are categorized in two broad categories namely "Neuropsychiatric Diseases" (which include depression, drug dependence, and epilepsy) and "Mental Behavioral Disorder Drug Abuse" (which includes "drug abuse (psychoactive substance use)" and "mental disorders"). The DHIS, however, does not provide the definition and/or diagnostic criteria for these disorders nor does it provide the rationale of classification of these disorders in the above mentioned categories. The lack of training and/or qualifications of the PHC level In-charges (MOs or LHVs) does not help in the diagnoses of these disorders, thus it is not clear if for example all the depression cases reported from these facilities are actually depression or not (8). This carries implications for the mhGAP roll-out since the currently reported numbers from these facilities may change after they are trained and supervised. Furthermore the DHIS categories on which these facilities report should also be reviewed so that mental disorders can be recoded correctly.

11. LIMITATIONS:

The fact that mental health is not a priority in terms of public health agenda served as the major limitation in obtaining information for this situation analysis, since it was not readily available in a systematic manner. This was compounded by the fact that Pakistan has not conducted a national mental survey. Therefore majority of the prevalence rates on all the WHO priority conditions were derived from small usually urban based independent studies.

Another limitation of gathering reliable data was posed at the health management information systems. The DHIS is functional and does include some (not all mental disorder related indicators) mental health indicators, however the understanding of PHC level staff reporting on those indicators was not up to the mark. Thus the figures reported need to be viewed with caution.

12. CONCLUSIONS:

Findings from the situation analysis based on the National, Provincial, five selected Districts and randomly selected 203 Facilities (within these five Districts), following are the conclusions that can be drawn in in terms of the mental health situation of Pakistan.

It is clear that the mental health situation of Pakistan in terms of the burden of mental disorders is far from optimal. Pakistan has one of the highest rates of common mental disorders (including maternal depression) in the region. Similarly one of the highest rates of developmental delays are also reported from Pakistan. Prevalence of other priority conditions like self-harm/suicide, epilepsy, substance abuse and dementia are seemingly on the rise. All the mental health disorders and conditions have a huge treatment gap secondary to the scarcity of mental health professionals.

Pakistan clearly needs to improve the mental health surveillance and reporting on all the priority conditions, as defined by WHO. There are mental health indicators present in the current DHIS, however the categorization of neuro-psychiatric disorders needs to be reviewed. Similarly the information from teaching hospitals (where mental health facilities are based and accessed) needs to be made more readily available eg the number of in-door patients and type of disorders treated. This will especially be needed once mhGAP is rolled out beyond the 5 pilot districts and starts to get scaled-up in other PHC facilities.

DHIS is the only means to help in the decision making for mhGAP refresher trainings and/or course correction of mhGAP implementation. There is scope and room to add more indicators to help cover other priority mental health conditions (eg suicide/self-harm and dementia, developmental delays) apart for the ones that are currently covered in the DHIS.

In terms of the mental health policy and especially after the devolution, Pakistan seems to be on the right trajectory and has positioned mental health well. This is reflected in the 2014-2024 program on NCD&MH, which is an excellent starting point for mental health. Furthermore, being a signatory on the WHO EMRO Regional Framework has provided the necessary impetus to this and the integration of WHO mhGAP at the PHC level. Along with this, the recent revision of the National Essential Medicines List (NEML) and the inclusion of psychotropic drugs and their

availability at the PHC level is also a favorable feature for the treatment of mental disorders and integration of mhGAP at PHC level.

The challenge will be the implementation of these policies at the provincial, district and facility levels. The key barriers to the implementation, as seen in this situational analysis, will be;

i) **At the Facility Level**: It was clear from the situation analysis that PHC facilities did not have all of their sanctioned posts filled. Thus shortage of human resource will create treatment gaps at the facility level. More than 30% facilities in Rawalpindi and about a quarter facilities in Quetta did not have all sanctioned posts filled. Another challenge will be that none of the human resource at the PHC level ever had any training in mental health. They will need continuous support in terms of supervision by their district level trainers in order to acquire the necessary skills and competency to detect and treat mental disorders.

   Availability of psychotropic medicines at the facility level was another gap. Currently none of the facilities approached in this situation analysis had psychotropic medicines and they were not part of the DHIS stock out reporting mechanism. The provinces will have to ensure that a) psychotropic drugs are made available and b) are part of the DHIS drug inventory list of stocks.

   The mhGAP training will help in the detection and diagnoses of mental disorders at the PHC level, however recoding these as part of the DHIS reporting will have to be reviewed carefully and should be part of the roll-out. This will ensure that post-rollout of mhGAP correct reliable diagnoses are reported as part of the DHIS data.

   Referral pathway was also found to have gaps. The facilities referring to the higher tier do not have a proper mechanism to follow up referred patients. One of the reasons of this is the unavailability of mental health services at the PHC and secondary level and the absence of any standard operating procedures.

   Last but not the least, communities being served by these PHC facilities will have to be made aware of availability of mental health services. Awareness rasing campaigns help reduce the stigma as well. Unless “demand side” is also addressed, only reinforcing the “supply side” (i.e provision of mhGAP trainings and medicines at the PHC) will not help increase the utilization of services.

ii) **At the District Level:** The key challenge at the district level will be the continuous supervision of the PHC staff trained in the mhGAP and responding to the needs of the PHC staff secondary to the DHIS monthly data. The District level mhGAP trainers will have to ensure monthly supervision of PHC staff is conducted and any refreshers are conducted timely. These monthly supervisions will have to be integrated into the routine supervisions of PHC staff. As mentioned above, district level awareness campaigns like the Mother-Child Week (MC Week) will have to be organized to help create demand and reduce stigma attached to mental health.

iii) **At the Provincial Level:** In the back drop of the 18th Constitutional Amendment 2011 and devolution the challenge at the Provincial level will be to ensure the implementation of the national mental health policies and the political will to ensure EMRO Regional Framework is implemented in letter and spirit at all the levels. The current focal persons appointed for NCD&MH will have to ensure timely provision of psychotropic drugs to the districts and facilities – thus provinces will have to increase the existing financial allocations to support this, as well as the awareness rasing campaigns. As well as take the necessary revisions needed in the DHIS to incorporate indicators for all the priority mental health conditions and have the teaching hospitals feed data to the DHIS to compete the picture. This will serve as part of the disease surveillance and improve the implementation of mhGAP. Lastly, provinces will have to ensure that all sanctioned posts at the PHC level are filled.

13. REFERENCES:

1. Coelho HF, Cooper PJ, Murray L. A family study of co-morbidity between generalized social phobia and generalized anxiety disorder in a non-clinic sample. Journal of affective disorders. 2007;100(1-3):103-13. Epub 2006/11/23.
2. Mental health Atlas country profile 2014. 2014.
3. Thomas J, Knowles R, Tai S, Bentall RP. Response styles to depressed mood in bipolar affective disorder. Journal of affective disorders. 2007;100(1-3):249-52. Epub 2006/12/01.
4. WHO-AIMS Report on Mental Health System in Pakistan *WHO Office Islamabad, Pakistan*: 2009.
5. Jamal H. Districts' Indices of Multiple Deprivations for Pakistan, 2011. 2012 82.
6. Population. Pakistan: Pakistan Bureau of Statistics, 2006.
7. Health updates on internally-displaced persons (IDPs) from north Waziristan. 2014.
8. Nizar H, Chagani P. Analysis of Health Care Delivery System in Pakistan and Singapore. International Journal of Nursing. 2016;8(2).
9. Gadit AAM. Mental Health in Pakistan: Where do we stand? Journal-Pakistan Medical Association. 2006;56(5):198.
10. Ather F, Sherin A. Health System Financing in Pakistan: Reviewing Resources and opportunities. Khyber Medical University Journal. 2014;6(2):53-5.
11. Organization WH. WHO-AIMS report on mental health system in Pakistan. World Health Organization. 2009.
12. Gadit AAM. Psychiatry in Pakistan: 1947-2006: A new balance sheet. Journal of Pakistan Medical Association. 2007;57(9).
13. Saeed K, Gater R, Hussain A, Mubbashar M. The prevalence, classification and treatment of mental disorders among attenders of native faith healers in rural Pakistan. Social Psychiatry and Psychiatric Epidemiology. 2000;35(10):480-5.
14. Gadit A. Ethnopsychiatry--a review. JPMA The Journal of the Pakistan Medical Association. 2003;53(10):483.
15. Gadit A. Could there be a role for shamans in the health care delivery system of Pakistan? JPMA The Journal of the Pakistan Medical Association. 2007;57(2):101-3.
16. Gadit A, Vahidy A, Shafique F. Mental Health Morbidity: An experience in a community psychiatric clinic. J Coll Phys Surg Pk. 1998;8(6):262-4.
17. Drug use in Pakistan 2013. Islamabad: UNODC, 2013.
18. Afridi MI. Mental health: priorities in Pakistan. JPMA The Journal of the Pakistan Medical Association. 2008;58(5):225.
19. Hanlon C, Luitel NP, Kathree T, Murhar V, Shrivasta S, Medhin G, et al. Challenges and opportunities for implementing integrated mental health care: a district level situation analysis from five low-and middle-income countries. PloS one. 2014;9(2):e88437.
20. Rahimi-Movaghar A, Amin-Esmaeili M, Sharifi V, Hajebi A, Radgoodarzi R, Hefazi M, et al. Iranian Mental Health Survey: Design and Field Proced. Iranian Journal of Psychiatry. 2014;9(2):96-109.
21. Noorbala AA, Bagheri Yazdi SA, Yasamy MT, Mohammad K. Mental health survey of the adult population in Iran. Br J Psychiatry. 2004;184:70-3.
22. Ghanem M, Gadallah M, Meky FA, Mourad S, El-Kholy G. National Survey of Prevalence of Mental Disorders in Egypt: preliminary survey. East Mediterr Health J. 2009;15(1):65-75.
23. Kohn R, Saxena S, Levav I, Saraceno B. The treatment gap in mental health care. Bull World Health Organ. 2004;82(11):858-66.
24. Mirza I, Jenkins R. Risk factors, prevalence, and treatment of anxiety and depressive disorders in Pakistan: systematic review. Bmj. 2004;328(7443):794.

25. Fisher J, Cabral de Mello M, Patel V, Rahman A, Tran T, Holton S, et al. Prevalence and determinants of common perinatal mental disorders in women in low- and lower-middle-income countries: a systematic review. Bulletin of the World Health Organization. 2012;90 139-49.
26. Rahman A, Malik A, Sikander S, Roberts C, Creed F. Cognitive behaviour therapy-based intervention by community health workers for mothers with depression and their infants in rural Pakistan: a cluster- …: Elsevier; 2008.
27. Rahman A, Iqbal Z, Harrington R. Life events, social support and depression in childbirth: perspectives from a rural community in the developing world. Psychol Med. 2003;33(7):1161-7.
28. Rahman A, Creed F. Outcome of prenatal depression and risk factors associated with persistence in the first postnatal year: prospective study from Rawalpindi, Pakistan. Journal of affective disorders. 2007;100(1-3):115-21. Epub 2006/11/14.
29. Zahidie A, Jamali T. An overview of the predictors of depression among adult Pakistani women. Journal of the College of Physicians and Surgeons Pakistan. 2013;23(8):574.
30. Khatri IA, Iannaccone ST, Ilyas MS, Abdullah M, Saleem S. Epidemiology of epilepsy in Pakistan: review of literature. J Pak Med Assoc. 2003;53(12):594-7.
31. UNODC. Drug use in Pakistan 2013. Narcotics Control Division, Government of Pakistan.
32. Haider W, Chaudhry MA. Prevalence of Alcoholism in the Punjab, Pakistan. Biomedica 2008;25:80-4.
33. Merikangas KR, He J-p, Burstein M, Swanson SA, Avenevoli S, Cui L, et al. Lifetime Prevalence of Mental Disorders in US Adolescents: Results from the National Comorbidity Study-Adolescent Supplement (NCS-A). Journal of the American Academy of Child and Adolescent Psychiatry. 2010;49(10):980-9.
34. Butt A, A., Khalid R. Behavioral Problems in Children: A Systematic Review of Research Literature in Pakistan. Journal of Behavioural Sciences 2015;25(2).
35. Bandeali S, Jawad A, Azmatullah A, Liaquat HB, Aqeel I, Afzal A, et al. Prevalence of behavioural and psychological problems in working children. J Pak Med Assoc. 2008;58(6):345-9.
36. Javed MA, Kundi MZ, Khan PA. Emotional and behavioural problems among school children in Pakistan. J Pak Med Assoc. 1992;42(8):181-3.
37. Razzak M, Khan RA, Chaudhari I, Ahmed M, Shamim N. Prevalence of psychiatric disorders in Karachi: 2006 – 2010. American Journal of Research Communication 2013;1(11):220-43.
38. Iqbal S, M., Rahman R, Saad M, Farid J, Zafar S. Prevalence of vulnerability for bipolar spectrum disorder among students of Pakistan. International Journal of Applied Behavioral Sciences. 2014;1(2).
39. Naqvi H, A., Hussain S, Zaman M, Islam M. Pathways to Care: Duration of Untreated Psychosis from Karachi, Pakistan. . PloS ONE. 2009;4(10).
40. Mirza I, Tareen A, Davidson LL, Rahman A. Community management of intellectual disabilities in Pakistan: a mixed methods study. Journal of intellectual disability research : JIDR. 2009;53(6):559-70.
41. Ibrahim SH, Bhutta ZA. Prevalence of early childhood disability in a rural district of Sind, Pakistan. Developmental Medicine & Child Neurology. 2013;55(4):357-63.
42. Durkin MS, Hasan ZM, Hasan KZ. Prevalence and Correlates of Mental Retardation among Children in Karachi, Pakistan. American Journal of Epidemiology. 1998;147(3):281-8.
43. Bashir A, Yaqoob M, Ferngren H, Gustavson KH, Rydelius PA, Ansari T, et al. Prevalence and associated impairments of mild mental retardation in six- to ten-year old children in Pakistan: a prospective study. Acta Paediatr. 2002;91(7):833-7.
44. Gustavson KH. Prevalence and aetiology of congenital birth defects, infant mortality and mental retardation in Lahore, Pakistan: a prospective cohort study. Acta Paediatr. 2005;94(6):769-74.

45. Maulik PK, Darmstadt GL. Childhood disability in low- and middle-income countries: overview of screening, prevention, services, legislation, and epidemiology. Pediatrics. 2007;120(1):S1-55.
46. Abidi MA, Zia W, Waqas M. Deliberate Self Harm: A Local Perspective JPPS. 2010;7(2).
47. Shahid M, Hyder AA. Deliberate self-harm and suicide: a review from Pakistan. Int J Inj Contr Saf Promot. 2008;15(4):233-41.
48. Shahid M, Iqbal R, Khan MM, Khan MZ, Shamsi US, Nakeer R. Risk Factors for Deliberate Self-Harm in Patients Presenting to the Emergency Departments of Karachi. Journal of the College of Physicians and Surgeons--Pakistan : JCPSP. 2015;25(1):50-5.
49. Shahid M, Hyder AA. Deliberate Self-Harm and Suicide: a Review from Pakistan. International Journal of Injury Control & Safety Promotion. 2008;15(4):233-41.
50. United Nations, Department of Economic and Social Affairs, Population Division (2015).*World Population Prospects: The 2015 Revision, Key Findings and Advance Tables.* Working Paper No. ESA/P/WP.241.
51. Ahmed A, Owais K, Mamun K, Rao F, Yousafzai WA. Dementia in Pakistan: National Guideline for Clinicians. Pakistan Journal of Neurological Sciences. 2013;8(3).
52. Irfan M. Implementation of mental health policy in Pakistan: A dream in search of reality? Journal of Postgraduate Medical Institute (Peshawar-Pakistan). 2011;24(2).
53. Tareen. A, Tareen. KI. Mental health law in Pakistan. BJPSYCH INTERNATIONAL. 2016;13(2):67-9.
54. Alwan A, Saeed K. A new agenda for mental health in the Eastern Mediterranean Region. EMHJ. 2015;21(7).
55. Assembly UG. Transforming our world: the 2030 Agenda for Sustainable Development. New York: United Nations. 2015.
56. Steele JD, Currie J, Lawrie SM, Reid I. Prefrontal cortical functional abnormality in major depressive disorder: a stereotactic meta-analysis. Journal of affective disorders. 2007;101(1-3):1-11. Epub 2006/12/19.
57. Nishtar S, Boerma T, Amjad S, Alam AY, Khalid F, Haq Iu, et al. Pakistan's health system: performance and prospects after the 18th Constitutional Amendment. The Lancet.381(9884):2193-206.
58. Starkman MN, Giordani B, Gebarski SS, Schteingart DE. Improvement in mood and ideation associated with increase in right caudate volume. Journal of affective disorders. 2007;101(1-3):139-47. Epub 2006/12/19.
59. Pakistan. Department of Mental Health and Substance Abuse, World Health Organization, 2011.
60. Healthcare Infrastructure. 2016.
61. Minimum Service Delivery Standards for Primary and Secondary Health Care in Punjab. 2008.
62. Naqvi HA. Primary care psychiatry in Pakistan: Issues and challenges. JPMA-Journal of the Pakistan Medical Association. 2010;60(10):794.
63. National Integrated Feedback Report 2013. Based on DHIS Data 2012. WHO Counrty Office Pakistan