The WPA-Lancet Psychiatry Commission on the Future of Psychiatry

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Executive Summary

Background

This Commission addresses several priority areas for psychiatry over the next decade, and into the 21st century. These represent challenges and opportunities for the profession to sustain and develop itself to secure the best possible future for the millions of people worldwide who will face life with mental illness.

Part 1: The patient and treatment

Who will psychiatrists help? The patient population of the future will reflect general demographic shifts towards older, more urban, and migrant populations. While technical advances such as the development of biomarkers will potentially alter diagnosis and treatment, and digital tech-nology will facilitate assessment of remote populations, the human elements of practice such as cultural sensitivity and the ability to form a strong therapeutic alliance with the patient will remain central.

Part 2: Psychiatry and health-care systems

Delivering mental health services to those who need them will require reform of the traditional structure of services. Few existing models have evidence of clinical effectiveness and acceptability to service users. Services of the future should consider stepped care, increased use of multidisciplinary teamwork, more of a public health approach, and the integration of mental and physical health care. These services will need to fit into the cultural and economic framework of a diverse range of settings in high-income, low-income, and middle-income countries.

Part 3: Psychiatry and society

Increased emphasis on social interventions and engagement with societal expectations might be an important area for psychiatry's development. This could encompass advocacy for the rights of individuals living with mental illnesses, political involvement concerning the social risk factors for mental illness, and, on a smaller scale, work with families and local social networks and communities. Psychiatrists should therefore possess communication skills and knowledge of the social sciences as well as the basic biological sciences.

Part 4: The future of mental health law

Mental health law worldwide tends to be based on concerns about risk rather than the protection of the rights of individuals experiencing mental illness. The United Nations Convention on the Rights of Persons with Disabilities, which states that compulsion based in whole or in part on mental disability is discriminatory, is a landmark document that should inform the future formulation and reform of mental health laws. An evidence-based approach needs to be taken: mental health legislation should mandate mental health training for all health professionals; ensure access to good-quality care; and cover wider societal issues, particularly access to housing, resources, and employment. All governments should include a mental health impact assessment when drafting relevant legislation.

Part 5: Digital psychiatry—enhancing the future of mental health

Digital technology might offer psychiatry the potential for radical change in terms of service delivery and the development of new treatments. However, it also carries the risk of commercialised, unproven treatments entering the medical marketplace with detrimental effect. Novel research methods, transparency standards, clinical evidence, and care delivery models must be created in collaboration with a wide range of stakeholders. Psychiatrists need to remain up to date and educated in the evolving digital world.

Part 6: Training the psychiatrist of the future

Rapid scientific advance and evolving models of health-care delivery have broad implications for future psychiatry training. The psychiatrist of the future must not only be armed with the latest medical knowledge and clinical skills but also be prepared to adapt to a changing landscape. Training programmes in an age in which knowledge of facts is less important than how new knowledge is accessed and deployed must refocus from the simple delivery of information towards acquisition of skills in lifelong learning and quality improvement.

Conclusion

Psychiatry faces major challenges. The therapeutic relationship remains paramount, and psychiatrists will need to acquire the necessary communication skills and cultural awareness to work optimally as patient demographics change. Psychiatrists must work with key stakeholders, including policy makers and patients, to help to plan and deliver the best services possible. The contract between psychiatry and society needs to be reviewed and renegotiated on a regular basis. Mental health law should be reformed on the basis of evidence and the rights of the individual. Psychiatry should embrace the possibilities offered by digital technology, and take an active role in ensuring research and care delivery in this area is ethically sound and evidence based. Psychiatry training must reflect these multiple pressures and demands by focusing on lifelong learning rather than simply knowledge delivery.

Introduction

Psychiatry has always been a medical discipline, but was this development inevitable, and will it always be this way? The profession has changed so much since so-called alienists treated their alienated patients up to the 19th century, when psychiatry as a term emerged. Changes in diagnostic practices, investigations, and therapeutic interventions—pharmacological, psycho-logical, and social—have brought psychiatric practice out of asylums and into the community in many countries, but not universally. Early intervention has gone from being an intriguing innovation to standard practice in many countries. However, delivery of these services depends upon resources available, and in many countries around the world such services remain aspirations.

Psychiatry in the first quarter of the 21st century is at the cusp of major changes. The scientific community is beginning to understand more about the structures of the brain and its development and function—and, more importantly, the effects of social factors on these processes. Recent investigations into the interactions between the immune system and the brain and into optogenetics promise new knowledge of mechanisms and new treatments. Psychopharmacogenomics can enable clinicians and researchers to profile the pharmacodynamics and pharmacokinetics of individuals to develop and deliver more targeted interventions.

The world is becoming more connected, and psychiatry is no exception to this phenomenon. On the one hand, the rise of the global mental health movement has highlighted the importance of mental health; on the other hand, this movement is often perceived to be yet another example of the so-called western Anglo-centric countries dictating to the rest of the world what needs to be done, ignoring different cultural models of expressing distress and seeking help. The global mental health movement needs to put much more emphasis on sharing examples of good clinical practice than it has done so far, because globalisation and urbanisation present not only challenges but also an opportunity to share knowledge. Furthermore, this interconnectedness both fuels and is enhanced by the growth of digital technology, whose effect on mental health is uncertain, and whose impact on the delivery of treatment might be immense. It is time to look at where psychiatry has been, where it is now, and to try to imagine its future. What will psychiatrists do, how will they do it, and what will they need to know in the next few decades? Who will psychiatrists treat? How will this treatment be delivered and financed? How will psychiatry's relationship with society change? How should mental health laws adapt to accommodate this? Will psychiatry be able to go digital, and if so, how? And how will psychiatrists of the future be trained?

To answer these questions, the World Psychiatric Association and The Lancet Psychiatry have commissioned a team of mental health professionals, researchers, and service users to write and review this new Commission on the future of psychiatry. The following pages are intended to stimulate thought, debate, and the change necessary for psychiatry to fulfil its potential as an innovative, effective, and inclusive medical specialty in the 21st century.

Part 1: The patient and treatment

Introduction

The dramatic neuroscience research advances in psychiatry of the second half of the 20th century have not yet led to substantial advances in patient care. In spite of this, patient care has been transformed by a number of other influences. The increasing recognition of social determinants of health has clearly led to increased appreciation of demographic, economic, and sociocultural aspects of risk for development of psychiatric disorders, patient acceptance of treatment, and design and implementation of systems of care. Furthermore, although diagnostic systems have continued to be refined, all those in use across the globe are at present non-aetiological approaches, awaiting the

development of improved understanding of the complex factors in the aetiology of psychiatric disorders. Treatment decisions therefore rest on the resources available to the patient in a particular setting, and on the best evidence based on clinical experience combined with the emerging clinical outcomes from research findings. In this section of the Commission, we review a number of areas of particular concern in the present patient assessment and care arena.

Demographic and societal factors affecting the patient

The future of the psychiatric patient in the health-care system will be influenced by many factors, several of which will be discussed in other sections of this report. One of the most critically important variables is the availability of and access to psychiatric care. WHO data[1] show vast discrepancies in resources across countries, with, for example, nearly 100-times variations in the per-capita availability of psychiatrists.[2] Within specific countries, substantial geographical variations occur in the availability of mental health clinicians and facilities as well as in specific treatment modalities such as pharma cological, psycho therapeutic, or psycho-social interventions, or neuro modulation therapies.

In the USA, which has over 50 000 psychiatrists—one of the highest per-capita ratios in the world—and an extensive array of government and privately supported programmes, many subpopulations have inadequate access to any aspects of clinical mental health care including medications. Owing to substantial fragmentation compared with the general health system, access is constrained for those living in rural areas and poverty-stricken urban cores, and elderly people, children, the homeless, victims of abuse, those in forensic facilities, and members of minority racial and ethnic groups.[3] Thus, it is uncertain whether many of our projected changes to patient care will be available to the majority of the global population in the next 10 years.

Although no evidence shows that the epidemiology of most psychiatric disorders is changing, large-scale demographic and societal changes already underway will affect individual and population mental health. Four such changes, already occurring in Asia and major population centres elsewhere, can illustrate this.

First, ageing of the global population will continue due to improved nutrition and water supplies as well as advances in general medical care.[4] The growth in the elderly population means an increase in age-related diseases such as the dementias and late-life depression. Changes in social patterns, with multiple generations of families no longer living in the same houses or even the same towns, will alter the role of elderly people in the community and the way they are valued and cared for. The increased demands for caregiving by younger family members for the older generations will be less likely to be served when those younger generations live far away. These changes impair the quality of life of elderly people and can lead to poor mental health outcomes.[5] Moreover, the high prevalence of coexisting physical conditions, such as sensory loss, will exert a greater effect on mental health through the loss of self-esteem and independence.

Second, an increasing percentage of the world's population will be living in urban areas. Urbanisation affects mental health through the influence of increased stressors and factors such as an overcrowded and polluted environment, high levels of violence, access to illicit drugs, and reduced social support.[6] For example, low-paid urban workers often live in crowded spaces with poor basic sanitation, food supplies, and shelter, as well as few—if any—basic governmental and social support services.

Third, population disruption and migration due to natural and manmade disasters are at the highest level in recorded history,[7] with associated adverse effects on mental health.[8] The stresses of forced

emigration—physical, social, and psychological—have taxed all societal systems.9 These stresses stem not only from factors directly related to migration or living in refugee camps, but also from living under the authority of individuals with, most often, a different culture, language, and traditions.

Fourth, the rapidly expanding use of electronic communications in the digital world has led to concerns about the effect of more constant digital connectivity on individuals, such as a reduced attention span and changes to interpersonal relationships and society (see Part 5: Digital psychiatry). For example, internet addiction disorder, although not listed in DSM-5, is of increasing concern in adolescents and young adults. In addition, a strong association exists between internet addiction disorder and depression10 although the causal relationship has not been determined.

Culture and patient care

Culture and diagnosis

With the vast migration of populations in recent decades, the importance of cultural factors in understanding mental processes of both individuals and groups and in psychiatric practice will continue to grow. Diagnosis will continue to be among the most complex issues in psychiatry and will have to take increasing notice of the influence of culture.11 Cultural variations must be taken into account in the clinician's understanding of the context and meaning of the language of patients, and this appreciation must be a basic component of every diagnostic interpretation. To understand what patients are communicating requires the clinician to have an awareness of the effect cultural relativism has on language and on other variables, and such awareness will produce more effective decision making about normality and psychopathology.12

The migration of human populations has modified local and regional cultures, but culture continues to be influenced by a multiplicity of factors, and global cultural diversity will persist. Assessment of race and ethnicity, language (verbal and non-verbal), religious beliefs, traditions, values and moral thought, family and gender issues, social relations, financial philosophies, and economic status will continue to be key elements for clinicians to consider when formulating a diagnosis.13

These and other cultural variables affect areas such as help-seeking patterns, causal attributions, explanatory models of illness, and severity assessment. The cultural elements inserted in several sections of DSM-5 are only the initial step in a conceptual and practical consolidation of culture in the diagnostic process.14 Study of idioms of distress and cultural syndromes in various diagnostic schemes should continue to be refined and implemented in a way that can be used more effectively around the world.15

DSM-5 developed the cultural formulation interview as a novel 16-question measurement instrument of cultural diagnostic components to be used during an initial interview. This process was field-tested for utility, and is supported by 12 supplementary modules to broaden and deepen the collected data.16 Thus, the cultural formulation interview can serve as a platform for further development.

Culture and the therapeutic alliance

Understood as the common and shared effort of physician and patient aimed at the alleviation, healing, or cure of ailments, the therapeutic alliance entails knowledge, attitudes, and skills that, if appropriately used, will result not only in the stated objectives but also in the prevention of relapses and the accomplishment of improved quality of life for the individual and the community. The therapeutic alliance is moderated by the knowledge base and skills of the clinician, the influence of

culture on the system of care, and the cultural background of the physician and the patient. Increasing attention is paid to the role of these factors in the development and maintenance of a productive therapeutic alliance.11,17

As an individual, the physician absorbs the general principles and particular features of the culture of medicine as practised in their location and filtered through their own cultural background. The patient's cultural background brings with it conceptions of trust, respect for authority figures, dignity, self-image, self-esteem, and family-nourished beliefs and attitudes that the physician needs to appreciate to develop a positive and productive therapeutic alliance. In psychiatry, the therapeutic alliance is also affected by prejudice, stigma (including self-stigmatisation18), and discrimination, which are powerful cultural forces in most societies.

Culture and psychiatric treatment

Cultural competence is important not only in diagnosis and in the therapeutic alliance but also in the formulation and execution of a treatment plan.11 The patient's culture might influence their willingness to engage in the type of emotional self-disclosure that is essential for all forms of psychotherapy. Cultural and spiritual beliefs might influence the patient's perception of an internal locus of control of their thoughts, emotions, and behaviours. Both these factors would influence, for example, a prescription for psychotherapy and its implementation. Thus, development and use of culturally sensitive psychotherapies and psychosocial interventions should be encouraged. In some cultures, pharmacotherapy prescriptions might be affected by traditional medicinal treatments and potential conflicts with traditional healers, which must receive particular attention from the psychiatrist.19 The cultural aspects of all components of the psychiatric care system should receive much more emphasis in the coming decade, with resources devoted to training, research, and clinical system development aimed to better equip clinicians to provide excellent culturally **competent care.20,21**

Culture and stigma

Culturally influenced discrimination against those with psychiatric illnesses, their families, and those who provide treatment for them has been known for centuries in essentially every society or culture. The discriminatory results of this stigmatisation have influenced media portrayals of patients with psychiatric disorders and their families, and of both clinicians who provide mental health care and the settings in which they work. In modern times, this stigmatisation has affected not only the place of psychiatry in the health-care system, but also governmental willingness to support adequate facilities, non-discriminatory policies regarding access, training of clinicians, and reimbursement for psychiatric care compared with all other components of the health system—even in a well developed health-care system such as in the USA.3 Furthermore, strong evidence suggests that substantial stigmatisation continues to exist among other physicians.22

As Fink and Tasman wrote in 1992, "Patients' willingness or unwillingness to be treated, the inability to pay for treatment, and the unwillingness of people to have mentally ill persons living near them or working in their companies have combined to form the most powerful antitherapeutic forces that mentally ill individuals face."18 Although impressionistic information from many clinicians around the world suggests that stigma in the psychiatric sphere of concern has been diminishing in recent decades, little formal psychiatric research is devoted to this topic. Culturally influenced stigma still appears to have an adverse effect on patients' willingness to seek care.23 In many countries, academic institutions, psychiatric and other mental health-related organisations, and governments have implemented programmes to reduce stigmatisation, but these efforts are often local or

regional in scope and influence, resulting in little study of national or cross-national assessments of stigma reduction. This paucity of data makes informal conclusions impossible to verify.

The tumultuous state of the world makes it difficult to predict whether adequate resources will be available to foster growth of sorely needed multifocal, strategically targeted programmes in the next 10 years. In addition, cultural change, which is necessary for widespread changes in attitudes and behaviour regarding mental health, comes at a very slow pace in most conditions. Both these factors suggest that a dramatic reduction in stigmatisation is unlikely to occur in the near future, with most changes likely to be gradual, modest, and geographically diverse.

Diagnostic assessment

Across medicine, diagnosis first involves the gathering of multiple types of information from different sources (eg, history, examination, and investigations), which is then considered, weighted, and integrated by the clinician who makes a decision on the likely diagnosis. Changes in psychiatric diagnostic practice could involve alterations in the way initial information is collected, the type of information that is gathered and used, and the way data are integrated into a diagnostic decision.

Typically, the diagnostic act begins with the clinician gathering information reported by the patient or others who know them well. Across medicine, the need to listen carefully, elicit relevant information, empathise, and observe remains crucial for any successful diagnostic assessment.

The psychiatric formulation is broader than diagnosis alone. It takes into account the social context, contributory risk and protective factors, and developmental change. These factors are relevant to formulation of the management plan, selection of appropriate treatments, and prediction of adherence and prognosis. This approach is unlikely to be replaced by a purely biological or investigative approach and in its ideal form should continue to be based on an integrative biopsychosocial-cultural formulation.

Given the global scarcity of resources, the level of direct clinician contact with a patient is likely to change over the next 10 years; few, if any, places have sufficient clinicians with enough time to meet population demands and needs. Mobile, internet, and telemedicine technologies already enable remotely administered, online diagnostic interviews (eg, the Development and Well-Being Assessment) and cognitive testing that are used in research and in some clinical settings. Such approaches could enhance task shifting from physicians to health-care workers in low-income and middle-income countries (LMICs).[24]

One of the holy grails of clinical psychiatry is laboratory tests to assist in diagnostic assessment—a standard component of diagnosis in most other medical specialties. Existing definitions of mental disorders are based exclusively on subjective signs and patient-reported symptoms that are prone to recall error and misinterpretation. Laboratory tests have potential advantages, including being more objective[25] and facilitating the detection of mental disorders in primary care settings, in which the use of laboratory tests is routine.[26]

Unfortunately, although one of the goals of DSM-5 was to make the diagnostic system more based on the underlying pathophysiology of mental disorders than on their symptomatic presentations,[27,28] no laboratory tests or other biomarkers were deemed to be sufficiently sensitive and specific to warrant their inclusion in the DSM-5 diagnostic criteria sets for any of the mental disorders.

One of the causes of the failure of studies searching for useful diagnostic biomarkers might be the erroneous assumption that the DSM categories represent true disease entities instead of diagnostic

behavioural measures that cut across current disorder categories and that can inform future revisions of our diagnostic system".31

RDoC-inspired insight into the relationship between biological processes and psychiatric symptoms might allow for the incorporation into psychiatry of clinically useful, diagnostically specific biomarkers over the next decade. To facilitate the incorporation of such measures in diagnostic practices, the DSM revision process is moving from one that permits updates only at fixed intervals to one that allows for the incorporation of empirically based changes on a continuous basis.32

A more likely change in diagnostic assessment practices will be the increased use of measurement based care in routine clinical practice. Measurement based care involves the use of clinician administered and self report scales for disease assessment, tracking, and treatment to achieve optimal outcomes.33 Although measurement based care already forms the bedrock of the management of chronic medical conditions such as diabetes and hypertension, it is infrequently used for assessment and monitoring of psychiatric conditions,34 despite calls for its widespread adoption by psychiatric clinicians.33,35

Primary care physicians routinely assess basic health measurements such as pulse, blood pressure, and weight and regularly conduct a so-called review of systems to enquire about the most common problems that can affect various body systems. Psychiatry would benefit from a standardised toolkit of psychiatric measures that would both provide a picture of the individual's mental health status and facilitate monitoring of specific conditions. constructs created by expert consensus.29,30 The US National Institute of Mental Health (NIMH) has developed the Research Domain Criteria (RDoC) project to promote "research to validate dimensions defined by neurobiology and behavioural measures that cut across current disorder categories and that can inform future revisions of our diagnostic system".31

To promote the routine clinical use of psychiatric measures, the developers of DSM-5 proposed the addition of a dimensional component to the diagnostic categories. This dimensional component took two forms: cross-cutting symptom measures that would function as a psychiatric review of systems and disorder-specific severity measures that might be useful in making treatment decisions and monitoring treatment response (panel 1).

DSM-5 field testing of the cross-cutting measures in academic settings indicated that most of the scales had good-to-excellent reliability37 and suggested that self-selected participants in the DSM-5 clinical practice field trials found them useful;38 however, evidence establishing the feasibility of their widespread implementation in clinical practice settings was insufficient. Ultimately, this proposed dimensional component did not become part of the official DSM-5 diagnostic system but was relegated to the Emerging Measures and Models section. This decision shows the paramount importance of considering feasibility of implementation and user acceptability in the adoption of diagnostic assessment practices.39 Computerised implementation of dimensional scales, especially self-report measures, has the potential to substantially improve the availability and ease of use of dimensional measures. Improvements in technology, as well as the steadily increasing use of computers in clinical settings over the next decade, will facilitate their implementation in routine clinical practice. Increased pressure for clinicians to demonstrate quality care by measuring patient improvement will also incentivise their more widespread use.

Concerns about litigation and complaints, as well as patient-generated self-diagnosis (using internet-based information), might also stimulate the development of more standardised decision-making tools. These tools might function more as an adjunct rather than a replacement for clinical judgment, because of the complexity of the clinical data and the situation in which the formulation is developed.

Genetic information, when combined with other risk data (eg, family history and task-based cognitive data) might also aid estimation of the risks of future adverse outcomes—eg, development of Alzheimer's disease.40 Future examples could include risk estimation for the conversion of subgroups with psychotic-like symptoms or high-risk mental states to full-blown psychotic illness, adolescent depression that is likely to convert to bipolar disorder, and child neurodevelopmental disorder subtypes that develop into schizophrenia. Identification of very high-risk subgroups becomes worthwhile when it alters clinical management. A clinician who knows an adolescent is at an elevated risk of psychosis or bipolar disorder might be more cautious about prescribing a stimulant medication for attention deficit hyperactivity disorder or an SSRI medication for unipolar depression.

The completion of the first revision in 25 years of the Mental and Behavioural Disorders chapter of the ICD over the next several years will affect diagnostic assessment globally, as most countries use the ICD mental disorders classification.41 Proposed improvements include a more clinically useful scheme to lay out the classification, clinical descriptions, and diagnostic guidelines such that format and content are presented in a more consistent way across all diagnostic categories; a dimensional approach to personality disorder classification; and several new disorders, such as prolonged grief disorder.

In summary, 10 years from now, diagnostic assessment based on internationally recognised nosological systems will probably be similar to diagnostic assessment as it is today. Clinicians will continue to rely on a careful personal assessment of signs and symptoms to make psychiatric diagnoses, although some diagnostically useful biomarkers might become available and in-corporated into a future interim revision of the DSM.40,42 The most likely change over the next decade will be more widespread use of dimensional assessments, facilitated by increasing penetration of computer technology into psychiatric clinical care.

Treatment planning and implementation

The centrality of the therapeutic alliance

Despite anticipated advances in the diagnosis and treatment of mental disorders, none of the innovations to be discussed is likely to displace the centrality of the doctor–patient relationship as the cornerstone of clinical care. This point is vital to the definition of the field, but more importantly serves as part of the healing processes. The doctor–patient relationship is not a placebo but an essential part of all clinical care. New interventions, such as psychopharmacological and neuromodulation treatments, have all been provided within the context of the therapeutic relationship. Clinicians seem persistently forced to rediscover what research has repeatedly reaffirmed: quality treatment is not about compliance—it is based on alliance.

In recent decades, the nature of the therapeutic alliance has been altered by several factors. During much of the 20th century, the rise of large institutions that provide a substantial component of clinical care meant the patient had to travel to the doctor's office for all medical treatment. From the 1960s, mobile clinical outreach teams developed in high-income countries to bring care to the patient, although usually focused on crisis intervention.43

Telepsychiatry, using high-speed interactive video conferencing, has shown that successful assessment and treatment do not require that both the patient and the clinician are in the same physical location (see Part 5: Digital psychiatry).

The availability on the internet of information about psychiatric illnesses and their treatments, although not always accurate, has increased patient autonomy, exerting a democratising effect on the hierarchical doctor–patient relationship. Excellence in psychiatric care in the coming decade, therefore, will rely on psychiatrists' skill in incorporating the patient and their family in clinical decision making.

Personalised or precision medicine in psychiatry Personalised or precision medicine aims to refine prevention and treatment.42 For prevention, genomic and other biochemical or physiological analysis in conjunction with assessment of environmental and developmental influences should provide increasingly robust identification of individuals at risk for psychiatric disorders. Because of the intricate interactions in any individual among biological, developmental, and environmental and social factors, accurate prediction is not yet possible. For example, although a family history of schizophrenia or bipolar disorder increases risk, clinicians cannot currently predict whether a specific offspring will be affected. Furthermore, although living in poverty is known to put an individual at risk for many illnesses, including psychiatric disorders, clinicians cannot predict with precision what, if any, disorder will emerge in a specific person.

For treatment, personalised medicine aims to match a patient with the most effective treatment for them. Pharmacological treatments for major mental disorders are at present suboptimal and often only a minority of patients achieve remission. Personalised medicine might be able to determine which patient will experience a severe side-effect from a specific medication, as is being explored using cytochrome P450 allele assays and other genetic characteristics to identify people who metabolise certain drugs slowly or too rapidly.44,45 Imaging analysis or other multifactorial assessment schemes not yet developed might identify, for example, those patients more likely to respond to psychotherapy than to medication46 or to medication as a monotherapy when substantial early life stress is a component.47 Innovative psychosocial interventions could be based on virtual reality programs48 and refinement of internet based psychological therapies that permit a participant to proceed at their own pace to acquire desirable psycho-logical resources. Digitally based suicide prevention programmes are being evaluated.49

Despite all the conversation about a biopsychosocial approach to patient care, the field remains fractured between reductionist viewpoints that arbitrarily di-chotomise the mind and the brain50 and much more complex and integrative models.

It is difficult to conceptualise how any precision based intervention can be provided outside of direct interactions with a patient either in person or through a teleconference type medium. Theoretically, patients could be given a computer generated list of results from genomic analyses, but the comprehensive approach to identification of risk factors and appropriate interventions, for example, requires a continuous care experience in order to be effective and patient centred.

Personalised psychiatry in the next few years will indubitably have its fair share of limitations and uncertainty. However, whenever large amounts of data are collected—eg, through multiple genomic analyses—there is the potential danger of lumping patients into very large cohorts and moving away from an individualised approach to maximise reproducible findings, thereby questioning the validity of the particular implementation of the personalised medicine approach.51

Areas of promise

Safer forms of medication administration or those more acceptable to patients, especially in the treatment of substance abuse disorders, might improve treatment outcomes through the use of implantable drug reser-voirs that will last for a year or longer. Nanotechnology might also contribute

to more effective treatments. Obviously, such long duration treatments must be administered and monitored within the therapeutic relationship.

The role of inflammatory processes in mental disorders is under investigation and holds great promise.52,53 Advances in stem cell therapy have enabled pluripotent cells to be directed towards defective brain areas with the aim of improving neuronal circuitry.54 This is a more distant goal for psychiatry: even if achieved, such a procedure should always be considered by doctor and patient in collaboration.

Neuroimaging and other techniques will continue to document new regions of the cortex as yet undefined by traditional cyto rchitectural studies.55,56 This documentation will increase appreciation of the connections between different brain areas and their interdependent character-istics and might provide insights into autism, dementia, schizophrenia, and mood and anxiety disorders.

New forms of neuromodulation might allow patients to administer treatments inexpensively and outside of the physician's office and hospital. These new treatments might have fewer complications and risks than are often associated with, for example, electroconvulsive therapy. However, neurologists have cautioned against experi-mentation of do-it-yourself neuromodulation activities with direct current stimulation, which once again speaks to the importance of the treatment relationship.57

The importance of subjectivity

An untoward effect of the enthusiasm about the promises of scientific advances has been neglect of the value of the psychiatrist's subjective assessment of the patient. The subjective data about clinicians' inter-actions with patients will always be key to excellent clinical care and remain as sound and data based as any laboratory test or imaging procedure. The importance of the clinician's subjective responses during assess-ment and therefore to the understanding of the patient's illness narrative and treatment has been reaffirmed through recent discussions of uncertainty in clinical care. The psychiatrist's capacity to tolerate uncertainty, as is true of all physicians, is the antidote to a reductionist biomedical model that undermines the role of the physician. It also balances the unhelpful aspects of medical technology and its indiscriminate application.58 This situation is certainly true of the failure, so far, of the electronic medical record to live up to its promise of enhancing care in psychiatry and is equally relevant in assessment of the premature expectations of precision medicine.

The enduring centrality of psychotherapy and psychotherapeutic skills

The affirmation of uncertainty as a core characteristic of the physician is crucial to the acceptance of psychotherapy as a monotherapy and in conjunction with somatic treatments. Research into psychotherapy effectiveness using modern research methodologies was delayed compared with biological research, but has been growing for the past several decades.

The ongoing expansion of clinical research on psychotherapy interventions, both alone and in con-junction with other treatments, should lead to broader acceptance of the efficacy of psychotherapy. Unfortunately, the paucity of resources available to deliver psychotherapeutic treatments and the expense and time required to train skilled psychotherapists will substantially constrain most patients' access to this form of treatment. Owing to the scarcity of high-quality psychotherapy research, psychiatrists are still unable to predict for which patients psychotherapy will be effective, nor which form of psychotherapy will be most appropriate for a specific patient.

The abuse of private or public personal authority and power, and its frequently associated psychological or economic deprivation, constitute a major source of the enduring intergenerational transmission of the potent and often devastating effects of psychological trauma to adults and children. Although neurobiological factors contribute to this human vulnerability,59 establishment of emotionally corrective therapeutic relationships with those who have been mistreated remains the most appropriate way to affirm the experience of the abused and maltreated and to confer hope for recovery.

In the near future, precision medicine is unlikely to lessen the role of the therapeutic relationship and psychosocial interventions. Treatment of individuals who suffer trauma, endure the effects of social dislocation, and experience developmental vicissitudes will require skilled clinicians with the ability to provide psychotherapeutic interventions within the context of a strong and positive therapeutic relationship.60

Subspecialisation in psychiatric practice

The exponential increase in the psychiatric knowledge base and the literature in specialised aspects of patient care has necessitated and driven the rise of sub specialisation. In well resourced countries, the public has a high expectation of the standard and quality of health services. This expectation includes being treated by clinicians with expertise in a well defined field related to their illnesses. Both public expectations and the advances in the profession foster a rising standard of patient care. Benefits of having clear standards in areas of subspecialisation exist both on the societal level and for individuals.61

However, progression towards increasing sub-specialisation comes with potential problems, even in high income countries. The first is the costs involved in development of a subspecialty and provision of services by subspecialties, as well as creation and maintenance of certification examinations.61 Patients might have to pay more to see a subspecialist. Subspecialisation raises concerns about fragmentation of care,61 such as has occurred in general medicine. Comorbidity is very common in psychiatry, and the trend towards increasing subspecialisation could result in a disease based model of care delivery, with patients finding themselves consulting several sub-specialists. Such eventualities could also give rise to the development of primary care psychiatry, wherein general psychiatrists are viewed as having less expertise than their subspecialist colleagues.

In LMICs, which can have less organised systems of health care and a lower expectation of centres providing tertiary care, a public drive for increased psychiatric subspecialisation is less likely. The scarcity of psychiatric and other mental health resources in such countries, as well as the implementation costs of a new system of psychiatric care, severely inhibit the likelihood of broad scale implementation of subspecialisation.

The extreme shortage of psychiatrists in LMICs has resulted in an enormous treatment gap for people with mental disorders.62 Psychiatric centres in these countries are examining a different model of mental health service provision involving task shifting. In one model, non specialist health workers are trained to deliver interventions for mental disorders and dementia. In this type of system, psychiatrists function as public health practitioners.62 One proposal is that mental health should be integrated with the care of other chronic diseases and in primary care to provide more efficient coverage of mental disorders.63 Such an integrated care approach, often referred to as a mental health team approach, might reduce the pressure for subspecialisation.

Even in high income countries, countervailing pressures against subspecialisation are likely. For example, old-age psychiatry has been very well developed in the UK since the 1980s. However,

recent years have witnessed a move towards ageless services in which people of all ages are treated by the same clinicians. Several reasons are possible for this shift to ageless services; one is that combining teams would save money.64 The Faculty of Old Age Psychiatry of the UK Royal College of Psychiatrists lobbied the government intensively to advise against this move to ageless services, which might only have slowed down this trajectory of clinical system changes.64

Over the next 10 years, pressure for increased subspecialisation is likely owing to the ongoing advances in the psychiatric knowledge base and increasingly sophisticated treatments, although with geographical and economic diversity in a dynamic process and the actual development differing by country. In LMICs, the needs and priorities in mental health care and the importance of subspecialisation are very different from those in high income countries, but even in countries such as China and India—which will be used to illustrate the countervailing pressures—a strong force is pushing towards increased subspecialisation.

China and India account for one third of the disease burden of global mental, neurological, and substance use disorders.65 However, China has only just over 20 000 psychiatrists for 1·3 billion people—ie, 1·49 psychiatrists per 100 000 population—and India has even fewer, whereas the USA has around 16 psychiatrists per 100 000 people.1 As an illustration, although the National Mental Health Working Plan of China has set a target to increase the number of psychiatrists to 40 000 by 2020,66 this goal risks not being achieved because of too few training programmes, even with an abbreviated length of training. Furthermore, the distribution of psychiatrists is very uneven in China, with few psychiatric facilities in the rural areas where currently about half of the population live.66

As in many countries globally, the populations in China and India are ageing rapidly, suggesting strong pressure to develop old-age psychiatry specialists. Other subspecialties are being established in China, including child psychiatry, addiction psychiatry, forensic psychiatry, and consultation liaison psychiatry. These subspecialties are being implemented in urban hospitals, but are absent in rural areas. Quality control of practitioners is difficult because the various subspecialties have no certification examinations. As the major cities have become increasingly affluent, public expectation and demand has grown for more specialised services. Therefore, the coming decade will probably see increased pressure for subspecialisation in urban China. This pressure will serve as an impetus for improved training of a vastly increased number of psychiatrists and improved clinical services and raised standards of patient care. In rural China, integration of mental health into primary care medical services might be more likely than increased numbers of psychiatric subspecialists.

The pace of change in patient care within all of medicine evolves slowly, and even dramatic new approaches might take decades to be fully implemented. Such was the case, for example, for Freud's psychoanalytic theories to gain worldwide influence, and for the rising tide of pharmacology research starting in the 1940s to result in new medications to treat psychiatric illnesses. Barring unexpected revolutionary advances, we expect that over the next 10 years, patient experiences will continue to evolve at a pace similar to recent decades. It would have been enticing to predict dramatic changes, for example in understanding of brain structure and function or of gene environment interactional influences on brain development and functioning, and their effects on the understanding of the aetiology of psychiatric disorders and more detailed personalised approaches to treatment, including neuromodulation and gene therapy inter-ventions. However, such results remain speculative for now. Nonetheless, the next generation of psychiatrists is likely to see dramatic changes possibly more revolutionary than we imagine.

Part 2: Psychiatry and health-care systems

Introduction

In most countries, psychiatry has a clinical focus—the emphasis is on individuals and individual disorders and health problems, rather than on the mental health needs of populations. The absence of a public health perspective is one reason for the huge treatment gap in most countries;[67] WHO estimates that the treatment gap for depression and common mental disorders is greater than 75% in LMICs.[68] Solutions to address this treatment gap require adaptation and use of public health models to deliver mental health care in many different parts of the world.[69] The knowledge and expertise needed to respond to these requirements go beyond the traditional training and clinical background of psychiatrists. Hence, emphasis on public health in training curricula and certification processes is required.[70,71]

However, a one-size-fits-all philosophy is unlikely to work; no universal public health model of mental health service delivery works in all countries. Effective models of care provision are crucially dependent on the availability and type of human and financial resources in a particular country,[72–75] alongside the organisation of its health care and specific mental health needs of its people.[76]

The funding of health-care systems has an important influence on the practice of psychiatry and the provision of psychiatric care, particularly preventive and health promoting aspects of psychiatric care.[77] A continuum exists between predominantly publicly funded, publicly delivered health-care systems (eg, the National Health Service [NHS] in the UK) and predominantly individual payee based, privately delivered health-care systems (eg, India, the USA). Although specific models might vary between countries, commonalities can be found when considering the place of psychiatry in the health-care system in a country: here, we focus on these commonalities.
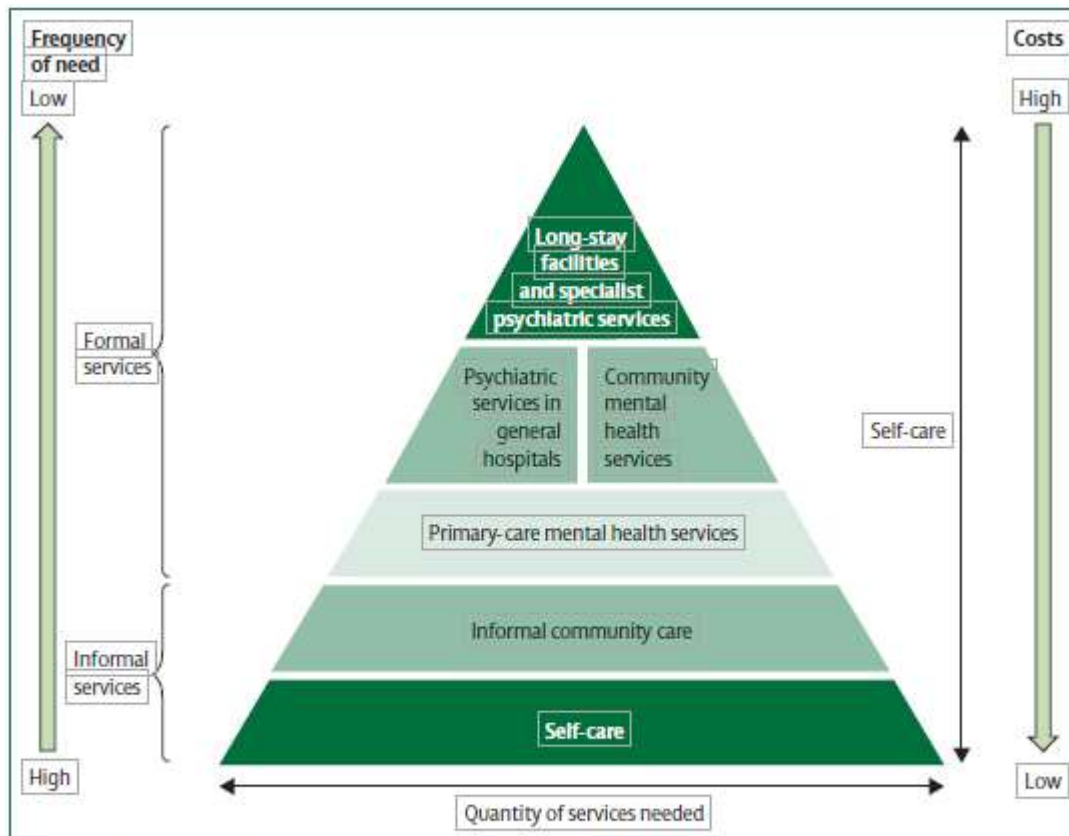
Figure 1: WHO pyramid model
The WHO model is a service organisation pyramid describing an optimal mix of services for mental health. The most costly services are the least frequently needed, whereas the most needed services can be provided at a relatively low cost. Self-care features through all services and all levels of the pyramid. Reproduced from WHO.[81]

Health-care systems in many LMICs are either poorly developed or dysfunctional.78 The United Nations' (UN) Sustainable Development Goals (SDGs),79 which will require efficient delivery mechanisms to achieve health goals and are likely to bring a renewed focus on improving health-care systems,80 represent a huge opportunity for psychiatry. Psychiatrists need to advocate effectively for the inclusion of psychiatric services and to prevent marginalisation of mental health issues in the health-care system.

Common factors in effective organisation of mental health care

WHO has developed a model for optimal mixture of services (figure 1).81 The WHO pyramid model is based on the premise that no single service is likely to meet the service needs of an entire population. This model provides a relationship between different service levels (primary, secondary, and tertiary) and should be used when planning services in all countries, regardless of their resource levels. However, existing services in any country, especially LMICs, are unlikely to approximate to this model of service provision. Irrespective of the country situation, any efforts to improve the service provision model require a good understanding of the existing mental health system and how to build, reshape, and decentralise the existing system to meet local needs.

Apart from an optimal mixture of services, the following should be considered when planning mental health services for a population:

(1) Episodic versus continuous care: health care, especially primary and secondary health care, is often organised around the treatment of communicable diseases that presumes the need for

treatment of an acute episode followed by remission or recovery and no care requirement until the next episode of illness in the same individual or another individual. However, episodic care models poorly address the needs of many people with severe mental illness who are likely to have continuous illness with episodic exacerbations. Their care needs are better addressed by continuous care models that take the long term nature of their illness into account.

(2) Needs led versus service led models of health care: in many countries, services are organised from a managerial perspective of service providers rather than through consideration of patient needs and abilities. Many people with mental health problems struggle to navigate separate health, mental health, and social care services that are organised in vertical silos with their own criteria and priorities for whom they serve. A needs led model of service delivery will necessarily take user needs into account and provide a seamless flow within health services and between health and social services.

Pathways to care

A common characteristic when looking at pathways to mental health care is the glaring absence of such pathways in many countries, particularly in LMICs.82 The arrival of a patient to the psychiatrist might not always be straightforward and direct. A common denominator in both high income countries and LMICs is the possibility of delay—sometimes months or even years—before a person reaches the specialised professional.83 Obstacles to the provision of proper care in the shortest possible time include the following:

(1) In LMICs, rural areas, or specific communities in high income countries, people with mental health problems are likely to seek the help of a traditional healer or religious adviser as a first option. If their symptoms continue or get worse, often after many months, these people ultimately reach a psychiatrist or another mental health professional, with an accumulation of negative consequences of delayed treatment.84

(2) When the only available services are old style mental hospitals, frequently on the outskirts of main cities, with a negative image of poor quality care, people with mental health problems are less likely to access them unless severely ill or with disabilities.85

(3) Stigma and discrimination can result in absent or inappropriate services at community level, worsening the access to possible pathways to care.86 The relation between stigma and help seeking is often underestimated, particularly in children and adolescents.87 Gender stereotypes also shape the path to specialised care in different ways for men and women.88 (4) People with different cultural and religious backgrounds or sexual or gender orientation have differing needs and perceived obstacles to approaching conventional mental health-care services. Inadequate cultural sensitivity within a health-care environment (eg, no prayer rooms for patients of different faiths) and insufficient cultural competencies in mental health professionals (eg, services that do not address specific needs of lesbian, gay, and transgender communities) can result in reduced acceptability and accessibility of services for these populations.

Despite these barriers, evidence indicates that the implementation of care management processes and collaborative chronic care models can facilitate pathways to care and ultimately improve outcomes for chronic mental illnesses.89 Some strategies can reduce the delay for people with mental health problems in accessing proper services (panel 2).

Psychiatrists in primary, secondary, and tertiary health care

Until a few decades ago, psychiatrists' activities and psychiatric practice in most countries were largely confined to old style mental hospitals. With increasing evidence of negative effects of institutionalisation[91] and of improvement in negative symptoms and social network upon resettlement of long term hospitalised patients into community care,[92] mental health care in high income countries (and some LMICs) has moved out into the community and into the general health system.[93] Patients with mental health problems no longer have to be treated at a mental health setting but might be seen by a psychiatrist in a general hospital, a community clinic, at home,[93] or, in the unfortunate circumstances of homeless people with mental illness, on the streets.[94]

However, owing to various political, cultural, and health-care structural reasons, in some countries standalone mental hospitals remain the only mental health-care provision. Although some of these hospitals have undergone substantial improvements in hospital environment and governance structure, many are still plagued with problems of institutionalisation, inpatient suicide, and human rights violation.[95] Notably, continued dominance of large mental hospitals in many countries does not facilitate evidence based interventions, such as services delivered in decentralised locations, integrated within the community, and supported by appropriate referrals to secondary and tertiary care systems.[96]

The change in care model in some countries inevitably needs to be accompanied by a radical change in the relationship between psychiatrists and other mental health professionals, from a paternalistic model to a new teamwork model. In the past, psychiatrists were considered the core professional group providing medical treatment whereas other mental health professionals were merely expected to execute treatments prescribed by psychiatrists. However, in the new model in which mental health interventions for common mental disorders are increasingly delivered in the primary care sector by other health professionals, psychiatrists now play the role of trainer and supervisor of these health professionals, both in the implementation of evidence-based psychosocial interventions and in decisions on the appropriateness of referrals to secondary or tertiary psychiatric care. Scarce resources for mental health care in LMICs (panel 3) have led to the trend of

> **Panel 2: Strategies to reduce delays due to care pathways**
>
> - Engagement with key community actors (traditional healers, community health workers, teachers) and training them, when needed, to identify people with mental health difficulties or at risk, perform basic interventions, and refer those in need of help to primary-care-level professionals.[90]
> - Primary health-care facilities should have basic skills to identify, treat, and refer when needed to secondary care. Once the psychiatrist receives and treats the patient, the person should be referred back to primary health care for follow-up and then back to the community leaders, as suitable. The interaction between community actors, primary health-care professionals, and specialised health-care professionals is crucial, with training and supervision being a key component.[71]
> - An essential role of the psychiatrist across the entire pathway to care is to interact with main actors in all levels of care to ensure capacity building, providing specific training and supervision to those who need it.[70]

> **Panel 3: Implementation of a school-based mental health literacy programme in Nicaragua**
>
> Nicaragua is one of the poorest countries in central America.[97] High rates of mental illness and addictions have been documented among its youth,[98,99] partly contributed to by insufficient availability of mental health services.[100] Inadequate knowledge and the stigma of mental illness further reduce help seeking.[101] School-based mental health literacy programmes have shown effectiveness in improving mental health knowledge and coping skills and resilience, increasing help seeking, and reducing stigma among young people.[102] The Mental Health and High School Curriculum Guide—a mental health literacy curriculum resource—was developed and piloted in a school-based programme in Canada,[103] and its validity for LMICs was tested in Nicaragua.
>
> The programme was implemented among high school and university students in Nicaragua after cultural and linguistic adaptation. Over 900 students were assigned to the 12-week intervention or to wait-list control. Students who received the intervention reported greater mental health knowledge, lower stigma, and better adaptive coping, help seeking, and healthy lifestyle choices than did those in the control group.[104] Substance abuse scores, although higher at baseline in the intervention group, reduced to become similar to those of the control group.[104] The findings replicate results found in Canadian student populations[105,106] and support the cross-cultural applicability of the programme to youth in LMICs.
>
> LMIC=low-income and middle-income country.

using and engaging with informal human resources, such as peer support, volunteers, family members, and caretakers (eg, Basic Needs, a mental health organisation providing and promoting informal community care). Thus, psychiatrists need to be trained not only in diagnosis and management of a wide variety of mental health problems, but also in supervision, training, and dissemination of relevant psychiatric skills and knowledge to other health and non-health professionals (see Part 6: Training the psychiatrist of the future).107

Psychiatrists working in secondary care should work in general hospitals or community settings and work with different professionals, including community nurses, counsellors, social workers, and even housing managers. Growing evidence shows that many patients with mental health problems have increased rates of untreated medical comorbidities including hypertension and obesity;108 some of these comorbidities are related to the side-effects of newer psychotropic medications,109 as well as the fact that people with chronic medical illnesses have increased prevalence of mental illnesses.110 As a result, psychiatrists need to be prepared to work closely with general health specialists. Psychiatrists also need to be trained in diagnosis and management of common communicable and non-communicable diseases so that they are equipped to manage common medical problems in patients with mental illness under their care.

Tertiary care services such as specialised services for eating disorders, severe personality disorders, and forensic psychiatry are equally necessary but poorly provided in most countries.111 Without appropriate secondary and tertiary care services, patients with complex needs risk being trans-institutionalised or incarcerated in correctional institutions such as prisons.92 Implementation of a stepped care model requires an adequate workforce of trained mental health specialists including psychiatrists, changes in training curricula for primary care and mental health-care staff in the community, and a change in health-care delivery models. Poor government commitment, a

paucity of mental health policies, and insufficient legislations for respect of human rights are some major barriers to the implementation of such improvements in mental health service delivery.96 Psychiatrists working in the tertiary sector are also expected to take up a role as leader of a multidisciplinary team with specialised skills in management of complex mental disorders (eg, eating disorders, severe personality disorders). Apart from having highly specialised knowledge and skills in the diagnosis and management of such patients with complex needs, psychiatrists need leadership skills to influence and unite various mental health professionals to work as a cohesive team, especially during crises for patients under their care. The described knowledge, skills, and attitude of working with different stakeholders in the community and in general medical health settings need to be cultivated and imparted during undergraduate and graduate psychiatric training.

Psychiatry thus needs to be integrated both vertically and horizontally into the general health system. Models of integration focused on hospital based inpatient and outpatient care alone do not ensure access and continuity of care, whereas exclusively community based services cannot provide comprehensive treatment. Hence, a balanced care model is the best choice, requiring a revision of the roles of mental health professionals.112 Mental health professionals including psychiatrists could work directly in secondary and tertiary services, providing consultation liaison for complex cases, training and supervising primary care staff to augment their ability to identify and treat people with mental illness, and assessing and treating outpatients and inpatients who cannot be managed in primary care.113 Such balance requires collaborative linkages with colleagues from different specialties114 and close interactions with other sectors beyond health,115 including a much more broadly defined social care sector—for instance, comprising social welfare, education, and justice.116

Governance, leadership, and coalition building

The change in the psychiatrist's clinical role over the past two decades as part of deinstitutionalisation worldwide117,118 requires that they engage in regular interactions with health authorities and other professionals, to promote and design new policies and programmes and to contribute to the search for additional financing119 (see Part 6: Training the psychiatrist of the future). It also requires reorganisation of services and development and dissemination of new guidelines and procedures to facilitate collaboration among its multiple components.120

A psychiatrist will have to build alliances, learn to work as part of a coalition with other health professionals, and alter the traditional isolation of psychiatry.121 Working with others helps to overcome the fragmentation of services provided to patients with diverse needs, and also contributes to reducing the isolation and stigma associated with psychiatry.62,122 Psychiatrists need to appreciate the strengths and values of different stake-holders, articulate their views in a language free from medical jargon, and lobby, negotiate, and compromise with stakeholders with contrasting views to devise optimal care plans for their patients.

To achieve these changes, appropriate stewardship of mental health and psychiatric care in governments75 is required. In some countries, a mental health department or unit is part of the organisational structure of the ministry of health, facilitating and ensuring interaction with other units and programmes, thus easing potential collaboration and integration of mental health related issues with other health sectors and programmes. In other countries, particularly in low resource settings, just one person might be in charge of the mental health programme, highlighting the importance and urgency of coalition building.123 In all situations, psychiatrists need to be equipped with the skills and insight necessary to effectively lobby, negotiate, and promote the values of mental wellbeing of the population to the relevant parts of the government.111 Working with

others and ensuring that people with mental health conditions are comprehensively being taken care of would put psychiatrists in a better position to reinforce their professional identity and related core skills.124

Financing and resourcing

Resources are finite and insufficient to meet all care needs in all health-care systems globally. Psychiatrists, as key stakeholders and advocates, require training to meaningfully engage in relevant discussions to advocate for both absolute increases in resources for mental health care as well as more appropriate reallocations of existing scarce resources. To achieve this, psychiatrists need to widen their knowledge of the health system beyond their own clinical area and expand their understanding of health-care financing and strategies to secure more resources—eg, use the push from large-scale actions such as the SDGs to secure further funding or changes to the health-care or health-care financing systems; secure ring fencing of funds for vital mental health care; or better integrate mental health care into related clinical contexts that are better recognised and resourced125 (such as physical health conditions that carry substantial mental health comorbidities).

Although absolute increase in mental health funding must remain a key goal, making the most of current resources is an important continuing challenge. Resources should be seen in terms of the value they can provide towards achieving the goals of the health-care system, whether they be improving population health, improving welfare and broadening its definition, or other societal aims. Such comparisons of value can be made either within a specifically defined population or across populations and communities. For example, consider a situation in which psychiatrists successfully secure increased funding for expansion of a mental health-care facility. Perhaps another form of care, such as training of community based lay workers, would have resulted in better outcomes for the community as a whole, or in more equity in access to care. Several effective and low cost interventions addressing childhood mental health problems could be self financing over time with pay-offs to the public sector and elsewhere—eg, improved educational performance, employment, or earnings, and reduced crime.126

Health economics offers concepts and frameworks to help to formalise such complex considerations. One approach is the explicit consideration and comparison of both inputs to and outputs from care and the relationship between them—ie, the assessment of efficiency—to direct scarce resources to interventions that work and are cost effective. This might necessitate redirection of existing resources from their current use (ie, disinvesting), if these resources could provide better value elsewhere. Resource allocation can be considered suboptimal against not only the economic criteria of efficiency and equity, but also a range of other social, ethical, and moral criteria. For example, in many countries, 80–90% of the mental health budget goes to mental hospitals,127 even though many stake-holders consider institutionalisation to be inhumane.128 Addressing such multidimensional issues requires a collaborative approach. Adoption of narrow perspectives risks cost shifting between sectors and budgets, whereby savings are either not felt in the area in which an intervention is provided (which then requires greater cooperation to avoid reduced incentives to provide that care) or savings are felt in the intended area but with an associated increase in costs or burden elsewhere that is unaccounted for.

Implementation and scaling up of evidence-based care is a priority for the strengthening of mental health systems.68 Reliance on arguments without an evidence base, with a low-quality evidence base, or with an evidence base without appropriate attention to translation across different contexts can lead to erroneous decisions that benefit neither patients nor the health-care system. Therefore, the ability to generate new evidence; find, understand, and critically interpret such evidence for

quality and relevance; and use and communicate evidence effectively is an important skill set in itself. Psychiatrists should be encouraged to learn such a skill set to enhance both their knowledge and persuasive abilities towards improving mental health systems.

Conclusion

Mental health-care models differ around the world due to history, culture, and availability of financial and human resources. Many of these models are not necessarily evidence based and might not be either effective, efficient, or acceptable to service users. The WHO pyramid model and the associated notions of stepped care, teamwork, and integration of mental health into general health care are widely considered to provide a good template when contemplating reform or development of mental health services in different countries. Within this broad international framework, individual treatment strategies and the use of human resources (professional vs peer or lay health workers) in different countries will need to respect individual values, culture, and the availability of financial and human resources. This diversity should be respected and encouraged to ensure that service provision in different countries is locally relevant. Enhancement of psychiatrists' skills to facilitate and lead these changes in mental health service delivery across the world is urgently needed.

Part 3: Psychiatry and society

Introduction

The state and extent of mental health care and the role of psychiatrists within it vary substantially across the world. In most industrialised countries, the past five decades have seen a transformation of psychiatric service delivery. Although the exact time of onset, political drivers, pace, and outcomes of mental health-care reforms in these countries have differed, the general shift has been from institutional forms of care that were centralised and isolated towards more community centred services. Such community centred services tend to be characterised by small units in accessible settings, working in close partnership with social care services. Overall, service capacity has expanded. Many more patients in industrialised countries receive some form of mental health care compared with 50 years ago. The quality of facilities tends to be better, and the number of mental health professionals—including those with a full qualification—has grown substantially. These improve-ments are a result of increased investment linked to growing interest in mental health care in these societies.

These changes have affected the role of psychiatrists in the delivery of mental health care. Psychiatrists frequently work with other mental health professionals in a multidisciplinary collaboration. The work of psychiatrists has often focused on traditionally medical competencies such as psychopharmacological treatment and physical aspects of mental disorders. Yet, little progress has been made in psychopharmacological treatment in the past 30 years, whereas psychological treatments are often studied and administered by a growing number of clinical psychologists. This situation challenges the central expertise of psychiatrists in mental health care and requires adjustment of the focus of core competencies and tasks. Increased emphasis on social interventions and engagement with societal expectations might be one way forwards for the next 10 years.

The role of psychiatrists in society

Psychiatrists have a long history as a profession. During the age of enlightenment, the term psychiatry was coined. Psychiatry soon became a separate specialty within medicine and the

profession of psychiatrists was established. Thus, medical doctors with the title psychiatrist have been part of the profession for about 200 years. The exact function and role of psychiatrists has changed over time and is different across the world.129 As a profession, psychiatry had a role in regulating itself and deciding on acceptable practice, but it has also been subjected to strong societal pressures, influenced by moral judgment, and controlled by legislation. Different groups in society—including the general public, the media, and politicians, as well as patients and their families—have expectations as to what the tasks and authority of psychiatrists should be. These expectations influence regulations for and funding of psychiatrists, shaping their roles and contributing to a contract with society.130 Roles typically include treatment and care of people who are considered—according to the ideas of the time—to be insane, mentally ill, or distressed. Yet, the roles also include functions of social control and risk containment of people who are both considered dangerous and mentally ill. The threshold and balance is again subject to values and tolerance prevalent at the time, associated with stigma and perception of fear. This tension between therapeutic aspiration and social control has characterised much of the history of psychiatry and can be assumed to continue for at least the next 10 years.

The role of the psychiatrist has always included the authority to initiate treatment against the will of some patients, although, depending on the exact regulations in different countries, the actual involuntary treatment might require the endorsement of other authorities. Psychiatrists have been given this power by society, commonly in the form of legislation. This authority implies a duty of protection of both the individual and society, with a balance of human rights and prevention of violence that poses a constant challenge and will continue to do so. The pendulum is constantly swinging, with different groups in society pulling in opposite directions. In one direction is an emphasis on the rights and autonomy of disabled people and their implications for mental health legislation, which, according to some interpretations of the UN Convention on the Rights of Persons with Disabilities (CRPD), might be incompatible with coercive treatment.131 In the other is the increasing pressure by some governments and the media to report people to the police who might pose a threat to public safety and to protect society from potentially dangerous behaviour of people with mental disorders. Both arguments appear to gain ground simultaneously, and these pressures will continue (see Part 4: The future of mental health law). Psychiatrists find themselves caught in the middle, at risk of being blamed by both camps. They can feel uncomfortable with their role in exerting formal coercion and also with use of so-called informal coercion, in the form of persuasion and other behaviour to influence patients to accept treatment suggestions.132 The arising tension and uneasiness are part of the practice of many psychiatrists and should be explicitly addressed in public, professional debates, and clinical training and supervision.

Psychiatrists are considered to have a general societal role as the arbiters of mental sanity. This role includes the task to distinguish between mad and bad, and the wider challenge to define mental normality and abnormality. Psychiatrists are challenged to identify which type and extent of mental distress and problems with performance in education and work constitute a mental disorder and which ones do not. The underlying concepts of mental disorders and the specific diagnostic classification systems used are subject to constant debate and vary across the world. In a globalised world, the question arises as to whether there should be one agreed way of making diagnoses or whether global variation of mental disorders warrants different approaches based on a dialogue with local society. Moreover, as the world sees increasing immigration, mass movements of refugees, and international travel, psychiatrists will often need to be competent in assessment of mental disorders across different cultural groups and in different societal contexts. Such competence might require an increasing ability to understand and communicate the processes that led to diagnostic categories to support their legitimacy.133

The role of psychiatrists in societies includes also a general task to stand up for the rights, dignity, and inclusion of people with mental disorders. This task is based on social values and might be seen as essential for the credibility of a helping profession. It involves commitment and activities against the discrimination of people with mental disorders and in support of their social inclusion.[134,135] Social inclusion requires appropriate legislation securing the rights of people with mental disorders to receive appropriate care, material and practical support—eg, in the form of protected accommodation and specific work arrangements—and to participate actively in societies. However, formal legislation alone cannot fully prevent social disadvantage and marginalisation. People with mental disorders are more easily integrated and respected if the general population holds positive attitudes towards them. So far, research has yielded little evidence as to how psychiatrists can influence these attitudes in public campaigns.[136] The next 10 years should see more systematic research on how the public should be informed about mental distress and mental disorders, so that better initiatives can be designed to build on and strengthen caring attitudes and integrative behaviour towards people with mental disorders in general populations.

Multidisciplinary status and role

Psychiatrists are not the only experts in mental disorders and in the different approaches that can be used to help and support people with mental disorders. Other workforce groups such as clinical psychologists, nurses, occupational therapists, arts therapists, and social workers have their own expertise and contribute to a wide range of treatments in multidisciplinary settings. The specific status and role of psychiatrists within the multidisciplinary role is fluid, both over time and across countries and settings. Constant adaptation is required, and occasionally this can threaten professional roles and status, especially when traditional monopolies such as prescriptions of medication are affected by extension of these rights to psychologists or nurses. Status, role, and level of specialisation are shaped by factors related to the structure and delivery of mental health services, professional respect, fashions of treatment, and economic opportunities, all of which are affected by public opinion through political processes such as laws, regulation, and resource allocation.

A central factor for the specific role of psychiatrists is the overall number of psychiatrists per population. In highly resourced health-care systems with large numbers of psychiatrists, their role can include wide responsibilities in the direct delivery of care and a large degree of specialisation. However, in countries with low spending on mental health care and low specialist clinical capacity, people with little specific mental health training might need to identify mental disorders and provide treatment as part of their jobs. There, the role of psychiatrists might be more focused on the development of protocols and services, support of staff, quality control, consultancy on the most challenging patients, leadership, and advocacy.

The political role

A large body of evidence shows the importance of social determinants for mental disorders.[137] Societal factors such as social inequality, crime, poverty, poor housing, adverse upbringing conditions, poor education, unemployment, and social isolation are related to increased rates of mental disorders.[138] The relevance of some social determinants varies across the world.[139] Examples are substantial urbanisation in LMICs; increasing social isolation in high income countries; the changing flow of refugees in some regions; and different levels of economic instability, civil unrest, and inequality between rich and poor people. Most of these social determinants influence physical health problems too, but they can be seen as particularly relevant to psychiatry.[140–144]

Psychiatrists are not ignorant of the complex interface of the manifold interactions between such social determinants and mental disorders. The challenge is how to improve such determinants, most of which cannot be changed by individual psychiatrists and the interventions available to them. Many psychiatrists are aware that antidepressants are palliative at best for a woman with depression living with several young children in poverty in a destitute neighbourhood and being subjected to abuse from an unemployed man with an alcohol problem. Referral to a social worker, if available, is an obvious option, but hardly addresses the root of the problem. The question is what role psychiatrists can take to improve conditions essential for overcoming mental distress.145 Should psychiatrists be involved in changing social determinants or should they limit themselves to remain doctors who treat mental disorders of individual patients?

One argument is that a change in these factors is mainly a political task. Some tasks such as alcohol pricing might be seen and supported as specific public health actions on a country or regional level,146 whereas others will have an even wider reach and go beyond a debate on public health. Measures that will achieve poverty reduction or less inequality require a redistribution of wealth, child-care provision for the poor needs public spending, and only legislation and funding programmes can ensure that all employees receive a living wage and have access to appropriate housing. These are far reaching political tasks and interventions, beyond the direct influence of psychiatrists.

Nevertheless, psychiatrists—as individuals or as representatives of larger organisations—might regard it as their role to advocate and lobby for broader societal actions that could have a beneficial effect on the mental health of the population in general and people with mental disorders specifically. With their expertise in how social processes affect mental health and with the societal status of the medical profession and science, psychiatrists can have credibility and influence in a political debate on how to improve the mental health of societies. The influence can be stronger when psychiatrists raise their voices in representative professional associations and jointly with other groups in society—eg, those rep-resenting patients, families, or other professions.

Other, more specific political debates and decisions are also central to and directly affect the work of psychiatrists. Political decisions are required on professional regulations and funding arrangements. Central or local decisions are taken on what type of services and treatments to prioritise, whether this be where to invest at times of growing investment in health care or where to reduce services in times of austerity. Psychiatrists have a role and expert voice in these debates and should inform these decisions. Their influence could be particularly strong if they are seen as not primarily pursuing a parochial professional advantage, but as acting in the interest of patients, their families, and the wider public.147

Working with communities

A general political commitment can be only one aspect of the societal role of psychiatrists. Central to the work of psychiatrists is the need to provide and oversee direct care for their patients. Although they will often be aware of the importance of the social factors and potential problems of their patients, the question arises whether changing these factors and addressing these problems in the given context of their patients is within their professional responsibility.148 Should a comprehensive psychiatric treatment plan include arrangement of employment or help to get out of poverty, or should these be considered separate tasks? In principle, the same question arises for other medical professions. Is it the role of an oncologist, for example, to assess and address the social isolation of a patient with cancer, because such isolation is a major predictor of reduced life expectancy in oncological patients? One argument could be that if psychiatrists aim to be the leading experts in

helping people to overcome mental distress, they need to understand and address social factors. Although psychiatrists cannot become social workers, the challenge is for them still to be experts in assessment of social problems and resources, and in initiation, overseeing, and evaluation of change in the social situation of their patients.149

Working not only in, but also with, communities is a serious challenge that varies depending on the type of communities with which psychiatrists might work. The challenge can change rapidly—eg, as stipulated by the massive trend towards urbanisation across wide parts of the world or by sudden influxes of large refugee groups.150 Working with communities can involve mental health promotion and prevention activities, focusing on groups at risk such as young mothers and people from socially marginalised groups; linking with faith communities and their networks; working with employers to improve conditions that put people at risk of mental distress at their workplace and implement procedures for support in case of signs of mental disorders; and lobbying housing providers and local authorities as well as supporting local community activities to foster better social integration of patients with severe mental disorders. More research is required to decide whether other potential initiatives, such as discussions in schools about mental distress and ways to overcome it (eg, the MindMatters mental health initiative), should be implemented and, if so, how best to do this.

Psychiatrists might have to learn how to analyse the social situation of a patient, evaluate the resources in a family and local community that can be used to overcome mental distress, and identify potentials for beneficial interventions and support.151 In collaboration with patients and their families, psychiatrists can then design interventions, be involved in their implementation as appropriate, and have methods to evaluate the outcomes on the level of affected groups and individuals. These steps will require working with local communities, services, and authorities, and might change the current focus on individualised treatments, instead emphasising the therapeutic potential of groups and communities.152 In many societies around the world, as a consequence of a shift from rural lifestyles to industrial work and urban expansion, loneliness and social isolation are increasing and causing prominent social problems, which affect mental as well as physical health. All these issues raise urgent questions as to how psychiatrists can best use their expertise and social status to initiate community cohesion.

Many peer support schemes153 and befriending schemes154 through volunteers have been set up to address the isolation or social exclusion. Such schemes can be valuable to both the patient receiving the support and the peer or volunteer providing it. Moreover, the schemes might also benefit communities by linking different groups, thus increasing social cohesion and social capital. A range of schemes exist across the world, although they can be difficult to sustain owing to little expert input and organisational support.

In low-resource societies, the situation is very different and much more challenging. The number of psychiatrists can be as low as 0·1 per 100 000 population, with hardly any specialist mental health resources for individualised treatments.155

In various LMICs, people with severe mental disorders can be hidden by their families or local communities, without access to health services, and sometimes chained up for years.156 A role for psychiatrists is to find such patients, challenge and change inhumane practices by families, and offer treatment and support instead. Some studies have suggested that psychiatrists and other mental health professionals can create social support systems by training lay people to support families and communities, so that patients receive basic emotional and social support to overcome or reduce their distress.157,158 This approach requires a very different model of working from the individual

treatment approach practised by psychiatrists in resource rich countries. Instead, they need to consider carefully how their rare expertise can be used most efficiently. Psychiatrists need to be coordinators, supervisors, and trainers with an indirect rather than direct effect on people with mental disorders. They need to work with existing networks, such as families and faith communities, and other available support systems, such as healers and lay counsellors.62,159,160 Over the next 10 years, the small number of psychiatrists in low resource countries should focus on such roles, rather than concentrate in large capital cities and provide private care to a small group of rich patients.

A focus on working with families, groups, and communities (eg, the Mental Health Innovation Network) rather than on individuals within them can be particularly appropriate and beneficial in societies that are more collectivistic (or family centric) as opposed to more individualistic (or egocentric) societies.

Social media

In areas where face-to-face contact with psychiatrists is difficult or not feasible, telepsychiatry is increasingly used as an alternative. However, the potentials of technologies go beyond this. Increasingly, social relationships can be online. Research suggests that patients with mental disorders often extensively use the internet and online networks.161 Psychiatrists cannot ignore this and should find ways to support their patients in this changing context as well as help them to use the new possibilities in social media and the virtual internet world.145,162 Technological progress might also allow many patients to access psychiatrists via the internet across the world, at any time, and wherever the patients are. This development might lead to a consumer dominated market of different types of psychiatric expertise with very variable forms of patient–psychiatrist relationships.

Training

Psychiatrists migrate across the globe. Anecdotally, it is said there are more African psychiatrists in the UK than in Africa. Yet it is questionable whether the education and training psychiatrists receive are preparing them to work in different cultural and social contexts. Some shared curricula might be helpful, although the challenges of standardisation are formidable.163

To work in and with societies, psychiatrists should know how to campaign and advocate, and have negotiating and mediating skills, which can be learned in training. To a different degree, some curricula have already incorporated specific training in advocacy, communication with the wider public, and taking a role in the wider society.164 Such training components could be expanded and made more comprehensive as a core part of the training of psychiatrists.

Psychiatrists still receive most of their training in hospital settings. A survey of training in 33 European countries suggested that in only 12 of them some rotation into a community setting is required, usually with a duration of 2–6 months.165 If psychiatrists are expected to work more in the community, they should also receive more training in such a setting.

Psychiatrists should also receive training in social sciences as an important basis of psychiatry in addition to the more biological basic sciences.145 Training in the next 10 years could also emphasise more skills in interpersonal communication and the management of social groups in different contexts.

Conclusion

The main task of most clinical psychiatrists will continue to be the treatment of individual patients. However, psychiatrists have and will continue to have a wide role in society, ranging from a potential political commitment to practical working with communities. This role will vary substantially in different countries and different societal contexts, and probably remain fluid and controversial. All of these factors can make working as a psychiatrist challenging and at times frustrating, but also exciting, socially relevant, and deeply rewarding.

Part 4: The future of mental health law

Introduction

The notion that people with mental illness need protection has evolved from teachings of ancient civilisations to guidelines for asylum management through to national policies and, finally, mental health legislation.

In some jurisdictions, such as in the UK, mental health legislation has changed from concern with removing people with mental illness from the streets to the need to provide a safe and caring haven, and then to the need to safeguard and protect the rights of people with mental health problems. We will use the progression of mental health law in the UK to illustrate this change, accepting that although some aspects are generalisable to other legislations, some will be of more parochial interest. Our aim is to assess mental health law, outline the issues, and suggest a new way forwards for the next 10 years.

200 years of mental health law in the UK

In 1808, the County Asylums Act was the first legislation specifically dealing with the treatment of those with mental health problems. It required the establishment of institutions (asylums) to provide treatment and refuge for people with mental health problems. This legislation was strengthened in 1845 when the Lunacy Act established the Lunacy Commission to ensure the building and inspection of asylums in each county. All asylums had to be registered with the Commission, have written regulations, and a resident physician. This legislation had a humane underpinning being borne out of concerns around how people with mental illness were being treated.

In 1890, the remit of the asylums was widened: rich people could now be admitted to asylums and reception orders were developed that allowed a person to be admitted for 1 year (signed by a Justice of the Peace, or Magistrate). A person had to be "certified insane" before they could be admitted, but this certification was on the order of the parish doctor rather than the specialist asylum doctor, who had little control over who was admitted to their institution. These reception orders could be renewed with the agreement of the Lunacy Commission following the provision of a suitable medical report. In 1913, the Lunacy Commission was renamed the Board of Control for Lunacy and Mental Deficiency and its powers widened considerably. A Royal Commission on Lunacy and Mental Disorder, established in 1924, reviewed the care of people with mental health problems following widespread condemnation of the conditions within asylums, with many people being left for long periods without review and extraordinarily high death rates. The Commission's findings, published 2 years later, were that the distinction between mental and physical disorder was largely artificial and it recommended greater overlap.

In 1930, the Mental Treatment Act allowed voluntary admissions to mental hospitals (the new name for asylums) and outpatient treatment. By the 1950s, improvements in mental health treatment increased the probability of recovery. In 1957, the Royal Commission on the Law Relating to Mental

Illness and Deficiency recommended that "no patient should be retained as a hospital inpatient when he has reached the stage at which he could go home".166 Until 1959, admission to hospital had come under the auspices of a judge. The Mental Health Act 1959 allowed for admission to mental hospital to be a medical decision and, if compulsory, under a proper legal framework.

For the first time, there was a requirement for appropriate treatment to be available in order for a person to be detained against their will.

The Mental Health Act 1983 sought to bring mental health law in line with the European Convention on Human Rights. The provisions of the 1959 Act did not include sufficient safeguards around the arbitrary detention of people with mental illness and consent to treatment (for both voluntary and detained patients). The 1983 Act required the speedy and regular review of a person's detention. The introduction of approved social workers whose role was to ensure that the rights of the patient were properly adhered to was a key advance: the rights of the individual were being brought to the forefront of mental health law.

The most recent legislation covering England and Wales, the Mental Health Act 2007, introduced supervised community treatment, including community treatment orders. Unlike the 1983 Act, which specified the types of mental disorder required for detention, the 2007 Act does not, prompting concerns that this new umbrella definition would catch all manner of mental disorder, including autism and substance use disorders, which were precluded with the 1983 Act. Although guidance clarified that people with primary alcohol and substance use disorders were not liable for detention and those with learning disability had to have abnormally aggressive or seriously irresponsible conduct associated with their disability, sexual deviancy and Asperger's syndrome are included in the definition of mental disorder. Therefore, even transgender people could be detained under the Mental Health Act 2007. As such, the new definition was felt to be over inclusive. Most controversial was the removal of the 1983 Act's requirement that the mental disorder be treatable and its replacement with the criterion that appropriate medical treatment has to be available.167 Moncrieff has complained that the 2007 amendments to the 1983 Act were driven by a fear of the risk of violence posed by a very small group of people with dangerous and severe personality disorder.168

A large proportion of detentions under the Mental Health Act in the UK are driven by concerns about the risk a person might pose to themselves and particularly to others, yet the primary method used to determine this—unstructured clinical judgment—is a poor predictor of risk.169,170 Although having a mental health problem is associated with a much higher risk of self harm than in the general population, this is not the case for risk to others. Even in those with severe mental illness (such as psychosis and schizophrenia), although the risk of self harm or suicide is 7·2 times the risk in the reference population,171 the risk of behaving violently is only 1·2 times that of the general population.172 Over-reliance on unstructured clinical judgment might result in more people being detained under the Mental Health Act than is necessary. Overuse of mental health legislation has substantial resource implications. The estimated cost for a voluntary admission in the UK is about £12 200 based on a median length of stay of 38 days. A 2012 report173 found that involuntary (compulsory) admission under the Mental Health Act is associated with an increased length of stay and involuntary admissions are likely to be far more expensive because they are usually longer. The report concluded that the availability of more and better interventions outside of the hospital inpatient setting would help to reduce such costly admissions.

A more evidence based approach to mental health law would probably result in greater focus on health need rather than on risk. Such an approach would increase access to appropriate evidence

based care in the least restrictive setting for that individual at that particular time. A focus on health need would identify those with mental health issues that increase their risk to themselves or others, and allow for them to be treated under section of the Mental Health Act. Together with legislation that focused on ensuring that appropriate treatment options were available in the most appropriate setting, this approach would probably not only reduce the numbers of people to be detained unnecessarily or for longer than necessary, but might well have substantial cost benefits.

An evidence based approach to mental health legislation should be designed around health need and improving outcomes. Mental health legislation should mandate access to good quality mental health services and care in whatever setting is most appropriate for that individual at that time; provide recognition of and protection against abuse (from carers, mental health providers, and the state); and be based around ensuring that the will and preferences of the individual are given high priority.

The problem with existing mental health law

The problem of mental health legislation and human rights The CPRD174 is an international human rights treaty, binding in international law on countries such as the UK that have signed and ratified it, intended to protect the rights and dignity of people with disability, including psychosocial disability (see appendix for more detail). The CRPD sets mental health law a profound challenge: compulsion based in whole or in part on mental disability is said to be discriminatory, and thus in breach of the Convention.174,175 Psychiatric detention and compulsory treatment have been mainstays of mental health provision for more than 200 years: is their abolition possible or an idealist dream? How could this be accomplished within the next 10 years? Whichever path is chosen, the views of those who experience such treatment must be taken into account (panel 4).

Abolition of such practices might be perceived as radical, but the psychiatric professions have (often after a period of resistance) adopted and promoted radical approaches—eg, the non-restraint movement in 19th-century England, or the move to abolish mental hospitals in Italy led by Basaglia, Manuali, and their colleagues in the 1960s and 1970s. The research around inpatient compulsion and community treatment orders raises doubt as to whether compulsion improves things for the patient.185–187 Other medical specialties seem to get on fine without legal compulsion; should psychiatry be using it, and if not, how can it be eliminated?

Society has to see compulsion as part of a bigger picture. Programmes have to be introduced and adjustments made so that the full range of CRPD rights will be realised. Detention and compulsory treatment cannot be sensibly divorced from the provision of appropriate services, most required by the CRPD, that people want to use. The CRPD requires people with disabilities to be involved in all aspects of implementation, which might be pivotal in devising services that really do meet their needs. Mental health law can no longer be just about the regulation of compulsory admission and treatment, and the mental health legislation of the future must change to reflect this.

Use of compulsion needs to be seen as a system failure. Some mental health-care providers have started to implement this view for restraint and seclusion, through the No Force First principles.188 Expansion of this idea to compulsion generally—ie, no compulsion first—would be a good starting point. Some German hospitals (notably small town and rural settings, rather than urban centres) have almost completely abolished compulsory psychiatric treatment, with no corresponding increase in other types of coercion or violent behaviour.189 The long-term effects of this decision and whether such work can be generalised to other areas and countries is yet to be evaluated, but these efforts suggest that the need for legal compulsion should not be taken for granted: it might

really be possible to do things differently. Development of alternatives to compulsion requires research, of which little has been done. Very little is known of how compulsion in mental health law is used now, let alone what can be done to avoid it. The scant evidence base makes it difficult to articulate what law relating to compulsion should look like in the future, if the practice of compulsion continues at all.

In all of this there is a caveat: law can provide frameworks, but passing of laws does not necessarily change much without the political and social will to implement the law. Insufficient resources are part of this problem, but not the whole issue. In many countries, all psychiatric detentions are by judicial order after a court hearing. Although this process looks good from the outside, it is usually an expensive rubber-stamping exercise. Real change will come only if the people involved in the system engage with it and buy into its importance.

The problem with mental health law built around risk Mental health legislation permits psychiatrists to decide who should be treated. These laws effectively grant psychiatrists mainly the status of substitute decision makers, rather than highlight their role as counsellors and mental health service providers. However, problems exist with development of mental health legislation based on risk.180 As the CRPD clearly states, "the existence of a disability shall in no case justify a deprivation of liberty".174

The concept of risk became a prominent feature of mental health law and policy making in the 1990s, particularly in high income countries. One reason for this was society's belief that many hazards are predictable and controllable and, therefore, policy and legislation should take into account all the necessary steps to avoid, or at least minimise the fallout of, a particular hazard or risky behaviour.190 Other reasons were that psychiatry improved its understanding of the predictive value of certain risk factors, alongside the growth in public anxiety that mental health services were not doing enough to challenge what was considered to be risky behaviour.190

Definitions of the concept of risk are wide ranging. With regard to mental health, the term risk is used in the medical sense and usually refers to the probability of a person developing a mental disorder. However, in mental health legislation, the term is often used to describe the probability that a patient already having a mental disorder will harm themselves or others. On the one hand, some authors have argued that lawmakers across the globe believe the risks posed by patients with mental disorders are so high that they require specific legislation and policy.190 Thus, the notion of risk has evolved into an instrument of social control in modern mental health law and policy—eg, the Mental Health Act 2007 in England and Wales. On the other hand, some authors have claimed that the additional harm criteria established in Mental Health Acts of some Australian territories could break human rights obligations and standards by establishing a discriminatory starting point for mental health care of patients who are unable to consent to treatment for themselves. These additional harm criteria include the assessment of both the probability of patients coming to harm themselves and the probability of a patient causing harm to others. These criteria must be satisfied before patients can be treated without consent. This situation differs from no psychiatric patients, who, if they are unable to consent to medical treatment for themselves, will be entitled to receive coercive treatment if it is in their best interests.191

The time has come to reconsider the development of mental health law built around risk. Risk assessments that place patients in high risk or low risk categories have been widely adopted by mental health policies, laws, and services—eg, in Australia, the UK, and the USA—in an effort to reduce the harms associated with mental disorders.[192–194] However, most patients categorised as being at high risk will not engage in any harmful acts.[195] Additionally, clinical decisions made on the basis of risk assessment divert resources away from patients classified as low risk, which in turn leads to reduced availability of treatments.[196]

Decision making capacity and so-called best interest tests are other criteria used for the development of mental health law. However, both of these factors pose problems. Mental capacity legislation has become too broad in scope, which has led to people being subjected to treatment against their will. Additionally, best interests tests have been proven to be strongly attached to

psychiatrists' subjective and personal understanding of what is considered to be best for the patient, without taking into account a patient's preferences.197

The debate about lawmakers' attitudes to risk assessment is crucial to the development of both mental health law and psychiatry. Some authors have argued that the emphasis on risk at the expense of care has made psychiatry more coercive, psychiatrists more risk averse, and has increased prejudice against their patients. However, limitations of risk assessment do not mean that emphasis on risk is not necessary at all. Psychiatrists and other physicians should be able to embrace the duty they have regarding the safety of their patient and the patient's family and towards the public as a whole.198,199 Psychiatrists should be able to provide optimal care according to the treatment needs of each patient.

Assessment of risk of harm should not form the sole basis for law, policy, or clinical decision making. Mental health laws and policies must reduce the importance of risk assessment in their conception and redirect the focus to what patients can do, what they want to do, and how mental health professionals can help in the recovery process.

The problem of coercion in mental health law

Mental health law provides the legal authority for compulsory detention and treatment and, commensurate with that, contains safeguards in relation to the exercise of that authority, as well as setting out entitlements to services. However, it has less influence over the discretion as to when or how to exercise the authority to detain and treat. Coercion then becomes an important mediating factor as to how the legal criteria are applied and which rights are brought into play as being relevant.

The law suggests a dichotomy exists: a person is detained or is not. In practice, coercion can determine who falls on which side of the line regarding, say, compulsory detention. Practitioners will be familiar with the scenario of a person refusing the offer of a voluntary admission, until faced with the prospect of a formal one. A patient's legal status is not a reliable guide to how much coercion they felt subjected to during the admission process.200

Coercion has been described as "pressures exerted by one person (or organisation) on another with the intention of making the latter act in accordance with the wishes of the former".201 It is usually portrayed in a negative light, with an emphasis on the use of compulsion, or at least the threat of it. More recent work has viewed coercion as a hierarchy of behaviours, shading from positive forms to negative ones. Szmukler and Appelbaum201 have set out a spectrum from persuasion through interpersonal leverage, inducements, and threats to the use of compulsion. Professionals are more overt about the use of compulsion but need to become more honest about the use of positive forms of coercion.

The work of the MacArthur Research Network on Mental Health and the Law has provided powerful evidence of how positive forms of coercion can have a beneficial therapeutic effect. Patients afforded procedural justice—namely, having a voice in the process and being treated with respect and in good faith—experience significantly less coercion than do those not so treated.200 This result can be observed in settings such as mental health tribunal hearings where the effect of decisions contrary to the wishes of the patient can be mitigated by following processes that promote procedural justice. Outside the hospital, some would argue the discussion about mandated community treatment needs to be re-focused from coercion to one of having a contract with the person concerned.202 Although advocates of compulsory community care argue it is less coercive than is compulsory inpatient care, the evidence of a reduction in use of mental health services or of

improved outcomes for patients is sparse.203,204 As with compulsion in the hospital, further research in the community to elucidate whether and how coercion, in its various guises, has long-term beneficial effects such as improved engagement or levels of functioning has to be an important priority in the coming years.

In the UK, the Department of Health has called on hospitals to substantially reduce their use of restrictive interventions and practices.205 The challenge will be to ensure that insidious forms of coercion are not then allowed to unwittingly dictate the life on the wards for all patients.

Mental health legislation in the next 10 years—can one size fit all?

WHO states that mental health legislation is essential to provide the necessary framework for protection of the rights of people with mental disorders because of the stigma, discrimination, and marginalisation they face in all societies.180 The CRPD174 has been an important landmark leading to developed and developing nations reviewing their legislation to safeguard the rights of those with mental health problems. But is a common set of principles and goals for mental health legislation for all countries feasible given the varied cultural, historical, political, and economic contexts?

A huge international disparity exists in levels of resourcing of mental health services. A country with 0·1 mental health workers per 100 000 population (eg, Vietnam) might have more difficulty guaranteeing access to care and resourcing human rights safeguards than would a country with more resources such as the UK.206 Access to mental health services is a challenge worldwide. South African law aims to make access to mental health services equitable.180 The USA passed the Mental Health Parity Act (1996) to ensure that insurance companies give equal coverage to mental and physical illness. Brazil has legislation to ensure access to mental health medication; Tunisia to medical and psychosocial care;180 and India to provide everyone with access to free mental health care.207 Although commendable in its aims, India's Mental Healthcare Act (2017) might be too ambitious for a country with only 0·6 mental health workers per 100 000 population.207,208

> **Panel 5: Good mental health care: common challenges across jurisdictions**
>
> - Access to mental health care for people who need it
> - Parity of access to mental health and physical health care
> - Protection and promotion of the rights of people with mental disorder, in relation not only to psychiatric care and treatment but also to full participation in education, work, and their families and communities
> - Support for people with mental disorders in their decision making, if they lack capacity
> - Mental health care for people who have committed offences that is equivalent to that available for those not involved in the criminal justice system
> - Striving for good practice, high standards, and well trained mental health professionals

illness. Brazil has legislation to ensure access to mental health medication; Tunisia to medical and psychosocial care;180 and India to provide everyone with access to free mental health care.207 Although commendable in its aims, India's Mental Healthcare Act (2017) might be too ambitious for a country with only 0·6 mental health workers per 100 000 population.207,208

Much rights based legislation is drafted to protect people from abuse by the state. However, in many countries, such as Pakistan, China, and Indonesia, families are the main carers and might be struggling in the absence of community services, and using restraint and other practices that violate the human rights of people with mental disorders.209–211 In China, before the 2013 Mental Health Law, families were responsible for making treatment and admission decisions on behalf of their family member, not the individual themselves or the psychiatrist. Families also bear civil liability for their family member's behaviour.209 Recent legislation in Western Australia has been heavily influenced by the increasing emphasis on the rights of families and carers as well as those of the individual.212

Countries that were previously colonised by Europeans might have a legacy of institutions and legislation that are not well aligned with their local culture and context.213 Some countries have populations for whom they make special provisions as a result of past trauma, oppression, or mistreatment. Australian and New Zealand mental health laws have provisions for recognising and respecting Indigenous people and their culture (Mental Health Act 2014 Victoria and Mental Health Act 2014 Western Australia; New South Wales Mental Health Act 2007; Queensland Mental Health Act 2016; South Australia Mental Health Act 2009; and Mental Health [Compulsory Assessment and Treatment] Amendment Act 1999 New Zealand). Colombia passed legislation in 2011 to provide comprehensive support for victims of armed conflict.214

Some cultures place less emphasis on individual human rights, and in a society where human rights are not a priority it can be difficult to guarantee the human rights of people with mental illness.207 Despite the differences across countries and cultures, common challenges emerge (panel 5).215 Mental health legislation cannot meet these challenges on its own. Poorly drafted, under resourced, badly implemented, or even frankly oppressive legislation can make things worse. But realistic, well drafted, and well implemented legislation can complement and reinforce mental health policy to improve the outcomes for people with mental disorders.215

What should mental health legislation ideally cover? Historical discrimination and segregation of people with mental illness places them in a vulnerable situation in many societies. Legislation can play an important role in protecting their rights, either through standalone legislation or provisions protecting the rights of people with mental illness that can be incorporated into health or disability legislation. The CRPD174 has forced a transformation in society's view of disability and people with disability. Disability is no longer seen as a deficit in the individual that needs correction (traditional medical model) but as arising out of an interaction between individual impairments and social and environmental barriers that prevent disabled people from full and effective participation in society (biopsychosocial model). Laws therefore need to address effectively attitudinal and other barriers while simultaneously helping people to access health services to reduce their impairments.

In the field of mental health, the adoption of the biopsychosocial model of disability also requires a shift from a traditional emphasis on what are considered to be the best interests of the person to an emphasis on respecting their will and preferences, thus removing attitudinal, social, and environmental barriers. Mental health legislation therefore needs to overcome the entrenched principle of best interests. Laws need to protect the right of people with mental illness to take decisions for themselves. This step forwards can be achieved through content and procedures in law to promote, respect, and fulfil the right of people with mental illness to exercise their will and preferences when receiving mental health care and treatment—eg, with advance directives, enduring power of attorney, support networks, personal ombudsman, personal representative, and representation agreements enshrined in legislation. Such tools should be used in the provision of mental health care and treatment.

Another important justification for mental health legislation is to ensure access to mental health care. In many parts of the world, the physical health and mental health needs of people with mental illness are neglected with disastrous consequences—in nearly all countries where this has been researched, people with mental illness have 15–20 years lower life expectancy than do their peers without mental illness.216 This reduction in life expectancy has many causes, but disparity in provision of health care (and mental health care) is an important contributor,216 which can be addressed through legislation.

Access to health care means provision of care in a manner that is acceptable to people with mental illness and their families and enables their inclusion in the community. Legal provisions can stop segregated services and mandate the creation of a range of mental health services that promote social integration and support people to live fulfilling lives in their own communities.

For many, common medical practices such as seclusion and physical restraint are seen as cruel, inhumane, and degrading treatment, in much the same way as use of chai mental health service providers from continuing with these practices.

Bach and Kerzner217 have outlined a practical legal model for the incorporation of the concept of decision making capability when providing treatment for mental illness, which can easily be incorporated into law in most countries.

For too long, involuntary hospitalisation and treatment has taken centre stage in mental health legislation to the detriment of the rights of people with mental illness, and pitting mental health professionals and people with mental illness against one another. Involuntary hospitalisation is based on ideas of decisional in capacity and so-called best interests rather than focusing on decision making ability and respecting the will and preferences of people with mental illness. Laws related to mental illness need to move away from involuntary hospitalisation and instead focus on enabling decision making capability, which is a combination of the unique decision making ability of the individual, understanding of the will and preferences of the individual, and decision making support and adjustments to enable people with mental illness to make legally competent decisions.

Conclusion

The different authors of this section of the Commission had very different views about mental health legislation, with some suggesting that it does far more harm than good and should be substantially reduced or removed altogether, whereas others call for something akin to greater dissemination such that mental health is taken into account when all legislation is developed in an effort to reduce stigma and discrimination. The differing viewpoints probably reflect those in wider society. The aim of this section is to open debate about the purpose and use of mental health legislation and suggest possible ways forwards.

Our majority opinion is that in the next 10 years, the primary aim of any mental health legislation should be to improve outcomes for people with mental disorder. Legislation should be evidence based, using evidence based treatment outcomes informed both by patient experience as a fundamental underpinning and by research aimed at the elimination of coercion and compulsion. There is a dearth of research on the use of coercion and compulsion. The journey to elimination requires a solid evidence base to justify and guide existing use of coercion and compulsion. Legislation should mandate for funding and resources to promote good mental health as well as address mental health problems. It should also take into account cultural mores and existing public understanding around mental illness and encourage increased advocacy for the rights of those with mental health issues—all factors that should, over time, shape concepts of management and care.

In practical terms, mental health legislation should encompass the need for practitioners to show that they have provided an evidence based treatment package for the individual and that the individual has been supported to enter into a contract around how best to engage with that treatment package and how the provider can best deliver it. Positive coercion should be used routinely and more often, with tribunal panels being primarily based around agreeing treatment packages (which would include type of treatment, the setting for that treatment, and who provides the treatment), rather than whether or not the person should be in hospital. The individual would be part of this discussion, with reasonable adjustments made to increase the possibility of them being fully involved in the process. Procedures such as advocates, advanced directives, and power of attorney would all support and safeguard the individual's rights, will, and preferences.

Enshrinement of an evidence based approach in law would increase the likelihood that people with mental health problems receive a more considered assessment plus higher quality treatment more likely to address their needs. The minority of individuals who have problems with violence would have this addressed as part of their treatment. As it became clearer where evidence around treatment needs was scarce, the legislation around provisions for mental health funding and funding of the research for mental health would come into play, requiring commissioners to fund appropriate services; requiring providers of mental health care to develop services that meet the needs of those with mental health problems; and encouraging researchers to focus their work on areas in need of being addressed. For example, few calls have been made for research into the management and treatment of violent behaviour in people with severe mental illness, despite the fact that this is one of the main public concerns about people with mental disorders.

These changes would not eliminate coercion and compulsion or the undue emphasis on risk, but they would give increased emphasis to partnership working, negotiation, and contracting, with the likely additional resources (financial and manpower) that would result from governmental legislation (ring fencing or prioritisation of mental health funding). Psychiatrists would have to spend more of their time engaging people in treatment programmes and ensuring that service users are involved in their own care and in the decision making about their care. In the longer term, this more collaborative approach might mean that service users would be more likely to take more responsibility for their own care and be proactive about seeking treatment. Ultimately, this approach should result in a reduction in coercion, compulsion, and the use of hospital beds, which are a costly drain on resources.

Mental health legislation should mandate training such that all health professionals have some mental health training and to ensure that more professionals are trained to become mental health practitioners in line with the known mental health needs of that jurisdiction. Similarly, legislation should ensure that access to good quality mental health care is available when it is needed.

Mental health legislation should also be enshrined within equality legislation and thus cover wider societal issues, particularly access to housing, resources, and employment.

All governments should include a mental health impact assessment when drafting legislation to ensure that it takes into account the needs of people with mental health problems and does not inadvertently discriminate against them.

The 2017 Report of the UN Special Rapporteur on Health has called for "the active involvement of the psychiatric profession and its leaders towards rights compliant mental health policies".218 In line with this, mental health leaders, service user organisations, and human rights specialists should work together in formal commissions aimed at shaping better mental health legislation.

Within the coming decade, we could envisage regular monitoring of the recognition of the rights of those with mental health problems as reflected in legislation and the attitudes within treatment institutions and the community at large.219 This monitoring would enable different jurisdictions to be compared with respect to their mental health literacy—ie, how well they respect the rights of those with mental health problems, including the rights to care, to treatment, and, inevitably, to risk assessment, and, if necessary, the right to involuntary admission for treatment. We did not reach consensus, but in essence, mental health legislation in the next 10 years should not simply be a narrow piece of legislation that deals with how to manage the affairs of a person who becomes mentally unwell, but a wider piece of legislation that incorporates government policy about human rights, equality legislation, resource allocation, and individual rights, preferences, and needs.

Part 5: Digital psychiatry—enhancing the future of mental health

Introduction

The digital psychiatry revolution has arrived. From tangible tools such as smartphones and virtual reality headsets to the underlying developments in data analytics and machine learning, a plethora of digital advances offers a myriad of possibilities for psychiatry. Understanding what those possibilities are and navigating the field towards optimal use of these new digital tools is important for all psychiatrists to ensure that future care offered is the best care.

Digital psychiatry—the use of mobile and other connected digital devices to offer mental health services beyond traditional telepsychiatry—has rapidly emerged due to the convergence of technological, societal, and analytical advances. Smartphones, owing to their many data sensors, large screens, and various communication modalities, have emerged as early leading devices for digital psychiatry. They, and other devices, include the technology to collect data relevant to mental health, share them with the health-care system, and deliver feedback and resources based on those data, offering the potential of a closed loop system. However, numerous complex real world and societal forces continue to shape the field, as we review in this Commission.

Widespread technology adoption has made digital psychiatry feasible

The global population's rapid adoption of smartphones continues220 with estimates that by 2020, 80% of the adult population will own one.221 People with mental illness also increasingly own and use smartphones in their daily lives.222,223 However, the rapidly expanding mental health service gap between resource rich and resource poor countries,63 as well as the socioeconomic burden of mental illness, still precludes some people from accessing digital technologies such as smartphones.224–226 Decreasing costs and increasing availability of such technologies suggest that ownership and use will continue to expand.

Interest in using smartphones for mental health care has exceeded the clinical evidence and knowledge base. Over 10 000 mental health apps are available for download and use,227 yet minimal data exist on their safety, usability, or effectiveness.228,229 Smartphones are only the first wave of new consumer technology applied to mental health. Wearable sensors such as fitness trackers,229 augmented reality glasses,230 and virtual reality headsets231 are examples of digital technologies entering the mental health space. Other advances that do not rely on consumer technology but are already projected to change health care include portable diagnostics, smart and implantable drug delivery mechanisms, more affordable genome sequencing, data science and machine learning, and digital security advances such as blockchain.232

The widespread adoption of digital tools and their technical ability to collect data or deliver services related to mental health offer the potential, not yet fully realised, for digital psychiatry to have a role in clinical care. That potential is affected by numerous shaping forces in the real world (figure 2). Factors such as patient and clinician engagement, clinical validation, clinical utility, interoperability, scalability, and economic value will mould the hope—some might even say hype—of digital psychiatry into reality. What that reality might look like and how its shaping forces need to be balanced is the topic of this section.
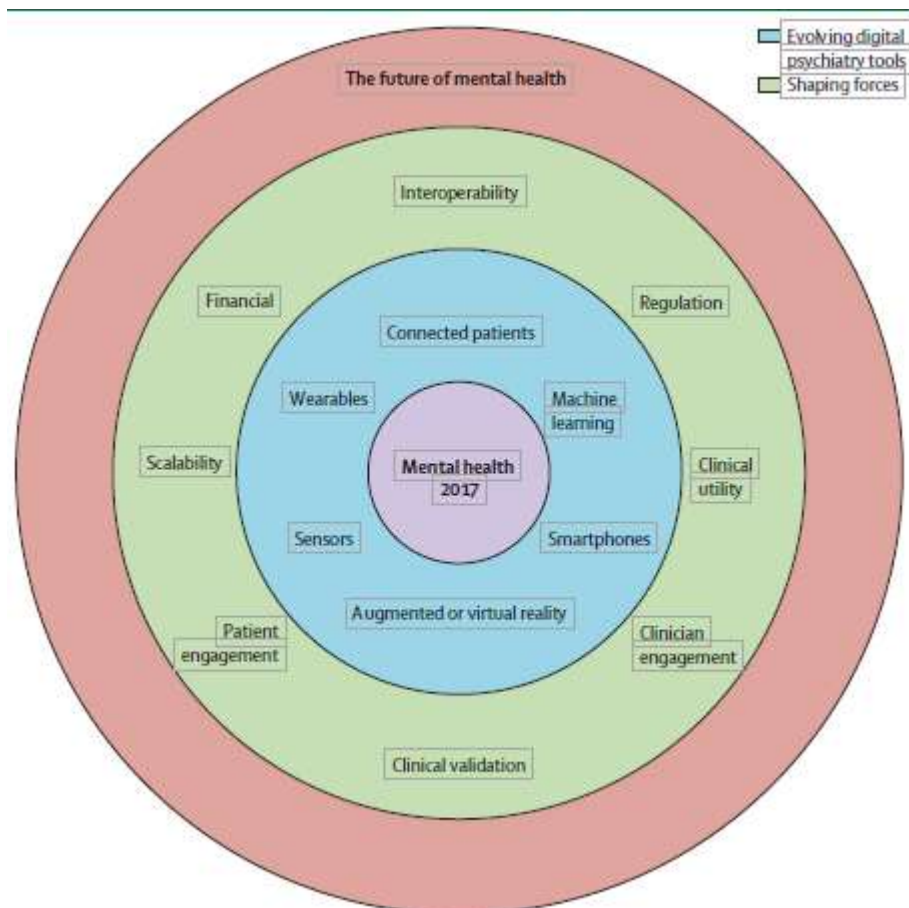
Figure 2: Driving forces for progress in digital psychiatry in the next 10 years Progress will be driven not only by new technologies, but also by numerous shaping forces.

Towards digital phenotyping and personalised diagnosis Despite major advances in the understanding of the biological basis of mental disorders, clinical biomarkers remain elusive;233 the potential of digital phenotyping enabled through personal digital devices might offer an unprecedented opportunity for psychiatry.

A vast amount of new data is now available from self-report, behavioural, physiological, neurological, molecular, and genetic information. These data offer an opportunity to evolve the nosology of mental illness away from phenomenologically derived descriptions towards more personalised and reliable definitions. For instance, through real time symptom surveys on devices, experiences can be captured while minimising retrospective recall bias.234,235 In addition to mobile app usage patterns,236 the sensors on these digital devices allow the capture of more objective behavioural data, such as global positioning system information about spatial location237 and call and text logs providing a window on social activity.238 Digital cameras on devices can be used to help to diagnose congenital disorders with dysmorphic phenotype and match patient cases to

potential genetic syndromes. Physiological sensors on wearable devices such as fitness trackers and smartwatches can already capture some basic, although not necessarily precise, information related to heart rate and skin conductance.239 Efforts are underway to develop reliable digital sensors that might be able to capture mobile electroencephalographic data,240 the molecular composition of sweat,241 and even perform rapid genotyping.242 Clinical studies are in progress of digital pills that automatically monitor medication adherence243 and the near future might bring previously unimagined streams of digital data.244 Models to organise these data, such as the NIMH RDoC, offer a proposed framework (figure 3). Digital psychiatry will enable a more accessible and multidimensional personalised psychiatry, with opportunities to focus more on primary and secondary prevention.245 Within the next decade, the field might move towards identification and management of preclinical risk rather than only treatment of overt illness.

The ability to collect this vast amount of digital data will probably be met with well warranted concern. Consider the 2014 Samaritans Radar project, a service that automatically scanned social media posts on Twitter for negative language such as "hate myself" and alerted that person's contacts that the person might need emotional support.246 A rapid national public outcry centred around privacy and consent quickly led to the removal of the Radar. Much more extensive and personal data related to mental health can now be captured in less obvious ways, raising the need for a public dialogue on how these data should be used in digital psychiatry. Ethical issues related to the use of these data remain complex and not well addressed.246

Towards digital prevention and therapeutics

Digital technology offers the potential to provide new models of adjunctive therapies and interventions that will bring treatment outside of the clinic. Telepsychiatry already possesses a robust evidence base247 and digital health tools offer the opportunity to make such services more accessible and engaging. For example, interventions such as cognitive remediation and cognitive behavioural therapy—effective treatments for those with severe mental illness—can now be delivered when and where the patient is via mobile devices, with personalised feedback delivered in part by automatically collected sensor data. Early evidence for this hybrid paradigm of digital assessment and treatment with both machine and clinician support has shown encouraging results with cognitive behavioural therapy,248 moving

Figure 3: RDoC, digital psychiatry tools, and digital phenotyping
The RDoC system, which examines dimensions of behaviour across multiple units of analyses across various categories of categorical diagnosis, can be effectively captured by smartphones to obtain a more comprehensive profile of illness at an individual level (digital phenotyping). EEG=electroencephalogram. RDoC=research domain criteria.

away from pure computer based programs to just-in-time real world interventions and personalised sessions.249 Encouraging research in addictions has highlighted the potential of smartphones to support contingency management for treatment of addictions.250 Newer technologies such as

augmented and virtual reality offer the potential to create optimal environments and spaces for exposure based therapies.251

Thus, these technologies might be means by which the concept of space in psychiatry is reversed; a patient's location will no longer determine what treatment they can access and instead the ideal environment and treatment resources will be digitally delivered to them. Many psychiatric clinics are based in cities in which the density of those seeking care is high, but soon it will be possible to offer digital services in rural or remote areas. Clinician involvement is essential for the success of digital interventions,252 and thus psychiatrists and psychologists in the future will probably divide their time between seeing patients face-to-face and supporting them through digital interventions, or possibly doing both in the clinic through blended therapy.

This model of digital technology potentially enables a personalised understanding of an individual's mental illness; emerging digital tools to prevent, augment, and enhance care offer a promising picture of psychiatry in the coming decade. However, transformation of that potential into reality will require concentrated efforts to steer the development, research, and education of digital psychiatry towards these goals and away from possible pitfalls. The barriers listed below are both the opportunity and challenge for psychiatry to shape digital technology to promote improved patient care. They focus on shifting the focus from technology itself towards what technology can enable and facilitate. Neuroscience advances will probably lead to new discoveries and treatments for psychiatric illnesses within the next 10 years and the role of technology might be very different to what it is today (with current efforts mostly centred around smartphone data). However, the core principles of patient enjoyment, trust, partnerships with data science and machine learning, clinical evidence, interoperability, and clinical integration will remain important.

Clinical considerations and training to reach the vision of digital psychiatry

The increasing ability of technology to capture new data or offer new digital services does not automatically translate to clinical utility or efficacy. Technological innovations have often developed in isolation from advances in clinical practice; the six core considerations outlined below (figure 4) can help to move these two modalities closer. Although many examples feature smartphone apps, no smartphone platform today meets all six core considerations. Both existing and new technologies must seek to balance and satisfy all six if they are to have a clinical role in the future of digital psychiatry. Of utmost importance, ensuring that care and user needs lead technology development, rather than vice versa, will result in viable and effective—rather than disruptive and short lived—advances.

Creating engagement through stronger patient partnerships Shaping of digital technology to best benefit mental health care requires increased involvement from both patients and clinicians. Focusing here on patients, these digital tools must successfully meet the needs of those who use them. For example, numerous mood tracking apps are available, but for patients with depression many apps have proven difficult with regard to entry and retrieval of data.253 Patients have also noted that today's apps do not offer enough emotional support, distract from real life challenges, might lead to care avoidance, and cause misrepresentation of symptoms.254 Many are simply not enjoyable to use. It is hardly surprising that smartphone apps for mental health struggle with poor adherence.255–257 Most individuals might never use a mental health app after downloading.255 Although digital mental health might evolve past smartphone apps, the requirement for technology to meet users' needs will remain constant. Involvement of patients in all phases of the design, research, and implementation of these technologies will be crucial for success.

Of course, technology alone cannot solve engagement. Clinician involvement with the technology is a key factor in increasing user satisfaction and engage-ment,258,259 but psychiatry has not yet established models or best practices for how best to engage digitally with patients. The same digital divide in terms of confidence and understanding of technologies seen in some portions of the mental health patient community might also be present among mental health professionals. Many clinicians had practised for years before smartphones were invented, let alone applied to mental health, leading to an often unrecognised need to educate colleagues about digital tools. The number of digital devices, their ability to generate constant data, and the novel nature of these data present a challenge for the field. Many psychiatrists remain justly concerned about the role of digital technology in the doctor–patient relationship and will probably remain reluctant to engage until stronger safety, utility, and efficacy evidence is established.259–261 Engagement with psychiatrists also requires their involvement in the development of these technologies. How to ensure that both patient and psychiatrist voices are heard effectively is a topic for further research, but it might be the most important, and currently underappreciated, step needed for digital psychiatry to advance. These two voices will also have to navigate the doctor–patient relationship in an increasingly digital era where clinicians and patients each have access to more data and information. Digital psychiatry does not mean that clinicians release all treatment responsibility to service users or that service users ignore clinical advice because of access to new tools. Rather, a balancing of power between clinicians and service users is necessary, although the dynamic nature of technology can make that equilibrium difficult to find. Further research in this space will be key for the success of digital psychiatry.
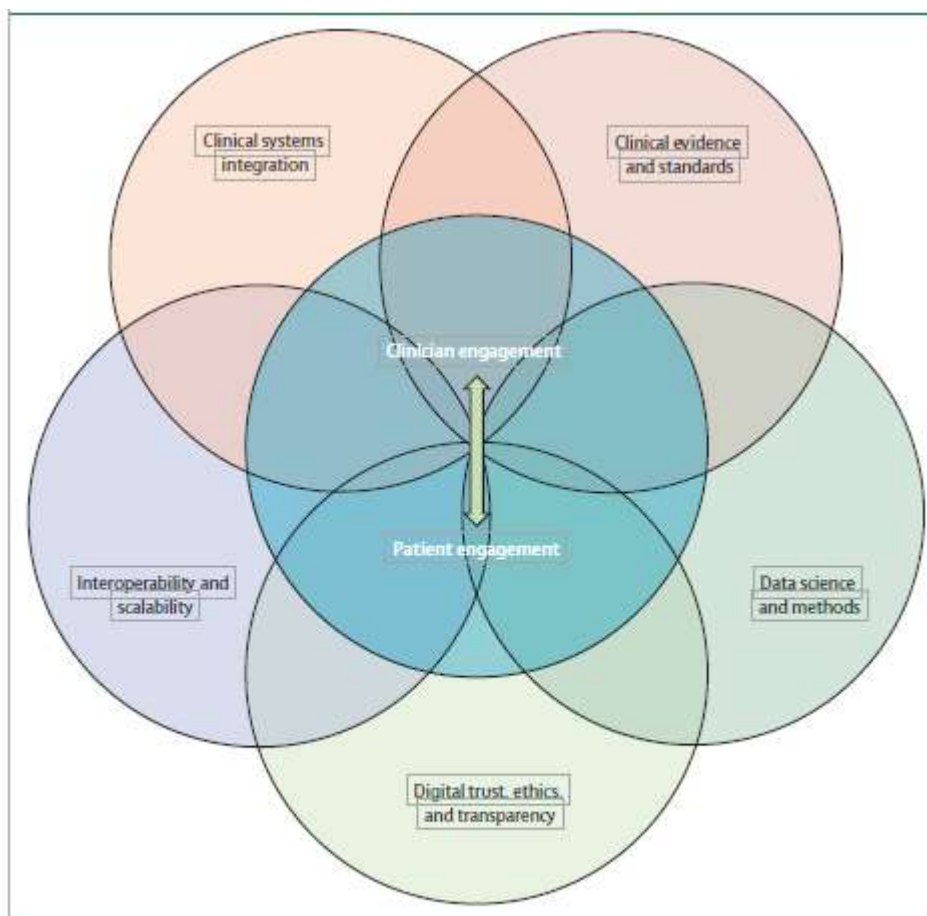

Figure 4: Targets for progress in digital psychiatry
The central role of patient and clinician engagement is reflected in this Venn diagram. All targets are integrally related to each other.

Another often overlooked aspect of engagement is that although increasingly many people have access to digital devices such as computers and smartphones,222,262 some individuals still do not. The monthly costs and fees associated with smartphones and their use might still be too high for many to have reliable smartphone service,263 and people in resource poor countries or of low socioeconomic status probably do not have the same access opportunities as do their richer counterparts.264 However, technology costs continue to decrease, meaning both feasibility and cost effectiveness of digital psychiatry remain a moving target. Assessment of a patient's digital technology access, as well as comfort and fluency, will probably become part of routine screening, with specialised education or peer support programmes developed to ensure that all can access these tools.

Building digital trust and transparency

The role of digital psychiatry in the next 10 years will also depend on trust. Even with advanced technology, the foundation of health care and especially psychiatry remains based on trust and a strong doctor–patient relationship. If patients are not comfortable disclosing sensitive information, the foundation of digital psychiatry will be fatally flawed. Patients need to feel confident that in sharing their psychiatric history, their experiences and private information will be respected. Likewise, patients need to be aware of the scope of data that can be collected about them via digital devices, especially in the case of passive data, and they must understand why and how it will be used. Just as psychiatrists today educate patients on risks and benefits of medications and treatments, in the future they will need to be able to discuss risks and benefits of digital monitoring or interventions, and help patients to make informed decisions.

At present, serious concerns remain regarding the privacy, transparency, and confidentiality of digital health tools. The current culture where smartphone app privacy policies are often non-existent265 or, when present, obfuscate how patient data are handled and shared266 is not compatible with the goal of widespread clinical use. Even in 2016, governing bodies such as the US Department of Health and Human Services have noted pitfalls and concerns related to the little public trust associated with the app marketplace,267 and NHS England closed its app store in 2016 for the same reasons. Although new digital technologies such as block chain will help to secure digital health information against malicious hacking, trust building is more than a technical problem and the field will need to focus on the ethics of digital psychiatry.250,268–270 Existing digital tools mainly monitor symptoms or offer present guided therapies, but growing evidence suggests that these digital tools work best when coupled with human support.252,258 In the near future, artificial intelligence, automated decision making, and individualised therapies will probably become closer to reality, but it is unclear whether they can rival the increased engagement and efficacy noted from human supported use of technology. Efforts to create empathetic technologies for mental health are underway.271 Psychiatrists will need to become familiar with these many ethical issues that will arise. A good start is to look for a privacy policy for a device or application and learn what protections have been put in place. The American Psychiatric Association offers a useful free resource to help to evaluate apps on its website.

Data science and methods

With digital psychiatry studies assessing real time passive data from individuals and existing programs such as electronic medical records collecting or generating big data (data of high velocity, high volume, and high variety), the analytical methods to process these data have become increasingly complex. The analytical methods for processing big data are also challenged by the complexity of clinical psychiatric data. For example, an overlap exists between different diagnoses of

helping to predict response to anti-depressants,277 analyse speech for risk of conversion to psychosis,278 and even augment risk assessment.279

In the next decade, we expect the development of a branch of psychiatry dedicated to these digital tools in the same way that some psychiatrists today specialise in interventions such as transcranial magnetic stimulation or electroconvulsive therapy. Clinical informatics is already a subspecialty and more training opportunities will probably arise. Partnerships with data science will become more common and it is not unforeseeable that data analysts will be part of the clinical team in the near future.

Building of the evidence base, standards, and creation of best practices

Although pilot data exist supporting the feasibility and acceptability of digital psychiatry tools such as smartphone apps across nearly all conditions,280 clinical data on tools such as smartwatches, augmented reality, virtual reality, artificial intelligence chat bots, and digital therapeutics remain scarce.281 Large-scale digital psychiatry studies on schizophrenia and depression282,283 have provided acceptability and feasibility results but no efficacy data. Even simple claims, such as fitness trackers being able to accurately measure heart rate, have in some cases proven nearly seriously wrong and led to legal disputes regarding false claims and misrepresentation of technology.284 As Thomas Kuhn285 writes in The Structure of Scientific Revolutions, "the success of the paradigm...is at the start largely a promise of success...science consists in the actualization of that promise". Actualisation of the promise of digital psychiatry is thus another challenge facing the field. Today, even the simplest questions, such as which patients will benefit most from digital interventions, at what dose, with how much human support, and for how long, are still largely unanswered. Mechanisms of change through digital technologies are also largely unknown. Initial hopes that a simple digital translation of validated clinical scales or effective in person treatments would prove valid and effective have given way to more fundamental research to create an evidence base for digital psychiatry.

As research and understanding of digital psychiatry expands, carefully crafted standards will be necessary to help to guide development without hampering innovation. Few clear or well adopted commercial or medical standards have led to the promulgation of many low quality and even dangerous apps on the commercial marketplaces.227 The US Federal Trade Commission recently targeted false claims by makers of so called brain training apps.286 The difficulty in finding a safe and effective app is well known to anyone who has searched for the word depression in these app marketplaces and been confronted with hundreds of apps making increasingly bold claims. Early efforts by www.thelancet.com/psychiatry Vol 4 October 2017 psychiatric disorders, but conventional data mining algorithms are not well suited to processing data with such vague labels. The NIMH RDoC model might offer a useful framework for understanding how different types of psychiatry data (eg, self-reported symptoms, behaviours, physiology) can be collected from digital devices and organised in a manner to facilitate meaningful analysis.272 Integration and processing of multimodal data from digital tech-nologies also present substantial challenges.273–275 Big data are a supplement to, not a substitute for, traditional data collection and analysis in psychiatry. Use of big data does not mean that the basic principles of study design, data collection, and data analysis can be ignored. To obtain robust results, findings must be replicated in independent populations to examine their generalisability.244

Neuroimaging modalities such as CT and MRI scans have advanced interest and understanding in fields such as neuroradiology and neuropsychiatry in which psychiatrists, neurologists, physicists, and data scientists work together to transform brain imaging into clinically relevant information.

Similar efforts will be necessary with smartphone data and digital phenotyping. The quantity and complexity of data from smartphones is beyond that of neuroimaging, where all setting and measurement parameters are carefully controlled in a clinical or hospital setting. Smartphones today can easily generate over 1 million data points per patient per day. The volume of data, let alone its complexity, is expected to expand as new devices are introduced. Considering the amount of data generated from electronic health records, pharmacy records, genetic testing, and neurodiagnostics such as electro-encephalography, the field will clearly need new methods and tools to transform data into clinical information. Big data are already affecting psychiatry,276 technological change in digital devices and data processing capability. Will the availability of preclinical digital phenotype signatures, including whole genome scans from infancy, lead to prevention of many psychiatric disorders? Will digital devices, combined with fully elucidated connectomics of brain wiring, and sophisticated neuromodulation, create a synergy that advances the field in directions currently not even realised? Although all of these developments are within the realm of possibility, we predict that such changes will probably not happen within the next 10 years, given the enormous ethical, practical integration, fiscal, and technological challenges. Social media and Facebook have existed for over a decade, but have not transformed the daily clinical practice of psychiatry.299 In the next 10 years, the field will see change. We believe that digital devices will lead to reduced need for office visits, increase access to care for a larger number of people, and facilitate seamless integration of care. Progress will occur; however, it might not be new digital devices but rather development of systems and means to integrate such devices into new models of care that will enable population level change.

This favourable scenario can be made possible only via expanded partnerships with patients and collaborations with data scientists. Novel research methods, trans-parency standards, clinical evidence, and care delivery models must be created for the field to utilise digital advances. Regardless of what technology can do, it will have a suboptimal effect in psychiatry unless it is developed in a coherent manner that meets the needs of all stakeholders and addresses the core considerations outlined above. From simple innovations such as improved battery life for smartphones to novel analytical models, the influence of digital technologies will interact with advances in neuroscience and genetics to create a plethora of potentials. Thus, looking at what digital psychiatry will be in the next 10 years is not so much about predicting the future but a start to building towards that future here and now in 2017.

Part 6: Training the psychiatrist of the future

Introduction

The rapid pace of scientific advances combined with evolving models of health-care delivery have broad implications for how to train psychiatrists for the future. Medical educators and psychiatry training programmes must ensure that the graduating workforce is not only armed with the latest medical knowledge and clinical skills but prepared to adapt to a changing landscape. Because new evidence based practices often take 15–20 years to become standard of care,300 training programmes must often forge ahead into uncharted territory and assist in the process of implementation and dissemination. As a result, training in psychiatry has an important role to play in setting standards for care and shaping the future of the field.

Priorities for training in psychiatry

In the setting of numerous advances, several training priorities will be essential for the field of psychiatry in the coming years. To meet the growing need for mental health services, training in

psychiatry will need to focus on new models for health-care delivery and, as a consequence, will need to expand training in team management, leadership, and collaborative care.301,302 At the same time, training of psychiatrists in strategies to integrate and harness the power of information technology will be essential. Fostering a culture of lifelong learning and provision of skills training in quality improvement strategies will perhaps be the most important step to prepare psychiatrists for a rapidly evolving field. In addition, as research expands the understanding of the biological underpinnings of psychiatric illnesses, integration of a contemporary neuroscience perspective alongside the other strong traditions of psychotherapy and social psychiatry will become increasingly important.303

New models for health-care delivery

Although mental illness and substance use disorders are the leading cause of years lived with disability,304 access to high quality mental health care is far from universal. With only nine mental health providers per 100 000 people worldwide,305 access to care is further complicated by disparities, stigma, and insufficient resources. Where resources do exist, the availability of mental health services is restricted by unsustainable, escalating costs and fragmented, siloed delivery models. Given these challenges, most patients with mental illness around the globe are not seen by mental health specialists but rather in primary care settings, making primary care the "de facto mental health system".306 Unfortunately, in these settings, mental health problems often go undetected, and when recognised they are frequently undertreated.306

To address these issues, new efforts to extend and integrate mental health services within primary care settings have emerged. These include collaborative care models whereby psychiatrists work with primary care doctors and behavioural health-care managers to address the mental health needs within a specific patient population. Task shifting and stepped care approaches have also been used in LMICs. In these systems, non-specialists and community health workers are trained and supervised to provide some basic mental health care with referrals to more specialised care when needed.24 Telepsychiatry has also been identified as an effective approach to expand access to mental health to remote and underserved areas.307 Well-resourced countries have also seen a push towards early intervention as a cost effective measure.

At the same time, patients with chronic psychiatric conditions might be well connected to behavioural health settings (long term residential care settings, or outpatient psychiatric clinics and day treatment centres) and yet have insufficient access to general primary medical care. This situation is particularly concerning because many general health conditions are more prevalent among patients with severe mental illness.308 A host of factors including lifestyle choices, side effects of psychiatric medications, and disparities in both the quality and use of health care among patients with mental illness are likely contributors.308 In response, proposed solutions have included the embedding of primary care providers in behavioural health-care settings and extension of the scope of practices of psychiatrists to include management of general medical problems in consultation with primary care physicians.309,310

All of these approaches have profound implications for medical training. Perhaps first and foremost is the need to reconsider what training in psychiatry general practitioners should have. WHO has estimated that, worldwide, less than 4% of training for general physicians and nurses is dedicated to mental health.311 An increase in basic exposure to psychiatry within medical school and within specialised training of other primary care providers will be crucial to meet the widespread need for basic mental health care. In recognition of the growing importance of addressing mental health needs among all patients, the Royal College of Psychiatrists has expanded training in psychiatry

within the 2 foundation years all doctors must do before moving onto specialty training, with half of all doctors participating in at least 4 months of postgraduate psychiatry training.312

For psychiatrists, focused education in the management of those general health conditions most common within psychiatric patient populations (eg, obesity, diabetes, hypertension) should be emphasised within existing training programmes. For both mental and general health conditions, all providers will need to have training in general screening and preventive strategies.313 This training includes learning how to counsel patients about their lifestyle choices—particularly surrounding issues of smoking, exercise, and diet—and motivate change.301

To adapt to new health-care delivery models, training in team based approaches and population based care will be essential. Psychiatrists will need to expand their focus from just the individual patient and provision of direct care to also overseeing the treatment and outcomes of a larger patient cohort through registries and collaborations with emerging professional groups and other health providers (such as nurse practitioners and physicians associates).301 As such, training in measurement based care and the use of standardised metrics to track outcomes will be important, as well as the use of information technology to manage large sets of data.33,301 Within these new roles, psychiatrists will also need to develop specific leadership and management skills to train and oversee a diverse cohort of providers while staying attuned to the fidelity and quality of the work.314 Psychiatrists will also need to become well versed in the use of technology to deliver care (see Part 5: Digital psychiatry). With telepsychiatry gaining popularity, psychiatrists will need to comply with professional practice standards and understand the unique issues regarding privacy and confidentiality in using these types of services.315 Psychiatrists need to learn how to work with a diverse set of providers and partners working at other sites. They will also need to learn how to build an alliance and conduct an efficient interview using technology.307 In addition to telepsychiatry, psychiatrists will need to familiarise themselves with an emerging market of online tools that patients can use to track symptoms or to participate in self directed therapy (such as cognitive behavioural therapy).316,317 Learning when and how to effectively integrate the evolving role of technology into clinical practice will be increasingly important.

Quality improvement and sustainable health care

In high income countries, it typically takes 15–20 years for knowledge generated by randomised controlled trials to be incorporated into standard care.300 This gap is plausibly even larger in LMICs, where fewer resources are available and infrastructure is less developed. To address this gap, growing emphasis has been placed on teaching of quality improvement and patient safety across disciplines.313,318 Clearly, psychiatrists need to do more than keep up to date with the literature; they must be trained in the skills necessary to adopt new evidence based practices. Development of skills in quality improvement supports lifelong learning and emphasises that psychiatry training is not limited to a single timeframe but rather a longitudinal course that continues over a person's lifetime.

Adapted from the manufacturing and airline industries, quality improvement is a systematic approach to goal setting, identification and testing of strategies intended to help to reach those goals, and measurement of performance or outcomes. Through iterative cycles of change, improved outcomes can be measured at the level of individual providers, hospital systems or care networks, and ultimately (and ideally) patients. Such improvements then inform future best practices for dissemination.

Along with developing skills in quality improvement, psychiatrists will need to learn how to track and report on quality measures within the context of value based care.319 Although many systems are pushing for concrete quality measures, so called recovery oriented care is redefining how the health-care community thinks about treatment goals, moving from simply the management of symptoms to the incorporation of patient goals for a meaningful and satisfying life, which might not translate easily into tangible, objective measures.320

Given the unsustainable cost of health care, psychiatrists will also need to develop a focus on resource management, or how to provide "the most effective, fair and sustainable use of finite resources".321 A movement for sustainable health care has focused attention towards disease prevention, patient empowerment and self care, lean service delivery, and the use of low carbon technologies in health care.321 In addition to developing skills in these areas, psychiatrists must continue to develop skills in mental health advocacy to shape and inform government policies in a way that respects the rights of individuals with mental illness while reducing stigma, discrimination, and barriers to treatment.322

Integration of a neuroscience perspective

Across medical specialties the focus for the past several centuries has been on understanding the physiology of the organs of specialisation. Because mental disorders emerge from disruptions in normal brain function, the "psychiatrist of the future will need to be a brain scientist".323 An understanding of normal anatomy and physiology of the brain as it relates to complex behaviours, thoughts, and emotions will be essential to understand the pathophysiology of the illnesses psychiatrists treat.

As the brain is several orders of magnitude more complex than any other organ in the body, psychiatry has faced greater challenges in the development of sophisticated biological explanations for those disorders relevant to the field. However, with new techniques, the understanding of brain function (and dysfunction) has expanded across multiple levels from genetics and epigenetics to neurotransmitters, second messenger systems, and neural circuitry.324 Neurobiology is rapidly expanding the understanding of psychiatric illnesses, such as depression, anxiety, and psychosis. Appreciation of the neuroscience underlying mental illness has now extended far beyond the caricature of a so called chemical imbalance. Additionally, psychodynamic concepts such as people's sense of self and identity, unconscious motivations, and defences and drives are increasingly understood in terms of cognitive neuroscience.323

With an increased emphasis on the underlying pathophysiology, future advances in neuroscience are likely to transform the way psychiatric illnesses are diagnosed and treated. Current initiatives such as the NIMH RDoC31 in the USA and the European Roadmap for Mental Health Research are redefining the way the mental health-care community conceptualises psychiatric illness, from existing classification systems with clusters of heterogeneous symptoms to coherent cognitive, behavioural, and biological dimensions that cut across diagnostic domains.325 Ideally, this approach will enhance understanding of the biological underpinnings of specific symptoms. In turn, psychiatrists might eventually be able to tailor treatments to individual patients on the basis of their own unique presentation and biological data, in an ideal world of precision or personalised medicine. For example, genetic data or other biological markers might ultimately guide treatment decisions so that psychiatrists can select the best treatment option for each individual patient, maximising the likelihood of therapeutic efficacy while minimising the risk of drug toxicity.326 Furthermore, the issue of prevention in psychiatry might finally be within reach, in addition to the focus on diagnosis and treatment.

For future scientific advances to reach their full potential and move beyond the laboratory to the bedside, all psychiatrists will need to have a strong foundation in neuroscience and genetics. Training in clinical neurology, as takes places routinely in some countries, would go some way to facilitate this. Psychiatrists will need the skill set to be able to understand the scientific literature and the implications of new research findings for their patients. They will need to understand when to order new tests and how to interpret them. In addition, psychiatrists will need to be able to effectively translate and communicate these findings to their patients in a meaningful way. For example, as the commercial availability of genetic testing expands, psychiatrists will increasingly need to be able to communicate with patients about the current benefits and limitations of this type of information as it applies to the field of psychiatry.327

Considerable efforts to expand neuroscience training within psychiatry are already underway in both the UK and the USA. The Royal College of Psychiatrists has received funding from the Gatsby Foundation and Wellcome Trust to substantially expand, modernise, and implement the clinical neuroscience aspect of its postgraduate curricula. The National Neuroscience Curriculum Initiative, supported by the NIMH, aims to "create, pilot, and disseminate a comprehensive set of shared resources...that will help to train psychiatrists to integrate a modern neuroscience perspective into every facet of their clinical work".328

Although many findings in neuroscience have not yet translated into new treatments, science can no longer be claimed to be clinically irrelevant for patients. At a minimum, modern scientific explanations offer patients an opportunity to understand their psychiatric symptoms in the context of a medical paradigm, which might be particularly therapeutic in the destigmatisation of mental illness.323

Social and cultural psychiatry and psychotherapy

As understanding of neuroscience has advanced, it has become increasingly clear that gene expression is shaped by experience and that the expression of mental illness often emerges from an interplay between underlying neurobiology and environmental triggers.329 With this in mind, psychiatry will need to continue to emphasise the importance of the patient's individual story and the social context and experience that they bring with them.

Social, religious, and cultural differences are widely recognised to influence how mental illness is defined, understood, and treated. With changing demographics among patient populations and the recent migration and refugee crisis seen throughout the world, training in cultural psychiatry remains particularly relevant.330 Expansion of access to care to distant sites through technology (such as telepsychiatry) will also require an appreciation and respect for local cultures, traditions, and belief systems.307

The use of evidence-based non-pharmacological treatments (such as psychoeducation and psychotherapy) will remain essential tools for treatment of mental illness within psychiatry. The physician's ability to form empathic, healing relationships with patients will remain a cornerstone in the practice of psychiatry. Although the field of psychiatry has historically labelled psycho pharmacology as biological treatments and psychotherapy as psycho logical treatments, research has shown that effective treatments, whether psychotherapy or medication, alter core brain regions331,332 and as such can all be considered biological treatments. As described by Insel and Quirion,323 "Just as we recognize the need for rehabilitation following the acute care for any serious injury or medical illness, ideally the psychiatrist will increasingly be part of a team that provides

culturally valid, psychosocial rehabilitation along with medications to help those with mental disorders to recover and return to a productive and satisfying life."

Given the training demands, psychiatrists cannot realistically be expected to become proficient in effectively delivering all the different types of psychotherapies available. However, psychiatrists will still need to know how to effectively engage and motivate patients and employ psychologically informed approaches for problem solving and safety planning. Although training in unique therapy modalities such as cognitive behavioural therapy or psychodynamic psychotherapy might be ideal, psychotherapy training in the future might focus more on common factors that cut across different therapies, such as the therapeutic alliance and empathic listening.[333] In addition, future research will probably lead to an increased understanding of how psychotherapies work and, more specifically, how different psychotherapy modalities might affect brain circuits in different conditions. Psychotherapy education might similarly evolve to focus on core elements drawn from a host of different therapeutic approaches based upon their mechanism of action. In translating these advances to practice, specific psychotherapy techniques might be taught and used a la carte and tailored to the patient's unique presentation and disease process.[334]

Physician wellbeing

A greater emphasis on physician wellbeing is needed within all disciplines of medicine, including psychiatry. The inherent demands of the career, along with increasing calls to do more with less, creates a high risk for burnout. Several studies have estimated burnout among residents in training to be more than 50%.[335] Burnout has been attributed to long work hours, financial difficulties, and fatigue, and is associated with a decline in performance, medical errors, and problems with professionalism.[335] Improvements in working conditions need to occur simultaneously with training in strategies that enhance resilience. Training programmes and employers are responsible for the development of cultures that support employees and promote a positive educational environment.
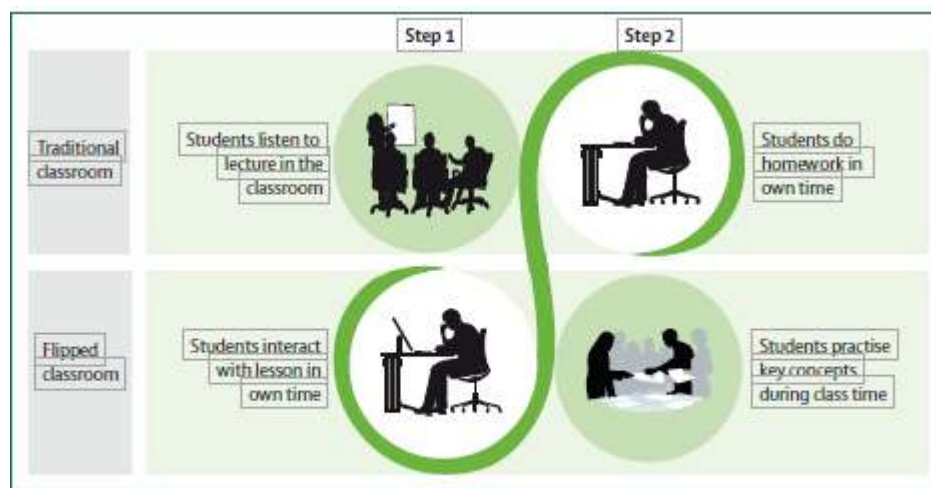
Figure 5: Flipped classroom
Images were licensed from Scusi (stock.adobe.com).

Approaches for training: not just what but how?

Preparation for the future of psychiatry requires consideration of not just what to teach psychiatrists, but how to teach it. An expanding body of literature on adult learning is moving the field of medical education away from lecture based methods and towards more interactive, skills based methods including simulation. Leveraging of technology through online learning platforms is not only helping to standardise training approaches but also enhancing dissemination and enabling

resource sharing and new opportunities for collaborations across programmes—both nationally and internationally. As new models of health care emerge, interdisciplinary and interprofessional training approaches will become increasingly important.

Active, adult-learning approaches

Medical education has historically consisted of classroom based lectures augmented with clinical training experiences. However, lectures are particularly ineffective at transmitting information: after a lecture, attendees only remember about 20% of the content.336 In addition, the ability to recall facts is not enough to practise medicine effectively—the complexity of medicine requires that students be able to understand, synthesise, and apply the information learned to clinical practice. Evidence suggests that participants are more likely to learn when they are actively involved in the manipulation of information as opposed to being passive recipients. In response, medical educators have tapped into adult learning theory and are transforming the classroom into interactive learning

sessions. Training in psychiatry should be based on principles of adult learning. Malcolm Knowles, a renowned adult educator, described how adult learners prefer learning to be self directed, experiential, relevant to the performance of their roles, and problem centred rather than subject centred.337

As seen across health-care disciplines, training the psychiatrist of the future will probably involve approaches referred to as blended learning and the inverted or flipped classroom (figure 5). In these approaches, learners typically participate in a self directed learning phase before coming to the classroom. This initial phase might include reading an article or watching a brief online video. The classroom is then reserved for more interactive learning approaches whereby trainees assimilate and apply what they have learned to reinforce learning. Such interactive learning might include role-play exercises or group discussion, among other techniques.

Another approach gaining popularity within medical education is problem based learning. In this approach, trainees reinforce their learning by working together to solve an open ended problem. Through problem based learning, trainees not only learn how to apply information they already know, but also learn to identify what additional information they need to know and how to access this information so that they can solve the problem. This approach also teaches collaboration and teamwork. The continuing expansion of medical knowledge makes teaching of all the content increasingly difficult, thus making the skill set developed by problem based learning all the more important for future psychiatrists.

Shared resources for training

Historically, medical programmes (including psychiatry training programmes) have each worked in isolation to develop and implement training curricula. With the expansion of medical knowledge, particularly neuro-science, it is becoming increasingly difficult for each programme to independently develop and cover all of the relevant material we hope future psychiatrists will know. In response, collaborations such as the National Neuroscience Curriculum Initiative are extending across programmes to develop shared open resources for teaching.303 Additional examples of open access resources for medical education include FOAM (Free Open Access Meducation), SlideShare, MedEdPORTAL, Khan Academy, and TED (Technology, Education and Design) Talks.

Advances in online platforms have also allowed for widespread dissemination of teaching through massive open online courses (MOOCs). MOOCs provide a variety of free online resources including lectures, videos, virtual patients, and quizzes on a variety of medical topics, and are expanding the

conceptualisation of teaching from a classroom with a few students to an online community with potentially over 100 000 participants. Through webinars, attendees can join in from remote sites and post questions in real time, providing another mechanism for sharing of expertise across programmes.338

These open access materials might be particularly relevant for smaller training programmes with few local resources and to expand higher education opportunities to LMICs. In a way, these types of resources might also provide a mechanism for the creation of more uniform teaching standards around the globe.

Integrated training

As much as psychiatry training programmes have historically worked in isolation from one another, they have also been disconnected from other disciplines and professions. As health-care models move towards more integrated care, psychiatrists will need to train in tandem with other teams of professionals including nurses, social workers, and internal medicine doctors. Interprofessional training can be particularly helpful to prepare physicians to work within a team and communicate with other providers.339 Students participating in interprofessional educational opportunities have reported an improved understanding of each team member's professional role and more open communication and collaboration.340

In addition to interprofessional training, growing emphasis has been placed on the role of the patient within medical education. Incorporation of patients (and carers) as educators within medical training is particularly important to teach the principles of recovery oriented care and combat negative stereotypes of patients with mental illness and substance use disorders.341

Uniform standards and outcome measures

Disciplines across medical education have seen a growing movement away from subjective outcome measures to more specific, objective performance measures. Within the USA, the Psychiatry Milestone Project has established an evaluation system to track trainee development across a series of observable behaviours.342 The programme recognises the developmental trajectory of learning, creates uniform standards, and allows programmes to track individual learner strengths and areas for improvement. In addition to the milestones, medical education is also defining outcome measures through entrustable professional activities (EPAs). Competencies are defined in terms of knowledge, skills, and attitudes, but they are also often vague and difficult to measure. By contrast, EPAs are clearly defined tasks that a trainee should eventually be entrusted to perform independently and without supervision. They often draw together several competencies and milestones.343 For example, an EPA in psychiatry might be that the resident is able to manage "the polypharmacy of treatment resistant patients".343 In being able to demonstrate this skill, the resident must also be able to demonstrate competency in medical knowledge, patient care, and practice based learning and improvement.343

Educational activities and evaluation strategies are also becoming more uniform through standardised patients, simulation, and virtual patients. Although multiple choice examinations continue to have a role in assessment of medical knowledge, there is growing recognition that this knowledge does not necessarily translate to the skills necessary to develop an alliance with a patient, conduct an efficient and thorough patient interview, and synthesise an appropriate formulation and treatment plan. Objective structured clinical examinations (OSCEs) are becoming more commonplace along with the use of standardised patients. The clinical skills evaluation required by the American Board of Psychiatry and Neurology for board eligibility requires that

residents in training pass several observed patient interviews and presentations with a board certified psychiatrist using a structured, standardised rating form. The Royal College of Psychiatrists requires postgraduate psychiatric trainees to pass the Clinical Assessment of Skills and Competencies examination—a 16-station OSCE that tests expertise in assessment, treatment, communication, and clinical knowledge—before they enter higher training.

Similar to expectations for practising psychiatrists, trainees will probably also be evaluated on the basis of specific quality performance indicators and compliance with evidence based standards. In addition, patient feedback will become increasingly important information for evaluation of learners, along with input from other members of the team (or 360° evaluations).

Although training standards are becoming more uniform for those programmes that fall under specific accreditation systems, psychiatry training remains variable around the world in terms of the length of training, specific training requirements, and how competency is defined and measured. Challenges for future psychiatry include striking a balance between standardised training and meeting the needs and realities of each local context. Regardless, worldwide shortages in psychiatry make recruitment to the field a key issue in the future of psychiatry training.

Continuing education

To train the psychiatrist of the future, the education mission must be recognised as not only being important for new generations of psychiatrists entering the field but also for practising psychiatrists who need to keep up to date with the latest advances. Training programmes must make sure that clinicians and supervisors teaching trainees are informed about new evidence based practices. As such, training programmes are often the vanguard pushing the field forwards. As described here, the task is not only to keep the field abreast of the latest developments in psychiatry but also within medical education. As such, teaching trainees how to teach will also be key to sustaining advances in the field.

Although medical education efforts continue to focus predominately on medical knowledge, individual accreditation and certification programmes (such as the American Board of Psychiatry and Neurology and the Royal College of Psychiatrists) now recognise the important role of quality improvement and systematic evaluation of practice habits in conjunction with new standards. In addition, increasing emphasis is placed on incorporation of peer and patient feedback into practice. A focus on enhancing skills for learning and for the adoption of new evidence based practices will have greater long term benefits than would an exclusive focus on existing medical knowledge and practices that are likely to evolve over time.

Conclusion

Training in psychiatry requires not only communication of existing knowledge to new learners, but also taking stock of where the field is headed and preparing learners for new developments that lie on the horizon. As the amount of content learners need to know expands, training programmes in psychiatry will increasingly need to leverage shared resources in addition to maintaining focus on the process of teaching and how best to engage learners. These issues are all pivotal as society moves to an age where knowledge of facts is less important than how new knowledge is accessed and deployed—ie, in an integrated, quality conscious, patient focused manner. Neuroscience research, technology, and health service delivery models will continue to evolve, making a commitment to lifelong learning and quality improvement particularly important.

Conclusion: end of the beginning, or beginning of the end?

As is evident from this Commission, psychiatry as a speciality faces major changes and challenges ahead. A revolution is on the way—and psychiatrists need to take hold of the flag and lead from the front.

Psychiatrists need to work with key stakeholders including policy makers and patients to help to plan, deliver, and ensure that no matter where in the world their patients live, they get the best services possible within the constraints of resources. Mental health professionals need to be well trained in integration of biological, psychological, social, and spiritual factors in the care that they provide. The contract between psychiatry and society needs to be renegotiated on a regular basis, so that clinicians and policy makers are truly representative of society, and are aware of the needs of patients and the strengths of the profession. Responsibilities and expectations lie on each side: both psychiatrists and the public must be fully cognisant of what each party can deliver. The ultimate aim is to provide services that are emotionally accessible, no stigmatising, and meet the needs of some of the most vulnerable individuals in society.

At present, this contract is implicit and not explicit. It has to be made transparent, and based on mutual expectations and psychiatry's role, responsibilities, and relationships not only with society as a whole, but also with stakeholders who include policy makers, other health-care and social care professionals, health service managers, service users, carers and families, the media, and politicians. This approach is needed to develop advocacy and support so that mental health services and mental health research receive the resources they need. Psychiatrists as physicians must primarily demonstrate the specific benefits they can bring to wider society and individual service users; at the same time, stakeholders in society, such as the state, other health professionals, service users, and the media, need to acknowledge their responsibility to support psychiatry and enable it to do its job effectively.

Psychiatrists are not only clinicians, but also members of the society in which they live and work. They therefore have dual roles as advocates for all patients in general, and for psychiatric patients in particular. Improved coordination and integration of care will benefit not only patients but society as a whole. Psychiatrists have to take on board the public mental health agenda with a greater consistency as part of a new professionalism. The challenges for psychiatry include resource pressures, as well as stigma and mistrust against patients, the subject, and the profession, which often seems to be marginalised, deprofessionalised, and undervalued. Therefore, educating psychiatrists, the public, and other stakeholders to develop and share examples of good practice is an important step. To achieve all of this, clinical leadership by psychiatrists is a must. With patients and health professionals, psychiatrists need to advocate for patients and the profession, being open and honest about the field's strengths and weaknesses.

Society, meanwhile, needs to acknowledge and meet the needs of psychiatric patients. Furthermore, social determinants of mental illness and the role of social discrimination in the causation of mental illness deserve study, but adequate financial resources need to be committed to carry out this research. Both advocacy against poverty and unemployment and equitable funding into neurosciences and social research is needed. Psychiatrists need to be skilled, competent, professional, and collaborative.

This World Psychiatric Association and Lancet Psychiatry Commission has set the scene for psychiatry in the first half of the 21st century. The future cannot be predicted, but it is important to remain professional as well as retain professional values that are fit for purpose and be prepared for major changes in health care and health-care systems. This is the beginning and not the end— perhaps it is not even the end of the beginning.

Contributors

All authors take responsibility for the views expressed in their individual sections. DB with the Editors of The Lancet Psychiatry conceived the Commission and coordinated its preparation. ALa helped to conduct focus groups and coordinated an online survey. DB wrote the introduction and conclusion. ATa, SPa, SPr, SS, JToro, and MRA contributed to the development of the overall structure, and selected and led the writing teams for their sections. Part 1: ATa, PU, RDA, MBF, JK, HFKC, and CS were involved in the initial determination of content and format for the entire section and each had responsibility for drafting specific sections. ATa, as lead author, collated and edited all material. Part 2: SPa, DK, AP, RMKN, and FKB contributed equally and participated in the planning, drafting, editing, and review of the section. Part 3: SPr drafted and edited this section as the lead author. MM, KJM, DM, and LDP all contributed to the overall conceptualisation of the section and the text, and participated in reviewing and revising the section. Part 4: Introduction and Conclusion: SS, NL. 200 years of mental health law in the UK: SS. The problem of mental health legislation and human rights: PB. The problem with mental health law based around risk: JTora. The problem of coercion in mental health law: TE. Mental health legislation in the next 10 years—can one size fit all?: SD. What should mental health legislation ideally cover?: SPa. Part 5: JToro, TW, HC, MK, JF, J-PO, ALi, and MB contributed equally and partook in the formulation, literature search, planning, drafting, writing, editing, and review of the section. Part 6: MRA was the lead author on this section and played a major role in drafting the original manuscript. MRA, ALa, KFL, HE, GK, AV, and MJT all had substantial input into the overall conceptualisation of the section, and participated in reviewing and revising the section. All authors approved the final manuscript.

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