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The World Psychiatric Association (WPA)

The WPA is an association of psychiatric societies aimed to increase knowledge and skills necessary for work in the field of mental health and the care for the mentally ill. Its member societies are presently 119, spanning 103 different countries and representing more than 140,000 psychiatrists. The WPA organizes the World Congress of Psychiatry every three years. It also organizes international and regional congresses and meetings, and thematic conferences. It has 51 scientific sections, aimed to disseminate information and promote collaborative work in specific domains of psychiatry. It has produced recently several educational programmes and series of books. It has developed ethical guidelines for psychiatric practice, including the Madrid Declaration (1996). Further information on the WPA can be found in the website www.wpanet.org.

WPA Secretariat

International Center for Mental Health, Mount Sinai School of Medicine, New York University, Fifth Avenue and 100th Street, New York, NY 10029-6574, USA.
Phone: +17183345094; Fax: +17183345096;
E-mail: wpa@dti.net.

World Psychiatry

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Office of the Editor – Department of Psychiatry, University of Naples SUN, Largo Madonna delle Grazie, 80138 Naples, Italy. Phone: +390815666502; Fax: +390815666523; E-mail: majmario@tin.it.

EDITORIAL

Partnership for mental health: the 12th World Congress of Psychiatry

JUAN JOSÉ LÓPEZ-IBOR JR.
President,
World Psychiatric Association
President,
12th World Congress
of Psychiatry

The succession of the themes and main contributions of World Congresses of Psychiatry reflects a continuous trend in the development of the WPA and of psychiatry itself. The first World Congress (Paris, 1950) was the consequence of an effort to bring together different traditions of psychiatry torn apart by the Second World War and the events which led to it. The next World Congresses (Zurich, 1957; Montreal, 1961; Madrid, 1966) were the expression of the trend to unify different schools of thought in psychiatry. The four next ones (Mexico City, 1972; Hawaii, 1977; Vienna, 1983; Athens, 1989) belong to the hardest period of the Association, faced with human right issues and with the abuse of psychiatry for political purposes in a cold war confrontation. The WPA came out of this period highly mature and strongly consolidated. The Congress in Rio de Janeiro (1993) was the opportunity to expand educational activities and to increase the importance of Latin American psychiatry in world psychiatry. "One World, One Language" was the motto of the 1996 World Congress in Madrid, which took advantage of the developments of nosology and the worldwide acceptance of a common language for diagnosis. In the Hamburg Congress (1999), the presence of non-psychiatric organizations was extremely significant. Psychiatry opened its doors to other scientists and professionals, to consumers, to politicians, to the media. New strategies were implemented in a profound manner. The educational program to fight the stigma of schizophrenia became an institutional program of the WPA, and its motto "Schizophrenia: open the doors" became the new principle of the Association and the expression of new goals for psychiatry and new roles for psychiatrists.

Yokohama 2002 will be the first World Congress of Psychiatry in Asia. Following the trends briefly mentioned, a logical theme was "Partnership for mental health". Two messages are included in it. The first is partnership. Today it is impossible to advance alone. Once a common language for psychiatry exists, there is a need of building partnership between science and practice, between East and West, North and South, developing and developed countries, because even in developed countries there are population groups with lack of opportunities or resources.

Furthermore, partnership should be increased among all parties concerned with mental diseases. At the end, as mental diseases are everywhere, to designate a limited number of partners is a way of isolating and stigmatizing those who suffer from them, their relatives and those caring for them.

The world is becoming increasingly complicated and difficult, but also provides increasing opportunities. One of them is the deep emerging change in the relationships between citizens and their governments. In a smooth movement, a new social contract, to use Rousseau's words, is being born. The mutual responsibilities of individuals and the political administration are changing. These changes are parallel to those we are witnessing in our profession. Informed consent is not a medical issue, it is part of modern cultures. The emphasis on individual rights, autonomy and equity of the Madrid Declaration is not a psychiatric concern, it is the new expression of the emphasis that modern world gives, or should give, to human dignity.

The second message is mental health. Psychiatry cannot exist without a deep commitment to mental health. Psychiatry cannot continue to fight against adverse social conditions or phenomena which help to appear, sustain or aggravate mental diseases. It should advocate, with scientific evidence, for changes in the environment. This is a well known fact, and in the past psychiatry has tried to go along this line. Unfortunately very often with a wrong strategy: to fall into political temptations enhances a certain sense of omnipotence sometimes present in psychiatrists. Today, the right strategy requests that psychiatry build partnerships in order to make the world change, and to give better opportunities to those who suffer from mental diseases or are vulnerable to them.

Again, a World Congress of Psychiatry is going to be a milestone in the development of our profession and of the WPA. At this point, we have to thank all of the partners who share the goals and the responsibilities of promoting mental health and a better life for those who suffer from mental diseases.

Dysfunctional connectivity in schizophrenia

KARL J. FRISTON

Wellcome Department of Imaging Neuroscience, Institute of Neurology, Queen Square, London WC1N 3BG, UK

Our understanding of brain function has developed considerably since the advent of cognitive neuroscience and functional neuroimaging. Apparently, there are two central principles that functional brain architectures conform to: functional specialisation and functional integration. The former posits that brain systems are specialised for various perceptual and cognitive functions, and the latter emphasises interactions among these specialised systems. This integration is mediated by the functional equivalent of anatomical connections, i.e. effective connectivity (defined as the influence one neuronal system exerts over another). The notion of effective connectivity engendered the disconnection hypothesis, which represented an attempt to understand schizophrenia in mechanistic terms. This paper reviews the disconnection hypothesis and its implications for how one might use the powerful tools that are emerging from functional neuroimaging and genomics, to pinpoint the mechanisms that might cause schizophrenia.

WHAT SORT OF DISCONNECTION SYNDROME?

The idea that dysfunctional integration underlies schizophrenia is as old as its name, coined by Bleuler (1) to denote the disintegration of psychic processes. The disconnection hypothesis considered here states that schizophrenia can be understood in cognitive terms, and in terms of pathophysiology, as a failure of functional integration within the brain. Functional integration refers to the interactions of functionally specialised systems (i.e., populations of neurons, cortical areas and sub-areas), that are required for adaptive sensorimotor integration, perceptual synthesis and cognition. Functional integration is mediated by the influence that the dynamics or activity of one neuronal system exerts over another and therefore rests on the connections among them. The pattern of connectivity is, in turn, a function of epigenetic activity and experience-dependent plasticity. The idea, developed below, is that the pathology of schizophrenia targets the modulation, facilitation or consolidation of changes in connection strength. This is distinct from an abnormality of plasticity per se and highlights aberrant regulation of where and when synaptic plasticity can occur. This dynamic regulation can be attributed, in part, to ascending modulatory neurotransmitter systems, like the dopaminergic system.

The notion that psychosis can be explained by a pathology of extrinsic connections (cortico-cortical and cortico-subcortical connections that constitute white matter tracts) can be attributed to Wernicke, who referred to disruptions of these 'organs of connection'. This implies an anatomical disconnection. This is not the sort of disconnection syndrome proposed for schizophrenia. In schizophrenia, the disconnection is thought of as explicitly functional, not anatomical (2). More precisely, the disconnection is in terms of effective connectivity (3) as opposed to anatomical connectivity. The abnormal interactions among neuronal populations will clearly have infrastructural correlates, but these are likely to be expressed at the level of synaptic specialisations, cellular morphology and cytoarchitectonics, not necessarily at the level of white matter fasciculi.

DYSFUNCTIONAL INTEGRATION OR SPECIALISATION?

It is worthwhile considering disconnection in relation to other formulations. The alternative is that schizophrenia could be explained by regionally specific pathophysiology in one or more neuronal systems. In other words, impaired functional specialisation as opposed to dysfunctional integration. There is an important distinction here between the pathological interaction of two cortical areas and the otherwise normal interaction of two pathological areas.

The distinction between a regionally specific insult to the brain and aberrant interactions is fundamental. A regionally specific pathology, such as stroke or a tumour, is a sufficient explanation for the cognitive or sensorimotor deficits of some patients. However, with the exception

of psychomotor poverty syndromes, these lesion deficit models are not generally useful in schizophrenia. In terms of neuropsychology, many of the experiential symptoms and positive signs of schizophrenia can only be explained by considering one cognitive process in relation to another. For example, hallucinations can be construed as a misattribution of internally generated speech to an outside agency (4). This speaks to a failure to integrate the attribution of agency and inner speech. In other words, the symptoms and signs of schizophrenia do not generally represent a single deficit, but can be seen as resulting from the abnormal integration of two or more processes. In a similar vein, the disconnection hypothesis suggests that the neuronal dynamics underlying these symptoms are not due to a single regionally specific pathophysiology, but are expressed when two or more regions interact. This is not to say that the regions involved will not show region-specific abnormalities, but these abnormalities are secondary to a more pervasive problem.

THE DISCONNECTION HYPOTHESIS

Connections and plasticity

The key assumption here is that the pathophysiology of schizophrenia is expressed in terms of abnormal connections. Because synaptic connections are in a continual state of flux, this implies an abnormality of changes in connectivity, i.e. abnormal plasticity. The disconnection hypothesis is therefore, implicitly, a dysplastic hypothesis (5). The challenge is to identify the particular form of dysplasia that might underlie schizophrenia.

To understand functional disconnection, in its broadest sense, one has to appreciate the diversity of mechanisms that are responsible for establishing connections in the normal brain. These result from an interplay between genetic, epigenetic and activity or experience-dependent mechanisms. The emphasis in utero is clearly on epigenetic mechanisms, such as the interaction between the spatiotemporal topography of the developing cortical sheet, cell migration, gene expression and the mediating role of gene-gene interactions and gene products such as cell adhesion molecules (CAMs). Following birth, the broad schema of connections is progressively refined and remodelled with a greater emphasis on activity- and use-dependent plasticity. These changes endure into adulthood, with ongoing reorganisation and experience-dependent plasticity that subserves behavioural adaptation and learning throughout life. In summary, there are two basic determinants of connectivity in the brain: a) structural plasticity, reflecting the interactions between the molecular biology of gene expression, cell migration and neurogenesis in the developing brain (these processes are expressions of plasticity at the cellular level and are usually neurodevelopmental in nature); b) synaptic plasticity, i.e., activity-dependent modelling of the pattern and strength of synaptic connections (this plasticity involves changes in the form, expression and function of synapses that endure throughout life; it subserves perceptual and procedural learning and memory).

Structural or synaptic plasticity?

Schizophrenia is a disorder that evidences a degree of specificity, in terms of functional, anatomical and neurotransmitter systems. This specificity could be explained by selective damage to cellular or molecular systems mediating either structural or synaptic plasticity. However, there are two simple facts that point to synaptic plasticity as the most likely target in schizophrenia (Figure 1). The first is that schizophrenic symptoms can be produced by psychomimetic drugs (6). This tells us immediately that the locus of abnormality is likely to be synaptic as opposed to cellular. This is because neurotransmitters act at synapses, not at the level of neurogenesis during development. Secondly, the fact that schizophrenia is expressed symptomatically in adulthood points to abnormal modulation of experience-dependent synaptic plasticity, as distinct from the induction and maintenance of connections though epigenetic mechanisms or indeed activity-dependent plasticity in utero. This does not preclude neurodevelopmental explanations for schizophrenia (7-9), but suggests that the mechanistic endpoint, of any putative aetiology, involves processes that are expressed post-developmentally.

Short vs. long-term synaptic plasticity

Synaptic plasticity may be transient (e.g., short-term potentiation, STP or short-term depression, STD) or enduring (e.g., long-term potentiation, LTP, with early and late phases). In contrast to the short-term plasticity, long-term changes rely on protein synthesis, synaptic remodelling and infrastructural changes in cell processes (e.g., terminal arbours or dendritic spines [10]). These may be induced by local dynamics and may be influenced by other (modulatory) neurotransmitter systems (e.g., 11,12). It is

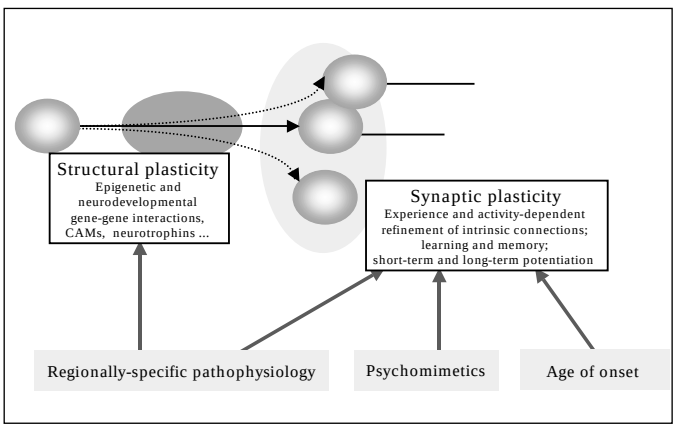

Figure 1 Processes determining connectivity

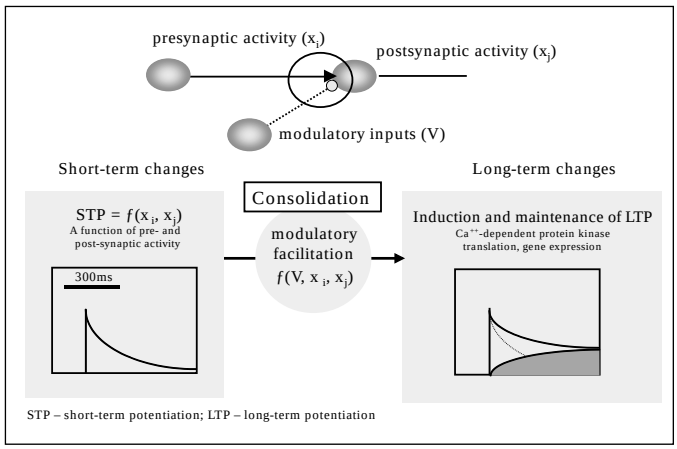

Figure 2 Synaptic plasticity: activity-dependent processes

useful to regard long-term changes as a consolidation of short-term changes (Figure 2).

From the perspective of the disconnection hypothesis, it is of no surprise that the neurotransmitter systems implicated in schizophrenia are exactly those that are responsible for modulating short-term changes in synaptic plasticity and their consolidation. The important role of N-methyl-D-aspartate (NMDA) glutamate receptors in conferring voltage sensitivity on post-synaptic responses (short-term) and their necessary role in the induction of LTP (long-term) sit comfortably with glutaminergic theories of schizophrenic pathology (13,14). Voltage-sensitivity and implicit nonlinear effects have been elaborated, at a systems level, in terms of 'contextual co-ordination' (15). Late developmental changes in the expression of glutamate receptor subunits and concomitant changes in synaptic function provide a potentially exciting focus for molecular and cellular biology in schizophrenia research (16). The role of the ascending classical neuromodulatory transmitter systems such as dopamine (DA) and acetylcholine (ACh) in modulating short-term changes in efficacy at a synaptic and cell assembly level is well known (e.g., 17,18). There are several compelling accounts of how abnormal DA modulation might translate in cognitive terms (e.g., 19,20). However, these ascending systems also have a crucial role in modulating long-term associative plasticity, that may be even more important in elaborating and maintaining adaptive patterns of connections.

Synaptic consolidation and schizophrenia

There is considerable evidence to suggest that monoaminergic - DA, norepinephrine (NE) and serotonin (5HT) - and ACh neurotransmission facilitates either the induction or maintenance of long-term changes in synaptic strength. The three most compelling lines of evidence are modulation of a) experience-dependent changes in synaptic efficacy, b) behavioural plasticity and c) experimentally induced LTP. One neurodevelopmental example is the role of ACh in facilitating experience-dependent organisation of connections in striate cortex (11,21). Further evidence implicating ACh in the modulation of plasticity comes from the electrophysiological correlates of learning (22). These findings suggest that ACh is necessary for, and can modulate, associative plasticity in a learning-related context. In short, the ascending neurotransmitter systems can exert a regulatory control over the translation of short- into long-term changes in connections that are associated with learning and memory.

From the perspective of theoretical neurobiology, in particular neuronal selection and reinforcement learning, this modulatory effect has profound implications for the way that adaptive connections can be established. Experimental evidence for reinforcement-specific responses in these systems is clear cut: for example, the experiments of Ljungberg et al (23) have demonstrated phasic discharges in the cells of origin of the dopaminergic system that are selective for reinforcing stimuli. Other models include intracranial self-stimulation and studies of emotional learning in animals (24-26).

Many of the disintegrative and autistic aspects of schizophrenic symptomatology can be viewed as a failure of emotional and social learning that is secondary to a fundamental failure of learning (27). However, it is more compelling to ask 'what would be the consequences of abnormal learning in adulthood?' Synaptic plasticity underlies both reinforcement learning in the context of emotional learning and representational learning involved in perceptual synthesis. The former learning difficulties could manifest as maladaptive responses to social contingencies, resembling those caused by inappropriate (disorganisation syndromes) or absent (psychomotor poverty) reinforcement. In terms of perceptual learning, the construction of high-order representations, that are used to explain sensory input, would be impoverished or inappropriate (reality distortion). The highest-order representations are probably the representations of the mental state of others, providing a nice connection with 'theory of mind' in schizophrenia (4). It is pleasing that a single mechanism can encompass the main aspects or sub-syndromes that constitute schizophrenia.

In conclusion, consolidation or reinforcement of synaptic plasticity underpins learning and must represent a clear candidate for pathophysiology in schizophrenia. This is important because recent advances in understanding the molecular biology of post-translational changes at the synapse that lead to long-term consolidation (e.g., 28,29) may afford much more detailed mechanistic hypotheses about schizophrenia.

IMPLICATIONS

Explanatory power and predictions

Tables 1 and 2 list some implications and predictions of the disconnection hypothesis that lend it explanatory

power. Perhaps the most important is that it links anatomy, pathophysiology and neuropsychology in terms of specific systems. If the pathophysiology lies in synaptic plasticity, then its expression will be restricted to those anatomical systems with high plastic potential. These are exactly the limbic and paralimbic/associational systems in which abnormalities have been found in schizophrenia. Furthermore, the neurotransmitters targeted by psychomimetics or antipsychotics should be those implicated in synaptic plasticity, as they are. Finally, the neuropsychology of schizophrenia should be reducible to a failure of perceptual, social or emotional learning, which it can.

The practical importance of hypotheses like the disconnection hypothesis is that they focus research resources more efficiently. In my own field (functional neuroimaging), the implications of dysfunctional connectivity are clear. We must develop mathematical and empirical models of connectivity that can be applied in the context of schizophrenia research. In functional genomics, the issues are summarised nicely by Daniel Weinberger in the first issue of World Psychiatry: "Genes do not encode hallucinations, delusions or thought disorganisation per se. Genes determine the structure of simple molecules in cells, usually proteins, and these proteins affect how cells process and respond to stimuli. A variation in the sequence of a gene... could lead to changes in the interactions that cell has with other cells, in the connections and cell assemblies that develop, and in how such assemblies and networks operate as functional systems" (30). The scope of enquiry, developmental cell assemblies vs. dynamic cell assemblies, cellular vs. synaptic processes, short vs. long term plasticity, is clearly constrained by a number of key questions posed by the disconnection perspective.

Outstanding questions

Two key questions are depicted schematically in Figures 3 and 4. The first pertains to whether schizophrenic pathophysiology involves short- or long-term synaptic plasticity. For example, it may be the case that abnormalities in DA or glutaminergic function, or indeed the interaction between them (31), cause abnormalities in STP or LTP. Knowing which mechanism is affected speaks to the behavioural paradigms one might employ. If STP were affected, then one would look for impaired working memory, attentional deficits and other abnormalities of high-order perceptual synthesis. These psychological deficits would be potentially important as surrogates for phenotyping subjects in genetic studies or as correlates of markers of DA or glutaminergic function. Conversely, if LTP were implicated, one might look to high-order conditioning paradigms and the psychophysics of perceptual learning (e.g., priming). The situation is, of course, complicated by the fact that abnormalities in LTP may be secondary to

Table 1 Explanatory power of the disconnection hypothesis of schizophrenia

• Explicit model for the necessary and conjoint influence of genetic and environmental factors *i.e.* Abnormal molecular biology of experience-dependent plasticity associated with emotional learning
• Pathophysiology of processes that are expressed in the developed brain - Psychomimetic drugs can induce psychotic symptoms - Schizophrenia is a disorder of adulthood
• Anatomical specificity – pathophysiology restricted to systems with a high plastic potential (These include the medial temporal lobe [amygdala, hippocampus, parahippocampal gyrus] and the prefrontal cortex) - Systems with a role in learning and memory - Systems implicated in schizophrenia by imaging, cytoarchitectonic and histochemical studies
• Neurochemical specificity - Posits a mechanistic role for the ascending neurotransmitter systems implicated in schizophrenia
• Disintegrative aspects of schizophrenic neuropsychology - Impaired perceptual learning (Reality distortion) - Impaired social learning (Disorganisation) - Impaired precedural learning (Psychomotor poverty)

Table 2 Predictions of the disconnection hypothesis of schizophrenia

• Abnormal functional integration, as measured by effective connectivity and coherence in neuroimaging
• Impairment on tasks that emphasise temporal succession, reinforcement and new learning, perceptual or procedural
• Demonstrable molecular abnormality in terms of how synaptic connections are consolidated during learning
• Markers of functional disconnection seen only in systems that have high plastic potential *i.e.* Systems that are involved in learning and memory

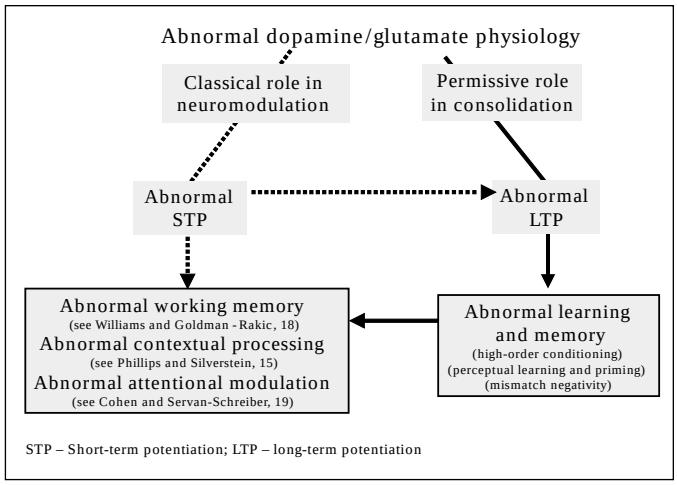

Figure 3 Short *vs.* long-term (modulation *vs.* consolidation)

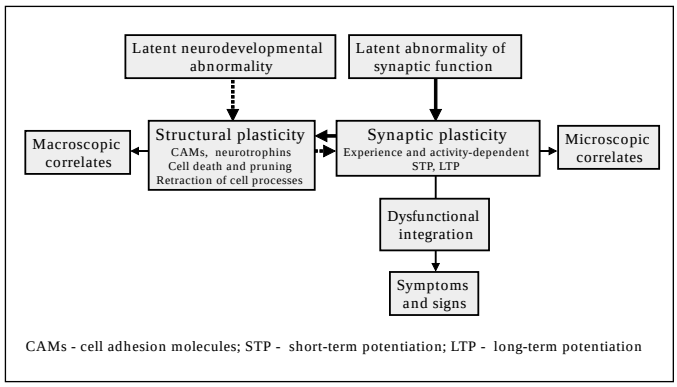

Figure 4 Structural *vs.* synaptic (neurodevelopmental *vs.* functional)

abnormal STP, and learning difficulties may be caused, not by a failure of consolidation, but by abnormalities in the short-term changes consolidated (dashed line in Figure 3). The bias presented in this paper is towards a consolidation problem in schizophrenia, where working memory and attentional deficits are seen as secondary to impaired learning. There are several lines of argument in favour of this, including the fact that the time course of antipsychotic action parallels the disappearance of experimentally induced LTP in animal models.

An equally fundamental distinction is depicted in Figure 4. This is the distinction between neurodevelopmental accounts of schizophrenia, that invoke abnormal structural plasticity in development to explain disrupted synaptic connections, and those that posit molecular abnormalities in synaptic plasticity per se. The developmental perspective has been clearly articulated (see Robin Murray's article in a forthcoming issue of World Psychiatry). An explicit neurodevelopmental model for synaptic disconnection can be found in McGlashan and Hoffman (32). If schizophrenia is developmental, then focus on developmental markers of abnormal structural plasticity - e.g., magnetic resonance imaging (MRI) morphometry (33) - will be much more useful in genetic studies than those of synaptic plasticity. Furthermore, appropriate animal models of schizophrenia may be found in developmental anatomy. Conversely, if the mechanisms causing schizophrenic symptoms are expressed at the level of synaptic plasticity, markers of cellular plasticity will segregate less with the genotype than those of synaptic function. In this case, studying molecular mechanisms of synaptic consolidation in adults seems more sensible. Both etiological perspectives can explain the same outcomes (dashed and solid lines in Figure 4), but they differ profoundly in terms of suggesting what should be studied.

The developmental view is appealing, but framing schizophrenia as something like 'late-onset autism' does not explain how developmental abnormalities in anatomical connections, at the structural level, cause symptoms and dysfunctional integration mediated by synapses (or indeed how psychomimetics and antipsychotics work) (horizontal arrow in Figure 4). This explanation may not be easy for the neurodevelopmental hypothesis, because the developing brain is notoriously resistant to structural insults. However, having made a clear distinction between structural and synaptic plasticity, it should be noted that, although they are often viewed as unrelated, "they seem to be part of a common process that involves a CaMKII-dependent enhancement of synaptic strength" (29). In conclusion, although the bias of this paper is in favour of synaptic abnormalities (Figure 2), a resolution of the developmental issues is clearly important for directing future research.

CONCLUSION

This article has reviewed the disconnection hypothesis of schizophrenia and has presented a mechanistic account of how dysfunctional integration among neuronal systems might arise. The particular hypothesis put forward is that the pathophysiology of schizophrenia is expressed at the level of synaptic plasticity, specifically the consolidation of associative plasticity in those brain systems responsible for emotional learning and memory. This modulation is mediated by ascending neurotransmitter systems that a) have been implicated in schizophrenia and b) are known to be involved in consolidating synaptic plasticity. By reference to theoretical neurobiology, this pathophysiology can be understood as disrupting the reinforcement of adaptive behaviour in a way that is consistent with the disintegrative aspects of schizophrenic neuropsychology.

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SPECIAL ARTICLE

Attachment, information processing, and psychiatric disorder

PATRICIA M. CRITTENDEN

Family Relations Institute,
Miami,
FL 33176, USA

Attachment theory is a theory about protection from danger and the need to find a reproductive partner (1-4). As a theory of psychopathology, it is concerned with the effects of exposure to danger and the failure to find a satisfying reproductive relationship on mental and behavioral functioning. When these effects extend far beyond the threatening circumstances themselves, they can be considered psychopathological. Attachment theory is also a developmental theory. Thus, unlike other theories of psychological disorder, it traces individuals' developmental pathways from infancy to adulthood. Indeed, most of the work on attachment has been done in infancy and early childhood, thus providing a sound developmental base from which to understand later pathology. In addition, the developmental emphasis permits a focus on the interactive outcomes of maturational processes, individual differences in genetic inheritance, and individual differences in experience. The outcomes are individuals' strategies for protecting the self and progeny and for seeking a reproductive partner. These strategies, i.e., the patterns of attachment, provide both a description of interpersonal behavior and a functional system for diagnosing psychopathology. This perspective offers several advantages for the understanding of psychopathology.

INNATE ORGANIZING MOTIVATIONS

Attachment theory proposes that humans have an innate propensity to organize self-protectively and, after puberty, sexually. In infancy and childhood, attachment figures both provide protection and also teach children how to make meaning of the information available to their minds. After puberty, the protective function is integrated with the reproductive function and both are directed to a sexual partner. This relationship produces the next generation of children to whom parents will be protective attachment figures. In that role, they act on their own understanding of what is dangerous and safe, thus creating the environment in which their children learn to make self-relevant meanings. These meanings, however, reflect the child's experience and, therefore, they may not be the same meanings and strategies used by the parents. Postulating the role of protection and reproduction in organizing human behavior permits attachment theorists to interpret psychopathological behavior as maladaptive attempts to protect the self or find a reproductive partner.

DEVELOPMENTAL PSYCHOPATHOLOGY

Attachment theory presumes that the same developmental processes regulate both normative and disordered development. This permits the separate bodies of empirical research to be brought together to inform one another (5). The processes of primary interest are: a) the ways in which the brain transforms sensory stimuli to generate meaningful representations of the relation of self to context, b) the ways in which the mind regulates the application of these representations to the organization of behavior, and c) the organizations of self-protective and reproductive behavior.

The brain and transformations

Universal genetic factors, in the context of environmental conditions, regulate maturation. As the brain matures, it becomes capable to transform incoming sensory stimuli in increasingly sophisticated ways. These permit increasingly complex representation of the relations between past and future. That is, the only information that we have is information about the past, whereas the only information that we need is information about the future. Information about the past is transformed to yield representations of the probable relation of self to context in the future.

The simplest transformations respond to two features of stimuli: the temporal order in which stimulation is received and its intensity. The former yields information about causation and operates according to the principles of behavioral learning theory. Disorders tied to this transformation include disorders of inhibition

and compulsion. The transformation based on intensity generates feelings and physiological arousal; associative learning modifies the eliciting stimuli. The anxiety disorders are associated with too great and too generalized arousal. These two transformations can be made at or before birth.

More complex representations are generated as the brain matures; by processing the initial transformation through additional parts of the brain, additional meanings are generated. For example, infants can exclude some information about the past from further processing, thus distorting the representation of the probable future. Young children can distort the retained information while concurrently excluding some information from representation; the effect is greater distortion of representation than was possible in infancy. By the school years, children can falsify information, that is, they can represent the opposite of what is expected and, by acting on that representation, they can mislead others about their future behavior. These sorts of transformations enable individuals to regulate the probability with which they identify danger. The more an individual feels threatened by imminent and severe danger, the less error can be tolerated; consequently, distorting transformations usually increase the probability of over-identifying danger.

The mind and representation

The transformations yield dispositional representations, i.e., patterns of neurological activity that dispose individuals to act in some manner (6). Depending upon whether the representation is based on temporal order or intensity of stimulation, individuals are disposed to behave based on expected consequences or on feelings. The various representations that are generated may dispose an individual to incompatible responses. In that case, the mind must select which response to enact or construct a new response. This occurs in the cortex, the last portion of the brain to mature fully.

When the estimation of danger is very high, individuals are propelled into action on the basis of the precortical representation that signaled threat most clearly. This representation is likely to be an over-estimation of threat, and because it has been processed only precortically, the error cannot be discerned or corrected. Thus, behavior will often be maladaptive. When this happens sufficiently often, it is deemed psychopathological. Because of cortical immaturity and greater vulnerability to danger, children are at particular risk for over-attributions of danger and maladaptive responses. Development promotes the correction of these errors, except in cases of severe, ongoing, and deceptive danger. In these cases, the pervasive and ambiguous nature of threat increases the probability of incompletely processed information regulating behavior. Together with increasingly sophisticated precortical distortions of representation, the outcome in adolescence or early adulthood can be very complexly distorted patterns of behavior.

Self-protective organizations of behavior

Ainsworth's classic work identified three basic patterns of attachment (7). Type A individuals tend to omit feelings from processing and to act in accordance with expected consequences. Type C individuals do the opposite: they act in accordance with their feelings with little attention to consequences. Both tend to over-estimate the probability of danger and act in an unnecessarily self-protective manner. Type B individuals use both sources of information; they have balanced mental processes and adaptive behavior. Crittenden (8) has expanded the array of strategies to include compulsive Type A strategies and obsessive Type C strategies. These reflect commonly recognized forms of maladaptive behavior. They differ from symptom-based diagnoses in that strategies are seen as a functional attempt to reduce danger as represented, albeit erroneously, by the individual.

DEVELOPMENTAL PATHWAYS

Attachment theory addresses the process by which normal development differentiates into a wide range of human displays, including those considered psychopathological. A particular advantage of this perspective is that the most serious disorders of adolescence and adulthood, the personality disorders and psychoses, can be seen as the cumulative effect of a series of developmental transformations, each of which adds distortion to previously distorted functioning. That is, given numerous branching points in development, the cumulative effect of always selecting the distorted pathway leading away from balance and normality will be an array of serious disorders that, when viewed only in adulthood, appear incomprehensible. Following the behavior forward from infancy renders the accretion of distortion comprehensible, albeit, in a person-specific manner.

Representation as a mediating variable

Recognizing that behavior results from the process of mental representation helps to explain why individuals exposed to similar dangers can have different outcomes and why genetically identical individuals exposed to different threats have different outcomes. The representational process, rather than genes or experience directly, organizes individuals' behavior. This suggests the need to differentiate between contributing, necessary, and sufficient conditions for psychopathology. There is little evidence that genes alone are sufficient to cause mental illness, nor is it evident that they are an essential condition. To the contrary, genetic influence more often functions as a contributing factor. Neither, however, does experience

determine outcomes. Attachment theory, through its emphasis on individual representation of events, suggests a process by which similar circumstances could yield different outcomes. Attachment researchers have developed a series of age-specific assessments to permit researchers and clinicians to assess individuals' representations.

PREVENTION

By tracing developmental pathways indicative of progressive risk, attachment theory fosters prevention. If risk were treated early on, the number of adolescents and adults who would experience the late-forming and most severe psychiatric conditions, i.e., personality disorders and psychoses, might be reduced. Further, attachment theory suggests what sorts of experiences might lead to risk for psychopathology.

DISTORTION, STRATEGY, AND MEANING

When mental transformation and representation are viewed developmentally and as self-protective and reproductive strategies, much of the incomprehensible behavior of very disturbed adolescents and adults becomes meaningful. For example, delusional behavior can be viewed as a series of small distortions that culminate in an inscrutable fantasy. Initially, intense sensory stimulation yields physiological arousal. With repetition, this effect can be augmented by increasing attention to more subtle elicitors, including especially somatic feelings. Recalling the experience can then recreate the physiological state in the absence of external stimuli. Next, by imagining possible events that didn't actually happen, arousal can be generated and then maintained or augmented by attentional processes. Finally, imagining impossible events can yield a delusional reality that feels somatically exactly like reality. At all steps, arousal functions to elicit the motivating affective state that the individual feels is necessary for safety. Identifying the process by which layers of distortion are added, in a developmental sequence tied to brain maturation, has several advantages. It makes maladaptive behavior meaningful; this will help therapists to communicate with patients. It indicates developmentally earlier points that might be open to intervention and prevention. And it suggests new approaches to treatment, particularly treatments that address the strategic function of the distorted process. For example, in the case of delusions, treatment might address both the somatic arousal process and also the subjective need to identify every possible source of danger.

CULTURE AND PSYCHOPATHOLOGY

The emphasis on the role of experienced danger permits interpretation of cultural differences in distributions of self-protective (attachment) strategies and prevalence of psychiatric disorders. Because different cultural groups have been subjected to different histories of danger as well as different current exposure to danger, differences in distributions of strategies and disorders tied to strategy would be expected (8).

OPPOSITE STRATEGIES; OPPOSITE TREATMENTS

In this approach, Type A and C are psychological opposites. The transformations that lead to Type A are based on a different characteristic of the incoming signal and are processed through different parts of the brain than are the transformations associated with Type C. Because they result from opposite processes, they are likely to be corrected by opposite forms of treatment. For example, a Type A individual might benefit from techniques that focused on feeling and somatic representation of feeling, whereas this treatment might increase somatic symptoms of stress in a Type C individual. Similarly, a Type C individual might benefit from a behavioral approach emphasizing self-relevant contingencies, whereas this might expand the repertoire of compulsive behavior of a Type A person.

VALIDITY AND DIRECTIONS FOR FURTHER RESEARCH

Published studies of infants and preschool-aged children suggest the validity of attachment theory and its relation to risk for psychiatric disorder. Unfortunately, there is little published work using this model with adolescents and adults.

On the other hand, it is only recently that a suitable tool has been developed to test hypotheses relating adults' self-protective attachment strategies and psychiatric disorder. The Adult Attachment Interview (AAI, 9) has been modified to permit analysis of a wide range of distortions of information processing (10,11). Unpublished dissertation research using the modified AAI suggests that these distortions are associated differentially with several types of psychiatric disorder. In addition, these studies suggest that disorders with different symptoms may sometimes be functionally similar at the levels of distorting transformations and functional self-protective strategy. If this is the case, treatment might be improved by clustering patients on the basis of these similarities rather than symptom-based diagnoses.

CONCLUSIONS

Attachment theory focuses on protection and reproduction as central organizing functions and on the array of ways that these may be realized as the interactive outcome of universal maturational processes, individual genetic differences, and unique environmental contexts. Its contributions to understanding psychopathology include a model of functional diagnoses (as opposed to symptom-based diagnoses), development-based hypotheses regarding the relation of childhood experiences to later

psychopathology, and an information processing model with implications for treatment.

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SPECIAL ARTICLE

The recognition and optimal management of early psychosis: an evidence-based reform

PATRICK D. MCGORRY

Department of Psychiatry,
University of Melbourne,
Locked Bag 10,
35 Poplar Road,
Parkville, Victoria
3052, Australia

The quality of health care for schizophrenia and other psychoses around the world remains unacceptably poor (1-3). Serious under-resourcing of mental health care is a major factor in most countries, but even when this is less of a problem (e.g., parts of Western Europe), there is still a large gap between efficacy (what can be achieved under optimal conditions) and effectiveness (what can be achieved under routine conditions). Typically, Falloon recognised this in conceiving the optimal treatment project (OTP) for schizophrenia (4). Many factors are responsible for this efficacy-effectiveness gap, including community-wide stigma and pessimistic beliefs about outcome, the low status of psychiatry in the health care system with consequent underfunding and poor workforce quality, the failure in the developed world to fully implement, resource and sustain the reforms associated with deinstitutionalisation, and the lack of translation of genuine advances in treatment into clinical settings (5). In fact, reform and the evidence base actually are not as closely related as might be expected, and while the former tends to lag well behind the latter, sometimes the opposite occurs based on fashion or enthusiasm alone. In psychiatry, given our fragile position in the health care system and a legacy of errors and scandal, this rightly concerns us. Hence our desire to get it right. We remain unclear as to how much evidence is required before reform is justified, and even what kind of evidence is necessary. There is also the key practical issue that to produce evidence, a certain amount of reform needs to be carried out anyway.

EARLY PSYCHOSIS: A NEW REFORM PARADIGM

According to Milan Kundera (6), "The best progressive ideas are those that include a strong enough dose of provocation to make its supporters feel proud of being original, but at the same time attract so many adherents that the risk of being an isolated exception is immediately averted by the noisy approval of a triumphant crowd". Over the past decade, there has been a growing sense of optimism about the prospects for better outcomes for schizophrenia and related psychoses, and this has achieved the status of a 'progressive idea'. This has disturbed some (7), who have urged caution in proceeding with reform. However, while there is a sociopolitical dimension to all successful reform, this one has an increasingly solid basis in evidence. Clinicians and policy makers in particular are enthusiastic about reform based on this idea because of the sound logic behind it and the unacceptably poor access and quality of care previously available to young people with early psychosis, and are encouraged by the increasing evidence that better outcomes can be achieved. The rationale for, and extent of, this reform is described in Edwards and McGorry (8) and the latest evidence reviewed in a balanced manner by Malla and Norman (9). The present article will summarise this evidence and provide guidelines for its clinical application.

A key driver of this paradigm is the special clinical needs of young people at this phase of illness, the iatrogenic effects of standard care and a range of secondary preventive opportunities (10). This is especially clear when the clinical care of the first episode and recent onset patients is streamed separately from chronic patients, something which is still difficult to engineer and sustain (11). The key failures in care are prolonged delays in accessing effective treatment, which usually occurs in the context of a severe behavioural crisis; crude, typically traumatic and alienating initial treatment strategies; and subsequent poor continuity of care and engagement of the patient with treatment. Young people have to demonstrate severe risk to themselves or others to gain access and a relapsing and chronically disabling pattern of illness to 'deserve' ongoing care. These features are highly prevalent in most systems of mental health care, even in developed countries with reasonable levels of spending in mental health.

The increasing devolution of mental health care into community settings has provided further momentum, as has a genuine renaissance in biological and psychological treatments for psychosis. An exponential growth in interest in neuroscientific research in schizophrenia has

injected further optimism into the field, with a new generation of clinician-researchers coming to the fore. Several countries have developed national mental health strategies or frameworks which catalyse and guide major reform and mandate a preventive mindset and linked reform (1,12). Around the world, an increasingly large number of groups have established clinical programs and research initiatives focussing on early psychosis, and it now constitutes a growth point in clinical care as well as research (8). It differs fundamentally from previous reforms (e.g., deinstitutionalisation) in being much more evidence-based, and also in its integration of biological, psychosocial and structural elements of intervention.

Early intervention means early detection of new cases, shortening delays in effective treatment, and providing optimal and sustained treatment in the early 'critical period' of the first few years of illness (9). Even with existing knowledge, substantial reductions in prevalence and improved quality of life are possible for patients, provided societies are prepared to pay for it. However, this has not occurred, despite the development of effective treatments (2,13), because we have so far failed to translate these advances to the real world beyond the randomised controlled trial. Early intervention, with its promise of more efficient treatment through an enhanced focus on the early phases of illness, is an additional prevalence and burden reduction strategy, which is now available to be widely tested and, if cost-effective, to be widely implemented. This is hardly a radical goal and would be non-controversial in other areas of health care, where primary prevention remains out of reach, e.g. diabetes, many cancers.

While evidence is a critical element, how much evidence is required before a change in practice is warranted? In deciding where the onus of proof should lie, we should also remember that the alternative to early and optimal intervention is delayed and substandard treatment with all its human (and inhumane) consequences (10,14). Even in developed countries, as consumers and carers will readily attest, the timing and quality of standard care is relatively poor, very much a case of 'too little, too late'. In developing countries, a significant proportion of cases never receive treatment (15). While we do need evidence, there are obvious additional clinical and commonsense drivers for the provision of more timely and widespread treatment of better quality.

EARLY INTERVENTION IN THE REAL WORLD: CONCEPTS, EVIDENCE AND CLINICAL GUIDELINES

Mrazek and Haggerty (16) have recently developed a more sophisticated framework for conceptualizing, implementing and evaluating preventive interventions for mental disorders which supersedes the primary, secondary and tertiary prevention model.

Universal preventive interventions are focused upon the whole population, while *selective* preventive measures are aimed at asymptomatic high risk subgroups of the population.

Indicated prevention is concerned with subthreshold symptoms which confer enhanced risk for a more severe disorder. 'Early intervention' can be defined as indicated prevention, early case detection and optimal management of the first episode of illness and the subsequent 'critical period'.

Prepsychotic intervention

Prepsychotic intervention is a form of indicated prevention and is currently the earliest possible phase for preventive intervention in psychosis (16). However, at present it remains a research focus, even though clinical guidelines have been developed to underpin a safe and appropriate clinical response to young people presenting for treatment with potentially subthreshold or prodromal symptoms (10), since these are distressing and disabling (17,18). Much of the disability and collateral damage associated with psychotic disorders develops during this complex and confusing period and sets a ceiling for recovery, thus influencing the social course of the disorder (17). In fact, subthreshold symptoms constitute a risk factor in their own right for more severe disorder (19). Since universal and selective prevention remain out of reach at present, indicated prevention marks the current frontier of prevention research in psychotic disorders (16). Notwithstanding the neurodevelopmental theory of schizophrenia, the illness is relatively quiescent during childhood (20), with the emergence in adolescence or early adult life of symptoms and disability which can be used to predict full-threshold disorder (21,22). The idea of intervening at this stage of illness raises conflicting concerns. With the passage of time, some of these cases will be seen to have been manifesting an early form of the disorder in question, and the subthreshold clinical features will then turn out to have been 'prodromal', a retrospective term. On the other hand, others will not undergo transition, and will therefore constitute 'false positives' for the disorder in question. This has caused concerns about the effects of labelling and unnecessary treatment (23,24).

Following a series of initial naturalistic studies which created more accurate operational criteria for ultra high risk (21), a recent randomised controlled trial in this clinical population has shown a significant reduction in transition rate to psychosis for patients receiving more specific treatment - very low dose risperidone (1-2 mg/day) and cognitive therapy - in comparison to non-specific treatment - supportive psychotherapy and symptomatic treatment (25). Such patients must be distinguished from a subgroup of the general population who report isolated psychotic symptoms in the apparent absence of distress, disability or progressive change, and who do not desire assistance (24,26).

Further research is urgently required to clarify the range

of treatments which will alleviate distress and disability and reduce the risk of subsequent psychosis in help-seeking ultra high risk patients. While this evidence is being assembled, if people present with a potentially incipient psychosis, there may often be a need for a clinical response. What should the clinician do when approached by a young person, or by the family of a young person, who appears to be at ultra high risk?

For those meeting the criteria for ultra high risk (21,25), the offer, at least, of initial psychosocial treatment, including the emerging range of cognitive therapies aimed at the relief of such distress and disability in young people, with or without syndrome-based drug treatments, such as antidepressants, seems justifiable. What the patient and family should be told about the level of risk of future psychosis has been debated. However, in our experience, an open approach of disclosure, guided by the curiosity of the patient and family, has worked well, especially since many are well aware of this risk and are already concerned. An optimistic attitude to treatment and recovery in schizophrenia and psychosis generally should be strongly communicated (27).

If this offer of intervention is initially refused, as it may well be in this age group, this can usually be accepted, although some kind of assertive monitoring or follow-up may be also justifiable, combined with family contact. This is important and necessary, because, in addition to the risk of psychosis, there is a higher than expected rate of substance abuse, deliberate self-harm and suicide in this potentially prepsychotic population (25).

Not uncommonly, the parents of the young person will be very concerned, but unable to persuade him/her to attend for assessment. Since this is partly due to stigma and self-stigmatisation, the young person should ideally be assessed and offered help in a low stigma setting. This can be accomplished through home visits by the family doctor, by the school counsellor, or, where these exist, by mobile youth mental health teams linked to specialist mental health services. Naturally, a good understanding of the range of normal psychology of adolescents and young adults, and of appropriate interviewing and engagement strategies, is invaluable.

Even if psychosis does emerge and the symptoms cross the threshold for antipsychotic therapy, a key advantage of this focus on vulnerable, prepsychotic or potentially prodromal young people, in a youth oriented setting, is that a therapeutic relationship has been securely established. The young person is usually more accessible to therapeutic relationships generally and this means that recommendations concerning drug therapy are more likely to be accepted when they are made, and hospitalisation can be avoided, hence reducing the costs and secondary trauma (28). Furthermore, the duration of untreated psychosis (DUP) is reduced to an absolute minimum. Even if only a minority of first episode cases can be engaged prior to psychosis and no transitions to psychosis can be prevented, the advantages are still potentially great. Treatment will be commenced 'on the right foot', in an atmosphere of trust rather than fear and disruption, and with fewer complications.

The final clinical issue in this phase of illness is whether there is a role for antipsychotic medications prior to reaching the threshold for diagnosis of a frank psychotic disorder. Despite the lower risks of some disabling side effects and better efficacy of the novel antipsychotic drugs (29), and positive early research findings (25), caution is required here. Novel antipsychotic medications are clearly not a benign intervention and have increasingly recognised side effects of a different kind. If the indications for broadening the use of antipsychotic medications beyond frank and persistent psychosis are not very carefully defined and supported by high quality research, then it is likely that much harm could be done. Treatments in the early phase of illness may not only be different but more benign. While antipsychotics may ultimately not be the appropriate treatment for this phase of illness, at least for some, it is the advent of more benign antipsychotic medications that has helped to catalyse interest in intervening this early.

In the future, a range of other strategies may prove to worth trying, such as cognitive remediation, cognitive behaviour therapy, and putative neuroprotective agents (30). The safety, acceptability and efficacy of all interventions need to be thoroughly tested through further clinical research. The value of such research cannot be overestimated, given the critical nature of this phase of illness in relation to outcomes for patients. However, in most clinical settings, because of the lack of streamed first episode psychosis programs, very few of these patients get anywhere near mental health services. Hence this is a focus which is still a long way off in terms of reform priorities.

Early case detection in first episode psychosis

Once the currently accepted threshold for treatment with antipsychotic medication - the first clear and sustained emergence of psychotic features - is reached, there is a firm foundation for early intervention. Despite this, and the severity of these disorders, for a substantial proportion of people, such treatment is surprisingly delayed, often for very prolonged periods (31,32). Indeed for others, especially in the developing world (15), treatment is never accessed. This focus is concerned with the timing of intervention.

The DUP, as a marker of delay in delivering effective specific treatment, is a potentially important variable in relation to efforts to improve outcome in first episode schizophrenia, and more widely in first episode psychosis (31,32).

DUP is important because, unlike other prognostic variables such as genetic vulnerability, gender and age of onset, it is a potentially malleable variable which can become the focus of intervention strategies. Psychosis may be an easier and less conflicted target to detect than schiz-

ophrenia (33). Schizophrenia, which requires a period of frank psychotic features for diagnosis, may take time to emerge as a stable diagnosis, and our primary treatment target is positive psychotic symptoms, for which we prescribe antipsychotic medications (notwithstanding their effects on other symptom domains). A strong and extensive literature supports a correlational link, albeit moderate, between DUP and both short and long term outcome (31,32), although two recent studies have cast doubt on the link (34,35).

Assuming the link is as robust as it seems, there is a further question. Is the association causal? That is, is delay (prolonged DUP) in treatment a risk factor for worse outcome? Or is the link due to a common underlying factor, namely a more severe form of illness, which has a more insidious onset, with more negative symptoms, more paranoid ideation, less salience and awareness of change and less willingness to seek and accept treatment? Even if this is so, DUP may still be a key intervening variable through which these clinical features influence outcome, and hence reducing it may mitigate their effect (36).

In addition to the evidence-based argument (32), there is a strong clinical appreciation, derived from patients and families directly, of the destructive effects of delay and the range of negative psychosocial outcomes which accumulate during the period of untreated psychosis. These include vocational failure, self-harm, offending behaviour, family distress and dysfunction, aggression, substance abuse, and victimization by others (10). Even those who have questioned the relationship between DUP and outcome are either extremely vague about how long one should wait to intervene in cases of clearcut psychotic disorder (7) or strongly support the idea of intervening as soon as a diagnosable psychotic disorder emerges which is impacting on functioning or quality of life (34). Since we do have effective treatments available, therapeutic nihilism, the underlying premise of a 'wait and see' attitude, is not justified.

Mental health services, in partnership with local communities, primary care and individual clinicians, should therefore embark upon a range of strategies to reduce delays in treatment onset (37). This is not a process which has been seen as part of the mandate of clinicians or clinical services, where resources are insufficient or scarce. It is more common, understandable and possibly even necessary, for the latter to regulate their workload by restricting access to new patients. There may be a natural reluctance to widen access because of a lack of resources, due to inadequate funding, to cope with a feared influx of referrals. Indeed, the effect of early detection strategies in community psychiatry settings (e.g., community education and mobile detection teams) will probably be twofold, as witnessed in recent studies (36,38).

Firstly, if intensive efforts are made to improve mental health literacy in the general community, improve recognition skills among general practitioners through training and consultation-liaison, and improve access to, and engagement with, specialist mental health services, then the DUP for the average case should be substantially reduced, especially the relatively small subgroup with a very long DUP. This should make the work of the service easier and result in a reduced need for inpatient care and involuntary treatment (37). Secondly, there will be an increase in treated incidence of psychosis and hence workload, and a corresponding reduction in the prevalence of hidden psychiatric morbidity in the community (36). More resources will be required for services to become proactive in this way, to undertake the detection role and cope with the additional caseloads. Such a role should be built into part of the mandate of modern community-based mental health services and hence adequately funded.

Optimal and intensive phase-specific intervention in first episode psychosis and the 'critical period'

The third and most robustly evidence-based preventive focus is enhancing the quality of treatment. As Malla and Norman put it, there is a lot more to early intervention than intervening early (9). The notion that optimal treatment of the early phase of disorder could shorten the duration of illness and thus reduce the prevalence of the disorder, and further have a positive medium to long term effect on the course and outcome, is an attractive idea. However, the treatment should be phase-specific. This introduces the idea of 'staging' into psychiatric treatment, an idea which has been rarely applied. It implies that the treatment in earlier phases of illness should be different, more benign and potentially more effective than in later phases. The best examples of this lie in the cancer field (39).

The idea of a '*critical period*' during which the disorder is more responsive to intervention has recently been developed for psychotic disorders and fits with the patterns of illness severity found in recent follow-up studies, as well as the developmental stage of life in which these illnesses emerge (27,40,41).

Since it does not require as much of a change in role as the previous two preventive foci, more intensive phase-specific treatment during the first episode of psychosis, and beyond into the critical period, is the most feasible proposition for most clinicians and researchers interested in secondary prevention.

In general, there is some evidence that such intensive treatment of young people at this phase of illness is effective (11,42), and cost-effective (43) in real world settings at least in the short term, though more research is certainly required to examine the longer term impact and to determine the most appropriate service models.

Whether it is possible to reduce the intensity of treatment over a longer time frame or not, is an important secondary research question. Recent studies would suggest that treatment intensity should not be reduced within the first 5 years for the majority of patients (44-46).

First episode psychosis

The key elements of management in first episode psychosis are summarised as follows.

Access and engagement

Most people, though not all, who develop psychotic disorders are young people with little or no experience of mental health services. They lack knowledge and carry the same fears and prejudices as the rest of the community regarding mental illness and will generally be reluctant to seek or accept help. This is exaggerated by the sense of invulnerability which is part of normal adolescence and by the presence of psychotic symptoms. Access and engagement with services are processes that can be markedly enhanced by the way services are designed and operated. Mobile assessment available around the clock in a setting that suits the individual patient and family is a key advance in improving access to care. This should ideally be offered even prior to a crisis or high risk situation having developed, so that a calm and careful process of assessment and initial management can be undertaken.

Engagement with services is made more difficult if a traumatic crisis and involuntary treatment is the initial experience of the young patient and family. While inadequate resources are typically a structural obstacle, many services still shield themselves behind convenient interpretations of local mental health legislation, requiring patients who are not actively seeking help on their own behalf or who reject it, especially first episode cases, to develop suicidal or violent behaviour before even direct assessment is offered. Although crises cannot always be avoided, the frequency can be reduced substantially if resources are devoted to a mobile early detection and assessment service (41).

Assessment

The initial assessment should focus on the major diagnostic issues and levels of risk of harm to self or others. The rest can be pieced together over time. A key issue is to determine whether the patient is clearly psychotic, and if so whether there is also a major mood syndrome present. This can be difficult. Substance abuse and dependence are frequently comorbid with positive psychotic symptoms, and should not lead to exclusion of the patient from treatment.

As early detection strategies begin to bite, it is also likely that more subthreshold cases, including those with isolated psychotic symptoms (26), will be assessed. Some of these patients have psychotic symptoms that are not typical of the textbook or diagnostic manual and may confuse clinicians. Many of these patients do request and require treatment, and further research is required to carefully define the range of appropriate treatment for such patients, though the onset of clearcut and sustained positive psychotic symptoms represents a watershed for any given patient.

Although the novel antipsychotics have broader effects than on positive symptoms alone, the clear emergence of frank and sustained positive symptoms is currently a necessary step to considering their use in clinical settings. Hence, in detection and diagnosis, (first episode) psychosis is an appropriate target which is a necessary waystation en route to schizophrenia as currently defined. Secondary targets within the psychosis spectrum include mania, depression, post-traumatic stress disorder and a range of other comorbid syndromes, rather than DSM or ICD diagnoses per se, because they constitute a better guide to drug therapy.

Acute treatment

The initial decision is whether inpatient care is required. This will be influenced by patient factors, the degree of family and social support, and by the range of services available and local policies. Where this is possible, home-based acute care is preferred for a range of reasons and can be achieved in over 50% of cases with a highly structured and intensive approach (41). An antipsychotic-free period of at least 48 hours is usually advisable, during which benzodiazepines only are prescribed to alleviate the distressing symptoms of agitation, anxiety and insomnia. If sustained psychosis is confirmed, then antipsychotic medication may be commenced. Reversible medical illnesses and drug intoxications should also be identified during this period.

Second generation or novel antipsychotics are indicated where possible as first, second and even third line therapy, because of their better tolerability and greater efficacy. The starting dose should be very low and be increased to an initial 'step' or target dose and held there for the effect to be evaluated. Further increases should only occur in the setting of poor response and only then at intervals of approximately 3 weeks, to allow the effect of the change in dose to become clear. More rapid increases in dose in first episode psychosis lead to greater risk of side effects, especially extrapyramidal features, with no clear benefit. This because we now know that low dosages are able to produce sufficient levels of D2 blockade in the central nervous system to bring about a clinical response, and that the threshold for clinical response is lower, albeit narrowly so, than the threshold at which neurological and other side effects begin to manifest (47,48).

These low doses of antipsychotics are not intended or expected to deal immediately with the behavioural disturbances and associated symptoms frequently seen in this acute phase. The latter should be managed if at all possible with benzodiazepines and psychosocial strategies during this period, since the use of parenteral or sedating oral typical neuroleptics will inevitably produce aversive side

effects and undermine, perhaps terminally, an already fragile process of engagement and adherence to treatment.

Emergency situations requiring urgent sedation can be managed with intramuscular benzodiazepines such as midazolam or lorazepam in most cases. In occasional cases this will be ineffective and a short-acting sedating neuroleptic is the next best option. Repeated injections are rarely required with good nursing care, a supportive milieu and liberal use of benzodiazepines in the acute phase.

Naturally intensive psychosocial support is essential for the patient and family during this highly stressful period, though services are often unable to provide this due to inadequate funding, low morale and poor skills, combined with an unfortunate lack of awareness or acknowledgement of its critical role. This is a deficiency in urgent need of reform.

Home-based care is less stressful for the patient in particular and usually results in a reduced need for acute medication. It is more likely to be feasible with earlier intervention. However, the presence of manic features makes it more difficult to carry out home-based intervention. Indeed, the identification and treatment of the major affective syndromes, especially mania, is a key issue in the treatment of first episode psychosis. A manic syndrome is present in up to 20% of cases of first episode psychosis and should be rapidly treated with a mood stabiliser, ideally lithium carbonate or alternatively sodium valproate, to promote full recovery while minimising antipsychotic dosages. Subsyndromal manic features are even more frequent. Depression, unless clearly dominating the clinical picture, commonly resolves in parallel with the positive psychotic symptoms; however, if it persists or worsens during the post-psychotic period, it should be actively treated with a combination of antidepressants and psychological intervention. More detailed descriptions of the principles and practice of acute care can be found elsewhere (8,41).

The recovery phase

Up to 85-90% of first episode patients will achieve a remission or partial remission of their positive psychotic symptoms within the 12 months following entry to treatment, though some potentially responsive patients will fail to engage with treatment or rapidly cease adherence to medication. This is balanced by the persistence of the vulnerability in most patients and the tendency to recurrence, which may be subtle (45). A range of psychosocial strategies can augment and broaden the scope and depth of the recovery process, and these include psychological interventions, family interventions and group based recovery programs (9). Some of these will increase the remission rate for positive symptoms and they all aim to improve negative symptoms, functioning and quality of life. Rapid discharge of responding patients following an acute first episode of psychosis to unsupported general practitioners is poor practice. It represents a missed opportunity for maximising and consolidating recovery and for secondary prevention. An integrated shared care model with the general practitioner and other agencies is likely to prove more beneficial in minimising relapse and promoting more complete recovery.

The 'critical period'

This term can be regarded as covering the period following recovery from a first episode of psychosis and extending for up to five years subsequently. This is based on the notion that this is the phase of maximum vulnerability (40). A number of recent research studies have focused on the treated course of early psychosis (9,45,46). These have shown that the early course of illness for both schizophrenia and affective psychosis is turbulent and relapse prone, with up to 80% of patients relapsing within a five year period, and between acute relapses there may be additional persistence of subclinical, yet disabling clinical features. These findings suggest that, if possible, drug therapy should be continued for most if not all patients for longer than 12 months after recovery from a first psychotic episode.

However, it should be remembered that a subsample, at least 20%, never relapse, that some will not relapse for a prolonged period, and that relapse prevention is not the sole consideration in treatment but rather a means to an end. Adaptation to illness is a challenging, often overwhelming task for these young people and they usually need to be given time and special help to come to an acceptance of the need for maintenance treatment (49,50). A concerted effort should be made to maintain the engagement of most patients with clinical care during the early years after onset and to have in place a written relapse plan, so that action can be taken if symptoms reemerge whether on or off medication. A good therapeutic and personal relationship with the patient and family is the key to success and should be nurtured, though continuity of care is at a premium in public psychiatry in developed countries. This deficiency is the Achilles' heel of the system, leaving patients, who often have significant problems with trust and in forming social relationships, with no safety net. Even with standard care, however, it has been shown that outcome at 13 years is much more positive than expected, supporting the notion of an early critical period, which may be turbulent, but this turbulence seems to abate after 2-5 years (27). With optimal care such outcomes could be substantially improved (4). "If early detection provides one safety net to limit the psychosocial damage of these illnesses, then optimal and sustained treatment during this critical period when the vulnerability is at its peak can act as a second one, providing an additional degree of 'damage control'. This strategy is supported by the fact that the level of disability attained within the

first 2 years or so after entry to treatment strongly predicts the level of disability many years later" (27).

Of the three elements comprising early intervention, optimizing and intensifying early phase treatment is easily justified (10) and for this reason is being systematically implemented in the UK as official government policy (12).

CONCLUSIONS

Despite and partly because of the poor quality of standard treatment for schizophrenia and other psychoses in real world settings in both developed and developing countries (1), there is growing support for a more preventive stance in treatment. Primary prevention, specifically universal and selective preventive interventions, is beyond our capacities at the present stage of knowledge. However, indicated prevention for subthreshold symptoms has been endorsed as the frontier of prevention research in schizophrenia (41), while early detection and optimal early treatment are clearly within the mandate of clinicians and services, and can be justified despite predictable academic skepticism. This skepticism must be appropriately addressed through rigorous clinical research, but it may prove difficult to fully dissipate, and should not be allowed to snuff out precious therapeutic optimism, which can improve morale within services as well as patient outcomes. Realistic optimism has been in short supply in the treatment of schizophrenia and this deficiency has contributed to the serious gap between efficacy and effectiveness in treatment, as well as suicide rates (51-53). Evidence will be a vital guide, because a range of new clinical and ethical issues are being brought to light as the frontier advances (though they are essentially the same as in the rest of medicine), and it is important that changes in mental health care are based on solid foundations, not shifting sands, as so often in the past. Nevertheless, dispersing the mists of pessimism which have shrouded the clinical care of people with schizophrenia, fuelled suicide and enhanced stigma, is an overdue and worthwhile endeavour. The treatment objectives and approaches reviewed here characterise recent steps in this direction, in the confident belief that further progress will occur.

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Balancing community-based and hospital-based mental health care

GRAHAM THORNICROFT[1], MICHELE TANSELLA[2]

[1]Health Service Research Department, Institute of Psychiatry, Kings College London, De Crespigny Park, London SE5 8AF, UK
[2]Department of Medicine and Public Health, Section of Psychiatry, University of Verona, Italy

In the last two decades of the 20th century, there has been a debate between those who were in favour of the provision of mental health treatment and care in hospital and those who preferred to use primarily or even exclusively community settings, where the two were often seen as incompatible. This paper summarises the evidence on the advantages and limitations of these two perspectives, and concludes that this false dichotomy should be replaced by a model, in which balanced care includes both modern community-based and modern hospital-based care. We shall focus on the mental health needs of adults of working age, and the range of services necessary to meet these needs (1). We shall not directly address the needs of other important groups, including children, older adults, or people suffering primarily from drug or alcohol misuse.

Mental health services in many countries are subject to change. They are now being reviewed and redesigned. These changes reflect in part the growing evidence of what constitutes cost-effective care, and are also an acknowledgement of the failures of the systems of care which were based on the old-fashioned and remote institutions. These asylums did not offer the quality of care that is expected today, both by patients and by their families. There is also now an increasing worldwide focus upon the chronically disabling conditions, including mental disorders. This is reflected in attention not only to mortality, but also to a wider concept of morbidity and global burden of disease, which goes beyond symptoms to attach importance to disability, quality of life, satisfaction with services, and impact on care givers.

A note is needed here on terminology, as we shall describe this new balanced care as the combination of a) services in a wide range of local sites and settings outside hospital, including non-hospital long-term residential care (*modern community care*), and b) services providing acute inpatient treatment, often in general hospital units (*modern hospital-based care*). In balanced care the focus is upon services provided in normal community settings, as close to the population served as possible, and in which admissions to hospital can be arranged promptly, but *only* when necessary. By contrast, the practices and orientation associated with the old, large psychiatric institutions may be described as *traditional hospital care*.

THE HISTORICAL BACKGROUND

The recent history of mental health services can be seen in terms of three periods: first, the rise of the asylum; second, the decline of the asylum; and third, balancing mental health services (2). It is important to note that although the three historical periods usually occur consecutively, the times at which they began and finished in different countries varied considerably. Table 1 shows the key characteristics of each historical period.

Period 1. The rise of the asylum

Period 1, the rise of traditional hospital care, occurred between approximately 1880 and 1950 in many of the more economically developed countries (3). It was characterised by the construction and enlargement of asylums, remote from their populations, offering mainly custodial containment and the provision of the basic necessities for survival, to people with a wide range of clinical disorders and social abnormalities. The consequences of this choice of remote locations were segregation of patients as well as the subsequent professional segregation of psychiatrists and nurses from the main body of clinical practice, and from the centres of professional status in the metropolitan, university teaching hospitals. There is now strong evidence that the asylum model has produced very poor standards of treatment and care (4). Despite this, in some countries, especially those which are less economically developed, almost all mental health service expenditure continues to pay for asylum care.

Period 2. The decline of the asylum

Period 2 has taken place in many economically developed countries after about 1950, since when manifest system shortcomings were repeatedly demonstrated. These recurring themes, associated with the failures of asylums, are: a) repeated cases of ill-treatment to patients; b) the geographical and professional isolation of the institutions and their staff; c) poor reporting and accounting procedures; d) failures of management, leadership, and ineffective administration; e) poorly targeted financial resources; f) poor staff training; g) inadequate inspection and quality assurance procedures.

The accumulating evidence of these failures of the asylum led to the

Table 1 The key characteristics of the three periods in the historical development of mental health systems of care (according to Thornicroft and Tansella [2])

Period 1. The rise of the asylum	Period 2. The decline of the asylum	Period 3. Balancing mental services
Asylums built	Asylums neglected	Asylums replaced by smaller facilities
Increasing number of hospital beds	Decreasing number of hospital beds	Decrease in the number of beds slows down
Reduced role for the family	Increasing but not fully recognised role of the family	Importance of families increasingly recognised, in terms of care given, therapeutic potential, the burden carried and as a political lobbying group
Public investment in institutions	Public disinvestment in mental health services	Increasing private investment in treatment and care and focus in public sector on cost-effectiveness and cost containment
Staff: doctors and nurses only	Clinical psychologist, occupational therapist and social worker disciplines evolve	More community-based staff and emphasis on multidisciplinary team working
	Effective treatments emerge, beginning of treatment evaluation and of standardised diagnostic systems, growing influence of individual and group psychotherapy	Emergence of 'evidence-based' psychiatry in relation to pharmacological, social and psychological treatments
Primacy of containment over treatment	Focus on pharmacological control and social rehabilitation, less disabled patients discharged from asylums	Emergence of concern about balance between control of patients and their independence

deinstitutionalisation movement, supported by the strong evidence of 'institutionalism', which is the development of disabilities as a consequence of social isolation and institutional care in remote asylums. Deinstitutionalisation can be defined as including three essential components: a) the prevention of inappropriate mental hospital admissions through the provision of community facilities; b) the discharge to the community of long-term institutional patients who have received adequate preparation (5); c) the establishment and maintenance of community support systems for non-institutionalised patients.

It is instructive to compare deinstitutionalisation in the USA and in the UK. In the USA the reduction in the numbers of long-stay hospital beds occurred mainly in the period between 1960 and 1980, and is considered in many states to have been unsatisfactory. This is due in part to the fact that community mental health centres, organised to provide for discharged long-term patients, instead came to serve a new population of patients, previously either receiving no care, or treated in non-specialist settings, while patients discharged en masse from psychiatric hospitals were either abandoned or transferred to smaller institutions, often private, which frequently provided a poor quality of care ('transinstitutionalisation').

By comparison, when deinstitutionalisation is more carefully planned and managed, then the evidence is that the outcomes will be favourable for almost all the discharged patients (6). The Team for the Assessment of Psychiatric Services (TAPS) study in London (4), for example, completed a five-year follow-up on over 95% of 670 long-stay non-demented patients discharged from Friern and Claybury hospitals, and found: a) at the end of five years, two thirds of the patients were still living in their original residence; b) reprovision did not increase the death rate or the suicide rate; c) fewer than 1 in 100 patients became homeless, no patient was lost to follow-up from a staffed home; d) over one third were readmitted during the follow-up period; at the time of follow-up 10% of the sample were in hospital; e) overall, the patients' quality of life was greatly improved by the move to the community, but disabilities remained due to the nature of severe psychotic illnesses; f) there was little difference overall between hospital and community costs: coupled with the outcome findings, the economic evaluation suggests that community-based care is more cost-effective than long-stay hospital care.

Period 3. Balancing mental health care

Period 3 refers to the stage in which the main goal is to develop a range of *balanced care* within local settings. In this process, which has not yet begun in some regions and countries, it is important to ensure that all the positive functions of the asylum are fully reprovided, and the negative aspects of the institutions are not perpetuated. The range of functions of these institutions are summarised in Table 2, along with the effects of transferring the functions from traditional hospital care to balanced care.

One of the implications of developing the balanced care approach is a fundamental reorientation of staff attitudes (Table 3).

The balanced care approach aims to provide services which offer treatment and care with the following characteristics: a) services which are close to home, including modern hospital care for acute admissions, and long-term residential facilities in the community (7); b) interventions relat-

Table 2 Functions of traditional hospital care and the effect of transferring these functions to balanced care

Function of traditional hospital care	Effect of transferring function to balanced care
Active treatment for short to intermediate stay patients	Function maintained or improved, but results from community care programmes may not be generalisable
Long-term custody for patients	Function usually improved in residential homes for those who need long-term high support
Physical assessment and treatment	Function may be better transferred to primary care or general health services
Protection of patients from exploitation	Function may be impaired: some patients continue to be vulnerable to physical, sexual and financial exploitation
Respite for family and carers	Function usually unchanged: place of treatment at home is offset by potential for increased professional support to family
Research and training	Function decentralised: new research and training opportunities arise
Provision of day care and outpatient services	Functions are decentralised and may be improved if more local and accessible services are developed or may deteriorate if they are not established; renegotiation of responsibilities is often necessary between health and social care agencies for day care and occupational services
Secure provision for assaultative patients	Function vulnerable: clear commitment needed to provide well staffed units for dangerous patients
Occupation, vocational and rehabilitation services	Function improved in normal settings
Shelter, clothing, nutrition and basic income	Functions decentralised and at risk, so responsibilities and co-ordination must be clarified

Table 3 Comparison of staff attitudes and orientation in traditional hospital care and balanced care

	Traditional hospital care orientation	Balanced care orientation
Staff attitudes	Routine contacts with patients Focus on control and structure Use of policies and procedures Hierarchical decision making	Unplanned responses Family focus Emphasis on social disability Negotiation approach
Staff training	Biological orientation Training rotates between specialist units for diagnostic groups	Eclectic orientation and problem solving approach Training rotates between specialist teams
Therapeutic orientation	Emphasis on symptom relief Improved facilities and expertise for physical assessment, investigation, procedures and treatment Brief assessment package Seek decision from above in the hierarchy Control for suicidal/violent patients Block treatment of patients groups Regulated timetable Separated short-term treatment and rehabilitation	Greater staff independence Longer term assessment process More individual treatment May neglect physical diagnosis and treatment Integrated therapeutic and social interventions

ed to disabilities as well as symptoms; c) treatment and care specific to the diagnosis and needs of each individual; d) services which reflect the priorities of service users themselves; e) services which are co-ordinated between mental health professions and agencies; f) mobile rather than static services, including those which can offer home treatment.

The historical development of mental health services is, however, not a consistent trend from traditional hospital care to balanced care. Many contradictions occur and every country shows examples of phases of evolution and regression.

A FRAMEWORK FOR PLANNING BALANCED MENTAL HEALTH CARE

Having assessed the scale of need for treatment, how can one plan the services necessary to respond to the need? A conceptual model can be useful to formulate such service plans. One example is the 'matrix model', which has two dimensions: the geographical and the temporal. The first refers to three geographical levels: 1) country/regional; 2) local and 3) individual. The second dimension refers to three temporal levels: A) inputs (the resources which are used); B) processes (how the resources are utilised) and C) outcomes (the results obtained). Using these two dimensions, a 3 x 3 matrix can be constructed as shown in Table 4. Whatever the precise local service configuration used, it is our contention that the most important issue is to optimise the outcomes for individuals with mental health problems (cell 3C).

ASSESSING NEEDS FOR SERVICES AND FOR TREATMENTS

Assessing needs at the country/regional level or at the local level

To assess the level of need for treatments and care for mental health problems at the country/regional or at the local levels, it is important to appreciate how common mental illnesses are, and to understand the pathways that patients can follow to seek care. The well-known Goldberg

Table 4 The 'matrix model' (according to Thornicroft and Tansella [2])

Geographical dimension	Temporal dimension		
	(A) INPUT PHASE	(B) PROCESS PHASE	(C) OUTCOME PHASE
(1) COUNTRY/REGIONAL LEVEL	1A	1B	1C
(2) LOCAL LEVEL (CATCHMENT AREA)	2A	2B	2C
(3) INDIVIDUAL LEVEL	3A	3B	3C

Table 5 Implications of the levels and filters scheme

- Mental illnesses are common, affecting up to a quarter of the adult population each year
- Most cases are only seen in primary care, and are often not detected
- Training primary care and general health care staff in the detection and treatment of common mental disorders is an important public health task
- This training is facilitated by liaison with local community-based mental health staff, and is uncommon if psychiatrists work in isolated institutions and do not transfer their expertise
- Specialist mental health staff and resources should be concentrated upon the most severely mentally ill, who have complex needs and who may develop chronic and severe disabilities if not treated
- The quality and quantity of specialist mental health services needed is critically dependent upon the services which are provided at the primary care
- To understand the way a mental health system works, and how it can be improved, one needs to know the occurrence of morbidity at the five levels (cross-sectional), and the relative permeability of the four filters (longitudinal)
- The provision of services at level 4 needs to be balanced between community care and hospital care

and Huxley scheme (8) describes five levels, separated by four filters, and represents the relationship between total psychiatric morbidity in the general population (level 1), the proportion who are seen in primary care (level 2), those who are recognised by primary care staff as having a mental disorder (level 3), those who are seen by specialist mental health staff (level 4), and finally those who are admitted to psychiatric beds (level 5).

This scheme is fundamental to an understanding of how to plan and provide mental health services on the basis of the frequency and severity of mental disorders. The implications of this approach are summarised in Table 5. Nevertheless, the scheme is an oversimplification of the actual pathways to and through care that occur in any specific place, since some patients will refer themselves directly to mental health staff, while others will be referred by long and indirect pathways (9). The pathways taken will also be largely constrained by the services available in each country or region, and by culture-specific patterns of help-seeking behaviour.

As specialist services are scarce and expensive, they should *target* their skilled impact upon for: a) undertaking the assessment and diagnosis of complex cases, and those requiring an expert second opinion; b) treating people with the most severe symptoms; c) providing care for those with the greatest degree of disability consequent from mental illness; d) making treatment recommendation for those conditions which have proved non-responsive to initial treatment.

To achieve this consistently, a service will need to identify *priority* groups of those who should receive access to specialist care, from among the 25% of the whole population who suffer from a mental disorder in any year. In our view *well targeted* services are those in which specialist care *concentrates* upon providing direct services to people with the most severe degrees of symptoms and disability. This means treating, to a high clinical standard of evidence-based care, both psychotic and non-psychotic severe disorders, in the acute and post-acute phases. Moreover, they should offer consultation, liaison and advice to primary care and other services which treat the more common mental disorders, with a special responsibility for the treatment-resistant and more chronically disabling mental disorders seen in those settings (10).

Assessing needs at the individual level

A reasonable starting point in planning mental health services is to provide them in relation to the *specific* needs of people with mental health problems in the local area. One of the most important developments in mental health in recent years has been the change from seeing patients solely in diagnostic categories, to a consideration of their specific disabilities and individual needs, including, for example, for housing, work and social relations. The focus of service planning and provision is now required to change accordingly.

Traditional hospital care often provided interventions in many of the following six areas: mental health, social life, physical health, accommodation, occupation and money. However, they were provided in an undifferentiated form as block treatment, not specific to individual patients, and sometimes in excessive 'dose'. For example, by being provided with meals who could cook for themselves if given the opportunity, patients were

disabled from exercising autonomy. In addition, patients within asylums were isolated from their natural communities, were restricted in many aspects of their basic autonomy, had weakened social networks, and so were offered a poorer quality of life.

Each of the above six domains can also guide service planning at the local level. If need is defined as the ability to benefit from treatment and care, then what is the evidence that these interventions for mental disorders are effective and can meet needs? An example of interventions in one domain of need will be illustrated here: occupation.

Evidence of treatment effectiveness for occupational interventions

It is clear that in many countries people suffering from mental disorders have profound disabilities in terms of their employment and occupation, and for example up to 95% of people with schizophrenia are unemployed in many economically developed nations. The available evidence (11-13) suggests that: a) supported employment schemes (which consist of arranging early placement in normal work with variable support from staff) may offer better outcomes than sheltered or transitional employment approaches; b) supported employment is more effective than pre-vocational training for patients suffering from a severe mental disorder who want to work; c) there is no evidence that pre-vocational training is more effective than standard community care or hospital care; d) most vocational rehabilitation programmes have a positive influence on work-related activities, but may have less success in enabling patients to gain and keep paid employment; e) vocational rehabilitation may also produce benefits on such clinical outcomes as medication compliance, symptom reduction and relapse.

The implication of these findings is that people suffering from mental disorders who want to work should be offered the option of supported employment (14,15). On the other hand, vocational rehabilitation should be offered for those people who have any of the following characteristics: a) identify competitive employment as a personal goal; b) have a history of prior competitive employment; c) have a history of minimal psychiatric hospitalisation; d) are judged from formal vocational assessment to have good work.

The components of balanced care at the local level

What are the implications of this balanced care approach for how and where mental health services should be provided at the local level? Since balanced care includes both modern hospital beds (or suitable alternatives), and community facilities and resources, what pattern of care is necessary, and where should be the focus of care?

The pattern of care refers to the relative availability of services in the five main categories in the basic service profile, reported in Table 6. The meaning of this profile is to emphasise that sufficient services will need to be provided in *all* of these five categories. One, therefore, has to address the *capacity* needed for *each* of these categories, taking into account the services that are available in all the other categories, and this orientation is sometimes called *whole system planning.*

The *focus of care* refers to the relative importance attached to hospital care compared with community care. During the second historical period (the decline of the asylum), the focus of care was still considered to be the hospital, supplemented by services in the community, which were then called 'complementary'. The successful implementation of balanced care implies a change in the centre of gravity, so that modern hospital care is seen as only one component of a wider range of provisions serving a whole community or population. In practical terms, this means that psychiatrists and other mental health staff working in community settings need to have access to modern hospital beds, when treatment options in the community are not sufficient to offer urgent clinical investigations, or to provide intensive support during periods of crisis.

The basic service profile applies to many countries which provide mental health services at both the primary and secondary care levels. For emerging market economies, in which services may be limited to primary care with few beds in psychiatric hospitals, the basic service profile offers a template to redesign a new service system.

Key interfaces for mental health services

While the specific service components necessary in each local area will vary according to local circumstances, there is a common need for communication within these components and between the service and other agencies. Compared with a hospital care system, the quality of communication is different in balanced care because: a) hospitals used more hierarchical systems of communication, with less emphasis upon collaboration; b) in hospital care a single agency usually provides all the services, while in balanced care the functions are separated and decentralised to many different well-coordinated agencies; c) face-to-face contact between staff in different teams is less common.

The implication of these aspects of balanced care is that particular attention needs to be paid to maintaining high quality communication between all parts of the care system. The experience of areas which have begun to introduce the balanced care model shows the need to address three types of *interface*: a) those *within the mental health service*, between its components; b) those *within the health service*, between mental health and other services (both primary and secondary care); c) those *between health*

Table 6 The basic service profile of balanced mental health care

Basic service component	Variations
1. Primary care and general hospital consultation, outpatient and mobile community services (including home visits)	Mobile services for assertive community treatment (including evening and weekend services) Outpatient services for specific disorders or for specialised treatments
2. Day care services (including occupational/vocational rehabilitation)	Sheltered workshops Supervised work placements Co-operative work schemes Self-help and user groups Advocacy services Training courses Club houses/traditional employment programmes
3. Interfaces with other services (e.g. health, social and non-governmental agencies)	*Health services* Forensic services Old age services Learning disability/mental handicap services Specialised psychotherapies General physical and dental health Consultation to primary care/general practitioners *Social services/Welfare benefits* Income support Domiciliary care (e.g. cleaning) Holiday/respite care *Housing agencies* Unsupervised housing/apartments *Other government agencies* Police Prison Probation *Non-government agencies* Religious organisations Voluntary groups For-profit private organisations
4. Acute inpatient services and equivalents	Specialised units for specific disorders (e.g. intensive care and forensic) Acute day hospitals Crisis houses
5. Longer-term residential services	Unsupervised housing with administrative protection Supervised housing (boarding out schemes) Unstaffed group homes Group homes with some residential or visiting staff Hostels with day staff Hostels with day and night staff Hostels and homes with 24 hours nursing staff

and other public services, including social services and the housing departments. A first requirement is to clarify the ways in which the separate mental health service components operate together as a system.

CONCLUSIONS

This paper is intended to help close the gap between what we know about effective mental health services and what we do. The growing influence of evidence-based medicine now means that we have a much clearer idea than ever before about which treatments, at the individual level, and which types of service, at the local level, have been shown to be effective, or cost-effective. The balanced care orientation described here creates a number of new challenges to planners and providers of services. It takes us beyond the sterile rhetoric about whether hospital care *or* community care is better, to consider what *blend* of these ingredients is most appropriate for a particular local area at a particular point in time. This means that an assessment of local needs must be undertaken to inform such planning decisions. Other key influences upon the quality and quantity of mental health service provision are economic factors, for example the proportion of total health resources which are dedicated to mental health care. This allocation is in turn determined not only by the overall national economic situation, but also by ethical and political considerations. The relationship between economics and mental health needs to be taken into account during the planning process. Differences between economically developed and developing countries in terms of availability of specialist services, and culture-specific patterns of help-seek-

ing behaviour, and changes over time according to economic cycles confirm the importance of that relationship (16).

A further challenge to professionals is the increasing call from service users and from carers to be directly involved in defining what local needs are, and which needs are the highest priority. The growth of this trend is such that a greater degree of consumer power is likely to be seen in future in both the planning and provision of services in many different cultures and contexts. This will influence the demand for the particular mixture of treatment and care. Indeed, the involvement of non-professionals is likely also to grow as a series of stakeholders insist on representation and involvement in planning mental health services. These may include local housing departments, churches, neighbourhood and community associations, local politicians, newspaper, radio and television reporters, and police officers.

The process of deinstitutionalisation has usually meant the closure of long-stay beds in the larger psychiatric institutions, and there is now strong evidence, for the large majority of such patients, that community-based residential care offers such people a higher quality of life. Such types of residential care are usually best provided when they are small in scale, linked closely to the other components of a balanced care system, and when they are developed gradually over time as the nature of local needs emerges. Further to this there is now growing evidence that some types of community-based alternative to acute hospital admission may also be cost-effective, such as crisis houses and home based treatment by community mental health teams, and such innovative services are likely to become more common in the coming years.

The new agenda described in this paper goes beyond traditional polarised views to invite a participatory approach to developing better mental health services. This model of balanced care needs to be flexible to adapt to changing circumstances, and the potential for such flexibility is indeed an advantage, compared to the rigidity of hospital based care. This ability to respond to the changing mental needs of local populations is likely to become even more important in the coming years because of the unpredictable results of futures cycles of planning and evaluation.

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Integration is as essential as balance

ALAN ROSEN
Department of Psychological Medicine, University of Sidney, and School of Public Health, University of Wollongong, 55 Hercules Street, Chatswood NSW 2067, Australia

"Community versus hospital" is a false dichotomy

Over the last two decades in Australasia the debate over whether mental health services should be provided 'primarily or exclusively' in community or hospital settings has been exposed as a contrived battle over a non-issue. For most of this period, clinical and lay opinion leaders and policy-makers in this field have been advocating *integrated* mental health services. This involves ensuring more than a *balance* in community and hospital service provision and resourcing, though this is a necessary but insufficient precondition. When services are fully integrated, it will no longer be a matter of '*them versus us*', whether we are describing hospital versus community, acute versus rehabilitation/recovery services, secondary versus primary care, or even caregivers versus service users versus providers. Our identification should progressively encompass 'them and us' and hopefully become such an active and inclusive partnership that we may characterise our joint enterprise as involving just 'us'.

Achieving balance

In Australia, achieving balance has entailed shifting the vast dominance of hospital-centred over community-based mental health service funding into something more like an equitable balance. In the state of New South Wales, a study (1) demonstrated that, by 1984, 90% of the public mental health service resources were still retained by the psychiatric inpatient facilities, even though 90% of people with severe mental illness now lived in the community: an inverse relationship. By 1998, 41% of such recurrent resources in New South Wales were used for community-based services and the shift had all but stalled before reaching parity (though this proportion is possibly now beginning to increase again), while in the state of Victoria 68% of mental health services were community-based by 1998 (2).

Unfortunately, this striving for balance still gets distorted by traditional priorities: when resources become scarce, mental health funds are moved to general health, hospital mental health services are still favoured over community, medical staffing fares better than non-medical interdisciplinary staff, and acute services trump rehabilitation.

Balance of resources and services should reflect where the bulk of individuals with significant need for specialised mental health services now live, and where intervention outcomes are generally better. As that is now predominantly the community, the services and the funds should follow them there. While allowing that hospital-based care has usually been shown to be more costly, this is both an argument for shifting provision wherever possible to the community, and for providing adequate funds for more intensive staffing of hospital care for those still in need of it.

From balance to integration

The second essential condition entails proceeding towards full integration of services. Whether provision between hospital- and community-based services are balanced or not, both hospital and community sites have too often been run as uncoordinated, stand-alone facilities. Psychiatric hospitals increasingly became repositories for long-stay patients with little throughput. Most of the functions of asylum in the best sense (3) can now be provided in community settings. Both general hospital psychiatric units (4) and community mental health centres (5) tended at first to move up-market, and become over-selective or swamped by being overly accessible to mild disorders which would be better managed in general practices or shared care.

Whatever the size or complexity, the effective integration of a comprehensive catchment area mental health service must occur in at least two dimensions in real and anthropological time and on several levels (6) (Table 1). Integration should occur with local general health services and possibly to some extent with local

Table 1 Integration of comprehensive mental health services

Dimensions of integration

1. Diachronic (historical time)
   - Continuity of service through every phase of care
   - Assist through age-appropriate life transitions or rites of passage
2. Synchronic (present time)
   - Integrate psychological socio-cultural functional and physical facets of care
   - Extend the kinship or caring network

Levels of integration

1. Unitary administrative fiscal and clinical management of catchment mental health services
2. Acute treatment and rehabilitation, hospital and community care, by one service or team
3. Case manager brings together all elements of service for and with individual service users and their caregivers
4. Active involvement of and partnership between service providers, service users, families and self-help groups
5. Integration with local general health services including primary care, linkage to social services, but with budget and programme protection

community care or social services, but with the firm provisos that: a) the mental health budget is protected from raiding by more powerful interests of high technology medicine; b) components of comprehensive services are not hived off and merged with generic health rehabilitation or social services, so that mental health services do not begin to lose their coherence again.

The best test of coherence and integration of a mental health service is via appraisal by discerning consumers or family caregivers, as to whether they are having their care continuously coordinated by one mental health organisation, regardless of whether they are in a hospital or community phase of care. Such appraisal is partially achieved in Australia by the innovation of having a trained panel of national consumer-surveyors for the National Mental Health Standards (7).

The rise and fall of institutions

In their paper, Thornicroft and Tansella aptly trace the shift of the 'centre of gravity' of contemporary services from the rise and decline of institutional centred services to the emerging more 'balanced' locality centred community and inpatient services.

With respect to period 1 (the rise of the asylum), even in Australia this occurred from before 1840 until the 1950s, rather than from the 1880s, although detention in asylums throughout the Western world peaked during periods of economic depression in the 1890s and 1930s (8). In period 2 (the decline of the asylum), one of the great recurring themes associated with the failures of asylums, not mentioned in the paper, is a geographic dislocation of the individual from his/her local community and the attenuation of family involvement. The USA equivalent of Russell Barton's description of 'institutionalisation' was social breakdown syndrome (7).

Another transitional phase actually follows period 2, which can be called 'the era of ambivalent dual provision', where the decreasing number of institutional beds is not yet matched by a full range of local 24 hour alternative services supported by evidence, but only partially by the development of acute inpatient units in general hospitals with limited admission criteria, and fairly gestural provision of 9am to 5pm weekday community mental health or outpatient services. This phase is commonly associated with a narrowing of intervention modalities to illness-focussed biological treatments, rather than a broader repertoire of psychosocial recovery or wellness oriented services. As part of this phase, involvement of families may be inconsistent at best and seen as optional at worst.

The authors cite the findings of the Team for the Assessment of Psychiatric Services (TAPS) study in London to imply, possibly unintentionally, that, by comparison with the USA experiences of 'transinstitutionalisation', de-institutionalisation in the UK was more carefully planned, resulting in favourable outcomes for almost all the discharged patients with little difference overall between hospital and community costs. The TAPS project was in fact far from the typical UK experience, in that it consisted of well-organised and funded community reprovision. My understanding is that TAPS was one of the exceptions during an era when more than 100 of 130 psychiatric hospitals in England and Wales were closed with substantial loss of their capital and recurrent funding to general health services, and consequent poorly organised or patchy reprovision. In a smaller-scale parallel study to TAPS of planned de-institutionalisation and reprovision in Australia (10,11), similarly favourable quantitative and qualitative outcomes resulted over 6 years following discharge, but the community costs were approximately half those in hospital. The reasons for this difference are currently being researched jointly by both projects.

Transferring to both balanced and integrated care

The 'effects of transferring [particular] functions to balanced care' are necessarily simplified by Thornicroft and Tansella in their Table 2. That the function of 'protection' of patients from exploitation may continue to be impaired, demands systematic training of service users and providers to attain full rights and to challenge discrimination and exploitation. While it is agreed that physical assessment and treatment may well be better transferred to primary or general health care, there is still likely to be a significant degree of discrimination suffered by the individuals with persistent mental illness, in their comparatively poor access to appropriate interventions for their general medical conditions (e.g., revascularisation for coronary heart disease). This discrepancy occurs despite many of them attending general practitioners much more frequently than the community average, and has been demonstrated in a recent offshoot of the Australian Survey of Mental Health: Low Prevalence Disorders Study (12).

The relevance and utility of the levels and filters scheme for Australasia have been amply demonstrated by the results of the above Survey, High Prevalence Disorders Study (13). 62% of persons with treatable mental disorder (whether affective, anxiety, substance abuse) did not seek any professional help, and of those who did, most sought such help from a general practitioner rather than from a specialist mental health professional of any discipline.

The reform agenda

The reform matrix framework for planning mental health service reform has high applicability in Australasia at all three geographic levels (14). In terms of the input, process and outcomes phase, providing this horizontal dimension to the matrix results in a map with which it is easier to follow the systemic forces and complex interactions associated with service

outcomes at different levels. As a map, the matrix requires a third dimension, 'change throughout time', which would turn it into a cubic matrix. Consistent with contemporary quality improvement methodologies, it emphasises the need to focus on system errors rather than blame of individual technicians, and to use the former as opportunities for constructive change (14).

There is also recognition of the need for service providers to lift our heads out of our preoccupation with the pressure of current clinical casework, and switch our mindsets to a population-needs focus (14). Rather than just trying to cope with the next crisis or psychiatric emergency, we should be reorganising our services to go looking for people in dire need who have never appeared on our doorsteps, in keeping with the emerging evidence of better outcome with earlier detection and intervention of depression and psychosis. We should be taking responsibility not only for the next clinical encounter, but for the continuity of the whole episode of care, or even whole of life care if necessary, and for the continuing encounter with the local community.

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Deficiencies in community-based mental health care and possible remedies

JULIAN LEFF
Section of Social Psychiatry,
Institute of Psychiatry,
De Crespigny Park, London SE5 8AF, UK

Thornicroft and Tansella have produced a clear account of the transition in psychiatric care from a hospital-based to a community-based system. During the second half of the last century this change progressed at different rates in the UK, North America, Western Europe and Australasia. The UK is now at the forefront of the development of community-based care, having closed almost all of the mental hospitals in England and Wales. While this change has benefitted most of the former residents of the mental hospitals, patients requiring hospital admission are now disadvantaged by conditions on many of Britain's admission wards. There are insufficient beds in National Health Service (NHS) wards for the number needing admission, resulting in the use of private hospitals by the NHS, a costly solution. While some psychiatrists call for more beds to be provided, other professionals advocate the development of more alternatives to acute hospital admission, such as those mentioned by Thornicroft and Tansella - crisis houses and home based treatment - as well as acute day hospitals (1). Many service users and carers express a preference for solutions which do not involve full time admission to hospital, and as a result, the boundary between hospital and community is likely to become less distinct and the use of hospital beds to decline.

A number of the functions of tradi-

tional hospital care have not been adequately replaced by the modern style of service. The old mental hospitals contained populations of patients that formed a social community. While many patients were social isolates, at least they shared the same communal space with those who were more socially active (2). Life in the community can be very lonely for those with few social skills. Even the more outgoing patients tend to be trapped within the social world of users and professionals. This is partly due to the stigma attached to mental illness and the stereotypes held by the public. These include the characteristics of unpredictability, aggressiveness and difficulty in communication, all of which would deter members of the public from making social approaches (3). The problem of social isolation from neighbours can be tackled successfully by locally based education campaigns for the public (4).

Thornicroft and Tansella recommend that specialist services should focus on the treatment of people with the most severe symptoms. These patients accumulate in traditional mental hospitals since they are too demanding for most relatives to care for and cannot survive on their own in the community. Known as the difficult-to-place (DTP), they are usually left until the end of a psychiatric hospital closure programme (5). A high proportion has been aggressive in the past or is currently so. They show a variety of behaviours which are disturbing to the public, such as stealing, sexually provocative behaviour, and urinating in public. They tend to be on high doses of multiple neuroleptics since they respond poorly to medication. The planners' dilemma is where to care for them. They obviously need a high level of supervision and skilled interventions of a psychosocial nature. At the closure of Friern psychiatric hospital, most of the 68 DTP patients were transferred to highly staffed (1.7 staff: 1 patient) facilities mostly in the grounds of hospitals. However, one group of 28 were cared for in an open facility newly built on the site of a small psychiatric hospital. These DTP patients gradually lost their difficult behaviours over the course of five years, during which 40% were discharged to community homes.

An experimental rehabilitation programme for DTP patients in another traditional psychiatric hospital has shown that the combination of the use of novel antipsychotic medication with staff training and individualised cognitive behavioural programmes has enabled the discharge of 40% of the patients in two years (6). This experience highlights the need for medium term rehabilitation facilities for the most severely affected patients with psychoses. There is no need for these to be located on hospital sites, indeed there are advantages to their being sited in the community close to local amenities such as public transport and shops, so that patients can practise their newly developed skills. Unfortunately, in the UK rehabilitation has been overshadowed by the demands of acutely ill patients, yet those with long-term disabilities are the most costly to society in terms of lost work and burden on the carers. In the move to community based services, the rehabilitation function of the traditional mental hospital must not be neglected.

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Evaluating the feasibility of crisis homes: an application of the matrix model

RICHARD WARNER

Mental Health Center of Boulder County,
1333 Iris Avenue, Boulder, Colorado 80304, USA

Thornicroft and Tansella emphasize some important elements in the proper planning of mental health services – finding the proper blend of community and hospital-based components, assessing local needs, taking account of economic factors, involving consumers and non-professionals in programme planning and service delivery, developing small-scale alternatives to hospital for both acute and long-term care, and being flexible enough to respond to changing circumstances. They arrive at these accurate conclusions by applying a matrix model for assessing service needs at the national, local and individual level. Part of the value of their paper lies in the description of their analytic model. I will add a further specific example of the applicability of the matrix model to service reform.

The use of crisis homes provides such an example.

Under the crisis home model, acutely disturbed adults are placed in short-term foster-family homes and treated by a mobile psychiatric team. The first programme of this type was developed by Polak and colleagues (1) at Southwest Denver Mental Health Center in Colorado, during the 1970s, where it decreased the annual use of adult hospital beds to 1 per 100,000 population. Similar systems are now in operation at Dane County Mental Health Center in Madison, Wisconsin (2) and elsewhere. These programmes provide care to a variety of people in crisis, most of whom would otherwise have spent time in hospital. Many of these clients suffer from acute psychotic illness and some are actively suicidal. Violence and safety are almost never a problem, in part because of careful selection of appropriate clients and in part because clients feel pleased to be invited into another person's home and try to behave with the courtesy of house guests. For this reason, people with severe personality disorders and with psychotic illness behave better in a crisis home than they would in a hospital ward.

Using Thornicroft and Tansella's matrix model to analyse the viability and success of such a programme in a new locale, we would consider the following factors.

A. Input phase

1. Country/regional level
- The programme can be cost-effective if hospital expenses are diverted into it as hospital use decreases (as when services are funded on a capitated basis or in other systems where 'the dollar follows the patient').
- The programme will be more heavily utilised and affordable where few hospital beds are available in the region.
- It is easier to launch an innovative programme of this type if the sponsoring agency is sufficiently independent to avoid external administrative interference.

2. Local level
- The programme requires that there be enough households available with an empty spare bedroom (a factor which prevented success of the programme in Blacktown, New South Wales).
- The programme is particularly valuable in rural areas where the hospital is far removed, and the crisis home is closer to the patient's own community.
- The community should be liberal and accepting, so that neighbours' concerns do not prevent host family enrollment.
- Staff should be flexible and training programmes adequate.

3. Patient level
- The programme presupposes that the patient's own family is not readily available (making the programme acceptable in Boulder, Colorado, but out of place in Bologna, Italy).
- Patients and their relatives must be able to tolerate the idea of family care instead of hospital care (making the programme less suitable for first-episode psychosis).

B. Process phase

1. Country/regional level
- The programme should be acceptable to the regional health authority and consumer groups.

2. Local level
- The programme requires a coordinator to ensure smooth working relationships between the foster family, the crisis/admission team and the mobile team that will treat the patient.
- The programme coordinator must be available to provide immediate support and consultation to host families.
- One process measure is the number of patients placed in crisis homes.

3. Patient level
Process measures include patient, family and staff acceptance of the programme and length of patient stay in the crisis home.

C. Outcome phase

1. Country/regional level
- If successful, the programme will be actively promoted as a model by the regional health authority and consumer groups.

2. Local level
- Measures of success include frequent utilisation, a high retention rate of host families in the programme, good cost-efficiency compared to other forms of inpatient care, and reduced levels of hospital use.

3. Patient level
- Outcome measures include individual clinical change and patient and family satisfaction (in comparison to prior hospital admissions), readmission rates, and incidents of violence, suicide attempts or other problems.

The matrix model provides a framework for programme developers to set out the preconditions and assessment measures for a novel project in a comprehensive way so that its viability in a new setting can be more fully determined.

The model allows us to see, for example, that the crisis-home model is unlikely to be viable in:
- highly centralised and bureaucratic service systems;
- systems which are rich in inpatient beds or where treatment funds do not 'follow the patient';
- working class areas where there are few households with spare bedrooms;
- cultures where most mentally ill people live with their own families.

Thus, we see that the matrix model which Thornicroft and Tansella present in their article can be a valuable tool for the service planner.

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The search for seamless care

PETER TYRER

Department of Psychological Medicine,
Faculty of Medicine, Paterson Centre,
20 South Wharf Road, London W2 1PD, UK

Thornicroft and Tansella make it clear from the beginning of their article that they are promoting the integration of hospital and community care rather than acting as advocates of one versus the other, an outmoded adversarial position adopted by several commentators on the subject (1,2). The most important task of those involved in planning psychiatric services is to ensure that the hospital and community services interact successfully and this will not be achieved by pitting one against the other.

Thornicroft and Tansella propose a sensible balance in which the level of care given to each patient is determined by his/her level of need and availability of the relevant services. They provide a clear structure of evidence to show that most care in mental health can be given at the community level, provided that there is quick and ready access to hospital care when it is needed, and in order for this to be achieved there needs to be excellent communication between different parts of the service. Some years ago the adjective 'seamless' crept into the managerial terminology of mental health services. It is a useful word, because it emphasises the natural discontinuity between hospital and community services and introduces the artificial notion of creating a close link between the two, which, if completely successful, would give the impression to everybody that no discontinuity existed.

For seamless care to exist we need excellent communication between all parts of the service, with preferably at least some staff working in both community and hospital components, sufficient skilled resources (a major problem in many countries), agreed measures of need (an area where Thornicroft and his colleagues have made a major contribution), and willingness to reform. Thornicroft and Tansella have illustrated graphically the fundamental differences in philosophy between the old and modern approaches and in some case this requires a sea change in attitudes. It is sad to reflect that this is often easier to achieve with patients than with staff, particularly in the old established mental hospitals, where consolidation often takes precedence over change.

The resource issue is more easily addressed. It has been shown universally that the most expensive component of mental health care is the provision of hospital beds. If bed usage can be reduced, and it is consistently found that community care provided from a dedicated team achieves this (3), then the claim that there is no money to introduce reform can be rebutted. It sometimes needs short-term funding to act as a bridge to get new services started, but this is quickly reclaimed (4). There is another reason why the balanced approach suggested by Thornicroft and Tansella is bound to prosper: it is preferred by patients to the older models of care and, for the first time in the history of psychiatry, patients are being asked to play a major part in planning their treatment.

There is only one possible barrier to progress, summarised by the words 'public protection'. If the public perceives that it is dangerous to have people with mental illness in their midst, then it makes it extremely difficult to promote integration. Stigma against the mentally ill is reinforced and, even if ten people are inappropriately detained to every one that poses a real danger, politicians and the public are likely to choose that option. 'Function vulnerable', as Thornicroft and Tansella put it; we must do everything we can to reduce this threat to a minimum.

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Challenges of balanced care in Africa

FRANK G. NJENGA

Kenya Institute of Stress Management,
PO Box 73749, City Square, Nairobi 00200, Kenya

The developing world, and Sub-Saharan Africa in particular, is in many ways still in the asylum era, for those African countries with sufficient resources to sustain mental hos-

pitals. For the others, life is still in the pre-asylum era, which on the surface appears to be full community care, but is in reality disregard of mental health care. The story of neglect of the asylums in Africa is legendary and the picture of malnourished psychotic often-chained patients is regularly interposed with a mosaic of hungry looking catatonic men and women wandering around the compounds of the mental hospitals, usually followed by equally tired looking demoralized poorly paid mental health professionals, marginalized from the rest of the medical fraternity by distance from the city center and low budgetary provisions. The poor state of mental hospitals in the developing world is an accurate reflection of the status accorded to the mental health needs of their communities.

Far behind the need to attend to high infant mortality, bacterial and parasitic infections and more recently AIDS, governments find justification in neglecting mental health needs on the mistaken belief that mental disorder does not cause significant mortality or morbidity. The World Health Report 2001 (1) underscores the impact of mental disorder on the global burden of disease. Few (if any) governments in the developing world seem able to factor this reality into the equation when providing mental health services.

The model proposed by Thornicroft and Tansella will therefore not work in the developing world until the fundamentals that lead to the neglect of mental health are attended to. Education of policy makers into the reality of the needs of those with mental disorder is a first and critical step.

Other seemingly peripheral issues to be addressed by Africans include poor governance, political instability, high social morbidity due to natural and manmade calamities (including wars), that give Africa some of the largest numbers of refugees per population in the world. All these factors conspire to give Africans some of the highest levels of independent risk factors for mental disorder of any continent. To complete the picture, facilities for research into the problems that arise are negligible (2). In spite of seeming to have the greatest need for research into their problems, Africans have extremely low activity in research. A recent survey of research in Sub-Saharan Africa could find only 1179 randomized controlled studies over the past 50 years! (2) Half of the trials were done in the relatively more developed South Africa, indicating the seriousness of the problem in the rest of Africa. Only 19 countries had more than one trial per million population. Neuropsychiatric conditions, the fifth most significant cause of disability as expressed in disability-adjusted life years (DALYs), were comparatively neglected, further emphasizing the plight of mental health needs.

Okasha (3) captured the plight of Africa most graphically, and listed some of the critical problems as being insufficient human and financial resources, absence of national mental health policies, shortage of specialized personnel, constant brain drain and widespread civil strife and violence as real and constant factors in the African scene. All these issues must be the subject of focus in the developing world even as one considers the model of balanced care proposed, as they have a bearing on its implementation as priorities continue to compete.

Most of Sub-Saharan Africa is listed by the World Bank Report 2002 (4) as existing below the poverty line, while the WHO World Health Report 2001 points to the relationship between poverty and mental disorder. To further complicate the picture, almost 80% of the countries in the same region spend less than 1% of the health budgets on mental health. (As an example, Kenya spends 7% of its annual budget on health and less than 1% of this on mental health!)

To contextualise Thornicroft and Tansella's discussion, Europe has an average 8.70 psychiatric beds per 10,000 population, while Africa has 0.34. To provide services, Europe has 9 psychiatrists per 100,000 population, while Africa has 0.05. Many African countries have no psychologists or social workers. Many healthy Africans have no employment and in some countries unemployment rates are as high as 50%. Schemes as proposed in Thornicroft and Tansella's paper intended to bring persons with mental illness to the labour market have to fight with this reality. In looking at the model of balanced care, the implementers of policy will have to decide on priorities at all levels, including questions on the critical numbers of mental health workers (psychiatrists, psychiatric nurses, psychologists, etc.) required to implement such services, and against the economic reality that most Africans survive on less than a dollar a day (4). Decisions have to be made on the best ways of spending the dollar, and specifically how much of it to give to mental health services.

The debate takes on a new dimension when psychiatrists are required to take a look at issues of national resource allocation as they affect the level of care given to their patients.

Frances Stuart (5), in an article on the root causes of conflict in developing countries, concludes that "the sharp economic and social difficulties between Western societies and the Muslim world are a clear example of international horizontal inequalities. These, together with widespread impoverishment in many Muslim countries, permit leaders such as Osama Bin Laden and Saddam Hussein to mobilize support only too effectively along religious lines". Whether one agrees with this view or not, it brings back to focus the fragile nature of peace, in this world, as well as the factors that maintain it (peace), and the relationship to health, since wars are a major cause of poverty and underdevelopment which themselves predispose to poor (mental) health. It seems as though one must keep looking further and wider.

These are the bleak facts. Is there reason to hope? Is there reason for optimism? The answer is a most emphatic yes to these questions.

One of the most pressing problems relates to poverty and governance as well as equity in the distribution of resources. The trend in Africa today (in spite of a few exceptions) is toward more open and transparent systems of governance, which should translate into more vibrant economies for the regions. This, coupled with the trend towards larger economic blocks in the regions, augurs well for Africans and their citizens with mental health needs. Serious efforts to study and anticipate civil strife in the continent are in evidence at both local and international levels. Nelson Mandela's activities in Burundi are a good example.

The developed world seems to be paying some attention to the developing world, following September 11, 2001 attack on New York, leading to the realization that inequality is a breeding ground for discontent, and there are signs that Western governments are committed to poverty eradication as one of the strategies of dealing with insecurity. In the long run, benefits could come to mental health, as evidenced by a number of ongoing projects on mental health policy support in Eastern Africa financed by the British Government with support by the World Health Organization.

Further reason for hope is homegrown. An example from Uganda illustrates a novel method of integrating the asylum and community approaches, similar though not the same as that proposed by Thornicroft and Tansella. Butabika Hospital has been transformed a few years ago from a traditional asylum to a beautiful modern institution, simply by making sure that it is adequately (and directly) funded, thus ensuring that patients receive medication and food. Many of the patients who previously stayed in the asylum for many years did so because they did not have adequate medication! With some of the funds saved by having fewer patients staying shorter, the hospital has been cleaned up and the patients given a cleaner, dignified environment in which to get better quickly and back to the community, giving even greater savings.

The community around Butabika has seen the improvement in the patients and the hospital, and are now happy to accept primary health care facilities from the asylum. The benefit to the war on stigma is great, as primary health care needs are satisfied in a former asylum where the local community is able to come face to face with formerly psychotic patients who are getting better.

There are three reasons to embrace Thornicroft and Tansella's approach. One because it is supported by common sense, secondly because there is evidence that community care works in spite of being perceived as a failure (6) and thirdly because increasing evidence supports the view that Sub-Saharan Africa is paying some attention to mental health, and as it does so must not make the mistakes made by the developed world in the asylum era. In this respect, Africa can and must avoid mistakes already made by the West, by applying its meagre resources to well thought out balanced care.

That the world is also paying attention to Africa is evidenced by the publication of this commentary in this official organ of the World Psychiatric Association, and one can only hope that the situation reported by Patel and Sumathipala (7), in which Africa hardly features in the leading journals of the world, will find resolution in the course of time. Africa has a great deal to teach and learn from the rest of the world. The future for Africa is good, the future of balanced care is assured as an appropriate model of care.

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Community-based vs. hospital-based mental health care: the case of Africa

ATALAY ALEM

Department of Psychiatry, Faculty of Medicine, Addis Ababa University, PO Box 9086, Addis Ababa, Ethiopia

Traditional methods of treating mental illness within communities prevailed in all cultures until the 19th century, when building asylums and isolating mentally ill persons from the rest of the society boomed in the economically developed countries. I believe this style of treating mental illness crossed to Africa in the era of colonialism and still prevails in many countries of the continent.

Mental health service reform in Europe came about because of

national initiatives and policies (1), whereas there are no mental health policies or mental health legislations in many African countries (2). This clearly indicates that African governments have very little commitment for mental health services.

Moreover, because of poor economy and brain drain, Africa suffers from shortage of material and human resources for social services in general and mental health services in particular. In Europe, the average number of psychiatrists per population ranges from 5.5 to 20/100,000, and 5 to 10% of health care funding goes to psychiatric services (1), while in Africa the average number of psychiatrists is 0.05/100,000 population (3) and the funding for mental health services is much less than one per cent of the general health budget (4).

Because of other competing priorities and attitudinal problems, mental health care in the developing countries gets the least in the priority setting compared to other areas of health care. The burden of caring for the mentally ill in most African countries is left to the families. When one family member gets ill with a mental disorder, traditional healing sites are the places which are tried first. Having tried and failed all other alternatives, modern mental health care centers are very often the last places where help is sought (1,5). Vagrancy in a disheveled state and malnutrition are very common phenomena for patients with chronic mental disorders. Such patients get admission to the traditional hospitals/asylums for assessment only when they get some kind of involvement with the law (6). In these hospitals they get food and shelter on a regular basis. One then wonders whether such patients are better off in asylums where at least they could get basic necessities for survival. This is not to suggest that asylums are good enough for African patients, but just to throw some thoughts on the discrepancy between economically developed countries and the low-income countries with regards to care provision to the mentally ill.

Until the early 1980s, the idea of expansion of mental health care for many African countries meant duplicating the existing traditional mental hospitals. One good example of this is a blue print of a design to build a huge mental hospital at the outskirt of Addis Ababa, Ethiopia around 1984. Before this plan of building the hospital materialized, the Director of the Mental Health Division of the World Health Organization paid a working visit to Ethiopia. Consistent with the new trend of the time, he advised the Ministry of Health against building the hospital, but rather to decentralize the service to the regions by training mid-level health workers. Following that advice, the plan to build the hospital was cancelled and training of psychiatric nurses was started. Now the service that was limited to one traditional mental hospital in Addis Ababa has spread out to 36 regional and district hospitals where units for mental health care have been established. Two psychiatric nurses each run these units. This service is now expanding to lower health facilities and has become relatively more accessible to those who need it and to their families. There is a good system of referral between the mental hospital in Addis Ababa and these centers. Given the shortage of resources in Africa, can one take this as a kind of counterpart to the mental health care reform or balanced care in Europe? In a country where there are only nine psychiatrists for a population of 65 million, forming a community mental health team of which psychiatrist is a member would be very far from reality, to say the least. Therefore, the current trend will remain in place for years to come and the prevailing socio-economic situation in the region forces us to accept it as a reasonable system of care for many African countries.

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Mental health systems: proposals beyond evidence-based mental health?

FUAD ANTUN

Antun Building, Zouk Mikhael,
PO Box 135098, Beirut, Lebanon

The paper by Thornicroft and Tansella comprehensively covers the historical transition from the rigid hospital care system to the open community model, with all considerations for cultural, economic and ethnic differences. The 'balanced' model it puts forward can be adapted to many countries and communities that vary in economic and other resources.

The balanced system discussed in the paper excludes child and adoles-

cent psychiatry, drug and alcohol abuse and old age psychiatry. This is probably at least in part due to the following reasons.

In the case of drug abuse and alcoholism, there is a tremendous amount of stigma, legislation conflicts and concern by the community about the possible threats to the security and stability of the society at large. The medical and psychiatric complications vary a great deal, each requiring specialized care. The systems of such care are experimental, deficient in many instances, lacking in resources. Moreover, the comorbidity with other conditions is quite frequent, necessitating different levels of care. The dilemma between short or long inpatient care and community based care, which leads to less stigmatization, still remains unresolved, with no guidelines that can be, at least in part, applied to different cultures and countries.

In child and early adolescent mental health, the problems of subnormality, special education, school health, parental abuse, delinquency and conduct disorders require a complex and unified system of care. Needless to say, in many countries such a system does not exist or is in disarray.

According to the WHO Mental Health Report 2001, the world population is becoming older and most elderly people are in a good mental and physical condition. However, if we consider the psychiatrically afflicted elderly, of whom the majority suffer from dementia, planning a strategy to combine inpatient acute and chronic care and community-based care is highly needed.

In the above three categories of patients, we could apply the constructs outlined in Tables 2, 4 and 6 of Thornicroft and Tansella's paper, with the adaptations required to address their specific needs.

It is imperative to develop a national training system for psychiatrists, psychologists, nurses, social workers and educators. This national system should incorporate local, ethnic and cultural values in the training schemes, which are usually derived from the Western core curriculum.

In all mental health circles, in the last few years, the two main themes of mental health administration and planning have been: a) the incorporation of mental health into primary care, by designing curricula for 'primary care psychiatry', due to the shortage of psychiatrists worldwide and the need for the specialists to devote more time to care for the difficult cases, as well as to teaching and administration; b) community mental health, with the purpose of destigmatization and integration of the patient into society, where he/she can be productive or at least socially capable of managing his/her affairs. Such a scheme is quite costly, as it also involves day-care centers, sheltered homes and hostels, but can never replace completely the inpatient care unit, which nowadays is part of the general medical complex generating less stigma. Affordability of the community system, however, is not within the reach of many countries.

The open community care system has been wrongly assumed to have led to increased homelessness (1), which was later found to be largely due to failure in planning resettlement hostels. The same misconception is now occurring about violence and mental illness (2). The new generations of psychiatrists are now being trained in a balanced system of acute hospital care and integration of the patient into society with outpatient follow-up. Of the 130 psychiatric hospitals present in England and Wales in 1995, only 14 remain open (3). Such a trend is taking place all over the world and the 'matrix' system presented in the Thornicroft and Tansella's paper is a good framework to model or remodel a system, with the flexibility it has to suit the needs and resources of any society.

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Developing models of balanced mental health care: the case of Pakistan

MALIK HUSSAIN MUBBASHAR, KHALID SAEED

WHO Collaborating Centre for Mental Health Research and Training, Rawalpindi Medical College, Rawalpindi, Pakistan

The development of mental health systems which provide a balanced spectrum of services needs to address conceptual, structural, functional and financial issues. This task is further complicated by the fact that mental health system development is an ascending spiral where a higher level is likely to come forth once a basic level is traversed. It is precisely for this reason we feel that the paper by Thornicroft and Tansella is a bold attempt to tackle the conceptual issues of planning and delivering a balanced spectrum of services, thus shifting the focus away from the sterile debate of community versus hospital based care.

Balanced care needs to cater for promotion of mental health and prevention of mental illnesses, as there is a common misconception that mental health care is 'limited' to recognition, treatment and rehabilitation of mental

illnesses. Widening of the conceptual boundaries of mental health beyond management of mental illnesses, though potentially fraught with danger, is nevertheless the first step in translating the bio-psychosocial approach, inherent in the definition of health and the essence of balanced care, into practice. This is exemplified by the concept of mental health promotion defined as "an action and advocacy to address the full range of determinants related to mental health and enhancing the value placed on mental health by individuals, families and societies" (1). Promotion of mental health thus involves action in the spheres of policy, legislation, housing, education, employment and mental health literacy (2).

Difficulties arise both at conceptual and execution levels. At the conceptual level, primary prevention is often considered to overlap with promotion, particularly in case of universal prevention. At the execution level, mental health promotion involves a multi-disciplinary approach, whose individual components are not operationalized and for which mental health professionals are not trained. Moreover, structural, functional and financial issues need to be tackled if balanced care is to become a reality.

Developing a mental health delivery system capable of providing a balanced range of services would involve a redefinition of roles, which have to be explicit, and training to provide the necessary skills to take up new roles and responsibilities by the professionals from mental health and related disciplines. This would undoubtedly bring about issues of power and control to forefront. Political and administrative commitments would be necessary to provide legislative reforms and finances. Planning must be inbuilt within the system to provide the necessary flexibility to adapt to the local realities.

Pakistan has developed in a phased manner, over the last seventeen years, a community-based programme of mental health care delivery, aimed at providing a balanced model of care for countries having limited resources and faced with the double burden of communicable and non-communicable illnesses. During the first phase, a preliminary evaluation was made of the needs and demands for mental health services in the community, to gauge the knowledge, attitude and practices and to educate the community using mosques and social congregations at the faith healers. This was followed by the preparation of training and teaching materials for primary health care personnel and education material for the community. The next phase involved activities in the realm of intersectoral collaboration for promotion of mental health and prevention of mental illnesses. Education administrators were sensitized to the need for incorporating mental health principles in improving the quality of education. This activity has now been completed at the national level. The next stage involved the development of a training package for school teachers, which was carried out in a decentralized manner. The response of school teachers and children is overwhelming, with the formation of the All Pakistan Teachers' Movement for mental health being one example. The faith healers were also provided with colored case identification cards, similar to those being used by multipurpose health workers and they are serving as an important source of referral to health care facilities.

Research and evaluation activities are being carried out side by side with the above-mentioned activities, particularly in the field of promotion of mental health and prevention of mental illness.

The next stage involved the development of indicators for evaluating the community mental health programme. The study was carried out in two areas, one with and the other without the mental health component in primary health care. It showed that in the index area there was a significant increase in detection of psychiatric cases (62.4%) as compared to the control area (12.7%). In addition to the enhanced detection rates, there was a significant increase in uptake of all services provided at primary care level. There were reduced infant mortality and maternal mortality rates, as a result of increased utilization of the antenatal care facility and increased rates of immunization, showing that integration of the mental health component in existing primary health care systems can result in improvement in indicators of general health care (3).

To evaluate the school mental health programme, a prospective case-control study was carried out. This study showed that school children and teachers are effective agents of social change, and that school mental health programmes can help change the perception of the community about mental health problems (4).

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Dis-sociality: the phenomenological approach to social dysfunction in schizophrenia

GIOVANNI STANGHELLINI[1,2,3], MASSIMO BALLERINI[2]

[1]WPA Section on Clinical Psychopathology
[2]Department of Mental Health, University of Florence, Italy
[3]Department of Philosophy, University of Warwick, UK

After more than a century since its introduction in psychiatric nosography, schizophrenia still hides its face. We lack the comfort of a 'strong' paradigm capable of explaining the reasons for the many different schizophrenic phenotypes and of pulling these different strands together into one unified model. Psychopathological research obstinately oriented towards compiling a systematic description has failed to achieve its purpose, as witnessed by the free-fall of the first rank symptoms and more generally by the absence of pathognomonic symptoms of schizophrenia (1-3). Maj (4) proposes a recovery of the broad psychopathological organisers of the continental tradition, such as autism, advancing the hypothesis that the basic phenomenon of schizophrenic pictures lies in a disturbance of social relationships. Indeed, it is amply documented that schizophrenic pictures have varying, but generally quite pronounced, levels of social dysfunction. The de-structuring of social life (Criterion B) is a basic diagnostic characteristic of the schizophrenic syndrome (5,6). While for other psychiatric disorders the impairment of social life is a direct consequence of the clinical symptoms, in the case of schizophrenia it "does not appear to be a direct result of any single feature" (5,6). Since it is not possible to find the pathognomonic character of schizophrenia in the clinical patterns (Criterion A), it is legitimate to ask if the basic psychopathological character of schizophrenia might not lie right there in Criterion B (7,8). What gives the character of schizophrenia to certain psychotic pictures is a particular form of impairment of social life.

In what does the specificity of social dysfunction in schizophrenia consist? Social dysfunction has been considered as a direct outcome of the disease process, a phenomenon of de-socialisation due to a negative or hostile environmental reaction, or a consequence of a non-effective psychological strategy operated by ill persons. In *deficit models*, the impairment of social functioning is a *consequence* of the disease (9-13). It is possible to distinguish the process of disease from its individual and social consequences. The deficit model expresses a clear direct line between cause and effect, according to which the phenomena of illness produce over time a deficit in social functioning. In *stigma models*, social dysfunction is seen as an *artefact*, a consequence of environmental stigma phenomena. Stigma acts as *primum movens* and the phenomena of de-socialisation are a consequence (14). Nonetheless, a substantial literature emphasises that social dysfunction precedes the appearance of clinical signs, thus being a premise, not a consequence (15-20). In *coping models*, social dysfunction derives from particular ways of coping with the disease process and with situations of social interactions (21,22). Social competence would act as a factor modulating the course of the psychosis. Unfortunately, it is an extremely complex matter to establish if the disturbance of social competence is a direct expression of schizotropic vulnerability or a modulating factor of it. Besides, either we admit that the processes of coping with social situations are aspecific, or we find a qualitative peculiarity in the social coping of schizophrenic patients.

IS SOCIAL DYSFUNCTION THE BASIC DISORDER IN SCHIZOPHRENIA?

Social dysfunction has also been considered a specific and autonomous psychopathological dimension in the course of schizophrenia (23,24). It seems, moreover, to contribute to define the disease, its course and its outcome (25). Is all this enough to confirm the peculiar nature of social dysfunction in the course of schizophrenia? If this is the case, social dysfunction appears to be a *trait* that, albeit in a quantitatively variable manner, is present in patients even before the onset of overt symptoms and is reflected in the organisation of the person and in his/her manner of living. The concept of *autism* (7,26-30) expresses this disturbance of participation in social life and reflects the disturbance of social competence, or *dis-sociality*. It is preferable to speak of dissociality in reference to the basic disturbance of

social relations indigenous to schizophrenia because on the one hand the term underscores the qualitative alteration of social competence, and on the other it goes beyond the strictly behavioural-functionalist perspective inherent in the term social dysfunction. Dis-sociality is not limited to aspects of deficit, such as behaviour inappropriate to the circumstances, lack of affective contact, detachment from social life. It is also reflected in phenomena like the tendency to rumination not oriented towards reality, rigid and non-adaptive adherence to idiosyncratic ideas, the emergence of a deviant hierarchy of values, aims, and ambitions (27-29). All this clearly expresses a disturbance of participation in social life. Rigorously defining dis-sociality can help us to define the meaning organiser (the fundamental phenomenon for the understanding) of schizophrenic pictures.

MODELS OF SOCIAL COMPETENCE

What is the primary ability that makes social life possible? Different schools have suggested different explicative models (Table 1) (5).

Behaviourism/functionalism. This is the shadow-paradigm of a great number of socio-psychiatric approaches. In this model (32-35), social competence lies in the ability to adopt the necessary behavioural procedures in order to satisfy one's needs and achieve one's goals. A disturbance in the implementation of social skills is supposed to be a ready consequence of the disease process. Several psychiatric disorders involve an impairment of social skills; differences are situated on a quantitative rather than qualitative level. Social competence defined by the behaviourist/functionalist model enhances the behavioural aspects of an individual in social interaction situations. It allows rather easy and repeatable measurements, but it does not enable us to reach the patient's subjective experience and to distinguish those disturbances of social competence that are related to schizophrenia from those related to other psychiatric disorders.

Structural functionalism. This theory (36) has been adopted in psychiatry as the 'disability model' (13,37). In this model, the most important phenomenon is social adjustment, i.e. the participation in social life in an adequate manner, by behaving exactly as others expect one to behave. To be normal means to be in accordance with socially established norms. There are some behavioural patterns that are generally judged as adequate - i.e. organised systems of participation of an individual in a social system, called 'social roles'. Disability is defined by deviance from the rules and expectations of one's own social context; the landmark is given by individuals' functioning in that particular social-cultural context. The assessment of disability is based on the observation of the inability to satisfy social demands and to perform social roles appropriately. Disability is considered as a consequence of the disease, with different levels of depth and expressiveness. This model also allows repeatable evaluations, but like the previous one it is not able to differentiate dis-sociality belonging to schizophrenia. In addition to this, it flattens out the social dimension of each individual as the ability to adopt the rules of a context, placing the subjective world of meaning and values in the background.

Cognitivism. Cognitivism is the dominant approach to empirical research on vulnerability and therapeutic interventions in schizophrenia (38,39). Social competence is here described as social cognition (39-41), i.e. the ability to understand, predict and correctly respond to thoughts, feelings and behaviours of others in diverse and often unrehearsed social contexts. Social cognition is based on three types of cognitive patterns, called 'social patterns' (41): a) person patterns, b) role patterns, and c) event patterns or scripts (39-41). Person patterns are based on prototypical personal features or on specific representations of individuals. Role patterns have already been described in the paragraph about structural functionalism. Event patterns are coherent sequences of events expected by the individual, linked together by time and by their cause. Social competence lies in the ability to develop social patterns in a correct way and to use them in an effective manner. This is a necessary premise for the social cognition process. The arguments of the social cognition model are an effective explanation of social competence, in order to bypass behavioural reductionism and normative reductionism. Social cognition processes, in any case, are not the fundamental phenomenon of social competence. As a matter of fact, they assume and do not explain one's own mental ability to understand the manifestations of the mind of other individuals.

Table 1 What is social competence?

Model	Ability	Conceptualisation
Behaviourism/functionalism	Social skills	Ability to adopt the necessary and adequate behavioural procedures in order to satisfy one's needs and achieve one's goals
Structural functionalism	Social adjustment	Ability to internalise the rules of a specific socio-cultural environment, and use them as a guideline to one's own behaviour
Cognitivism	Social cognition (social schema)	Ability to understand, predict and correctly respond to thoughts, feelings and behaviours of others
Symbolic interactionism	Social knowledge	Ability to use and share the symbolic means of communication
Psychoanalysis	Object-relationship attachment	Emotional ability to maintain interpersonal relations

Symbolic interactionism. The social world is given by interaction processes between persons, mediated and made possible by shared symbols (42). Individuals act according to the meanings that objects and events have for them, and this meaning derives from social interactions. Each person experiences herself not through direct information but only indirectly, with the help of the ability to adopt the other's point of view. The typical feature of the adult self is the ability to adopt the whole community's point of view - the so-called 'generalised other'. This is the way single persons participate in the social community. The set of knowledge shared by the entire social community is called 'social knowledge'. This forms a sort of network of shared symbols, representing a fundamental premise to the communication process. Social competence lies in the ability to interact with others using this common symbols network. The concept of 'adopting the others' point of view' introduces, though not explicitly, the fundamental phenomenon of intersubjectivity. These concepts have influenced the psychosocial (43) and phenomenological (44) approaches to the understanding of psychoses.

Psychoanalysis. Social competence lies in the emotional ability to maintain stable interpersonal relationships (45-47). Its disturbances may be attributed to structural conflicts/defaults of the individual mind, such as pathological ways of developing object relationships. A fundamental role is attributed to the ways in which the early stage of the mother/child relationship is enacted (48). Disturbances in social competence appear as qualitatively different in different psychiatric disorders, in relation to the different pathological ways in which object relationships, attachment patterns and defence mechanisms are enacted. These concepts assume the fundamental phenomenon of primordial intersubjectivity, widely discussed in the phenomenological approach.

THE PHENOMENOLOGICAL PERSPECTIVE

In the phenomenological perspective, the social world is a product of the individual mind; i.e. the social dimension lies in the very mind of each individual. Facts, events, and objects of the world (and in general every social fact) are not considered realities that are independent from the individuals' mental activity, but as *phenomena* - i.e. contents related to intentional minds (the individuals' mental activities). Phenomenology has defended the *inescapable subjective peculiarity of sociality*, adopting as its landmark the subjective dimension of social action and the forms of symbolic mediation operated by the mind during the process of interaction between individuals. The social world is the world made of meanings understood and shared by every individual. The constant reference to the subjective dimension does not appear only as a fundamental epistemological argument or as a methodological procedure, but throughout this model it also adopts a full ethical choice feature (49-52). Recent trends in phenomenology have questioned to validity of early phenomenological attempts to develop a theory of experience of the other based on the analysis of isolated individuals (53). Recently, this solipsistic perspective has been abandoned. This has fundamental consequences. The nature of knowledge (the meaning and explanations that each of us gives to his/her own experience) becomes necessarily conventional and deriving from society. This is where one can clearly trace social constructivism features (49). The phenomenon of intersubjectivity is considered as a *primordial event*, rather than a category that must be attained starting from the *solus ipse*. As a consequence, *social phenomenology* abandons the *naïve* belief that reality is ontology. We experience objects and events as 'real' because we share their meanings with the others. The social world is the world of meanings shared by individuals who are part of it. According to phenomenology, on the one hand it is wrong to adopt a model of social interactions that bypasses the analysis of subjectivity during the process of the constitution of meanings (as behaviourism and functionalism do). On the other, it is also wrong to separate the individual mind from social phenomena as we analyse the process through which we attribute the meanings of objects and events. The analysis of *subjectivity as a social phenomenon* is the epistemological basis for the clarification of the impairments of intersubjectivity in schizophrenia.

THE WORLD OF SHARED MEANINGS

The social world is not established by a *prescriptive order*, that is a set of rules accepted by everyone. Instead, the social world is established by an *interpretative order* valid for every individual belonging to a specific cultural context. Every person receives and participates in this *interpretative order* spontaneously, intuitively and in an ante-predicative (i.e. un-reflected) manner. This interpretative order in everyday life is not a matter for reflection because it is given and taken for granted by every person (52). This interpretative order valid for everyone is called *common sense* (54). Common sense is not only the set of knowledgeable facts available to everyone; it is the set of interpretative procedures or 'account practices' (50) shared in a tacit and undiscussed manner by everyone belonging to the same cultural context. The social world presents itself as a building, made of arbitrary and conventional meanings, built on the edge of the great abyss of the doubt that reality is *not* how it is usually represented. Common sense itself covers, conceals and prevents access to this abyss of doubt. The interpretative procedures that establish common sense make it possible to experience the different phenomena of the world as solid realities whose meaning is taken for granted. The interpretative order of common sense has a moral and emotional value: each form of deviance brings bewilderment, disapproval,

embarrassment. Common sense is the constitutive element of the perception of reality, and as such, it is the true pillar of normal mental life. The boundaries of the perception of reality begin from, and are traced by, the evidence of common sense. Common sense is based on the primordial phenomenon called *intersubjectivity*. Intersubjectivity is not just communication with others; it is the very condition that makes communication possible. The cornerstone of intersubjectivity is 'social attunement' (19,55,56), i.e. the ability to make emotional contact and establish mutual relationships; perceive the existence of others and their mental structure as similar to one's own; understand intuitively the mental manifestations of other persons; communicate with others using the shared meaning structures.

CONCLUSIONS

Social dysfunction is considered by DSM-IV as a diagnostic feature of schizophrenic disorders, but its definition lacks validity: Which theoretical paradigm lies behind DSM-IV's definition of social dysfunction? What is the relationship between social dysfunction and clinical symptoms in schizophrenia? Is social dysfunction a salient factor in the pathogenesis or should it be atheoretically considered as a state of overt schizophrenia useful for diagnostic procedures? Last but not least, are there specific landmarks of schizophrenics' social dysfunction? In this paper, we argued that the fundamental and characteristic element of schizophrenia lies in a specific kind of disorganisation of the basic structures of social life. We called this specific phenomenon 'dis-sociality' - the qualitative disturbance of spontaneous and intuitive participation in social life. We would rather use the term *dissociality* since the term 'social dysfunction' leads to a strictly behavioural-functionalist way of seeing things. Dis-sociality consists in a disorder of primordial intersubjectivity and common sense - i.e. the pillars of a normal mental life - which undergo severe perturbations in the early stages of schizophrenia. Primordial intersubjectivity is the very condition that makes communication possible. Its cornerstone is social attunement, that is the affective-conative-cognitive human ability to perceive the existence of others as similar to one's own, make emotional contact with them and intuitively access their mental life. The sharing of meanings and of social scripts, the understanding of rules and the adoption of adequate behavioural procedures all depend on the pre-existence of a valid social attunement. Social attunement affords the constitution of common sense. Common sense is the *interpretative order* valid for every individual belonging to a specific cultural context that makes possible the existence of a socially shared world. Every person receives and participates in this interpretative order spontaneously. Common sense is a set of knowledgeable facts available to everyone (social knowledge) and a set of interpretative procedures (account practices) shared in a tacit understanding by everyone belonging to the same cultural context. Common sense prevents the access to the abyss of doubt. Is this very abyss of perplexities, that in normals is concealed by common sense, the landmark of early precursors of schizophrenic experiences? Are deviant behaviours in pre-schizophrenics the epiphenomena of the disorders of primordial intersubjectivity and common sense? Are also the disorders of social adjustment, cognition and knowledge the consequences of those more basic disorders pointed out by phenomenological analyses? Can schizophrenic dissociality be distinguished from social dysfunction in general according to phenomenological criteria? Our answers to these questions is 'yes'. But, of course, we still need a great deal of work to define the dis-sociality of schizophrenics, this primordial disorder of conceptualisation of the world and its relationships with idiosyncratic ways to get in touch with the others.

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Measurement of some novel concepts in psychiatry

ALEKSANDAR JANCA , JOHN E. COOPER

WPA Section
on Measurement
Instruments
in Psychiatric Care

The main objective of the WPA Section on Measurement Instruments in Psychiatric Care is to collect and disseminate information on existing and new measurement concepts and instruments in psychiatry and to promote psychiatric assessment tools designed for particular purposes, cultures and population groups. The Section has recently been involved in the development and evaluation of several new concepts and measurement instruments in psychiatry, which are summarised in this paper.

CONTINUITY OF LIFE

Over the past few decades, the widely used concept of Quality of Life has become associated with many different meanings and, hence, became less useful in a methodologically sound clinical, epidemiological and service evaluation research. One of the reasons for such a devaluation of the Quality of Life concept can be seen in its over-inclusive definition, covering a very broad range of life domains (e.g., according to World Health Organization Quality of Life Instrument, the Quality of Life concept refers to "individuals' perceptions of their position in life in the context of culture and value systems in which they live and in relation to their goals, expectations, standards and concerns") (1).

In an attempt to resolve some of the abovementioned conceptual and measurement issues, a novel approach entitled Continuity of Life has been proposed and offered for further development, testing and application (2). The Continuity of Life concept can be defined as "the degree to which an event or process (such as mental illness) has interrupted the continuity of an individual person's life with regard to his or her activities, hopes and plans". It focuses on the present state as well as on future expectations of the individual and covers the following domains:

- Access to material possessions and earnings
- Personal mental health
- Personal physical health
- Relationships with family members
- Relationships with friends
- Work, studies, professional career
- Leisure and recreation
- Civic duties and responsibilities
- Personal beliefs and/or religious faith.

This formulation of the Continuity of Life concept makes it particularly sensitive to events such as admission to psychiatric hospital for a serious illness such as schizophrenia, or the presence of obvious disability due to any cause.

With these ideas in mind, a Continuity of Life Interview has been developed. This is a semi-structured instrument aimed at assessing an individual's perception of illness-related disruption of, or interference with, relevant life areas and global life quality regarding present state and activities as well as plans for the future. The instrument is designed for use by interviewers who are already experienced in clinical work and in talking to patients (such as doctors, nurses, psychologists and social workers). A 'clinical' style of interviewing is needed for the administration of the instrument, i.e. the interviewer asks the first main question that is provided, and then, depending on the answer, asks whatever other probes seem necessary (not included in the schedule) to arrive at a rating.

The Continuity of Life Interview has been evaluated for its feasibility (i.e. duration of the interview, comprehensibility of the main questions and other procedural, textual and rating problems) (2) and its inter-rater and test-retest reliability are currently being assessed. It is hoped that the evaluation results will show that the novel concept and the accompanying instrument represent convenient outcome measures and suitable tools for evaluation of the effectiveness of mental health service delivery programs.

SOCIAL RITUALS AND MENTAL HEALTH

The relationship between social rituals and prodromal stages of mental illness represents the main subject of another project carried out by the Section in collaboration with the University of Western Australia, the Royal Perth Hospital and the Jarlmandangah Burru Aboriginal Community in the Kimberley region of Western Australia. This project aims to examine the extent to which disturbances in everyday

expected social rituals (such as greetings, farewells, giving thanks, general good manners, polite eating customs, wearing of conventional clothing and similar) can be used for the early detection of individuals, families and communities who are in, or at risk of soon developing, poor mental health.

The concept of a prodrome (or the very earliest signs of the onset of a mental disorder) is well recognised in clinical psychiatry, and refers to disturbances of ordinary behaviour that may precede the abnormal behaviour and experiences that constitute recognised psychiatric symptoms. In the psychiatric literature, however, prodromes are described simply by means of lists of behaviours, such as avoidance of meeting other people, irritability, polite greetings absent or minimal, poor table manners, conversation avoided or kept to a minimum, and lowering of standards of personal appearance and hygiene. The proposed project is concerned with the description of prodromes, but uses some concepts from social anthropology so as to achieve a systematic approach that should ensure a more thorough review of a person's pre-symptomatic behaviour than the usual clinical enquiry based on a simple list. This combination of approaches and ideas from the two disciplines has not been used before.

The interviewing and rating schedules that are being produced in the context of this project will describe the extent to which the everyday expected social rituals of the subject conform to what is expected by other members of the family. The interview and rating schedules will be based on a key informant interview with a member of the family of the selected patients. This is a well-tried method of interviewing, often used in cultures where conventional face-to-face interview between two individuals can cause a number of problems. Selection of the most appropriate key informant and the most appropriate definition of a family (or household) will be decided in consultation with local culture experts.

These ideas and the related instruments will be evaluated in two very distinct cultures and, if proven suitable, reliable and valid, they will have a high probability of serving as good predictors of high-risk persons in further surveys and follow-up studies of people in the early stages of mental illness. It is possible that future developments of these techniques will allow estimates to be made of the 'social health' of groups or communities, in addition to that of individuals.

THE ASSESSMENT OF ONSET IN PSYCHOTIC ILLNESSES

The details of the onset of psychotic illnesses are notoriously difficult to study. Recognition of the onset is essential for early intervention, and the recent widespread recognition of this has led to the development of the Nottingham Onset Schedule (NOS) by a group of Section members and researchers from Nottingham. Onset is conceptualised as possibly having: a) a prodrome of two parts (a period of 'unease' followed by more definite but still non-diagnostic symptoms); b) the appearance of psychotic symptoms; c) a build-up of diagnostic symptoms leading to a definite diagnosis. These are assessed by a short guided interview with the patient and an informant. Early experience with the NOS shows that it is acceptable and feasible, and inter-rater reliability is now being studied (3).

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Exploring boundaries of schizophrenia: a comparison of ICD-10 with other diagnostic systems in first-admitted patients

LENNART JANSSON[1], PETER HANDEST[1], JAN NIELSEN[1,2], DITTE SÆBYE[3], JOSEF PARNAS[1,4]

[1]Cognitive Research Unit, Department of Psychiatry, Hvidovre Hospital
[2]Institute of Psychology, University of Copenhagen
[3]Institute of Preventive Medicine, Copenhagen
[4]Danish National Research Foundation, Center for Subjectivity Research, University of Copenhagen

The introduction of operational criteria for clinical and research diagnosis in psychiatry was motivated by alarmingly different diagnostic habits among British and American psychiatrists (1). With respect to schizophrenia, at least 15 different diagnostic systems may be identified in the literature over the last three decades (2). The operational approach in psychiatry, considered by many as a progress in the right direction, is also being increasingly criticized for serious epistemological shortcomings and for a number of negative pragmatic consequences for psychiatry as a profession (3-7). "The [operational] diagnosis has almost become a thing in itself - a certainty of 'concrete dimensions' [...] 'allegedly' being more data based, has even assumed the aura of allowing psychiatry to keep pace with the rest of medicine as a 'technological triumph'" (5). Thus, although the contemporary DSM and ICD criteria for schizophrenia are a *convention* of unknown validity as compared to their potential rival definitions (see 8 for an extensive discussion), these criteria are being increasingly considered by the residents and the younger colleagues as *the* criteria which somehow must reflect the true nature or essence of this disorder. Needless to say, the official diagnostic criteria exert powerful censoring effects on the editorial and funding policies.

The purpose of this study was to revive the issue of boundaries of schizophrenia by comparing the ICD-10 criteria to other diagnostic systems. Special attempt was made to assess the concurrent validity of ICD-10 and ICD-9. The study is a part of an ongoing prospective follow-up investigation of first-admission cases (The Copenhagen Prodromal Study).

METHODS

The sample consisted of 155 patients with age <40 years, consecutively first-admitted to the Department of Psychiatry at Hvidovre Hospital (catchment area: 130,000 inhabitants of the city of Copenhagen) during the period from September 1, 1998 to September 1, 2000. Patients who suffered from clear-cut affective disorders, organic disorders or severe substance abuse as a primary diagnosis, or as a clinically dominating secondary diagnosis, were not included. Severely psychotic and aggressive, or involuntarily admitted patients were not included, due to ethical concerns or because they were considered unable to undergo the full examination. The sample, according to the clinicians in charge, included clearly psychotic patients (approximately one third) as well as patients regarded as non-psychotic, yet possibly within the schizophrenia spectrum.

All patients received a 3-5 hour interview, consisting of the Operational Criteria Checklist (OPCRIT [9]) expanded with several items used in the Copenhagen High Risk Study (10), the Danish version of the Bonn Scale for the Assessment of Basic Symptoms (BSABS [11]), the Positive and Negative Syndrome Scale (PANSS [12]), the Premorbid Adjustment Scale (13) and the Global Assessment of Functioning (GAF [14]). This was supplemented by a 5-6 page typed summary of premorbid functioning, social history and detailed descriptions of psychopathological features, illustrated by verbatim quotes. All interviews were performed by a senior clinician (PH), trained in Germany in the use of the BSABS by the authors of the scale, and with extensive research interviewing experience from a genetic linkage study. Both the interviewer and another senior clinician, with research interview experience from the Danish-American adoption studies (LJ), completed a checklist comprising all single symptoms and other criteria required by several diagnostic systems: the St. Louis criteria (15), the Research Diagnostic Criteria (RDC [16]), the Flexible System, narrow and wide (17), the Vienna Research Criteria (2,18), the DSM-IV, the ICD-8/9, and the ICD-10. The ratings were made on the basis of all materials available on each patient (i.e., the interview summary, chart notes by the staff clinicians and second informant

interviews). Whenever a disagreement in the rating occurred, a consensus assessment of the symptom in question was performed by three clinicians (PH, LJ, JP). Only the consensus ratings are used here for data analyses. Schizophrenia diagnosis was generated by computerized algorithms written for each diagnostic system. For each patient, a family history of mental illness was obtained (19). All patients were tested (by JN) with the Thought Disorder Index (TDI [20,21]), which is a Rorschach-transcript based, quantitative and qualitative assessment of different aspects of formal thought disorder, subsequently scored by a group of psychologists trained and regularly supervised by Philip Holzman from Harvard University (one of the creators of the TDI). The inter-rater correlation of the total TDI scores between two independent raters performed on a random sample of 10 transcripts was 0.82 ($p< 0.01$) (22). The TDI responses were factor analyzed, resulting in two factors: one measuring severe formal thought disorder, comprising absurd responses, idiosyncratic symbolism, autistic logic and confabulation ('state' formal thought disorder), and a second factor, referring to trait-like semantic distortions ('trait' formal thought disorder), such as inappropriate distance, vagueness, peculiar verbalizations and queer responses.

We applied analysis of variance with the continuous variables as response, and the binary ICD-9 and ICD-10 schizophrenia diagnostic status as explanatory variables, and compared the parameter estimates for ICD-9 and ICD-10 schizophrenia by means of a likelihood ratio test size evaluated in a chi square distribution. Normality of the residuals from these models was checked both with the Shapiro-Wilks test and with a diagram of fractils. When both the test ($p<0.05$) and the plot demonstrated that normality could not be assumed, a transformation of the response variable with the logarithm or the square root function was tried and rechecked for normality. If the transformation worked successfully, the results from this model is presented. If normality still could not be assumed, we dichotomized the response variable into low and high scores (into, as far as possible, equally sized groups, Table 1). In this case (and for all originally binary responses, i.e. sex, marital status, family history), a binary logistic regression model was tested with the dichotomized (binary) outcome variable and ICD-9 and ICD-10 diagnostic status as explanatory variables, with a comparison of the estimates (odds ratios) for ICD-9 and ICD-10 schizophrenia. The odds ratios for the reference groups – non-ICD-9-schizophrenia and non-ICD-10-schizophrenia – were set to 1.00. PROC GENMOD in SAS 8.2 was applied for the analyses.

RESULTS

Polydiagnostic assessments

The results of the polydiagnostic assessment of all 155 patients appear in Table 2, which indicates the numbers of patients with schizophrenia by each diagnostic system, numerical overlaps as well as the kappas of agreement between the systems. The ICD-10 simple schizophrenia category is considered separately, because it deviates substantially from the main ICD definition of schizophrenia. The ICD-10 (without the simple category) appears as the most conservative (n=35) and the ICD-9 as the most liberal (n=89) system. All ICD-10 schizophrenia cases, including the simple category, are covered by the ICD-9

Table 1 Descriptive characteristics of ICD-10 and ICD-9 combinations

Variable	Groups	Non-schizophrenic according to both ICD-9 and ICD-10	Schizophrenic according to ICD-10 but not ICD-9	Schizophrenic according to ICD-9 but not ICD-10	Schizophrenic according to both ICD-9 and ICD-10
Familiar predisposition	Predisposed to schizophrenia	4	0	11	9
	Not predisposed	59	0	43	26
'Trait' formal thought disorder	High score: 6-43 points	28	0	34	16
	Low score: 0-5 points	38	0	16	18
'State' formal thought disorder	High score: 2-20 points	22	0	23	14
	Low score: 0-1 points	44	0	27	20
Sex	Male	25	0	19	17
	Female	41	0	35	18
Marital status	Married/cohabitating	40	0	25	12
	Single	22	0	27	22
PANSS positive symptoms	High score: 13-29 points	11	0	22	34
	Low score: 7-12 points	51	0	32	1
PANSS negative symptoms	High score: 13-31 points	13	0	31	29
	Low score: 7-12 points	52	0	20	6

Data on occasional individuals are lacking. PANSS: Positive and Negative Syndrome Scale

Table 2 Numbers of individuals and kappa agreements (in brackets) between different diagnostic criteria for schizophrenia in a sample of 155 first admissions

	ICD-9	Flexible System, wide	Research Diagnostic Criteria	Flexible System, narrow	Vienna Research Criteria	DSM-IV	St. Louis criteria	ICD-10	ICD-10 Simplex
ICD-9	89								
Flexible System, wide	71 (0.595)	84							
Research Diagnostic Criteria	46 (0.397)	45 (0.422)	52						
Flexible System, narrow	52 (0.545)	52 (0.598)	36 (0.537)	52					
Vienna Research Criteria	40 (0.317)	41 (0.388)	24 (0.244)	34 (0.541)	47				
DSM-IV	37 (0.351)	36 (0.368)	38 (0.769)	31 (0.553)	20 (0.262)	39			
St. Louis criteria	36 (0.353)	34 (0.345)	29 (0.517)	29 (0.517)	21 (0.318)	26 (0.582)	37		
ICD-10	35 (0.356)	33 (0.346)	34 (0.701)	31 (0.606)	20 (0.309)	32 (0.823)	25 (0.602)	35	
ICD-10 Simplex	8 (0.078)	7 (0.064)	0 (-0.098)	5 (0.085)	3 (0.023)	0 (-0.094)	3 (0.053)	0 (-0.092)	8

definition. The best diagnostic agreement is observed between ICD-10 and DSM-IV (kappa 0.823) and RDC and DSM-IV (kappa 0.769). There are non-trivial differences between even rather conservative systems: e.g., 10 (28%) of the ICD-10 schizophrenia cases are not so diagnosed by the St. Louis criteria, whereas 18 (34%) of the RDC schizophrenia cases are not so diagnosed by the ICD-10.

There are substantial differences in *which patients* are actually labeled as schizophrenic. Thus, similar numbers in the cells of Table 2 reflect, to a substantial extent, different individuals (see Figure 1 for illustration of distributions of individual patients in four selected systems). After excluding the ICD-10 simplex category, *there are only 14 cases diagnosed as schizophrenic by all 8 systems and 108 patients diagnosed as schizophrenic by at least one of the systems*.

Comparisons of the ICD-9 and ICD-10

The inter-rater (PH vs. LJ) reliability for the ICD-10 diagnosis was higher than for the ICD-9 (kappa 0.855 vs. 0.505). The median inter-rater kappa for the *single symptoms* was 0.587 (incoherence) for the ICD-10 and 0.603 (autism) for the ICD-9. *All* the 35 patients with ICD-10 schizophrenia had *different constellations* of symptoms; among the 89 patients with ICD-9 schizophrenia, 61 different symptom combinations were observed. The ICD-10 diagnosis was made on the basis of the criterion 1 solely (Schneiderian symptoms, voices from the body and/or bizarre delusions) in 4 individuals (11%), on the sole basis of the criterion 2 (assortment of second rank and negative symptoms) in 6 individuals (17%), and by both criteria 1 and 2 in 25 individuals (72%). Statistical comparisons of the ICD-9 and ICD-10 diagnoses (without simple schizophrenia) on a number of concurrent characteristics appear in Table 3.

There are no significant socio-demographic differences, but the ICD-10 schizophrenics tend to be more

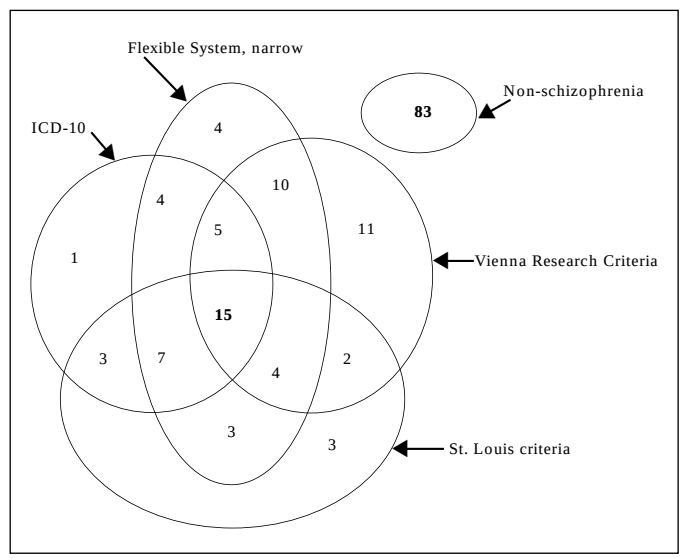

Figure 1 Numbers of individuals with schizophrenia diagnosis according to four selected systems

Table 3 Statistical comparisons of ICD-9 and ICD-10

Binary logistic regression	**Odds ratio in the ICD-9 schizophrenic group (95% CI)**	**Odds ratio in the ICD-10 schizophrenic group (95% CI)**	**p value for comparison of odds ratios**
Family predisposition to schizophrenia	**3.77 (1.13-12.65)**	1.35 (0.49-3.70)	0.273
High score for 'trait' formal thought disorder	**2.88 (1.34-6.22)**	0.42 (0.17-1.03)	**0.008**
High score for 'state' formal thought disorder	1.70 (0.80-3.63)	0.82 (0.34-1.98)	0.309
Male sex	0.89 (0.42-1.88)	1.74 (0.73-4.14)	0.343
Married/cohabitating	0.51 (0.24-1.08)	0.59 (0.24-1.43)	0.838
High score for PANSS positive symptoms	**3.19 (1.37-7.44)**	**49.45 (6.29-388.5)**	**0.007**
High score for PANSS negative symptoms	**6.20 (2.71-14.19)**	**3.12 (1.09-8.85)**	0.387
Analysis of variance	**Parameter estimate in the ICD-9 schizophrenic group (p value)**	**Parameter estimate in the ICD-10 schizophrenic group (p value)**	**p value for comparison of parameter estimates**
Age at first psychiatric symptoms	-0.31 (0.777)	1.05 (0.424)	0.511
Global Assessment of Functioning (GAF) score	**-8.28 (<0.0001)**	**-15.46 (<0.0001)**	0.051

Statistically significant results are in bold types; results of statistically marginal significance are underlined

frequently male, whereas the first psychiatric symptoms tend to appear earlier in life among ICD-9 schizophrenics. The ICD-9 schizophrenia status is associated with a nearly four-fold and statistically significant risk for having a positive family history of schizophrenia, whereas this is not the case for ICD-10. Only the ICD-9 schizophrenia diagnosis is associated with a significantly increased level of 'trait' formal thought disorder as measured by the TDI. Both ICD-9 and ICD-10 schizophrenia diagnoses are associated with decreased levels of functioning measured by GAF (more so for ICD-10) and increased PANSS symptom levels (ICD-10 dramatically so with positive symptoms, and ICD-9 mainly with negative symptoms).

A re-analysis of the comparisons between ICD-9 and 10 after expanding the ICD-10 with the simplex category did not change the overall picture, except for increasing the significance of the association between ICD-9 schizophrenia and family history (odds ratio for ICD-9 = 4.64; ICD-10 = 0.84), making the association between ICD-10 schizophrenia and living alone significant (odds ratio 0.41; 95% CI = 0.17-0.98), increasing the association between the PANSS negative symptoms and ICD-9 (odds ratio for ICD-9 = 6.75; ICD-10 = 1.96) and decreasing the association between ICD-10 and the PANSS positive symptoms (odds ratio for ICD-9 = 3.89; ICD-10 = 5.21).

Finally, we looked into potential differences among the ICD-10 schizophrenia cases when diagnosed by criterion 1 only, 1 and 2 simultaneously, and criterion 2 only. The sample sizes were too small for a reliable statistical analysis: yet, in the Kruskal-Wallis analysis of variance, the criterion 1 plus 2 patients had the lowest mean GAF score (30.68 vs. 35.00 for patients fulfilling only criterion 1 and 43.17 for patients fulfilling only criterion 2, p = 0.054), whereas the sole criterion 2 patients had the most frequent family history of schizophrenia (4 out of 6 vs. 1 out of 4 for patients fulfilling only criterion 1 and 4 out of 25 for patients fulfilling both criteria, p = 0.043).

DISCUSSION

In contrast to other polydiagnostic studies, which dealt with predefined psychotic patients only (23-25), this sample was psychopathologically more variegated, reflecting a broader range of first-onset psychiatric contacts and so perhaps being more generalizable to a standard diagnostic setting outside a closed ward. It is likely that the polydiagnostic studies restricted to predefined psychotic patients inflated the concordance between the investigated systems.

Each of the diagnostic systems examined in the present study has its own rationale and background (e.g., the Flexible System is derived from statistical analyses of a large body of psychopatological data in more than 1000 identically assessed patients from nine different countries) but no convincing evidence of a superior validity. The interdiagnostic kappas (Table 2) suggest that RDC and DSM-IV, as well as DSM-IV and ICD-10, are close to each other, reflecting historical modelling sequences. There are, however, quite substantial differences among the systems with respect to *how many* and *which* patients are diagnosed as schizophrenic (Table 2 and Figure 1).

These findings re-emphasize the need for a continuing debate and research on the boundaries of schizophrenia. The obvious arbitrariness of the contemporary diagnosis poses a serious problem for etiological research (especially genetic linkage research) and early intervention studies (e.g., how many of the so-called 'pre-onset' patients in one diagnostic system are already 'post-onset' in another system?). The issues of validity and reliability of psychiatric diagnosis are frequently conflated in the literature, yet a demonstration of a high reliability of a given diagnostic system does not make that system valid. In the case of

schizophrenia, we are confronted with a viciously circular difficulty: we do not possess robust extra-clinical markers to anchor the diagnosis, while at the same time unclear phenotypic limits impede the etiological research. In the presented comparisons of ICD-9 and ICD-10 (Table 3), only formal thought disorder and family history may be considered as *concurrent/construct validity* indicators, i.e. as extra-clinical measures, yet essentially pertinent to the disease concept as such (26). Formal thought disorder is intrinsically linked to the notion of schizophrenia, and the TDI is currently its most sophisticated measure (27). The view of schizophrenia as aggregating in families is as old as the disease concept itself (28). On both indices, the ICD-10 appears to be *less* valid than the ICD-9. This may be linked to what Kendler (26) calls a non-empirical aspect of validity; in this case the conceptualisation of the *phenomenological essence* of the disorder. Thus, the ICD-9 seems to be more oriented towards the fundamental features of schizophrenia, such as autism and self-dissolution (29,30). These aspects become diluted in the ICD-10, through its strong emphasis on the flamboyant psychotic phenomena, and further trivialized through the notion of the so-called negative symptoms.

We are currently starting a 4-year follow-up of this sample in order to assess predictive validity of the different diagnostic systems (the most frequent type of validity testing today) (25,31-38). Yet, temporal persistence of diagnosis (chronicity) is an epistemologically dubious validity indicator. Moreover, the original Bleulerian-Kraepelinian emphasis focused on the stability of the autistic trait phenomena rather than on the continuity of the state indicators (i.e. psychotic symptoms). Finally, in practical terms, chronicity at outcome is often more reflective of the illness duration recorded at the initial assessment than of specific symptomatological constellations (34).

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Psychotherapy and antidepressant treatment of depression: evidence for similar neurobiological mechanisms

FRITZ A. HENN[1], EMMELINE EDWARDS[2], DAVID ANDERSON[3], BARBARA VOLLMAYR[1]

[1]Central Institute of Mental Health, PO Box 122120, 68072 Mannheim, Germany
[2]National Institute of Neurological Disorders and Stroke, Bethesda, MD 20892, USA
[3]Abbott Laboratories, 100 Abbott Park Rd., Abbott Park, IL 60064, USA

The neurobiological mechanisms that underlie depression are not yet entirely clear, and their relationship to the psychological changes which accompany depression have not been explored. Cognitively, it appears that there is a change in the processing of information, often exacerbated by stressful events and loss of control. This leads to the overvaluing of negative interpretations and a sense of hopelessness and helplessness, which characterize the psychological state in depression. Antidepressant medications, electroconvulsive therapy (ECT), cognitive behavioral therapy and interpersonal psychotherapy can reverse this process.

Much of our knowledge about the potential neurobiological changes in depression results from studying the factors that change during the medical treatment of depression. Thus far a series of modulating neurotransmitter systems have been implicated. These mainly include norepinephrine (NE), serotonin (5-HT), and some peptides such as corticotropin-releasing-hormone (CRH) (1), substance P (2) and the endorphins (3). At times the changes leading to depression appear to arise spontaneously, perhaps driven by genetic factors, while at other times they seem to be related to stressors involving loss and loss of control. This observation led Seligman to attempt to create an animal model of depression using aversive stressors in an unpredictable fashion that would lead to a sense of lost control for the animal. This resulted in the development of the learned helplessness model of depression (4). In this model, animals exposed to unpredictable and uncontrollable aversive stimuli alter their behavior in that they no longer try to escape from aversive situations from which they could escape. These animals also develop many of the signs of depression, including weight loss, sleep changes with decreased rapid eye movement (REM) sleep, decreased libido, and increased cortisol secretion. These changes persist for weeks but can be reversed with antidepressant treatment (3). Using this model we wanted to examine the neurobiological mechanisms by which learning reverses helplessness compared to antidepressant medications.

To date we have been able to show that in learned helplessness both the 5-HT and the NE systems show alterations when the animal becomes helpless. Reliable markers of helplessness in these systems are an increase in hippocampal NE beta receptor (5) and 5-HT-1b receptor density (6). Analogous to the situation seen clinically in depression, cortisol, while increased on average, does not show an increase in all helpless animals (7), so that it cannot be seen as a suitable marker. We followed the NE beta receptor density as a function of various treatments, in an effort to determine if the same neurobiological mechanisms came into play in all cases. Initially, we carried out an experiment to examine how closely the level of noradrenergic beta receptor would correlate with helpless behavior, in order to determine if it would serve as a valid marker of the neurobiological mechanisms brought into play in reversing depression. We used this marker in the current study to monitor neurobiological change as a function of pharmacological or behavioral treatment.

METHODS

Learned helplessness training and testing

The animals were initially exposed to a training session during which they experienced a series of random foot shocks of 0.8 mA intensity. The shocks were of varying lengths over 1.5 seconds and with random intervals between them. The sessions lasted for 40 minutes with the rats experiencing a total of 20 minutes of shocks. On the following day the animals were tested in a grid cage with a light cue. They received a 60 second shock of 0.8 mA pulsing on and off with a 35 ms frequency concurrently with a cue light. The shock could be terminated if the rat pressed a bar in the cage. Each trial in which the rat pressed the bar in under 20 seconds was counted as an escape. Initially, rats

would press the bar inadvertently by jumping during the shock and then learn that bar pressing terminated the shock. Rats that had fewer than five escapes in 15 trials were termed helpless, while rats with more than ten were considered not helpless and served as similarly stressed control animals. During any training and testing session, 15 to 20% of the animals were normally found to develop helplessness. They maintained an unchanged level of helplessness for two weeks using this paradigm and then gradually remitted.

Behavioral training and medication treatment

Behavioral training was carried out using a rat harness, which encased the front paws and had threads to each paw whereby the rat could be walked around the cage without having to be touched. The helpless rats were given a signal light and then walked to the bar press to terminate the shock, which began 5 seconds after the light signal. After ten days, most rats had learned to anticipate the shock when being presented with the light signal and went to the bar without assistance. Medication treatment was carried out through daily i.p. injections. The course of treatment ran over five days, in which time a behavioral response was seen. The administered drug dosages were imipramine 18 mg/kg, fluvoxamine 12 mg/kg and mianserin 8 mg/kg all given once daily i.p.

Beta receptor binding

The binding was carried out using methods described by Martin et al (5). Two ligands, ^{3}H-CGP12177 (8) and ^{125}I-iodocyanopindolol (^{125}ICYP) (9), were used and the results compared and found to be identical. Rat hippocampal membranes were homogenized, washed in sodium phosphate buffer, and centrifuged at 25,000 g at 4° C for 10 min. The pellet was resuspended and used for the binding assay. ^{125}ICYP was utilized in a concentration range of 30 to 240 pM, while the CGP concentration ranged from 0.05 to 5.0 nM. In both cases non-specific binding was determined by adding 2 molar d-l propranolol. B-max was determined in fmol/mg protein as a measure of numbers of binding sites. The control values were taken as 100% and correspond to a value of 55 fmol/mg protein.

RESULTS

Figure 1 illustrates the correlation of helpless behavior and NE beta receptor levels in the hippocampus as a function of time. A large series of animals were trained and tested for helplessness. At selected time intervals after the training, a subset of the animals were then retested behaviorally and beta receptor levels in the hippocampus were determined. The curve of behavior vs. time shows that the animals spontaneously gradually lose their helpless behavior. In parallel the curve for the beta receptor levels as a function of time also reverts toward normal. The correlation between the two curves is very good and illustrates that the change in NE beta receptor is a valid marker of helpless behavior and can be used to track the neurobiological effects of antidepressant drugs and behavioral training in helpless animals. It should be noted that on day 3 the animals tested had a somewhat reduced behavioral score, indicating that in this group some animals were spontaneously reverting to non-helpless behavior. This is mirrored in the beta receptor levels, suggesting that the correlation between these variables is very tight.

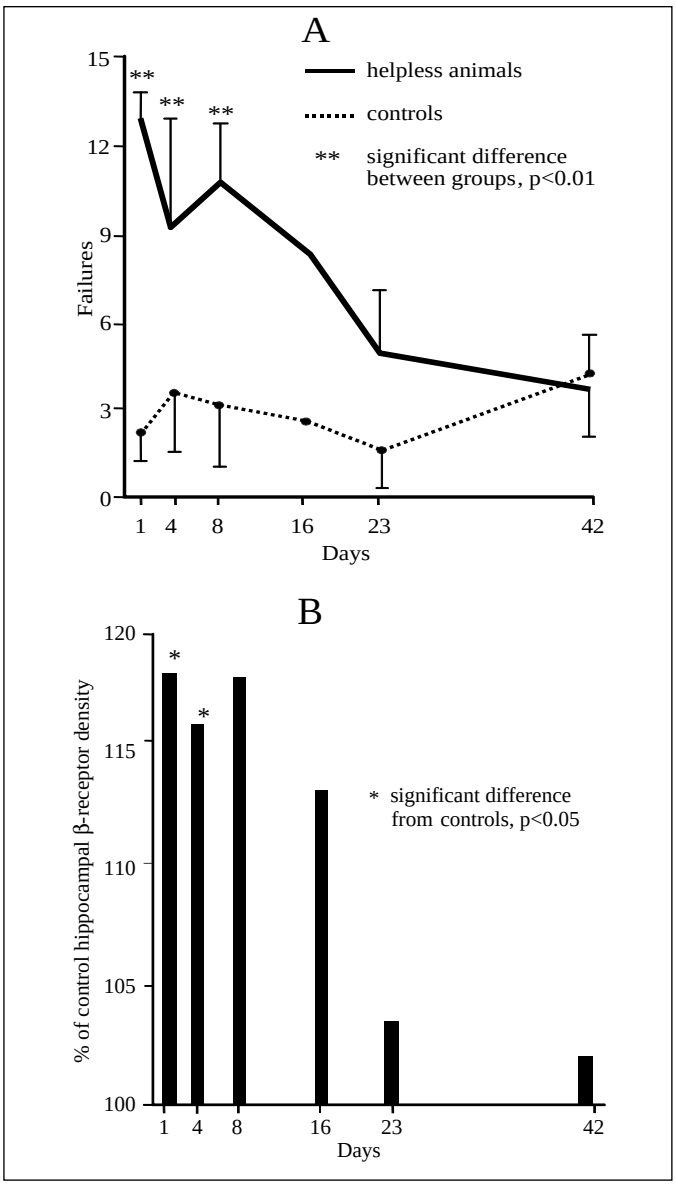

Figure 1 **A**: Number of failures to escape from footshock in 15 trials, in helpless animals compared to controls. **B**: Hippocampal beta receptor density in helpless animals at different time points.

Table 1 indicates that either the treatment with imipramine, fluoxamine or mianserin, or a behavioral training experience all lead to a rapid reversal of the helpless behavior. While the pharmacological treatments appear to

work within five days, the behavioral approach generally showed its effectiveness within ten days and no attempt to optimize the training was attempted. When the animals were examined for levels of NE beta receptors, all three groups had receptor levels that had reverted to normal, non-helpless values. This suggests that in the central nervous system of helpless animals similar changes take place under the influence of antidepressant medication and targeted behavioral training. In the case of fluoxamine and mianserin, our experiments demonstrate that while pathologically up-regulated receptors are normalized, wild type receptors are not down-regulated, in contrast to imipramine, which down-regulates all NE beta receptors.

Table 1 Neurochemical and behavioral response to treatment

	Beta receptors density in % of control value	Behavior failures (out of 15 trials)
Helpless	122 ± 5	12.3 ± 0.2
Imipramine	98 ± 3*	3.8 ± 0.2*
Mianserin	93 ± 4*	4.2 ± 0.3*
Fluvoxamine	95 ± 2*	4.8 ± 0.4*
Behavioral training	101 ± 3*	3.9 ± 0.6*

* Significantly different from helpless value, $p < 0.0001$

DISCUSSION

These results suggest that, at the neurobiological level, both a psychological approach involving learning and a medical approach involving antidepressant medications may act through the same pathways. This suggests that no dichotomy exists between a psychotherapeutic approach and a medical one in terms of central mechanisms, indicating the necessity for developing measures to monitor such changes in the central nervous system of patients, which in turn could then be used to maximize response. The dichotomy between a biological approach and a psychological one appears artificial, as both are aimed at altering the functional organization of the central nervous system in such a way as to normalize responses to stress.

A first drawback of this study is the choice of one arbitrary step in a complex neurobiological mechanism to act as a marker of the complete neurobiological process. Secondly, the study uses methods that are only applicable to animal research.

The chain of events that trigger a depressive episode is thought to involve activation of c-AMP responsive binding element (CREB) and subsequent gene activation. In our view depression arises when specific structural changes involving decreasing synaptic contacts take place. The reversal of depression, as hypothesized by Duman et al (10), involves increasing synaptogenesis. This can be initiated by increasing beta receptor stimulation, among other modulators; this should lead to the down-regulation of receptor numbers, activation of CREB and induction of neurotrophic factors such as brain derived neurotrophic factor (BDNF), stimulating increased membrane synthesis, resulting in increased synaptic contacts. One way to monitor such effects in patients is to find a marker which reflects membrane synthesis. We believe that one such marker may be choline levels as measured by magnetic resonance spectroscopy. The levels measured are the sum of small choline containing molecules, that predominantly consist of phospholipids, which are the building blocks of cell membranes. In an initial attempt to use this marker, we found that choline levels were indeed decreased in the hippocampus of severely depressed patients and that these levels reverted to normal in all cases when the patients responded to a course of ECT (11). Thus, it should be possible to use this marker in patients receiving a variety of treatments, in order to determine whether the same final common pathway, namely new synapse formation, is increased in response to psychotherapy, antidepressant medication or ECT.

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Mental health and mental health care in Asia

PARAMESHVARA DEVA

Department
of Psychiatry, Perak
College of Medicine,
3 Jalan Greentown,
30450 Ipoh, Malaysia

Asia is by far the largest continent in the world in terms of area and is covered by four of the World Health Organization (WHO)'s six regions (i.e., the Eastern Mediterranean, European, South East Asian and Western Pacific). With a population exceeding 3.5 billion, it is by no means a homogeneous continent. It has dozens of cultures, religions, languages and ethnic groups, that spread over climatic zones from the arctic and Himalayan to forbidding deserts of Mongolia and China and steamy tropical jungles of Malaysia and Indonesia. Asia is also a veritable chest of economic treasures and a collection of some of the poorest areas of the world. In political systems, it is no less varied, having a variety of both market economies and planned ones. As a result of these highly varied political systems, Asia also spawns a wide variety of health care systems, often based on historical roots and at times colonial heritages. Over 450 million persons are reported to suffer from mental or neurological disorders in the continent (1).

Mental health care is therefore by no means standardized and extremely varied. These are important points to note, as the many so-called norms of psychiatric care in many economically highly developed countries may not only be not applicable but highly detrimental to mental health care in many parts of Asia. This is particularly true of some aspects of mental health care that are taken for granted in many developed countries, such as community care for the mentally ill, social security for the disabled, hostels for discharged mental patients in the community, and free treatment for the mentally ill. These and many other aspects of mental health care are not available in vast areas of Asia and often substituted by a remarkably resilient, but not always highly successful, family care alternative and a strong heritage of traditional medical care for the mentally ill, that is very often the norm.

HISTORICAL ASPECTS

There is ample evidence that mental health care in the pre-modern age was largely in the community, and provided by members of the family with the help of traditional healers or religious persons in temples and other centers of religion (2). This practice continues in vast tracts of Asia and indeed in many parts of the world. The reasons for this are not difficult to find, as the provision of modern hospital- or clinic-based mental health services within reach of many parts of a developing country is the exception rather than the rule. In many countries there are today relatively good basic health services, but these do not include mental health care.

The reason for this lop-sided development of health care for the mentally ill can be traced to the development of mental health care in many of the poorer parts of Asia that came under colonial rule. The state of the art in mental health care, in the early 1800s and up to the late 1950s, was the mental asylum, usually situated far from the cities and towns, out of sight and often out of the minds of health care systems. These asylums grew up with different administrations and different budgets, similar to the provision for leprosy hospitals and tuberculosis hospitals of the day. Thus, for instance, the Chao Phrya Hospital in Bangkok was built at the turn of the 19th century across the river from the city center. The Woodbridge Hospital in Singapore was built in the 1800s on the far eastern side of the island, a good 10 km from downtown Singapore, where the Singapore General Hospital was sited. In Calcutta (Kolkata), the city's Gobra Mental Hospital built by the British was sited far from the center, where the Calcutta's Medical College Hospital was proudly sited. Hong Kong's Castle Peak Mental Hospital, built by the colonial government, was sited in the new territories rather than on Hong Kong Island. Even the new Kwai Chung Mental Hospital, built in 1982, is far from the city center. The well-known Angodda Mental Hospital outside of Colombo was built a good distance from the Colombo General Hospital.

These examples suffice to underscore the ignorance, fear and psychological prejudice against the importance of mental health and services for the mentally ill in the health care systems. Although the WHO, in its constitution (3), clearly defines mental health as an integral component of health, the historical place of

mental health services in the minds of medical administrators has for the most part remained well outside of the mainstream of health care. As health care developed through not only giant strides in medical discoveries but also health care delivery concepts, such as the shift from hospital to community, the care of the mentally ill has remained for the most part stagnant and behind locked mental hospitals and prejudiced in the minds of the public as well as the vast majority of non-psychiatric health personnel. This paradigm and its stigma has sullied all the advances that have taken place in the field of mental health in the past half a century.

TEACHING OF PSYCHIATRY

The root of all that is wrong with mental health cannot only be traced to the historical development of psychiatric care in the continent, but also in the equally slow changes in the teaching of psychiatry to medical students and other care professionals in most Asian countries. For decades since the late introduction of psychiatry as a subject in medical schools in Asia, all that was taught was 10 lecture-demonstrations of the severely psychotic or depressed mentally ill patients, more as oddities in medical practice than as ill persons who needed to be understood. Even today the teaching of psychiatry is in many medical schools done in large mental asylums, and the content geared to severe illnesses rather than primary care psychiatry as will be seen in the practices of most future non-psychiatrist doctors the medical schools are producing. The aim of teaching of psychiatry appears to be not so much to educate young medical students on how to detect and treat the mental symptoms in their patients, but to give students a superficial overview of the mental side of medicine. Most medical schools in Asia do not conduct formal examinations in psychiatry, and the ability to diagnose and manage a psychiatric patient is not a part of the requirement to become a doctor. The time spent in psychiatry in medical schools varies widely, from two weeks of psychiatry clerkship in most Indian medical schools, to three weeks at the National University of Singapore, four weeks at the Mongolian Medical University and the Beijing Medical University, six weeks in most Indonesian medical schools and nine weeks in the University of Science of Malaysia. The content of this teaching varies widely, but the teaching is largely in psychiatric wards, whereas most mental problems in the community in a country are seen in primary care clinics. The association of psychiatry teaching with the severest illnesses has a negative effect on the mind of the future doctor. In principle, the teaching of a medical discipline should not be exclusively limited to the most difficult cases with poorer prognosis, while the more common cases remain untreated. This type of prejudicial attitude perpetuates the marginalized state of mental health, at community and ministries of health levels, in many countries of Asia. Nursing and other health care professionals are often trained in no other ways either.

Postgraduate training in psychiatry is relatively new in Asian countries, having come about in less than the past 50 years. Most Asian countries have senior psychiatrists today who were trained in UK, France, Russia, Germany or USA. The recent advent of training in Asian countries has not changed significantly the practice of institutional psychiatry, that continues to hold sway over the profession in the developing countries. However, in countries with more established postgraduate training programmes in psychiatry, locally trained psychiatrists are starting to develop ideas and services that are innovative and less dependent on the countries where their senior colleagues were trained. Examples of these are Thai and Malaysian psychiatrists developing better nationwide training of medical officers in primary care psychiatry, and Indian psychiatrists, especially in South India, developing community-based psychiatric care.

MANPOWER IN MENTAL HEALTH CARE

The ratio of mental health personnel to population is nowhere near the WHO recommended levels in the less developed countries of the continent. In China there are about 15,000 psychiatrists for 1.2 billion people (about 1:80,000). In India, with 1 billion people, there are but 3000 psychiatrists (about 1:330,000), Indonesia has about 450 psychiatrists for 210 million people in over 13,000 islands. But numbers of psychiatrists alone do not tell the whole story, as the distribution of the psychiatrists is so heavily weighted in favour of the large and prosperous cities that the rural poor are not able to access even basic mental health care. Thus about 50% of the psychiatrists in Indonesia live and work in the mega-capital city of Jakarta, with an estimated population of over 12 million people (about 6.5% of the country's population). The story is not much different in India, Philippines or Thailand.

When it comes to sub-specialisation, the figures are even less encouraging. Thus in Malaysia, for 24 million people, there are seven child psychiatrists, not all of whom have had formal training. There are but three forensic psychiatrists in Malaysia. There are also many countries where the only psychiatrists are in the capital city, such as in Vientiane in Laos. Clearly, for lack of resources or lack of interest, mental health remains marginalized in the realm of health care in most countries in Asia.

STRENGTHS AND PROMISING TRENDS IN PSYCHIATRY IN ASIA

Despite these many problems facing psychiatry and mental health care in Asia, there are several strengths that cannot be ignored and indeed are worth preserving, if possible. Among these are the still largely intact family cohesion, that is a resource for support of the mentally ill. Most

mental patients in Malaysia are visited when admitted in hospitals on a daily basis and taken back to their own homes when discharged. Rejection of the mentally ill is still fairly uncommon and occurs in conditions of abject poverty and economic privation. This however may change rapidly with provision of insurance cover or reimbursement systems that are designed to encourage long hospital stays, as in Japan and Korea, where the average length of stay in private hospitals may exceed a year.

Traditional belief systems encourage care of the disabled and mentally ill in many cultures in Asia. Thus many mentally ill are said to be possessed by spirits and capable of special powers and sometimes even revered. While this may deny them access to treatment, their social status is elevated beyond the stigmatization that may otherwise occur. Religious practices and belief in religion are remarkably strong in most of Asia and this is another source of both caring and treatment for the mentally ill. Many treatment centers focus on prayers for the cure or well being of the ill person and this appears to be beneficial to some.

There are growing numbers of mental health non-governmental organizations (NGOs) in India, Thailand, Malaysia, Japan, Korea that have started dealing with numerous mental health problems in the community, mainly through public education, awareness raising and lobbying for better care. Some have set up their own training for volunteers, as in Korea, and day centers for rehabilitating mentally ill persons in the community, as in Malaysia and Philippines.

CONCLUSIONS

Mental health and mental health care have not become a high priority in most Asian countries, despite the recent emphasis at international level. The reform in mental health care will have to be preceded by the building blocks of change in training of health professionals in basic primary care mental health. Hopefully this will trigger the awareness that is lacking in health care planners to make provisions for the mental component of health that the WHO has been soliciting for several years. As long as medical schools keep repeating the same archaic ways of teaching psychiatry, with the most seriously ill in mental hospitals as examples, mental health will remain stagnant.

The institutional image of mental health has to change, with the provision of more small short-stay units for care of the seriously ill and more community based care. Lastly, public education and NGO work in mental health must be boosted to improve the understanding among all of the basics of mental health and mental illness.

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Mental health of refugees: the case of Azerbaijan

NADIR V. ISMAYILOV, FUAD ISMAYILOV

Azerbaijan Psychiatric Association, Str. Shamil Azizbekov 95, FI 43, Baku, Azerbaijan

Azerbaijan has been one of the first republics of the former Soviet Union to face the problem of refugees. At present, 244,000 refugees and 575,000 internally displaced people live in the country. They include the 177,600 Azerbaijanians, the 11,000 Moslem kurds and the 3,500 Russians who were deported from Armenia in 1987-1988; the 49,234 Meskheti Turks deported from Uzbekistan in 1990; the 1,500 refugees from Kazakhistan and the 1,000 refugees from North Caucasus; the 56,000 Azerbaijanians living in the Nagorny Karabakh autonomous region who were internally displaced in 1991-1992; and the 519,000 Azerbaijanians of the seven regions adjacent to Nagorny Karabakh (Lachin, Kalbajar, Agdam, Fizuli, Gubatli, Jabrail, Zangelan) who had to leave their homes due to the occupation by the Armenian military forces in 1993.

THE CURRENT SITUATION OF REFUGEES

74,000 of the above-mentioned refugees are placed into 13,500 tents in 20 camps of various Azerbaijan regions. 99,000 persons live in villages; 17,500 live in public buildings, schools, nursery schools; 20,200 live in sanatoriums, boarding houses, tourist centers; 156,400 live in the houses of their relatives or friends; the remaining live in farms, wagons and other places without electricity, gas and water supply. Due to the lack of financial resources, the government has been unable up to now to meet the main refugees' needs (food, medical care, social security, etc.) satisfactorily.

Among refugees' social problems, the most essential are unemployment and education. 260,000 adult persons who would be able to work have no job. 600 schools, 250 nursery schools, 65 technical colleges and 2 institutions of high education were destroyed during military operations. As a result, over 210 thousand schoolchildren and students have lost a chance to continue their education. Of 111,043 children up to 5 years old, only 8,300 attend preschool institutions. In spite of the government's efforts (introduction of education programs, free of charge textbooks), most school-aged refugees do not go to school and about 20% of them are illiterate.

A further serious problem is medical care. In the occupied areas, about 700 medical institutions (clinics, maternity hospitals, children's hospitals, primary care centers, drugstores, etc.) were destroyed. The damage inflicted to the health care system was of about 1,2 billion US dollars. In spite of the fact that local health care services and international organizations in Azerbaijan did their best to avoid the arising of epidemics of infectious diseases, several gastrointestinal diseases (including helminthiases), skin diseases (scabies, pediculosis, mycoses), respiratory infections, rheumatism are widespread among refugees. In the period between 1989 and 1998, fertility rate has abruptly dropped and mortality has increased, with a decrease of population growth of 16.9-22.6%. Refugees' newborn mortality is 6-8 higher than in the general population (150-200 deaths/1000 vs. 25/1000).

MENTAL HEALTH PROBLEMS OF REFUGEES

Of course, the above-mentioned problems could not be without consequences for the mental health of the displaced population. The most widespread mental disorders are long-term depressive, anxiety and stress-related psychosomatic disorders. Among the factors having a negative impact on refugees' mental health are the loss of close relatives, the stress caused by staying in the military operations region or being hostage, the uncertain social status, the difficult economic situation, the strained relations with local population, the nostalgia for abandoned lands.

In spite of substantial mental health problems, very few refugees seek medical help. For instance, in 2001, of 144,000 refugees officially residing in Baku, only 314 referred to the city psycho-neuralgic dispensary, which is the only national institution providing outpatient psychiatric care. The diagnoses made in these patients are reported in Table 1.

There are several reasons why so few patients refer to psychiatric services:

a) Stigmatization of mental disorders. A very common statement is: "We have already lost our relations, left our homes and lands. Should we

Table 1 Psychiatric diagnoses made in the 314 persons referring to the Baku psycho-neuralgic dispensary (according to Aliyev and Abbasova [1])

ICD-10 diagnosis	N. patients (%)
• Organic disorders (mainly postconcussional syndrome)	91 (29.0)
• Schizophrenia and delusional disorders	36 (11.5)
• Affective disorders (mainly depressive disorders)	31 (9.9)
• Neurotic, stress related and somatoform disorders	62 (19.7)
Phobic-anxiety disorders	1
Dissociative disorders	35
Somatoform disorders	8
Neurasthenia	18
• Personality disorders (mainly emotionally unstable and histrionic type)	39 (12.4)
• Mental retardation (mainly moderate type)	55 (17.5)

now admit that we lost our mind?". A common belief is that a diagnosis of mental disorder makes the person's image worse in the eyes of surrounding people and can negatively influence his or her future (for example, his or her marriage or employment). Another reason for avoiding psychiatrists is the fear of forced treatment and placement in a psychiatric hospital.

b) Lack of information on mental health issues. Traditionally, severe mental illness is regarded as a soul insanity, whereas such conditions as depressive, anxiety and adjustment disorders are considered not as mental illnesses but as normal reactions to real life problems. At the same time, non-psychotic disorders are often considered as physical problems and refugees with such disorders use to refer to the specialists of other fields of medicine.

c) Low social-economic status. Refugees have often to pay for medicines and services even at government medical institutions. Therefore, they refer to psychiatric units only in case of severe mental illness.

d) Distrust on the government psychiatric institutions, due to the general negative attitude of refugees to the official authorities which (in their opinion) do not care for them.

e) The conviction that mental health services will be unable to provide an effective care if a solution to basic living problems is not made available.

MENTAL HEALTH CARE FOR REFUGEES IN AZERBAIJAN

Various international organisations have played an important role in providing mental health care to refugees in Azerbaijan. Since 1993, after the United Nations General Assembly passed four resolutions concerning the Nagorny Karabakh problem, sixteen international organisations have launched activities in Azerbaijan, and their programs include provision of food, clothes and medical care. Although almost all these organisations do not explicitly provide mental health services, their medical teams include about 20 psychiatrists, who provide consultancy on mental health issues and outpatient treatment. In addition, two local humanitarian organisations dealing with refugees' children provide some psychotherapeutic interventions in their programs. Unfortunately, most humanitarian organisations have completed the implementation of their programs, and the amount of humanitarian aid has decreased almost three times in recent years (2).

Since the appearance of the first refugees in Azerbaijan, the government has passed several acts providing privileged services to refugees. One of the first of them was Order #145, providing simplified acceptation of refugees to psychiatric institutions, regardless of their place of residence and the availability or not of referral from a medical institution. Moreover, some special drugstores providing free of charge medicines to refugees were established.

An important step towards the improvement of the situation would be the establishment of a Mental Health National Program, including a specific section devoted to refugees' mental health. Practice shows the need for different methods of care in these populations. Since in some regions the concentration of refugees occupying camps, villages and dormitories is particularly high, it seems that mental health care should be decentralized and community-based approaches should be adopted. Non-governmental organizations providing alternative services can play an important role in the organising of mental health care.

At present some small projects on psychosocial rehabilitation of refugees (particularly invalids and children) are successfully implemented in Azerbaijan (2). One more prospective line is the implementation of educational programs for refugees describing mental health issues. On the one hand, such educational programs could be helpful in fighting stigma related to mental disorders; on the other, they could inform people about how to apply for care. Such programs will be also essential when refugees will return to their lands and will have to adapt to the new conditions after settlement of conflict and liberation of occupied areas. In relation to this, a very significant assistance can be provided by international bodies financing projects on refugees' psychosocial rehabilitation, as well as by professional organisations with a specific experience in the field.

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Bioethics and psychiatry: a challenging future

FERNANDO LOLAS

Regional Program
on Bioethics,
Pan American Health
Organization, Providencia 1017,
Piso 7,
Santiago de Chile,
Chile

Since its very establishment as a social practice, medicine has been fraught with ethical dilemmas. Moral custom, religious belief, and legal norm have been the guiding tools for dealing with them. Ancient medicine assumed that physicians are helpers of Nature and should follow its mandates, medieval practices relied heavily on Christian conceptions about the beneficent goods provided by God, and modern times saw the emergence of scientific facts as the fundament and raison-de-etre of any legitimate healing practice. Thus, different concepts of health and normality, different evaluations of the role of physicians and medicine, and different conceptions of social ordering have prevailed at one time or another. Yet, the fundamental basis of medicine, its being a secular formulation of suffering, pain, and illness and of the means of their alleviation, has remained invariant throughout the centuries.

Psychiatry, as a branch of medicine, is influenced by the different views and conceptions about art and science dictated by culture. In no other field, however, the positivistic distinction between fact and value has been more ambiguous and more difficult to sustain. Psychological normality, deviance, mental illness, therapies of all kinds, are more sensitive to the fundamental structure of values prevailing in society than other concepts related to health and well-being. The role of psychiatrists has been associated with that of spiritual counsellors and confidents, as well as with that of scientists detached from any sentiment or feeling aside from the concern with the health of their patients and clients. Psychiatry is probably the least biological of the branches of medicine and at the same time the most sensitive to scientific developments in the fundamental sciences. Being both applied neuroscience and philosophical reflection, most ethical debates acquire within its boundaries a particular character, one that makes them more difficult to articulate or to handle.

As in other fields of medicine, the essentials of ethical thinking in psychiatry have been of a normative or regulatory type. Declarations have been published which emphasize the duties of the professionals toward their peers and their patients. This deontological stance has been chacteristic of most written codes and has been reinforced by special international documents related to the participation of psychiatrists in torture, their relationships with political power, and their rights and duties. Historically relevant, as for scientific investigation in general, was the lesson provided by Third Reich psychiatry, with its emphasis on human experimentation without subject consent and its aspiration to eradicate psychiatric illness through elimination of persons.

In the general formulation of the moral obligations of psychiatrists, the role of professional associations has been fundamental. Most national societies have presented codes of ethics which their members should follow, and the *Declaration of Madrid*, issued by the World Psychiatric Association in 1996, set the stage for many documents to follow. Another important line of development relates to the protection of human rights, of which patients' rights are but a special case, helping to reform psychiatric services throughout the world, as exemplified in several documents.

However important these developments are, the evolution of philosophical reflection, the practical needs of regulation in practice and research, and public awareness of rights and duties have led to the development of a new form of applied ethics which has come to be known as *bioethics*. Presented as a form of *global ethics* concerned with the impact of science and technology on human affairs and the moral obligations of humankind to the environment and the biosphere, it has been expanded to cover issues related to equity of access to health care, autonomy of patients in decision making, forms of beneficence which are not paternalistic, and analysis of harm and risk in research and therapy. It is not the contents, however, but the style of reasoning and debate which more essentially characterizes modern medical bioethics. Through the creation of social institutions, such as committees and commissions, a *procedural emphasis* in ethical analysis has been established, using *dialog* as a tool for decision making in matters of therapy, research questions, resource allocation and in those limits to medical action imposed by aging

and death. Bioethics goes beyond the traditional deontological quest for righteous actions on the part of professionals and departs from the highly abstract reasoning of philosophical ethics. It is an openly dialogical form of discourse which does not lead to a conflict with established medicine but to a more horizontal practice, patient-centered in the area of health care, and subject-centered in research. Bioethics takes into account the diversified nature of moral convictions in contemporary democratic societies and the character of 'moral strangers' of the members of different groups seeking ways to overcome unjust differences and to impulse a humane application of the technosciences to the welfare of mankind.

Under this new dialogical spirit, ethical (now bioethical) reflection has to deal, as ever, with the obligations of the professionals towards their peers and clients, but at the same time accord these the right to express their needs and wishes, to articulate societal demands for health and improvement and to provide insights into issues of justice and resource allocation. The problems facing psychiatry today are shaped by the emergence of dilemmas created by science and technology but not solvable by them. Genetic testing has reached limits of prediction not envisioned a few decades ago, posing threats to privacy and confidentiality not hitherto encountered, chemical interventions on thought and feeling render controllable processes which give practitioners powerful tools. Responsible management and control of the means for reducing the burden of mental disease all over the world, but particularly in the poorest regions, should permit an analysis of what is ethically as well as economically sustainable. Research in psychiatry, while increasing and refining generalizable knowledge, should respect human dignity and the rights of individuals.

Psychiatry, as other branches of medicine, faces several dilemmas. The emergence of new professions and the demands of society threaten to reduce the ability of its practitioners and leaders to shape their future. Public accountability restricts traditional paternalistic forms of practicing psychiatry or posing research questions. The influence of the market and industry introduces forms of rationality which have to be reconciled with the traditional scientific, therapeutic, or altruistic goals of the profession and its quest for knowledge based on the empirical sciences.

The (bioethical) declarations of the future will have to tackle these issues. They will have to recognize the changing character of the social scenarios in which psychiatry evolves, its many actors, the many interests which converge on mental health, on scientific research and on the oldest of all human demands: the welfare of mankind aided by reason and virtue. The challenging future of psychiatry and its bioethical underpinnings are rich food for thought and for the exercise of moral imagination.

The Declaration of Madrid and its implementation

AHMED OKASHA
Chairman, WPA Ethics Committee
WPA President Elect

The first position statement of the psychiatric profession concerning ethical issues was the Declaration of Hawaii. This was drafted in 1977 to help psychiatrists in conflicts of loyalty in contemporary societies. A major trigger was the political misuse of psychiatry in countries such as the former Soviet Union, Romania and South Africa, that came to public awareness during the early 1970s. The very first paragraph of the Declaration is concerned with the ethical problem of the political misuse of psychiatric concepts, knowledge and techniques.

At the 1993 World Congress of Psychiatry in Rio de Janeiro, the WPA gave its Ethics Committee the mandate to update the Hawaii Declaration and to develop ethical guidelines for specific situations. The outcome of that process, the Declaration of Madrid, was drafted several times by the WPA Ethics Committee, reviewed by the WPA Council, then revised accordingly, reviewed by the WPA Executive Committee and then revised more than once, until it was presented to the WPA General Assembly in Madrid in August 1996.

The preparations for the Declaration of Madrid involved the collection of data on professional ethics in the field of medicine and psychiatry from all WPA member societies. Those which responded provided us with a richness of perspectives and points of view, that helped to widen our horizon and establish more and more the complexity of the issues that we were addressing. Upon the recommendation of the WPA Long Range Planning Committee, we also collected information on the existence of codes of ethics for psychiatrists in the different countries. We received responses from 21 member societies. Of those societies, six followed the general medical code and two were preparing a code of ethics for psychiatrists at the time of the survey. Furthermore, all member societies received a checklist for the assessment of the human rights conditions of the mentally disordered in their countries, prepared by the Division of Mental Health of the World Health Organization in Geneva. A response was received from 23 countries.

In addition to the rich information which we drew out of those mail surveys, several of the respondents expressed their interest in the issue and their willingness to contribute to a further development of the process. In other words, the preparations for the Declaration of Madrid went beyond the development of a document into creating a circle of psychiatrists interested in the field of professional ethics.

The collected material was shared and discussed among the members of the Ethics Committee. Position papers circulated among the members and eventually a draft was prepared and presented to the Executive Committee for comments. A process of revising, editing and reformulating extended over a period of approximately six months, after which the draft was presented to the WPA Council, whose comments were taken into consideration before the final draft was presented to the WPA General Assembly in Madrid, 1996.

The first section of the Declaration of Madrid outlines the ethical commitments of the profession and the theoretical assumptions upon which these are based. It acknowledges that medical professionals are facing new ethical dilemmas resulting from increasingly complex medical interventions, new tensions between the physician and the patients, and new social expectations from the physician, and that, although there may be cultural, social and national differences, yet the need for ethical conduct and continual review of ethical standards is universal. It also emphasizes that ethical behavior is based on the individual psychiatrist's sense of responsibility towards the patient and his/her judgment in determining what is correct and appropriate conduct.

The second section contains seven general guidelines that focus on psychiatry as a medical discipline concerned with the provision of the best treatment for mental disorders, with the rehabilitation of individuals suffering from mental illness and with the promotion of mental health. It states that it is the duty of psychiatrists to keep abreast of scientific developments, to convey updated knowledge to others, to ensure that involuntary admission is for the welfare of patients, and to inform the person being assessed about the purpose of the intervention. It also stresses that the patient should be accepted as a partner by right in the therapeutic process, that the therapist-patient relationship must be based on mutual trust and respect to allow the patient to make free and informed decisions, and that information obtained in the therapeutic relationship should be kept in confidence and used, only and exclusively, for the purpose of improving the mental health of the patient.

The third section of the Declaration deals with the need to develop specific guidelines on special issues. Guidelines approved by the 1996 General Assembly of the WPA included ethical positions regarding euthanasia, torture, death penalty, selection of sex and organ transplantation.

After the 1996 Congress, the WPA Ethics Committee continued to draft further specific guidelines. Three were endorsed during the 1999 General Assembly, dealing with psychiatrists addressing the media, psychiatrists and discrimination on ethnic and cultural grounds, and psychiatrists and genetic research and counseling.

Currently the Ethics Committee has drafted further specific guidelines to be sent to all WPA components for feedback and to be endorsed at the

next World Congress of Psychiatry in Yokohama, Japan, August 2002. Issues involved include ethics of psychotherapy, conflict of interest in relationship with industry, conflicts arising with third party payers, and violation of the clinical boundaries and trust between psychiatrists and patients.

The Declaration of Madrid has been translated into many languages and constitutes the ethical codes and principles by which WPA member societies should abide. Since the approval of the Declaration, the WPA has been carrying out opinion surveys among its member societies regarding the activities of its various components. The WPA 2001 survey revealed that 76.1% of member societies believe that the WPA has fulfilled its statutory purpose of promoting the highest ethical standards in psychiatric work. This is opposed to 65.6% who gave the same rating in the 1998 survey. 16.8% of societies were not in agreement with that position and 7.1% did not provide a rating. The quality of the WPA Declaration of Madrid and its additional guidelines obtained one of the highest ratings (39% for excellent and 76% for good or excellent). At present, almost all WPA member societies have endorsed the Declaration and its specific guidelines, and the WPA is encouraging member societies to have their own national ethics committee (currently existing in 57.6% of the societies).

The work of the WPA Committee to Review the Abuse of Psychiatry

MARIANNE KASTRUP
Chair, WPA Committee to Review
the Abuse of Psychiatry

In 1977, at the 6th World Congress of Psychiatry, the first WPA ethical guidelines, the Hawaii Declaration, were approved by the General Assembly. This document reflected a growing interest to stimulate professional awareness of ethical and moral problems also at the international level. At the same World Congress, it was decided to create a committee, later called the Review Committee, that had as its mandate to investigate any alleged abuse of psychiatry for political purposes.

At the General Assembly during the World Congress in Vienna in 1983, the work and status of the Review Committee were discussed and it was decided to let the Committee become statutory. The General Assembly decided further to change the scope of the Committee towards complaints about not only political but any abuse of psychiatry. It was emphasized that the WPA is not a human rights organization and that the Review Committee should only handle complaints about specific acts of abuse against specific persons and carried out by specific psychiatrists.

At the General Assembly in 1996, Paul Fink, who chaired the Review Committee at that time, reported that the Committee had received just a few cases for consideration, primarily cases in which mentally ill persons brought forward alleged abuses of psychiatry but where there seemed little obvious evidence to substantiate their complaints. In the light of that, he suggested to terminate the Review Committee in its present form or to merge the Review Committee with the WPA Ethics Committee. The General Assembly, however, decided to renew the Review Committee.

In light of the experiences gained in the period 1996-99, the mandate of the Review Committee was modified by the 1999 General Assembly as follows: "The Review Committee shall review complaints and other issues and initiate investigations on the violations of the ethical guidelines for the practice of psychiatry as stated in the Declaration of Madrid and its additional guidelines in order to make recommendations to the Executive Committee as to any possible action".

This change in the terms of reference of the Review Committee reflects a development in its work. From primarily reviewing individual complaints and allegations regarding abuse of psychiatry, the Committee takes a more proactive form as it may express a concern regarding countries/regions where the intentions of the Declaration of Madrid are not respected, e.g. lacking access to mental health care, or disrespect for psychiatric patients.

The Review Committee has established its rules of procedures, approved by the WPA Executive Committee. The procedures outline the criteria for receivability of cases, information required to start a case, the various steps in the investigation procedure, and the outcome hereof. The Review Committee may also initiate reviews in the absence of a complaint and act upon information available of alleged violations of the ethical guidelines.

Since 1996 the Review Committee has received more than 40 cases/requests. Several cases have after thorough investigation been found to be outside the mandate of the Committee. Some of these concern complaints assessed not to refer to any breach of the ethical guidelines, e.g. a case where the complainant had conducted a parapsychological investigation into telepathy. Others concern general issues of ethical interest but judged not to deal with breaches of the ethical guidelines, e.g. a case on alleged discrimination of gays at work, in the army and in educational institutions. A couple of cases relate to the general condition of mental health care in individual countries and have been considered in collaboration with the WPA Executive Committee. A couple of cases have subsequently been withdrawn or considered closed due to lack of information, e.g. a case of alleged sexual harassment by a psychiatrist.

Ten cases relate to the issue of

"Whistleblowers": they refer to complaints against an administrative praxis in Australia where psychiatric assessments have been used in screening the labor force. The ethical implications hereof are presently discussed with the local Member Society.

Several cases are in the process of investigation. This is done in collaboration with the relevant Member Society. Among these cases is the issue of Falun Gong. The Review Committee is here working closely with the local Member Society, that has affirmed its commitment to the ethical standards of the Declaration of Madrid, its opposition to involuntary hospitalization of individuals who are not mentally ill, and its plan to initiate an investigation of specific cases. This investigation is actually ongoing. The Review Committee has expressed its willingness to collaborate in any investigation or relevant educational activities.

The Review Committee was established with the purpose not just to investigate cases of alleged abuse of psychiatry, but to sensitize the WPA Member Societies and other components to become more aware of ethical issues and be more concerned hereof. The belief has been that such an awareness and concern may facilitate a better understanding and hopefully result in the protection of citizens from any abuse of psychiatry. Since the creation of the Committee, the concern for ethical aspects has not diminished and the necessity of a close collaboration between the Committee and the Ethics Committee, that is developing new ethical guidelines, remains. Increased focus on preventive aspects and the need for educational activities, e.g. in collaboration with the Operational Committee on Education as well as Member Societies, should be recommended.

News from the WPA Secretariat

JUAN E. MEZZICH
WPA Secretary General

WPA continues to grow both in institutional strength and in membership, the latest admission being that of the Kenya Psychiatric Association as our 119th Member Society. As part of its general mission of supporting administratively the functioning of WPA, the Secretariat has carried out in recent months a number of informational, consultative and promotional activities, some of which are highlighted below.

Broad communicational activities

– The Secretariat completed in March 2002 the latest edition of the *Directory of WPA Components*, which contains professional affiliation, address, telephone, fax, and e-mail information for all WPA officers and Secretariat staff members. The *Directory* is produced from our computerized data base, which is continuously updated and verified.

– In collaboration with the Educational Coordination Center, the Secretariat has upgraded *WPA Online* in terms of design, searching power, and e-mail and website opportunities for WPA components. This development has led to striking growth in number of visitors.

– The Secretariat has enhanced and packaged as *WPA Courier* the regular mass mailings with informational and consultative materials that are sent to all Member Societies, Sections, and other components of WPA approximately every six weeks.

Supporting the work of Zonal Representatives

The WPA structure of Zonal Representatives, the roots of which as 'Permanent Council' date back to the Constitutional Assembly of 1950, was established by the General Assembly in 1996 and then upgraded in 1999. Zonal Representatives, as individual officers and as WPA Board, embody institutional goals of decentralized and participatory governance. As experience has been gained over the past six years, Zonal Representatives as a group are displaying greater effectiveness in the fulfilment of their coordinative and two-way communication roles in their respective Zones, as well as their advisory and overseeing responsibilities vis-à-vis the Executive Committee. Additionally, through their work at the regional or continental level, Zonal Representatives are making the five-Region structure of WPA more viable. This is illustrated below through some highlights of Zonal Representatives' recent activities, statutorily coordinated and supported by the Secretary General and the Secretariat.

– Zonal Representatives in the European Region initiated at the WPA Regional Meeting in London, July 2001, a developing network involving WPA Member Societies as well as officers of the European Union and WHO. Through additional sessions in Madrid, October 2001 and Stockholm, May 2002, and supported by an electronic newsletter, they are focusing efforts on organizational matters and medical student education.

– Zonal Representatives in Africa and the Middle East have been instrumental in the organization of several psychiatric encounters over the past year, the most recent being the WPA Regional Meeting in Sharm El-Sheikh, Egypt in January 2002. Their work has been facilitated by the Institutional Program on Sub-Saharan Africa and Central Asia, and rewarded by the recent admission to WPA membership of the national psychiatric associations in Ghana, Sudan, Uganda and Kenya.

– Zonal Representatives in the Americas have contributed decisively to making this region highly vibrant and participatory in a wide range of WPA activities. WPA Regional Meetings have taken place in Buenos Aires in October

1999, Rio de Janeiro in October 2000, and Cancun in November 2001, often in collaboration with the Latin American Psychiatric Association. The Zonal Representative for the US has been catalytic in the flourishing collaboration between the American Psychiatric Association (APA) and WPA.

– Asian and Australasian Zonal Representatives have been quite active over the past year in preparations for the 12th World Congress of Psychiatry, to take place this August in Yokohama as the first ever in Asia. To this effect, they held a productive meeting in October 2001 in Tokyo, with the participation of most Member Societies in the area. The Bangladesh Association of Psychiatrists joined WPA recently and the application of another national association in the region is being processed.

Supporting the 12th World Congress of Psychiatry

– The Secretariat is helping with the general promotion of the upcoming World Congress by announcing it through all our institutional vehicles (*WPA News*, *WPA Online*, *WPA Courier* mass mailings, etc.), preparing press releases and articles for publication, arranging for informational booths at various scientific meetings, and responding to inquiries coming by regular and electronic mail and by telephone, for which our multilingual staff is particularly helpful.

– Illustrating the above in the United States, the Secretariat has contributed to the editing of three sequential articles in *Psychiatric News* (newspaper of the APA), which have been followed by numerous queries by phone and e-mail. Additionally, it arranged for a promotional booth at the APA Annual Meeting this May and facilitated presentations for international visitors at a hospitality suite there.

– The Secretariat has supported preparations for the second edition of the Jean Delay Prize to be awarded at the opening of the 12th World Congress of Psychiatry. It has received all nominations, verified their completion, and assembled them into booklets to facilitate the work of the Jury.

Supporting the 2002 WPA General Assembly

– The Secretariat has drafted for the consideration of the Executive Committee the agendas for the Extraordinary and Ordinary General Assemblies due to meet on August 26, 2002, and the extensive list of documents to support the agendas. Additionally, it paid a visit to the Congress venue to make physical space and logistic arrangements for the Assembly and other administrative activities at the Congress.

– It supported the Planning Committee in the preparation of a systematic Developmental Plan for a WPA Permanent Secretariat, to be presented to the 2002 General Assembly, and has carried out sequentially two consultations on this matter with WPA Member Societies and other components.

– The Secretariat has been the official recipient of sealed bids for the selection of a core professional congress organizer (PCO) for the WPA. These materials will be opened by a technical committee appointed by the Executive Committee for a preliminary review, which will be followed by a review for a selection decision by the WPA Board.

– The Secretariat has participated in the drafting of the Evaluation of the Strategic and Financial Plans 1999-2002 and of the new Strategic and Financial Plans for 2002-2005, for the consideration, first, of the Planning, Financial and Executive Committees, and then of the Board and the General Assembly.

As may be inferred from the above, the work of the Secretariat team seems to be endless, but their dedication to WPA is stimulated by their conviction that our Association's lofty goals require for their attainment a robust and effective administrative base.

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