GUIDE TO PSYCHIATRY FOR DOCTORS

CHAPTER 1

INTRODUCTION

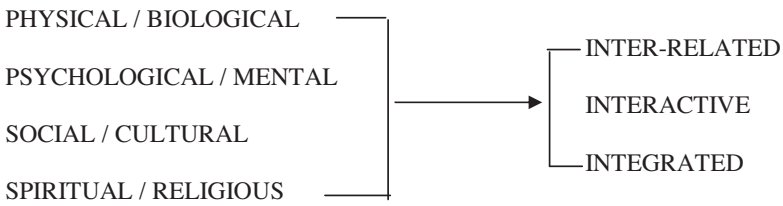
In **medical disease** there are physical and/or mental symptoms and there is generally a recognized aetiology, demonstrable pathology and predictable course i.e. based on biological or physical factors.

In **mental disorder** there are mental and/or physical symptoms. However here, one tends to talk of **predisposing, precipitating** and **propagating** factors which can be physical, psychological and social.

Whether the individual suffers from medical disease or mental disorder there is complaint of discomfort, distress, disability or dependency caused by disturbed structure or function. When **subjective experience** is corroborated by **observed behaviour**, an illness is present or considered. It should be appreciated that mental illness is as real and as incapacitating as physical illness.

Nature of Psychiatric Problems

The human person has **physical, psychological, social** and **spiritual** attributes which are **inter-related, interactive** and **integrated** in function. [In other words there is inter-relation, interaction and integration between the **individual** and his **environment**, between his **body** and **mind,** between his **mental functions** and **neural circuits** and between his **past** and **present life events** and **experiences**.]



Disturbance in any one aspect would affect the well being of the rest, causing stress and distress to the individual as a **whole**. Depending on the **proportions** of biological, psychological, social and spiritual factors or the dominant factor involved, the patient may suffer from an obvious organic disease e.g. epilepsy, brain infection or dementia; a psychiatric illness e.g. schizophrenia, depression or paranoid state; a psychosocial reaction e.g. anxiety, phobia or adjustment disorder; a problem in living e.g. relationship difficulty, domestic crisis or stress in employment; or a religious experience with spiritual struggle.

As a result there are medical, psychological and sociological or cultural **theories** and **models** of mental disorders as well as spiritual explanations of morbidity.

Biological / Medical Concept	-	Pathological Abnormality
Social / Cultural Concept	-	Statistical Deviation
Psychological / Behavioural Concept	-	Developmental Impairment
Spiritual / Religious Concept	-	Supernatural Visitation

However, more commonly the aetiology is **multifactorial,** the complaints are **multi-facets** and the management is **multidisciplinary.**

Apart from the common **psychotic** symptoms i.e. hallucination, delusion, thought disorder, abnormal mood and anomalous behaviour, psychiatric problems often present with symptoms of aches and pains, breathlessness and giddiness, palpitation and fear, poor concentration and forgetfulness, nervousness, sadness or irritability, insomnia, anorexia or bingeing, weight loss, impotence or loss of libido, social withdrawal, sense of worthlessness or hopelessness, loss of interest, pleasure, energy, apparent laziness, slowness or stupidity, hyperactivity, compulsive or addictive behaviour and deterioration in work performance. For obvious reason it is necessary to exclude any underlying physical disease which could produce both somatic and mental symptoms.

According to the nature of each case, the emphasis may be completely medical, psychological, social or spiritual. But more often than not the problem or disorder is **multifactorial in causality** and therefore **multidisciplinary in management** taking into consideration predisposing, precipitating, perpetuating and protective factors. This is all the more so in the developing young and the declining old whose problems are frequently **multi-axial** in nature. No single theory explains all and no single treatment is comprehensive. It is only practical to be **holistic** and **eclectic.**

Size of Psychiatric Problems

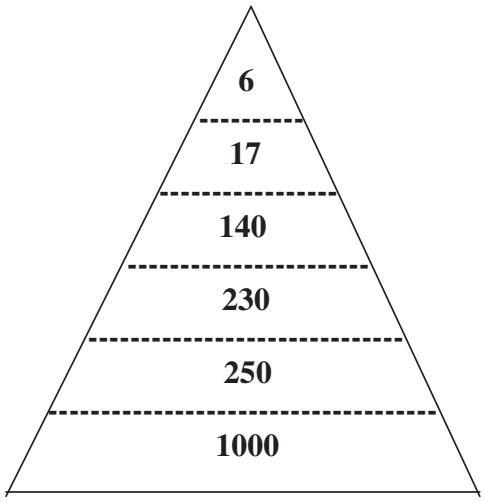
Depending on **concepts**, **definitions, criteria, methodology, demographic pattern**, **economic development, geographical area, natural disaster, migration movement, cultural practice** and **life style,** epidemiological data may vary widely and often of questionable validity and reliability. Much depends on the quality of resource and research as well as changes that take place during the time frame of studies. Based on reported studies or surveys, very roughly the prevalence of the major psychiatric disorders such as schizophrenia and depression (in broad term) is about 0.5-1% and 10% respectively. For the 'minor' psychiatric morbidity like neurotic disorders and others it is about 15-20% and mental retardation or intellectual disability of various degrees occurs around 2-3% of the population. These figures are not static and change with time and circumstances. The dementias would increase with the ageing population while the young are constantly exposed to the danger of drugs and abuses. Alcohol dependence and addictive behaviour such as problem gambling and computer game, are also a major area of growing concern. A recent local survey indicated that less than 10% of the population suffered from anxiety and depression although 3%

suffers from obsessive compulsive disorder, whereas 5-10% of those over 60 years of age would suffer from dementia.

Goldberg and Huxley of U.K. (1980) studied the **pathway to psychiatric care.** In a community survey of a random population sample of 1,000 (one-year period prevalence, median estimates) 250 were noted to have some complaints. Of these, 230 exhibited illness behaviour and sought help at primary care level and 140 were detected to have conspicuous psychiatric morbidity. Only 17 were referred to the psychiatrist and 6 were eventually admitted to mental hospital. The hospital-based figures therefore represent only the tip of the problems. Primary care service therefore plays an important role. Nowadays, the emphasis is on reducing hospital beds and improving comprehensive community service.

PATHWAY TO PSYCHIATRIC CARE -- GOLDBERG & HUXLEY (1980)

(ONE -YEAR PERIOD PREVALENCE , MEDIAN ESTIMATES)



Problem of Terminology

Psychiatric terminology is still in a flux. Mental disorder is a generic term that covers all the mental conditions that fall within the specialty of psychiatry. In common practice it includes mental illness, mental retardation [intellectual disability], personality disorder, substance abuse and sexual deviancy. Mental illness is traditionally divided into psychoses and neuroses. Mental disease is an old term for psychosis or insanity and disease of the mind is more legal in origin and usage than a medical term. The "mind" in the Mc'Naghten Rules is used in the ordinary sense of mental faculties of reason, memory and understanding. Thus, if these faculties are impaired, disease of the mind is present and it matters not whether the aetiology of the impairment is organic or functional, permanent or transient (**Diplock**).

Concept of Normality

In general what is "normal" may refer to the **absence of pathology**, a **statistical average** or an **ideal norm**. When the concept is medical there is less controversy. But when the concept is **psychosocial** and based on **mores** and **norms** then what is normal or abnormal may vary from one society to another and from one period of time to another. This has implication on the therapeutic approach because of **different aetiological concepts** for the same clinical syndrome e.g. eating disorders, koro. The clinician should be familiar and wary of the differences in cultural background, religious belief, political system, economic development, prevalent life style and changing thresholds. For instance being a virgin after a certain age could be a source of embarrassment if not anxiety and depression in a permissive and promiscuous society. Conversely, in a conservative culture losing one's virginity out of wedlock may result in guilt, shame and suicide. However, values can be eroded, life style can be changed and norms can be imposed upon. In the process the Asian extended family system and values break down and ironically the therapist has now to learn family therapy from the West which itself does not appear to sanctify marriage. There is some truth that what is "right" is often defined by "might". But nowadays the catchword is **globalization**.

It is also important to realize that a **statistical deviant** is not quite the same as a **pathological abnormality** although the one may merge into the other. For instance, it has been said that "he is so bad, he must be mad". The response to this is: “Whatever happens to sin?” It is not always easy to separate variation from morbidity i.e. in mental retardation or intellectual disability, personality disorders and borderline conditions. With the completing of the Human Genome Project there may be increasing ‘medicalization’ of human anomalies. There is also a tendency to pathologies existential human imperfections and sufferings or habits.

Classification of Mental Disorders

Different countries may adopt **different** national systems of classification of mental disorders. By and large, worldwide, the Glossary of Mental Disorders (Chapter V) of the World Health Organization's **International Classification of Diseases** 10th Revision (ICD-10), 1992 is used by governments for coding and statistical compilations. It provides **prototypic descriptions** of mental disorder for all levels of clinical user. The American **Diagnostic and Statistical Manual of Mental Disorders** 5th Edition (DSM-5), 2013 continues to provide **criteria sets** of mental disorder favoured by researchers. However, it is not accepted universally even by the American psychiatrists themselves. The nomenclature and classification of mental disorders or even their concepts and descriptions are therefore not universally same or static. In Singapore, the WHO ICD is officially used although professionally and clinically DSM is also widely referred to. There is much similarity and compatibility between the two, though differences exist. There are also different versions of ICD-10 for different levels of user e.g. primary health worker, clinician and researcher. However, in DSM 5 diagnostic classifications, the same criteria and definitions are used for clinical, research, forensic, administrative and educational purposes. It avoids theoretical discussion on cause and effect and is a non-axial system. There would be changes as well as harmony in the new revisions of DSM-5 (May 2013) and ICD-11 which would be ready earliest end of 2015 or perhaps in 2017. The current developments in genetics and neuroscience are probably not yet helpful in the categorization of mental disorders.

It is to be reiterated that unlike medical disease which is diagnosed and treated according to known aetiology, mental disorder is multifactorial in causality and multidisciplinary in management.

There is constant: Inter-relation, Interaction, Integration/Dissociation between:

a) Individual and Environment [Bio-psycho-social factors]

b) Body (+Brain) and Mind [Physical and Mental factors]

c) Mental Functions and Neural Circuits [billions of neurons, trillions of synapses and myriads of circuitries, and 100 odd of neurotransmitters, more complex than computers]

d) Past and Present life events and experiences [in Chain Reactions]

Then we are what we are downloaded with from education and social media such as concepts of "Democracy" and "Human Rights" and "Freedom of Speech".

Proper Psychiatric Assessment is longitudinal and includes Predisposing, Precipitating, Perpetuating, Protecting Factors. The most appropriate diagnosis is then chosen to fit the patient.

In Forensic issue, the focus is on the individual mental state at a material point of time or cross section assessment and the "patient" is often made to fit a diagnosis.

Clinician's conceptualization of clinical presentation **may differ** and therefore the **diagnosis** made **may not concur** [e.g. in acute stress reaction or disorder (emphasis on aetiological stressor), adjustment disorder (emphasis on "change" that is stressful/threatening), cluster of symptomatology, personality pattern/problem, hierarchy of dominant syndrome].

Categories of Mental Disorders have been changing, expanded, controversial and in a flux. New entities are added while some old entities are grouped dimensionally into spectrum disorders e.g. Asperger's under Autism Spectrum Disorder (ASD). In DSM 5 prolonged grief disorder is added by bereavement exclusion from major depression. There are also medicalised inclusions of premenstrual dysphoric disorder, disruptive mood dysregulation disorder, illness anxiety, hoarding, binge eating and minor neurocognitive disorder.

The principles underlying **ICD** are that it should be clinically useful, global in application, targeting mental health professionals, focusing on public health and ultimately aims to reduce disease burden worldwide. In the ICD-11 draft there would be attempt to integrate disorders with onset in childhood and adolescence that continue into adulthood with the main classifications e.g. ASD, ADHD, psychoses and personality disorders. There would also be attempt to reduce the number of categories and simplify where possible e.g. schizophrenic disorders with specifiers. (R. Uher, Canada)

Historically there have been similar clinical syndromes that are given different names by different people, in different cultures and during different periods of time. For instance, the French term "bouffee delirante", the Scandinavian term "psychogenic psychosis", the Anglo-

American term "schizoaffective illness", Leonhard's term "cycloid psychosis" (Kendell); Mitsuda's and other "atypical psychoses" could all refer to the same group of patients. On the other hand the same term i.e. "schizoaffective psychosis" (likewise schizophreniform psychosis, schizotypal disorder and dysthymia) have undergone changes in usage over time or apply to different conditions. There is also a hierarchical approach in which a dominant disorder is diagnosed over the presence of concomitant symptoms from another disorder. A more recent trend is to consider the idea of co-morbidity or dimensional position occupied.

In fact there has been an increase in the diagnosis of co-morbidity due to cross section examination of mental state. However, psychopathology should be assessed and understood **developmentally, sequentially** and **dynamically** to determine what is **primary** and what is **secondary**. This will make management more rational.

Not all mental disorders are diagnosable by ICD or DSM, hence the category of not otherwise specified (NOS) or now "**unspecified**". In clinical practice, variations in diagnostic labels are accepted so long as the operational criteria are spelt out. However in research and evaluation, confusion and controversy arise when diagnostic criteria vary or differ. This is because the clinician's conceptualization of the clinical presentation may differ. Hence DSM which provides criteria sets dominates research work. It is also important to be clear about what is a **nosological entity**, a **clinical syndrome** and a **consensus of opinion**. The implications are far reaching in clinical management, research studies, forensic practice and insurance coverage or subvention. Both ICD and DSM offer no theoretical discussion or explanation on the cause and effect of the classified mental disorders.

The human person is so complex that one should avoid forcing square pegs into round holes. The fact that there are many **different** rating scales or measuring instruments and diagnostic inventories or schedules used indicates that no one has exclusive answers. Often it is better to be descriptive of the condition and allow room and time for further observation and research. There can be **universal truth** derived from the **studies** of **single cases**. But on the other hand what is **statistically correct** and **significant** may have **no predictive value** for **specific** individuals.

For further reading refer to Essential Guide to Psychiatry, Chapter One on "**Nature of Classification Systems for Psychiatric Disorders**", 2014 by **Dr. Chua Hong Choon**.

CHAPTER 2

MENTAL FUNCTIONS AND PSYCHOPATHOLOGY

Just as the body is divided into systems e.g. central nervous system, cardiovascular system, endocrine system, etc., the mind is divided into mental functions i.e. **cognitive function, emotion, volition** or **drive** and **behavioural expression.** These functions are normally **inter-related**, **interactive, integrated** and manifested as the individual's psychic experience and physical behaviour. It should be emphasized that the division of body and mind is artificial and undesirable.

Similarly, like the nervous system which has a hierarchy of organization and function from the peripheral, spinal, brainstem, sub-cortical to cortical structure, there is also a **hierarchy of development and maturation** of mental life from instinctual, primitive, logical, rational and to intellectual manifestations. Impairment of the higher regulatory mechanism will release an innate response from the lower level systems. This results in what is known as **vegetative function** (neurologically) or **regressive behaviour** (psychologically).

To understand **psychopathology**, which is about **abnormal mental functions**, it is necessary to know what is normal (mental) functioning. To begin with, there is cognitive function which essentially consists of perception, memory and thinking.

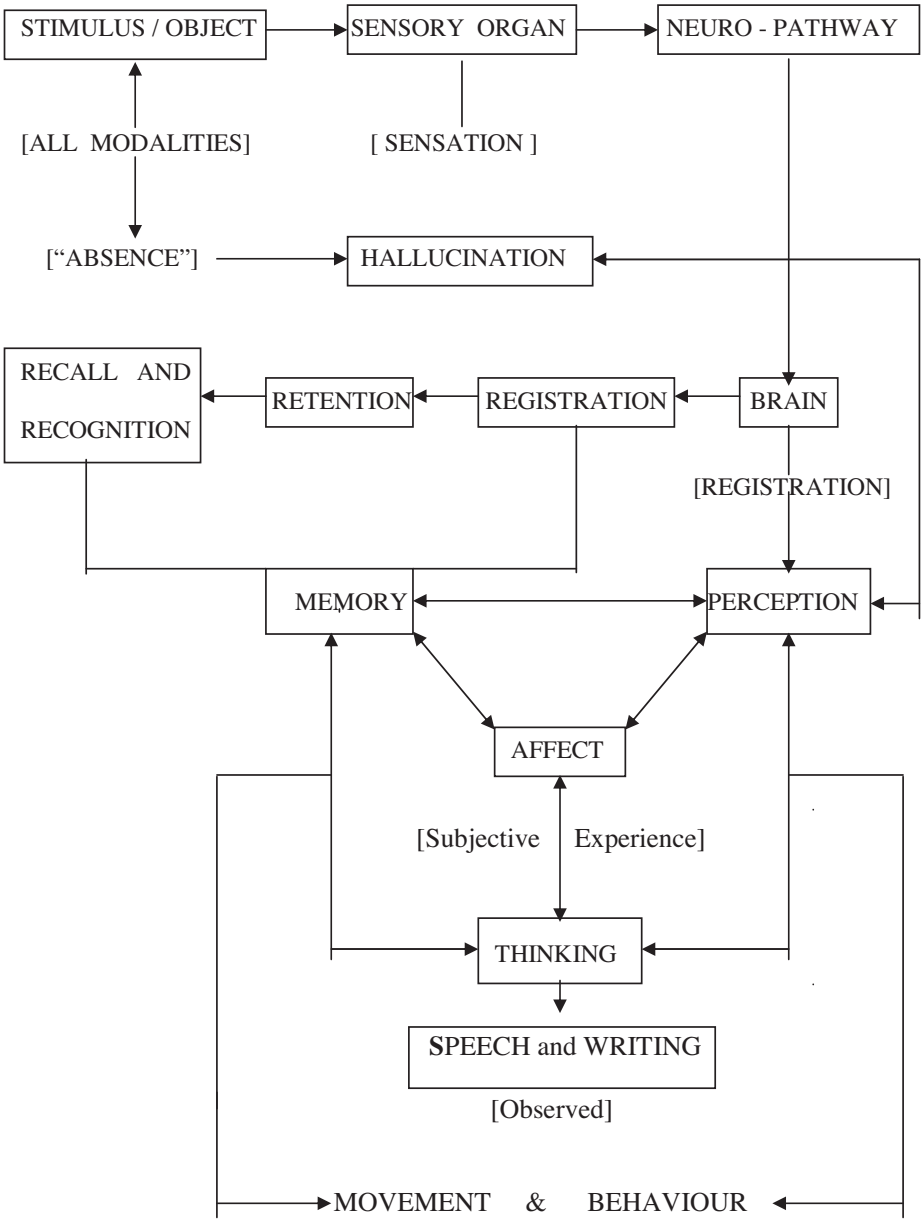
Thus, to see an object, there must first be the object which is the stimulus. Then there must be adequate lighting, a healthy sensory organ viz. the eye, and an intact neurological pathway for sensation received to reach the unimpaired visual cortex. The stimulus, when completely new, is stored as memory for future reference. If the stimulus is familiar then it evokes past memory and recognition. This is perception. Thinking takes place when ideas associated with the perception are stimulated.

The perception, memory or thinking may be accompanied by an appropriate feeling or emotional state that may be pleasant or unpleasant. All these psychological experiences may cause physiological responses and lead to certain physical expressions and actions as seen in outward behaviour.

Morbidity can occur anywhere between the stimulus and the behavioural response. The cause of the disorder may be physical and/or psychosocial. The signs and symptoms of psychiatric disorders may be classified according to the mental functions that are disordered. As disorder in one function could affect other functions, secondary symptoms are produced. What one perceives may influence how one feels and how one feels may determine what one thinks and vice versa. Thus hallucinatory voices that threaten would lead to fear and secondary delusion of persecution; or feeling of depression could result in negative thought, etc. Diagnosis is based on the primary disorder or symptoms. However co-morbidity is considered when other co-existent symptoms are also prominent and sustained.

SCHEME OF MENTAL FUNCTIONS

IN CONSCIOUSNESS: (AWARENESS, ATTENTION, CONCENTRATION)



[These normal mental functions are inter-related, interactive and integrated.]

DISORDERS OF PERCEPTIONS

What is perceived depends on what is there to perceive, the environmental factor, perceptual habit, mindset and mental state of the individual or beholder. Different authors classify and explain psychopathology in slightly different ways. Terms such as distortion, falsification, misinterpretation and misperception are confusing because of variation in focus and definition. As mentioned earlier, due to the **integrative** nature of mental functions it is often difficult to distinguish or separate what is perceptual or sensory and what is thinking or ideational; or what is affective or cognitive. Perhaps that is why the same verb **"feel"** or **'jue'** in mandarin when used "to feel pain or cold" refers to **sensation/perception**; or "to feel sad or nervous" refers to **emotion/affect**; or to "feel that it is right or good" refers to **reasoning/thinking (cognitive)**.

Perception is thus more than sensation for it is closely tied up with memory which incorporates both cognitive and affective aspects of knowing. Therefore it is important to accurately observe any phenomenon with an open mind, to note its **development** and **progress** and the consequent **effect**. What matters essentially is whether the experience or complaint is morbid or non morbid. Morbidity would indicate psychopathology or the result of a disorder in the individual. It could be said that abnormal perceptions arising from a **non-morbid** state (such as due to poor lighting or vision) are considered non-morbid while those arising from a **morbid** state (such as a disordered mind, whether organic or psychological) would be morbid.

Illusions

Under certain circumstance, normal people can experience an illusion. It consists of an **object/stimulus** that is **falsely** perceived either because of the lack of clarity of the object/stimulus or due to the psychological state of the person. Thus an innocuous silhouette or sound may be perceived as something threatening by someone in a suggestible condition. When the psychological state is morbid, then what is perceived may be misinterpreted e.g. in idea of reference. The misperception is understandable and secondary to an underlying morbid state.

The perception of the object/stimulus may undergo distortion in reality, dimension or intensity as a result of physical disease or psychiatric disorder. The object/stimulus may appear amplified e.g. hyper-aesthesia (in emotional or physical state), diminished e.g. micropsia (in temporal lobe epilepsy), or strange (in familiarity) e.g. déjà vu.

Hallucinations

Hallucinations are false "perceptions" in whatever modalities (visual, auditory, olfactory, gustatory and tactile) where stimuli/objects are **absent** or **non-existent.** The contents are of importance and should be noted. There are many varieties of hallucination indicative of different organic and mental disorders. Partial seizures are well known to manifest different hallucinatory experience. **Temporal lobe hallucinations** are multi-sensory but not including somatic sensations. The primary auditory field lies in this lobe as do parts of the cortical fields for smell and taste. Certain **auditory** hallucinations (discussing the patient in the third person, hearing of one's own thought or thought being broadcast and a running commentary on one's actions known as Schneider's First Rank) are diagnostic (but not pathognomonic) of schizophrenia. **Visual** hallucinations are more common in acute

organic states with clouding of consciousness or **delirious** states than in so called 'functional' psychoses. They also appear in dementia. Critical or condemning voices may be heard in depressed patients.

Not all hallucinations are morbid in nature e.g. hypnogogic when falling to sleep, hypnopompic on waking up, and during sensory deprivation. **Pseudo-hallucinations** are thought to be more of mental images in internal subjective space and lacking substance. A simpler view is that the patient is aware of its non- reality. But in **schizophrenia**, patients do complain of "voices" coming from certain parts of their bodies e.g. head or brain, throat, heart. Some patients may complain of hearing voices in the beginning of their illness. However these voices may disappear later on. When they persist the patient may remark that it is like talking to myself and not real. He learns to accept and ignore them.

Delusional perception starts with a normal perception but with **concomitant** formation of a **new abnormal idea** (apophanous) of delusional nature. For instance, a patient sees someone washing a car and instantaneously believes that gangsters are after him. It is sometimes preceded by a **delusional mood** (feeling of something going on which concerns him). Together with the sudden development or intrusion of a **delusional idea** (out of the blue or **autochthonous**) they form the **primary delusional experience** characteristic of schizophrenia. Delusional perception is therefore not quite the same as misinterpretation of a normal perception as a result of an existing morbid mental state. (See also delusional memory below.) More often than not delusional ideas develop or build up, secondary to primary delusional experience, hallucination or mood state, an organic lesion or life situation.

Both hallucination and delusion may be associated with "**obsessive rumination**" postulated under Obsessive Compulsive Disorder.

DISORDERS OF MEMORY

The formation of normal memory begins with attention to and normal perception of stimulus or subject material. Then there has to be proper registration, consolidation and retention of the perception and material for future recall when required. Any stage of the memory formation process may be affected for various reasons e.g. poor attention and concentration, mood state, brain diseases, drugs, emotional conflict and normal forgetting. In addition, the left brain is more concerned with verbal memory and the right brain with visual-spatial memory. During learning or acquisition of new knowledge and skill, memory would necessarily undergo revision or edition.

Impairment of memory in general indicates **organic** disorders e.g. delirium, dementia, brain disease, head injury and effect of drug/alcohol. However memory function could be disturbed when the normal processes of **registration, retention and retrieval** (or encoding, consolidation and retrieval) are affected by various mental states. In situations of distraction, deficits of attention and concentration and emotional conflicts such as anxiety, depression and dissociative disorders, memory disturbances are frequently complained of with fear of brain damage or disease. Depending on the cause, amnesia may be **anterograde**, **retrograde**, **subjective**, **reversible** or **permanent**. Like the computer a file may be "lost" because of faulty saving or corruption but subsequently retrieved through different pathways.

Memory could also be falsified in that what is remembered had in fact never happened or not exactly as it was. **Deja vu**, in which there is a sense of familiarity in a new place would

be an example. In **confabulation**, fabricated or false answers of the past are given to questions asked because of amnesia. **Delusional memory** is the development of a delusion, side by side with a normal memory. It is similar in concept to delusional perception of the primary delusional experience. [The concept may possibly be extended to "**delusional dream**".]

Memory is generally considered part of cognition but due to the association of mental functions (see Memory and Reflex), there are also '**affective', 'sensory'** and **'motor'** memories. Thus past emotional experience could be provoked and relived when the event is recalled. On the other hand the affective component of the experience may be separated and repressed or appears in different guise **dissociated** from the **"cognitive"** memory.

DISORDERS OF THINKING

Thinking involves association of ideas and is expressed in **speech** or **writing** for communication. However, in order to respond and communicate, the capacity to understand what is heard or read must be intact. In a psychiatric setting, disorders of thinking cause breakdown in communication that is **not** due to coarse organic lesion, intellectual functioning, language ability or barrier, or cultural difference.

Frank Fish classifies disorders of thinking according to:

1. **Stream/Flow** - whether **rapid** or **slow**, and its **direction/goal** e.g. flight of ideas with chance association in mania; retardation of speech in depression

2. **Possession/Ownership** - **involuntary** or **alien** in nature e.g. obsessional ruminations or thought insertion/withdrawal /broadcast as in Schizophrenia, respectively

3. **Content** - what is expressed i.e. **delusional** ideas which may be persecutory, grandiose, nihilistic, erotic or of jealousy

4 **Form** - how words and ideas are associated or linked.

Formal Thought Disorders

These refer particularly to that found in schizophrenia though they could also occur in coarse brain disease. The central feature is **disconnection**. If thought is 'words forming ideas' then examples, ranging from the worst to the subtle type of thought disorder, are as follows:

Neologism - letters of the alphabet put together but not forming words (or ordinary words used differently/peculiarly)

Word salad - words thrown together but not forming sentences

Disjointed talk - no logical connection in sentences

Dissociation of ideas -. paragraphs loosely linked

Vagueness in speech - talk or answer seemingly logical or relevant but difficult to follow and leading to nowhere

In **"perplexity"** the patient appears unable to register and understand what is said to him nor make the necessary response. It is like a computer system that has hanged or a page of printed words and sentences gone out of alignment or broken up. Sometimes, the patient may respond with "Huh?" or may answer the first few words clearly but fizzles out in mumbles like a radio with weak batteries. Or there may be cross reception and interference due to poor differentiation of channel frequencies.

In **circumstantiality**, the person does not come to the point directly. There is much beating around the bush and giving of a lot of details before finally answering the question. When the answer goes off the point completely it becomes **tangential**.

DISORDERS OF MOODS

What or how one feels and reacts, depends on individual predisposition which is part of personality trait, and external factors in the environment. There is a range of emotional experience and behaviour in sadness, joy, anger and fear that is considered appropriate and normal.

However, when the mood of **depression** (low spirit), **elation** (high spirit) or **irritability** is out of proportion in intensity and duration to what is understandable or acceptable and it dominates or overwhelms the individual, affecting his normal functioning, then a mood disorder exists. **Primary mood disorder** has **secondary effects** on other mental functions e.g. thinking, memory and behaviour. Sometimes a mood disorder is not apparent unless the **"emotional baseline"** of the individual is known. It could also be an **acute on chronic situation** i.e. the so called **"double depression".**

In psychotic conditions, mood may be **incongruous**. Patients may laugh or cry without appropriate reasons and feelings. Or a patient may complain that when he/she sees/hears happy things he/she would cry and conversely when he/she sees/hears sad things he/she would laugh. **Affective blunting** which is characteristic if not diagnostic of schizophrenia shows a **lack of sensitivity** in feeling and has a quality of indifference or callousness to it. **Flattening of affect** is a **loss of expressivity** of feeling such as masked facies in Parkinsonism or induced by neuroleptics. However some may use blunting and flattening interchangeably. **"La belle indifference"** is typically described in conversion disorders in which the patient shows an inappropriate lack of concern about his disability.

DISORDERS OF CONSCIOUSNESS

Consciousness is the **awareness** of self and the environment. When the awareness is focused it is **attention** (like the pointing cursor**)** and when the attention is sustained it is **concentration.** Normally, when an individual is in control of his mind, he is able to shift his attention at will to concentrate on any immediate task at hand. Other objects or intrusions are kept out. In other words, at any point of time there would be a dominant consciousness and possibly a hierarchy of subsidiary consciousness in the background. This “subconscious” mind (like programmed functions and applications in the computer, running in the background and out of sight) may distract or intrude from time to time (like advertisement, message or prompting) into the conscious mind or monitor screen. The mind works like multi-

tasking on the computer with windows being opened, minimized or toggled according to application or requirement. However, when the mind is disturbed or over-aroused, for instance by life events, high expressed emotion, excessive stimuli and activities, it loses control over what the dominant consciousness should be. Other covert mental processes become overt and manifesting independently as various forms of psychopathology. Again it is like the computer with too many windows opened in succession and the CPU processing slows down and hangs or crashes. These "independent" mental processes may dominate, interfere or co-exist with the "normal" mind or blurring its boundary. Some patients are able to recognize these abnormal mental processes in their mind and learn to overcome them by avoiding or taking breaks from excessive input.

Under **physiological** condition, the lowering of consciousness leads to **sleep**. **Clouding of consciousness** is **pathological** in which awareness, attention and concentration are affected and may result in a **comatose** state. **Confusion** is clouding of consciousness with **disorientation**. It is obvious that other mental functions i.e. perception, thinking and feeling are also affected. Hallucinations are present, thinking is disordered, the patient exhibits fear and restlessness as in **delirium**.

There is **variation** in different textbooks and past literatures by various authors on the **concept** and **definition** of **"confusion"** and **"delirium".** The two words have different historical streams and backgrounds. From historical Continental (**French**) psychiatry, the term "confusion" has a wide meaning, and it would probably include the **British** description of "delirium" as it is commonly understood and used.

The term "**confusion**" may have a number of connotations. In the **ordinary sense** it means a **lack of comprehension** or simply "I do not understand". The possible explanations could be due to intellectual capacity, linguistic difficulty, lacking of information, unfamiliarity with the subject matter or just poor communication between parties. The instructed/listening person who complains shows insight and the communicator may lack awareness of his shortcoming in clarity, grasp and skill in delivery.

Clinical terms of "**confusion**" may also be applied descriptively to patients with mental disorders, and the hallmark of confusion is **chaotic thinking**, and **cognitive failure**. For example, in schizophrenia, confusion is more likely to be due to perplexity, thought disorder and hallucinatory distraction. In retarded depression it may be related to the restriction of attention and poor concentration, and in mania it maybe a result of hyperactive distractions. There may also be interference from agitated and amnesic states.
The use of the word confusion **does not, by itself** indicate the presence or absence of altered consciousness.

The clinical term "**delirium**" however, is understood definitively, as a psychopathology of consciousness. It regards the presence of **"clouding of consciousness"** as the essential core of pathophysiology. [Iincidentally, the pivotal paper by Chaslin and Bonhoeffer, brought the two concepts of confusion and delirium together, as features of **acute brain failure]**. Delirium is like groping in poor lighting or darkness and trying to operate electronic gadgets when the battery is running low. The aetiology or pathogenesis is **organic** in basis. The medical or physical diseases could be infective, inflammatory, trauma, substance intoxication/withdrawal, organ failure, metabolic disorders, coarse brain disease, post GA, ECT and etc., etc.

In confusion and delirium brain processes are disordered and cognitive function is impaired. In our practice the operational clinical test for confusion is disorientation to person, place and time. Clarity of thought/thinking, perception and memory are affected.

In delirium due to impairment of cognitive functions there is pathology of conscious level, perceptual disturbance and distortion resulting in hallucination, illusion and delusional ideas such as threat. There may be affective response of "fear, frenzy and freeze" with psychomotor behavioural acting out. The individual personality make-up and past experience may influence the manifestation. The delirious state fluctuates and reacts to external cues in the environment such as lighting, movement and sound. Hence a calm, well lit environment and measured intervention help in management.

In digital camera with weak battery power computing of data would be erratic and inaccurate. Pictures taken would turn out under exposed and unfocused. Likewise in confusion and delirium because of clouding of consciousness there would be blurred or even absent memory.

Consciousness may also be **restricted** as in dissociative or fugue state which is unconsciously caused or when under hypnosis.

OTHER DISTURBANCES OF SELF AWARENESS

Depersonalisation

This is a feeling or sense of **change** in oneself whether **emotionally** or **physically** with an **unpleasant** quality. It also includes **derealisation** which refers to the same phenomenon but of the environment. This sense of **dissonant** change in oneself or the environment may be due to the **dissociation** between **cognition** and **affect** and **dissociation of affect** with **loss of feeling**. For instance one patient says "I know it is raining outside but I am unable to feel that it is so." Another says "I am worried because I should be feeling sad but I am not." Yet another who is panting away after exercise says "I am not able to feel breathless."

On the other hand, although the patient is unable to **subjectively** feel emotions and yet his **external emotional expressions** or **responses** are observed to be quite **normal.** Thus he may laugh heartily at a joke but states that he could not feel the humour. In normal functioning we think, feel and behave in **consonance**.

Identity and Boundary

These are more psychotic phenomena in which the patient thinks he is not himself but somebody else; his body is not his own; that he has no control over his thinking and feeling or there is mutual influence of action and behaviour between himself and the environment. One engineer empathizes strongly with an overworked train.

Passivity Experience

Schizophrenia sufferers may complain of being **made** to think, feel and act in certain manner by some external force outside voluntary control. It has to be differentiated from disorder of thinking and mood and compulsive behavior. One abnormal offender explained that he was made to throw a child down the building.

MOTOR DISORDERS

Generally, our actions and responses are intentional, purposeful and adaptive. But in some coarse brain diseases and mental disorders, the individual's posture, movement, behaviour, facial expression and speech or utterance may become disordered because of neurological lesion or psychological 'blocking/obstruction' in their spontaneous and smooth execution. Catatonic symptoms from hyperkinesis to akinesis, from abnormal posture to behaviour and response etc., are outward physical signs that may have neurological explanation as well as psychopathological meaning. As such they are also termed 'psychomotor disorder'. The 'flow' of movement and response may become interrupted or repetitive as in perseveration. Mannerism is used to describe seemingly goal oriented action and behaviour and may reflect personal characteristics. Stereotypy refers to apparently non-adaptive or non-goal-oriented behaviour or movement. However it is not always easy to distinguish the two as mannerism may merge into stereotypy. In speech e.g. echolalia (echoing what is said), palilalia (repeating the last word) and logoclonia (repeating the last syllable of last word) are classic examples. There is also echopraxia (copying actions) etc., etc. In **stupor** the patient is mute and motionless and unresponsive to stimulation to varying degree. The differential causes are organic, psychotic or catatonic, psychogenic or hysterical and affective (manic or depressive). C**atatonia** a differential diagnosis of stupor is most commonly seen in catatonic schizophrenia. The clinical picture may range from 'frozen' to 'frenzy' or excitability. The presence of incontinence of urine and faeces would be indicative of organic or psychotic conditions. **Cataplexy** may be considered a 'perseveration of posture' induced in catatonia.

A NEURO-PSYCHOLOGICAL MODEL

Neuronal (or Neural) Circuits and Networks

There are probably up to 100 billion of neurons with up to 100 trillion synapses estimated in the human brain. Also, about 100 neurotransmitters have been discovered. In other words each neuron is connected to many other neurons forming myriads of neural circuits and networks. There are continuous attritions of nerve cells and there may also be birth of new ones through neurogenesis.

The brain receives nerve impulses continuously from both the external and internal environments through the sense organs of the body. Every stimulus of adequate threshold must necessarily be transmitted through chains of neurones forming circuits. The impulses of different modalities converge in a **network of neuronal circuits** which integrate them into meaningful information and evoke appropriate response through familiar or newly created neuronal circuits. Like well trodden footpaths the circuitry may become **stereotyped** or go into **default**.

Neuronal (neural) connections are mediated through **neurotransmitters** which may lead to **excitatory** or **inhibitory** impulses in different parts of the complex network of neuronal circuits to effect the appropriate response. However, for various reasons including the dying of brain cells, there may be **excessive** or **deficient** excitation or inhibition that results in disruption and malfunction. One explanation is in the availability and balance of neurotransmitters and receptors. In Parkinsonism, there is a deficiency of dopamine in the basal ganglia and an imbalance of dopamine and acetylcholine. In depressive illness it is believed that there is deficiency of biogenic amines at the synaptic junctions and in

schizophrenia there is dopaminergic over-activity in the mesolimbic system or hypoactivity in the mesocortical pathway. In the dementing process the loss of neurones would result in permanent break up of circuitry and destruction of mental function.

Memory and Reflex

Memory is a cognitive function. It involves registration (encoding) of stimulus (whether external or internal) which is received by the sense organ (of whatever modality) and conveyed up its nerve to some specific area(s) in the brain. By some complex processes the information or psychic experience is stored or retained (as synaptic and systemic consolidation) for future recall. A memory trace is thus formed so to speak.

When we read silently for instance, the visual pathway is activated. If we read aloud, then the auditory pathway as well as the sensorimotor pathway of the articulatory apparatus is opened up. If in addition we write out or copy the words that are being vocalized and the passage evokes certain emotional response, then more neurological pathways are called into play. The whole neurophysiological processes are further influenced by the existing circumstance surrounding the individual. There may be other competing, distracting or soothing audio-visual, tactile, thermal, olfactory, autonomic and psychic stimuli (e.g. music, lighting, temperature setting, aroma, health state or influence of a significant person). Each stimulus could possibly generate specific nerve impulses that travel in specific pathway forming a circuit and its own memory trace. All these circuits may **antagonize, interfere, reinforce** or **integrate** with one another. The **"final memory"** is the **"convergent product"** of all these inputs.

The **complete** or **partial recall** of this "convergent" memory may be triggered off by one or more of the **component sensory stimuli** which are associated like a **set piece** such as the total experience of a memorable candle-light dinner, musical extravaganza or beautiful holiday (cf. a computer file, folder or icon). Thus during communication there is not only the vocal speech but also emotional expression, body language and gesticulation even when talking to someone on the telephone. On the other hand, one or more of these component circuits may go into "loops", get shunted, short circuit, become entangled or disconnected or for one reason or another (medical or psychological) exist separately and function independently. The result could cause the various **"split"** and **incongruous phenomena** and **repetitive symptoms** that are seen in depersonalisation syndrome, schizophrenia and obsessive compulsive disorder or addictive behaviour. The memory, instead of being "convergent" is now **"divergent".** Subsequently, when the **"trace"** is set, the memory becomes a **"reflex".** However, memory is not static or permanent. It can undergo modification and edition with new experience, development and application.

A reflex is a fixed **stimulus-response**. It may be conditioned or learned. A typical reflex action is said to be at the "spinal" level and not involving consciousness. But this is not completely true. Many patterns of behaviour, habits, responses and skills e.g. driving, games and sports, musical scales and scores , are first consciously and deliberately learned and practised before they become automatic. Correction is difficult later on when the "memory trace" is too entrenched. On the other hand **a conscious thought** or **an unconscious desire** may initiate **outflow of neurological impulses** that could be recorded or observed in the behavioural response of the target organs. This could be the principle for robotic prosthesis.

Cognitive Functions and Photography

The brain is like the film and memory is like the picture taken. The level of consciousness is like the degree of brightness or intensity of light. When lighting is poor or absent the picture will be blurred or blank. So at different levels of consciousness there will be varying degrees of subsequent amnesia. To get good pictures the lens must be clear; the focusing and exposure must be correct. Similarly, memory function depends on intact sensory organs and neurological pathways as well as directed attention and concentration. When the freshly exposed film is developed straight away the pictures will be vivid. Similarly, when learning is quickly rehearsed the memory becomes better consolidated. But if the film is double exposed or the developing is much delayed then the pictures are superimposed or faded. In the same way, if learning is distracted and interfered or what has been learned is left unused then the memory is muddled or lost. When the brain is aged and damaged as in dementia, it is like the roll of film that has expired in date. Memory or image is impaired. Finally, perception and memory are influenced by the mood state just like the tone of the picture is coloured by the filter.

FUNDAMENTAL THEORIES OF PSYCHOANALYSIS

Psychoanalysis - is a

1. Technique of **free association** used in psychotherapy. The patient is encouraged to speak his mind or say whatever thought that comes into his consciousness without censorship.

2. Theory constructed by Freud to explain the materials which emerged in psychotherapy - it becomes in a way a **Personality Theory**.

Sigmund Freud (1856-1939) - had early training and research in neuroanatomy, neuropathology, neurology and hypnosis. His theories are physical in basis and approach.

Basic Assumptions or Hypotheses

1. **Psychic determinism or causality**
   Each psychic event is determined by events that preceded it, just as all physical events have causal determinants. It is therefore important to trace the origin or primary cause.

2. **Theory of the Unconscious** - (cf. Iceberg)
   Mind - a. Conscious - like the tip of the visible iceberg (or windows of the computer)
   b. Unconscious - Instinctual forces and Repressed conflicts (bulk of iceberg beneath or what is in the hard disk of the computer)

3. **Mechanism of Repression** -
   Unconscious suppression of what is painful or threatening to one's well being, image or self esteem. Successful repression leads to neurotic symptoms while failure to repress results in psychotic breakdown.

Structure of the Personality (Mind)

1. **Id - Original System of Personality**
   Reservoir of all psychic energy (like the CPU)

Mode of operation:
Pleasure Principle - immediate gratification of instinctual needs and reduction of psychic tension regardless of reality situation

Primary Process Thinking (or communication) - direct, immediate, non-verbal, reality-fantasy(blurring or mixing) ; beyond logic, objectivity, contradiction, space and time. (pictorial, imagery)

"I WANT **(NOW)!**" e.g. something direct from the TV screen.

2. **EGO - Executive Part of Personality**
Derives from Id, and is mostly conscious. It is the Mediator between Id, Outside World (or reality), Superego, past memories and physical needs of the body.

Mode of operation:
Reality Principle – to test reality, to assess, evaluate and plan, modify or censor

Secondary Process Thinking (or communication)- may be indirect, delayed, matured in meeting demand/desired goal; verbal, logical, objective.

"CAN I HAVE?" ("Let me see".)

3. **SUPEREGO - Moral Part of Personality**
Post Oedipal, partly conscious and consists of:

a. Conscience → guilt feeling
b. Ego-ideal → deep inner feelings of well being and pride. It incorporates basic moral principles and ideals of parents.
and also basic values or traditions of cultures.

"SHOULD I HAVE?" ("Is it good/right?").

<u>Topography of Personality (Mind)</u>

1. **Conscious** - those parts of mental life of which the individual is readily aware at any given moment. It includes most but not all, of the Ego. (cf. open windows on the computer)

2. **Preconscious** - those parts of mental life which can be brought into consciousness with concentration and effort. It lies principally in the Ego. (cf. minimized windows on the computer)

3. **Unconscious** - totally outside awareness. Contents may remain permanently unknown, or parts of it may at times pass into the preconscious and from there be called up into the conscious. Contents are primarily Id and Superego determining behaviour and thought. The unconscious Ego produces the mechanism of defence and symptoms formation. Evidence of unconscious mind derives from i.e. slip of the-tongue, dream, free association, narcoanalysis, hypnosis, psychotic symptoms.

Dynamics of Personality

Psychic Energy – it is the subjective experience of power and enthusiasm, and the hypothetical driving force responsible for all psychological actions.

Instinct (Freud)

At first: only **Sex instinct** → source of all instinctual drives
Later: propounded **Two instincts** -
1. Eros - group of self preservation drives (mainly sexual)
2. Thanatos - self destructive, aggressive group of drives

Most of Freud's followers :

1. Aggressive drives cannot be entirely derived from sexual instinct
2. Reject self destructive (or death) instinct - Thanatos

Thus **Id = Instincts + Psychic Energy**. (Ego and Superego also derive from the Id and depend on its energy source)

A. **Instincts:** All stem from the Id

1. **Sexual instinct** ("Libido", "Life instinct" - Eros) is the drive for:
Individual gratification and racial propagation

Pleasurable and creative activities
Has a somatic basis in the **erogenous zones** in the body. The energy that is associated with the sexual instinct is the **libido** which forms the **major part** of the psychic energy. It is a **psycho-physiological** process with both **mental** and **physical** manifestation.

Libido - refers to "that force by which the sexual instinct is represented in the mind" i.e. mental manifestation of sexual instinct.

2. **Aggressive instinct** -

It includes all the hostile and destructive forces in the human psyche. Derivatives include the impulse to self assertion, ambition, competition, the desire to win, and the drive to succeed. Sexual and aggressive drives may fuse.

Energy Concepts -
Psychic energy distributed among the 3 systems - ID, EGO, and SUPEREGO in different ways in different individuals.

Cathexis - Psychic energy directed to or invested in an object (person or thing) or function e.g. one's work with purpose of gratifying an instinct or its derivative

B. **Anxiety**

1. **Realistic** Anxiety - fear of real dangers in the external world

2. **Neurotic** Anxiety - fear of instincts getting out of control
   e.g. aggression etc., leading to punishment

3. **Moralistic** Anxiety - fear of conscience resulting in guilt.

Free Floating Anxiety

"**Neurotic**" **functions** to prevent conscious part of the Ego from recognizing actual specific conflict situation in a pathological attempt to "protect" the Ego from the conflict.

Traumatic Anxiety

When Ego becomes overwhelmed and ineffective → defence mechanism - which may be normal or abnormal e.g. rationalization or regression (see 'defence mechanism' page **24**)

Signal Anxiety

early preconscious perception of anxiety by the Ego which causes the Ego to initiate protective measures to prevent development of a full-blown anxiety state.

It would not be inappropriate therefore to say that Anxiety is the "Mother of Psychopathology" and in someway involved in most mental disorders.

Bowlby et al (1969, '73, '80, '88) believe that like all mammals, human infants are genetically predisposed to want access or proximity to an **attached figure** and that this behaviour is triggered by fear or **separation anxiety**. Being totally dependent on the caregiver in early life any threat to the child's sense of security will activate the attachment system resulting in the characteristic sequence of **protest**, **despair** and **detachment** behaviour.

Lindermann (1944) first defined psychological trauma as "sudden uncontrollable disruption of our affiliative bonds."

Chronic HPA (hypothalamic-pituitary-adrenal) stress response is toxic.
[Early prevention, diagnosis and treatment (**ASAP**) are therefore important.]

A – Attachment to source of mothering and nurturing to ensure survival and security during infancy and early childhood [Protective]

S – Separation from**/Scarring** of attachment [Predisposing]
A – Activation/Anticipation of separation anxiety by trauma and threat [Precipitating]

P –Psychopathology [conversion/dissociation as in hysteria; avoidance of object and situation as in phobias; ritual/undoing as in OCD in defence; GAD when failure to contain anxiety]

DEVELOPMENT OF THE PERSONALITY - in response to 3 major sources of tension:

A. **Physiological growth processes** including infantile sexuality -"Oedipal Complex" and resolution

B. **External frustrations of drives**

C. **Internal conflicts between dynamic forces.**

THEORY OF PERSONALITY

Topography / Structure	Unconscious e.g. (Hard Disk)	Pre-conscious (Minimised windows)	Conscious (Windows opened)	External
ID (Original System: Instincts and Psychic Energy)	Pleasure Principle: (Immediate Gratification) Primary Thinking Process			
EGO (Regulates between Internal needs and External Reality) CPU (Brain)	Defence Mechanisms Symptoms Formation → ← → ←	→ ←	Reality Principle: Evaluate/Execute Mediate/Co-ordinate Endorse/Censor Secondary Thinking Process	Outside World Reality
SUPER-EGO (Post Oedipal)	Conscience/Ego-ideal (Introjection)		Moral Standards Values/Ideals	
	(Non-verbal and Repression)		(Verbal)	

Psychosexual Development

Infantile Sexuality

"Sexual" includes all kinds of pleasures that the child obtains from his bodily sensations. Activities at different stages of its development are focused on different muco-cutaneous junction areas of the body and are known as oral, anal, and phallic stages of libidinal development. The infant desires gratification of the instinctual needs connected with the given stage. [But it may not have the same connotation of adult sexuality.]

Pre-oedipal Phase: (Birth to Age about 4)

1. **Oral phase** (Birth to age 1-2 years)

Primary interest centred on **mouth** e.g. sucking, biting, mouthing, swallowing, eating, chewing, drinking, talking, kissing, spitting and smoking etc.

Infant - narcissistic (only aware of and concerned with self)

Pleasures - **auto erotic** (stimulation of self)

Goals - development of **basic trust** and **security**.

Ego boundary (body ego)

Psychopathology - oral aggression "fed like an infant"
distortion, hallucination, denial, projection etc.

2. **Anal Phase** (age 1-3)

Libidinal energies centred on retention, and expulsion of faeces i.e. control of anal sphincter to please or displease parents (**obedience/defiance**). It is still **narcissistic and auto erotic**.

Goals - **autonomy** and **control** (bowel training). **Ego formation**

Psychopathology – as in obsessive-compulsive behaviour, indecision, ambivalence, sado-masochistic behaviour.

Mechanism used - displacement, reaction formation, undoing and isolation

3. **Phallic Phase** (age 3-5)

Libidinal energies focused on penis and clitoris, concerned with **power** and **strength.** Initially auto erotic but later differentiated sexual interest on parent of opposite sex. It is the **beginning of oedipal period**.

Goal - **self initiation**. Formation of Superego
Psychopathology - sexual deviancy

4. **Urethral Phase** (age 3-5)

It coincides with late anal and phallic stages. Interest and concern on bladder control. Phenomenon of **shame** i.e. enuresis

Symbolic - setting fires and putting them out. Have aggressive and masturbatory elements.

Oedipal Phase (age 3-4 to 6-7)

Develops **sexual interest** in **parent of opposite sex** and consequently strong feelings of rivalry towards parent of same sex. However, forbidden sexual desires and feelings, of **love/hate** towards parent of same sex produce feelings of anxiety and guilt and fear of punishment for the "crime". This results in **castration anxiety** and **oedipal conflict.**

Resolution - repression of sexual feelings. Identify with parts of each parent i.e. **moral** and **idealistic** values of each parent. This formation of Superego is largely unconscious.

Ego of Male child -

"I cannot literally have mother for my own but I can make part of her (conscience and ideals) become part of me. Then I will possess her in this safe way. Likewise I cannot do away with father whom I both love and hate but I can become like him (by taking over his conscience and ideals) and then he will like me and no longer see me as a rival and hence will not castrate me. Mother will even like me more since in this non-sexual manner I have become more like father who is her real lover."

Psychopathology - over attachment, over identification, undue fear of parent, poorly resolved oedipal phase → poorly formed or deficient super-ego → sociopathic character disorders and neuroses. Psychoses (psychological aspect) - generally stem from earlier oedipal problems.

Reasons for poorly resolved oedipal period:

a. Entering oedipal phase with too many **unresolved pre-oedipal conflicts** (oral, anal, phallic) so that not enough psychic energy is available to deal effectively with this new phase.

b. **Absence of either parent** (without a good substitute i.e. no model.)

c. Severe psychopathology in either parent i.e. **poor or bad model**.

Latency Period - (age 7-12 to 14)

A period of relative sexual quiescence follows resolution of oedipal period,. Sexual fantasies and activities are repressed.

Genital Phase (adolescent phase)

From auto-erotic (phallic phase) transformed to **love object** and development of **identity**, **maturity**, and **independence**.

Fixation and Regression:

Fixation - may occur at any phase of development resulting in psychic energy being tied down. Difficulties resulting in fixation include over frustration, over gratification, and gross inconsistencies (from key figures).

Regression - retreating to an earlier phase of development (to a point of fixation) when faced with stressful situation.

Analogy

It is like building a house with given amount of materials i.e. psychic/libidinal energy and scheduled periods of time i.e. developmental stages. Different individuals may concentrate on (or neglect) certain areas of the house e.g. kitchen (oral), bathroom/toilet (anal/urethral), bedroom (phallic), living-room (genital) and apportion different quantities of materials and time to their construction resulting in an unbalanced house that could not fulfil its total purpose adequately. It is to be expected that depending on the care and materials invested some areas would be well constructed and strong and the other areas would be deficient and weak. The individual, who is stressed or in crisis will retreat to his/her favourite part of the house.

Fixation Point - refers to **"weak spot"** left behind by unresolved conflict from under or over gratification during a given stage. Conflict is reactivated when under stress in adult life.

Defence Mechanism of the Ego:

REPRESSION - underlying basis of all of defence mechanisms. It is an **unconscious** process.

Through repression, the Ego keeps threatening impulses, feelings, conflicts, wishes, fantasies and memories from becoming conscious and troubling the individual.

The other defence mechanisms are essentially various types of ego activity which assist in maintaining repression.

The **Ego** at all times attempts to cope with **3 sources of stress**:

1. **Id** - constant push for instinctual gratification

2. **Superego** - constant reminder of good and bad

3. **Outside reality** - with its multiple demands

The Ego attempts to deal with these by the best and most efficient methods at its command:

a. Conscious - **logica**l and **rational** approach based on learned knowledge and past experiences

b. Utilizes various **defence mechanisms** acquired in development and brought into play by unconscious part of ego e.g. forgetfulness, excuses, avoidance.

c. Ego utilizes **symptom formation** e.g. anxiety, depression, phobias, obsession etc. This is a pathological attempt of the ego to deal with the problems after other methods have failed.

Transference - **rekindling/reactivation** of past emotional attitude or response towards certain **key** figure is now directed to someone else i.e. therapist because of some specific similarity. It is an **unconscious** process. The transference may be **positive** or **negative.**

Counter-transference - when the therapist feels likewise towards the patient.

ROLES

From childhood, we have been learning and cultivating roles consciously and unconsciously, voluntarily and involuntarily. When we meet and interact with others it is always at many levels. We play many roles and switch roles constantly to match the situations. It is almost a reflex.

It is not often realized that the relationship between two persons as lovers is not the same as when they are husband and wife. This is again different when they become parents. There are implied obligations and responsibilities in each relationship. Thus, the relationship between the same persons is not constant but changes with assumption of new roles. Perhaps, that is why some people choose marriage to start a family and some others prefer cohabitation or even single parenthood to maintain certain status quo relationship.

On the other hand, each society has its own concept of the necessity and expectation of roles. In addition, not only does relationship change with changing roles but each role itself is also undergoing change with time e.g. the role of a husband or wife, parent or child, teacher or pupil. It has much implication on duty, parenting and educating.

Post Freudian

Since Freud many other psychoanalytical or psychodynamic schools have developed focusing and elaborating on or modifying different aspects of his hypotheses based on the individual founder's observation, experience and belief. A consequence of this is that sometimes the same term e.g. "introjection" is used differently by different authors.

CHAPTER 3

PSYCHIATRIC CONSULTATIONS

Psychiatric consultation ranges from **problem in living** to **neurosis**, **psychosis** and **organic brain syndrome**. In fact, in **liaison psychiatry** it covers virtually the whole of medicine and human activities. Our psychiatric practice is **phenomenological** in approach. **Accurate observation** and **reliable description** of the development and progress of signs and symptoms are therefore of paramount importance. There is no substitute for a complete and detailed case history. The **stigma** of mental illness is universal and dies hard. People often seek psychiatric treatment as a last resort. Patients, relatives and friends alike are therefore inclined to deny the mental afflictions and attribute them to some cultural beliefs or plausible explanations. We should distinguish **objective facts** from **subjective understanding** or **interpretation**. As a matter of fact, the more factual information or data is available the less the need to hypothesize or resort to complex bio-statistics. To achieve this, curiosity, diligence and thoroughness are essential. The psychiatrist is his own laboratory subject to his experience, knowledge and skill. Rating scales are developed and employed akin to laboratory tests for more objective assessment. Only then can we come to a proper diagnostic formulation and carry out appropriate treatment. It is believed that knowing the **mechanism** of mental disorder may replace phenomenology.

Referral and Admission

Patients requiring consultation or admission may be referred to the Institute of Mental Health (IMH) / Woodbridge Hospital (WH) and its specialist clinics/behavioural medicine clinics (BMC) from any source. Non-emergency cases should preferably be referred by appointment to Specialist Clinics in IMH/WH or one of the designated BMCs / Community Wellness Centre near their homes. "Walk-ins" without appointments should be prepared to wait for their turns. Consultation fees are chargeable.

For emergency cases the Medical Officer on duty will use his discretion and judgement to examine the patients in the Emergency Department in order of urgency. The police and the ambulance should not be kept waiting too long while the disturbed patients should be attended to early. When "**violence**" is anticipated, the special squad of staff should be summoned immediately. Meanwhile keep calm, be reassuring and do not provoke. Sometimes it is necessary to admit the disturbed or violent patient first and examine him later in the ward. Do not hesitate to consult or ask for help from the senior doctors, at any time.

Guidelines for Admission

As a rule admission should be on a voluntary basis. However the following persons or patients are admitted involuntarily or formally:

A. Warrant of Remand

Those who are sent from the **Court** with a Warrant of Remand are admitted for psychiatric assessment. It is usually for a period of two to three weeks but could be extended up to two months if needed. Medical reports regarding **soundness of mind** and **fitness to plead** are expected. Others are admitted under special detention orders. They all go to the **forensic** wards.

However "**category A**" patients whether brought by the police or Singapore Armed Forces are not to be admitted.

B. Mental Health (Care and Treatment) Act (2008)

This new Act replaces or repeals the Mental Disorders and Treatment Act (1985). It provides for the **detention**, **care** and **treatment** of mentally disordered persons in **designated** psychiatric institutions. "**Treatment**" includes **observation, inpatient treatment, outpatient treatment** and **rehabilitation**.

It is the duty of the **police officer** to apprehend any person who is reported to be **mentally disordered** and is believed to be **dangerous** to himself or other persons by reason of mental disorder and take the person together with a report of the facts of the case to any **designated medical practitioner** at a ('**gazetted'**) **psychiatric institution** and the designated medical practitioner may thereafter act in accordance with **section 10**.

"**Mental disorder**" means any mental illness or any other disorder or disability of the mind, and "mentally disordered" shall be construed accordingly.

"**Psychiatric institution**" means a psychiatric institution designated by the Minister under **section 3**. It may be any hospital or any part of a hospital.

The **Magistrate** provided with evidence of **cruel treatment** or **neglect** of **mentally disordered person** may make an **order** for the person to be sent to a designated medical practitioner as above who thereafter may act in accordance with section 10.

In **section 10**, a designated medical practitioner at a (**gazetted**) psychiatric institution after examining any person who is suffering from a mental disorder and is of the opinion that he/she **should be treated**, or **continue to be treated**, as an **inpatient** at the psychiatric institution may at any time sign an order in accordance with **Form 1**. This applies to **both at admission for treatment** as well as **for detention and further treatment of an inpatient.**

Form 1 signed by **one** designated medical practitioner after examination at a psychiatric institution may detain the person/patient for a period of **72 hours**.

Form 2 signed by **another** designated medical practitioner after **separate** examination before expiry of 72 hours shall detain the patient for a period of **one month** for further treatment.

Form 3 signed by **two** designated medical practitioners (**one** of whom shall be a psychiatrist) after **separate** examination before the expiry of one month shall detain the patient for further treatment not exceeding **6 months** from the date of the order.

The designated medical practitioners and the psychiatrists who sign such forms should not have **fiduciary** relationship with the patient. A person shall not be detained at a psychiatric institution for treatment unless he is suffering from a **mental disorder** which warrants the detention for treatment and it is necessary in the interests of the **health** or **safety** of the person or for the **protection** of other persons that the person should be so detained.

If further detention is required, the **Hospital Visitors** shall make application in accordance with **Form 4** to the **Magistrate** who may at his discretion sign a detention order in accordance with **Form 5** to extend care and treatment for a period not exceeding **12 months**. During the interim period the visitors may order by endorsement to detain the patient. Visitors are appointed to inspect the management and condition of the mental hospital and the patients therein at regular intervals of **at least** once every **3 months**.

Sometimes the police also bring drunkards, vagrants and illegal immigrants. They should not be admitted if no overt psychotic signs are detected. The more appropriate disposal would be police lock-up, welfare home and repatriation respectively.

Normally, the compulsory detention lapses when the "Form" expires on date or when the patient leaves the hospital/institution and is discharged. However when the patient requires transfer to and treatment in a restructured hospital (RH), arrangement has been made between Ministry of Law and Ministry of Health to allow the "Form" to be effective and to continue to be monitored by IMH routinely. Nurse and doctor in receiving RH must first be informed.

C. **Psychiatric Emergencies**

Patients who are **suicidal, homicidal** and **violent** are psychiatric emergencies. The underlying causes may be depression, paranoid disorder, schizophrenic illness, alcoholism, drug and personality disorder. They should be admitted especially when they have young children and vulnerable members in the home. For proper assessment, close kin and friends should be carefully interviewed privately with regard to threat or risk that may be posed by the patients. Past history of similar or recurrent episodes and their management will be very important and useful. Except for personality disorders and addictive problems such patients may be referred to the high dependency ward (**HDPCU**) for management. When in doubt, the senior doctor should always be consulted.

On the other hand, we could admit patients for a period of **observation** because of diagnostic difficulty or for inpatient investigation, treatment and **stabilization.**

Patients who are **medically ill** and require more extensive investigation and intensive care should be referred to the appropriate general hospitals.

Patients who do not require immediate admission could be observed for up to 23 hours in the special conducive A/E side room under close monitoring. They are provided treatment, counseling, diversion and psycho-education etc., etc. An outpatient appointment to see the Department psychiatrist on call is arranged. Admission rate could thus be reduced.

Clerking of Patient

Clerking should be **systematic** and as **complete** as possible. Any psychopathology would be revealed in due course. Subsequently, significant areas could be focused, explored and elaborated. But on a busy day the immediate task of the Medical Officer is to determine who should be admitted and to screen the patient for any serious medical conditions.

You should develop your own standard procedure. Depending on the circumstances either the patient or the accompanying person may be interviewed first. It is important to know how long and how well the **informant** has known the patient and whether they have been in contact lately. Do not waste time with informants who are unreliable, subjective and long-winded.

Interview is best conducted in the **language** or **dialect** that is **most familiar** to both the doctor and the patient or informant. It is very important to **ascertain** all the time that what is asked is fully understood and what is answered is equally so. If an interpreter is used he should be asked to interpret verbatim. When in doubt always **clarify** and **verify**, and do not assume. Questions asked should be purposeful and probing, and not haphazard or random. Information recorded should be accurate and factual. The novice should be like a faithful video recorder rather than an impressionistic artist.

Interview may begin with the present complaint or the family history depending on the situation and response. If information is not forthcoming direct and leading questions may be posed. Sometimes a patient prefers to write than to speak.

Technical terms like hallucination, delusion, specific type of thought disorder and blunted affect etc. are preferably avoided. It is better to write down what is exactly said and observed e.g. the patient complains of hearing voices talking to or about him and that people want to charm or harm him. If there is no connection, logic or sense in his talk, give **verbatim** samples rather than concluding that he is irrational and/or irrelevant or "thought disordered". Similarly the mood and manner should also be objectively noted at each point.

Nevertheless, one should know the definition of each technical term clearly, understand what it means and use it correctly. Different textbooks may have to be referred to.

History Taking

A good history cannot be over emphasized. There is much to be learned from the past which can throw light on the present. Certain background tends to shape certain behaviours, and a certain personality make-up tends to respond in certain manner. Many mental disorders tend to run a recurrent course. Presence of family history and history of past episodes are of enormous help. **Longitudinal history** in c**hronological order** or **developmental sequence** of **events** and **symptoms** is of utmost importance to appreciate what is **primary**, **secondary** and **chain reaction**. Diagnosis is based on the **primary disturbance** rather than on the secondary manifestation or presentation.

Family History

Parents - age, occupation, health, personality, relationship and marital status (widowed, divorced, remarried or separated)

If deceased - age and cause of death; any reaction to bereavement; any history of mental illness, alcoholism, suicide.

Siblings – include natural, half, step, adoptive or fostered.
In order of birth rank - age, sex, education, occupation, marital status, their relationships, medical history especially psychiatric.

(Note: **Familial is not synonymous with genetic**.)

Household - nuclear or extended, any in-law or ill person; what are the living arrangement, financial state and atmosphere; what is the burden and needed support.

Personal History

Childhood - Birth and milestone, upbringing and care giver, temperament and behaviour, physical and mental health e.g. any significant illness, operation, hospitalisation, developmental problem, neurotic trait and conduct disorder; any separation or significant childhood memory and history of abuse.

School - experience, behaviour, achievement in primary (PSLE score), secondary ("O" levels) and junior college ("A" levels), tertiary education; ECAs (extra-curricular activities); any truancy, adverse comments, report of 'beyond parental control' or special commendations.

National Service - PES (Physical Employment Status) grading, vocation, rank, ORD (operation ready date), any adverse record or coping difficulty; reservist call up and IPPT (Individual Physical Proficiency Test) performance.

Employment – jobs in chronological order and duration and reason for change; current job and pay. Whether coping well and happy with colleagues. If unemployed, how long is it and why. It is important to remember that **work** is an **index of health** and **performance** is related to the degree of **well being**. **Inability** to work or deterioration in performance is a sign of **ill health** and its duration could help to date the onset of de-compensation or illness.

Psychosexual History

This covers the whole area of' psychosexual development, orientation, preference, deviancy, including trans-sexualism, fetishism and paedophilia, practice, libido, performance, relationship, marriage, spouse, children and family life, etc.

Knowledge and experience of sex, masturbatory fantasy, partners, pregnancy and abortion, molest, incest and rape - when relevant and indicated, ought to be enquired. Note with caution the controversial publicity given to child sexual abuse. In the first place childhood sexuality differs from adult sexuality. Secondly, the so-called memory may not be factual. Finally the link between sexual abuse and psychiatric disorders may be iatrogenic. The question of AIDS ought to be kept in mind as well as history of exposure and VD.

Patients who are married should be asked about courtship and its duration, age and occupation of spouse, marital relationship, frequency of intimacy etc. Information on sexual intercourse could reveal problems of impotency, frigidity, vaginismus, dyspareunia, obstetric complication, alcoholism, delusion of jealousy, hyper-sexuality from manic state or loss of libido from depression. It also reflects good or poor marital relationship.

The number, age and sex of children are also important. They could be a source of stress e.g. not doing well in school, mixing with wrong company, taking drugs and going out

with members of the opposite sex or being addicted to the computer. On the other hand infertility or not having a male heir could be a reason for unhappiness.

Financial difficulty and emotional burden especially in the case of a single parent should not be forgotten. In extended families, conflict with in-laws is well known.

Homosexuality, in our culture is not something people are proud of or proclaim in public. Covert homosexuality therefore often presents with disguised or difficult symptoms which may go on for a long time if the condition is not suspected.

Habits

This would include drinking, smoking, drug taking, glue sniffing, computer games, internet surfing and chatting. Note the quantity, frequency and duration of ingestion or abuse. Identify the substance, the source of supply and determine the cost and effect. Enquire for any associated forensic history or medical complication.

Gambling and debts should be asked. This is not infrequently the underlying cause of many psychosocial problems - similar to alcoholism. The whole family may be affected and need help.

Pre-morbid Personality

Information on pre-morbid personality is most important and yet very difficult to elicit. The usual answer given by the informant is: "He was normal." What we want to know is what sort of a person he was when he was normal or before the change that brought him to seek psychiatric help. Unless we know how he was we will not know how he has changed. The **pre-morbid baseline** is important for diagnosis, management and prognosis.

Preferably the patient is able to tell about himself. He should also be asked what others have said of him e.g. his family members, friends, colleagues, employers. He could be asked of his aspirations, values, health, temperament, work, social life, relationships with people, hobbies and religious belief etc. An account of his **daily routine** may help. He should also be asked whether he has a **nickname** and the reasons for it. It often provides a caricature of his personality. The company he keeps is also a useful clue as “birds of a feather flock together”. We need to know the ‘baseline’ when assessing any **abnormal change**.

A ‘**psychopathological**’ approach is not infrequently used when information is not forthcoming. Questions like whether he is an introvert or extrovert, optimist or pessimist, has he got mood swings; is he easily worried and timid, sensitive, suspicious or indifferent, callous, irresponsible, impulsive or meticulous and indecisive, etc. Is there any history of anti-social behaviour or conduct disorder and past record of offence and conviction. Information from significant others when available should also be obtained.

Medical History

Past and present medical history should be obtained and their records traced. Treatment and medication should be noted. In female the menstrual history and any associated symptoms should be enquired.

Medical conditions such as head injury, epilepsy and asthma can have both direct and secondary consequences.

Re-admissions

For re-admissions the social history of the patient should be **updated**. Changes may provide clues to relapses and affect the plan of management**. Changes** include change of home, school, job, leadership, routine, family structure i.e. due to marriage, birth of a child, ageing, sickness, death, etc. **Non-compliance** of medication and **"high expressed emotion"** i.e. **hostility**, **smothering** or **critical** behaviour in the family are well known factors in relapses. However, "high EE" could also be **induced** by the patient himself/herself.

Interview of Patient

One should endeavour to **know the patient** and **understand his problems** before thinking of making a quick diagnosis.

Routine questions about name, age (DOB), NRIC No., address, telephone number, contact person and relatives, day, date, place, reason and manner brought to hospital etc., help in data collection and building rapport. It also forms part of the mental state examination of orientation, memory and general intelligence. In addition, organic brain reactions and dementia could more or less be ruled out or established.

Mental State Examination

Mental state examination is actually a **cross section assessment** of presentation. It should be **descriptive** and **narrative** even as mental state fluctuates and changes. One should keep an **open mind** and not have any preconceived ideas. Remember that the questions asked determine the answers given. Questions should therefore be open ended.

Objective observation should be **corroborated** by patient's experience and report before a sign or symptom is firmly established. There is no place for subjective presumption or interpretation let alone pseudo authoritative pronouncement. The following mnemonic (A,B,C,...) is merely an aid and not to be rigidly adhered to. The signs and symptoms may be congruent, non-congruent or overlapping.

Appearance

Note the general physical appearance and attire; size, shape, height, weight, complexion, nutritional state, deformity, posture etc. Is he old or young for his age? Is he neat and tidy, or dishevelled, unkempt and filthy? Is he over-dressed and bizarre, or well-groomed and fashionable? Is he apathetic, self-absorbed, or relaxed and cheerful?

Behaviour

This refers to the overall psychomotor aspect as well as outward expression of inner experience reflecting one's perception, thinking and feeling. He may be retarded and withdrawn or excited and agitated. He may stand around and refuse to sit. There may be odd or repeated movement. He may seem distracted and hallucinated or dazed and perplexed. He may be indifferent and mumbling, talking, smiling, laughing, prying or gesticulating to himself. He may be resistive, distant, suspicious and hostile or co-operative, responsive and appropriate.

He may be disinhibited, restless, hyperactive, talkative, loud and over-familiar. He may be anxious, tense, fearful, tearful and downcast. Some may be timid and shy or childish, silly and fidgety. Others may appear confused or aggressive.

Conversation

This refers to the manner and content of speech. Talk is a **key to inner thought**, **feeling** and **psychic experience**. Thus it has been said that: "**So long as the patient talks we are in business.**" When thought is disturbed, speech will be affected. Many forms of thought disorder have been described and there will be various degrees of breakdown in communication. Formal thought disorder refers particularly to that found in schizophrenia but organic brain lesion, mental retardation, language barrier and cultural difference must be excluded. (See Disorders of Thinking)

To demonstrate thought disorder, verbatim examples of both the questions and the answers should be recorded.

Other aspects to note include speed, flow, direction, linkage and content of speech and whether the patient thinks his thought is being interfered with. Sometimes the mind is crowded with thoughts like a road junction jammed with vehicles because of breakdown of the traffic lights.

Delusion

A delusion is a belief that is **untrue, unshakeable** and **unshared**. (The last characteristic may rarely be induced in someone very close to the deluded as in **folie a deux**.) Sometimes, what is believed may be a **fact** i.e. the infidelity of a spouse or partner and has been described as "**morbid jealousy**" indicating its abnormal or pathological quality. In reality, jealousy may be normal or neurotic in nature or psychotic when it is of clinical and forensic significance. Generally, an acute or abrupt onset due to sudden delusional development is considered a morbid or mono-delusional disorder. Of course morbid jealousy could also be symptomatic of underlying disorders such as schizophrenia and alcoholism. Difficulty arises when the onset is insidious and the spouse or partner is indeed unfaithful. Nevertheless, with painstaking examination it is still possible to determine that the factual conclusion has been abnormally derived. The degree or intensity of jealousy does not discriminate between what is normal, neurotic and psychotic. It is the result or nature of disordered thinking.

A delusion may be **primary** or more often **secondary** to hallucinatory experience, mood state or organic condition. It may be transient or persistent, disorganized or

systematized. It is a **psychotic** symptom and depending on the content may be persecutory, grandiose, erotic or nihilistic. Sometimes a delusion is very well guarded and hidden and it is a test of interview skill to elicit its presence.

Recovery from delusion may occur in **two stages**. First the patient stops having active delusion but still holds on that what he had believed earlier on or in the past were true. It is when he realizes that what he had believed in the past were untrue that he has fully recovered.

Akin to the delusional belief is the **overvalued idea.** Here one can understand or sympathize with the overvalued idea held but does not share the complete conviction and commitment in its pursuit. It is a kind of fanaticism.

Emotion

This refers to the affect or mood state and particularly to **depression** or **elation**. It is not enough to believe or infer that the patient is in low or high spirits and therefore suffering from depression or mania. Patient should specifically be asked how he feels. His baseline temperament should be established. In particular **suicidal thought** and **intent** should be ascertained in the depressed and sad. It is important to determine what is lost and what is the **value** and **meaning** of the **"loss"** to the patient. It is also important to determine who and what there is left to live for. It provides a clue to **suicidal risk. Anxiety** and **irritability** are often associated with mood disorders and an attempt ought to be made to distinguish what is primary and what is secondary.

Fantasy, Fiction or Fact

It is always important to evaluate and determine what is factual, what is imagination and what is fabrication. It is also necessary to find out the reason(s) behind each of these. The **content** and the **motive** are equally informative.

General Knowledge

How well informed is the patient? One should be aware of the going-on around us e.g. what is current in the newspapers, TV, radio and life style of people. Educational background and occupational status will more or less indicate the level of intelligence. If he is mentally retarded/intellectually disabled, can he take care of himself, attend to personal hygiene, tell time and date, make telephone call, count and use money, know the bus route and fare, name the president etc.

Hallucination

Hallucination may be psychotic or non- pathological under certain circumstances. Simply defined it is perception without real or external stimulus i.e. not due to voluntary imagination. All sensory modalities can be affected. In pseudo-hallucination insight is retained. (See Disorders of Perception)

Auditory hallucination is most frequent. One should ask about the "source", content, effect and its relation to time of the day, sleep and place. The content of the "voices" is important as the patient may succumb to their instruction and carry out dangerous act e.g.

homicidal or suicidal behaviour. During recovery the voices/noises would become softer, further and less frequent. [Patients often complain that voices come from someone(s) or spirit(s) in themselves and not from external space. They may also have difficulty distinguishing what they hear from their own thoughts.]

The presence of **olfactory** and **visual** hallucination may suggest organic conditions whereas **tactile** hallucination may be due to passivity phenomenon. In our local population, a positive answer may be more forthcoming if they are asked about hearing or seeing "dirty" (meaning supernatural or spiritual phenomenon which is more acceptable) things in the patient's culture.

Insight

Insight to illness is not easy to ascertain. It is more than the patient's admission or denial of his illness. Awareness and appreciation of loss of well being may be present initially but the patient may conceal it. Patients with early dementia and schizophrenia may present with depression or anxiety because of initial presence of insight. Compliance with treatment may also indicate insight even though the patient may deny illness.

Judgement

This can be very subjective on the part of the observer. Judgement is not infrequently retrospective and relative. It involves personal experience, intuition, evaluation and decision.

Level of Consciousness

It has been said that drowsiness leads to sleep whereas clouding of consciousness leads to coma. Presence and degree of clouding of consciousness as in confusion or delirious states is therefore pathological, indicating CNS involvement.

In clouding of consciousness, attention and concentration are affected. The **serial 7** (100 minus 7 consecutively) is generally used. This however, involves mathematical ability as well. A simpler version of '20 minus 3 consecutively' is also used by some. Alternatively, counting 100 or 20 backward could be used.

Memory

Complaint of memory loss or poor memory is frequent and is associated with fear of brain diseases. The complaint may be objective or subjective. It is necessary to know how memory is formed. (See Disorders of Memory)

Memory function **tests** are objective tests for **organic** lesion of the brain. Broadly, **verbal** memory tests the integrity of the left cerebral hemisphere while **visuo-spatial** memory tests the integrity of the right cerebral hemisphere. A simple clinical test consists of the **ultra short** term (digit span forward and backward), the **short** term (5-minute) and the **long** term (past events). In the short term memory test, it is important to ensure that the patient has learned what he is to reproduce 5 minutes later by making him repeat it at least once. Another simple test is to ask the patient to draw the face of a clock specifying a time. Patient could also be asked about details of family members or recent events and then go over again later on

for reproduction and consistency. In organic conditions it is the **recent** memory that is first impaired.

Negativism

This may include being unresponsive, resistive or uncooperative (when instructed to perform activities of daily living) or at times doing exactly the opposite of what is asked. This is in contrast to 'automatic obedience' or 'command automatism' more commonly seen in catatonia and occasionally in dementing conditions.

Orientation

Orientation to person, place and time should be tested. Usually orientation to time is affected before that of person. During recovery, orientation to person occurs before that of time. Disorientation is a sign of confusion or organic condition. Some patients may give random answers but are not confused.

Passivity Experience

Passivity experience may be cognitive, affective, volitional or behavioural. Characteristically, the schizophrenia sufferer complains of being made or compelled to think, feel or act in specific ways by some external forces. In other words he is no more a free agent himself.

Physical Examination

A routine physical examination must always be carried out. Special attention must be paid to evidence of **injuries** whether external or internal, and documented. Protect yourself medico-legally. Call for more staff to help when the patient is disturbed or violent. Sometimes the patient has to be sedated first and examined later on the ward. Injection haloperidol 5-10 mg or chlorpromazine 50mg is also suitable. Others may prefer injection of midazolam or diazepam.

Blood and urine samples should be taken for sugar, alcohol and drug levels for toxicology.

SOME GENERAL CONCEPTS

Problems of Diagnostic Validity

Medical diagnosis ideally should be based on aetiology. However in mental disorder aetiology is multi-factorial. This is further compounded by the fact that similar conditions or syndromes have been described by different workers in different places and periods of time and given different labels.

Generally speaking, a **diagnostic syndrome** is based on a specific cluster of descriptive symptoms. The **validity** of such a diagnosis is preferably supported by **laboratory investigations**, **family history**, **course and outcome**, **exclusion criteria** and

therapeutic response to specific treatment. When all conditions converge or correlate the validity of the diagnosis is strong.

Common Classes of Mental Disorders (and Related Matters)

Dementias

Dementias are **chronic organic brain syndromes**. When presenting with psychotic symptoms such as hallucination, delusional idea and abnormal behaviour or superimposed delirious state they may be regarded as organic psychoses. The **clinical diagnosis** of dementia is based on the **syndrome** of **global deterioration** of **intellect, memory and personality** (IMP). **Aetiologically**, the dementias may be **primary** or **secondary**. The primary dementias consist **chiefly** of the Alzheimer's Disease (**AD**) and the more recently highlighted dementias with Lewy bodies (**DLB**) and frontotemporal lobe. More rarely are Pick's, Creutszfeld-Jakob's (which is rapidly dementing), slow virus or prion diseases in which normal brain protein undergoes conformational change causing the death of brain cells.

The **secondary dementias** would include causes such as multi-infarction of brain (or vascular dementia, the next commonest after AD), head injury, chronic alcoholism, cerebral anoxia, hypothyroidism, neurosyphilis, AIDS, encephalitis, brain tumours, deficiency in vitamins (B12), Huntington's Disease, Parkinson's Disease and etc. As some causes are reversible, investigation must be thorough and treatment must be vigorous.

Alzheimer's Disease (AD)

As people live longer, the prevalence of dementias, in particular **AD**, will increase rapidly with old age. In **AD** chromosomes 1, 14, 19 and 21 appear to be implicated with chromosome 19 being responsible for the late onset type. The neurobiological understanding is that there is accumulation (due to overproduction with failure to degrade) of amyloid beta-protein, followed by abnormal phosphorylation of tau protein resulting in massive neurone death in vulnerable brain areas. Senile plaques and neurofibrillary tangles are typically seen in histopathology. Younger age onset is more likely genetic.

The clinical course of progressive or degenerative **primary dementias** such as **Alzheimer's** disease may be divided into 3 phases:

1. **Psychologica**l - the disease may initially present with anxiety and depression, forgetfulness, (disorientation), accentuation of personal trait or erratic behaviour that is out of character and symptoms of delusion and hallucination. The onset may be insidious.

2. **Neurological** - motor restlessness, dysarthria or aphasia, dysphagia, apraxia, slow mentation, abnormal reflexes, poor coordination, ataxia and seizures, etc.

3. **Vegetative** - loss of memory, speech, social interaction and personal identity. The patient eventually becomes bed ridden, incontinent and totally dependent.

Biomarkers of AD

Compared with other dementing disorders, tau protein in **CSF** is significantly increased in AD. The tau level is not correlated with duration of the disease or score of MMSE (mini

mental state examination). On the other hand beta-amyloid-42 protein is significantly decreased (because in advanced AD the insoluble beta-amyloid attracts the soluble beta-amyloid and locks it up). In mild cognitive impairment (**MCI**) or very early stage dementia tau is increased but beta-amyloid is normal. Perhaps it could be predicted that during the transition of MCI to AD beta-amyloid in CSF would decrease. Thus combined measure of tau protein and beta-amyloid protein is better marker for AD demonstrating more than 85% of sensitivity and specificity. It is highly sensitive in differentiating early and incipient AD from normal ageing, depression, alcohol dementia and Parkinson disease but lower specificity against other dementias i.e. frontotemporal and Lewy body dementia. This is important for evaluation of mild cognitive impairment (MCI) and earlier detection of clinical stage of dementia and AD.

Biological Treatment and Psychosocial Intervention

Therapeutic approaches depend on different pathophysiological hypotheses or beta amyloidogenic pathway requiring different mechanistic markers.

There are active researches both biological (and psychosocial) on pathogenesis, prevention and treatment of AD. These include:

1. gamma-secretase inhibition

2. Metal-protein attenuating compounds (MPACs)

3. Immunisation with beta-amyloid

4. Cholesterol metabolism
   Lowering cerebral cholesterol may decrease beta-amyloid production possibly through beta-secretase pathway. Prospective studies with statins are being actively investigated.

5. beta-amyloid binding proteins (in vivo) e.g. glycosaminoglycan may inhibit fibrillization.

6. Other investigational agents in trials include NMDA antagonists, ampakines, (anti-amyloid strategies), anti-inflammatory agents, chelators, gingko, hormones etc.

7. **Insulin** is a neurotrophic factor with a major role in inhibiting apoptosis or cell death. It may be critical to normal brain circuitry. About 10-20% of AD are estimated to be the result of diabetes. Both diabetes and obesity increase the risk of MCI and likewise depression. Amyloid has proinflammatory and insulin–resistant effects. [Roger Mcintyre]

   Lithium is being investigated for its protection of nerve cells from death by preventing the phosphorylation of tau protein that is essential to normal brain function but harmful when in excess resulting in cell death and dementia.

8. There is also increasing data with regards to the efficacy of antidepressants and anti-psychotics for treating specific behaviour in dementia.

9. Psychosocial intervention includes generally a healthy lifestyle of healthy diet, exercise. appropriate interpersonal relationship, music and reading etc., etc.

Cholinesterase inhibitors represent the first approved strategy for treating AD. The rationale is that there is a deficit of acetylcholine neurotransmitter from damage to an ascending forebrain projection. There are also trials on combinations of cholinesterase inhibitor with a variety of agents (glutamate antagonists, sertraline, risperidone, vitamins and statins).

Although Lewy bodies are also found in other dementias, **DLB** characteristically presents with visual hallucination, parkinsonism. and fluctuating cognitive impairment besides symptoms of dementia. It is neuroleptic sensitive i.e. worsened by drugs with anticholinergic side effects. In Parkinson Disease at least 25-30% or more cumulatively would become demented. However dementing symptoms are said to develop more than 12 months after the initial motor symptoms and should therefore be diagnosed as Parkinson Disease Dementia (PDD). Management of dementias depends on the stage of the illness diagnosed and the symptoms complained of. Of course psychosocial factors and behavioural approach cannot be ignored. (See section on Psychogeriatrics)

Psychoses

Concept of Psychosis

A) Phenomenology –

Phenomenologically, the traditional definition of psychosis is a mental condition in which the signs and symptoms are:

Non understandable [in ordinary sense of thought, word and deed]

Out of touch with reality [cultural context of mores and norms]

No insight [contextual and relative]

B) Social/Lay Madness – due to **Breakdown** in **cultural:**

Conformity – communal context [but spirit possession and trance state accepted]

Communication – interpersonal context [not due to IQ, language barrier, culture]

Control – individual context [in response to abnormal psychic experience]

Thus the appearance and behavior may be bizarre, intolerable and unacceptable; the speech may be incoherent, irrational and irrelevant; and as a result of abnormal experience and belief, the psychotic may act out beyond self-control.

Reports or history of having consulted temple **medium** or **deity**, or **bomoh**, would suggest psychotic disturbance. It is worthwhile to enquire what has transpired and what the healer actually says. Cultural beliefs are powerful and can undermine or facilitate medical treatment.

C) Clinical Psychoses – based on presence of one or more psychopathology or symptomatology of :
Schizophrenic and **Manic-Depressive Psychosis** [or **Bipolar Disorders**] which are considered as **typical psychoses** and

Atypical Psychoses [e.g. schizoaffective psychosis and others**]**:

Hallucination, **Delusion**, **Thought Disorder**, **Abnormal Mood**,
Anomalous Behaviour or **movement**, **Loss of Volition/Drive**,
Passivity Experience [loss of autonomy and control i.e. made to think, feel and do]
(to be differentiated from thought disorder, mood disorder and compulsive behaviour)

[Symptoms may be primary or secondary e.g. primary hallucination and secondary delusion
Contents may or may not be offensive or dangerous or acted upon.]

D) Medico-legal Insanity [or Unsoundness of Mind]

"Unsoundness of mind" or **legal insanity** is not the same as **medical psychosis**. In other words, clinical psychosis need not be legally insane or of unsound mind whereas mental retardation or intellectual disability [ID] without psychosis may qualify (see below).

There are different **connotations** in different **contexts** of the **Penal Code, Criminal Procedure Code** and the repealed **Mental Disorders and Treatment Act (1985)** as well as in **Civil Laws**. A person may be unsound in one context and yet not unsound in another context. In general it involves assessment of issues regarding **credibility, culpability**, **competency, compensation** and **custody (Slovenko).** Though the term "**unsound mind**" is not defined, in normal understanding, it consists of **two components** i.e. presence of a **mental disorder** (psychosis or mental retardation/intellectual disability as in our practice) which is **essentia**l and the **reason/result** and **a set of criteria/tests** which pertains to the legal issue in question e.g. fitness to plead, criminal responsibility, testamentary capacity, property transaction, marriage contract, custody of child, detention for treatment and appointment of committee(s) of the person and/or his estate and etc. However, in reality the legal set of criteria or tests appears to **dominate the determination of** soundness or unsoundness of mind. As such the **causative factor** of "defect of reason from disease of the mind" is not confined to that of a mental disorder but logically includes **disease of the brain.** The final decision lies with the court.

The **Mental Health (Care and Treatment) Act [MHCTA] 2008** and the **Mental Capacity Act [MCA] 2008** which repeal **MDTA (1985)** do not use "unsoundness of mind". Instead **mental disorder** or the **mentally disordered** are mentioned and made more explicit to include psychiatric illness, learning disability, dementia or brain damage that impair or disturb the functioning of the mind or brain. **MHCTA** provides for the detention, care and treatment of mentally disordered persons in designated psychiatric institutions. **MCA** deals with the assessment of persons who lack capacity in making decisions and taking actions, and other matters.

(See Chapter 7 on Law and Psychiatry)

Neuroses

It is often taught that neuroses differ from the psychoses in that the symptoms are understandable; the individual is in contact with reality and there is presence of insight. Although these criteria are not absolute clinically, they do indicate that the feelings and reactions of neurotic states are **common** and **shared** by normal people as well. What separate

the neurotic complaints from the ordinary are the **intensity, duration** and **frequency** of the symptoms. This of course does not preclude the psychopathological basis of neurotic disorders. (See Neurotic and Stress Related Disorders, and Treatment of Neuroses)

Concept of "Psychosomatic", "Somatoform/Somatisation", "Dissociative" (Disorders)

The common feature underlying these conditions is the presentation of **physical symptoms** without apparent or known physical causes. The classical "psycho-physiological" or "psychosomatic" disorders e.g. asthma, peptic ulcer and headache had emphasised on psychogenic aetiology. This had been found unsatisfactory. The objection is that this view encourages the splitting of mind and body. **Thus W.H.O. (1964)** stresses the **holistic** approach to medicine and to all diseases in its statement: "When we speak of psychological processes and physiological processes we are speaking of different ways of approaching one phenomenon. The phenomenon is not so divided." Psychosomatic medicine should therefore denote holistic medicine.

In fact long ago, **Plato** had said: "This is the great error of our day in the treatment of the human body that physicians separate the soul from the body. The cure of a part should not be attempted without treatment of the whole. No attempt should be made to cure the body without the soul and if the head and body are to be healthy you must begin by curing the mind."

To avoid the dichotomy of body and mind, purely descriptive terms are coined for these various, multiple, recurrent and/or changing physical symptoms which have no discovered organic basis. Although no aetiology is offered, it does not mean **emotional conflict** and **psychological stress** are to be ignored.

Somatoform disorders are **generic** and include **somatisation** disorder (or Briquet's syndrome) and others. **Dissociative** (conversion) disorders are new terms for old **hysteria.** In ICD-10, the dissociative disorders exist separately and include both the conversion (somatic) symptoms and the dissociative phenomena such as amnesia, fugue or trance state and multiple personality disorder. However DSM-IV splits the historical hysteria into conversion symptoms to come under somatoform disorders and keeps the dissociative phenomena separately under dissociative disorders.

In **hysteria** (conversion and dissociation) the symptoms are unconsciously produced with unconscious purpose. In **factitious disorder** the symptoms are consciously produced but with unconscious motive. In **malingering** the symptoms are consciously produced with conscious motive.

The **body dysmorphic disorder** (BDD) appears to straddle across hypochondriacal or somatoform disorder and delusional or psychotic disorder. However, in DSM 5 it is grouped under obsessive compulsive disorder together with hoarding disorder, trichotillomania and excoriation disorder.

Generally speaking, respiration, circulation, digestion, nerve conduction, muscle contraction and even the sensorium go on **functioning continuously** in **self-monitoring without our awareness.** However, we become conscious of morbidity only when **malfunctioning** occurs. It is also possible that we become **sensitized** to what is going on in certain parts of our body by **heightened attention** or **lowered threshold** of sensation. It is

like the naked eye that sees nothing on a slide. But when a portion is focused under the microscope details are magnified and seen clearly. Again, there are all sorts of radio and television waves around us which "come alive" in sound and picture only when tuned in.

Personality Disorders

Personality may be considered as the sum total of an individual's physical endowment, mental capacity, emotional experience and pattern of behavioural response. Together they manifest certain **traits** and **tendencies** that are enduring, predictable and are evident from young. These traits and tendencies may be an advantage or a disadvantage depending on the circumstances. However, some traits and tendencies when excessive and non-adaptive become a liability and cause distress, dysfunction and suffering not only to the individual but also to others. When this is persistent, a personality disturbance or problem is said to exist.

The classification of Personality Disorders is **highly controversial** and **in a flux**. In ICD-11 all existing categories of personality disorder from ICD-10 are removed apart from the main one, the presence of personality disorder itself. **Personality dysfunction** is best represented on a **continuum** or **dimension** with **different levels of severity** defined to indicate the point on the continuum that represents the person's personality functioning at the time of assessment, including the relatively recent past. The severity of personality disturbance ranges from no personality **dysfunction** to personality **difficulty** (not a disorder) and mild, moderate and severe personality **disorder**. The destigmatizing implications are that they could be diagnosed during adolescence, subject to change and not a lifelong label.

The level of severity is qualified by a **description** of **domain traits** such as negative emotional (affective); dissocial; disinhibited; anankastic; and detached. [Peter Tyrer]

However, in current clinical and forensic settings, diagnosis of personality problems/disorders is often based on "**trait symptoms**" and "**behavioural patterns**" over a prolonged period of time. The significance of these personality problems or disorders is that they are of clinical and forensic interests with regard to **suffering** and **criminal responsibility**, respectively. The implication is that such conditions are "medical" in nature and therefore amenable to treatment. This is in contrast to the concept of stable personality traits in psychology. However, people do seem to change (at least behaviourally) as a result of diseases e.g. brain-damage and encephalitis or life experiences and psychotherapy, which set off a series of chain reactions. It is important to remember personality factor in any management. Nonetheless, the term of "**borderline personality**" has been overused and diagnosed without understanding of its historical development and domains involved.

The categories of personality disorder in classification have fluctuated in ICD and DSM with controversy and criticism.

Life Events

Life events are **significant** events that occur during the individual's life time. They may vary from society to society and from one period of time to another. Some common life events include birth, coming of age, school enrolment, examinations, new job, promotion, unemployment, marriage, separation, divorce, moving house, illness, retirement, death, birthday, anniversary and even festive celebrations. The **quantum** of significance of each life event **varies** with individuals and at different stages of life.

Basically, life events bring about **changes** or **threats** that require the individual to make **efforts to adjust** or **cope**. They are like stressors that can cause distress and precipitate or exacerbate an illness. The same life event may cause different symptoms in different persons with variable consequences. It is not unlike the same bacteria that can cause different diseases in different organs in the body.

Epilepsy

Epileptic phenomena are truly neuro-psychiatric problems. Epileptic seizures are recurrent, paroxysmal electrical discharges from focal lesions in the brain. The **focal** (or localized or partial) seizures may arise from a part of the brain i.e. the frontal, temporal, parietal or occipital lobe. It is called a **simple partial seizure** when restricted with **no loss of consciousness**. When the discharge spreads to other parts of brain or whole cerebral hemisphere with possible loss of consciousness it is called a c**omplex partial seizure (**as in **temporal lobe epilepsy,** psychomotor seizures)**.** The **prodromal** simple partial seizure is then known as an **aura**. In **generalized seizures** both the cerebral hemispheres are involved i.e. in generalized motor seizures (grand mal fits) and **absence** seizures (petit mal fits) with **loss of consciousness**. In the 18th Edition of Harrison's Internal Medicine (2011) partial seizures are divided into "**partial seizures with dyscognitive features**" and "**partial seizures without dyscognitive features**".

The type of seizure observed or reported depends on the direction, extent and speed of discharge from the focal lesion. Thus epileptic seizures may be motor (e.g. convulsions or involuntary movements), sensory (e.g. sensations and hallucinations), autonomic (e.g. nausea, palpitation, sweating, flushing), affective (e.g. fear, anger, depression), psychic e.g. déjà vu, flashing images) and behavioural (e.g. automatism without awareness) either alone or in combinations. In partial seizures the symptoms vary according to the site of discharge and the subjective content. **They may mimic psychiatric disorders**.

The typical history is that there may be birth injury and/or childhood (febrile) seizures which go into remission. After a prolonged latent period, seizures appear in adolescence and could present with grand mal, petit mal and psychomotor attacks on different occasions or in combinations.

Recurrence of paroxysmal and stereotyped sequential progress of symptoms must be established. Amnesia follows when there is unawareness or loss of consciousness. It must be emphasized that diagnosis of epilepsy is based on clinical history.

"Epileptic psychosis" refers to psychotic manifestation associated with epileptic seizures. **Temporally**, it may be **prodromal**, **ictal, post-ictal** or **inter-ictal**. **Clinically**, it may be **organic** (ictal/post ictal confusion) or **functional** (inter ictal schizophrenia-like symptoms) in nature. Personality change may be involved as a result of brain dysfunction, prolonged medication and chain reaction in psychosocial development.

Drug-Induced Psychosis

With more and more drugs of abuse available it has become important to recognise their effects on the mind and behaviour. Some mental symptoms occur during state of **intoxication** and some during stage of **withdrawal.** Depending on the property of the drug, the mental make up of the user and the immediate surrounding environment, consciousness, perception

and mood state are variably altered with matching behaviour. The experience may be pleasant or unpleasant and paradoxical reactions are not uncommon.

Acute intoxication may result in acute brain syndrome while chronic use may result in chronic brain syndrome. The prolonged use of a drug may lead to **tolerance** and **dependency**. In tolerance the user needs to take more and more of the drug to achieve/attain the same desired effects. Dependency may be physical due to withdrawal symptoms and/or psychological when there is emotional and mental preoccupation with the drug's effects and a persistent craving for the drug.

When psychotic symptoms occur as a result of drug taking, then a diagnosis of "**drug-induced psychosis**" is made. There has been much debate on the concept of "drug- induced psychosis". The difficulty seems to be that the term "induced" is used in both the **aetiological** and **precipitating** sense. If the psychotic symptoms are limited **temporally** according to the **presence** and **action** of the substance used e.g. bupropion then "induced" may have the aetiological meaning. On the other hand if the psychotic symptoms persist beyond the temporal presence and action of the substance used then "induced" would mean precipitating. However, it is difficult to demonstrate the nature of either condition as brain damage with lasting symptoms could be caused by drugs such as methamphetamine and some inhalants. Early and prolonged use of **methamphetamine** (MAMP) has been associated with increased risk of psychosis similar to the positive symptoms of schizophrenia in vulnerable personality (schizoid/schizotypal?). Amphetamines use may cause short term (during intoxication and withdrawal schizophrenic symptoms). Heavy early use of c**annabis** probably exerts its effect via the dopamine system moderated by a genetic polymorphism in catechol-O-methyltransferase (COMT) that reduces the frontal cortex dopamine transmission of the susceptible to induce schizophreniform psychosis. As such it has a **predisposing** sense in inducing psychosis.

Assessment of 'Dangerousness' or 'Risk' and Suicide

Dangerousness

Not infrequently, one is asked to predict the '**dangerousness'** of a person. In reality, the request should be to assess the '**risk'** of dangerous behaviour or response by a particular individual in a particular situation at a particular time. In other words, the so-called dangerousness of a person should be **context specific**. Thus to be meaningful, both the patient's mental state or condition and the prevailing environmental circumstance must be assessed together in context. A past history of dangerous behaviour would be a good predictor. The following factors should be considered when making an assessment.

Inherent aggression or impulsivity directed at self or others – personality trait
e.g. cultural upbringing, conduct/personality disorder

Symptomatic behaviour of underlying disease or disorder – brain or mental
e.g. epilepsy, alcohol, drug, affective and schizophrenic disorders

Interactive with or in response to environmental factors
e.g. provocation, threat and stress

Suicide

There are many explanations or reasons why people commit suicide. Many are mentally and physically ill or socially distressed while some are not. A few may give no indication whatsoever of their suicidal intent till it happens.

People may kill themselves because they are depressed or in response to the command hallucination, passivity experience, persecutory delusion or insight of prognosis; or under the influence of drug and alcohol; or personality problems.

There are many schedules for assessment of suicidal risk. A most important risk is when there is nothing, not even immediate loved one(s) to live for and there is no religious or spiritual belief or anchor.

APPROACH TO DIAGNOSIS

It is important to realize that for every piece of behaviour e.g. violence, there could be a number of reasons or explanations; and for every complaint or symptom e.g. insomnia, there could be a number of differential diagnoses. One should **not** adopt a **checklist** approach of "**what**" are the symptoms" to diagnosis but rather should consider the **whole** clinical picture of "**why**" and "**when**" in development. The question of "what are the **facts** of the case?" must always be asked and determined. The following steps may be helpful:

1. The first question to ask is whether there has been a **change** i.e.departure from baseline or PMP and **when** i.e. onset in **personality** or **behaviour** and **work performance.**

2. Is the change **normal** or **abnormal**, **understandable** or **non-understandable**.

3. If abnormal and non-understandable, is it likely to be **organic** or "**functional**" psychosis [i.e.**endogenous process**]

4. If organic, is it **acute** or **chronic** i.e. delirium or dementia. Substance abuse disorders presenting with confusion state may be due to **intoxication** or **withdrawal**.

5. If "**functional**" ['old' term now, more likely biological], is it schizophrenic, affective or delusional

   [Many delusional disorders have underlying organic conditions]

6. When the change is **understandable,** likely **exogenous reaction** [i.e.to stressor/stress] but the complaints are out of proportion in intensity, duration and frequency neurotic conditions are likely.
   [However, when patients present with "inexplicable" withdrawal or fearfulness, schizophrenia/psychosis ought to be excluded.].

7. Remember to think of the **underlying personality** and to always exclude **temporal lobe epilepsy, history of encephalitis, frontal lobe syndrome** [e.g. clinically appearing depressed and retarded or anti-social and disinhibited], **hypo/hyperthyroidism,** effects of **alcohol** and **drugs, A.I.D.S** and **autoimmune disease.**

8. Is there a family history or past similar episode and treatment.

Different persons at different stage of their life react to the same illness differently. The interaction between personality traits and symptoms or the superimposition of one disorder on another can make diagnostic exercise difficult. Furthermore, due to the dynamic and interactive nature of mental disorder, diagnosis may be made according to the longitudinal development of symptoms and behaviour or the cross section examination of mental state at the point of consultation. Different diagnosis may be arrived at by different clinicians who examine the patient at different point of time in his illness. It is important to keep in mind that the **patient should not be made to fit a diagnosis** (from a checklist or out of convenience) but rather the **most appropriate diagnosis is selected to fit the patient**. Management is then **tailored** according to the **total needs** of the individual patient and **not** treatment of his **diagnosis itself**.

Clinician's conceptualization of clinical presentation differs and therefore the diagnosis made may not concur [e.g. in acute stress reaction or disorder (emphasis on stressor), adjustment disorder (emphasis on "change" that is stressful/threatening), cluster of symptomatology, personality pattern/problem, hierarchy of dominant syndrome].

CHAPTER 4

COMMON MENTAL DISORDERS

The diagnosis of a mental disorder, in the absence of known aetiology or mechanism, depends on **symptom cluster** and (arbitrary) **duration** criteria. This is usually decided by consensus of opinion rather than by nosological concept. There is also a question of whether one takes a longitudinal (historical course) or a cross section (episodic) view. Some disorders such as 'schizotypal', 'dysthymic' and 'cyclothymic' may be considered "sub-threshold" or "attenuated" forms of major schizophrenic and affective disorders.

Due to developmental and conceptual changes some mental disorders are considered to be categorical entities while others are dimensional in a continuum or spectrum. Thus schizophrenia and bipolar disorder (manic depressive psychosis) have been categorical entities but now argued to be of dimensional nature occupying opposite ends of a continuum/spectrum with schizoaffective disorder in between. Recent evidence indicates that there is overlapping of shared genes. Asperger's disease has become part of Autism spectrum disorders. Likewise depression and anxiety, OCD and phobia maybe similarly linked.

SCHIZOPHRENIA

Schizophrenia is a generic term for a **heterogeneous** group of psychoses. The concept, psychopathology, pathogenesis and classification are still undergoing change. In the drafting of ICD-11 the types of schizophrenia maybe reduced and simplified with symptoms specifier. Meanwhile, according to **W.H.O. ICD-10 (1992), sc**hizophrenic disorders exhibit some of the following symptoms for a period of **one month**:

1. Thought - Echo (hearing one's own thought as voice), Insertion, Withdrawal, Broadcasting (which is in particular distressing because of the loss of control and privacy to one's own thought) and (Thought Block when thought comes to a halt.)

2. Delusion of control, influence, or **Passivity -** affecting action, sensation or thought. Here the patient complains of being made to think, feel, do or behave in a certain way.

3. **Hallucinatory voices** - Running Commentary (commenting on patient's every action and movement), Discussing the patient in the third person i.e. (Schneider's First Rank).
Command hallucination - telling the patient what to do which could be dangerous and disastrous. ("Voices" from parts of body)

4. **Persistent Delusion** - (Untrue, Unshared and Unshakeable belief e.g. alien and supernatural) (It may develop suddenly or gradually.)

5. **Persistent Hallucinations** - any modality, especially auditory

6. **Thought disorder** - (Breakdown in communication not due to organic lesion, mental retardation, language barrier, or cultural difference)
(See Disorders in Thinking)

7. **Catatonic Behaviour** - Stupor or Excitement, Waxy Flexibility, Posturing, Negativism, Mutism

8. **"Negative" symptoms** - Social Withdrawal, Poverty of Speech, Loss of Volition, Blunting of Affect, Psychomotor Retardation

9. **Overall deterioration** and change in quality of life and behaviour e.g. apathy, indolence, self-neglect, socially drifting or withdrawal

Schizophrenic disorders have been classified according to the most prominent symptoms or combination of symptoms/features exhibited i.e. **paranoid, catatonic, hebephrenic, undifferentiated**, **residual or simple**. In **Delusional Disorders** the symptoms are chiefly delusional. The core deficit of schizophrenia appears to be **cognitive impairment** affecting executive functions. These are similar to Emil Kraepelin's (1899) chronic, deteriorating 'dementia precox' and what **E. Bleuler** (1911) describes as the central psychopathology of schizophrenia i.e. loosening of **association** (in thinking), blunting of **affect**, **autism** (or withdrawal behaviour) and **ambivalence** (or weakening of volition/will). Bleuler considers **hallucination** and **delusion** as **accessory** symptoms. It is of interest that in clinical practice we rely heavily on the presence of auditory hallucination and delusional idea (i.e. as in **1, 2, 3**) described by Kurt Schneider's '**First-Rank Symptoms'** (1938) in making the diagnosis of schizophrenia. These symptoms are however not pathognomonic and their diagnostic significance is under review. They have also been described in the symptomatology of the present bipolar disorders.

Crow and Andreasen (1980s) - describe Two Syndromes of Schizophrenia:

Positive symptoms : Hallucination, Delusion, Thought disorder +/-, Inappropriate affect, Abnormal behaviour

Negative symptoms (not absence of symptoms): Poverty of Speech, Loss of Volition, Psychomotor Retardation, Social Withdrawal, Blunting of Affect (They may be of primary insidious onset or due to burnt out end stage, or secondary to medication.)

During the early stage positive symptoms may be prominent and dominate. As the illness progresses negative symptoms may become more apparent and dominant eventually.

Course

The course of the illness ids under review.
There may be only one episode in the patient's life time or multiple episodes with the following outcome:

Single episode - complete remission, incomplete remission, or continuous

Recurrent episodes - remittent, stable deficit, or progressive deficit

Pathogenesis

From **family, adoption** and **twin studies, biological factors** are well established. Thus the closer the blood relation and the greater the number of family members afflicted the higher is the probability of offspring developing the illness. However the fact that **mono-zygotic** twins who have the same genetic make-up and yet do **not** show 100% concordance rate indicates that other factors are involved. In fact one twin could suffer from schizophrenia and the other a bipolar disorder. It has been suggested that the earlier the onset the more likely it is due to genetic and developmental factors. However it would be correct to say that both genetic and environmental factors contribute to the development of schizophrenia.

Genetically, the presence of susceptible genes including neuregulin 1 (in chromosome 8p), dysbindin (chromosome 6p) and catechol-O-methyltransferase (chromosome 22q) in normal variation may predispose individuals with childhood abnormalities such as delayed motor development (particularly walking), speech problems, lower IQ and anxiety in social situations to develop schizophrenia. (British Cohort Study) Other factors hypothesized include **birth injuries** and viral **infections** that manifest their effects during critical neuro-developmental stage. However, research in recent years shows patients with schizophrenia to have severe impaired neuroplasticity or 'synaptopathy' (down regulation of synaptic proteins)/(disturbance of micro-connectivity') and brain volume decrement from white matter rather than grey matter. This neurodegeneration is associated with decline in growth factors. A combined neurodevelopmental and neurodegenerative model is therefore possible.

Social theories on pattern of parenting, migration, poverty, stress etc., etc. are also advocated.

Taking the average of various studies the prevalence of schizophrenia in a population is about 0.5-1%; the risk in first degree relative is 10% or more and in identical twins 40% or more. In general it can be said that genetics contribute 70% and environment 30% to the cause of the disease.

Pathophysiology

The current dominant **Dopamine Hypothesis** postulates that the 'positive' psychotic symptoms in schizophrenia are due to hyper-dopaminergic activity in the brain i.e. the meso-limbic pathway or system and the 'negative' symptoms due to hypo-dopaminergic activity in the meso-cortical pathway or system. The support for this hypothesis comes from the efficacy of anti-psychotic drugs that are mainly dopamine antagonists or relative agonists to the receptors. Other psychotogenic pathways may be due to glutamate excitotoxicity such as stimulation of NMDA (N-methyl-D-aspartate) receptors, GABA dysfunction linked to 5HT receptors, oxidative stress and etc. which lead to reduction in neurogenesis. (See Chapter 5)

Schizophrenia, meaning **splitting** of the mind was coined by **E. Bleuler** (1911) to describe the breaking up of the mental functions. As mentioned before, different aspects of mental functions are inter-related, interactive and integrated. In diseased conditions of the mind or brain these functions undergo **variable** and **differential dissociation, disorganization, disintegration** and **regression** affecting part or whole of the individual's psychic experience, behavioural response and social functioning. The effects may vary from mild and subtle cognitive deficit to complete fragmentation and incongruity of mental functions. The clinical spectrum may range from oddities of speech and habit, lack of productivity, deterioration of performance to obvious psychotic breakdown with recognised core features. In recent years,

Japanese psychiatrists have used the term "**Integration Disorder**" in place of schizophrenia which is stigmatizing. The result shows families and patients are more willing to come for early consultation and more compliant in treatment.

The patient may exert control and conceal his hallucination and delusion or if not talk back at 'voices' and attack his 'persecutor'; he may hide in fear from imagined harm, avoid 'poisonous' food and withdraw from others. He may laugh and cry without reason, behave oddly without being self-conscious or become childish and incoherent, etc. In the chronic state he may appear lazy, unkempt and shabby. Often he withdraws from others or avoids crowds to protect himself from over-arousal/stimulation which overwhelms him. When over exposed his mind gets 'jammed up' and he/she experiences great intra-psychic anxiety. It is like clicking the 'mouse' repeatedly and rapidly and the CPU is not able to respond accordingly. As a result the 'hour glass' and 'cursor' stall and the process is delayed or 'hangs'. A break or rest or even rebooting is necessary for functions to be restored. It helps for schizophrenic patients to have intermittent respite when they feel their mind 'overcrowded' or stressed.

Schizoaffective disorders

The concepts and definitions of schizoaffective disorders have been confusing and controversial. Nevertheless, according to ICD-10 (and probably in coming ICD-11 too) "These are episodic disorders in which both affective and schizophrenic symptoms are prominent within the **same episode** of illness, preferably simultaneously, but at least within a few days of each other." Patients who have been diagnosed to suffer from schizoaffective disorders often have an initial florid undifferentiated psychotic episode during adolescence. The clinical picture is one of mixed organic, schizophrenic and affective features. However, with time, the psychosis may become more differentiated and the patient may subsequently show only schizophrenic, affective or mixed symptoms in other episodes. Precipitating stressors are commonly present. It is not unlike temporal lobe epilepsy, frequently with a past history of childhood febrile fit, which later may present with variable seizures such as psychomotor, grand mal and petit mal attacks depending on the direction, speed and extent of discharge from the focal lesion. In DSM 5, schizoaffective disorder can be diagnosed when there are mixed affective and schizophrenic episodes occurring in the longitudinal history.

It is of interest to note that there is some similarity between manic hyperactivity or stupor and catatonic excitement or stupor which may be due to hyper-dopaminergic activity. There is also some similarity between depression with psychomotor retardation and schizophrenia with negative symptoms which may be due to hypo-dopaminergic activity. Differential gradient of dopaminergic activity and interaction between the different pathways may result in production of different symptoms or syndromes.

Robin Murray (Institue of Psychiatry – London)

Robin Murray is of the opinion that the Kraepelinian dichotomy of distinct schizophrenia and bipolar disorders are actually part of the **same continuum** in which bipolar patients experience psychosis and schizophrenic patients experience depression or manic episodes. They not only **overlap in symptoms** but also have onset in early adulthood and respond to dopamine blockade. Thus in monozygotic twins they are more likely to develop the same illness as well as more at risk of exhibiting symptoms of the other illness because they **share certain susceptible genes** for psychosis such as neuregulin 1, dysbidin and COMT. However

those who suffer from bipolar disorders tend to be spared impediment in intellectual development and education, have better outcome though sensitive to major life events. Schizophrenia tends to have more severe cognitive impairment and poorer outcome. Therefore schizophrenia comprises **5 syndromes**: **positive** symptoms, **negative** symptoms, **manic** episodes, **depression** and **disorganization**. Besides psychotic symptoms, associated affective and anxiety symptoms need to be treated as well as they may help to prevent onset of psychosis. There is also an important role for cognitive behavioural therapy i.e. in area of cognitive deficits. (See Anxiety is the 'Mother of Psychopathology' page.)

AFFECTIVE (MOOD) DISORDERS

Affect, mood, emotion and feeling have been defined and used differently in different textbooks. However in clinical practice, "affect" and "mood" are interchangeable terms i.e. Mood "Affective" Disorders (ICD 10). In DSM-5 they are split up into Bipolar and Related Disorders and Depressive Mood Disorders.

Depression, elation and irritability are cardinal signs in the primary disturbance of affect or mood. The abnormal affect or mood would colour or exaggerate other mental functions.

Depressive Illness

In the updated "**2004** Global Burden of Disease Study (**WHO**), depression was found to be the **third** leading cause of burden of disease **worldwide** and the **top** leading cause of burden of disease in **middle** and **high income countries**." (MOH Clinical Practice Guidelines 1/2012). But there was no mention on the "cause" of depression.

The word **depression** can denote a **symptom**, an **illness** or a **syndrome**. One can be depressed (that is feeling sad or low in spirit) but not suffering from a depressive illness. Depression as an illness is characterized by **low mood**, **psychomotor retardation or agitation** and **negative beliefs**. To this is added **loss of concentration** and **anhedonia** (meaning loss of energy, interest, libido and pleasure). For the newly initiated it has been confusing to read about **melancholia**, **bipolar depression**, "**unipolar"** (without hypomania/mania) **depression**, **major depressive disorder i.e. MDD** (until occurrence of hypomania/mania), **psychotic depression** (with delusion and hallucination), **dysthymia** (which used to mean **neurotic** depression, later a **personality** disorder and currently **chronic depressive mood disorder** that is long standing) and "**reactive"** (author's view) **depression**. There is also special description of **postpartum blue** and **depression in pueperium**. Prolonged and abnormal grief of bereavement exists now as a separate **prolonged grief disorder**. The **classification** of depression is thus not quite resolved. Besides, depression may be **primary, secondary** or **organic.**

In recent years, with more new anti-depressants available it has been proclaimed that depression is widely prevalent and grossly **under diagnosed** as well as **under treated**. There is hardly any mention on why the malady has become so universally common. Most probably, more people are suffering from depression because of **increased stress** with **losses** in modern living. But this is not highlighted or is ignored. The consequence is the undesirable effects of focusing only on symptoms, overlooking causative factors and encouraging medications. The medical principles of diagnosing and managing diseases according to aetiology appear to have

been forgotten. For these sufferers, jobs creation and financial assistance during economic crisis are probably more helpful to relieve stress and depression than medications.

Thus the past **aetiological** concept of **endogenous** (inborn/inherent or **genetic**) and **exogenous** (reactive or secondary) **depression**, and the **clinical** picture of **psychotic** or **neurotic depression** merit review. In the former family history is important though the external cause maybe covert. But in the latter we are particularly obliged to look for causes e.g. **stressors** and **losses**, to know the patients and understand their environments and not merely follow a checklist of symptoms or criteria set approach to diagnosing.

The "endogenous" depressive illness as in **manic depressive psychosis, MDP** (now known as **bipolar disorders**) would be **bipolar depression** when the bipolar disorder is established. Otherwise **MDD** is diagnosed till an episode of hypomania/mania appears. In the past "unipolar" depression (without hypomania/mania) would be diagnosed as part of **MDP** even before occurrence of hypomanic/manic episode because of its characteristics different from reactive/secondary depression. In other words the current bipolar disorder is often a **retrospective** diagnosis waiting for the appearance of a hypomanic/manic episode. **MDD** is therefore a heterogeneous group of mixed endogenous and exogenous depressive illness. The implications in differentiating the endogenous (unipolar or bipolar of MDP) depression from the exogenous (reactive or secondary) depression are in treatment (mood stabilizer or antidepressant), understanding the course of the illness and long term prophylactic management. In endogenous depression there seems to be **absence** of obvious loss. The "exogenous" is however mainly reactive to **external stressor** i.e. overt loss whether material or non-material, physical or psychological and would probably include most of the major depressive disorder. The clinical picture of "psychotic" (as in endogenous condition) or "neurotic" (as in exogenous condition) is still useful. Implied in "neurotic condition" also suggests presence of **personality traits** as an additional factor. The division of categories is of course not always clear cut and there is much overlapping which is to be expected. Hence the dimensional aspect is debated.

The clinician in the **past** would distinguish endogenous depression from exogenous depression by its non understandable onset, being out of touch with reality, diurnal variation of mood, early waking, psychomotor retardation or agitation, mood congruent hallucination and delusion, non-reactive response and high suicidal risk. On careful inquiry some may even show brief hypomanic symptoms known as "manic defence" before onset of the depression. The symptoms are thought to be more biological and cyclical. No such distinction appears to be necessary or inquired nowadays.

In clinical practice many if not majority of depression seen are **secondary** to other disabling disorders or diseases as well as **reactive** to psychosocial and socioeconomic factors which are ignored or neglected. Such depression is usually diagnosed as a primary disorder or a co-morbid condition. In "**double depression**" there is an acute reactive or secondary depression superimposed on a chronic or **primary** (endogenous) depression due to ongoing unresolved accumulated losses.

Pathophysiology as Pathogenesis

In simplistic terms of pathophysiology, it may be postulated that the endogenous (inborn or inherent) depression is due to monoamines deficiency in the brain. The exogenous depression is more mediated through the hypothalamus – pituitary – adrenal (HPA) axis response to

stressors or losses in life. The initial output of noradrenaline and cortisols is adaptive and beneficial to the crisis. But when the levels are prolonged and sustained they become toxic and harmful to the body resulting in cardiovascular, metabolic and autoimmune disorders. Both the monoamines deficiency and HPA response would cause hippocampal atrophy leading to similar depressive symptoms.

Perhaps it is due to the close linkage between the primary (endogenous) depression and secondary/reactive (exogenous) depression from "chain reaction" or "one thing leads to another" that the current classification has dispensed with aetiology. However, what is 'endogenous' as in manic-depressive, could also be viewed as a 'predisposed vulnerability' to external precipitating stressor or losses. In 'exogenous' depression the stressor or losses would be directly aetiological. Diagnosis also depends on the stage of assessment along the longitudinal development of the illness. [See relation between Anxiety and Depression.]

Suggestion

Regardless of the current system of classification to follow officially it would be useful to think along what is endogenous and exogenous in clinical management. A provisional "aetiological" classification may consist of the **endogenous depression** (primary, "unipolar" or bipolar) when there are no obvious or significant losses or stressors and **exogenous depression** (reactive, secondary or co-morbid) when there are overt losses. Then we are not likely to miss out or overlook on "causative" factors whether predisposing, precipitating or perpetuating and managing them accordingly with inclusive protective factors instead of just treating symptoms or diagnosis of depression with drugs.

Bipolar Disorders (Manic Depressive Psychoses)

These **recurrent** affective disorders (considered to be 'endogenous' in origin and psychotic in nature in the past) are similar to schizophrenia in prevalence and early age of onset. They may present with depressive episodes alone **(unipolar)** or mania/hypomania with/without depressive episodes **(bipolar** or **manic depressive psychosis** in the past**).** However, nowadays, the bipolar affective disorders have been sub-classified into i.e. **I** (with mania) and **II** (with hypomania) and even more with specifiers and become more complex. Genetics and family history as well as environmental factors play important parts. The episode may be single in a life time or more commonly there are multiple random episodes of depression and mania/hypomania throughout life. As a manic or hypomanic episode may emerge much later than depressive episode(s) the diagnosis of bipolar disorder is often made **in retrospect** or much delayed. However bipolar depression with prominent retardation could be diagnosed early before the appearance of mania or hypomania. In the course of illness there is a tendency of each subsequent episode to become longer in duration and the remission period to become shorter. The illness eventually becomes chronic with all round deterioration of mental and physical health. Bipolar disorder is also believed to have higher suicide risk and shows cognitive deficits.

A recent hypothesis is that with each episode there is a chain of reactions in brain adaptation to the induced stress to maintain short-term stability i.e '**allostasis**'. The main hormonal mediators of the **stress response**, cortisol and adrenaline have both protective and damaging effects on the body. Over time, due to wear and tear from chronic stress on the central nervous system and the body there is a cumulative cost or '**allostatic load'** which leads to atrophy of nerve cells in the brain. In the long term there is also damage of the **cardiovascular**,

metabolic and **immune systems**. The patient becomes less resilient and more vulnerable to medical co-morbidity, early ageing and cognitive impairment. In chronic stress it is postulated that there is **brain rewiring** going on in hippocampus, prefrontal cortex and amygdala via the neurotrophins. Among the neurotrophins and their receptors, **brain derived neurotrophic factor** (**BDNF**) is considered to play a most important role. It is involved in **neurogenesis**, neuronal survival, neuronal maturation, maturation of neural developmental pathways and in the adult synaptic plasticity, dendritic growth and is essential to long-term memory. In chronic stress, trauma (abuses) and acute psychotic episodes BDNF level is decreased. The **second generation antipsychotics** as well as **lithium** in treatment are thought to be protective/preventive of this stress induced **structural remodeling** through stimulation of BDNF expression.

In **cyclothymia**, a virtually life long affliction, there is a persistent instability of mood, involving numerous periods of mild depression and mild elation but not amounting to bipolar affective disorder or recurrent depressive disorder.

Relation between Anxiety and Depression

Depression (mostly **reactive** or **exogenous** in nature) may be said to **begin with losses** of e.g. loved ones and relationships, health and wealth, success and status, power and pride, employment and livelihood, etc., and **result in losses** in e.g. sleep, appetite, libido, concentration and capacity for work, pleasure, interest, energy, hope, meaning and purpose in life. Risk of severe depression culminates in suicide.

[Other symptoms distinguishing the more **endogenous** bipolar disorder or manic-depressive psychosis] include diurnal variation of mood, guilt feelings, non-reactive response, suicidal thought or intent, nihilistic delusion and mood congruent auditory hallucination. In severe affective disorders, mood incongruent delusion and hallucination or even Schneider's first rank symptoms may be present (in current criteria). Bodily symptoms like aches and pains (somatization) are common and may be complained of as medical illness. (Among **Asians** and **third world populations**, losses, afflictions and privations in life are **accepted** and **suffered** as one's **fate** and **destiny**, **ordained** perhaps by **gods** and **heavens** rather than "depression" as an illness. In fact there may be hope of changing fortunes and a better next life.)] **Major Depressive Disorder** is **heterogeneous,** mostly **reactive** or **secondary** and does not distinguish between what is exogenous or endogenous.

Nonetheless in depression there is **incapacity**. Depressed patients would anticipate task(s) and commitment(s) with anxiety.

Anxiety may be considered the "**mother of psychopathology**". It is frequently a **precursor** or **trigger**, **reinforcing** or **exacerbating** factor and **associated** or **secondary** symptom of many mental disorders. **[**Hence there is initial improvement when anti-anxiety drugs are prescribed for undifferentiated mental disorders at the primary care level.**]**

How depressed and anxious the patient is depends on the **stage of development** and **time of presentation** of his illness. It is not without reason that symptoms of **depression** and **anxiety** are frequently found together. When there is a '**loss**', be it **material** or **non-material**, **physical** or **psychological**, depression will be experienced. In this state of depression the individual will find task such as job assignment, life event, social activity, chores of daily living and even festive celebration, **daunting** and **threatening**. He or she will begin to experience

anxiety or worry as well. On the other hand an individual who faces stressful task will experience anxiety. In this state of anxiety he or she will not function optimally and suffer **loss in performance**. So in addition to anxiety he will have depression. Anxiety is about what is **ahead** and depression is about what is **behind**.

Understanding of Stress and Chain Reaction:

There is constant change in life due to relentless competition for the survival of the fittest. When there is imposed change there is need to **adjust** and **adapt**.
External imposed change without **control** and **choice** becomes a threat or stress.

The following simplified schemes may illustrate in **psychodynamic** terms the relationship between '**loss/depression**' and '**task/anxiety'**:

[When there is pressure in life with loss of control and choice, stress will be experienced.]
PRESSURE → LOSS OF CONTROL & CHOICE → STRESS

[When under stress and faced with task, anxiety will be experienced.]
STRESS + TASK → ANXIETY

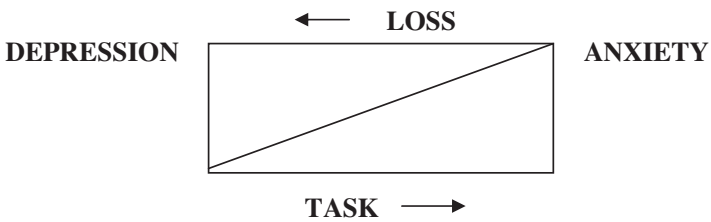
[When under stress with loss of capability/capacity depression is experienced.]
STRESS + LOSS → DEPRESSION

[Loss leads to depression and when faced with task anxiety is added.]
LOSS → DEPRESSION + TASK → ANXIETY

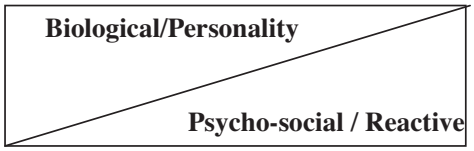
[Task leads to anxiety and when there is loss of capability/capacity depression is added.]
TASK → ANXIETY + LOSS → DEPRESSION

The proportion of anxiety and depression in **mixed anxiety-depression** depends on the stage of presentation between **task** and **loss.**

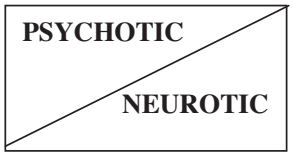
Development or Progression of Depression/Anxiety (Mixed States are more common)



"Aetiology"



Clinical Presentation:



What do suicides have in common?

Edwin S. Schneidman draws up a list of "Ten Commonalities of Suicide". He is the Emeritus Professor of Thanatology at UCLA. [Suicide (Guidelines for Assessment, Management & Treatment) Edited by Bruce Bongar, 1992] The list is as follow:

1. Common *purpose* of suicide is to seek a *solution:*
Suicide is problem-solving behaviour and not a random, pointless or purposeless act

2. Common *goal* of suicide is *cessation of consciousness:*
An urgently felt need to stop unbearable anguish…an action to put an end to intolerable affects and the individual's unwillingness to tolerate that pain

3. Common *stimulus* in suicide is *intolerable psychological pain:*
Psychological pain is the centre of suicide and the basic clinical rule is to reduce the level of suffering, often just a bit and the individual can choose to live. In clinical practice, suicide prevention is psychological pain management.

4. Common *stressor* in suicide is *frustrated psychological needs:*
It is a reaction to unfulfilled psychological needs. There are many pointless deaths but never a needless suicide. Frustrated needs should be addressed.

5. Common *emotion* in suicide is *hopelessness-helplessness:*
Pervasive feeling of helplessness-hopelessness.

6. Common *cognitive state* in suicide is *ambivalence:*
Therapist uses these simultaneous contradictory feelings and plays for time.

7. Common *perceptual state* in suicide is *constriction:*
More or less transient psychological constriction of affect and intellect during which options are reduced to 'one'.

8. Common *action* in suicide is *escape* (*egression):*
   Egression is a person's intended departure from a region of distress.

9. Common *interpersonal act* in suicide is *communication of intention:*
   In most cases (80%) there were clear verbal or behavioural clues to the impending lethal event.

10. Common *consistency* in suicide is with *life-long coping patterns:*
    We must look to previous episodes of deep perturbation, distress, duress, threat, and the capacity to endure psychological pain in order to find paradigms of egression in that person's life.

The high risk of suicide is seen as the climax reached in Pain (psychological), Perturbation (state of being upset or perturbed) and Press (negative conditions or events as opposed to positive press e.g. good genes and happy fortune). The aim of management is to reduce pain, perturbation and press that is negative. One should not confuse concomitance of events with causality of suicide. Clinically, combination of depression and anxiety portends a high risk for suicide

Manic Illness

The clinical picture of **hypomania or mania** (more severe) may be said to be the opposite of depressive illness. Primarily the mood is **elated** (or **irritable**) and there is **increase in activity** but with little achievement. The patient is charged with energy, needs little sleep or rest, occupies himself in activities, gets distracted easily and interferes with others. He is full of confidence, optimism and may even have grandiose ideas, plans and missions. He may spend unnecessarily and excessively or make irrational decision in business transaction and run into financial trouble. He is disinhibited, talks loud, fast and too much often with clang association. When the condition is mild his gaiety can be infectious. But when the condition is severe he is both irritating and irritable. He would become excited, hyperactive, disruptive, dysfunctional and even exhibit hallucination, delusion and violent behaviour. There may also be amplification or exaggeration of what he is thinking or experiencing e.g. crying at a sad thought or complaining of a physical discomfort. There is accentuation of personality trait and personal experience.

NEUROTIC and **STRESS RELATED DISORDERS**

The **Freudian** syndrome of "**anxiety neurosis**" includes symptoms of general irritability, chronic apprehension or anxious expectation e.g. excessive worry, anxiety attacks (now called panic attacks) and secondary phobic avoidance. This "anxiety neurosis" is later renamed "anxiety disorder". There were other hysterical, hypochondriacal, neurasthenic and depressive neuroses which have been reclassified into somatoform, dissociative and depressive disorders; post traumatic stress disorder and atypical anxiety disorder have been added to anxiety disorders. The earlier described anxiety neurosis with panic attacks became generalised anxiety disorder, an independent entity in DSM III (1980) and in ICD-10 (1992), while the panic symptoms are separated into the panic disorder. The "phobic neurosis" consists of agoraphobia with or without panic attack, social phobia and simple phobia. Also obsessive impulsive neurosis has been renamed obsessive compulsive disorder.

Thus **neuroses** or **neurotic disorders** are no longer mentioned as a class of mental disorders. Instead specific disorders like anxiety, obsessive compulsive and somatoform disorders etc. are used. Nevertheless, the traditional concept and usage of 'neurosis' remain popular. Neurotic symptoms are a result of interaction between the individual and his environment. By and large **psychopathology** may be traced to past traumatic events, emotional conflicts, conditioning and learning of non-adaptive responses and personality development from childhood to adulthood. All these could be a result of **exposure** to and **experience** of certain environments and upbringing that are **culturally determined** for the individual. The **symptomatology** is not always clear-cut for each case and indeed is often mixed. **Diagnosis** is made depending on whether emphasis is placed on the **dominant symptom** manifested, the **personality make-up** of the complainant or the **environmental factors** prevailing. Different mental glossaries may describe differing categories of neurotic disorders based on symptoms, mental mechanisms or reactions.

Aetiological Postulations

Much of mental life is believed to be **unconscious** in which are hidden the instinctual drives and forbidden desires seeking gratification. Also in the unconscious are accumulated from birth, forgotten memories, whose attendant emotions still haunt and influence the individual through life. The conscious self normally copes by balancing the demands of the instinct, the reality and the ideal. What are unacceptable, unpleasant and painful are kept buried in the unconscious. In this way, **anxiety**, the primary and principal manifestation of emotional conflict is prevented from troubling the mind. However, when the individual for one reason or other fails to maintain a satisfactory mental equilibrium, anxiety emerges. Anxiety may be experienced **directly** or **disguised** to appear as various physical or psychological conditions.

Thus it has been hypothesized that unconscious anxiety may undergo complete conversion to physical or somatic symptoms leaving the individual to feel 'indifference' as in **hysteria**. Or the anxiety may be focused on specific objects or situations as **phobias** that can be avoided. Or it can be **disguised** as rituals, a form of magical undoing in obsessive compulsive disorders. When these mechanisms fail, the individual may experience free floating anxiety as in **generalised anxiety disorder** (**GAD**).

The **behaviourist** believes that feelings and behaviours are a result of conditioning and learning e.g. upbringing or parenting. People become neurotic when they either learn non-adaptive, or fail to learn adaptive behaviour. The **biological proponents** would talk of receptors in the brain, neurotransmitters and genetic predisposition.

The experience of worry or anxiety, fear, nervousness and tension is **universal**. When appropriate it has survival value as it prepares the individual to protect himself from danger or threat; or enables him to compete and excel. There is also **existential** anxiety of life's inevitability or eventuality.

GENERALISED ANXIETY DISORDER

GAD is a new term for old anxiety neurosis with anxiety attacks but with shifting criteria and uncertain pathophysiology. To begin with the panic attacks have been separated to go under panic disorder. In DSM (III to IIIR and IV) the duration criterion has been extended from 1 to 6 months and there is a shift of emphasis away from somatic complaints to psychological symptom of "uncontrollable worry". ICD-10 is more practical, giving weight to both physical and psychological symptoms and the duration criterion of several months. Due to frequent symptoms of co-morbidity, especially associated with depression it is debated whether GAD is an independent disorder or a trait/temperament vulnerability that overlaps with some depression. This has implication for management and the choice of treatment. [See section on Affective (Mood) Disorders]

PHOBIC ANXIETY DISORDERS

The common Phobic Anxiety Disorders include Agoraphobia with/without Panic disorder, Social Phobias, Specific (isolated) Phobias and others.

Agoraphobia

The term means fear of open spaces. However, as a clinical entity, the fear includes public places, crowds, shops, cinemas, banks, buses etc. especially when the patient is by himself. This eventually leads to the fear of leaving home, becoming house bound and even being alone. The fear is related to the intense sense of insecurity that something may happen and the patient finds himself helpless or humiliated with no escape.

The development of agoraphobia is like the formation of the snow-ball. It may start with a dizzy spell or fainting attack in a public area. This could be followed by an uneasiness of a recurrence that gradually takes hold of the patient. He becomes sensitive to crowds and noises that over arouse him and begins to develop both mental and physical symptoms of anxiety in such situations. Consequently, the person avoids these places. As time goes on his fear is extended to cover more areas and his activities become more restricted. Eventually, he only feels safe at home. He could go out and travel a short distance, if accompanied, even though by a child. The worst form is when he fears to be alone even at home.

Social and Specific Phobias

Social phobias refer to **discrete situations** in which the patient fears his appearance or action is **under scrutiny** by other people. Symptoms of anxiety developed when eating or speaking in public or meeting the opposite sex at gathering. He therefore avoids such situations. The phobias usually start early in life and is associated with low self esteem and fear of criticism

Specific phobias refer to fear of animals, darkness, heights, enclosed space, flying, riding a lift, using public toilets, blood, disease etc.

Panic Disorder

The symptoms that make up a **panic attack** occur in both medical disease and mental disorder. However, the diagnosis of the **panic disorder** (episodic paroxysmal anxiety) is

described in ICD-10 as recurrent attacks of severe anxiety (panic) that are not restricted to any particular situation or set of circumstance and are **unpredictable**. **Dominant symptoms** vary from person to person but sudden onset of palpitations, chest pain, choking sensations, dyspnoea, sweating, trembling, dizziness and feelings of unreality (depersonalization or derealization) are common. There is **secondary fear** of dying, going mad and losing control. The episode lasts minutes only, sometimes longer. Frequency of attacks and its course are variable.

The panic attack itself is experienced as a **crescendo of fear** and **autonomic symptoms** causing the person to make a hurried exit from the prevailing situations and subsequent avoidance. Frequent and unpredictable panic attacks produce fear of being alone or going into public places. A panic attack is often followed by a persistent fear of having another attack.

Stages in development/progress of **Panic Disorder**

The following stages of panic disorder, how they progress and worsen when undiagnosed and untreated have been described by **David Sheehan** (USA):

Limited symptom attacks i.e. fewer than 4 symptoms

Panic attack → Health fears → Limited phobias → Extensive phobias → Depression.

Panic disorder is a **heterogeneous** group involving **different neurotransmitters**. Therefore different drugs may be efficacious in its treatment.

Mixed Anxiety Disorders

Often, symptoms are mixed and are not clear cut enough to be given separate independent diagnoses. The commonest is **anxiety depression**. [see relation between anxiety and depression]. Others may include mixture of obsessional and somatized symptoms.

Obsessive-Compulsive Disorder (OCD)

There is a wise **quote/saying** attributed to various sources**:**
"Beware of your **thoughts** for they become words.
Beware of your **words** for they become actions/deeds.
Beware of your **actions/deeds** for they become habits.
Beware of your **habits** for they become your character.
And your **character** becomes your **destiny**.**"**

Obsessional trait involves preoccupation with **perfectionism** resulting in **ambivalence,** constant **doubt** and **indecision**. In life **optimal** obsessional trait is necessary for **success**.

Obsessive compulsive disorder (**OCD**) in **DSM 5** is grouped together with body dysmorphic disorder, hoarding disorder, trichotillomania and excoriation disorder instead of under anxiety disorders. It can be a most distressing and incapacitating illness. The patient may have difficulty describing his/her symptoms and is sometimes misunderstood and thought to be psychotic. Leading questions may have to be asked to elicit diagnosis.

Clinical OCD

Consists of two components:

1. **Obsessive symptoms** – that which is said to be **anxiogenic** causing anxiety i.e. **obsessive ruminations** of **involuntary** but **non alien, intrusive** and **recurrent thoughts** (cognitive), **images** (sensory) and **impulses/urges** (affective) often of aggressive or obscene nature with fear of doing something harmful and wicked..

2. **Compulsive symptoms** – that which is said to be **anxiolytic** relieving anxiety and includes both **repetitive physical rituals** e.g. washing and checking and ruminating **mental rituals** which may lead to compulsive action**.**

The individual recognizes these symptoms as being **senseless** and **unpleasant**. Effort to **resist** them are unsuccessful because of tension experienced. However in late stage of the illness the individual may just give up resisting the compulsion. **OCD** may be associated with other mental disorders e.g. schizophrenia, depression and anxiety disorders and there is sub-classification specifying degree of insight into symptoms. The "**contents**" of obsessional rumination are important and will be discussed later.

Compulsive acts and rituals are particularly represented in the form of **repeated checking** and **washing**. The patient **feels doubt** and he checks his belongings, accounts, work or more mundane routines like water tap, electric switch, gas oven and locked door, etc., over and over again. If he is a 'washer' he washes things he uses and himself to feel clean. For both checking and washing, he may develop certain formulae and rituals to overcome excesses or to feel satisfied. The secondary effect is that he develops fear of dirt and excessive washing. He may then avoid washing altogether and becomes filthy. He may also be compelled to read, count, walk, touch or behave in certain manner to relieve inner tension. He can be most trying by asking the same question repeatedly for reassurance.

The obsessive and compulsive components may be **separate** and **independent** or **associated**. Their symptoms may undergo endless **bizarre elaboration** or **substitution** as in **compulsive mental rituals** before a simple action or task is carried out. The sufferer is cognitively aware of his action and behaviour but feels compelled to continue till he achieves "**satisfaction"**. Normally, thinking, acting and feeling go hand in hand. But in this case feeling lags behind knowing or there is "**affective lagging**".

Pathogenesis of OCD and Treatment

Research evidences i.e. functional brain images indicate that there is dysfunction in the complex cortico-striatal-thalamic-cortical neuro-circuitry in OCD and other related compulsive and impulsive disorders. Lesions to basal ganglia causing OCD include i**nfection**, **immunologic cause**, **toxic substances**, **vascular infarction** and **genetic** or **idiopathic** factors. **Post encephalitic parkinsonism** is known to exhibit OCD symptoms.

Serotonin deficiency is thought to play a major role in the production of OCD and other related impulsive and compulsive disorders such as Gilles de la Tourette, trichotillomania, bulimia and addictive behaviours etc. OCD symptoms may be induced by atypical antipsychotics e.g. risperidone and clozapine that are also $5HT_2$ antagonists. Dopamine and other neurotransmitters may also be involved. Selective serotonin reuptake inhibitors (**SSRIs**) and clomipramine (a TCA) become the mainstay in pharmacotherapy of OCD. Recently,

clinical reports suggest that **memantine**, an antagonist of NMDA receptor of the excitatory glutamate system may be efficacious in treatment of OCD.

Onset of OCD usually occurs in adolescence but consultation and diagnosis are often delayed till young adulthood. In terms of prognosis only about **20%** would achieve full and sustained remission while **10%** become intractable and chronic. The rest shows **sub-optimal** response to treatment. For the intractable and chronic cases the irreversible **neurosurgery** might rarely be considered. Strict ethical approval is required. The more recent **deep brain stimulation** is less drastic but needs the same approval. Behaviour therapy is also efficacious in normalizing cortico-striatal-thalamic-cortical circuitry dysfunction and is preferred as a first line treatment for younger patients. Combination of psychopharmacotherapy and behaviour therapy may produce better results.

An empirical postulation based on anecdotal experience

It is postulated that **obsessive rumination** may be "**conscious**" presenting as **OCD** symptoms or "**unconscious**" surfacing as **auditory hallucination** and **delusional ideas** like **schizophrenia**. "**Obsessive rumination**" in the **unconscious mind** is akin to many programs/apps running simultaneously in the background of a computer that **pop-ups** on the monitor screen like psychotic symptoms. Long term sufferers may reveal insight on source of their symptoms.

Mentioned earlier "**contents**" of obsessive rumination (conscious and unconscious) could explain the occurrence of both OCD and many other anxiety/mental disorders.

Mental disorders in individuals with **obsessive ruminations** could include:

Phobia – when **content** is about phobic object and situation such as dirt and death

Post Traumatic Stress Disorder – when **content** is about past experience, trauma and memory

Anorexia Nervosa – when **content** is about overweight and obesity

Hypochondriasis – when **content** is about physical/mental symptoms of no known causes

Dysmorphophobia – when **content** is about preoccupation with appearance of body parts

Schizophrenia – when **content** is more likely **unconscious** but emerging into consciousness as auditory hallucination and delusional idea

Insomnia – due to obsessive rumination before sleep that keeps a person awake.

Kleptomania- a controversial mental disorder in **forensic** practice might illustrate both components of situational obsessive impulse/urge that is anxiogenic and lead to compulsive commission of offence that is anxiolytic.

Possibly affecting **other conditions** such as **autism** and **early stages of addictive behaviour.**

Experience based observation:

Up to half of some 40 **anecdotal** cases with abovementioned postulated psychopathology have shown improvement with adjunct SSRIs and zolpidem treatment. Incidentally, zolpidem is a hypnotic and anxiolytic but may also have anti-obsessional action or property. Research needs to be done to confirm or support clinical observation.

Other Stress Related Disorders

In **Acute Stress Reaction, Adjustment Disorder** and **Post Traumatic Stress Disorder** the focus is on the **precipitating stressor** or **aetiology**. The **symptomatology** is **variable** depending on the individual and circumstance, and may range from **neurotic** to **psychotic** e.g. anxiety, depression, conversion symptoms, dissociative phenomena, hallucination, delusion etc.

Post Traumatic Stress Disorder (**PTSD**) first appeared in DSM III (1980) and also ICD 10 (1992). It had probably existed in the past as 'shell shock', 'battle fatigue', 'trauma neurosis' and in some 'compensation neurosis'. However its aetiological criteria in DSM have evolved from exceptional trauma that would affect almost anyone to milder traumatic events such as accident and assault. Furthermore one could be affected by being a witness to such events experienced by others. Finally, such events so defined include an intense reaction involving intense fear, helplessness or horror. In other words the focus is shifted to the individual's reactions rather than on the aetiological event. ICD 10 has kept to the initial definition of PTSD that it arises as a delayed and/or protracted response to an exceptionally stressful event or situation such as a natural disaster or human violence that would affect almost anyone. Symptoms of Acute Stress Reaction such as initial daze or numbness, intense mixed emotions e.g. fear, despair, anger and depersonalisation, and withdrawal or over activity which occur immediately or within minutes of the trauma instead of resolving within few days persist up to 3-6 months. In addition there are **"flashbacks"** or persistent **re-experience** of the traumatic stressor in the form of **recurrent intrusive recollections, recurrent distressing dreams** and **re-living of the traumatic event**. The victim would also show **avoidance** (including dissociative symptoms) of anything associated with the traumatic event and **increased arousal state** or excitability. Symptoms of anxiety and depression are common. There may be delayed onset of symptoms up to six months after the traumatic event.

In the drafting of **ICD-11** the definition of **PTSD** focuses on the **re-experiencing** the **trauma** in the **present** rather than flashbacks and ruminations.

Over the years the concept of PTSD has undergone changes and is being debated. The latest research regards the pathophysiology of PTSD as an **attachment disorder** i.e. insecure attachments and the most important **risk factor** is **lack of social support**. The **right** cerebral hemisphere and the hypothalamic pituitary adrenal (**HPA**) system and **hippocampus** are believed to be involved. Thus cognitive and verbal therapy involving mainly the left hemisphere is inadequate. Unlike other stress reactions the corticotrophin releasing factor is raised but the cortisol level is low.

Sleep Disorders

Sleep is very important for both physical and mental health. During sleep the body repairs its wear and tear and the mind restores its optimal functions. Sleep is therefore a necessity as well as therapeutic when one is ill. However, the quantity and quality of sleep are believed to decline gradually after adulthood. There is less deep and more interrupted sleep.

The **staging** and **phasing** of sleep, like all biological data, shows normal variation. **Normal sleep** may be divided into two kinds i.e. the non-rapid eye movement sleep i.e. **non-REM** or quiet sleep and the rapid eye movement sleep i.e. **REM** (active or paradoxical) sleep. They go

in cycles from **Stage 1** that is transitional between wakefulness and sleep; **Stage 2** of light sleep; **Stage 3** of transitional between light and deep sleep; and **Stage 4** of REM sleep.

Deep sleep occurs in **non-REM** that is supposed to be free from dreams. The vital signs are regular and stable, reflecting a resting state and it is restorative. However, muscle tone is present and the individual is capable of movement. In **REM sleep**, dreams occur and there is scanning movement of the eyes. The vital signs are "activated" and irregular, and there is penile tumescence in the male. However, voluntary muscles are in a flaccid state and the individual seems paralysed. Thus in **somnambulism** and **night terror** that occur in deep sleep, the individual is capable of physical movement but has no recall. On the other hand, in **nightmares** the individual experiences frightening dreams but feels paralysed and trapped. Diazepam which lightens deep sleep helps in somnambulism, night terror and bed wetting.

Sleep disorders may be primary or secondary. Common primary sleep disorders/insomnia include obstructive sleep apnoea (**OSA**) and periodic limb movement disorder (**PLMD**) of endogenous disturbance. Diagnostic evaluation could be carried out using polysomnography (**PSG**). Secondary sleep disorders/insomnia covers a host of medical, psychological and environmental factors such as arthritis, depression and disturbing surrounding.

A sleep disorder of special interest is **Narcolepsy.** It is characterized by the tetrad of excessive daytime sleepiness, cataplexy, hypnagogic/hynopompic hallucination and sleep paralysis. Not all four are always present in every patient. In cataplexy there is sudden loss of muscle tone brought on by strong emotion e.g. “buckling of knees from laughter” or fall. Patient may also complains of fatigue, low mood, obesity, clumsiness, slurring speech, falling asleep during activity and poor performance. Daytime nap may be restorative. It is a neurological disturbance but the current understanding is that it is an **autoimmune disorder** following an **infection** or **injury** and more common in adolescents. Low CSF **hypocretin** measurement is diagnostic. Hypocretin neurons in hypothalamus are involved in stimulating other brain cells in keeping awake. Treatment of narcolepsy includes psychostimulants and specific antidepressants. Off label use of sodium oxybate ameliorates cataplexy. In delayed sleep phase disorder (**DSPD**) there is late onset of sleep and delay in waking up. Sometimes, the parameters in non-REM and REM sleep seem to have become “disrupted or “dissociated" and one gets mixed kinds of sleep disorders.

As one grows older, sleep becomes intermittent and there is reduction of deep sleep and duration of sleep. Sleep apnoea (interruption of breathing during sleep) from organic causes has been increasingly diagnosed and treated nowadays.

Dreams are brain activities during sleep. There have been psychoanalytical explanation and interpretation of their function and significance. Physiologically, during sleep the physical body is repaired and the mental capacity is restored. It is akin to the **defragmentation** process of the computer that organizes and assembles haphazardly saved data during waking to optimize working memory capacity for more input. It is also analogous to the activities that go on in the **bank** or **library** after it is closed for business of the day. Staff members stay back to sort out, classify, catalogue and file the accounts, transactions or returned books so that they can be ready for business again the next day. In the process of sorting and filing they may come into contact with other adjacent accounts, files or books. So we dream not only of what have taken place during the day but also related matters in the past. The materials may undergo editing or synthesizing, (perhaps in story form). In sleep deprivation, the materials of daily experiences and transactions are left unsorted and working memory capacity could be

affected and mental functions disorganized. Sleep is therefore essential and therapeutic to mental and physical health.

Culture-Bound Syndromes

These are **syndromal symptoms** and **behaviours** which **incorporate cultural beliefs** and **ideas** in **their causes** and **effects**. **"Koro"** is an example in which there is a perception of penile retraction into the body, a belief that it brings death and is accompanied by panic anxiety symptoms. Both sporadic cases and epidemic koro have occurred in Asia. Symptomatic koro secondary to schizophrenic delusion has also been reported.

Man has an innate desire to master and dominate his environment. This is evident in the human quest for knowledge to seek explanation and answer to phenomenon and problem. When faced with uncertainty or the unknown he feels uneasy and threatened. The natural tendency is to ascribe to the supernatural what is inexplicable and unpredictable. In this way it becomes easier to accept and communicate the distress or misfortune. Resignation to what is beyond control removes shame and stigma and makes life bearable.

As a rule people consult their family doctor for their physical ailments, the religious clergy for their spiritual troubles and the psychiatrist for their emotional/mental symptoms. Thus the religious clergy and the psychiatrist may see different groups of people in need of help. Each may describe the same phenomenon in his own language and terminology with apparent differences in opinion. Some people prefer to call **trance states** and **spirit possessions** social diagnoses and therefore outside the field of medicine. Thus depending on the operational definitions used the same condition may be fixed with a **medical**, **socio-cultural** or **spiritual label**. From the medical point of view nothing is more rewarding than to see a person recover from his affliction through proper interventions.

Trance state and **spirit possession** are **dissociative phenomena**. According to William Sargent, in trance states the dissociation of consciousness is more or less complete and the individual's personality is temporarily displaced and taken over by someone else i.e. deity or spirit. On recovery there is amnesia of what had taken place. In spirit possession the individual is conscious of being possessed by some spirit that is in control of him. Culturally speaking, these phenomena serve certain personal and social functions. The belief in the discernment and pronouncement of the deity or spirit is a powerful influence in the therapeutic process. The deity or spirit at times enables the 'weak' to speak his/her mind to the 'strong' without fear of repercussion. And the 'strong' is more prepared to listen to the deity or spirit speaking through the 'weak', without loss of face. In this way an intolerable situation might be resolved. It should not be dismissed as simply superstitious.

However there are unscrupulous mediums who make use of such belief in deity and spirit to deceive and cheat others who may be gullible, naïve or under stress.

Eating disorders i.e. **anorexia nervosa** and **bulimia nervosa** might perhaps be also considered as western culture bound syndrome. The pursuit of thinness is a modern "glamour culture". In anorexia nervosa, there is not only a deliberate reduction of calorie intake but also an increased effort in calorie expenditure. The belief is that one is too fat even when grossly under weight. In the related bulimia nervosa there is bingeing of food followed by self induced vomiting and purging to control weight. Interacting socio-cultural (e.g. diet and eating habit) and biological (e.g. genetic and pubertal development) factors are probably

involved in their psychopathology. However many are believed to have underlying depression and low self esteem or the need to be in control. In view of the seriousness of physical stigmata, endocrine abnormality, metabolic disturbance and the real risk of mortality the management should be intensive, comprehensive and sustained. A new periodic **bingeing disorder** has been added in DSM 5.

The symptoms may also be secondary to other mental disorders. In anxious patients they may eat excessively to relieve anxiety or throw up because of anxiety. The depressed patients in general have poor appetite but some may binge drink and food. In schizophrenia, the patient may resist eating because of hallucinatory command not to eat or the delusional belief that the food is poisoned. Management depends on the psychopathology.

The classic culture bound syndromes such as **Koro**, **Latah** and **Amok** seem to have disappeared from our region. What could be the explanation? Are culture bound syndromes dependent on the cultural milieu prevailing or the stage of development of the society? Some are of the opinion that when the society becomes more developed and knowledge advances the so called culture bound syndromes would disappear. The belief seems to be that all mental disorders could be reduced to common, biological, generic psychopathology and mechanism i.e. anxiety disorders, affective disorders and psychoses. However it could also be a matter of definition and nomenclature. For instance, to the DSM users neurasthenia is a form of depression whereas to the Chinese it is an entity that may include depression.

Evolution and Hierarchy of Aetiological concepts of diseases:

In the history of medicine, cause of disease has been attributed to the following factors:

Supernatural/Superstitious → Physical/Environmental → Biological/Organic/Genetic

→ Psychological/Social → Moral/Spiritual ?

Within each culture and society there are different evolutionary and hierarchical approach to understanding illnesses or illness behaviours and their management. Much depends on the belief system and theoretical model prevailing that may shape the manifestation and presentation of the disorder. Different healers or therapists are consulted.

CHAPTER 5

TREATMENT AND MANAGEMENT

Pharmacotherapy and Psychotherapy

The **brain** and **mind** dichotomy seems to be reflected in the proponents for **physical** and **psychological** methods of treatment. The psychopharmacological approach to treatment is to restore normal neurotransmission affected by 'synaptopathy' or 'defective connectivity'. The rationale is to augment what is deficient and to dampen what is excessive through use of drugs that are agonists or antagonists in the systems concerned.

In simplistic terms, there are also the **GABA Inhibitory system** and the **Glutamate Excitatory system**. They need to be in **optimal balance** for mental health. To achieve an inhibitory state, relevant/specific agonist of the GABA-ergic system or relevant/specific antagonist of the Glutamatergic system or both at the same time could be employed. Similarly, to achieve an excitatory state, antagonist of the GABA-ergic system or agonist of the Glutamatergic system or both at the same time could be employed. Polypharmacy may therefore be enhancing and fine tuning for desired outcome.

Lately, studies suggest that **antipsychotics** and **antidepressants/mood stabilizers** do not just act neurochemically as agonists or antagonists but could **stimulate** brain derived neurotrophic factor (**BDNF**) to create new neural pathways. It is postulated that brain cells are damaged by illness and stress and BDNF promotes **neurogenesis** and **neuroplasticity**. In neurogenesis existing nerve stem cells could differentiate into specific nerve cells. In neuroplasticity or brain/cortical plasticity, neurones exposed to normal experience or injury could undergo growth, reorganization, migration, rewiring and assume new function.

Psychological treatment embraces at one end, the classical psychoanalytical psychotherapy and the other end, cognitive and behaviour therapy. Theories abound as to how symptoms are derived and how they could be relieved. It is hypothesized that be it a therapeutic relationship or counselling, a reconditioning or desensitization, a hypnotic suggestion, an abreaction, a diversional therapy, a cognitive change, a positive stroke or a placebo response etc., the **mechanism** is to effect a **change** in the morbid pattern of neuronal circuitry. [Morbid circuits may also be disrupted by aversion therapy.] This is achieved through **strategic** and **systematic verbal**, **behavioural** or **experiential input** to **re-channel** or **bypass** 'prevailing faulty circuits' or **open up/create** 'new desirable circuits'. It is likened to **re-wiring**. **Effort** and **practice** (like **compliance/adherence** with medications) are necessary to maintain the new pathways and improvement. The most powerful force to effect change is the arousal of **emotions** and **"love"**. Happy memories or painful experiences are equally important in therapeutic processes.

Therefore if the objective of **psychopharmacotherapy** is to restore normal neurotransmission then the role of **psychotherapy** is to facilitate the direction of desirable neurotransmission. On the other hand physical exercise, relaxation activities, meditations and enjoyable diversions or hobbies provide breaks for overheated circuits from excessive stress to cool down and recover. **Physical exercise** and **skill training** are thought to promote structural regeneration of cells in the hippocampus and their function. [They also stimulate and integrate cognitive, affective, sensory and motor functions.]

It is also important to remember that the mind of a psychotic person need not be completely deranged and nor is he psychotic all the time. There is always part of him that can function and respond normally. With patience and understanding one can relate to this normal part of the mind, to strengthen and expand it. This may explain the success of **charismatic therapists** because of **positive therapeutic relationship.**

Evidence Based Medicine (EBM) and Treatment Algorithm

Nowadays, there is much emphasis or cliche on "**evidence-based medicine**" which derives from clinical studies that is **deductive** while the "**experience-based medicine**" which derives from anecdotal insights that is **inductive** is neglected. In fact e**vidence based medicine** begins with anecdotal observation and empirical experience or anecdotal observation and empirical experience are the bases for evidence based medicine. To insist rhetorically on "evidence" first before initiating any new potentially beneficial treatment is to think in the box and impede innovation and progress. There would have been no discovery of the antibiotic penicillin and vaccination of chicken pox. Much depends on the availability of facilities and resources to conduct research so that experience based becomes evidence based.

In the management of psychiatric disorders as well as in general medicine and other specialties, **treatment algorithm** or guideline in treatment is developed and taught. In psychiatry such evidence-based medicine derives mainly from drug randomized controlled drug trials (**RCTs**) which are carried out on diagnostic categories dominated by DSM's definitions and criteria, standard questionnaires or rating scales on symptoms, limited patient populations, fixed periods of time, and complex statistical analyses. When there is inconsistency in published findings from different clinical drug trials meta-analysis (which excludes unpublished negative reports) is studied. Strangely, in such clinical drug trials the **response rates** of common mental disorders such as anxiety, depression and schizophrenia, respectively, to each drug within the specific psychotropic class of anti-anxiety, antidepressant and antipsychotic investigated have been about **one** to **two thirds** (not excluding **placebo)** response. The standard conclusion is that within each class of drugs the **efficacy** for each disorder is about the **same** i.e. antipsychotic A is as effective as antipsychotic B in treatment of schizophrenia and antidepressant X is as effective as antidepressant Y in treatment of major depression, so on and so forth. The main difference or selling point is in the **side effect profile** or **adverse reaction** of the drug. Clinical trials and treatments are **diagnoses based (**heterogeneous and lacking specificity). Typically psychosocial factors are ignored and a holistic approach is neglected.

It is often asked by pharmaceutical presenters with vested interests whether all antipsychotics, antidepressants, anxiolytics, mood stabilizers or anticonvulsants are the same, implying that some are superior to others. The more appropriate question to ask really is whether all psychotic, bipolar, depressed and anxious patients are the same. Patients may have the same diagnosis but respond differently to the same drug and in fact sometimes exhibit paradoxical reaction e.g. activation instead of sedation. They also have different psychosocial backgrounds and life events.

Over the years despite the up to two thirds response phenomenon, diagnostic categories have increased and become **more** differentiated, perhaps, taking into account multi-factorial causes, varied manifestations and courses e.g. in affective and anxiety disorders. This might suggest more specific **nosological** entity being defined. However, in practice psychopharmacotherapy has become **less** differentiated. Drugs **registered** originally

for **specific** mental disorders are now promoted to treat **off label** other categories of mental disorders that may probably have **similar/shared common symptoms** or **psychopathology** such as hallucination, delusion, disturbed behaviour or mood and suicidal risk as in schizophrenia, affective disorder and organic brain syndromes. This is not surprising when the **drugs used do not actually act specifically on so called specific disorders** but ameliorate overlapping symptoms in different disorders. The **crossing over** of drug treatment is also likely to be driven by expiry of the **patent** for a specific disorder and **market forces**. It is therefore necessary to review carefully the diagnosis of mental disorder, clinical drug trial and the so called evidence-based medicine in management. And it makes sense to treat empirically underlying **psychopathology** and/or **pathophysiology** as understood or postulated rather than specific diagnosis without nosological basis or by consensus of opinion. There should be a **shift of paradigm** to focus on psychopathology/pathophysiology rather than operationalised diagnosis when conducting clinical drug trials.

The clinicians more often than not are guided in their prescriptions by their practical experience, knowledge and understanding of psychopathology, pathophysiology and individual psychosocial stressors of each patient besides factors such as availability, affordability and lifestyle. Such individualized management would give better results than **one size fits all**, **trial** and **error algorithm**. Inadvertently, the so called "off label" dynamic polypharmacy creeps in. **RCTs** would therefore preferably be based on **psychopathology** and **pathophysiology** rather than "specific" diagnosis. Hence we do not talk of "anti-schizophrenic" or "anti-bipolar" drugs even when RCTs are based on diagnoses of schizophrenia and bipolar disorder. We prescribe instead anti-psychotics or mood stabilizers. There is already a trend to shift focus on management of **specific domain** of psychopathology such as functional cognitive deficit in **depressive illness (**as in the new antidepressant **vortioxetine)**. It involves parameters of social function, work capacity and productivity apart from sleep, mood and libido etc., etc. Likewise, specific domains of psychopathology in schizophrenia may respond to different antipsychotics.

Biomarkers are questionable when diagnoses are syndromal, non nosological, heterogeneous with shared genes and similar symptomatology. Besides the biomarkers could be "cause" or "effect". However, biomarkers are being looked into in terms of treatment response.

In general, the practice of Evidence Based Medicine is controlled by FDA and other international academic or professional bodies and individual National Regulations. What is approved and available in one country may not be the same as in another. They are not binding, comprehensive and infallible. In fact they may impede discovery and progress.

Psychotherapy

Pharmacotherapy has come to a sort of "dead end" in recent years with most patented drugs becoming generic and with very limited new drugs of novel mechanisms on the horizon. It is not surprising that psychotherapy is swinging back because RCTs have omitted psychosocial factors in mental disorders which are important in understanding morbidity and management. However, there are many schools, theories and models on psychopathology and therefore variety of psychotherapy. Psychotherapy probably works through plastic rewiring of the neuro-circuitries through systematic and strategic cognitive and behavioural input while pharmacotherapy attempts to restore balance of neurotransmitters and synaptic receptors.
Community and Social Psychiatry are also growing in importance to provide comprehensive and holistic management.

The guidelines of the World Federation of Societies of Biological Psychiatry (**WFSBP**) are broadly as follow:

In the treatment of **schizophrenia** the so called atypical or new generation anti-psychotics have become the standard first choice. It seems to indicate that despite the higher cost and the possible life threatening side effects of metabolic disturbance in the form of obesity, diabetes mellitus and hyperlipidaemia that would incur additional monitoring, treatment and burden, these drugs are still preferred to the conventional anti-psychotics that would induce non life threatening EPS, TD and perhaps negative symptoms.

For **bipolar affective disorders**, in particular **manic** or **hypo-manic** episodes (and subsequent maintenance) lithium is the treatment of choice and mood stabilizers/anticonvulsants or anti-psychotics could be used in mono-therapy or in combination. For bipolar **depression** sodium valproate/mood stabilizers or anti-psychotics and/or antidepressants are indicated. Antidepressants are mainly prescribed for depressive symptoms and should be tailed off when the depressive episode is over. Sodium valproate/mood stabilizers or anti-psychotics are also indicated for **rapid cycling** disorder. Some reviews have suggested that antidepressants may worsen the bipolar disorders by precipitating or inducing manic/hypo-manic episodes/symptoms, new rapid cycling or cycle acceleration. Indeed, one should also be guided by one's own experience and the patient's response

In treatment of **anxiety spectrum disorders**, the different SSRIs have become the first line drugs recommended. The benzodiazepines are more or less sidelined into secondary roles probably due to potential misuse and abuse or dependency and addiction. Psychotherapy i.e. cognitive behaviour therapy has been suggested to offer more sustainable long term benefit. The general principle is that combined pharmacotherapy and psychotherapy produce better result.

Guidelines aside, **anxiety** may be considered the **'mother of psychopathology**' and frequently a **precursor** or **trigger**, **reinforcing** or **exacerbating factor** and **associated** or **secondary symptom** of many mental disorders. Thus an anti-anxiety drug (whether SSRI or benzodiazepine) is often useful to ameliorate most mental disorders and therefore widely prescribed at the primary health care level. **Polypharmacy** though **not** to be encouraged is therefore unavoidable when symptoms are **dynamic** and **polymorphic**.

In psychiatry the patient is not a diagnosis of symptoms. Moreover, adopting the symptom checklist approach may miss an underlying primary disorder and leave it untreated. It cannot be overemphasized that unless a thorough **biopsychosocial** assessment is made **it is not infrequent that an inaccurate diagnosis can be made, incorrect treatment can be given, the patient does not improve nor die, he does not complain and we are no wiser.** There is no place for smugness.

Management of Inpatients

Psychiatric management is multi-disciplinary.

Sleep is almost always affected during the acute stage of any mental condition. It is therefore therapeutic to ensure sleep and to restore normal sleep pattern. The newly admitted patient, being in a strange environment, should be given adequate hypnotic or sedative medication.

(Exceptions will be those who are semi- comatose or confused from organic causes.) (Sodium Amylobarbitone 200mg nocte had been most effective and useful but unfortunately it is no more available.) **Diazepam** 10mg or **hydroxyzine** 25mg nocte are usually prescribed in our practice. Actually there is a wide selection of **benzodiazepines**, from **short** to **long acting** that one can choose from e.g. **lorazepam**, **midazolam**, and **flurazepam**. For the **depressed**, one of the more sedative anti-depressants e.g. **amitriptyline, trimipramine**, **dothiepin** 25-50 mg or **mirtazapine** 15mg on may be prescribed. In the case of the **psychotic**, anti-psychotic drugs like **chlorpromazine, thioridazine** (unfortunately out of production) 50-100 mg would promote sleep as well. For those disturbed **organic** conditions with clouding of consciousness, **haloperidol** 1.5-5 mg may be helpful.

Acutely d**isturbed** and **violent** patients should be sedated and restrained when necessary. Oral anti-psychotics (e.g. clozapine 25-50mg) and benzodiazepines (e.g. lorazepam 1mg) may be given, short term, in close intervals if the patient could be persuaded. Otherwise, I/m haloperidol 5-10mg for the psychotic is preferred although i/m chlorpromazine 50-100 mg can be given too. The latter may cause postural hypotension and falls. (I/m paraldehyde is not an anti-psychotic but a powerful and quick sedative. It is no more in use.) For maintenance of sedation, medication can be repeated as when necessary either orally or by injection. Injection Clopixol Acuphase 50-100 mg is useful to provide sedation for up to 24-48 hours e.g. over the week end. Others may prefer Injection midazolam. Some may object to sedative 'drugging'. Difficult and unstable patients may be referred to HDU (High Dependency Unit) for management.

In restraining the patient, proper procedures and regular monitoring of vital signs should be observed. When sedation has taken effect restraint should be released. The patient may be isolated in the padded room and other patients should be kept away.

All new admissions should be reviewed by an Associate Consultant/Consultant. Ideally, the multidisciplinary team (**MDT**) consisting of the psychiatrist or doctor, the nurse, the medical social worker, the clinical psychologist, the occupational therapist, case manager and pharmacist should see the case together, for total management.

The mental state of organic cases with confusion should be reviewed **daily** for **orientation** and **memory** and **also vital signs.**

Patients who are **recurrently** disturbed and violent should be reviewed carefully with a view to understand the nature of his behaviour. Often, report of such behaviour results in escalation of medication. A more fruitful approach is to determine whether the behaviour is in **response to psychotic experience; impulsive, compulsive or hyperactive in nature; due to epilepsy or akathisia** etc., etc. Treatment could then be more rationalized and tailored according to the clinical formulation.

TREATMENT - Physical, Psychological, Social

A. PHYSICAL TREATMENT

Physical treatment includes **pharmacotherapy**, **electro-convulsive therapy** (ECT) and **brain surgery** or **psychosurgery** which is not done in Singapore at present. More

recently, **trans-magnetic stimulation** and **deep brain stimulation** are introduced. Pharmacotherapy is of course, the mainstay.

Pharmacotherapy

Psychotropic drugs include the **anti-anxiety** (anxiolytic or minor tranquillizer), the **anti-depressant**, the **anti-manic**, the **anti-psychotic** (major tranquillizer), **mood stabilizers** and others. Within each category there are numerous choices available. **Statistically**, the efficacy of the different drugs in each category is about equal and the selling point is in the different side effect profiles claimed. In most drug trials the **overall response rate** of **each drug** is from one third to **two thirds** (not excluding placebo effect). However, we are not told which two thirds would respond to which drug. One possible explanation is that psychiatric disorder and treatment is **not** well differentiated and specific enough. Pathophysiology or mechanism is not fully understood and psychosocial factors are not considered. Although polypharmacy is discouraged, in practice it is in fact fairly prevalent and not without rationale. For instance a less sedative drug could be prescribed during the day and a more sedative drug at night. **Combination of drugs** may improve the symptoms more than the prescription of a single drug as the efficacy of each drug though similar i.e. up to two thirds but does not overlap completely. It could also be due to drug interaction.

Psychiatric treatment or psychopharmacotherapy is **symptomatic,** no different from the management of chronic arthritic, asthmatic, diabetic, epileptic, hypertensive and a host of other cardiac, dermatological, immunological and neurological conditions, etc. which is also not curative. So far research and clinical trials focus primarily on symptoms reduction as evidence of effectiveness. However absence of symptoms does not mean capability to function and presence of symptoms does not preclude reasonable functioning. Psychosocial factors and stressors, cultural and environmental influence are frequently ignored.

More recently there is a shift of therapeutic aims to **subjective indices** such as patient's report on **quality of life**. Apart from objective research finding and subjective report of satisfaction, a third possible area for inquiry could be the **carer's or family's view** on the therapeutic outcome. A complete biopsychosocial assessment of each patient is therefore necessary. Besides drugs, a **holistic milieu therapy** is just as important.

Early diagnosis and treatment cannot be over emphasized because of chain reactions and cumulative deleterious effects of illness. However it must be kept in mind that all drugs may have side/adverse effects. In clinical practice we diagnose and treat according to aetiology or rather **pathophysiology**. For instance in myocardial infarct or stroke we do not just treat the diagnosis per se in terms of thrombosis or haemorrhage but the attendant hypertension, hyperlipidaemia, diabetes mellitus and other contributing causes as well. The trend towards **polypharmacy** becomes unavoidable. Therefore attention should be paid to **drug-drug interactions**. The liver **cytochrome P450** enzymes system metabolises different drugs at different rate and to different extent. Due to **individual** and **ethnic** differences therapeutic dosage of each drug has to be varied or adjusted. When drugs are used in combination there is additional consideration of metabolic competition between drugs and enzymes. As a result the **efficacy** or **toxicity** of each drug used in combination with other drugs may be affected.

The **principles** of symptomatic treatment are as follows:

1. Therapeutic Phase

Once the drug is chosen the dosage and frequency can be rapidly increased to achieve:

Maximal relief of symptoms with Minimal side effects

Depending on the response, tolerance and sensitivity of the individual, the drug may have to be changed till the most suitable and effective one is found. Knowledge of past treatment and familial response is important and provides a good guide.

2. Maintenance Phase

When the symptoms are relieved or stabilized, side effects may appear unless the dosage and frequency of the drug are reduced. The strategy now is:

Minimal dosage at Maximal interval

3. Individualization

Findings from clinical drug trials are based on 'research' diagnosis, with standardization of limited variables and provide only 'one size fits all' statistical data, so to speak, for comparison. The usual conclusion is that drug 'A' is as efficacious as drug 'B'. Patients may have the same diagnosis but differ in their response to the same drug and dosage. Therefore in clinical practice 'tailor made' management should be endeavoured. The regime of treatment for each patient is different depending on his symptoms and time of day they occur, personal variables, family history, daily routine, life style and requirement. Most of the drugs are long acting or have long half-life. It is preferably given in a single dose for instance at night. But if he is doing shift work, he may have to take it when he goes off duty lest he falls asleep at work. Taxi and bus drivers should be closely monitored for side effects. Patients who need to climb when working should be warned of postural hypotension and dizziness; factory operators handling machines should be told of the effects of medication on co-ordination and reaction time.

Individuals who need to perform well at important functions e.g. interview, examination and public appearance should find out the **optimal dosage** and **timing** of their medication before hand. A booster or protective dose may be taken or given in anticipation of stressful changes, environments, life events and travelling. Any adjustment to medication should preferably be carried out over the weekends or holidays to ensure minimal disruption of routines. Taking medicines at work arouses curiosity and invites questions. Therefore, it may be more convenient to prescribe a morning and an evening dose which family members could help to remind or supervise. When the patient had been compliant/adherent and stable but relapses, psychosocial factors must be inquired and remedied. Sleep is therapeutic.

Timing of **termination** of treatment depends very much on any significant task at hand or event ahead. University studies may be at stake; a career is in the making; a marriage is being contemplated; a baby is on the way; someone close is sick or dying; an important assignment has been given. All these are potential stressors that could precipitate a relapse. It is unwise to take unnecessary risks by terminating treatment during such times. On the other hand, a

period of plain sailing may never be in view and one has to weigh the pros and cons and make a decision.

Past pattern of relapses and remissions should also be considered. In many, medication has to be continued indefinitely. When termination is decided it should be carried out gradually to prevent rebound phenomenon or withdrawal symptoms that could be harmful.

ECT (Electro-Convulsive Therapy)

Although ECT has been in use since late 1930s, the treatment is still empirical. It was originally meant for schizophrenia but subsequently found to be efficacious for **endogenous** or **psychotic depression** and **suicidal** patient. However, ECT has also been prescribed for other conditions because of management problems e.g. severely withdrawn and retarded patients who refuse food and drink; or excited and aggressive patients who are destructive and in danger of exhausting themselves. In depressive illnesses, a course of 4-6 "shocks" is usually enough but in a manic patient about 9 "shocks" or more are needed. The patient would still need to be maintained on medication.

ECT is a safe procedure when physical fitness is screened and properly carried out. Patients are starved, anti-convulsant is temporarily omitted and atropine may be given to counteract vagal inhibition on the heart during ECT and also to reduce secretions. In earlier days, ECT was given "straight" (i.e. without general anaesthesia) which was frightening and traumatic to the patient. Nowadays, the modified ECT is given with general anaesthesia and muscle relaxant, and with the anaesthetist in attendance. It is important to ensure that brain electrical discharge has taken place (from EEG recording) or by observing for mild twitching. To be therapeutic, the duration of induced seizure should be 25-30 seconds. Too much current will aggravate post-ECT amnesia. ECT is usually administered on alternate days and progress should be reviewed after each ECT to decide on the further course of treatment.

Side effects like headache, giddiness and memory impairment are transient or temporary, and complications like fractures and cardiac arrests are rare. Consent from the patient is required.

Contra-indications would include recent myocardial infarctions, risk of cerebro-vascular accidents, raised intra-cranial pressure, de-compensated pulmonary conditions and use of pacemaker.

Experienced clinicians would argue that straight ECT is more effective than modified ECT, and **bilateral** is more effective than unilateral. This is our impression too. However **unilateral** ECT to the non-dominant cerebral hemisphere does reduce (verbal) memory disturbance.

TMS (Transcranial Magnetic Stimulation)

This is an investigative tool first used by the neurologist. Essentially an electric current is passed through an insulated coil placed on the surface of the scalp. By changing the current through the coil, magnetic fields are generated which stimulate the neurones in the cortex beneath. The electrical currents induced have the capacity to interrupt and facilitate neurone function, probably by depolarisation. In the process of stimulating cortical areas and mapping cortical functions, neurological studies have shown the potential anti-depressant effects of TMS. Clinical research is being carried out to establish its therapeutic value and safety.

Deep Brain Stimulation

This involves implanting a "brain pace maker" which sends electrical impulses through implanted electrodes to specific parts of the brain for relief of treatment resistant movement and affective disorders and chronic pains. It is still in the research stage and conditions treated include depression, OCD, Parkinson's disease, essential tremors, Tourette syndrome, dystonia, cluster headaches etc., etc.

Brain Imaging Studies and Research

There has been active and impressive brain imaging studies e.g. MRI, PET, SPECT carried out on various psychiatric disorders. Associated functional or dysfunctional areas in the brain have been located. However there is still a long way to go to interpret the findings in terms of cause or effect and working out pathophysiology and intervention.

Treatment of SCHIZOPHRENIA

Schizophrenic disorders are characterized by symptoms of hallucination, delusion, thought disorder, abnormal behaviour, blunting of affect, loss of volition and withdrawal in varying combination and proportion. The symptoms may be circumscribed, covert, intellectualised or florid, bizarre and regressive. There is splitting or disintegration of mental functions.

In the **Dopamine Theory** of Schizophrenia, it is postulated that schizophrenic symptoms are a result of abnormal levels of dopaminergic activity (hyper or hypo) in the brain. The neuroleptics which are anti-psychotics act by blocking the **post-synaptic dopamine receptors**, particularly **D_2** in the **meso-limbic/meso-cortical**, the **nigro-striatal** and the **tubero-infundibular** pathways. These actions broadly correspond to their **anti-psychotic** (mesolimbic)**, extra-pyramidal** (nigrostriatal) and **endocrinal/autonomic** (e.g. galactorrhoea-amenorrhoea syndrome from increased prolactin level) effects. In addition, blocking of dopamine receptors in **mesocortical** pathway may contribute to or aggravate negative symptoms of schizophrenia and cognitive impairment due to hypo-dopaminergic activity. The clinical picture is similar to the **syndrome of hypo-frontality**.

There are many anti-psychotics in the market. Their overall efficacy is about the same and they differ mainly in their side effects profile. The typical or first generation ones in our practice are chlorpromazine, thioridazine (no more available now), trifluoperazine and perphenazine (which are phenothiazines) and haloperidol which is a butyrophenone. They are also known as major tranquillizers or neuroleptics with strong affinity for the **D_2** receptors and hence extra-pyramidal symptoms (EPS). The second generation **atypical anti-psychotics** are characterized by their weaker/moderate affinity for **D_2** receptors and are also antagonists of **$5HT_2$** receptors. They have less or minimal EPS and also ameliorate the negative symptoms. This is probably explained by the findings that when $5HT_2$ receptors are blocked dopamine is released through disinhibition. Another postulation is that there is '**rapid dissociation**' from or '**transient occupation'** of the dopamine receptors (i.e. clozapine and quetiapine). The **$5HT_2$** receptors may also have a role in psychosis. These atypical anti-psychotics are believed to act differentially on the dopaminergic system i.e. in the pre-frontal cortex to improve cognitive functions (with antidepressant effect), in the basal ganglia to reduce EPS and in tuberoinfundibular system to check on prolactin secretion. This class of newer anti-psychotics includes **clozapine. risperidone, olanzapine, quetiapine** and **ziprasidone** etc. **Amisulpride** has no affinity for $5HT_2$ receptors but claims to be atypical too because it improves the

negative symptoms and has less EPSE. Although the selling points of the atypical anti-psychotics are reduced EPSE and improvement of negative symptoms they have been found in recent years to be associated with development of metabolic disturbance leading to **weight gain, diabetes mellitus** and **hyperlipidaemia** (especially clozapine and olanzapine), perhaps in those predisposed, to various degrees. Due to serotonin receptors blockade, obsessive compulsive symptoms may result e.g. risperidone.

Chlorpromazine and **thioridazine** are more sedative (causing drowsiness) and better indicated for the excited and disturbed patients. They are prescribed in multiples of 25 mg. The dosage is from 25 mg tds to 100mg tds or more e.g. 1 gram daily in divided doses. Common side effects include drowsiness, postural hypotension, weakness and constipation. Thioridazine is strongly anticholinergic and may be toxic to the heart i.e. causing arrhythmia. Also, nasal congestion is often complained of. Though safe when used judiciously, its supply has been **stopped** by the manufacturer. In mega doses of anti-psychotics, ECG may show a **prolonged Q-T interval** and ought to be monitored.

Trifluoperazine and **haloperidol** do not cause much drowsiness but may be more likely to produce extra-pyramidal disturbances. Trifluoperazine seems better indicated for the more withdrawn patients and those with symptoms of hallucination and delusion. It is given from 5 mg bd to 10 mg tds. Haloperidol is better indicated for the more manic patients and is given from 1.5 mg bd to 5-10 mg tds. It has a long half life and side effects like stiffness, pains and aches and akathisia may last for weeks even after discontinuation.

When the acute stage is over, the daily drug dosage can be reduced to a smaller dose in the morning and a larger dose in the evening, or just one big single dose at night. It must be mentioned that the typical anti-psychotics can also induce weight gain, obesity etc., etc.

Anti-psychotics in colourless, odourless and tasteless **liquid** form are available. This is very useful in patients who have difficulty swallowing tablets or need careful titration. It is also used in patients who are uncooperative, resistive and suspicious. The drops could be added into drinks, soup or food. However, caution should be exercised in prescription and usage in case of abuse and breach of **ethics**. Liquid haloperidol, clopixol and risperidone are available.

Other drugs like **pimozide, sulpiride** and **amisulpride** are said to have less extra-pyramidal side effects. Pimozide 1-4 mg nocte, was once recommended for monosymptomatic hypochondriacal psychosis. It is long acting and can cause cardiac arrhythmias. **Sulpiride** has been used more for anxiety and hypochondriacal symptoms than as an anti-psychotic. However in **liaison** psychiatry it is considered the anti-psychotic drug with lower or moderate risk in pregnancy, breast feeding, cardiovascular disease, diabetes, epilepsy, liver disease and renal impairment. The dosage ranges from 100 to 600mg a day. **Amisulpride** acts on $\mathbf{D_2}$ and $\mathbf{D_3}$ receptors. In low dose, 50-100mg/day it stimulates (antagonist to) the pre-synaptic autoreceptors to release dopamine to ameliorate negative symptoms, probably through the mesocortical pathway. At higher dose, 600-800mg/day it blocks the post-synaptic receptors in the mesolimbic pathway to suppress positive symptoms. The medium range of 400-600mg/day controls both positive and negative symptoms of schizophrenia.

In old and frail patients, risperidone 0.25-0.5mg, amisulpride 50mg, olanzapine 2.5mg or quetiapine 12.5-25mg could be prescribed. However side effects like anticholinergic and extra-pyramidal symptoms must be avoided or minimized.

Clozapine, discovered in 1959, launched in the early 1970s, was withdrawn few years later because of fatal **agranulocytosis** (without granulocytes i.e. neutrophils, eosinophils, basophils) or **granulopenia** (marked decrease in granulocytes). But in the late 1980s it was revived and repackaged to treat the so called **treatment resistant** (or treatment refractory) schizophrenics and/or those who are greatly troubled by extra-pyramidal symptoms. Negative symptoms are also improved. The term "treatment resistant" is misleading unless qualified by "to what"? If clozapine is prescribed as a first line anti-psychotic for schizophrenia, then only 2 thirds or so treated would respond and the rest would be treatment resistant to clozapine. Clozapine has its own side effects such as sedation, salivation (M4), seizure, cardiac toxicity, anticholinergic and antihistaminergic effects, hypotension, CNS and metabolic disturbances, etc., and most importantly (non dose related) **agranulocytosis** which occurs in about **<1%** mostly during the first 6 months. Regular monitoring of white blood cells (WBC) and ANC (Absolute Neutrophils Count), initially weekly for first 18 weeks and later fortnightly for 6 months and thereafter monthly must be carried out to avoid potential fatality. To be safe **WBC** should be **>3500 mm^3** and **ANC >2000 mm^3** and free from infection and fever. (Lithium and ascorbic acid are thought to protect leucopenia.) Clozapine has minimal or no EPS and the improvement rate of the so called 'treatment resistant' cases are between one and two thirds.

More recently, clozapine has also been reported to be promising in the treatment of suicidality in schizophrenia, aggression in psychotic patients, schizophrenia with polydipsia and hyponatraemia, refractory and psychotic depression and mania. It is also sometimes used in the treatment of tardive dyskinesia. However, the use of clozapine should best be left to the **specialist.** The dosage should be titrated gradually upward from 25mg daily.

Risperidone is effective against both **positive** and **negative** schizophrenic symptoms and may develop dose dependent extra-pyramidal side effects (**EPSE**) at higher end. The dosage should be titrated gradually and slowly from 0.5-1mg a day up to 4 -6 mg daily. Due to serotonin blockade, **serotonin related syndromes** i.e. obsessive compulsive symptoms, apathetic depression, weight gain and sexual dysfunction may develop. Adjustment of dosage and adjunct medications may be necessary. Incidence of stroke in elderly patients has also been reported.

Paliperidone is a recently registered antipsychotic. It is actually the main active metabolite of risperidone, undergoes minimal hepatic biotransformation and is excreted mainly unchanged in the urine. As such it is similar in efficacy and side effects as risperidone. However it comes as once a day extended release preparation of 3mg, 6mg, 9mg or 12mg capsule. The osmotic controlled-release oral delivery system provides a steady therapeutic level minimizing the peak-trough fluctuation. The dosage of 6mg should be sufficient.

Olanzapine resembles clozapine in chemical structure and pharmacological profile. Its plasma half life is about 30 hours and a single dose of 5-10mg/day is prescribed. Though efficacious for positive and negative symptoms of schizophrenia it carries a higher risk of weight gain, increase in plasma glucose level and type II diabetes and lipidaemia. Its sedative action may be better indicated for more agitated and manic patients.

Quetiapine interacts with broad range of neurotransmitter receptors. It has a short half life of 3-6 hours and no active metabolites. Therefore it is prescribed 150-600mg/day to be taken bid or tid. However in practice a single dose daily seems effective. It is low in EPS and TD, weight gain and hyperglycaemia when compared with clozapine and olanzapine. It is useful for the elderly patient with psychotic disorders and drug induced psychosis in Parkinson's

disease; and 25mg a day may be sufficient. In low dose it may have antidepressant and anti-anxiety properties.

Other marketed atypical anti-psychotics include sertindole and ziprasidone. **Sertindole** has the longest elimination half life of about 3 days among the atypical anti-psychotics. It seems to act mainly on the limbic (L) system. The dosage is 4-12mg daily or more. Its effect on QTc prolongation is similar to thioridazine and pimoside. **Ziprasidone** comes in both oral (given 40mg bd) and injection form. The latter seems to be more sedative. It is claimed to cause less weight gain, hyperglycaemia and hyper-cholesterol. Together with quetiapine and clozapine it causes less prolactin elevation.

Neorotransmitter receptor affinities and effects

	D_2 (antipsychotic)	$5HT_{2A}$ (D release)	$Alpha_1$ (orthostatic)	M_1 (anticholinergic)	H_1 (antihistamine)
Clozapine	++(L)	++++	++++	++++	++++
Risperidone	++++	++++	++++	--	++
Olanzapine	++(L)	++++	++	++++	++++
Quetiapine	++	++	++	++	++++
Ziprasidone	++	++++	++	--	+/-
Sertindole	+++(L)	+++	++	--	+

Depending on the source of reference varying data are quoted by different authors. Drug with H_1 affinity contributes to sedation and weight gain. However there could be other reasons besides H_1 affinity for weight gain i.e. $5HT_{2C}$ pathway, satiety centre dysfunction, slow metabolism and insulin resistance induced or otherwise. Susceptible individuals include young patients, women, psychotic mood disorder and those with family history.

Rapid switching or sudden withdrawal of drugs may precipitate rebound symptoms according to the neurotransmitters and receptors affinity involved. Therefore when switching from one drug to another, dove tailing is advisable i.e. gradual decrease of one and increase of the other.

Aripiprazole, a dopamine partial agonist, is a recent available atypical anti-psychotic. It functions as a post-synaptic **partial agonist** at D_2 receptors when there is hypo-dopaminergic activity (i.e. in **mesocortical** pathway) and functions as a post-synaptic **antagonist** at D_2 receptors when there is hyper-dopaminergic activity (i.e. in **mesolimbic** pathway). In addition it is also an agonist to $5HT_{1A}$ and an antagonist of $5HT_{2A}$ receptors. It has been described as the **3rd** generation antipsychotic that is efficacious for both positive and negative symptoms. It is also claimed to have a better side effects profile i.e. less sedation (but may cause insomnia and headache), EPS, anticholinergic side effects, hypotension, hyperprolactinaemia and also less risk of weight gain, adverse changes in glucose metabolism, lipids and ECGs when compared with the other atypical anti-psychotics. It is prescribed in 10 or 15 mg om although the dosage should be halved when fluoxetine or paroxetine is concomitantly prescribed. It is has also been used empirically as an adjunct for treatment resistant OCD.

In some patients treated with atypical anti-psychotics, although their symptoms of delusion and hallucination may persist, somehow they seem more tolerant of them and do not respond or react as strongly as before.

Based on the hypothesis of hypo-frontality (due perhaps to reduced dopaminergic activity in the meso-cortical pathway) **amineptine** (a dopaminergic antidepressant) 50-100 mg om had been given to those with negative symptoms though some positive symptoms were reactivated. However due to potential for dependency the drug has been withdrawn. Conversely, schizophrenic patients who are florid in symptoms, impulsive, suicidal and violent, addition of **escitalopram** 5-10mg nocte seems to help. It appears to dampen behavioural response to psychotic symptoms such as delusion and hallucination. However it may also trigger off hypomanic symptoms.

Asenapine is a latest **atypical antipsychotic** with high affinity for serotonin, adrenaline, dopamine, histamine and low affinity for muscarinic acetylcholine receptors. It is a partial agonist at $5HT_{1A}$ receptors and antagonist to others. It is indicated for schizophrenia and bipolar mania. It is claimed to have less anti-cholinergic and cardiovascular side effects and weight gains. However it may have side effects like akathisia, oral hypoaesthesia somnolence, and extrapyramidal side-effects or metabolic disturbance etc., like the other antipsychotics. It is not recommended for psychotic symptoms in dementia. The tablet should be taken dry, whole and sublingually followed by no food and drink for 10 minutes. The dosage is 5-10 mg bd. Drug interactions and effects on liver functions should be noted.

DEPOT INJECTIONS

Long acting anti-psychotic drugs are not only useful in patients who are non-compliant with medication but also to those who may not respond well to oral medications which bio-availability is reduced in the gut and liver. There are many depot injections available. In general, one dose is given every 2-4 weekly and often combined with oral medications to fine tune. The following depot injections are available in IMH/WH.

Fluphenazine decanoate (Modecate)

This is the earliest and still the most useful depot injection. It is generic, effective, cheap, and comes in both vial and ampoule. The disadvantages commonly complained of are the extra-pyramidal side effects and depression. However, when properly prescribed and monitored they can be minimized.

During the acute stage it may be given 12.5 mg weekly when the patient is in the hospital. Usually 6.25 mg (1/4 ml) is started off as the "test" dose. The maintenance dose is quite variable. It may range from 6.25 mg 6-8 weekly to 50 mg 2 weekly. Experienced patients are able to judge for themselves when the effect of the drug is wearing off and would often come before the appointment date for an earlier injection. The dosage and the interval should be flexible and adjusted according to the needs and convenience of the patient. When there are more mental activity, social interaction and stressful events, more of the drug is needed. (It is not unlike the battery that needs to be frequently recharged when over used.) On the other hand, when life is quiet and peaceful, less medication is required. The same principles apply to the other depots.

Pipothiazine palmitate (Piportil)

This comes in 50 mg ampoule and is given 12.5mg-50 mg each time. It is thought to have less side effects and is possibly effective for a longer interval. However it is costly.

Flupentixol decanoate (Fluanxol)

This comes in 20 mg and 40 mg ampoules. Besides being an anti-psychotic it has also been claimed to have anti-depressant property at a lower dosage. A recent finding is that it has affinity for D_2 as well as $5HT_2$ receptors. As such it is like the 'atypical' anti-psychotics that is efficacious for schizophrenia with positive and negative symptoms and would also cause less side effects. It has been recommended by some reports for patients who are repeatedly suicidal probably because of some antidepressant effect.

Zuclopenthixol decanoate (Clopixol)

This comes in 200mg ampoule and is recommended for patients who have a tendency to be aggressive or violent. It can be given 200-400mg every 2-4 weeks. Liquid form is available and given in drops like haloperidol liquid.

Risperidone (Consta)

This defers from the other depots in that the first dose takes about 3 weeks to be effective. The patient therefore needs to continue with the oral risperidone or anti-psychotic during this period. The starting dose is 25mg and could be increased to 37.5mg or 50mg later. The depot side effects are supposed to be less than the oral risperidone. It is recommended to be given 2 to probably 4 weekly. The cost of consta 37.5mg/ampoule is many times that of other depots.

Haloperidol decanoate

The depot comes in 100mg/ml ampoule. It is non standard and yet to be fully registered by HSA. Like 'consta', oral antipsychotics e.g. haloperidol needs to be continued for 2-4 weeks when initiating the depot because the absorption rate constant is slower than the elimination rate constant. The depot has slightly longer half life than the oral haloperidol. The conversion dosage is roughly 100mg/4 weekly depot equivalent to Chlorpromazine 500mg/daily. The initial dose of 50mg depot is about 10-15 times the daily dose of oral haloperidol. The maintenance dose is 50-200mg 2-6 weekly. (See principles under "modecate")

Paliperidone palmitatet

This is a new antipsychotic depot. It is supposed to be non-sedative, non-anticholinergic and low in EPS and metabolic disturbance. It is used in non-acute patients with schizophrenia with claim of superior remission. The initial regiment is 150mg on Day 1 given in the deltoid, 100mg on Day 8 in the deltoid, 75mg on Day 38 (+/- 7 days) given in deltoid or gluteal and thereafter 4 weekly (+/- 7 days) given in deltoid or gluteal based on pharmacokinetics. Paliperidone is a metabolite of risperidone and is excreted by the kidneys. It comes in 50mg, 100mg and 150mg packs. In the initial stage an antianxiety or sedative drug may be needed. During switching over from more sedative antipsychotics tailing off should be gradual.

Adjunct Medication

As symptoms of anxiety and depression are present in many psychotic disorders they could be treated with a SSRI to reduce exacerbation and aggravation of the mental symptoms. Anecdotally, in some schizophrenic patients, SSRIs seem to benefit psychotic hallucination and delusion which might be expression of **subconscious** or **unconscious** obsessional ruminations **unrecognised** by the conscious mind. Or perhaps due to drug interaction the SSRI might have enhanced the effect of the anti-psychotic used. They are also added to relieve obsessive compulsive symptoms e.g. suicidal rumination, trichotillomania, and compulsive ritual induced by atypical antipsychotic drugs as a result of their $5HT_2$ blocking action.

Side Effects of Neuroleptics

One should be familiar with the many possible side-effects from neuroleptics or anti-psychotics. Distressing side effects are a major reason for non-compliance with medications. Apart from the more dramatic oculo-gyric crisis, dystonia and Parkinsonism, there are frequent complaints of giddiness or dizziness, drowsiness, weakness, headaches, muscular pains, tremors, dryness of mouth, blurring of vision, constipation, nausea, increased appetite, putting on weight, amenorrhoea and sexual dysfunction etc. There may also be allergic reactions, seizures and blood dyscrasia. However, it does not mean that the same drug will always induce the same side effects or allergic reactions in the same patient. When necessary, the drug could be used again and titrated all over.

Two other side effects are of particular importance. **Tardive dyskinesia (TD)** i.e. involuntary movements of tongue, mouth, jaw, trunk and/or limbs (after prolonged medication) are socially embarrassing if not personally distressing. Repeated belching may be due to diaphragmatic TD. As there is no specific remedy, it is something best prevented by reducing the neuroleptics and avoiding or withdrawing the anti-Parkinsonism drug whenever possible. The other serious side effect is **akathisia** which is a most distressing symptom that could drive a patient to suicide or violent behaviour. The patient complains of extreme uneasiness and restlessness. They are unable to keep still for long and move about. A milder and transient complaint may occur towards evening. Not infrequently, neuroleptics are mistakenly stepped up rather than reduced or stopped. Propranolol, diazepam and mirtazapine may help to ameliorate the symptom.

In acute **dystonia** with spasm and pain, the symptoms could be relieved with diazepam 10 mg and benzhexol (artane) 2 mg and adjustment of the neuroleptics. In the case of oculo-gyric crisis, i/m diphenhydramine 25-50mg or i/m benztropine (cogentin) 1-2 mg could be given followed by oral benzhexol and a review of medication. As it tends to recur and usually towards the evening, it is better to prescribe benzhexol 2 mg prophylactically at about 4 p.m. rather than at night, apart from the morning dose. **Spasmodic torticollis** could be relieved by oral diphenhydramine.

Neuroleptic Malignant Syndrome (NMS)

This is a **serious** and **potentially fatal complication** of neuroleptic medication. The patient develops first two weeks or at any time, NMS, after anti-psychotic treatment. **Clinical features** include muscle rigidity, clouding of consciousness, hyperpyrexia, leukocytosis, tachycardia, labile blood pressure and elevated creatinine phosphokinase (similar to combined

features of catatonia, infection and autonomic dysfunction). The patient may go into coma and die of cardio-respiratory and renal failures. Possible risk factors include male gender, organic brain disease, mental retardation, rapid neuroleptization and concomitant lithium therapy.

In the management, **early detection** of restlessness, mild rigidity and low grade fever with prompt discontinuation of anti-psychotic medication may abort the full blown syndrome. Intensive supportive medical care, muscle relaxant **dantrolene** and dopamine agonist **bromocriptine** have been found to be efficacious. Also benzodiazepines may be helpful in reversing the condition.

Anti-Parkinsonism Drug

Benzhexol Hydrochloride (Artane)

This anti-Parkinsonism preparation is highly addictive and in demand by abusers. It is also believed to predispose to and aggravate tardive dyskinesia. When taken in excess the patient may develop toxic symptoms e.g. flushing with hyper-pyrexia, tachycardia, dilatation of pupils with blurring of vision and even delirium. It should therefore be prescribed sparingly and only when indicated. However, one should balance complete omission with the risk of default on treatment because of unpleasant extra-pyramidal side effects from neuroleptic medications. In the outpatient setting it may be better to give a small dose of artane for a short period of time. When no unpleasant extra-pyramidal side effects are reported then it should be withdrawn quickly. For patients on depot neuroleptics, artane may be prescribed for the first one to two weeks when the side effects are most likely to appear. For urgent relief of acute extra-pyramidal side effects, injection cogentin 2mg or diphenhydramine 25-50mg is available. Oral benztropine may be used in place of benzhexol.

Teatment of AFFECTIVE DISORDERS

Anti-depressants

Anti-depressants may be grouped under the monoamines re-uptake inhibitors **e.g. tricyclic antidepressants** (TCAs)**; the monoamines oxidase inhibitors** (MAOIs) **e.g.** phenelzine **and** moclobemide **which is a** reversible **MAOI; the selective serotonin re-uptake inhibitors** (SSRIs) **and the more recently promoted serotonin and nor-adrenaline re-uptake inhibitors** (SNRI**,** NaSSA)**. They are also efficacious for** anxiety disorders**.**

In depression, the hypothesis is that there is deficiency of **nor-adrenaline** (NA), **dopamine** (DA) and **serotonin** (5HT) neurotransmitters in the synaptic junctions. The action of MAOIs is to increase the synthesis and storage of NA and DA in the pre-synaptic neurones. The re-uptake inhibitors act essentially on the pre-synaptic transporters (re-uptake pumps) to increase the availability of monoamines for neurotransmission. The different re-uptake inhibitors also act on different post-synaptic receptors to produce or block different side effects and perhaps to enhance therapeutic efficacy. The amount of NA, DA or 5HT in the synaptic junction is also regulated by feedback mechanism of the respective pre-synaptic auto-receptors which control its release. These monoamines then act on appropriate post-synaptic receptors to achieve therapeutic results but also on some other receptors to cause side effects.

The **TCAs** are nor-adrenaline, serotonin (5-HT) and dopamine agonists in varying degrees and most of them have rather troublesome **anti-cholinergic** side effects which can be quite

intolerable. Otherwise they are potent antidepressants. The common TCAs include amitriptyline, imipramine, trimipramine, clomipramine and dothiepin. They are prescribed in multiples of 25mg, ranging from 25mg to 150 mg in divided doses, or one single dose at night as they are also sedative and doubled up as hypnotics as well.

Amitriptyline is comparatively more sedative, and given its cardio-toxicity it could be fatal in overdose. **Clomipramine,** which is most serotonergic among TCAs, is commonly used for obsessive-compulsive disorder. **Imipramine** is also frequently prescribed for phobic anxiety syndrome e.g. agoraphobia and panic disorder. **Dothiepin** appears to be fast acting and improvement could be seen early. **ECG** monitoring for prolonged Q-T interval is advisable.

It is good practice to inform patients of the possible side effects during the initial period of treatment and that it takes two to three weeks before they begin to feel better. Common **side effects** of standard **TCAs** include giddiness, drowsiness, dryness of mouth, constipation, acute retention of urine, impotence, blurring of vision, sweating, etc. They are often the reasons for default on treatment. Therefore, dosage ought to be built up gradually and reviewed at short intervals till optimal result is achieved. **Contra-indications** include glaucoma, enlarged prostate, and ischaemic heart disease.

M**ianserin, maprotiline**, and **nortriptyline** are heterocyclic anti-depressants**.** Mianserin may cause drowsiness; maprotiline may lower seizure threshold; and nortriptyline is contra-indicated in patients with heart conditions. They are not much in use nowadays. **Flupentixol** in small doses is claimed to have anti-depressant property.

For patients with known cardiac conditions (abnormal ECGs) and those who are unable to tolerate the anti-cholinergic side effects, the newer SSRIs are preferred. Mianserin and moclobemide can also be prescribed.

The newer **SSRIs** are said to have mild or little anticholinergic side effects and less cardiotoxic. There are 4 main **Serotonin Pathways** in the CNS (cf. Dopaminergic Pathways) in which serotonin is released simultaneously when the serotonin neurone is disinhibited. The pathways are from midbrain raphe to: (i) **prefrontal cortex**, (ii) **basal ganglia**, (iii) **limbic cortex** and **hippocampus** and (iv) **hypothalamus**. The desired $\mathbf{5HT_{1A}}$ actions (on both pre-synaptic and postsynaptic receptors) of SSRIs may be said to correspond to their therapeutic effects on **depression**, **obsessive compulsive disorder**, **panic disorder** and **bulimia** respectively. On the other hand they may also cause side effects such as anxiety, agitation, akathisia, panic attacks, insomnia and sexual dysfunction due to stimulation of $\mathbf{5HT_2}$ receptors; and nausea, GI distress, diarrhoea and headache due to stimulation of $\mathbf{5HT_3}$ receptors. (These side effects probably constitute the 'serotonin syndrome' described.)

Thus **Fluoxetine** may cause nervousness, anxiety, insomnia and impotence and is better indicated for the more retarded. It should therefore be taken in the morning with or without an adjunct benzodiazepine. The dosage varies from 10-40 mg om. The dispersible tablet form is recently available. It has a long half life of 2-3 days, the longest among the SSRIs. **Fluvoxamine** is given in 50-100mg bid or up to100-200mg at night as it could be sedative. It is considered the choice for obsessive compulsive disorder by some. Some patients complain of gastric discomfort. **Paroxetine** should be started with 10-20mg om and gradually increased by 10mg to 40mg daily. It seems to work well for the more '**neurotic**' depression and anxiety disorders. Withdrawal should be gradual. **Sertraline** has a similar dosage range as fluvoxamine but the optimal dosage recommended is 50mg daily due to gastric symptoms. It

is also dopaminergic and better indicated for concomitant Parkinsonism. **Escitalopram** can be given 5-10mg at night or 2.5-5mg bid as it can be sedative as well as effective in improving poor control of impulses that may be aggressive or suicidal. It is faster acting and also the safer drug to use when there are concomitant medical conditions e.g. cardiac, liver or renal problem.

Mirtazapine (**NaSSA**)**,** an alpha-2 antagonist is a noradrenergic and specific serotonergic antidepressant. It not only increases the release of noradrenaline and serotonin and enhances their neurotransmission via $5HT_{1A}$ but also blocks $5HT_2$ and $5HT_3$ and their unwanted side effects. However due to its anti-histamine properties there may be drowsiness and weight gain. It is useful in promoting sleep and appetite. The dosage is 15-30mg nocte but the sedation may be inversely related to dosage. It may augment conventional anti-psychotic to simulate an atypical anti-psychotic or ameliorate its induced akathisia. **Venlafaxine** at low dose inhibits re-uptake of serotonin and in increasing higher dose inhibits noradrenaline and then dopamine. Due to short half life it is given twice a day from 25-50mg bd. A slow release 75mg tablet/day is available. In the elderly patient it may lead to hypertension. **Trazadone** is a serotonin antagonist but partial agonist of $5HT_{1A}$ and has both antidepressant and anxiolytic effects but little anticholinergic side effect. It is sedative and therefore better indicated for depression with anxiety, agitation and insomnia. The somnolent effect probably results from excessive blockade of $5HT_2$. The dosage ranges from 100-300mg daily in divided doses. **Duloxetine** is a recent dual actions i.e. noradrenaline and serotonin agonist antidepressant. Its efficacy and side effects are comparable to the others. Its claim to relieve somatised pain and neuropathic pain in diabetes mellitus has not been studied in the other antidepressants. It is given as a 30-60mg single dose daily. In patients with liver conditions it is contraindicated.

As a rule **MAOIs** should not be used together with other anti-depressants because release of synthesized monoamines from pre-synaptic terminals will increase the concentration of monoamines in the synaptic junctions causing untoward reactions e.g. acute rise of blood pressure that may be fatal. Therefore when switching over from MAOIs to TCAs a **washout** period of two weeks is required.

Tianeptine (**Stablon**) is a novel antidepressant with anti-anxiety effect. Unlike SSRIs it enhances the re-uptake of serotonin, dampens the hypothalamo-pituitary adrenocortical (**HPA**) axis stress response and protects or restores hippocampal CA1 and CA3 pyramidal cells from stress-induced toxic effects and dysfunction, albeit in the rats. It is debatable whether the antidepressant efficacy is via the re-uptake of serotonin. Most probably its therapeutic efficacy is best indicated for **stress-induced** symptoms or disorders of which insomnia, anxiety and depression are the commonest. It also **protects** patients with schizophrenia (or perhaps recurrent affective disorder) who are exposed to high expressed emotion (**high EE)** or stressful/high arousal environment from relapsing. The side effects are mild e.g. gastric discomfort, sleepiness and possibly obsessional rumination. The dosage varies from 12.5mg daily, bd or tds.

Bupropion (noradrenaline and dopamine reuptake inhibitor) and **buspirone** ($5HT_{1A}$ partial agonist) may be tried for SSRI-induced sexual dysfunction and as adjunct antidepressant for refractory depression. Bupropion is also prescribed for smoking cessation but it may induce auditory hallucination and cause insomnia. Buspirone has been used to treat anxiety disorders.

In treatment of depression both the **symptoms profile** of the patient and the **pharmacological profile** of the drug must be taken into consideration. Different anti-depressants may have to

be tried out for efficacy and side effects. Treatment should normally continue for some months after the relief of symptoms or recovery as relapse is known if medication is stopped too soon. The recent trend is to maintain the medication at therapeutic level rather than at a lower maintenance level. In some, it is even advocated that treatment should be prolonged and for an indefinite period of time. This may be necessary and correct. However it is unclear whether this is due to the **nature of the illness** (endogenous or exogenous) or that some **perpetuating psychosocial stressors** have been ignored. The latter seems more likely. It should be common sense that so long as the psychosocial stressors persist the patient is not going to recover. Medication is no substitute for appropriate intervention and resolution of psychosocial stressors when indicated. One in six depressed (bipolar) patients may commit suicide. [See also relation between Anxiety and Depression]

Like schizophrenia, there are depressed patients who do not respond to the usual anti-depressants. Such patients are managed by the specialist with various combinations of anti-depressants, or augmented with lithium and anti-convulsants i.e. carbamazepine, sodium valproate and lamotrigine (i.e. in particular the unipolar/bipolar depression). When combining SSRIs and TCAs in the treatment of **refractory depression** it is important to bear in mind drug and drug interactions. The liver **cytochrome P450** (**CYP**) super-family of enzymes is involved in most drug metabolism. SSRIs (in particular fluoxetine, paroxetine and less so sertraline and escitalopram) **inhibit** the **CYP 2D6** which metabolizes TCAs, antipsychotics, anti-arrythmics and beta blockers and thus increasing their plasma levels causing toxic effects. . Fluvoxamine inhibits both **CYP 1A2** and **CYP 3A4** which eliminate warfarin, TCAs, clozapine, benzodiazepines and some anti-arrythmics. Dosages of drugs used should therefore be adjusted or reduced. Escitalopram is relatively free from hepatic interaction. Empirically, **lamotrigine** seems promising in treatment of protracted or bipolar depression. It has to be given very gradually starting from a very low dose. Rashes or skin eruptions may occur and incidence of cleft palate has recently been reported when given during pregnancy.

Treatment with antidepressants can lead to SIADH and **hyponatraemia** with complaints of dizziness, nausea, lethargy, confusion, cramps and seizures. Baseline and follow up serum sodium should be determined. **Lately**, there has been **caution on suicide risk** when prescribing the new generation antidepressants e.g. SSRIs for the children/adolescents in particular. Although completed suicide has yet to be documented there appears to be **increased occurrence** of suicidal ideation and behaviour. This 'alarming warning' is probably based on anecdotal reports and questionnaire surveys. However no explanation is given to the finding. Could it be that depression has been **over diagnosed** and **over treated** that patients suffer from distressing and intolerable side effects**?** Could it be the lack of efficacy of the antidepressants (in one third or more) and the depression expresses itself truly**?** Could predisposing and propagating environmental factors have been overlooked and ignored**?** Whatever the implications, there should be a balance between potential medico-legal liability and realistic clinical practice.

Agomelatine

This is a new antidepressant that is agonist to melatonin receptors **MT_1/MT_2** and antagonist to serotonin receptor **5 HT_{2C}**. It claims to be efficacious in treatment of major depression by **re-synchronizing** the disturbed **circadian rhythm** which is both the cause and result of depressive illness. It restores normal sleep and is efficacious on anhedonia. The side effects are said to be no different from that of placebo. A baseline liver function test is done though

effect on liver enzymes are said to be not significant. The dosage recommended is 25-50mg daily.

Vortioxetine (Brintellix)

It is a new multimodal antidepressant with a novel mechanism of action that combines direct activity at multiple serotonin (5-HT) receptors. It has agonistic properties at 5-HT1A with potent inhibition of the serotonin reuptake transporter (SERT). It has been approved by FDA for treatment of major depressive disorder. Depending on Depression Rating Scales used it has been claimed to be particularly efficacious for recovery of cognitive function domain in depression. The dosage recommended is from 5 to 20mg/daily. The side effects consist mainly of gut symptoms like nausea, vomiting diarrhea, constipation and dizziness. The sexual side effect was said to be low and similar to placebo. Serotonin syndrome apparently has been reported. Due to its long half-life rebound phenomenon is unlikely.

Serotonin Syndrome

Serotonin syndrome like neuroleptic malignant syndrome is a potentially life threatening adverse drug reaction that results from the therapeutic drug use of SSRIs (or proserotonergic agents like nefazodone), intentional self poisoning or inadvertent interaction between drugs e.g. meperidine and phenelzine. In fact a large number of drugs and drug combinations, including all classes of antidepressants, opiate analgesics, cough mixtures e.g. dextromethorphan, antimigraine agents e.g. sumatriptan, drugs of abuse e.g. LSD, 'ecstasy', anticonvulsants e.g. valproate and others e.g. trytophan, ginseng, lithium etc., etc. have been associated with the syndrome.

The occurrence of the serotonin syndrome requires one to be **aware** of the predictable consequence of excess serotonergic agonists of CNS and peripheral serotonergic receptors. This excess serotonin produces a spectrum of clinical findings and the clinical manifestations of serotonin syndrome range from barely perceptible to lethal. The **onset** is **rapid** in terms of **hours** (cf. **NMS** in **days**) and the **clinical triad** often described consists of:

a. mental state changes – e.g. anxiety, agitation, akathisia, hypervigilance, delirium, coma
b. autonomic hyperactivity – e.g. tremors, shivering, diarrhoea, increased bowel sounds, tachycardia/tachypnoea, excessive sweating diaphoresis), dilatation of pupils (mydriasis), hypertension
c. neuromuscular abnormalities - e.g. rigidity, hyper-reflexia, clonus/myoclonus (more in lower extremities), hyperthermia, seizure

Management of serotonin syndrome

Precipitating agents should be stopped (although withdrawal of medication e.g. risperidone, a strong $5HT_2$ antagonist, could be associated with the syndrome). This alone may suffice in mild cases. In more severe cases as the $5HT_{2A}$ receptors are believed to be involved cyproheptadine a $5HT_{2A}$ antagonist is empirically recommended. A starting oral dose of 10-12 mg is given and subsequently 2mg 2 hourly prn. The maintenance is 8mg 6 hourly.

Symptomatic and supportive treatments for anxiety, clonus/myoclonus, hyperthermia, tachycardia, hypertension etc., with benzodiazepines and others are essential.

Anti-manics (see WFSBP's recommendation for bipolar disorders)

In local practice for initial manic episodes during the acute disturbed stage, **haloperidol** has been the first line drug used. Liquid or intra-muscular haloperidol 5-10 mg may be given at intervals in the absence of EPS to achieve stabilization of behaviour. When the patient is cooperative, oral medication should be started from 1.5 -5mg tds or up to 10 mg tds. **Lorazepam** 0.5-1mg tds is recommended. **Chlorpromazine** may be prescribed in addition or on its own from 100mg tds to 200mg tds or more. **Clonazepam** 0.5 tds has been used as adjunct and alternatively **diazepam** 5-10mg or more tds can be given. More recently there has been an increasing promotion of the atypical anti-psychotics i.e. **clozapine, olanzapine and risperidone** as well as the newer anticonvulsants e.g. **sodium valproate** in the treatment of recurrent affective disorders. This is an example of the lack of differentiation of psychiatric disorders and specificity of therapeutic efficacy.

In the maintenance phase, haloperidol and **lithium** either singly or in combination can be continued with side effects monitored. When there are depressive episodes sodium valproate or lamotrigine ought to be considered.

Lithium Therapy

Lithium Carbonate is effective and drug of choice in the treatment of manic psychosis. It is also effective in the maintenance or prophylaxis of the bipolar illnesses. When the attacks or episodes are recurrent and close, lithium therapy should be considered. Lithium is believed to protect/prevent the neurones from the toxic changes in the brain during acute episodes and stress and reduces vulnerability to further attacks. **Prophylactic treatment** is long term and safe though it may induce complications like goitre (**hypothyroidism**), **hyper-parathyroidism** and diabetes insipidus. Decision for long-term prophylaxis should be weighed against suicidal risk, suffering and consequence to studies, career development and family life. A first year university student with a first episode of manic depressive psychosis would warrant lithium therapy in our competitive society.

Before lithium treatment the following assessment is carried out. The **test panel** includes ECG, full blood count, renal screen, urine FEME and thyroid functions. Lithium should not be given to patients with severe kidney disease, serious heart disease, or diseases with disturbance of fluid or salt balance. A recent meta-analysis (reported in Lancet, 20 Jan 2012) however found that its effect on renal function and teratogenicity might be overstated. Serum calcium level monitor is recommended because of para-hyperthyroidism. Depending on individual differences in absorption and excretion, a daily dosage of 500-1000 mg nocte or 200-400mg bid can be prescribed. The therapeutic **serum level** of lithium in our experience is between 0.4 meq/L and 0.8 meq/L. The blood is taken 12 hours after the last dose. Blood is normally taken between 8.00 am and 8.30 am, and the patient is advised to take the last dose between 8.00 pm and 8.30 pm the night before. However, clinical response and report of side-effects or complications are more important and reliable in monitoring the dosage. Periodic serum lithium level, renal screen and thyroid functions ought to be carried out. Lithium need not be withdrawn when hypothyroidism is present. Thyroxine can be added.

During **pregnancy**, especially the first trimester, lithium should be avoided as it may cause foetal cardiac malformation. However, if a pregnant woman is on lithium treatment, it should be remembered that towards full-term, lithium is rapidly excreted. Then, at the time of delivery the excretion rate falls abruptly to the normal. Dosages should therefore be accordingly adjusted. Lithium is best omitted during the days before and after delivery.

Recent findings suggest that termination of maintenance therapy may result in treatment resistance when the patient relapses. Thus judgement must be carefully exercised when deciding on commencing and terminating lithium therapy.

When lithium therapy alone is ineffective or contraindicated carbamazepine or sodium valproate 200-400mg bid may be added in combination or used as a substitute respectively. Lamotrigine can also be used for recurrent or prolonged depressive episodes. Nowadays, there is a trend to prescribe **sodium valproate** as the first line medication in place of lithium, especially for depressive episodes. However there have been reports of sodium valproate use associated with **ovarian cysts**. Serious cases of drug rashes and **Steven Johnson Syndrome** have been reported in the use of **carbamazepine** and **lamotrigine.**

ECT (see earlier notes)

TREATMENT OF "NEUROSES" [mostly anxiety disorders]

An Approach

It has been said that we not only need to know the bug the patient has but also the patient who has the bug. Therefore it is desirable to find out:

Who is this patient?

Information on the patient's background and personality is essential. Certain traits and tendencies may predispose to certain responses and the onset of the present illness. In other words the symptoms developed could more likely be due to "personality reaction".

Why does he become ill?

The circumstances and causes that precipitate the illness should be explored in detail and in chronological sequence. Everybody has a breaking point depending on the severity of the stress experienced. However preconceived ideas are likely to result in wrong conclusion.

What are the symptoms?

Some patients complain too much and some too little. Care should be taken to elicit the significant symptoms and how they develop, progress and change. Organic diseases must always be excluded.

How are the symptoms derived?

This is something "technical" and subject to interpretation. It refers to the "defence mechanism" e.g. denial, dissociation, displacement, employed by the unconscious to deal with

anxiety provoking stress arising from within or without the individual. Different symptoms are produced by different defence mechanisms unconsciously. All defence mechanisms serve to **repress** threatening unconscious materials from emerging into the conscious mind.

Pharmacotherapy

Anti-anxiety drugs used to consist mainly of the **benzodiazepines** which act on the GABA inhibitory system**.** They may be divided into the **short** and the **long** acting groups according to their half-life. However recent practice appears to advocate antidepressants such as **SSRIs** over benzodiazepines. The reason is probably that patients may abuse or misuse benzodiazepines and develop dependency or addiction with dangerous consequence. As such benzodiazepines are recommended for **acute** and **short term** management of anxiety disorders. However there are patients who need long term treatment and management and do not escalate in the dosage prescribed. Judicious use and proper documentation cannot be overemphasized. The SSRIs and SNRIs act on the serotonergic and noradrenergic receptors and probably ameliorate the frequent co-morbid depressive symptoms better. As different neurotransmitters and receptors are involved in the pathophysiology of anxiety disorders it is debatable whether SSRIs and SNRIs can claim complete superiority in efficacy and safety over benzodiazepines. Paroxetine seems better indicated. Again treatment is symptomatic and the same principles mentioned earlier apply.

Treatment of every patient should preferably be **individualized** in terms of the most suitable drug, the optimal dosage, the frequency and timing of medication throughout the day or night to obtain the best result. The **symptoms of anxiety** may be **anticipatory, existential, situational** or **sustained** and **generalized**. Prescription should be rationalized accordingly rather than the routine standard of om (mane), bd (bid), tds (tid), qds (qid), on (nocte). As such, patience and cooperation from the patient are required. Trial and error may be necessary. For those who are prescribed p.r.n. (pro re nata) a trial run should have been carried out to test the timing of medication, efficacy, duration of action and possible side effects.

It is always advisable to start with a lower dose e.g. **diazepam** 2 mg, **chlordiazepoxide** 5 mg, **lorazepam** 0.25 mg, **bromazepam** 1.5 mg, **clobazam** 5 mg or **dipotassium clorazepate** 5 mg and increase according to response and requirement (rarely up to 30 mg/day for diazepam, chlordiazepoxide, clobazam and dipotassium clorazepate; 3-4 mg/day for lorazepam and 12 mg/day for bromazepam). Treatment should aim at **maximal** if not complete **relief of symptoms**. The confidence of the patient suffering from anxiety disorders is greatly undermined by his symptoms. Therefore when improvement occurs medication should continue till **confidence** and **routine life** are restored. Medication should be reduced gradually without risk of relapsing symptoms.

The short acting drugs e.g. lorazepam (**Ativan**) are faster in action, and **dependency** is more likely to develop, especially in patients with **personality problems**. With these people, extra caution in prescribing should be exercised right from early consultations, otherwise one may end up being dictated to by them. For them, small doses of **antidepressant** e.g. amitriptyline 10-25mg, imipramine 25mg, or **antipsychotic** e.g. trifluoperazine 1-2 mg or thioridazine 10 mg may be substituted. **Hydroxyzine**, an antihistamine 10-25mg may also be used.

In **phobic anxiety disorders** and other anxiety disorders such as **agoraphobia** and **panic disorder** respectively, there are both **mental** and **physical** symptoms. A **combination** of

imipramine 25-50 mg nocte, diazepam 2-5 mg bid or tds and propranolol 10 mg bid or tds has been found to be effective and economical. As **different** neurotransmitters and receptors may be involved e.g. in panic disorder, different **anti-depressants** and **anti-anxiety drugs** may be indicated and tried. Thus **alprazolam** 0.25-1mg bid to qid or **moclobemide** 50-100mg tid have been found efficacious. As mentioned earlier, **treatment aims at complete relief of symptoms** and **restoration of confidence** and **function**. As panic attacks come with little or no warning and the symptoms pass off within minutes, p.r.n. prescription has no rational basis. **Clonazepam** may be prescribed for social phobia apart from antidepressants and other benzodiazepines. For **post traumatic stress disorder** treatment with antidepressants and psychotherapy/CBT (EMDR) would be more appropriate. Due to HPA and hippocampal response, tianeptine may have a role in the treatment. Prolonged medication or 'medical dependence' may be unavoidable in some.

The recent anticonvulsant **pregabalin** which decreases the release of glutmate, nor-adrenaline, substance P and calcitonin could be indicated for partial seizures, generalized anxiety disorder, neuropathic pain and fibromyalgia. However basic renal function must be done. The dosage is around 300mg daily.

Obsessive-compulsive disorder (OCD) is related to serotonin activity or the lack of it as well as an imbalance of dopamine and acetylcholine (?). Drugs which are serotonergic i.e. **clomipramine** and **SSRIs** are therefore employed to correct the deficiency. In addition, dopaminergic and ($\mathbf{M_1}$) anti-cholinergic drugs might also have a role in treatment (?).

Clinical experience shows that compulsive symptoms maybe more amenable to both pharmacological and behavioural therapy combined. Clomipramine would have been the preferred choice in treatment except for its intolerable strong ($\mathbf{M_2}$, $\mathbf{M_3}$) anti-cholinergic side effects. The dosage is from 25mg nocte to 150-200mg nocte or in divided doses. In severe cases i/v drip had been tried. **SSRIs** i.e. fluoxetine, fluvoxamine, paroxetine, sertraline and escitalopram are becoming more widely prescribed, often used as first line drugs and occasionally in combination. Clonazepam (long acting and with serotonergic effects) 0.5-1mg on may be given. Therapeutically, compulsive act or ritual responds better to medications and behaviour therapy. Obsessional thought or rumination may respond better to fluvoxamine. Sufferers of OCD are naturally distressed. However, a small number may have an underlying psychotic process and shows incongruous affect. In such patients an additional anti-psychotic might help. [See OCD section re memantine and zolpidem]

Chronic depression with anxiety symptoms and **chronic anxiety** with depressive symptoms are common. **One leads to the other**. Anti-depressants should be therapeutic for both. About one-sixth of affective disorders will be intractable. When there is treatment resistance, **stressors** are likely to have been persistent**. Psychosocial factors** should never be overlooked. Combined treatments do produce better results.

B. PSYCHOLOGICAL TREATMENT

This is particularly indicated for 'neurotic' conditions. The patient should preferably **be intelligent** and **motivated**.

I. Behaviour Therapy

They include:

Relaxation for anxiety, tension, nervousness, phobia, insomnia.

Desensitization for phobias, obsessive-compulsive symptoms.

Aversion for addictive behaviours.

Flooding (in vivo), **implosion** (in imagination), for phobias and obsessive compulsive symptoms.

Bio-feedback for control of anxiety and somatic symptoms such as pains, headaches, tension.

Token economy for reinforcing positive behaviours in chronic patients/conditions e.g. persons suffering from schizophrenia and mental retardation/intellectual disability.

EMDR (Eye Movement Desensitization Reprocessing) has been used for treatment of PTSD. It is a technique of bilateral hemispheric stimulation and probably dispersion/disruption of psychic materials. As a matter of fact the visual pathway is extensive starting from the eyes, spreading into quadrants and reaching the visual cortex in the occipital lobe. Its stimulation probably interacts on neural connections/circuits along its long pathway to disrupt morbid pattern of response. However the technique has evolved e.g. tapping of body parts.

Hypnotherapy – it may be considered as psychotherapy under **hypnosis** which is the tool or technique. The form and objective of psychotherapy depend on the formulation of the pathogenesis or psychopathology. The therapist should be a qualified professional trained to handle possible psychotic breakdown.

Cognitive Behavioural Therapy (**CBT**) is essentially based on the hypothesis that how one feels depends on how one thinks. Symptoms are supposed to arise from faulty pattern of thinking e.g. generalizing what is specific, jumping to conclusion and much ado about nothing, which must be systematically exposed and corrected. Sometimes, simple time management and setting priority help to relieve thoughts like "I am late …" and "I can't meet the dateline …" that may trigger off anxiety or worry. CBT is employed to treat symptoms of anxiety, depression, obsessive-compulsive disorders and other conditions. It can be carried out in an outpatient clinic and may be combined with pharmacotherapy or psychotherapy.

The clinical psychologist is involved in the treatment, and prior arrangement should be made. Several sessions may be necessary. Results depend on conscientious practice of procedures by the patients. There is some evidence that CBT is better indicated for those with vulnerable traits and predisposition to 'neurotic reactions' and its efficacy is more sustainable than pharmacotherapy.

II. Psychotherapy

Psychotherapy like democracy, human rights and freedom of speech, means different things to different people. Thus psychotherapy is practised differently by people of authority from many theoretical schools while democracy or human rights or freedom of speech is defined by people in power from many political systems. Each endeavours to convince others or impose on the lesser his view and virtue. The common factor in different schools of psychotherapy is that the past determines the present e.g. psychic determinism or causality.

Much has been debated on the issue of nature and nurture. There is truth to say that we are what we eat, we reap what we sow and we are what we are downloaded with. And in economics, output depends on input and in IT language the computer functions according to its operational system and the programmes that have been installed. In psychopathology, symptoms are believed to derive from past exposure and experience. Their meaning and significance are explained according to the theory espoused. Different treatment models are thus evolved and developed.

Each school has its own hypothetical assumption of pathogenesis and theoretical formulation of therapeutic goals based on the therapist's personal experience or observation of his own specific cultural settings, norms and values. When uncritically practised on or prescribed for patients from different cultural backgrounds it becomes tantamount to **downloading** on them with theoretical input and programming them for formulated output. Therapy then becomes a subtle imposition of assumptions or even colonization of norms and desired goals extending to child development, parenting, value system, morality, life-style and interpersonal relationship. Very often we come across patients or clients who speak like their therapists and would use the same jargons.

Nevertheless, psychotherapy may be psychoanalytical or psycho-dynamic, individual or group and interpersonal. "Individual psychotherapy" in our busy clinical practice is usually **supportive** and **brief**. Patient is helped to ventilate, to gain insight, and at the same time, given emotional support and counseling during crises.

One should be aware of the differences in **cultural norms, ideals, values** and **life-style** and cautious of the desired outcome hoped for**.** Although there are **theories** and **techniques** couched in quasi-scientific jargons, psychopathology and its management are essentially based on **psychosocial models** postulated by individuals. It is fashionable nowadays to attribute much of adult psychiatric disturbance to childhood sexual abuse. It is strange that in societies where permissiveness and promiscuity are a way of life that sexual trauma is so highlighted. Much of the western life-style, value system and **quality of life** are fundamentally derived from their **doctrinal subscription** to their **"democracy and human rights and freedom of speech"** which determine all enquiries and activities. Even what appears to be scientific, on closer examination would reveal the influence of the same doctrines at work. Medical ethics are similarly derived.

Therefore, we ought to be more discerning and should not borrow wholesale western definitions, theories and practices. In our cultures, patients respond better to a **more directive** and **authoritative** approach. However, there is a trend towards a **confluence of values, life style and method of parenting** dominated by the western world. The **"Id" culture** of self-gratification is already **cloning** psychiatric morbidity and psychotherapist in our society. This is further enhanced by the phenomenon of "**globalization**".

C. SOCIAL THERAPY

The **psychiatric nurse (PN)**, the **medical social worker (MSW)** and the **occupational therapist (OT)** play important roles here. They are pivotal in mobilizing and coordinating the family and community resources. They all contribute significant therapeutic roles to the welfare and wellbeing of the patients under their charge.

In the ward the **nursing staff** ensure their personal grooming and hygiene; regular meals and medications; and their safety and sleep. Activities of daily living, recreation and social interaction are encouraged. The **OT** provides assessment, training and rehabilitation in social skills and work habits. Activities and treatment programmes including art therapy aim at integration of sensory, motor, affective and cognitive functions. Vocational assessment and job training are available. Meanwhile the **MSW** makes home visit, looks into family situation and housing problem, does crisis intervention, arranges for financial assistance and seeks placement in job. The MSW also carries out family and marital therapy. When there are young children more work is involved in caring and protecting them. All efforts are concerted and coordinated to reintegrate the patient as a person back into the community. The case manager makes regular contact with the patient, coordinates and feedbacks on hia/her progress to the multidisciplinary (management) team.

The **Agency for Integration Care** (**AIC**) has been set up by the Ministry of Health to oversee, coordinate and facilitate all efforts in integrated care. This involves institutional, communal and voluntary organizations and services to enhance and integrate long term care sector.

REHABILITATION

Disease causes **disability** that leads to **dependency**. There are various degrees of disability and dependency that may be **temporary** or **permanent**, **partial** or **complete**. Ideally, disease should be cured if not prevented. [However wise physicians have taught that: "to cure sometimes, to care often and to comfort always".]

However, mental illness is often chronic and results in chronic disability and long-term dependency. The patient needs food, clothing, shelter, transport, occupation and recreation just like anybody else. The questions are: who should provide these needs and how are they to be provided and where?

The aim of rehabilitation is to maximize the patient's functional capabilities and to minimize his residual disabilities through proper treatment and training. If the patient cannot become employable, productive and independent, it is hoped that he can at least look after his own personal needs e.g. eating, washing, grooming and socializing. However, some would need permanent institutional care.

Treatment and rehabilitation are inseparable, and multi-disciplinary effort is essential. It also involves the family and the society e.g. their **co-operation**, **accommodation** and **acceptance**. Mental patients face particularly discrimination when seeking employment. They are caught in a dilemma whether to disclose their psychiatric history or not, when filling an application form for a job. Psychiatric rehabilitation is a vocation that requires **constancy** and **continuity**. Often too little is done too late. There are also **different expectations** from the family, staff, manager, employer and public causing conflict. However with educational campaign and shortage of manpower,employers have become more enlightened.

Much has been written about **institutionalization** and its negative aspect. As a result, mental hospitals have been closed down and community care and communal living emphasized. However, the real force behind the decision to de-institutionalize appears to be political and administrative rather than clinical. In the process, over-night, patients become inmates of

welfare homes or prisons and freely roaming citizens in the streets. The good intention of better quality of life in the community has suffered because of apparent lack of resources. A solution to the dilemma had been the 'day release scheme'. Patients on the scheme held full time jobs outside during the day and returning to the hospital in the evening. The hostel or halfway house is midway between the hospital and community living.

It is ironical that the patient who breaks down because of stress in life should face stress of stigma on recovery. **Stigma** is essentially due to misconception of mental illness, fear of the unknown and uncertainty, together with difficulty or inability to relate to the other person. This leads to avoidance behaviour and alienation.

The physically disabled are viewed with great sympathy by all and rightly so. There are many voluntary organisations and lobby groups formed to advance their rights and interests. There are jobs created or reserved for them, special cars and car parks, wheel chairs, ramps, lifts, telephone height, public seats and toilets, access to places of interest etc., etc. However those mentally disabled are avoided or ignored or even rejected.

People do not expect the blind to see, the deaf to hear, the paraplegic to walk like normal people and therefore bend backward to help and accommodate them. But the public and sometimes our own rehabilitation programmes expect if not demand that they behave and function like ordinary people. But some of them are like "psychic" tetraplegia or the computer that hangs. Over enthusiasm can therefore be stressful and counter productive.

It is a case of "enlightened familiarity breeds acceptance and accommodation while unenlightened familiarity breeds stigma and snubbing."

Facilities

Different **varieties** and **levels** of **facilities** should be provided for different patients, bearing in mind that **needs differ** from person to person and **change** over time. **Case managers** are assigned to track, monitor, coordinate and provide therapeutic continuity.

1. Patient Education Programme

Patients due for discharge come together for sessions conducted by staff to educate and prepare them for life outside the hospital. Topics covered include knowledge of mental illness, importance of medication and side effects, management of anger, counseling on marriage and sex, social activities, attending job interview and coping with stress.

2. Day Centres

These centres provide organized programmes and activities for day care, basic living skills, desirable habits, social interactions, contract work and sheltered workshop like vocational training. Many patients become productive and find employment subsequently.

Re-admissions and medications are significantly reduced in patients who attend the day centre regularly. The patient reports sleeping better, develops confidence and gains self esteem. Interpersonal relationships in the family also improve.

3. **Family Education and Support**

Sessions are held for family members to educate and counsel them regarding the nature of the patient's illness, the importance of treatment, the early detection of warning signs and coping with the patient. The families also receive support from the staff and share their experience with one another. Respite admission or care for the patient can be arranged.

4. Community Mental Health Team (more reactive) consists of:

Community Psychiatric Nursing

Problematic patients and families in distress can be referred to the community psychiatric nurse or team who will visit the home, make assessment, (give medication like depot in the past), arrange for admission, liaise with other services and sort things out. When necessary, the doctor and MSW would be called in. Rehabilitation is offered.

Helpline and Mobile Crisis Team are available.

Community Engagement Team is provided under **AIC.**

OUTPATIENT TREATMENT

When a patient is discharged from the ward, he is preferably followed up for a period of time in the hospital's Specialist Outpatient Clinic (SOC) or Behavioural Medicine Clinic (BMC)/Community Wellness Clinic (CWC).Upon stabilization, he may be referred to one of the trained general practitioners in the partnership programme for more convenient follow up

Patients must be advised on the importance of **maintenance therapy** and how long they are likely to continue with treatment. **Good rapport** and **relationship** help to improve co-operation and reduce defaults. Medication must be tailored according to their requirement and daily routine. Many patients work on shifts and sleep at different times. Others need to drive, handle machines or climb heights in their jobs, and must therefore be warned of the possible danger from side-effects.

Non-compliance with medication is notorious and patients may hoard large quantity of medicines at home. Such patients must be told to return them or have their new supply correspondingly reduced. On the other hand, there are **drug abusers** who should be blacklisted as they are known to harass and abuse doctors in busy clinics or accost other patients for their supply. They are best referred to a senior doctor in the hospital SOC. Even so other attending staff should be alerted so that when these patients pose a danger help could be immediately summoned. The computerized appointment system has helped to prevent these patients from going to different clinics to collect medicines. If necessary the police should be called.

Therefore, we must routinely **check** the previous dates of attendance and the treatment given. Do not repeat prescription blindly, and do write down the date, the medicines and dosages and reasons clearly on a new page. (Many, especially the neurotics and the psychopathics, have become dependent on drugs because we have been too liberal in our prescription and failed to check and review their treatment regularly.)

In a busy outpatient clinic one may be at a loss as how to assess the patient in a few minutes. Ideally, the patient ought to be followed up by the same doctor who knows him well. Complaints of symptoms or side-effects should be noted. But if they do not interfere seriously with sleep, appetite, work and their sexual life, then the patient could be said to have maintained fairly well. Therefore, routine questions on the so-called **appetites** i.e. for **food, sleep, work, sex** (in its widest context) and **recreation** (hobbies, habits, physical and social activities**,** addictions) which cover the whole day should be asked. Covert **psychopathology** maybe revealed. Generally speaking, **work** and **performance** is an **index of well being** regardless of presence of other symptoms. For **positive mental health** one may add the capacity for **pleasure** and **interest** and of **energy** (i.e. **PIE**) as opposed to anhedonia.

Subspecialty Clinics

These "specialized clinics" provide anxiety and stress management, psychotherapy, hypnotherapy, neuro-psychiatric assessment, cognitive behavioural therapy, treatment of affective or bipolar disorders, early psychosis, insomnia, smoking cessation, alcoholism, drug addiction and gambling, eating disorders, memnpry clinic and assessment of psycho-geriatric patients etc. by appointments. They are provided by individual specialists with personal interests in their own clinics in both IMH and other general hospital psychiatric departments.

Treatment of Insomnia

Insomnia is difficulty in falling to sleep and staying asleep. It may be **primary** or **secondary [**see Sleep Disorders**].** It is one of the commonest complaints, and is often the presenting symptom of many underlying physical, mental and neurological disorders. However there are also mundane reasons like hot weather, noisy neighbourhood, too much excitement or over stimulation, anticipation of events, crying baby, too much coffee or tea, physical discomfort, shift duty, and change of environment, etc., which can affect one's sleep.

Management of insomnia consists of determining the **causes,** physical or psychological, and then removing them or treating them accordingly. Thus in **psychiatric disorders**, a heavier dose of **anti-psychotic**, **anti-depressant** or **anti-manic**, or **anti-anxiety** drug can be given respectively for a psychotic, an affective or a neurotic condition (e.g. hearing voices, fear of harm, feeling high or low in spirit, worries, palpitation, and obsessional rumination).

During enquiry, it may be found that different patients may have different ideas about insomnia. Some need longer hours of sleep while some can do with less. Others have fixed ideas on the number of hours required. Apart from the **quantitative** aspect of sleep, there is the **qualitative** aspect too i.e. **non restorative** or **refreshing sleep**. Some sleep but deny that they do. Others complain that their sleep is disturbed by too many dreams. The complaint must be properly assessed.

Patients should be asked about physical sleeping arrangement; what time they go to bed ; what time they fall asleep; what time they wake up and what time they get out of bed; what they think is the cause of their insomnia; what they do when they cannot sleep; and how do they feel during the next day. Organic causes such as sleep apnoea should be excluded.

In delayed sleep phase disorder (DSPD), although we cannot force ourselves to sleep at a fixed time, we can force ourselves to wake up at a fixed time. In doing so, it is like setting our **biological clock** anew. By repeat resetting, it is hoped that the normal bio-rhythm will be restored. As it is easier to delay sleep than to sleep earlier, those with disorder of **sleep-wake**

schedule who sleep in the early hours of the morning and wake up around noon could try to delay their sleep by 3 hours every day till they come round to normal sleeping time.

Management

1. **Sleep Hygiene**:
This includes a comfortable bed and environment, keeping regular hours and habits, avoidance of stimulants and stimulation, management of stress, exercise and relaxation and a warm milk drink for night cap.

2. **Medication**
Benzodiazepines, despite all the adverse publicity of addiction and dependency are still the mainstay in the treatment of insomnia. **Judicious use** and prescription is emphasized. The shorter and faster acting ones e.g.. **triazolam, lorazepam, lormetazepam** and **midazolam** are better for those having difficulty in falling asleep while the longer and slower acting ones e.g. **flurazepam** and **diazepam** are better for those with interrupted sleep. If **long term** use is likely, drugs should be switched around, augmented by or even substituted with small doses of anti-psychotics or antidepressants. In some chronic insomniacs, their socio-occupational functioning is not significantly affected. They may have to learn to accept their insomnia and not continue medication. Patients should be advised on the **rebound** phenomenon during **withdrawal** of hypnotics. Medical leave may be necessary to "rough" out the period. Alternatively a long acting benzodiazepine may be introduced first, followed by withdrawal of the short acting drug, after that the long-acting drug is tailed off.

Patients who abuse **flunitrazepam** (Roche 2) and **nimetazepam** (Erimin) are known to present in **acute psychotic** states with symptoms of hallucinations, delusional ideas, violent behaviour, disorientation and amnesia lasting up to 2-3 days**. Suicidal** and **homicidal** behaviours have been known to occur during such abuse. Complaints of **amnesia** are also common with the other benzodiazepines and would affect their socio-occupational functioning. **Zopiclone** and **zolpidem** are newer short-acting hypnotics with claims of inducing more normal sleep and less "hangover". However patients on zolpidem could develop dependency and somnambulistic activities. **Hydroxyzine**, an antihistamine has also been prescribed for insomnia. **Mirtazapine** can be an effective hypnotic and is said to preserve normal sleep structure. **Tianeptine** seems to promote sleep too when insomnia is stress induced.

The **timing** of medication varies with different patients and conditions. In general, 15-30 minutes before sleep is recommended. However, there are some patients e.g. those with dementia, who respond to sedatives only hours later. It is a question of trial and error.

Treatment of Impotence and Erectile Dysfunction

Male sexual functions depend on the integrity of the cortical, spinal, peripheral and autonomic neurological pathway as well as the hypothalamic, pituitary, adrenal and gonadal endocrine system. There are also local anatomical/vascular factors as well as cardio-respiratory and musculo-skeletal conditions. In addition there are mental /psychic factors such as stress, anxiety, depression and strained relationship. A conducive environment and multi-sensory stimulation, voiding of bladder and bowel help too. Organic causes may more or less be ruled out when there is presence of nocturnal penile tumescence/erection. The commonest reason for poor erection and premature ejaculation is probably anxiety. In depression, libido is

lowered. Psychotropic drugs with anti-cholinergic side effects especially the tri-cyclic antidepressants and a host of anti-psychotics and other medications are also well known to cause impotence in the male.

In management, the principle is to reduce anxiety level by explanation, reassurance, medication and relaxation as well as cooperation and encouragement from the wife or partner.

Besides primary physical/mental disorders and drugs induced side effects, the libido of both male and female may be affected by their **past psychosexual development** or experience and their **relationship** with their partners. Sexual relationship and practice may reveal a whole host of psychopathology.

Phosphodiesterase (PDE) Inhibitors

There are several types of **phosphodiesterases** widely distributed in nearly all the tissues in the body and they regulate a wide variety of cellular functions. PDE3 has been used for cardio-protection, to increase insulin secretion and action. PDE4 is used in the treatment of chronic obstructive pulmonary disease, inflammatory bowel disease, autoimmune disease and cognitive function of the brain including depression. **Sildenafil** (Viagra) and **tadalafil** (cialis) are **PDE5** inhibitors. They are essentially vasodilators that help to improve erectile dysfunction. Due to the effect of vasodilatation, they potentiate other (organic) nitrates and can cause serious cardiovascular side effects and other medical consequences e.g. hypotension, headaches. A thorough medical history and examination of cardiovascular disease should be carried out before prescribing such a drug. On the other hand sildenafil has been shown to increase cardiac output and maximum workload in mountain climbers and competitive sports. It has also been tried in treatment of pulmonary hypertension and hypertension.

CHAPTER 6

PSYCHIATRIC SERVICES AND DEPARTMENTS

Woodbridge Hospital (WH) and The Institute of Mental Health (IMH)

The **WH/IMH** provides comprehensive inpatient and outpatient services. There are various departments and divisions of subspecialties as well as Specialist Outpatient Clinics or Behavioural Medicine Clinics and day centres. The department of admissions and. emergencies is open 24 hours. Woodbridge Hospital is also the centre for forensic psychiatry.

In the **Adult (General) Psychiatry** acute patients are admitted to the short stay wards while those who need more structured rehabilitation or long term custodial care are housed in the long stay wards. Patients who are persistently disturbed or disruptive, suicidal or violent and are compounded by disorder of personality and alcoholism, are best contained in the specified wards in the Forensic Block (Block 7). A Unit on Intellectual Disability has been developed.

The **Institute of Mental Health** is a centre for teaching, training, research and service e.g. training of psychiatrists, clinical psychologists and allied mental health workers, early psychosis intervention programme (**EPIP**), epidemiological studies, collaborative research projects, national addiction management service (NAMS) which comes under the new Addiction Medicine Department, psychopharmacology and drug trials, mental health education etc., etc.. It organizes programmes and activities such as seminars, workshops, talks and forums, conferences on mental disorders and mental health for professionals as well as the public.

Child and Adolescent Psychiatry

The **Child Guidance Clinic** (CGC) is sited at the **Health Promotion Board**. Besides its own outpatient clinics providing consultation, treatment and follow up, the multi-disciplinary team also provides outpatient sessions at **IMH/WH** and consultative services to other ministries and institutions. Children and adolescents who are in schools/junior colleges can be referred to CGC. Otherwise the age limit is 16 years old.

The staff of **CGC,** now known as **Department of Child** and **Adolescent Psychiatry (DCAP)** also runs the inpatient **Child and Adolescent Psychiatric Unit** in IMH/WH. Outside office hours, the medical officer on duty at (WH/IMH) helps to cover but the Child Psychiatrist on call is clinically responsible and is available for consultation.

Children and adolescents differ from adults in that they are **growing, developing** and **maturing physically, mentally, emotionally, socially and psychosexually.** As such they undergo changes in **defined stages**. However growth and development do not always proceed evenly and may result in series of chain reactions. **Variation** is to be expected and **discrepancy** is not necessarily abnormal. Like adults, they face changes and stresses in the environment as well as in themselves. The younger ones in particular manifest their problems in somatic symptoms e.g. pains and aches, disturbance of bodily functions e.g. feeding, sleeping and excreting, and worrisome behaviour e.g. weepiness, fearfulness, aggression and school refusal. Often the complaints are due to **adjustment** difficulty. In such cases, explanation, reassurance and brief symptomatic treatment would suffice. When the complaint persists i.e. for more than a few weeks/months (except suicidal cases) then the patient ought to be referred to the child psychiatrist for proper assessment and management.

Like adults, children and adolescents do suffer from mental disorders such as neuroses e.g. **anxiety**, **depression** and **obsessive compulsive disorder** which may be grouped under **emotional disorders**; **psychoses** e.g. **schizophrenia** and **bipolar disorders**. The **neuro-developmental disorders** would include **autism spectrum disorders** with **Asperger's** in **DSM 5, specific language impairment** (SLI), dyslexia and others. The **behaviour disorders** would include the opposition and defiant behavior (ODD), antisocial or conduct behaviour and substance abuse. The consequence of these would result in disruptive behaviour, learning disability and academic failure. Most of the time, it is the parents or teachers who make the complaint. It is worthwhile to repeat that for every symptom there could be a number of differential diagnoses and for every piece of behaviour there could be a number of reasons.

There has been on going recent long-term longitudinal / epidemiological studies on the **associations between mental disorders in childhood and adulthood** and the possible causes or mechanisms on the **continuities** or **discontinuities** of psychopathology between childhood and adult life. Thus the concept of **developmental psychopathology** and a **developmental perspective** have become a mainstream of inquiry. Once again **nature** and **nurture** or **gene** and **environment interplay** is evident and important. Precursors or risk factors such as disturbance in socio-emotional behaviour and motor coordination, and abnormal suspiciousness / sensitivity may be associated with later schizophrenia. But on the other hand less than half of those with prodromal symptoms or early manifestations of the disorder would go on to develop schizophrenia. This calls for caution in clinical intervention. Empirical evidence indicates that adolescent-onset depression is associated with strong risk for recurrence in adulthood and may be preceded by anxiety in childhood.

In recent years (or during this last decade) there has been a surge in the diagnosis of **attention deficit/hyperactivity disorder** (ADHD) which has become the most frequent disorder seen at our CGC/DCAP. This may be due to changing definition/criteria and better and earlier pick up by informed parents and trained teachers in schools. The disorder consists of two conditions (attention deficit and hyperactivity) overlapping; is strongly influenced by genetic factors with a marked male preponderance and could be diagnosed in early life. Two thirds of the disorder may continue into adulthood or one third adults may not have corroborative history in childhood. It seems the main problem lies in behavioural dysregulation, executive deficits in inhibitory control and working memory and delay aversion. Thus **methylphenidate** probably helps through stimulation of the neuro-inhibitory system or correction of hypodopaminergic effect. **ADHD** is frequently associated with oppositional/defiant (ODD) behaviour and conduct problem in childhood. Follow up studies have shown that ADHD predicts later **antisocial** behaviour or disorder but not always. Likewise not all antisocial adults give a past history of antisocial childhood (Robins, 1966). Childhood and adolescent conduct disorder may also be linked to substance abuse.
Impulsivity and co-morbidities are common in ADHD.
["Continuities and discontinuities in psychopathology between childhood and adult life" by Michael Rutter et al in Journal of Child Psychology and Psychiatry, 2006 is recommended reading.]

In managing the child or adolescent organic causes must always be ruled out before one looks at the family, the school and the neighbourhood, or peer group for clues and understanding. The child/adolescent deserves to be seen in his own right and not to be treated merely as a member of the family that is in distress. Pharmacological treatment and response may defer from adult and the specialist should be consulted. There has been much controversy on suicidal risk in the treatment of the young depressed patients with the SSRIs i.e. paroxetine. This is probably over exaggerated.

Childhood experience, family background and upbringing provide understanding and possible prevention of later disorders in life. What is proper parenting should be very carefully considered before advice is given. There is wisdom in cultural tradition as well as danger in modern permissiveness. We need to establish our own desirable mores and norms based on our culture and shared values. **"When roles and relationships are well defined and fulfilled, stability and satisfaction in the family life can be expected."** (Stephen Fleck). In recent years there have been 'epidemics' of psychiatric disorders which have been traced, according to popular belief, to past history of childhood sexual abuse. But such a memory may not be true and the definition of sexual abuse is itself controversial. Besides childhood sexuality differs from adult sexuality. Physical contact may cause pleasure or pain but not in the adult sexual sense. Those who hold such a belief are like religious converts who upon their conversion realize their sinfulness.

A **REACH**, a community-based project/programme i.e. **R**esponse, **E**arly Intervention and **A**ssessment in **C**ommunity Mental **H**ealth for students has been set up.

Mental Retardation Intellectual Disability

The concept, terminology and approach to management of mental retardation have evolved with new understanding and knowledge over the decades. The term "mental retardation" is now replaced by "intellectual disability" .

It is useful to review the development through the ICDs.

ICD-8 (1968)

Subnormal **intellectual** functioning **irrespective** of its causes.

'Sub-normality' … a state of arrested or incomplete development of mind…which includes sub-normality of **intelligence** and is of a **nature** or **degree** which requires or is susceptible to **medical treatment** or other **special care** or **training** of the patient, and of

'Severe sub-normality' as a state of arrested or incomplete development of mind which includes sub-normality of **intelligence** and is of such a **nature** or **degree** that the patient is **incapable of living an independent life** or **of guarding himself against serious exploitation**, or will be so incapable when of an age to do so. (**Not** necessarily always related to the degree of retardation.)

Where psychosis occurs in a mentally retarded person it is the **psychotic condition** which shall be given **priority** of classification.
Similarly, where serious **personality disorder** dominates the picture the case should be classified accordingly.

It is stressed that the degree of retardation according to **I.Q. levels** is **artificial** and **unreliable.**

Cause:

Following Infections and intoxications
Following trauma or physical agents
With disorders of metabolism, growth or nutrition

Associated with gross brain disease (post-natal)
Associated with diseases and conditions due to (unknown) pre-natal influence
With chromosomal abnormalities
Associated with prematurity
Following major psychiatric disorder
With psychosocial (environmental) deprivation
Other and unspecified

ICD-9 (1978)

A **condition** of arrested or incomplete development of mind which is **especially characterized by sub-normality of intelligence**. The coding is made on the individual's current level of **functioning** without regard to its nature or causation.

The **assessment** of **intellectual level** should be based on **whatever** information is available, including **clinical evidence, adaptive behaviour** and **psychometric findings**.

The **IQ levels** such as based on **Wechsler** scales are provided only as **a guide** and should **not** be applied rigidly.

Mental retardation often involves **psychiatric disturbances** and may often develop as a result of some physical disease or injury (i.e. acquired)

ICD-10 (1992)

A **condition** of arrested or incomplete development of the mind, which is **characterized by impairment of skills** manifested during the developmental period, which contribute to the **overall level of intelligence**, i.e. **cognitive, language, motor**, and **social abilities**.

Retardation can occur with or without any other mental or physical disorder.
However, mentally retarded individuals can experience the **full range** of mental disorders, and the **prevalence** of other mental disorders is at least **3-4 times** greater in this population than in the general population. They are also at **greater risk** of exploitation and physical/sexual abuse. **Adaptive behaviour** is always impaired, but in protected social environments where support is available this impairment may not be at all obvious in subjects with mild mental retardation.

The presence of mental retardation does not rule out **additional diagnoses**. However, **communication difficulties** are likely to make it necessary to rely more than usual for the diagnosis upon **objectively observable symptoms** such as, in the case of a depressive episode, psychomotor retardation, loss of appetite and weight, and sleep disturbance.

Diagnostic guidelines

Intelligence is **not a unitary characteristic** but is assessed on the **basis of a large number of different, more-or-less specific skills**. Although the **general tendency** is for all these skills to develop to a **similar level** in each individual, there can be **large discrepancies**, especially in persons who are mentally retarded.

Such people may show severe impairments in one **particular area** (e.g. language), or may have a particular area of higher skill (e.g. in visuo-spatial tasks) against a background of severe mental retardation. This presents problems when determining the diagnostic category in which a retarded person should be classified.

The **assessment of intellectual level** should be based on **whatever** information is available, including **clinical findings, adaptive behaviour** (judged in relation to the individual's cultural background), and **psychometric performance**.

For a **definite diagnosis**, there should be a **reduced level of intellectual functioning resulting in diminished ability to adapt to the daily demands of the normal social environment.**

The diagnostic category chosen should therefore be based on **global assessments of ability** and **not on any single area** of specific impairment or skill.

The **IQ levels** given are provided as **a guide** and should **not be applied rigidly** in view of the problems of **cross-cultural validity**. The categories are **arbitrary divisions** of a **complex continuum**, and cannot be defined with absolute precision.

The **IQ** should be determined from **standardized**, individually administered intelligence tests for which local cultural norms have been determined, and appropriate to the individual's level of functioning and additional specific handicapping conditions.

Mild mental retardation

Language development delayed but adequate
ADL independent
Simple skills
Difficulty in academic achievement
IQ 50-69
Associated conditions such as autism, other developmental disorders, epilepsy, conduct disorders, or physical disability are found in varying proportions.

Moderate mental retardation

Language development slow and limited
ADL needs supervision
Some basic skills
Limited educational achievement
IQ 35-49
Discrepant profiles of abilities are common
An **organic aetiology** can be identified in the majority

Severe mental retardation

Broadly similar to that of moderate mental retardation in terms of clinical picture, presence of an organic aetiology, and associated conditions.

Most people in this category suffer from a marked degree of motor impairment or other associated deficits, indicating the presence of clinically significant damage to or mal-development of the central nervous system.
IQ 20-24

Profound mental retardation

IQ estimated under 20
Severely limited in ability to understand or comply with requests or instructions

Most individuals are immobile or severely restricted in mobility, incontinent, and capable at most of only very rudimentary forms of nonverbal communication.
ADL dependent
Organic aetiology in most
Severe neurological or physical disabilities e.g. epilepsy, visual and hearing impairments
Pervasive developmental disorders e.g. atypical autism

Investigation and Management:

The more severe the disability the more organic is the cause.

A sustained and committed **multidisciplinary** team of psychiatrist, nurse, clinical psychologist, occupational therapist, and physiotherapist is needed. The co-ordination and liaison with VWOs/community partners and family members are essential.

The focus is on activities, exercises, language development, education, skill training. Rehabilitation requires manpower, equipments, facilities and space. Optimal biopsychosocial functioning is targeted. With proper and adequate management polypharmacy due to behavioural problem, psychosis and epileptic seizure could be minimized and quality of life improved.

Mental Retardation (Intellectual Disability) and Unsoundness of mind :

It has to be pointed out that the term "**unsound mind**" in Mental Disorder and Treatment Act (MDTA), 1985 is **dropped** from the new Mental Health (Care and Treatment) Act (2008) and Mental Capacity Act (2008). The term "**mentally disordered (person)**" is retained. [see the relevant sections]

However "unsoundness of mind" with regard to mental retardation is still relevant in:

Penal Code
Criminal Procedure Code
Civil Law
The presence of a mental disorder (psychosis or mental retardation) is essential although in reality the legal criteria / tests of the issue determine the question of soundness or unsoundness of mind

An individual's **psychometric IQ** may to some extent explain his educational achievement, optimal functioning and social behaviour. But other factors like opportunities or privations

and health state play important parts. Hence the notions of "**under achieving**" and "**over achieving**" are coined although **one can fake low IQ but not high IQ.**

However, in **forensic issues** the degree of mental retardation or **low IQ per se** does not determine soundness or unsoundness of mind. What matters is the individual's **capability of knowing** and **doing** regarding what is involved. The same would apply in the case of Mental Health (Care and Treatment) Act and Mental Capacity Act.

Psycho-geriatrics

Psycho-geriatric patients may suffer from **different mental disorders** as well as **physical diseases.** Often multiple conditions are present together. The common factor for both is 'age' that is 65 years and above. In old age, there is ageing and failing of organs and tissues. As a result there is **reduction** of physiological capacities and physical powers. Processes are **slowed down. Sensory impairment** such as seeing, hearing, smelling and posturing affects simple pleasures in life and socializing. (The cliché of "golden years" therefore is misleading**.**)

The **problems** presented are usually **multi-axial** and interrelated. Old age per se is not a problem unless there is ill-health and forced retirement. When there is loss of health and employment there will be loss of well-being, status, self-esteem and income. When there are neither savings nor family support, the problem becomes worse. The worst is to be **old**, **sickly, poor, lonely and homeless**. **Dysmnesia**, **depression, dementia** and **delirium** are common. [Consultations in Geriatric Psychiatry edited by Andrew L.H. Peh and Cheryl Loh of CGH is recommended reading.]

Clinically the principles of management are proper medications at low doses (in particular to be mindful of altered metabolism, drug interactions and risk of fall), simple procedures, safe environments, routine activities, adequate nutrition, appropriate stimulation, social contacts and support for caregivers. The approach should be "person centred care". Thus the patient's past personal and medical history, experience and premorbid personality should be inquired and understood. The key to person centredness in care is to recognise individual differences and independence and find out what most engage and stimulate him/her for quality of life..

However, more often than not, besides the clinical multidisciplinary team involved, multiple social agencies and networks would need to be tapped. It is therefore important that there is a coordinator in charge to collaborate the total management. Persons in need could be referred to the **Aged Psychiatry Community Assessment & Treatment Service** in IMH.

In terms of medication the more suitable anti-depressants would be the SSRIs. Drugs with anticholinergic activity such as the tricyclic anti-depressants and many EPS inducing anti-psychotics should be avoided. Psychotic symptoms which appear for the first time in old age may precede the onset of dementia. A low dose of quetiapine starting from 12.5mg, olanzapine 2.5mg or amisulpride 50-100mg daily may be suitable. As for dementia (Alzheimer's), the acetylcholinesterase inhibitors available include rivastigmine, galantamine and doneppezil**.** They are useful in the early stages of dementia. Cognitive functions and possibly neuropsychiatric symptoms may be ameliorated in the responders. However patients may complain of nausea, vomiting, insomnia and diarrhoea. In addition there may be vagal effect on the heart. **Rivastigmine** is prescribed twice a day starting from 1.5mg bd and gradually increased every two weeks to 3mg bd, 4.5mg bd and 6mg bd. Patch is available. **Galantamine** is also prescribed twice daily starting from 4mg bd and increased after 4 weeks

to 8mg bd and when necessary to 12mg bd 4 weeks later. **Donepezil** is given 5mg/day and when indicated up to 10mg/day after 4 weeks. Memory improvement takes place after 12 weeks of medication. Also available is **memantine**, an antagonist of NMDA receptors with neuro-protective function and thus disease-modifying. Its starting dose is 5mg/day and gradually increased to 20mg/day. The side effects are hallucination, dizziness and confusion.

Alcoholism and Treatment

Alcohol is a daily diet and a potential drug to millions of people. The making and selling of alcohol is big business while excessive drinking has brought about untold suffering and disruption to the problem drinker and others around him. Alcohol in suitable amount is **enlivening** and **pleasurable**. Probably it acts by stimulating the release of **noradrenaline**, **dopamine** and the **endogenous opioids**. The latter two neurotransmitters are involved in the reinforcing actions of most drugs of abuse (Nutt). People also take alcohol to reduce anxiety. Its anxiolytic action is due to increasing inhibition of the **GABA system** and the decreasing excitation of the **glutamate system (**particularly N-methyl-D-aspartate or **NMDA** receptor). However at higher concentrations of increasing toxic proportions **ataxia**, **amnesia** and **asphyxiation** would result. During **withdrawal** there is a combination of decreased central inhibition and increased excitation. Symptoms of increase of **sympathetic activity** from noradrenergic overdrive are obvious. The effect of alcohol on the brain is very complex as it interacts with **the brain excitatory and inhibitory systems**. Prolonged and heavy drinking could lead to brain damage with symptoms of **seizures**, **blackouts** (amnesia) and **dementia**.

Alcoholism is a general term for conditions and disorders related to excessive intake of alcohol and its dependence. According to Cloninger and colleagues the **type 2 early-onset** alcoholics are low in brain serotonin (5-HT), poor in impulse control and associated with psychopathy or criminality. The **type 1 late-onset** alcoholics have high levels of 5-HT function with personality trait of high harm avoidance and anxiety. The effects of alcohol causing **medical diseases** are well known. Apart from gastritis or ulcer, haematemesis, avitaminosis, malnutrition, liver/pancreas disease, cardiomyopathy and sexual dysfunction, alcohol affects the cortex, cerebellum, pons, midbrain, brainstem, spinal cord and cranial/peripheral nerves.

Mental or **neuro-psychiatric disorders** include acute and chronic brain syndromes e.g. **delirium tremens** and **dementing symptoms** respectively. **Pathological intoxication** with aggressive and violent outburst can occur in susceptible individuals. Morning drinking to reduce 'morning shakes' from ('mild withdrawal') is evidence of alcoholism. **Auditory hallucinosis** may or may not be due to withdrawal. In **Korsakov's** psychosis the outstanding symptoms are amnesia and confabulation. Finally, a most important complication of alcoholism is **morbid jealousy** which may be preceded by **low libido** and symptoms of **impotence** in the male drinker. This delusional disorder can lead to grave consequences including homicidal behaviour. It becomes a **forensic** problem.

Chronic alcoholism not only causes **physical** diseases and **mental** disorders but also brings about a host of **social** problems. It is frequently associated with symptoms of insomnia, anxiety and **affective disoders.** Excessive drinking during **pregnancy** may affect foetal development. Marital and family life, work performance and employment, income and financial state, social relationships and public behaviour e.g. driving, accident and violence are all affected. Thus the alcoholic not only creates problems for himself but also for his

family and the society as a whole. The causes of alcoholism are **multi-factorial** and the management is truly **multi-disciplinary**.

Motivation for treatment and recovery is of utmost importance. The individual must be prepared to follow a structured programme or regime rigorously and religiously. **Detoxification** can be carried out on an outpatient basis. Acute medical treatment includes correction of fluid balance, nutritional deficiency i.e. vitamins (B1, B12, folic acid) and sedation with **benzodiazepines** and/or **anti-psychotics** during period of withdrawal. Relapse prevention is an uphill and unending task. **Medications** depend on the understanding and hypotheses of symptoms production. For aversion therapy **disulfiram** has been used though not without risk. It blocks oxidation of alcohol and leads to accumulation of acetaldehyde with complaints of flushing, headache, choking sensations, rapid pulse and feelings of anxiety etc. The opioid receptor antagonists i.e. **naloxone** and **naltrexone** are effective in reducing the reinforcing actions of alcohol. **Acamprosate** stimulates the GABAergic inhibition and suppress the glutaminergic excitation like the alcohol. In this 'simulative' way alcoholics 'conditioned' on acamprosate may be less activated by the cues of sights, smells and sounds that have been associated with alcohol use (Nutt). As $5HT_{1A}$, $5HT_2$ and $5HT_3$ receptors are implicated in various symptoms and behaviours of alcoholism, antidepressants which are agonists or antagonists would have a role in treatment.

Psychosocial treatment in terms of understanding, empathy, counselling and support is most important. Regular group sessions are held for alcoholics and also separately for their families. Self-help groups like **Alcoholics' Anonymous** provide identification, fellowship and foster collective effort in maintaining sobriety. The scale of progress and success in treatment of alcoholism is measured in small steps and from day to day. Relapses from **abstinence** are common.

Addiction

An Overview

"Addiction" used to refer mainly to dependency on substance use via oral ingestion, inhalation or intra-muscular and intravenous routes. The "substance" is generally a psychoactive drug that has been medically prescribed, misused or abused. This concept of dependency apparently driven by compulsive need and craving behaviour for drugs, beverages and food has been extended to non substance appetite such as sex, gambling, computer game, internet surfing and other activities e.g. repeated offence.

The urge for the substance or activity is to derive comfort, pleasure and stimulation or to suppress discomfort and distress from its withdrawal. The first experience of the **substance** or **activity** may be voluntary or involuntary and the outcome may be positive or negative depending on the individual and the circumstance. What follows depends on the multiplicity of predisposing, precipitating and propagating factors which could be biological, psychological, social and spiritual. For many perhaps, it is just a one off curiosity or experiment and if some do continue they do so with voluntary control of themselves and their experience. For others it may be a case of "**love at first try**" and they may pursue in voluntary control. Actually for some or many, the first try may be an unpleasant experience. However for various reasons they may persevere voluntarily or involuntarily and do experience comfort and pleasure in the beginning, an "**acquired taste**" so to speak. Subsequently tolerance and dependency would develop and voluntary control is lost. These people then continue

involuntarily, enslaved, without deriving any enjoyment. Often more than one substance and/or activity are involved or combined

Psychologically, the path to addiction or dependency may begin with the cognitive intent to experience. However, it may be associated with the individual's affective state or symptomatic of underlying ongoing anxiety/depression which may perpetuate the substance use or activity. The mind and heart go hand in hand. As the course progresses, the cognitive will or resistance weakens and gives in to physiological response and emotional distress. Attempts at control and abstinence fail when cognition and affect exposed to environmental sensory cues and personal experiential tension are overwhelmed and the past convergent memory set of experience and habit is released.

Psychological and physiological processes normally react, change and adapt. However when adaptation breaks down, stereotyped responses emerged. It could be said that when habits become a reflex the default automatic system kicks in. The habit of addiction perpetuated by this default auto drive system does not seem to serve any purpose except to go in circles. It is no more rewarded with pleasure or stimulation and is indulged in despite suffering and punishment.

Due to similar compulsive features, habits and impulse control disorders, obsessive compulsive disorder, tics, Tourette syndrome, bulimia etc., etc. have been linked in overlapping psychopathology. Broadly the following neurological systems and their interplay appear to be involved in the pathophysiology. They are the Inhibitory GABA system, the Excitatory Glutamate system, the Serotoninergic (impulse control) system, the Stimulating Opioid/Endorphin system and the Dopaminergic system. The latter two neurotransmitters are said to be involved in the reinforcing actions of most drugs of abuse. They form the basis for rational psychopharmacological interventions.

Approach to Management

The substance use disorders, habits (addictive) and impulse control disorders are highly heterogeneous and complex set of disorders. The approach should be holistic and the management should be individualized and eclectic. Each individual ought to be evaluated separately and understood in terms of his/her predisposing, precipitating and propagating/perpetuating factors. When his/her biological, psychological, social and spiritual attributes are factored in there are multiple combination and permutation of inter-relation, interaction and integration or disintegration. The aims are to reduce aggravating factors in areas identified and to strengthen or restore cognitive and affective control.

It is also necessary to determine at what stage of the course the problem presents for consultation. Voluntary control should not be allowed to slide into involuntary control and pleasure should be restrained before giving way to distress. The problem is best "**nipped in the bud"** through education and avoidance/prevention of temptation when potential risks exist as in certain subculture or life style, peer influence/pressure, occupation hazard, pathological family history and vulnerable personality profile. A Hong Kong study shows that people with **unfounded confidence in indulging** (e.g. "I won't get addicted", "I will win this round") and **desire for quick gratification** (e.g. effect or result is experienced with little delay) are the very ones more likely to be addicted. In psychological management the general principles are to reward and reinforce desirable positive response or deter and 'punish'

undesirable negative response. Socially, policy and legislation, manipulation of the environment and group support are needed.

The medical model is based on the understanding or belief of the neurotransmitters and receptors and their interplay implicated in addiction and addictive behaviour. The principles are to employ appropriate drugs to block negative impulses and behaviour, cancel or negate the reinforcing effects of habits, induce aversion response to habit, alleviate underlying symptoms of distress or psychopathology and treat or prevent symptoms of intoxication or withdrawal. On the other hand a latest Hong Kong study indicates that more than half of problem gamblers also suffer from one or more psychiatric disorders.

Different strategies are advocated in different treatment programmes. There are abstinence oriented treatment, replacement therapy, controlled substance use and habit approach besides psychopharmacological intervention. Essentially there must be matching of patients to treatments and matching of treatments to course of disorders.

The **Substance Abuse and Mental Health Services Administration** published online on 22 December 2011:

Study Highlights

- SAMHSA defines "recovery" from mental disorders and substance use disorders as a process of change through which **individuals** improve their health and wellness, live a self-directed life, and strive to reach their full potential.
- The Recovery Support Strategic Initiative has identified 4 major dimensions that support a life in recovery: **health, home, purpose, and community.**
- **Health** is defined as overcoming or managing the disease and living in a way that promotes physical and emotional health.
- **Home** is defined as a stable and safe place to live.
- **Purpose** refers to meaningful daily activities, such as work, school, volunteering, family caregiving, or creative pursuits, accompanied by the independence, income, and resources to participate in society.
- **Community** refers to relationships and social networks offering support, friendship, love, and hope.
- Guiding principles of recovery include the following:
    - Recovery stems from **hope**, which is internalized and can be encouraged by peers, families, providers, allies, and others.
    - Recovery is **person driven**, based on self-determination, self-direction, definition of patients' own life goals, and design of their own unique path(s) to attain these goals. Optimizing patient autonomy and independence empowers patients and gives them the resources to make informed decisions, begin recovery, build on their strengths, and gain or regain control of their lives.
    - Recovery occurs via **many pathways**, based on each individual's unique needs, strengths, preferences, goals, culture, backgrounds, and trauma experiences. Pathways may include professional clinical treatment; medications; support of family, school, and peers; faith-based approaches; and abstinence for those with substance use disorders.
    - Recovery is **holistic**, involving mind, body, spirit, and community, and integrating self-care practices, family, housing, employment, education, clinical treatment, faith, spirituality, creativity, social networks, transportation, and community participation.

- Peers and allies **support** recovery through mutual support and mutual aid groups, as do professionals by providing clinical treatment and other services.
- **Relationship** and **social networks** support recovery by allowing the patient to leave behind unhealthy and/or unfulfilling life roles and to engage in new roles, such as partner, caregiver, friend, student, or employee.
- Recovery is **culturally based and influenced**, with values, traditions, and beliefs determining a person's journey and unique pathway to recovery. Services should be culturally grounded and personalized.
- Addressing **trauma** — including physical or sexual abuse, domestic violence, war, and disaster — supports recovery, as these forms of trauma often precede or are associated with alcohol and drug use, mental health problems, and related issues.
- Recovery **involves** individual, family, and community strengths; and responsibility.
- Recovery is based on **respect** and requires protecting patient rights and eliminating discrimination. All concerned should acknowledge that taking steps towards recovery may require great courage. Self-acceptance and a positive sense of identity promote recovery.

Under **NAMS** (National Addictions Management Service) a separate **Clinic C** has been set up in IMH to cater for this group of patients.

Forensic Psychiatry

Abnormal offenders remanded by the **court** for **psychiatric assessment** and **report** are admitted to the Forensic Psychiatry wards in WH. They may be found fit or unfit to plead and of sound or unsound mind at the time of the commission of the offence. Those who are unfit and/or unsound would be detained and reviewed regularly by the Visitors' Board which will put up appropriate recommendations to the Minister for Law.

The forensic wards also look after patients who are **refractory, violent** and **dangerous**.

Special procedures are laid down for forensic patients with medical or surgical emergencies. The first line of action is to refer them to Changi Prison Hospital (**CPH**). However, if the condition could not be handled at CPH then the patient should be sent to Changi General Hospital (or another designated hospital). If specialized attention is required, the patient should be referred to the appropriate hospital. Full instructions regarding referrals are kept in each forensic ward. All forensic patients need **police escort** when leaving the ward.

Psychological Medicine Unit

There are Departments of Psychological Medicine or Psychiatric Units virtually in all the general hospitals in Singapore. National University Hospital, Singapore General Hospital, Tan Tock Seng Hospital, Changi General Hospital, Khoo Teck Puat General Hospital, Ng Teng Fong General Hospital and Kandang Kerbau Women and Children Hospital. They admit or treat patients with milder psychiatric disorders or those not too disturbed, violent and suicidal nor show absconding tendency. They run their own outpatient specialist clinics and follow-up treatment. They also provide liaison consultation service to the other disciplines or specialities in their respective hospitals.

Psychiatric Treatment in Pregnancy or During the Reproductive Period
(Dr. Helen Chen et al, KKH)

Generally speaking, this approach to treatment could only be a **guideline** based on **anecdotal** cases and **retrospective** studies since **ethics** does not permit clinical drug trials risking embryonic development and foetal well being.

The reproductive period of the female patient may be divided into **pre-conception**, **pregnancy** and **post partum**. As a guide, due to **potential toxicity** to the mother and **risk of teratogenicity** to the embryo/foetus medication is **best avoided** if possible especially when there is a plan to have a baby i.e. before conception and during the first trimester of pregnancy, the period of organogenesis. However management decision must be precluded by a **proper and complete history.** This includes the patient's **past psychiatric history** and the **family's history of mental disorders**. If the patient had a prior episode(s) of mental illness, the **nature**, **severity** and **frequency** of the disorder ought to be enquired. It is also important to assess her **marital status** and **relationship** and the **family** and **social support** available. This will help in the planning of the management and therapeutic alliance.

As much is still unknown or uncertain the patient should be explained clearly the **potential risks** and **benefits** of the medications so that she and her partner or family can make **informed treatment decision** which must be **properly documented.**

What is known so far, the various classes of drugs from anecdotal experiences are suggested as follows?

Anti-depressants

On 8 July 2015, BMJ reported on line that in study of 28000 women no increased risk for birth defects was linked to **citalopram** and **sertraline**. It confirmed two previously reported birth defects associated with **fluoxetine** i.e. heart wall defects and craniosyntosis and 5 previously reported birth defects associated with **paroxetine** i.e. cardiovascular defects and anencephaly. Though this is 2-3.5 times more frequently among infants of women taking fluoxetine and paroxetine early in pregnancy researchers noted that absolute risk was low.

In the second trimester, barring side effects **TCAs** may be preferred to **SSRIs** which may cause pulmonary hypertension in the newborn. However, in the first trimester, because risks of SSRIs are a little more understood, informed consent and decision might make their use more acceptable as compared to TCAs, which remain little examined to date. Specific drugs and risk for specific birth defects ought to be noted and reported.

Anti-anxiety i.e. benzodiazepines

They may cause floppy baby syndrome and sedation

Anti-psychotics

The **first generation anti-psychotics** like trifluoperazine and haloperidol may be preferred and there is good evidence based to suggest that olanzapine is relatively safer albeit its metabolic side effects.. However, quetiapine and risperidone are also prescribed by local clinicians.

Mood stabilizers and Anti-convulsants

These are used mainly in Bipolar disorders. (They may be associated with ovarian cysts.)

Lithium may cause cardiac abnormality to the early foetus and toxicity to the mother towards time of delivery. Close monitoring and titration are necessary during the last 2 weeks of 3rd trimester and during peuperium; and peripartum lithium therapy should only be done by well trained and experienced specialists. (See also section on lithium therapy)

Sodium Valproate and **Carbamazepine** may cause neural tube malformation and is also associated with low IQ.

Lamotrigine appears to be the safer drug though it may cause cleft palate. Adverse effects e.g. rashes, bullous skin lesion and Steven Johnson Syndrome must be looked out.

ECT
In severe and emergency situation ECT should be considered. Its use in pregnancy is safe and does not cause uterine contraction. The result could be remarkable.

Peuperal Psychosis occurs in about 1:1000 pregnancy. It refers to a psychotic episode during peuperium. The clinical presentation may be **pleomorphic** with **mixture** of symptoms not unlike schizophrenia, bipolar disorder and organic psychosis together. It may resolve well with anti-psychotics or become prolonged and differentiate into more obvious psychotic depression, bipolar disorder or schizophrenia and **recur** later on in life. Family history may give a clue. Maintenance treatment must be considered in those with recurrent episodes and positive family history of severe mental illness. For some women who present early for treatment and have minimal risks, short term treatment can be sufficient and indeed beneficial.

Breastfeeding is contraindicated in mothers on lithium therapy but sodium valproate and carbamazepine are not incompatible, as suggested from evidence from nursing mothers with epilepsy. There is limited evidence about lamotrigine safety in lactation. Mothers should be supported in their decision to breastfeed as the benefits are significant. Treatment can be modified to support this e.g. using minimum effective dose in dividing dosing and possibly after feeding/expression. The condition of the .baby should be assessed.

Overall Management

In principle, when the decision is reached to treat, the drug used should commence with **low dose** and gradually build up. Not only should medication be closely supervised and monitored, **psychosocial support** should be ensured and provided. Indeed **psychological therapy** and support remains the **first line** and **mainstay intervention** whilst medication are considered for those with moderate-severe depression. The patient and family also require psycho-education and social support when long term follow up of the mental disorder suffered is expected.

In addition the patient's **fitness** and **worthiness to motherhood** should be **reassured** and **encouraged**. As far as possible mother and baby should not be separated so as to allow confidence and bonding to develop.

Miscellaneous

Certification of Deaths

All deaths in Woodbridge Hospital are Coroner's cases. Special forms have to be filled. It should be noted that certification of death is not the same as certification of the cause of death which is the Coroner's job.

Voluntary Welfare Organisations

Apart from the government psychiatric services, voluntary organizations play important roles in providing complementary or supplementary community services. The relevant services or facilities include care and counselling centres, social service centres, the New Horizon Centre for Alzheimer's disease, day-care and family service centres, welfare services and homes, homes for the aged, elderly, or senior citizens and halfway houses etc. Most of these facilities are run by voluntary organizations or associated with religious groups. Others include Singapore Association for Mental Health, Samaritans of Singapore, Movement for the Intellectually Disabled, Alcoholic Anonymous, Singapore Anti-Narcotic Association, Singapore Anglican Community Services etc., etc.

The medical social worker will be able to advise on how to approach these agencies for help. A Directory of Social Services in Singapore is available.

The Ministry of Health has set up the **Agency for Integration Care** (**AIC**) to oversee, coordinate and facilitate all efforts in integrated care. This involves institutional, communal and voluntary organizations and services to enhance and integrate long term care sector.

CHAPTER 7

LAW AND PSYCHIATRY

Law - is concerned with the protection of individuals and properties in society. It defines what crime is. (As such, what was crime yesterday may not be crime today and what is crime today may not be crime tomorrow, each according to the law of the land.)

Psychiatry - is the branch of medicine that diagnoses and treats mental disorders. It upholds the doctor and patient relationship and ethics.

Forensic psychiatry is the application of psychiatry in legal processes. In general, it involves assessment of issues regarding credibility (e.g. as witness), culpability (e.g. in crime), competency (e.g. when making a will or contract), compensation (e.g. to injury) and custody (e.g. of a child). (**Slovenko**)

Terminology and Concept

Madness	-	lay idea
Insanity/Lunacy	-	legal concept (unsoundness of mind)
Psychosis	-	medical term
Mental Disorder	-	generic term for all psychiatric conditions
Mental Illness	-	traditionally refers to psychosis and neurosis
Mental Disease	-	old term for psychosis/insanity
Disease of the Mind	-	legal term

Theories and Models of Mental Disorders

Biological/Medical Concept	-	Pathological abnormality
Social/Cultural Concept	-	Statistical deviation
Psychological/Behavioural Concept	-	Developmental impairment
Spiritual/Religious Concept	-	Supernatural visitation

More often than not there is interplay and overlapping of factors.

FORENSIC PSYCHIATRY IN

A. PENAL CODE

Concept of Responsibility

Man is presumed to be a free agent who acts according to his intention. This forms the basis of every criminal code and system of punishment. However, some are less responsible than others. "Excuses" from responsibility may include young age, mistake, accident, provocation, duress and insanity. There is also a tendency by some to medicalize transgression i.e. sin is due to sadness or "he is so bad he must be mad".

Criminal responsibility is essentially a legal matter to be determined by the jury. In Singapore, the judge decides as the jury system has been abolished.

Actus Reus

An illegal act or omission has occurred and been carried out by an identified person. In addition the act or omission must cause the offending consequences.

Mens Rea

This refers to the presence of **intent** (or guilty mind) specific to the particular offence. The mental state in question concerns largely the cognitive and not emotional aspects.

Theoretically, when there is no intent, there is no crime. However, in practice, intent is presumed when there is an offence. In **automatism**, certain act is carried out but without awareness. This would imply absence of intent and therefore criminal responsibility.

But in reality, the legal outcome depends on the underlying cause of the non-awareness. If the cause is non-insane then it leads to acquittal. However, if the cause is one of insanity and/or inherent in nature then the verdict is unsoundness of mind. Epilepsy and somnambulism have been examples of “disease of the mind” and judged legally insane because of the inherent danger of recurrence.

McNaughton Rules

"To establish a defence on ground of insanity it must be clearly proven that at the time of the committing of the act, the accused was labouring under such a defect of reason from disease of the mind as not to know the nature and quality of the act or if he did know it that he did not know he was doing what was wrong."

The **defect of reason** refers to cognitive impairment. As regard **"disease of mind"**, the mind is said to be in the ordinary sense of mental faculties of reason, memory and understanding. Thus, if these faculties are impaired, disease of the mind is present and it matters not whether the aetiology of the impairment is **organic** or **functional**, **permanent** or **transient** (**Diplock**).

Cap 224 of the Penal Code (Singapore)

Section 84

Nothing is an offence which is done by a person who at the time of doing it by reason of unsoundness of mind is incapable of knowing the nature of the act or that he is doing what is either wrong or contrary to law.

Section 85(2)

Intoxication shall be a defence to any criminal charges if by reason thereof the person charged at the time of the act or omission complained of did not know that such act or omission was wrong or did not know what he was doing and

(a) the state of intoxication was caused without his consent by malicious or negligent act or another person, or

(b) the person charged was by reason of intoxication insane temporarily or otherwise at the time of such act or omission.

In Singapore, Section 84 has been treated as being the same as McNaughton Rules. **"Unsoundness of mind"** is not defined. It has been employed on one hand to mean the **medical concept of psychosis** and on the other hand to mean the **legal concept of insanity**. A psychotic in the medical sense need not be insane in the legal sense. Similarly, a person who is legally insane need not be medically psychotic because in local practice unsoundness of mind has been extended to cover persons who are defective in reason from mental retardation. Confusion arises when medical psychosis is equated with legal insanity.

Diminished Responsibility

The defence of diminished responsibility is available only if the charge is murder. It is often pleaded because murder is punishable with death and a successful plea under exception 7 to Section 300 of the Penal Code will reduce the sentence to a definite term of imprisonment.

Exception 7 to Section 300 of the Pena1 Code

"Culpable homicide is not murder if the offender was suffering from such **abnormality of mind** (whether arising from a condition of arrested or retarded development of mind or any inherent causes or induced by disease, or injury) as **substantially impaired** his **mental responsibility** for his acts and omissions in causing the death or being a party to causing the death".

The psychiatrist is involved in establishing the cause of "abnormality of mind"

Lord Parker C.J. defines **"abnormality of mind"** as being

"...a state of mind so different from that of ordinary human beings that the **reasonable man** ... would term it abnormal. It appears to us wide enough to cover the mind's activities in all its aspects, not only the perception of physical acts and matters, and the ability to form a rational

judgement as to whether the act was right or wrong, but also the ability to exercise will-power to control physical acts in accordance with that rational judgement."

It is important to note that the abnormality is a **lay concept** and the "mind" includes **impulse control** as well.

B. CRIMINAL PROCEDURE CODE

Remand for psychiatric assessment*	(Pre-trial)
Fitness to plead/stand trial	(At trial)
Detention under Minister's Order	(Unfit for trial or
Review/Discharge by Visitors Board	Post trial detention)

*[In bailable offence the accused may not be remanded but should be produced in court when fit to stand trial.]

The **Visitors Board** must review those who are detained because of unsoundness of mind at least once in six months to determine their mental state and make suitable recommendation regarding fitness to plead, discharge or further detention.

Criteria on Fitness to plead

Capability of:
a. understanding what is the charge
b. knowing the difference between pleading guilty and not guilty
c. following the court proceedings
d. challenging the jurors (jury system abolished in Singapore)
e. instructing the legal counsels

In reality, fitness to plead is fairly relative.

MENTAL DISORDERS AND TREATMENT ACT (MDTA) Revised 1985

This MDTA is split up and repealed by:

Mental Health (Care and Treatment) Act 2008
Mental Capacity Act 2008
Mandatory Treatment Order (2010, CPC)

Mental Health (Care and Treatment) Act 2008 (MHCTA)

The Act consists of 3 parts:
Part I
Preliminary
Sections 1 and 2
Part II
Admission and Detention of Mentally Disordered Persons in Psychiatric Institution
Sections 3 to 22

Part III
General Provisions
Sections 23 to 34

Mental Capacity Act 2008 (MCA)

Explanatory Statement:
This Act seeks to reform and update the law where decisions need to be made on behalf of **adults lacking capacity**. The Act will govern **decision-making** on behalf of adults, both where they lose mental capacity at some point in their lives (e.g. as a result of dementia or brain injury) and where the incapacitating condition has been present since birth. It covers a wide range of decisions, on **personal welfare** and **financial matters** and **substitute decision-making** by **attorneys** or **court-appointed "deputies",** and clarifies the position where no such formal process has been adopted. The Act provides **recourse**, where **necessary**, to a court with power to deal with personal welfare and financial decisions on behalf of adults lacking capacity. [It is administered by the Office of Public Guardian (OPG) and the Mental Capacity Court (MCC).]

This Act consists of 9 parts:
Part I
Preliminary
Section 1 and 2
Part II
Persons Who Lack Capacity
Sections 3 to 6
Part III
Acts in Connection with Care and Treatment
Sections 7 to 10
Part IV
Lasting Powers of Attorney
Sections 11 to 18
Part V
General Powers of Court and Appointment of Deputies
Sections 19 to 25
Part VI
Excluded Decisions and Declaratory Provisions
Sections 26 to 29
Part VII
Public Guardian and Board of Visitors
Sections 30 to 34
Part VIII
Supplementary Powers, Practice and Procedure of Court
Sections 35 to 39
Part IX
Miscellaneous
Sections 40 to 42
In **MHCTA** and **MCA** there is no mention of "unsoundness of mind". Instead "mentally disordered person" with attendant conditions or criteria is used.

Under **MCA Part 2 Persons Who Lack Capacity** the key principles which apply to **decisions** and **actions** taken under the Act are that a person must be **assumed** to have capacity until it is proved otherwise. He must also be **supported** to make his own decision as far as it is practicable to do so. He is not to be treated as lacking capacity to make a decision **simply** because he makes an **unwise** decision. In other words he has the **right** to make **irrational** or **eccentric** decisions that others may not judge to be in his best interest. However everything done, or decision made, under that Act for a person who lacks capacity must be done **in his best interest.**

The definition for a person who lacks capacity for the purposes of the Act focuses on the **particular time** when a decision has to be made and on a **particular matter** to which **the decision relates**, rather on any theoretical ability to make decisions generally. It follows that a person can lack capacity for the purposes of the Act even if the **loss of capacity** is **partial** or **temporary** or if his capacity **fluctuates.** It also follows that a person may lack capacity in relation to one matter but not in relation to another matter.

The inability to make a decision must be caused by an **impairment of** or **disturbance in** the **functioning of the mind or brain.** This could cover a range of problems such as **psychiatric illness**, **learning disability**, **dementia** or **brain damage** that affect the functioning of the mind or brain, causing the person to be unable to make the decision. When lack of capacity has been determined then the **relevant Part(s)** of MCA that follow may be implemented.

The person involved is generally **21 or over**. He is deemed unable to make a decision if he cannot undertake one of four things:

1. Must be able to comprehend the information relevant to the decision
2. Must be able to retain this information
3. Must be able to use and weigh it to arrive at a choice
4. Must be able to communicate the decision in any way

In ascertaining a person's best interest all relevant circumstances and factors must be considered and balanced in order to determine what would be in the best interest of the person concerned.

In **Part IV** of **MCA** a new statutory form of power of attorney is created viz. the "**lasting power of attorney"** (**LPA**). By making an LPA, an individual (the **donor**) confers on another individual (**donee**) authority to make decisions about the **donor's personal welfare** or **property** and **affairs** or **specified matters** concerning those areas, when the donor no longer has capacity to make such decisions. The donor must be aged 18 or over and have capacity to execute an LPA. Rules regulating making a LPA, donor and donee must be complied with.

Mandatory Treatment Order or MTO (2010) [CPC - Section 338-339]

The abnormal offender has been judged according to whether he is legally of sound or unsound mind. This has led to outcome of limited disposal. Over the years there has been loosening of this rigid approach with better understanding of the offender and his offence resulting in a more therapeutic sentencing. The MTO is one of several community-based sentences **in lieu of imprisonment**. Offenders who are mentally ill may be remanded up to 3 weeks for assessment by **appointed psychiatrist** at Institute of Mental Health. Suitability with inclusion and exclusion criteria is determined and forwarded to the court for decision to

mandate. Treatment period of up to 2 years with regular follow up and report to the court must be observed and administered by IMH.

In general it would imply that the offence is not of a serious nature but related to the mental condition that is not severe and is **treatable**. **Personality disorders**, **addictive behaviours, mental retardation, severe impulsive** and **mental disorders** are **excluded**. Offenders must be agreeable to accept and pay for the treatment. On completion of treatment or when in default the matter is referred back to the court for further action.

CONSENT

Consent is required from the patient in a number of situations e.g. request for medical report when confidentiality is breached, invasive investigation and treatment procedure.

Fitness to give consent depends on the minimal age of the individual as set by the law; the mental state of the patient; the level of understanding capable of; and the necessity of the life saving measure. In U.K. no one but the individual can give consent. However, in Singapore, the next of kin or guardians do give consent in good faith on behalf of their wards when necessary. When in doubt, the advice of the Attorney General should be sought.

ASSESSMENT for Litigation/Compensation

A quick and simple approach is to ask the following questions:

1. What is the nature of the lesion, injury or disorder caused?

2. What is the consequence of the lesion, injury or disorder?

3. What is the reaction to the lesion, injury or disorder?

4. What is the reaction to the consequence of the lesion, injury or disorder?

5. What is the contribution of the personality to the reactions?

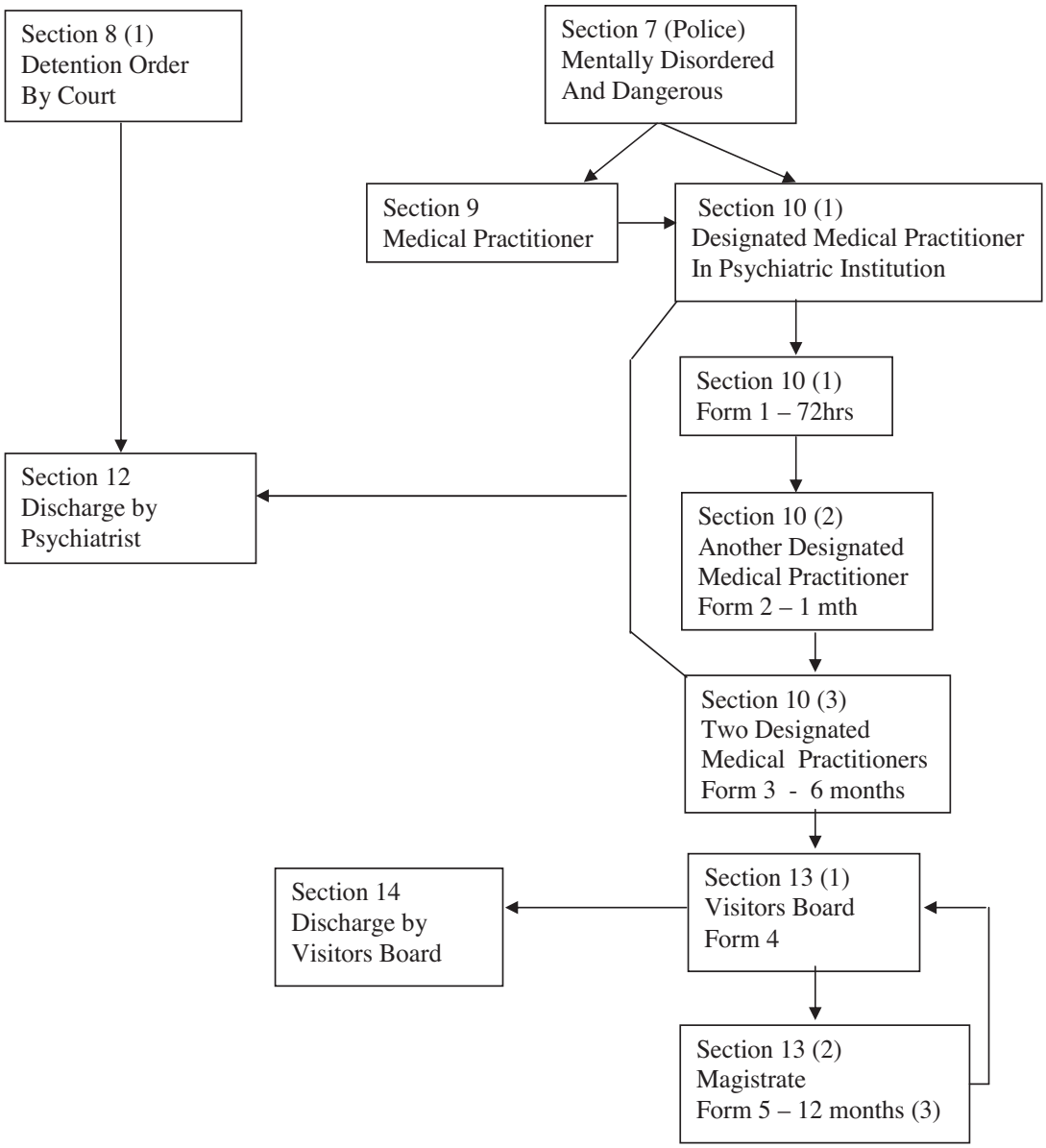
6. What is the consequent influence on the personality?

7. What are the advantages or benefits derived from the symptom or disability?

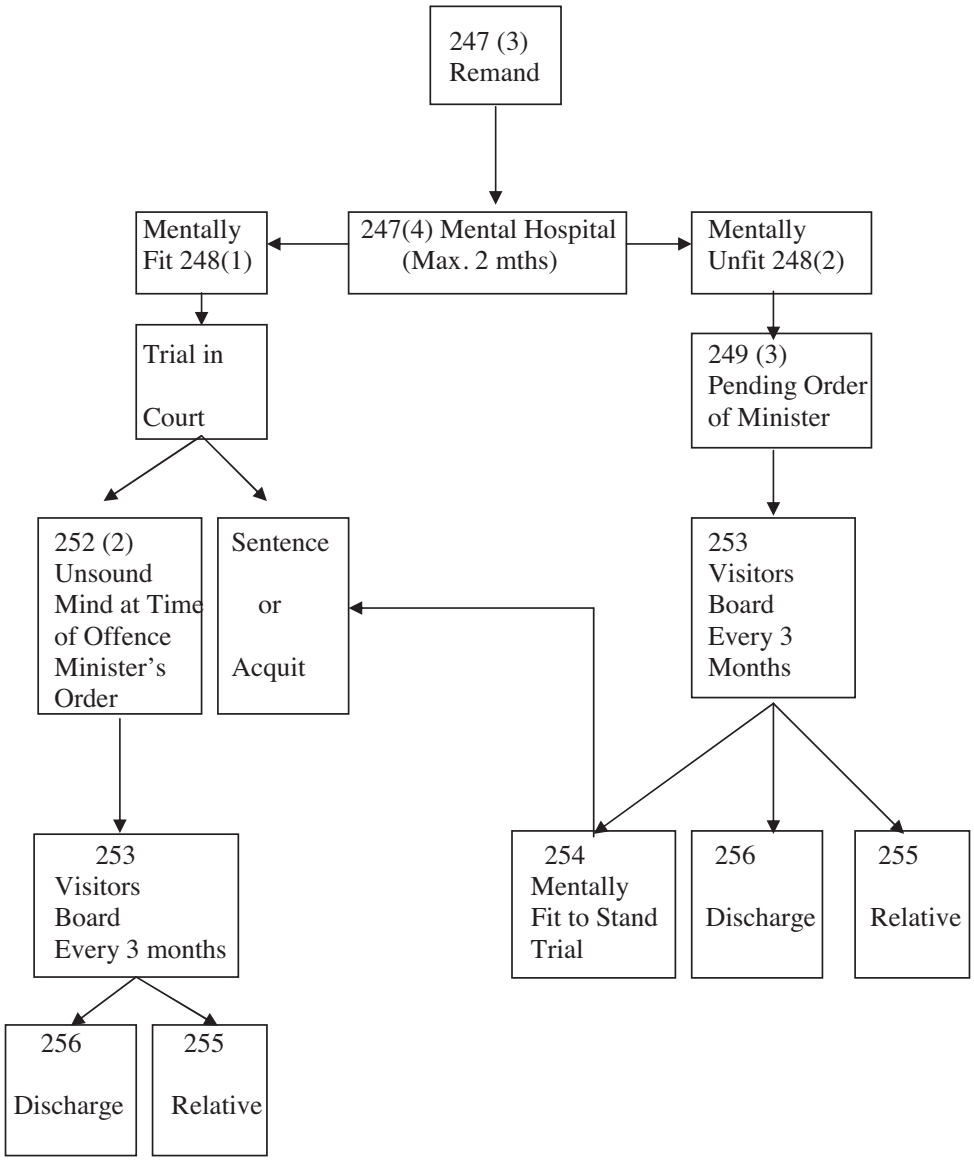
Punitive or Therapeutic in Approach

In the past sentencing of convicted offenders is restricted to the issue of whether they are of sound or unsound mind. The disposal is limited. However there has been better appreciation of the grey area of those who are intellectually challenged or mentally ill in terms of their responsibility. The approach now is more humane and therapeutic.
Generally speaking, depending on stage of development, value system and availability of resources, society may **medicalize** some deviant or anti-social behaviours and treat them or **criminalize** such behaviours and punish the individuals responsible. Thus drug problems may come under the Ministry of Home Affairs or the Ministry of Health in different countries.

Mental Health (Care and Treatment) Act 2008



Criminal Procedure Code - 2010



GUIDE TO FORENSIC EXAMINATION [and MEDICAL REPORT]

Sound Clinical Foundation and Objective Investigation Skill are basic.

All persons giving evidence are officers of court helping to seek the truth.

All responses are directed to the Court i.e. presiding Magistrate/Judge.

Forensic Psychiatrist is neither for the Prosecution nor for the Defence.

Expert Witness-Accused relationship replaces Doctor-Patient relationship.

Information/Evidence obtained could be used against Accused.

[Remember the "first oath" of "Do no harm."]

Always ask "what are the **facts of the case"** and not hearsay nor interpretation.

History Taking/Clerking should be systematic, thorough, detailed, chronological,
[to include drugs and alcohol] from reliable Informants and Sources.

Be specific in date, day, time, place and person and any other data.

The more detailed, chronological, consistent in repeat history the more likely **factual**

In the process **consistency**, **memory** and **mental state** at material point of time
assessed could/would exclude organic conditions.

Inconsistency in account on repeated interviews could/would indicate **Malingering**.

Determine **presence of Mental Disorder** in particular **Psychosis** and **ID**

Is it present **before**, **during** or **after** the legal issues concerned.

Presence of Psychosis or ID is essential for Unsoundness of Mind.

Unsoundness of Mind is **Legal Insanity** and not synonymous with **Clinical Psychosis**.

A Psychotic need not be of Unsound Mind and severe ID though not psychotic
could be considered to be of Unsound Mind according to Legal Criteria involved.

Dementias would be of unsound mind when acting under psychotic symptoms.

Opinions:

First offender has better prognosis than **repeat offender** with different offences.

Balance of "**untruthful till proven otherwise**" versus "**advantage/benefit of doubt**".

Evidence and opinion on criminal responsibility is **at point of time** of **commission**.

Sometimes **unsoundness of mind** is considered when the psychotic denies wrong doing but justifies action based on hallucination and/or delusion.

Fitness to plead/stand trial is **at point of time** of **assessment**.

Soundness or Unsoundness of Mind is virtually defined by **Legal Criteria**.

Explanation (or causal link) does not equal to Exoneration/Exculpation.

WRITING MEDICAL REPORTS

Content and Comprehensiveness of report is variable depending on prevalent practice and expectation or requirement.

Medical Report should be Concise and Precise therefore not lengthy.

[The longer the report the more mistakes there would likely be]

It is akin to Abstract of a complete article.

One learns to focus on what is important and relevant.

One learns to be clear, organized and specific.

One learns to use correct and appropriate words or expressions.

Avoid subjective adverbs and adjectives; every word must be defensible.

Recommendation and Mitigation suggested when appropriate.

CHAPTER 8

ACTIVE BALANCE AND PASSIVE EQUILIBRIUM

It seems there are **three major areas** of **conflict, tension** and **stress** in modern living. They are not mutually exclusive and in fact overlap and interplay. What is discussed below is with special reference to psychotherapy. Indeed these conflicts or dilemmas are applicable to other things.

A. Evolutionary Processes versus Revolutionary Changes

Biological development is evolutionary in nature and its functioning is integrative. There is a built-in feedback mechanism that monitors the organism's internal and external environment continuously. The processes generally follow a predictable course and time span. Thus the growth and development of a child go through defined stages. Education and training take time and specialization takes even more time. There is no way to mass produce precious personnel in shorter time by way of mechanization, computerization and automation the key processes in productivity. Hence the import of foreign talents when needs arise. However, soon habit and inbreeding takes place and becomes a problem. The local workforce may or may not be ready but is picky, impatient and feels displaced and resentful.

Social changes on the other hand are man-made and tend to be ad hoc and lopsided, directing at specific problems and needs during certain periods of time. In our competitive world they occur so rapidly that our biological make-up cannot match the pace. A concrete example would be the phenomenon of jet-lag when our physiological rhythm is out of step with change in time zone. The necessity for shift duties especially the third shift, apart from social implications, can also upset the body systems with regard to sleep, appetite and bowel habits. It is not surprising that sleeping pills and alcohol are used to overcome problem of insomnia. Frequent abrupt changes of policy and organization disrupt people in their long term plans and commitments. This is made worse by incredible advances in technology. Soon foreign talents or workers would be replaced by robots.

Biological adaptation takes time and learning process is arduous. They cannot be reversed or switched on and off at will. The older generation or elderly persons in particular suffer because they have greater difficulty to cope with rapid changes or to acquire new-know how or undergo re-training. Even conversion to the metric system had been a laborious process and taken years to complete. Cultural attitude, belief and custom are not changed over-night by economic success or scientific discovery. The human mind may reach into the sky to be among gods but the human heart is still in the jungle with the animals.

Implications for Psychotherapy

Modern living is fast-paced and changing, characterized by the instant culture of constant stimulation, seduction and self-indulged gratification of fad and fashion, internet, sex, drugs and virtual reality etc. However psychotherapy takes time and the individual needs time while changes do not keep time.

On the other hand, deep rooted cultural beliefs and practices are not to be under- estimated for their therapeutic roles. They can be an alliance or an enemy in therapy.

B. Role Prescription/Acceptance versus Individual Right/Freedom

In the Confucian society there is an **ethical code of conduct** and a **hierarchy of social organization** that must be strictly observed. Everybody knows his station in life and lives according to his **multiple roles** i.e. as ruler, citizen, employer, employee, friend, father, son, brother, husband etc. He acts and responds dutifully in line with expectation and there is rule and order. Naturally this is subject to complete and willing acceptance of prescribed roles inculcated from young. The elders must always be respected and their words are law. Young men and women who have come of age must marry and the go-between is asked to look for compatible matches. The greatest sin of unfilial piety is not to produce a male heir to carry on the family name. For the female, she must follow her father before she is married, follow her husband when she is married and follow her son when she is widowed. She must also be virtuous in her conduct, appearance, speech and work. There seems no place for self identity and expression. It is to be expected that there will be sufferings and tragedies mostly because of **human weakness** and **wickedness** rather than the system itself. **For roles are abused and exploited for selfish ends.**

But with exposure to western philosophy and way of life, man and woman apparently liberate themselves from social restrictions and claim their **rights as individuals** to seek self-fulfilment or do as they please. The gender of a person or his/her "seniority" does not seem to matter much. In western society, people call one another by personal name regardless of differences in hierarchy and generation. This reduces all relationships to a linear one of apparent equality and contributes to social chaos. Conflict arises when his/her **expression of freedom** is at odds with his/her **social obligations**. It becomes disastrous when he/she cannot handle his/her freedom responsibly and abuses it. Then it is like the autonomous cancer cell that grows and multiplies indiscriminately till the host body is destroyed. Inevitably respect for law and order and traditional wisdom breaks down. Schism and alienation set in. Seniority and experience count for nothing. The filial children of yesterday become unwanted parents of today. The new idolatry is **individualism**.

Of course, man would like to believe that he is enlightened through education and religion. However, cruelty, corruption and crime still abound everywhere. Only the form and method have become more sophisticated. Countries are divided among themselves by ideology, race, language and religion. They kill each other in the loftiest proclamation. The violence of exploding bombs, the greed in drug trafficking and the exploitation of sex regardless of consequences and conscience should complete the scenario. Human nature over the ages has been unchanging. However to shackle a person into rigid roles is as dangerous and tragic as to give free rein to his passions.

Implications for Psychotherapy

Whether we admit it or not we play **multiple roles** and interact at **many levels** all the time consciously or unconsciously. At different times, in different situations there may be a dominant role and other subsidiary roles. The doctor and patient roles in clinical setting are dominant roles. When other roles creep in between them transference is said to take place and the relationship is changed.

It is often forgotten that the **relationship** between two persons changes with change in roles. Furthermore the characteristics or expectations of each role also undergo changes. Each society has its own concept of the necessity and expectation of roles.

But in real life, certain hierarchical roles are unalterable. People do not just relate and interact as equal individuals but also observe their social stations. There is genuine **conflict** between preserving family structure and functioning and establishing individual identity and independence.

C. Survival of the Misfits and Unfits

It should be stated from the outset that the right to survival is unquestionable. The terms "misfits" and "unfits" are not absolute and have nothing to do with the Nazi's idea of creating a super race. They are to be viewed in the perspective of the biological concept of Darwin regarding the **survival of the fittest**. In certain sense we are all misfit and unfit in some ways. Our personality development is **uneven** and we all have our strengths and weaknesses. We may be brilliant or dull in mind, beautiful or blemished in physique and stable or volatile in temperament. An individual could be an intellectual giant but suffers from social inadequacies, sexual deviance, or emotional immaturity. To put it crudely there are people who are socially high class but morally low class, intellectually first class but spiritually no class. Depending on the period and culture he lives in and the value system that is upheld he may enjoy public prominence or languish in anonymity. [**One man's meat may be another man's poison but what is meat today may be poison tomorrow.]**

To achieve progress we have traded **general versatility** for **intensive specialization**. In the process we have become more and more **interdependent** for mutual services and also more and more vulnerable when such services break down or when our individual talents fail or go out of demand. On the other hand, the **market forces** are such that what is in demand could dictate exorbitant terms with impunity. There are very young millionaires or even billionaires with their innovations or creations which capture the world.

With advancement in medical sciences and technology as well as the affluence of the civilized society, the **frail** and **feeble** in **body**, **mind** and **morals** have been enabled to survive. They do not only survive without being productive but also expect better quality of life and services encouraged by welfare state. The personality disorders, the mental and behavioural disorders, abuse of psychoactive substances, the physically and intellectually disabled or handicapped as well as the aged sick would fall under this category. They are not only a stress to themselves as consumers but also a stress to others as providers. Incidentally, it is ironical that while fortunes are spent in modern medicine to prolong some dying lives, fortunes are also made from arms sale to exterminate many thriving lives. When man plays god he has to deal with the devil. The ageing population with declining birth-rate is going to be a monstrous dilemma. Less and less people who are productive will have to support more and more people who are unproductive.

Implications for Psychotherapy

Psychotherapy here would have to grapple with issues of values, judgement, morality, economics and politics.

In the developed countries, the pressure is on the welfare state but for the others, the burden is on the family.

What are the answers

Human solutions to problems are always at the expense of something else. Every solution creates a new problem. **A price is paid by someone, somewhere, sometime**. There is no perfect and permanent solution. Nevertheless suffering must be alleviated.

In terms of psycho-dynamics and treatment, western psychotherapy aims not only at removing symptoms but also to promote growth and development of the individual. It is patient centred and the interest of others is of secondary importance. This is consistent with the belief that individual rights are sacrosanct. The eastern society is family centred and the individual is to put group interest above self. For ages, the Chinese have also coped by accepting as their individual fate and destiny, when faced with trials and tribulations. Life is made more bearable and individual failure or weakness is overlooked.

It may be said that the western society encourages vertical development of individuals that would lift up horizontal growth of the community. But the eastern philosophy of life emphasizes the well being of the whole through selfless contribution of the individuals. There is a Chinese saying that when there is no country/nation there is no family/home. Perhaps the answer lies in the:

ACTIVE BALANCE (**win-win**) of **OPPOSITE VIRTUES**

and **NOT**

PASSIVE EQUILIBRIUM (zero sum) of **DOMINATION** and **RESIGNATION.**

The human community is made up of individuals and the individuals cannot be effective without the community. Perhaps we need to **restrain the "ID" culture**, **relax the "SUPER-EGO" culture** and **reinforce the "EGO" culture** that would hold all things together in harmony. Psychotherapy must therefore recognize the cultural norms, values and realities from which the patient comes and to which the patient returns.

CHAPTER 9

STRESS, MENTAL HEALTH AND MANAGEMENT

Stress is part of life. But in this competitive world for survival, some people say it is or should be a way of life. Stress is therefore unavoidable. However it is not always necessary. Very often, it is the result of incompetent, mediocre, selfish and greedy management or personality problem. A higher or hidden reason for creating stress is perhaps to toughen up the people to ensure survival. But then there will be casualties even before going to war. There are both **intrinsic** and **extrinsic factors** involved in stress. The nature of mental health work requires that the psychiatrist should be well informed and interested about life.

The Spring and The Load

Individuals are like coil springs which are of different material, thickness, length and strength. Each time a weight is suspended the spring stretches and as the load is increased the spring will stretch proportionally. When the weight is removed the spring returns to its original state. However if the load keeps on increasing the spring will keep on stretching. There comes a moment when the spring does not quite return to its original position when the weight is completely taken off. This could also happen when a certain weight is applied over a prolonged or indefinite period of time. In this instance the spring has undergone a qualitative change and lost its full resilience. Subsequently, its response to the force applied would be erratic and difficult to predict. Eventually with increasing load a critical point is reached when the spring snaps. There is a saying about the final straw that breaks the camel's back.

Of course an excessive weight right from the start or at any point thereafter would produce the same result in a more dramatic fashion. However if the whole process is carried out in a different medium i.e. immersed in some liquid then the buoyancy effect will affect the response of the spring to the applied force.

The Horse, The Cart and The Road

The saying about putting "the cart before the horse" refers to the wrong sequence of doing things or adopting the wrong priority. Here we are concerned about productivity.

To carry a certain load from A to B within a certain time frame will depend on the nature of the load, the power of the horse, the size of the cart and the conditions of the road. There are several variables in this job assignment but we shall not discuss them all.

When the horse power is fixed there will be a maximal limit to payload. The horse pulls easily when the cart is small and the load is light. More often than not it is a full load. However within limits the horse can still do a good job although its reserve may be reached. Crisis comes when the cart is over loaded or expanded to carry more and no additional horse is available. This calls for decision as to what valuable load should be carried and what dispensable load should be discarded. But this is not always done.

Sometimes the horse matches the cart and the load. But the road can be narrow, winding and uneven. When a time schedule has to be strictly followed the horse and the cart head for a breakdown from exhaustion and making extra trips.

In modern IT language, we know that every computer has a fixed capacity and speed. When the diskette/hard disk is full it cannot take in more data. But the human workforce seems to have no limit in capacity and speed to meet production targets.

The Driver and The Car

The performance of the car on the road depends not only on its road worthiness and the traffic conditions but also on the way it is driven. There are drivers who drive without changing gears or with the foot on the clutch or with the hand brake on. One can imagine the serious wear and tear, the wastage of energy with much heat and exhaust and the eventual breakdown of the engine and parts. The new auto-pilot electric car will lead to atrophy of driving skill.

"Sloggers" and "Shirkers"

With emphasis on paper qualifications and performance measured in selective quantifiable units the phenomenon of apparent quality and quantity emerges. Qualifications do not always predict delivery as there are other important factors such as personality, character, commitment, state of health and energy level to be considered. However, meritocracy often develops into elitism and mistakes made at recruitment might be concealed.

Thus on paper, the staff complement may be full. But in reality, out of 10 in employment, there may be 7-8 who pull their weights and 2-3 who are not doing their parts although they all receive the same reward. To achieve the productivity of 10 employees the 7-8 "sloggers" would have to put in extra to make up for the 2-3 "shirkers". The management which is concerned with increasing its output therefore depends more and more on the "sloggers" for their input. While the "shirkers" are allowed to get away, the "sloggers" are under stress having to do well above their share and feeling resentful. The "sloggers" also suffer when rules are tightened with the "shirkers" in mind.

Stress is further aggravated when the management, to put it crudely, is preoccupied with "creating its image" and "covering its backside" which generate unproductive activities and waste resources. The worldly wise soon recognizes that the priority is not so much to provide a better service but to please those in authority. Amazingly, feedback, monitoring, auditing and accountability appear to be satisfied merely by making rhetoric statements and submitting questionable figures. The paradoxical outcome is that the more capable the individual, the more is expected from him, the more he is under stress and the more likely he will break down when he remains in the system, even when suitably rewarded. Stress becomes poisonous when the "slogger" works under a "shirker" whose output depends on the former's input.

Input and Output

It is not often appreciated that the output of the management depends on the input from the ground. As such when the individual's input goes to his own output and does not directly contribute to the management's output or image then his performance is not likely to be recognized and rewarded. Increased mechanization, automation and computerization are intended to increase production. But productivity depends on trained people.

In this age of information technology, computerization is an answer to efficiency and productivity. Facts and figures when required by the management are displayed immediately at the touch of the finger tip. But it requires a sufficient number of people at the bottom to

regularly collate and key in the necessary data. Computerization does not reduce work-force. The user depends on the feeder. The top people may take minutes to formulate and issue an idea or an instruction but it takes others hours, days or weeks to accomplish. Often the results are obvious, redundant or inconsequential and much time, effort and money are wasted at the expense of other priorities. But the management must be seen to be working and protocol must be observed.

Apart from production targets and deadlines people can also find themselves trapped to do things against their convictions and principles. To opt out would mean unemployment and privation.

Self Interest and Group Interest

Self interest is innate and natural. It has survival value. The group is composed of individuals and group interest should be to enhance individual interest and survival. However, there are many kinds of group and each group has its own purpose or function, characteristic and life. As each individual can be a member of more than one group there will be conflict of interest and loyalty. People have their own priority of membership and hierarchy of group interest. Generally speaking, that which provides work and livelihood is the most important.

When basic needs are satisfied, people look beyond to higher standard of living, better working condition, career development, job satisfaction and being somebody. Once again there will be conflict and tension. Stress is aggravated when group interest is divided, undermined by self interest or controlled by interest outside the group. It should be noted that there could be subgroups with their own specific interests within the larger group. Sometimes the purpose and function of the group may become outdated and its continuity becomes a sentimental burden.

History of Corporate Stress

Corporate stress has been in existence from ancient times. There had been strong but bad rulers as well as good but weak ones. There had been ambitious and scheming courtiers who manipulated the emperors and exploited the people and there had also been capable and virtuous statesmen who were banished or executed. In historical perspective, the enlightened dictator that is super-ego guided may be better than the dictatorship of mediocre democracy that is id driven.

In modern management and governance the top priority is to be in control by whatever means and methods (powered perhaps by branded MBAs – Mind Brain Altered or Automated). It has been said that management creates jobs for itself and work for others. Indeed, often, the management size grows faster than the core business manpower. The management does not contribute directly to productivity but devises ways and measurements to squeeze the work horses to produce more. The management seems to enjoy regular travelling to get ideas, lengthy meeting to promote ideas, top down delegating to enforce ideas and remote controlling instead of walking the talk. What is achieved is usually ‘image creation’ and ‘backside covering’. It is not unlike a parasitic predator that takes control of the host and drains off much of the harvest of labour to feed its separate existence, infra-structure and running cost. (The work horses are further squeezed to provide for the CEO’s bonuses and the stakeholders’ benefits.) Talent and quality or standard are dispensable if they do not meet up with the prevailing management culture and expectation. Therefore, for the management it is

the consolidation of power and control that really matters. For others who have acquired invaluable experience and wisdom in the course of work they are soon discarded at a cut off point because they are considered obstacles to the compulsive need for change and the need to make way for rejuvenation. The cycles of 3 steps forwards and 2 steps backwards in terms of experience and wisdom are repeated as progress as long as power and control are maintained.

Thinking in the Box

Thinking in the box is natural when it is downloaded like the software on the hard disk and one is constrained to think only on its contents. When the content is: "I know all, I know best, I decide all, I veto rest" the consequence is: "Fear to speak, Foolish to speak, Futile to speak". ISOs, SOPs and NUTS (No U-Turn Syndrome) are orders of the day. To think out of the box we need more boxes with different contents mixing freely. However too much short sighted free ideas and demands may have dire long term consequences

Prohibition and Permissiveness

In conservative or prohibitive culture and society, values, attitudes, beliefs and customs are clearly spelled out. There is little ambiguity on what is good and bad, and what is right and wrong. Rules are laid down to prevent what is undesirable from taking place. People are therefore more inhibited. In liberal or permissive culture and society boundaries of good and bad, right and wrong are blurred. Rules are not absolute and people are more adventurous and experimenting.

However, prohibition does not prevent what is undesirable from happening. When things do happen the solutions to the problems are limited and restrictive. Where there is permissiveness, things are allowed to happen and solutions are found to deal with the various problems that surface. Take for example the question of sex. Sex is associated with procreation and the transmission of sexual diseases (STD). The surest way to avoid procreation and STD is to prohibit sex. When there is no unwanted pregnancy and STD there is no reason to invent intervention. But when promiscuity is a way of life one can indulge in sex without being caught so to speak by learning about the safe periods and the numerous methods of contraception as well as treatments available. Open society thus seems more innovative, creative and advanced. When closed society is faced with problems it has to look to the open society for solutions.

Innovation needs to be encouraged with support and flexibility. But it should also be tempered with conscience and caution to cause no harm.

The Economic Preoccupation

In the modern world the new dictator that drives us on and on is materialism or consumerism. Making money has become a most important part of our culture because of its purchasing power. It can even buy talents and citizenship. There are so many things that are attractive, desirable and irresistible. Furthermore, these things are churned out so fast that they are being replaced continuously. To delay in getting them means missing them for good. The pace is such that he who postpones or procrastinates in his gratification is a loser. The race is on and everyone takes the shortest and quickest route to achieve his objectives by hook or by crook. Not surprisingly, advanced credit, competition, conflict, conspiracy, confrontation and even criminal behaviour have occurred. Short term interest prevails. Lifestyle instead of being a by-

product of what one can afford becomes the end-product to have at all cost. As a result the success of economic pursuit is the benchmark to replace all human values and relationships. There is no more altruism or higher calling.

The Customer is Always Right

The emphasis that the customer is always right is both misleading as well as a source of stress and mental health problem to those who serve in the front line. What it really means is that the customer has or will have money that we want him/her to spend on our goods and services now or in the future. So, if he/she does not buy today it is hoped that he/she will buy tomorrow and keep coming back to do so. Thus the statement should honestly be that money is always right provided it is not illegally derived. To insist that the customer is always right is more or less to say that there are no personality dysfunction or difficulty as understood in psychiatry or persons with negative social traits.

There is another context where the clients or consumers, particularly the users of Government service are also always right. In this case it is not directly related to economic performance. The cause and cost of complaint may affect the outcome of political election. Thus, complaints whether they are reasonable or unreasonable are feared by both the honest and the corrupt governments in power.

The Amoeba and The Specialized Cell

The amoeba is a lowly unicellular organism. But it is free and independent. It moves, seeks food, grows and reproduces itself. Life goes on in monotonous cycles. Only multicellular organism is capable of higher quality of life.

The more complex the differentiation and organization of cells into tissues, organs and systems the more developed and versatile is the total organism. However, the individual cell has to sacrifice its independence and mobility for a specific function. The specialized cell then serves a greater purpose for the benefit of the whole organism.

However, now and then, some cells decide to go their own way regardless of consequences. They proliferate autonomously, spread from organ to organ and are in fact cancerous. Eventually they harm or kill the host body and themselves. (It is therefore important to detect cancer early and treat it radically.) Man in the human society has the dilemma of preserving his individuality and independence like the amoeba and fulfilling a prescribed social role like the specialized cell. Stress arises when the two interests are in conflict.

The Soloist and The Orchestra

The aim of many musicians is to be able to perform as soloists. However, the music made by the soloist cannot be compared with that of the orchestra in grandeur, richness and impact. To make great symphonic music, every player from the first violin to the percussionist must play his part accordingly and follow the direction of the conductor. Every instrument, every note and every pause has a specific place. There is no such thing as outplaying one another in loudness or in speed nor reaching a compromise. Competition does exist but only to determine the better player that can lead each section to bring the performance to the highest plane possible. In concertos, the star player is the soloist and he is accompanied by the whole

orchestra. The conductor controls the orchestral players to co-ordinate with the soloist. They will play as one to create the desired music.

The music that each orchestra is capable of performing depends on its size and component players. To perform well, the orchestra needs time to practise and rehearse. Frequent changes of programmes or musical scores and conductors will affect its performance. To have good music we also need the necessary support, environment and atmosphere.

Inclusiveness and Exclusiveness

People are always more important than systems because the human element is always crucial. Life is relationship. It is the relationship between cells that forms tissue; between tissues that forms organ; between organs that forms system; and between systems that forms the complete organism.

The highest form of relationship is non self-seeking love, love that is inclusive, that grows and makes whole. It is not technical, intellectual or professional but it enlarges its circle of relationship between persons, families, neighbourhoods, communities and nations. Opposing it is exclusiveness, that which is set apart and stands apart from the rest in the cause of perhaps efficiency and excellence. Being distinct, it discriminates, divides, dominates and demoralizes. The in-group however fosters identity, comradeship and loyalty. If it could be more inclusive instead of being totally exclusive then its growth and strength would know no boundary. **The secret of successful management lies in the in-group that is inclusive**. Through sharing and belonging it inspires solidarity that puts common and higher good first.

Vision and Mission

It is fashionable if not mandatory for every institution or organization to have a vision and a mission statement. And so, many heads will meet for hours and days to draft, re-draft and craft, re-craft these statements which become the ends themselves and mostly on paper. Implementation is either neglected or compromised. It is not unlike the section leader of each instrument coming together to compose the perfect symphony that is beyond the incomplete orchestra to perform while the audience is starving for some music to be played.

Policy and Traffic Lights

Policy is like the traffic lights. During the ‘green wave’, the traffic flows smoothly. But when it turns red suddenly, there will be accident and casualty. Then when it changes to green again, the traffic in front will begin to move and the queue behind will follow slowly. Thus, after the last general election (2011) a “new normal” comes about. The top people quickly respond more openly and inclusively. However the middle rung reacts tardily and the lower end hardly moves. If the lights change erratically there will be traffic jams and chaos.

Helicopter View and Submarine View

Much emphasis has been given to the importance of possessing helicopter view. The helicopter view sees far and wide and what is on the surface. But to see in depth what is below the surface the submarine view is needed. There is an earlier saying that people who live in ivory tower are out of touch with the reality on the ground. Or they act merely as messengers with misinformation.

The Means and The Ends

It has been said by Soren Kierkegaard: "The end does not justify the means for the means is an end itself". Presumably even if the end is something good.

Human solution to problems is always at the expense of something else. Every solution creates a new problem. A price is paid by someone, somewhere, sometime. When we cure disease and promote health, we increase life span and face an ageing population. When we develop our economy and create wealth, we also create pollutions and wastes. The name of the game is "progress and prosperity". So, to develop we must create wealth and to create more wealth we must create waste through environmental destruction to compete for consumers. Our standard of living is measured by the amount of junk mails in the letter box and re-useable disposables in the garbage bin.

There are two sides to every virtue or vice depending on the circumstance and perspective. To put it in another way what is virtue in one context may be vice in another and vice versa. It is important to observe rules and regulations but sometimes it is more important to bend them. (Although rules should be rules and exceptions remain exceptions.) A staff member who works overtime may be diligent but may also cause inconvenience to others and incur higher cost. Perfectionism can be an asset or a setback. As the saying goes what is meat to one may be poison to another. Furthermore, what is meat today may be poison tomorrow and vice versa. There is a Chinese saying that the wheel of fortune turns round and round.

The Square One Theory

There is a saying that too many cooks spoil the broth.
To solve the 'problem', a team of chief cook, assistant cooks and kitchen hands is formed.
Thereafter the team meets regularly to discuss the menu and recipe.
Members are also sent for courses and training.
In high expectation, more and more new menus and recipes are created.
Eventually a glossy cookbook is produced and accepted.
However the broth is still not served.
Because the cooks are no more cooking and there are no ingredients in the pantry.

Evolution of Knowledge

When we are young we see only grey
As we grow and learn we distinguish black and white
On becoming adults we realize the shades of grey in between
Then there are experts who can detect black in white and white in black
There are also others who argue that black is white and white is black
Of course there will be a few who decide what is black and what is white
In the end it is all grey again
There is no limit to human intelligence and rationalization.

Schizophrenic Statistics and Knowledge

As knowledge increases and what has been untreatable in the past becomes treatable, there is also a trend of changing threshold in criteria and disease definition. As a result, a high percentage of the population would be suffering from every disease or disorder known. If one

were to add up all the percentage or rate of each physical disease or mental disorder published, then everyone would have to suffer from more than one illness. There would be no healthy individual left and everyone would end up taking medicines and health supplements.

On the other hand, there are 24 hours in the day. Physiologically, the body needs regular meals and exercise or recreation and on the average 6-8 hours of sleep and rest to stay healthy and function well. But full time jobs nowadays may require the individual to work up to 12-14 hours a day or 60-80 hours a week with no regular break for meals. Doctors on duty are expected to be on their feet more than 24 hours at a stretch, 2-3 times a week and not fumble at work. In addition, each one is urged to exercise regularly, date and marry, have children and raise them well, be filial to the parents, do voluntary work and be involved in nation building during the remaining hours of the day. To accomplish all these more than 24 hours a day would be needed. However, it is argued that people who prioritize, manage time and do quality stuff would still be able to find time to play golf, attend concerts and go for holidays.

Monkey see, Monkey do

There is a global culture of colonization and cloning through international trade and information technology. And so from the monkeys of "see no evil, hear no evil, speak no evil" people have become "monkeys see, monkeys do". They learn to assert and sell themselves, shamelessly or smartly at times. To succeed there seems no place for honesty, humility and modesty. They also adopt the same language and expression including spelling; the same terminology and titles; the same management and operation; the same franchise and lifestyle; the same idol and icon; the same diet and drink; and develop the same diseases and disorders etc., etc.

And when people sing "Count on me Singapore" in celebration each year they also leave behind heaps of affluent litters as "one nation, one people" for others far away from their homes to clean up the mess. Perhaps there is no alternative or choice in this "monkeys see, monkeys do" business. It has frequently been repeated that people are too dependent on those in authority. The probable truth is that these people have been too conditioned to obey instruction and follow direction in the mould of "monkeys see, monkeys do". Some "monkeys" keep setting new bench marks and gold standards or re-labelling them for the rest with strained resources to chase and copy, often blindly or for the wrong reasons. Sadly, there is just no catching up. The standard bearer or trend setters will always stay ahead.

"Monkey see and monkey do" also applies to following the footstep of uncompromising advocates of democracy, human rights, freedom of speech and capitalism that divides the world between extremisms and perhaps introduces the new warfare of "state sans border."

Change, Choice, Control

Change is a fact of life. And so it is.
Change such as the growth and development of a child and the four seasons are part of nature. They may be anticipated with welcome. Natural disasters like earthquakes, floods, hurricanes and epidemic diseases are obviously destructive, traumatic and feared. But there are also man made changes which may be accidental, arbitrary, incidental or intentional such as industrial disasters, wars, terrorism, economic crises or political upheavals.

Change may be a challenge to conquer and control or a scourge to submit and survive.

When faced with change a response is expected. The response may be to avoid, ignore, overcome, adjust and adapt. There is a choice although effort is required. When change is threatening and effort to cope is exhausting, stress is felt. Such changes are usually imposed on the individual without choice. There may be arm twisting, blackmailing or trading off involved.

Successful management of change presupposes choice and control. At a higher plane it implies power of politics, strength of forces and reserve of wealth. The developed and powerful in order to perpetuate control introduces constant changes such as IT, knowledge based economy, new policies, re-structuring, merging and recruitment of fresh personnel or talents.
Others become stressed because they are at the mercy of imposed changes that they have to keep catching up with to survive.

Through understanding of human nature, marketing strategies and forceful regulations, enormous amount of money is amassed by the enterprising innovators of fad and fashion and fanciful upgrading of hard-wares and soft-wares. And so the manipulated consumers, apparently with choices for competitive products, slaving in pursuit of brand names and latest gadgets play an important role to enrich and support the quality life style of the developed and powerful.

Id, Change, Virtual Reality

In this era of globalization there is a relentless emphasis on 'change' and so an abundance of cliché statements on 'change' e.g. "change is the only certainty in life" or "the only constant in life is change". It is strange that in the midst of constant and continuous change the human nature has not changed. [This is evidenced in the proliferation of rules and regulations, protocols and procedures, laws and ethics to control and curb the complex and ingenious human commissions and omissions.] Nevertheless, the need to change can be a matter of survival for the individual or the society. So people have to be flexible and nimble, innovative and entrepreneurial. On the other hand there is also change for the sake of change which becomes an end itself. So people in place must introduce continuous change to appear creative and progressive. Process supersedes product and results are inconsequential. In fact it is difficult to assess or evaluate the outcome of such change because before the dust of change settles another sweeper will come along. While high flying sweeping is commended the people on the ground have to keep on inhaling the dust stirred up and getting choked. When accounting and accountability are demanded the virtual reality of "Enron Success" or "WorldCom Connection" could be projected; rhetorical statements and white lies are employed. Losses in red become gains in black overnight through merging, restructuring, retrenchment and selling off assets..

Virtual reality can also be seen in packaging, advertisement and label, restructuring and ISOs, JCI, SOPs on paper, measurement and manipulated statistics, relationship in name, title inflation, free market, future trading and paper asset etc., etc. In the essence of rapid change the Vision and Mission statements of yesterday become different from their translation and implementation today. There is a saying about 'word of honour' in Chinese that is 'what is uttered cannot be retrieved by the speedy horses'. In the modern context of change it seems what is uttered disappears into thin air.

One possible explanation for change and the power of change is the insatiable greed or need of the human 'id' for immediate gratification and constant stimulation. The forefathers from their experience and wisdom knew the 'id' well. They cultivated the 'superego' through upbringing to repress it and emphasized education of the 'ego' to suppress it. The modern entrepreneurs

also know the 'id' well and they stoke it with fad, fashion and fancy for commercial profits or economic gains.

Surrounded by all these changes we need to strike an active balance of opposite virtues. We must not forget our vocational link to our patients when in pursuit of our career advancement or the market forces.

Secrets to Secular Success (and Power)

Make money by hook or by crook
Accumulate wealth beyond needs
Market consumerism as the global icon
Merge and restructure to compete and control
Optimise mastery, monopoly and mass production
Negotiate with turn and twist to give little away
Interfere and destabilise then exploit for gains
Sins are to be whitewashed for survival or success
Money is the alpha and omega

Courtesy, Civic Mindedness, Social Grace, Happiness

There are different perceptions on the regional or global ranking of courtesy, civic mindedness, social grace and happiness. When high ranking is the result of spontaneous and genuine efforts it would reflect good mental health and cultivated lifestyle. But if it is achieved under duress then mental health is likely to be at risk.

There could be a number of possible reasons for low ranking. The emphasis on "no free lunch" or "no one owes you a living" means that "everyone is on his own and for himself" or "I owe no one anything". This would be the root of "kiasuism" which has been overused on almost everything and really means self centreness and selfishness. Then there is the elitist top down modelling effect. Superiority is endorsed, rank is right, money is king, title is queen and bottom up for the unselected is a futile struggle. The gap between the top 20% and the lower 20% widens. Low ranking is then the outcome and expression of displaced resentment/anger or ventilation of frustration or plain "bochap" (who cares). There is also the habit of complaining against the backdrop of excellence and success constantly proclaimed. Complaint is safer than criticism. It is all a form of coping with stress in life and saying no by people with no say. Finally there are the "uneducated", antisocial and mentally unwell groups who exist in every society.

Certification, Branding and Franchise

Certification, branding and franchise are big money making businesses today.
Without certification in areas of education, skill, performance and product
one is handicapped in life.
The entrepreneurs therefore create and innovate ways and means of certifying others
with qualifications and standards that are marketable.
Life becomes a continuous pursuit of certification and re-certification.
Many pay handsomely and willingly to be certified to enhance their market value.
Others have no choice but to submit to the stressful process.
Indeed not all certifications guarantee quality and delivery.

Only birth certificate and death certificate for all are not earned.
But they too could be forged and used for different purposes.

Peddling Stress Management

In medicine diagnosis is preferably made according to aetiology
Treatment is then directed at removal of the cause to allow natural healing.
When the cause is not understood or could not be cured or controlled
Then treatment is symptomatic or management is palliative.
Modern stress management that earns big money is mostly symptomatic in approach
There is little attention paid to the cause or stressor
Often the stressor is the management that creates unproductive stress
(see "Sloggers and Shirkers" and "History of Corporate Stress"
Stress management should therefore target both the stressed as well as the stressor.
Sadly the peddler is often a helpless victim himself dishing out standard clichés.

Strange Outcome

Despite the crusading and championing of human rights and democracy
It has not produced an equal and egalitarian society
Instead the gap between the rich and the poor, the haves and the have-nots has widened
Such is the power of the predatory globalized corporate organizations
The engine of relentless competition and stress
Then there is politically correct denial of differences in individual capability, capacity and caprice
That requires differential, judicious and enlightened approach instead of one size fits all.

The Mystery of Logic

To achieve quality of life which includes better wage package
There must be significant economic growth
To achieve sustainable economic growth
There has to be continuous restructure, upgrading of skill and increasing productivity
The price of quality of life is therefore relentless change, adaptation and stress.

However upgrading of skill and increased productivity
Does not appear to apply to CEOs and directors of MNCs
The culture and operation of conglomeration is such that
The CEOs and directors are paid millions as an entitlement
Even when the corporation is not making or losing money

The lifestyle of entitlement seems to extend to the newer generation
Whose bread and butter are provided for by the labour of the older generation
Having the basic needs satisfied they are no longer hungry to do any job
Preoccupation with hedonistic pursuit replaces the drive to learn and improve
The Id culture of constant stimulation and immediate gratification
Supersedes the Super-ego culture of conscience and ideal
Meanwhile the Ego culture struggles to balance them with reality.

APPROACH TO PROBLEMS

What is the problem? (It is obvious that the problem must be identified.)

Whose problem is it? (Responsibility or liability is implied.)

Why is it a problem? (Question of circumstance or context.)

How to deal with the problem? (It depends on individual orientation.)

Orientation to the Problem :

Philosophy - Altruism, Ideal, Pragmatism

Point of View - User, Provider, Purchaser, Payer, Politician

Purpose - Objective, Goal …

Priority - Urgency, Agenda, Resources, Viewpoint again !

Professional - Expertise, Training, Practice, Territory

Progress - Not synonymous with New and Change, or Technology

Politics - To ensure continuation of power or popularity

Policy - Subject to Political, Economic, Social Forces

Payment - Funding, Reserves, Profits

Partnership - To Enhance Image and Competition

Propaganda - Mechanism to achieve covert/overt set goals

Prosecution - Medico-legal implication, Litigation, Insurance

The different orientations to dealing with problem are not mutually exclusive. There is much overlapping, interplay and compromise.

Healthy Person and Healthy Environment

Someone has said that there is **no healthy person without a healthy environment** [and perhaps vice versa.] So there are movements and organizations promoting Healthy Person-Healthy Environment projects and programmes. These would include:

Physical – good housing and transport, clean air and water, supply of food and energy, hygienic environment , sewage and sanitation, control of pests and diseases, etc.

Social – opportunity for education, fulfilling employment, fair income, religious freedom, racial harmony, law and order, justice, individual rights, space for recreation, healthy life style and etc.

Psychological – security, safety, stable and caring society, satisfying relationships at home, at work and at play etc.

These factors play important parts in both physical and mental health and often taken for granted.

Therefore the clinical multidisciplinary team has important role and function.
The Government or society that provides healthy environment and promotes healthy persons deserves as much credit if not more as the physician.

Ecc. 1:9,11

What has been will be again
What has been done will be done again
There is nothing new under the sun

There is no remembrance of men of old
And even those who are yet to come
Will not be remembered by those who follow

CHAPTER 10

HEALTH ECONOMICS, POLICY, AND MANPOWER

OVERVIEW OF HEALTH ECONOMIC ISSUES

Worldwide, healthcare cost is escalating.

Healthcare economics is complex.
Like all things, one **complexity** is that it has become a **commercial enterprise**

Practice of medicine has changed from **one doctor** treating many patients at the primary care level to **many specialists and subspecialists** managing single patients at the secondary and tertiary levels. There is also a **proliferation** of **allied health professionals** or **workers**, **technicians** and **managers**.

Developing society with limited resources provides **one size fits all** services that are **basic**.

With development and affluence treatment or management becomes **individualized** or **customized**.

However when society is developed and affluent and more resources are available, the **latest** investigations, machines, drugs and procedures are introduced as necessary. It becomes the **new** baseline of **one size fits all** services that is **expensive** because of **new facilities** and **market forces** as well as **medico-legal issues** and **defensive practices**.

People are living longer and older with **chronic** and **degenerative diseases** that require long term treatment and care. What is untreatable in the past is treatable now.

There are also more diseases and disorders added because of **new discovery**, **changing concept** and **threshold**, and **medicalization** of existential human imperfections and sufferings.

In addition there are preventive **screening** and **early** treatment and **aesthetic medicine**.

Finally we have so called **lifestyle diseases** and **disorders** and **addictive** habits or behaviours.

Mental health, wellness and **illness problems** are also gaining prominence and recognition.

The wise saying of "to cure sometimes, to care often and to comfort always" becomes "to cure always, to care often and to comfort sometimes."

TRAINING OF FUTURE PSYCHIATRISTS

The training of future psychiatrists will be related to the training of future doctors.

The nature and purpose of medical education and training have been undergoing changes and are not static. Medical practice likewise undergoes changes for better or worse

Medical schools have been revising their curricula, contents, directions and emphases; tools and methods of teaching or training. (e.g. problem based learning, virtual reality)

Based on growth of knowledge and advancement in management there is a dilemma and tension between the balance of producing generalists and specialists at both the undergraduate and post graduate levels. Years of medical course and medical curricula vary. Levels of general competency and confidence also vary. The trend is toward life-long continuous medical education or professional development.

The **oath** and **pledge** we take are persons centred, emphasizing compassionate approach to **cure**, **care** and **comfort** of our patients and the special **fraternity** within the profession.

DECLARATION OF GENEVA [173rd WMA Council Session, Divonne-les-Bains, France May 2006]

['first' adopted by 2nd WMA General Assembly, Geneva, Switzerland, September 1948) (amended by 22nd WMA, Sydney, 1968; 35th WMA, Venice, October 1983; 46th WMA General Assembly, Stockholm, September 1994; editorially revised by 170th WMA Council Session, Divonne-les-Bains, France, May 2005]

At the time of being admitted as a member of the Medical Profession:

I SOLEMNLY PLEDGE to consecrate my life to the service of humanity;

I WILL GIVE to my teachers the respect and gratitude which is their due;

I WILL PRACTISE my profession with conscience and dignity;

THE HEALTH OF MY PATIENT will be my first consideration;

I WILL RESPECT the secrets that are confided in me, even after the patient has died;

I WILL MAINTAIN by all the means in my power, the honour and the noble traditions of the medical profession;

MY COLLEAGUES will be my sisters and brothers;

I WILL NOT PERMIT considerations of age, disease or disability, creed, ethnic origin, gender, nationality, political affiliation, race, sexual orientation, social standing or any other factor to intervene between my duty and my patient;

I WILL MAINTAIN the utmost respect for human life;

I WILL NOT USE my medical knowledge to violate human rights and civil liberties, even under threat;

I MAKE THESE PROMISES solemnly, freely, and upon my honour.

But environmental/economic factors and administrative policies have made it difficult for our oath and pledge to be fulfilled.

We have no complete control on how we practise medicine, nowadays. Administrators and management have the final say. **Clinical language and terminology are replaced by business terms such as:**

Corporatization, CEO, case manager, case-mix, customer service, costing, packaging and marketing, health industry and clinical technology, entrepreneurial research, medical tourism, added value, KPI and performance bonus and a host of other economic jargons.

Computerization on one hand facilitates management but on the other hand stifles flexibility and controls how procedures should be followed. There seems no place for altruism.
Internet savvy consumers are no longer passive patients.

In training future psychiatrists, planners may consider the following:

What are the needs in terms of numbers and ratios:

This will depend on demographic change/projection and the anticipated life style.
e.g. ageing population, retirement, savings, family support, independent living, quality of life, substance abuse etc., etc.

One possible error in the projection of doctors needed and the capping of intake into medical school is the **one size fits all doctor/population ratio**. It was probably not taken into consideration that:

We are treating what have been considered untreatable.

We are treating more and more patients with chronic conditions.

We are treating more and more conditions for marginal benefit/improvement.

We are treating more and more people because of changing threshold criteria

We are treating what others consider as 'medicalization' of problems in living and habits.

We are doing things for aesthetic/cosmetic reason and wellness promotion.

There are also preventive screening and early intervention promoted.

Finally there is attrition due to migration, retirement, sickness and death.

In the past one doctor treats many patients (as whole persons) but now many doctors treat one patient (as divided parts).

How do we practise or intend to practise:

Primary healthcare level
Secondary specialist level
Tertiary super-specialist level
Teaching, Training and Research level

What should future psychiatrists need to know and how much and in what area?

We have been against the division of mind and body but now we are dividing the 'mind'.

What is the territory boundary and medico-legal implication in practice?

Are we going to be DSM symptoms list checkers and persuaded to prescribe specific drug for specific diagnosis approved by FDA?

Will there be more demand for psychotherapy, medication or genetic intervention?

What are the roles of future psychiatrists:

Is he going to be holistic and a team leader of other trained professionals?

Is he going to retreat into the medical model of diseases, doing nut and bolt or assembly line job?

How is treatment/management going to be financed or paid?

In Singapore we have Medisave, Medishield and Medifund and other health insurance

What do policy makers have in mind?

TRAINING FUTURE CONSULTANTS

What matters most regardless of different postgraduate models and programmes of training is to avoid **inbreeding** of **confusion** and **supposed experts** that leads to stagnation of progress. Novices and trainees in psychiatry have been struggling silently in confusion under great **disparity** in clinical teaching and practice in terms of diagnosis and treatment. There is questionable didactic application of certain diagnostic system and algorithm prescription.

The nature of psychiatric illness or problem depends on the understanding or rationalization of the **inter-relation**, **interaction** and **integration** between the **individual** and his **environment**, between his **body** and **mind**, between the **neural circuits** and **mental functions** and between the **present** and the **past life event and experience**. **Clinical conceptualization** depends on biological or psychosocial construct or model employed. Although the current approach is **phenomenological** it should not be synonymous with **atheoretical**. The foundation of medicine is based on the diagnosis and management according to **aetiology** i.e. **pathogenesis** and **pathophysiology.** Note what is **primary** or **secondary** in development.

When in training one should have **curiosity** which is necessary for creativity, **diligence** which is necessary for achievement and an **open mind** which is necessary for growth. Always ask to **clarify** and **verify** and try to **rationalize** what you do**.**

Learn as much as possible when you are young and inexperienced.
Learn from **patients**, **know** and **understand** them and not just rating scales.
Because when you become a consultant you may be **too proud** or **shy** to learn.

And you would not be able to teach or avoid teaching what you do not know.

The worthy consultant is a **resource person**, should be humble and keep on learning

The often quoted **Evidence-Based Medicine** is a **standardized** and **statistical** guide. Its application is a bottom line **one size fits all** approach.

Advanced or improved management would have to be **individualized** and **customized.** This calls for **personal experience** built up **rigourously** over the years.

Evidence-Based Medicine is to be complemented by **Experience-Based Medicine.** Beware of the power of persuasion of the pharmaceuticals which are driven by profits.

Classification of Mental Disorders is **atheoretical**, **syndromal** and by **consensus inclusion.**

Not all mental disorders are **diagnosable** and they often are **forced into pigeon holes.** Rigid adherence to ICD, in particular DSM leads to **thinking in the box** and **stagnation**.

Do not be complacent or smug just because it does not seem to matter whether a correct diagnosis is made, a proper treatment is given, the patient may or may not respond, is not likely to die, does not complain and no one is wiser.

To seek answer or solution to problem **clinical research** is necessary besides reading up.

Finally, experience and skill are mostly acquired from subsidized patients in the beginning. It should **benefit all** and not meant later on for only those who can afford. We teach "**first do no harm**" that is no harm to the body by what we do; no harm to the mind by what we say; and no harm to the pocket by what we charge. We need to ponder whether **our lifestyle** ought to be the **by-product** of what we can manage or the **end-product** to achieve at all cost.

Science and Art of Medicine

Treating the Bug the Patient has is Science.
Treating the Patient who has the Bug is Art.
Therefore treating the Disease is science and treating the Patient is Art.
To care with Competence is Science.
To care with Compassion is Art.

Best

In the best interest of the patient is not the same as giving our best
Because our best may not be the best unless and until we become the best.

Cure, Care, Comfort

The wise physician teaches about
To cure sometimes, to care often and to comfort always
Modern medicine and technology do the reverse
To comfort sometimes, to care often and to cure always

Change

Change in Life is said to be Constant and Continuous
But Human Nature of Selfishness and Greed, Cruelty and Corruption is Unchanging.
Hence the proliferations of Rules and Regulations, Protocols and Procedures, Laws and Ethics To Control and Curb the complex and ingenious Human Commissions and Omissions.