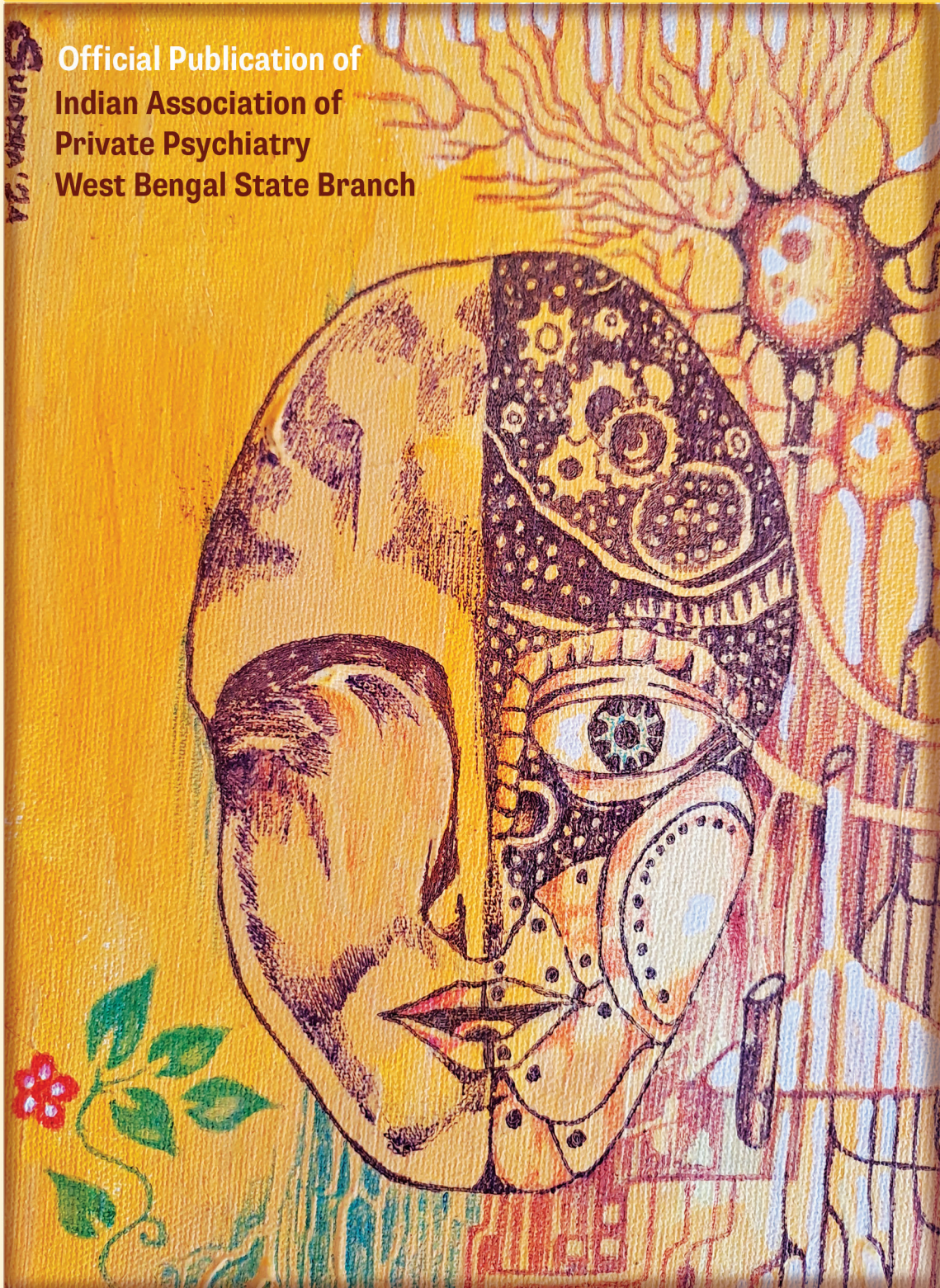


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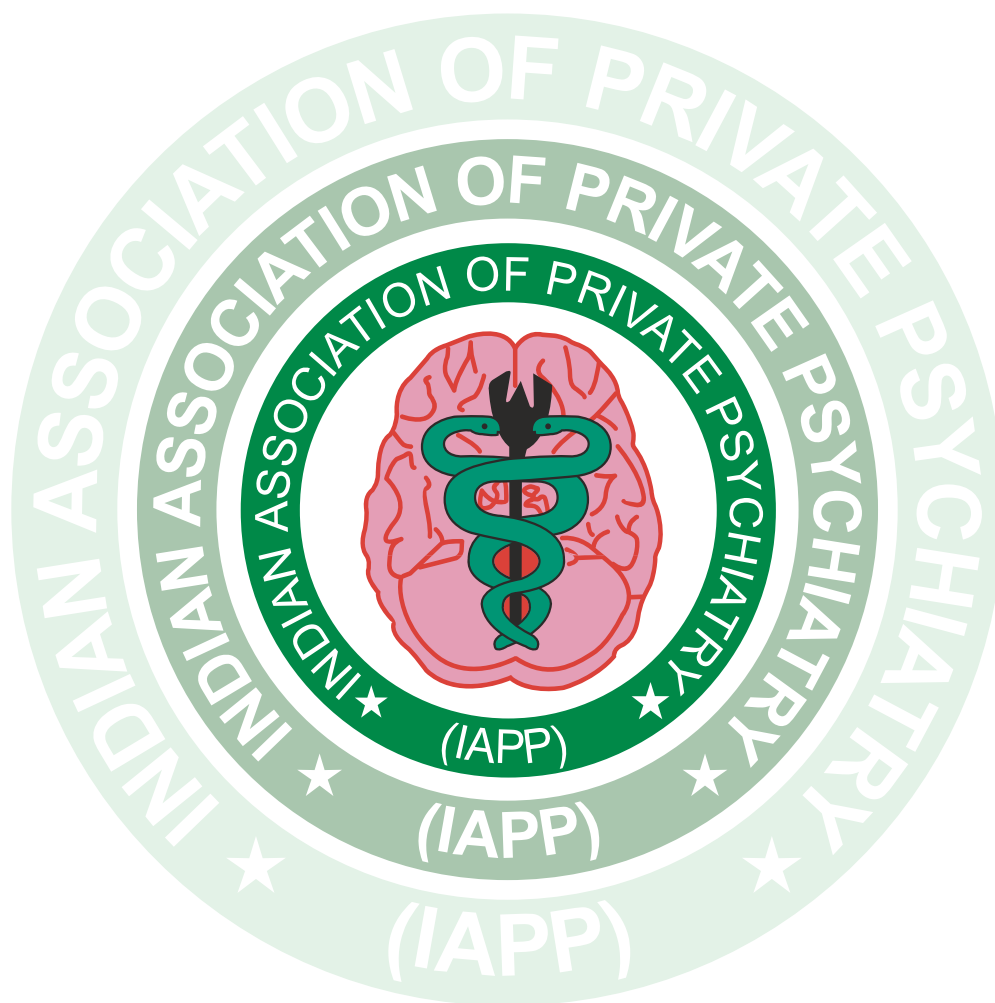
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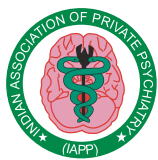


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Dr. Ranjan Bhattacharyya

Hony. Editor

Bengal Journal of Private Psychiatry

To
The Esteemed Members,
Indian Association of Private Psychiatry,
West Bengal State Branch.

It gives me immense pleasure to release the current edition (Vol 11, issue 1, September 2024) of Bengal Journal of Private Psychiatry (BJPP) before you.

BJPP remained only viable regular state official publication of Indian Association of Private Psychiatry because of your blessings, support and perseverance of the contributors.

As, publication in an indexed journal is required for departmental promotion by teaching faculties, most of the authors are looking forward to publish their original research in indexed journals. We need regular flow of articles (original research, case series, meta-analysis, systemic reviews) in BJPP so that we can improve the quality of our very own journal and proceed for indexing.

I am really grateful who have allowed us to share their intellectual properties in the current edition (total ten articles, view point, pictorial CME, review article) of the journal and help us to grow mutually. The cover has been designed by none other than my brother, Dr Suddhendu Chakraborty.

I am indebted to the Office bearers and EC members who have trusted me over consecutive three years as Editor, BJPP and with your blessings, I have been recently elected as Editor of JIMA (2025-26).

My special words of thanks to Dr Sanjay Garg, Hony Secretary, IAPP West Bengal State Branch who is inspiring and encouraging me since my undergraduate days.

Long live BJPP.

Long live IAPP WB State Branch.

Long live IAPP.

Psychiatrist and Media

Dr. Mrugesh Vaishnav, Director, Samvedana Happiness Hospital and Samvedana Foundation- Institute of Psychiatric & Sexual Research

The Media

- The media is a major source of information and misinformation.
- Even after the digital revolution, print media remain popular and offer an efficient opportunity to convey mental health information to the masses with attached authenticity.

The psychiatrist

- Psychiatrist should actively participate in the process of write-ups on mental health. Instead of leaving it on journalists to ensure that the published information is scientifically and culturally valid.
- In EM and SM numerous biases, myths, and misconceptions are perpetuated, it becomes essential for psychiatrists to proactively spread accurate information and diplomatically debunk erratic posts.

Why communicate science to the public?

- Inappropriate use of electronic and digital media can lead to diverse mental health issues, hence psychiatrists should possess expertise in recognizing, managing, and preventing such problems.
- If we fail to communicate science to the public in a clear and effective manner, they may fall prey to misinformation and pseudoscience.
- Studies have revealed a high prevalence of stigma and misconceptions regarding mental illness in India.]
- It is crucial for Psychiatrist to educate the public through diverse media.

General principles of effective communication

- Have a SMART (Specific, Measurable, Achievable, Relevant, and Time-bound) objective for each activity.
- Remember that the public may include those who are genuinely interested in the topic, as well as those who have no interest or even opposing views.
- Have one key message and repeat it in different ways.
- When addressing complex issues, try to involve an interdisciplinary team.
- To effectively communicate a topic, one has to thoroughly understand it oneself.





- It can be effectively used to impart information about mental health conditions and positive mental health.
- Provide tips for the promotion of mental well-being.
- Educate people of all ages about mental health and illnesses.
- Spread information about government programs & policies for mental health and services available.
- India's digital population reaching up to 692 million active users (48.7% internet penetration). because of the rise in mobile internet use.
- The prevalence of SM users in the Indian population is 32.8% (467 million), as reported in January 2023, the active mobile user count reached 77% of the total population.
- This can be viewed positively also as the higher the internet use, the more the opportunity to spread awareness about mental health to deeper sections of the country.



- Display professionalism
- Counteracting myths and misbeliefs.

- Television: it can be a highly impactful electronic medium to spread mental health awareness. Movies, web series, plays, panel discussions, live programs, or any other format can be considered for this.
- Radio: Radio can be an excellent medium to spread mental health awareness and education. Private psychiatrists are already doing an excellent job of guiding people through various programs on the radio.
- Smartwatches/apps: smartwatches are used by most fitness-seeking individuals, Exercise acts as a stress booster; They may motivate the individual for regular exercise and sleep. Some smartwatches also sense the stress level and guide about relaxation techniques, breathing exercises, and mindfulness, which can be timely and accurately practiced
- Medical education (application-based):
- Detox Applications: Numerous applications exist to diagnose excessive screen use, monitor and track the time spent on SM, block notifications and distracting apps, and provide an analysis of smartphone activities

Table 1: Mental health promotions through social and electronic media

Promotion activities	Social Media	Electronic Media
Creating mental health awareness and debunking myths	Booklets, guide statements, newsletters, videos, interviews, and live online programs.	Interviews (mental health professionals, recovered patients' experiences), live question/answer or phone-in program
Information on mental illness	Reels, live programs on Facebook/Zoom/Google Meet	Talk show with the expert (TV/Radio)
Preventive psychiatry: Stress management, career guidance, work/life balance, lifestyle modifications, mindfulness, time management, goal setting, etc.	YouTube videos, interactive sessions, and recorded videos made publicly available.	Online sessions/live programs
Observance of national/international mental-health-related days	Uploading pre-recorded videos	Circulating videos and keynotes
Soft-skills training (communication skills, resilience, empathetic approaches, etc.)	Online programs on any social media platform	Live program and video recordings

Recommendations for psychiatrists regarding the use of digital media

- While doing any activity on social media, one should ensure whether that particular action has any legal consequences.
- Social media should be utilized with a professional approach
- Be aware of professional boundaries with colleagues and patients, and maintain confidentiality while using social media.
- Be careful while posting any information/image online or commenting on any issue.
- Be watchful about online presence and impression.
- Use the media to promote positive mental health,
- spread information about common mental illnesses to the general public, improve treatment adherence.

Guideline to media on reporting of suicide and mental illness

- The headline should promote the Papageno effect (e.g., how wrong the step of suicide taken is), or it should never be a headline.
- Describe, in short, the facts without sensationalizing or romanticizing them.
- Minimal details about the method, lethality, or location of the act.
- No picture of the body, actual place, weapon, or complete personal details of the victim is to be shown.
- The cause of suicide should not be oversimplified. Precipitating factors can be mentioned.
- The history of psychiatric illness/problem should be clearly mentioned with a suggestion to seek help from mental health professionals.
- Repetitive reporting in the news should be avoided.
- Suicide victims should not be glorified (like by calling them martyrs).
- Publicizing the interviews of surviving relatives should not be done or should be done with great caution.
- The goal should be to promote mental health or treatment and not the fear, stigma, embarrassment, or negative view about persons with mental illness.

Recovered patients' experiences can be publicized (news/interview/video) with their consent.

Recommendations about handling online misinformation

- Keep up to date with latest medical research in the field and CME about emerging medical issues to stay well informed and updated.
- Always verify the source of information before accepting or sharing it with others³. Always cross-check the information from different sources before accepting it as accurate.
- Always evaluate the credibility of the author or researcher.
- Ensure that the tone and language have scientific and professional nature with no sensationalist language.
- Always display genuine resources of information for patients and promote digital health literacy among patients.

Spread of potentially harmful misinformation should be addressed through public communication channels such as social media, articles, or interviews along with providing right information.

Psychedelic in Treatment of Psychiatry

Dr Priyojyoti Chakma, MD, CCT in EEG & Epilepsy (Thomas Jefferson University, USA, CCT in Headache, Assistant professor, Department of Psychiatry Agartala Govt. Medical College, Tripura

Psychedelic In Treatment Of Psychiatry

Psychedelics have shown promise in treating various mental health disorders.

Research indicates their potential in therapy for depression, PTSD, addiction, and anxiety.

These substances can alter perception, mood, and cognition.



Introduction

From Ancient Greek (psychê, “mind, soul”) + (dêlos, “manifest, visible”)

Psychedelics are any of the so-called mind-expanding drugs that are able to induce states of altered perception and thoughts, frequently with a heightened awareness of sensory input but with diminished control over what is being experienced. [Rucker J et al, 2018]

Hallucinogens were originally referred to as psychotomimetics after Isbell and colleagues described lysergic acid diethylamide (LSD) as “the most effective and safest agent for inducing an experimental, but reversible, psychosis in nonpsychotic subjects”. [Isbell et al.1956]

Historical Perspective of Psychedelics

Psychedelics have been used for centuries in various cultures for spiritual and therapeutic purposes.

The modern era of psychedelic research began in the mid-20th century.

Research was halted due to societal concerns and legal restrictions.

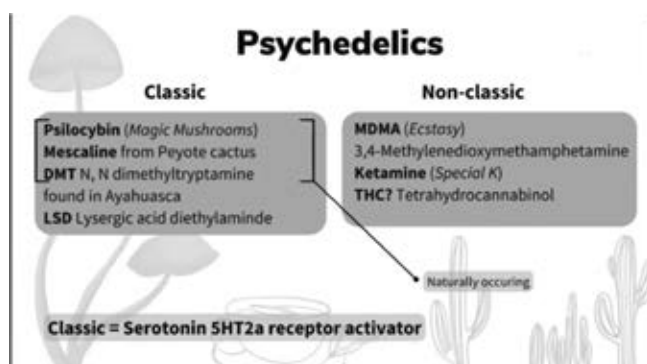
Historical and Contemporary Research

LSD was first synthesized by Sandoz in 1938 and by 1943 was shown to have psychoactive properties. By the mid-1960s there were >1000 clinical papers on psychedelic drug therapy with >40,000 patients. [Nichols 2016]

Therefore, in 1970 the Controlled Substances Act was passed, which classified LSD and other psychedelics as Schedule 1 drugs thus effectively restricting all medical research into these drugs.

Furthermore, in 1971 the UN Convention on Psychotropic Substances placed global restrictions on psychedelic drugs across 183 countries.





Descriptive classification - Based on the effects of the compound and user experiences.

Examples: Entheogens, Empathogens/Entactogens, Dissociatives.

Entheogens

An entheogen ("generating the divine within") is a psychoactive substance used in a religious, shamanic, or spiritual context.

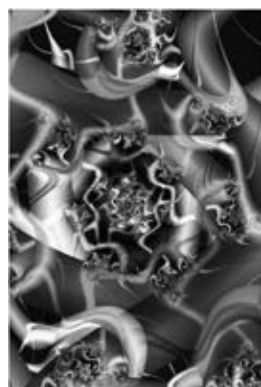
Examples: LSD, Peyote, Psilocybin, DMT, Salvia, Ibogaine

Empathogens

The terms empathogen and entactogen are used to describe a class of psychoactive drugs that produce distinctive emotional and social effects such as feelings of empathy, love, and emotional closeness to others.

Empathogens/entactogens - Mixed serotonin and dopamine reuptake inhibitors and releasers such as methamphetamine (MDMA) are known to cause emotional connectivity as well as increased sociability and affability.

Examples: MDA, MDMA, 2C-B, 2C-I, 2C-T-7



Dissociatives

Dissociatives are a class of hallucinogen which reduce or block signals to the conscious mind from other parts of the brain.

The characteristic features of dissociative anesthesia are described as catalepsy, amnesia and analgesia.

Glutamatergic NMDA receptor antagonists

Dissociative anaesthetics - Glutamatergic NMDA receptor antagonists such as ketamine, phencyclidine, and dextromethorphan (DXM) reduce excitation, causing sedation and perceptual distortion.

Chemical Classification

Phenethylamines – Amphetamine • Methamphetamine • MDA • MDMA

Tryptamines – Serotonin • DMT • Psilocin • Psilocybin • Ergolines • LSD

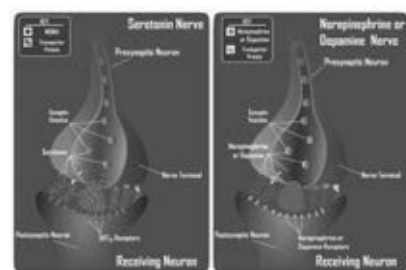


Figure 16.3. Mechanism of Action of MDMA
Original drawing by Nathan Olivieri

Mechanism of Action of Psychedelics

Psychedelics primarily interact with serotonin receptors in the brain.

They disrupt typical brain activity, leading to altered states of consciousness.

This disruption can promote introspection and emotional processing.

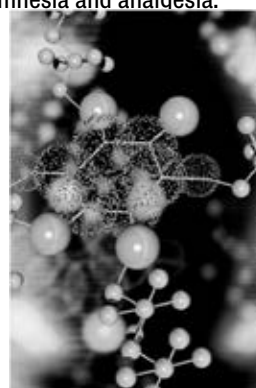
Semi-Synthetic, synthesized by Albert Hoffmann in 1938 from ergotamine

• LSD is the best known and most researched

psychedelic

• It is active at extremely low doses and is most commonly available on blotter or in liquid form.

• Dosage: Threshold 20 ug, Common 50 - 150 ug, Heavy 400 + ug



Lysergic Acid Diethylamide (LSD)

Mechanism of Action



5HT-2A partial agonist - Hallucinogenic effects
5HT-1A Partial Agonist



MDMA

Chemical name: 3,4-methylenedioxymethamphetamine

Class: Euphoric Empathogen; Stimulant; Phenethylamine

Common names: Ecstasy; E; X; XTC; Rolls; Beans; Adam; Molly

Comments: MDMA, or 'ecstasy' is a psychedelic amphetamine that has gained popularity over the past 20 years because of its ability to produce strong feelings of comfort, empathy, and connection to others.

Dosage: Threshold: 30 mg, Common: 75 - 125 mg, Heavy: 200 + mg

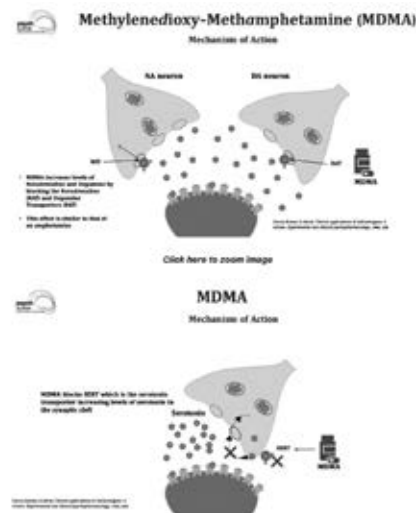
Concerns: Hydration, cardiovascular complications, possible neurotoxicity, delayed crash, illegal

Why MDMA for eating disorders?

TRUST: MDMA increases oxytocin levels, which may strengthen the therapeutic alliance

FEAR REDUCTION: MDMA increases ventromedial prefrontal activity and decreases amygdala activity, which may improve emotional regulation and decrease avoidance

EMOTIONAL ENGAGEMENT: MDMA increases norepinephrine release and circulating cortisol levels, which may facilitate emotional engagement and enhance extinction of learned fear association



FDA Agrees to Expanded Access Program for MDMA-Assisted Psychotherapy for PTSD

On January 17, 2020, the U.S. Food and Drug Administration (FDA) agreed to MAPS' application for an Expanded Access program for MDMA-assisted psychotherapy for posttraumatic stress disorder (PTSD). The purpose of the Expanded Access program is to allow early access to potentially beneficial investigational therapies for people facing a serious or life-threatening condition for whom currently available treatments have not worked, and who are unable to participate in Phase 3 clinical trials. The program will enroll 50 PTSD patients at up to 10 sites in the U.S. Site locations will be announced in the next few months.

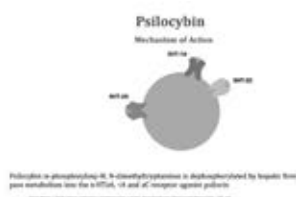
Psilocybin

Chemical name: [3-(2-Dimethylaminoethyl)-1H-indol-4-yl] dihydrogen phosphate

Common names: Shrooms; Magic Mushrooms; Sacred Mushrooms; teonanácatl; Boomers; Fungi

Comments: There are more than 180 species of mushrooms which contain the psychedelics psilocybin or psilocin. They have a long history of use in Mexico and are currently one of the most popular and commonly available natural psychedelics.

Dosage: Threshold: .2g, Common 1-2.5g, Heavy: 5+g (Dried Psilocybe Cubensis)



Pilot studies have since suggested that when used in conjunction with CBT, psilocybin may be useful for smoking cessation [Garcia-Romeu et al. 2014]; [Johnson et al. 2014] and treating alcoholism. [Bogenschutz et al. 2015]

More recently, research into psilocybin's efficacy in treatment-resistant depression Revealed that 10-25 mg significantly reduced Quick Inventory of Depressive Symptom scores and resulted in the complete remission in 67% of patients

Mescaline

Chemical name: 3,4,5-trimethoxyphenethylamine

Class: Psychedelic Phenethylamine

Common names: Peyote, Cactus, San Pedro, Buttons, Mescalito

Comments: Mescaline is a naturally occurring psychedelic with a long history of human use. It is best known as the primary active chemical in the peyote cactus.



Dosage: Threshold: 100mg, Common: 200-300mg, Heavy: 500-700mg

Concerns: Existential/psychological crisis, purity, illegal*

Ketamine

Chemical name: (RS)-2-(2-Chlorophenyl)-2-(methylamino)cyclohexanone

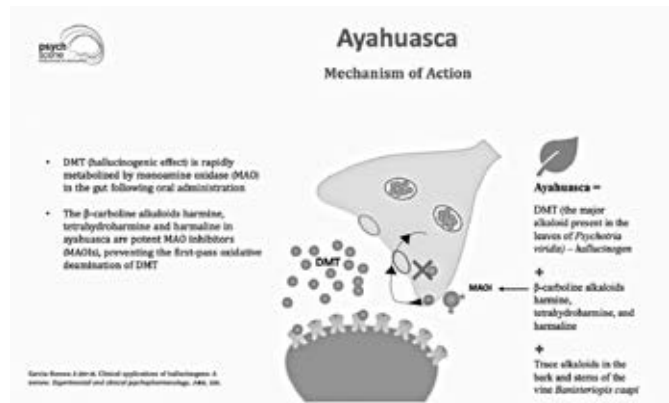
Class: Dissociative Anaesthetic; Psychedelic

Common names: K; Special K; Cat Tranquilizer

Comments: Ketamine is a dissociative psychedelic used medically as a veterinary and human anaesthetic. It is one of the few addictive psychedelics and is associated with researcher John Lilly.

Dosage: Threshold: 10-15mg, Common: 30-70mg, Strong: 60-125mg

Concerns: K-Hole, compulsive behavior, loss of consciousness, death, illegal



Esketamine Nasal Spray (Spravato®)
FDA approved March 2019 (initial ketamine approval: 1970)
Janssen Pharmaceuticals Inc., Schedule III Controlled Substance

Indication: To be used in conjunction with an oral antidepressant for the treatment of treatment-resistant depression (TRD) in adults. Not approved as an anesthetic agent.

Mechanism of Action: Esketamine, the S-enantiomer of racemic ketamine, is a non-competitive N-methyl D-aspartate (NMDA) receptor antagonist that enhances glutamate release in the brain. The mechanism by which esketamine exerts its antidepressant effect is not fully understood. Esketamine has greater affinity for the NMDA receptor & greater dopamine transporter inhibition compared to the R-enantiomer or racemic ketamine.

Dosage & Administration

Phase	Frequency of administration	Dose
Induction Phase	Weeks 1 to 4: Twice a week	Initial dose: 56 mg Subsequent doses: 56 or 84 mg
Maintenance Phase	Weeks 5 to 8: Once weekly Week 9 & after: Every 2 weeks or once weekly	56 or 84 mg
Prior to administration	- Avoid food for at least 2 hours & liquids for 30 minutes prior to administration - Chs on nasal corticosteroid/discontinuation should use these medications at least 1 hour prior to esketamine administration - BP assessment	
Administration	Administer intranasally under the supervision of a healthcare provider (HCP)	
Post-administration	- BP assessment - Do not drive/operate machinery until the next day after a restful sleep	
Moderate or severe hepatic impairment	- Moderate impairment: may need to monitor for ARs for a longer period of time - Severe impairment: not recommended (not studied)	
How Supplied	Each device delivers 2 sprays containing a total of 28 mg of esketamine	

Drug Drug Interactions

Concomitant Medication	Effect
Benzodiazepines & other CNS depressants	Additive effects. Closely monitor for sedation.
Psychostimulants or Monoamine Oxidase Inhibitors	May increase BP. Closely monitor.

Adverse Effects (see attached tables 1 & 6)

Most frequently reported AEs (≥5% & at least twice of placebo plus oral antidepressant):
Dissociation, dizziness, N/V, sedation, vertigo, hypoaesthesia, anxiety, lethargy, increased BP, & feeling drunk

Warnings & Precautions

- Black Box warnings**
 - Sedation: Monitor for at least 2 hours after administration
 - Dissociation: Monitor for at least 2 hours after administration
 - Potential for abuse & misuse: Available through Spravato REMS program only
 - Increased risk of suicidal thoughts & behaviors in pediatric & young adults taking antidepressants. Not approved for use in pediatric patients
- Contraindications**
 - Aneurysmal vascular disease or arteriovenous malformation

References as available upon request

Challenges and Considerations in Psychedelic Therapy

Legal and regulatory barriers restrict access to psychedelic therapy.

Safety concerns exist, particularly regarding set and setting.

Proper training and supervision are crucial for the effective and safe use of psychedelics.



Ethical Considerations in Psychedelic Therapy

Ethical dilemmas may arise in the use of psychedelics, such as informed consent and autonomy.

Ensuring patient safety and well-being is paramount in psychedelic therapy.

Therapists must adhere to ethical guidelines and standards when utilizing psychedelics

Current Research and Clinical Trials

Ongoing research is exploring the therapeutic potential of psychedelics in various mental health conditions.

Clinical trials are being conducted to further investigate the efficacy and safety of psychedelic therapy.

Worldwide, about 100 psychedelic trials are currently active for the treatment of depression and anxiety in the terminally ill, alcohol and drug use disorders, dementia, anorexia and chronic pain.

UK, Canada, the United States and Israel are active research hubs, and research is informed by international collaboration. The first psilocybin-assisted psychotherapy

trial has been approved in Australia, targeting depressive and anxious symptoms in terminal patients, and is hosted at St Vincent's Hospital, Melbourne.

In Australia, from 1 July 2023, Psilocybin and MDMA can be prescribed by specifically authorised psychiatrists for the treatment of treatment-resistant depression and PTSD

Further research is required to assess the efficacy, safety and effectiveness of psychedelic therapies to inform future potential use in psychiatric practice.

Psychedelic Therapy and domains of the Research Domain Criteria (RDoC)



Patient Selection for Psychedelic Therapy

Not all individuals may be suitable candidates for psychedelic therapy.

Screening assessments are crucial to determine eligibility and assess potential risks.

Therapists should consider factors such as medical history, mental health status, and current medications.

Guidelines for Safety

1. Psychiatric interviews to determine traits and factors that will help predict a patient's response to psychedelic therapy.
2. To ensure that the patient has a positive prior expectation of psychedelic therapy and is fully engaged and willing in the therapeutic process to experience a positive outcome.
3. The presence of two clinical monitors with medical experience as well as an in-depth knowledge of the altered state of consciousness.
4. A safe and comfortable environment i.e. the physical setting.
5. The individual feels safe and secure in the company of the clinical monitors who are friendly, welcoming, respectful, and compassionate.
6. Signed consent forms and adequately detailed information about the preparation and the procedure.
7. The presence of a physician as a medical precaution.



Global Regulatory Landscape of Psychedelics

Regulatory frameworks for psychedelics vary worldwide, impacting research and clinical practice.

Some countries have decriminalized or legalized psychedelics for therapeutic purposes.

Advocacy efforts are underway to reform drug policies and facilitate access to psychedelic therapy.

Conclusion

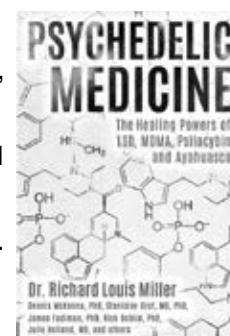
Psychedelics hold great promise in the field of psychiatry for treating a range of mental health conditions.

Continued research, education, and advocacy are essential to harness the therapeutic potential of psychedelics.

Integrating psychedelics into psychiatric practice has the potential to revolutionize mental health care.

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ICD - 11 Personality Disorders

Dr. Anweshak Das, Consultant Psychiatrist, Guwahati

Path for today

Psychedelics have sh
Personality disorders • ICD 10 drawbacks • ICD 11 • ICD-11 Vs DSM5
• Way Forward

What is Personality?

A totality of behavioral and emotional traits

Characterize a person in day-to-day living, under normal circumstances

Mainly formed by adulthood

Stable

Predictable, unique , specific, can be dynamic, acquired through learning and acquisition of experiences.

Personality is the dynamic organization within the individual of those psychophysical systems that determine his unique adjustments to the environment

What is Personality Disorder?

An enduring pattern of culturally deviant inner experience and behavior

1. Cognition : distorted perceptions/misinterpretations
2. Affectivity : inappropriate intensity or range of emotions
3. Interpersonal functioning
4. Impulse control

- A pattern of long duration
- Present by early adulthood
- Maladaptive and rigid
- Associated with significant emotional distress or disturbed functioning



ICD

- Edition 1-5: French government responsible for revision
- From 6th edition onwards: WHO took over responsibility in 1948
- Separate chapter on mental disorder begins from 6th edition
- Uses of ICD:
Diagnosing various diseases
For reporting health problems

Chapter (V) on mental disorders in ICD-10 divided into 10 sections

F00-09 Organic mental disorders

F10-19 Disorders due to drugs

F20-29 Schizophrenia

F30-39 Mood disorders

F40-49 Neurotic disorders

F50-59 Behavioural symptoms due to physical factors

F60-69 Disorders of personality and behaviour

F70-79 Mental retardation

F80-89 Disorders of physiological development

F90-91 Disorders of childhood and adolescent

Number of mental disorders in ICD-10: 787 (if all subcodes counted)



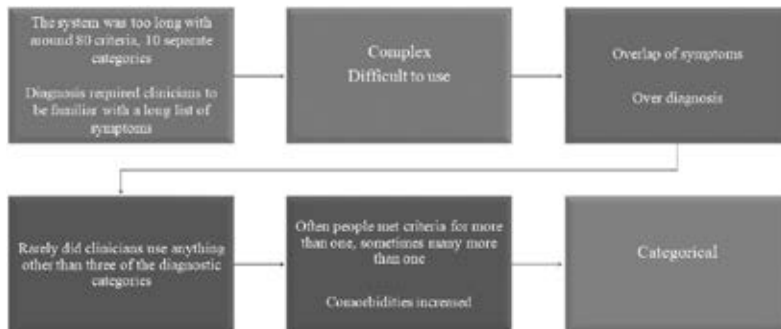
ICD-11 working group for the revision of the classification of personality disorders was established in 2010

Led by Dr Peter Tyrer

Around 17 working groups and data from multiple countries gathered

There was a great deal of dissatisfaction with the current ICD-10

Drawbacks pointed out.....



Aim of ICD-11



ICD-11 conceptualization

- Personality develops in the transaction between biology and early life experiences.
- Personality characteristics have a strongly heritable component and can be seen in early temperament, which has a high degree of stability across the life span.
- Early trauma can have a significant impact on the developing brain.
- Personality and personality disorder develop in the transaction between biology and environment and can be conceptualised as a person's best efforts to function and cope with their familial and social environment given their biological heritage and early life experiences.

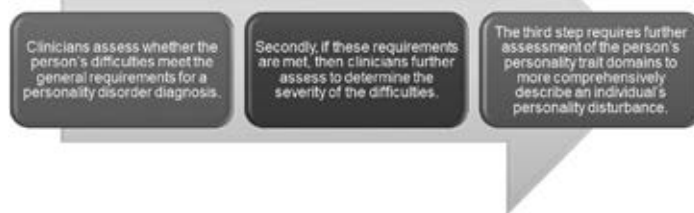
What's new.. To achieve the aim

- The initial proposal for the ICD-11 classification set out to abolish all categories of personality disorder
- Personality disorder was conceptualized along a dimension of severity
- Qualify for a diagnosis of personality disorder, general diagnostic features such as problems in interpersonal relationships and impaired functioning of self must be present.
- Concept of personality difficulty which, while not a disorder, is described as "cognitive and emotional difficulties only intermittently or at low intensity"
- The five personality trait domains are similar to the DSM-5 Alternative Model for Personality Disorders (AMPD)
- One noteworthy feature of the ICD-11 classification is the removal of any age specification for the diagnosis. Previously diagnosis was either forbidden in under 18s or strongly discouraged

ICD-10 vs ICD-11- classification for MBND

ICD-10	ICD-11
F60-F69 Disorders of adult personality and behaviour	6C70-6C7Z Impulse control disorders; 6D10-6D11.5 Personality disorders and related traits; 6D30-6D3Z Paraphilic disorders; 6D50-6D5Z Factitious disorders; (7A00-7A0Z Insomnia disorders); (7A20-7A2Z Hypersomnolence disorders); (7A60-7A6Z Circadian rhythm sleep-wake disorders); (HA60-HA6Z Gender incongruence)
F70-F79 Mental retardation	8A00-8A09Z Disorders of intellectual development
F80-F89 Disorders of psychological development	6A00-6A09.Z Neurodevelopmental disorders
F90-F98 Behavioural and emotional disorders with onset usually occurring in childhood and adolescence	6C00-6C0Z Elimination disorders; 6C90-6C9Z Disruptive behavioural or dissocial disorders
F99 Unspecified mental disorder	6E60-6E6Z Secondary mental or Behavioural syndromes associated with disorders or diseases classified elsewhere

Three steps ...



ICD-11 & personality disorders

Diagnosis of personality disorder is further differentiated according to

- 6D10 - Severity: mild, moderate, and severe

6D11 - Optionally be specified by presence of one or multiple maladaptive personality traits:

1. Negative affectivity
2. Detachment
3. Dissociality
4. Disinhibition
5. Anankastia
6. Borderline pattern

Personality disorders - ICD-11

ICD11 has 2 parts: • “personality disorder” (6D10) • “prominent personality traits or patterns” (6D11).

In order to fully describe the nature of a personality disorder, both parts should be used.

It is not possible to use only the second part, unless the code from the first part is applied beforehand.

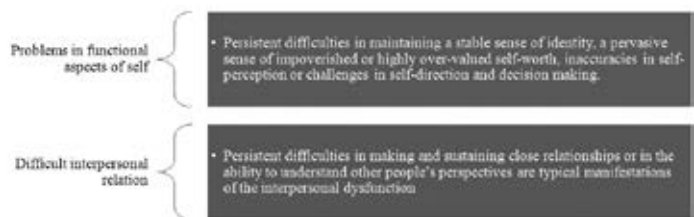
Different personality disorders in ICD-10 were replaced with a single personality disorder diagnosis in ICD-11 which is characterized by Step - 1:

Problems in functioning of aspects of the self (eg, identity) and/or

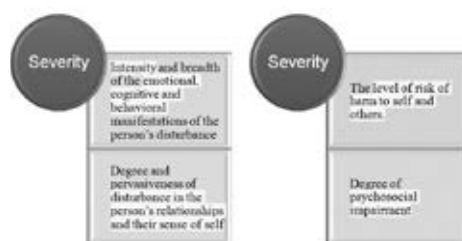
Interpersonal dysfunction (eg, managing conflict in relationships)

For a diagnosis, these disturbances must be enduring - so present for a minimum of two years

- Manifest in maladaptive patterns of cognition, emotional experience and expression and behaviour which must be evident across a range or personal and social situations.
- The disturbance must not be a direct effect of medication or of some other substance, including withdrawal effects.
- The disturbance must not be explained primarily by social and cultural factors, including socio-political conflict.
- Significant impairment in socio occupational functioning



Determination of severity of personality disorders : STEP 2



- **Mild Personality Disorder** The most notable aspect of mild personality disorder is that only some areas of personality function are affected. Problems in many interpersonal relationships or in the performance of social and occupational roles are evident but some relationships are maintained or social roles carried out
- **Moderate Personality Disorder** For moderate personality disorder, disturbance affects multiple areas of personality functioning such as identity, sense of self, formation and maintenance of intimate relationships, capacity to control and moderate behaviour. Despite these difficulties, some areas of functioning may be relatively less affected. Occasionally moderate personality disorder will be associated with harm to self or others. When this is present, typically, it will be of moderate severity
- **Severe Personality Disorder** People with severe personality disorder have major disturbances in their sense of self functioning. Severe personality disorder is often associated with harm to the person or other people. Severe impairment is evident in all areas of the person's life.

Trait domain specifier : STEP 3

1. Negative affectivity: In people with a personality disorder diagnosis this typically means that they experience a broad range of negative emotions with a frequency and intensity that others judge as being out of proportion to the situation
2. Detachment: can be either social or emotional. Social detachment in people with a personality disorder diagnosis consists of significant avoidance of social interactions and what they may consider unnecessary interpersonal contact
3. Dissociality: Disregard for the feelings and rights of others which includes self-centeredness and lack of empathy is at the center of this trait domain. People with this trait may demonstrate a sense of entitlement, expecting others to admire them
4. Disinhibition: Impulsive action in response to immediate internal or environmental stimuli without consideration of longer-term consequences forms the basis of the disinhibition trait domain
5. Anankastia: Individuals high on Anankastia have a very clear and detailed personal sense of perfection and imperfection that extends beyond the typical standards of the society
6. Borderline pattern

Assessment

- Similar to Personality Inventory for DSM-5 is the Personality Inventory ICD11
- The ICD-11 Personality Disorder Severity Scale (PDS-ICD-11) is a 14-item measure that shows promise and provides a rapid assessment of the severity of personality dysfunction.
- Oltmanns and Widiger produced a scale specifically developed for the ICD-11 trait domains—the Personality Inventory for traits ICD-11 (PiCD)
- The recently modified PID5BF captures both ICD-11 and DSM-5 trait domains

Clinicians' perspectives for ICD-11 & personality disorders**TABLE 1 |** Alignment between ICD-11 and DSM-5 alternative model for personality disorders models.

ICD-11 severity of personality dysfunction	DSM-5 criterion A: level of personality functioning
None	0) No impairment (Healthy Functioning)
Personality difficulty	1) Some impairment
Mild personality disorder	2) Moderate impairment
Moderate personality disorder	3) Severe impairment
Severe personality disorder	4) Extreme impairment
ICD-11 trait domain qualifiers	DSM-5 criterion B: trait domains
Negative affectivity	Negative affectivity
Detachment	Detachment
Disinhibition	Disinhibition
Dissociality	Antagonism
Anankastia	(Rigid perfectionism)
(Schizotypal disorder)	Psychoticism
Continuity with clinical practice	Hybrid types
Borderline pattern qualifier	Antisocial, Avoidant, Borderline, Narcissistic, Obsessive-Compulsive, Schizotypal, Trait-Specified

In a web-based field study

- Sample of 163 mental health professionals rated the ICD-11 classification of personality disorders (including three levels of severity and trait qualifiers)
- utility for treatment planning, communicating with patients, comprehensiveness, and ease of use compared with the ICD-10 classification of personality disorders.

Study with health professionals of the respective utility of ICD-10 vs ICD-11

- New structure was more useful with respect to
- formulating interventions,
- communicating with clients
- comprehensively describing a person's difficulties
- ease of use.

Conclude

- The ICD-11 personality disorder classification is now official and Has been used in many countries from January 2022
- Introduces the new structure of ICD-11 for personality disorders.
- Categories are abolished
- More user friendly
- Describes the different severity levels and trait domain specifiers.
- It is hoped that its use will lead to greater understanding of the concept of personality disorder and better clinical care, Better utility, better treatment planning.

Clinical descriptions and diagnostic requirements (CDDR) for ICD-11 Mental, behavioural and neurodevelopmental disorders: ICD11: Changes in Psychotic Disorders

Dr. Pankaj Kumar, MD Psychiatry, Additional Professor & Head of Department of Psychiatry, AIIMS, Patna

ISSUES IN ICD 10 CLASSIFICATION

Construct derived from Kraepelin's formulation of dementia praecox, focusing on its chronic course

Classical subtypes of schizophrenia provided a poor description of its heterogeneity;

Longitudinal stability was found to be low.

Boundaries between schizophrenia, schizoaffective disorder, and mood disorder not clearly differentiated resulting in inappropriate diagnosis

Significance given to Schneider's first-rank symptoms particularly bizarre delusions.

Broad principles adopted in ICD-11

Scientific validity	Consistency of structure & information in the CDDR is organized under the following headings: • Essential (required) features • Additional clinical features • boundary with normality (threshold) • Course features • Developmental presentations • Culture-related features • Sex- and/or gender-related features • Boundaries with other disorders and conditions (differential diagnosis)
Clinical utility	
Global applicability	

APPROACH OF ICD 11

- Categorical with dimensional extension
- Life course approach
- Cultural sensitivity

Schizophrenia and other primary psychotic disorders

PRINCIPLE CHANGES IN SECTION

- Aim:- To increase reliability, clinical utility & validity of the diagnostic categories
- The section "F2 schizophrenia, schizotypal, and delusional disorders" has been renamed as "schizophrenia spectrum and other primary psychotic disorders."
- Deemphasizing Schneiderian first-rank symptoms
- Elimination of subtypes of schizophrenia due to their lack of predictive validity or utility in treatment selection.
- Use of the term primary to distinguish from secondary psychotic disorders

Dimensional extension of categorical diagnoses

- Symptom specifier

- symptom domain specifier (positive symptoms/negative symptoms/depressive mood symptoms, manic mood symptoms, psychomotor symptoms/cognitive symptoms)
- Symptom severity specifier(4 point scale)
- Course specifiers: 2 components
 - 1st:- Characterization of Longitudinal course
 - 2nd:- Evaluation of cross-sectional current clinical state

Dimensions in schizophrenia and primary psychotic disorders



Rating of symptom manifestations

Severity	Anchor points
None XS8H	No significant symptoms from the respective domain have been present during the past week
Mild XS5W	Symptoms in the domain have been present during the past week, but these are minimal in number or do not have a substantial degree of impact. Everyday functioning is not affected by these symptoms, or is affected only minimally. No significant negative social or personal consequences have occurred as a consequence of the symptoms. The symptoms may be intermittent and show fluctuations in severity, and there may be periods during which the symptoms are absent. Compared to other individuals with similar symptoms, the severity of symptoms in the domain is in the mildest third.
Moderate XS0T	A greater number of symptoms in the domain have been present during the past week, or a smaller number of symptoms that have a substantial degree of impact. Everyday functioning may be moderately affected by the symptoms. There are negative social or personal consequences of the symptoms, but these are not severe. Most of the symptoms are present the majority of the time. Compared to other individuals with similar symptoms, the severity of symptoms in the domain is in the middle third.
Severe XS25	Many symptoms in the domain have been present during the past week, or a smaller number that have a severe or pervasive degree of impact (i.e. they are intense and frequent or constant). Everyday functioning is persistently impaired due to the symptoms. There are serious negative social or personal consequences. Compared to other individuals with similar symptoms, the severity of symptoms in the domain is in the most severe third.
Severity unspecified	Symptoms from the respective domain have been present during the past week, but it is not possible to make a severity rating based on the available information.

Diagnostic categories

Schizophrenia and other primary psychotic disorders		161
6A20	Schizophrenia	162
6A21	Schizoaffective disorder	170
6A22	Schizotypal disorder	177
6A23	Acute and transient psychotic disorder	180
6A24	Delusional disorder	185
6A2Y	Other specified primary psychotic disorder	189
6A2Z	Schizophrenia or other primary psychotic disorder, unspecified	189

6A20 SCHIZOPHRENIA

- Categorical concept retained; dimensional added
- Requires 2 out of 7 symptoms for duration of 1 month or more. (ESSENTIAL/REQUIRED FEATURES)
- Atleast one of the qualifying symptoms should consist of persistent delusions, persistent hallucinations, disorganised thinking or experiences of influence, passivity or control
- Cultural factors may influence the onset, symptom pattern, course, and outcome
- Migrants and low “ethnic density” populations is associated with higher rates of schizophrenia
- Course is affected by culture via
 - family (e.g. level of family support or style of family interaction, such as expressed emotion)
 - society(e.g. industrialization, urbanization).
- For example, the prevalence of schizophrenia is much higher in urban than rural settings
- Need to be familiar with culturally normative expressions of distress to avoid misdiagnosis.

6A21 SCHIZOAFFECTIVE DISORDER

- All diagnostic requirements for schizophrenia are met concurrently with mood symptoms that meet the diagnostic requirements of a moderate or severe depressive episode, a manic episode, or a mixed episode

6A20	Schizophrenia
Specify course: 6A20.0	Schizophrenia, first episode Specify current presentation: 6A20.00 ... currently symptomatic 6A20.01 ... in partial remission 6A20.02 ... in full remission 6A20.0Z ... unspecified
6A20.1	Schizophrenia, multiple episodes Specify current presentation: 6A20.10 ... currently symptomatic 6A20.11 ... in partial remission 6A20.12 ... in full remission 6A20.1Z ... unspecified
6A20.2	Schizophrenia, continuous Specify current presentation: 6A20.20 ... currently symptomatic 6A20.21 ... in partial remission 6A20.22 ... in full remission 6A20.2Z ... unspecified
6A20.Y 6A20.Z	Other specified episode of schizophrenia Schizophrenia, episode unspecified

- The onset of the psychotic and mood symptoms are either simultaneous or occur within a few days of one another.
- The duration of symptomatic episodes is at least 1 month for both psychotic and mood symptoms.
- Previous diagnosis of schizoaffective disorder does not preclude a diagnosis of schizophrenia, and vice versa

6A22 SCHIZOTYPAL DISORDER

- An enduring pattern of unusual speech, perceptions, beliefs and behaviours
- constricted affect, such that the individual appears cold and aloof;
- behaviour or appearance that is odd, eccentric, unusual or peculiar, and is inconsistent with cultural or subcultural norms;
- poor rapport with others and a tendency towards social withdrawal;
- unusual beliefs or magical thinking influencing the person's behaviour in ways that are inconsistent with subcultural norms, but not reaching the diagnostic requirements for a delusion;
- unusual perceptual distortions such as intense illusions, depersonalization, derealization, or auditory or other hallucinations;
- suspiciousness or paranoid ideas;
- vague, circumstantial, metaphorical, overelaborate or stereotyped thinking, manifested in odd speech without gross incoherence;
- obsessive ruminations without a sense that the obsession is foreign or unwanted, often with body dysmorphic, sexual or aggressive content.

for at least 2 years.

6A23 ACUTE TRANSIENT PSYCHOTIC DISORDER

- Acute Polymorphic psychotic disorder without symptoms of Schizophrenia is only retained
- Lack of support for prognostic & therapeutic relevance of other subtypes
- Other subtypes Collapsed into "other primary psychotic disorders"

<i>Specify course:</i>	
6A23.0	Acute and transient psychotic disorder, first episode
<i>Specify current presentation:</i>	
6A23.00	... currently symptomatic
6A23.01	... in partial remission
6A23.02	... in full remission
6A23.0Z	... unspecified
6A23.1	Acute and transient psychotic disorder, multiple episodes
<i>Specify current presentation:</i>	
6A23.10	... currently symptomatic
6A23.11	... in partial remission
6A23.12	... in full remission
6A23.1Z	... unspecified
6A23.Y	Other specified acute and transient psychotic disorder
6A23.Z	Acute and transient psychotic disorder, unspecified

6A24 DELUSIONAL DISORDER

- All categories of delusional disorder clubbed together
- Delusion or set of related delusions, typically persisting for at least 3 months and often much longer, in the absence of a depressive, manic or mixed episode
- Apart from the actions and attitudes directly related to the delusional system, affect, speech and behavior are typically unaffected

6A24	Delusional disorder
<i>Specify current presentation:</i>	
6A24.0	... currently symptomatic
6A24.1	... in partial remission
6A24.2	... in full remission
6A24.Z	... unspecified

6A2Y OTHER SPECIFIED PRIMARY PSYCHOTIC DISORDERS

- characterized by psychotic symptoms that share primary clinical features with disorders in schizophrenia and other primary psychotic disorders grouping
- do not fulfill the diagnostic requirements (e.g. in severity, frequency, or duration) for any other disorder
- not better accounted for by another mental, behavioral, or neurodevelopmental disorder
- not developmentally appropriate or culturally sanctioned

To Summarize.....

- Changes are modest
- Broad categorical paradigm is retained
- Dimensional extension will give more clinical information
- Clinical utility & reliability is expected to increase
- Differential will be easier by current changes
- Implications & challenges for research is yet to be seen

Update on Recent Antipsychotics

Dr Jayanta Dutta, MBBS, DPM, In charge Psychiatry Unit, S T H G CIVIL Hospital, Morigaon, Assam. District Nodal Officer, DMHP, Morigaon district, Assam since 2006.

Introduction

Antipsychotics have revolutionized the treatment of psychiatric disorders in the last few decades

Despite advances in psychopharmacology, the quest for more effective and safer antipsychotic medications is not yet over.

Second-generation antipsychotics (SGAs) are commonly used to treat schizophrenia and other conditions, including bipolar disorder.

Despite their proven efficacy, existing antipsychotic medications are limited by treatment-emergent side effects

The lack of efficacy of medications to treat negative symptoms of schizophrenia, poor quality of life, and medication non-adherence remain a challenge.

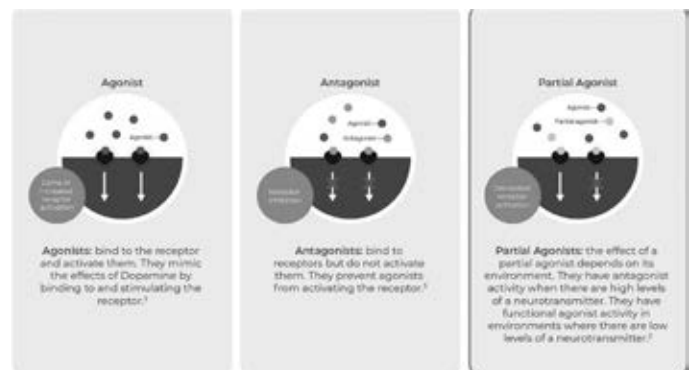
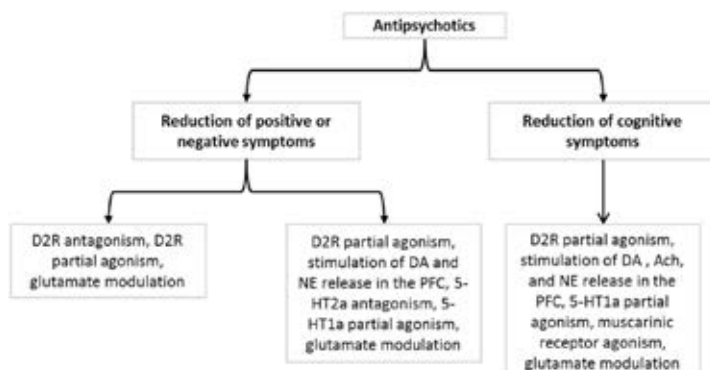
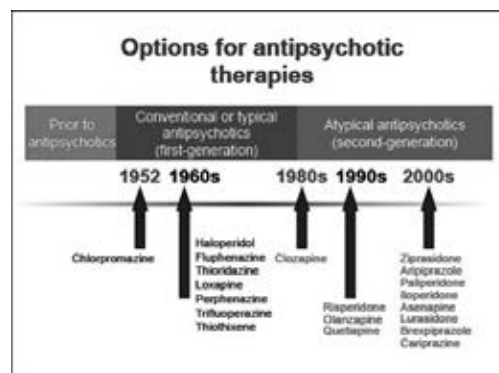
FDA-Approved First- and Second-Generation Antipsychotics

FGAs-

Chlorpromazine
Haloperidol
Loxapine
Perphenazine
Prochlorperazine
Thiothixene
Thioridazine
Trifluoperazine

SGAs-

Risperidone
Olanzapine
Quetiapine
Aripiprazole
Ziprasidone
Paliperidone
Clozapine
Asenapine*
Iloperidone*



Receptor	Side effect	Mechanism
Serotonin 5-HT 2C	Diabetes	Antagonists disrupt sympathetic regulation of peripheral glucose metabolism; also inhibit skeletal muscle and hepatic glucose uptake
	Weight gain	Antagonists disinhibit hypothalamic NPY neurons (resulting in elevated NPY) and inhibit POMC neurons (resulting in decreased α -MSH); may also play a role in leptin resistance
Serotonin 5-HT 1A	Diabetes	Antagonists inhibit skeletal muscle and hepatic glucose uptake and downregulate pancreatic β -cell sensitivity to glucose
	Weight gain	Agonists increase food intake; partial agonists may mitigate 5-HT _{2C} antagonism; partial agonists may also decrease carbohydrate craving
Histamine H1	Weight gain	Antagonists cause increased hypothalamic AMPK activity, mimicking depletion of cellular energy stores and causing increased appetite
	Diabetes	Antagonists disrupt sympathetic regulation of adipose tissue
	Sedation	Antagonists inhibit cholinergic neurons of basal forebrain and serotonergic neurons of dorsal raphe
Dopamine D2	Weight gain	Antagonists cause overall decrease in limbic dopaminergic activity, possibly leading to increased engagement reward-seeking behaviors such as food intake; agonists (psychostimulants, cocaine) are appetite suppressants
	Extrapyramidal side effects	Antagonists disinhibit indirect descending motor pathway in basal ganglia
	Endocrine effects	Antagonists disinhibit prolactin release from posterior hypothalamus, also contributing to weight gain
Muscarinic M1	Anticholinergic effects	Antagonists cause dry mouth, urinary retention, cognitive dysfunction, urinary retention, and constipation
Muscarinic M3	Diabetes	Antagonists cause impaired glucose tolerance and reduced insulin secretion from pancreatic β cells

α -MSH, α -melanocyte-stimulating hormone; AMPK, AMP-related kinase; NPY, neuropeptide Y; POMC, pro-opiomelanocortin.

Table 2.2 Minimum effective daily dose of antipsychotics

Antipsychotic	First episode Dose (mg)	Relapse/exacerbation Dose (mg)	Antipsychotic	Maximum dose (mg)
First-generation antipsychotics			Second-generation antipsychotics – oral	
Chlorpromazine	200*	300	Amisulpride	Daily 1200
Haloperidol ¹⁻⁵	2	> 4	Aripiprazole	30
Sulpiride ⁶	400*	800	Asenapine	20
Trifluoperazine ⁷	10*	15	Clozapine	900
Second-generation antipsychotics			Olanzapine	20
Amisulpride ⁸⁻¹¹	400*	800	Paliperidone	12
Aripiprazole ¹²⁻¹⁵	10*	10	Quetiapine	750/800 (see BNF)
Asenapine ¹⁶	10*	10	Risperidone	16 (see BNF)
Iloperidone ¹⁷	4*	8*	Sertindole	24
Olanzapine ^{5, 18, 19}	5	10	Ziprasidone*	160
Quetiapine ²⁰⁻²⁵	150*	300	Depots	
Risperidone ^{4, 26-28}	2	3	Flupentixol	Weekly 400
Sertindole ²⁹	Not appropriate	12	Fluphenazine	50
Ziprasidone ³⁰⁻³²	80*	80	Haloperidol	300 mg every 4 weeks (see BNF)
			Paliperidone	150 mg per month
			Pipotiazine	50
			Risperidone	25
			Zuclopenthixol	600

Speed and onset of antipsychotic drug action

- The standard teaching being that the 'onset' of antipsychotic action may take anywhere from 2 to 4 weeks.
- There is a distinct onset of an antipsychotic effect within the first week, nearly 22% improvement in the first 2 weeks and only 9% improvement in weeks 3 or 4.
- There is a specific effect on psychotic symptoms within the first week, not just a non-specific effect on agitation and hostility.
- Newer studies show that if a patient does not demonstrate a certain amount of clinical response (first 2 weeks), the patient has a rather low chance of response on that drug and dose in the future.
- Clinical observation during the first 2 weeks of antipsychotic treatment is vital.
- Recognised rating scales should be used to monitor change.
- Where there is no response at 2-3 weeks, treatment should be changed (switch drug or increase dose).
- Where there is some response, staying, switching and augmenting appear to be equally, albeit modestly effective.

Treatment options for a patient not responding to antipsychotic therapy:

- If dose has been optimised, consider watchful waiting.
- Consider increasing antipsychotic dose according to tolerability and plasma levels.
- If this fails, consider switching to olanzapine or risperidone (if not already used).
- If this fails, use clozapine (supporting evidence very strong).
- If clozapine fails, use time-limited augmentation strategies (supporting evidence variable).

Antipsychotic drugs: long-acting injections

- Antipsychotic long-acting injections (LAIs), also called depot antipsychotics.

- Advice on prescribing long-acting injections of antipsychotic drugs-
 - For FGAs, give a test dose.
 - Begin with the lowest therapeutic dose.
 - Administer at the longest possible licensed interval.
 - Adjust doses only after an adequate period of assessment.
 - Depot preparations are not recommended for those who are antipsychotic-naïve.

Table 2.8 Antipsychotic long-acting injections: suggested doses and frequencies^a

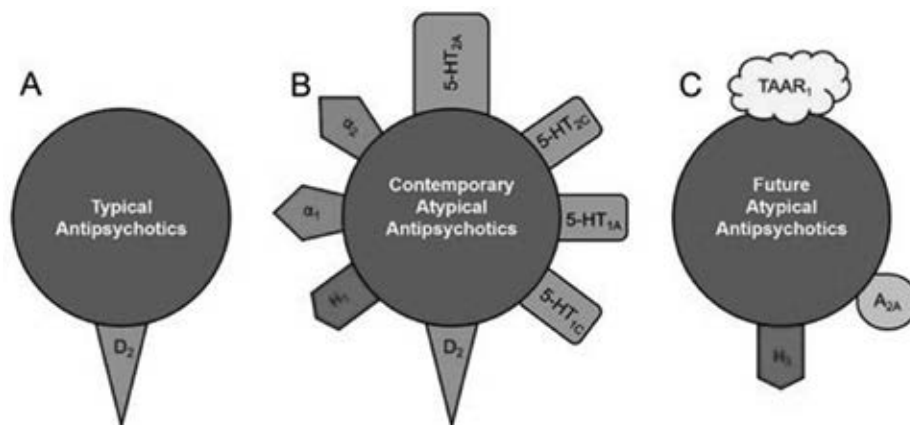
Drug	Trade name	Licensed injection site	Test dose (mg)	Dose range (mg/week)	Dosing interval (weeks)	Comments
Flupentixol decanoate	Depixol	Buttock or thigh	20	12.5–400	2–4	Maximum licensed dose is very high relative to other LAIs
Fluphenazine decanoate	Modicate	Gluteal region	12.5	6.25–50	2–5	High EPS
Haloperidol decanoate	Haldol	Gluteal region	25*	12.5–75	4	High EPS
Pipothiazine palmitate	Pipartil	Gluteal region	25	12.5–50	4	? Lower incidence of EPS (unproven)
Zuclopentixol decanoate	Clopixol	Buttock or thigh	100	100–600	2–4	? Slightly better efficacy
Risperidone microspheres	Risperidal Consta	Deltoid or gluteal	Not required**	12.5–25	2	Drug release delayed for 2–3 weeks
Olanzapine pamoate	ZypAdhera	Gluteal	Not required**	75–150	2–4	Risk of postinjection syndrome
Paliperidone palmitate	Xeplion	Deltoid or gluteal	Not required**	6.25–37.5	Monthly	Loading dose required at treatment initiation

Combined antipsychotic drugs

- There is very little evidence supporting the efficacy of combined antipsychotics.
- Substantial evidence supports the potential for harm, therefore the use of combined antipsychotics should generally be avoided.
- As a minimum requirement, all patients who are prescribed combined antipsychotics should have their side-effects systematically assessed (including electrocardiogram monitoring) and any beneficial effect on symptoms carefully documented.

Recently approved drugs

1. ASENAPINE TRANSDERMAL PATCH
2. OLANZAPINE/SAMIDORPHAN
3. RISPERIDONE IN SITU MICROPARTICLE
4. BREXPIPIRAZOLE
5. LUMATEPERONE
6. CARIPRAZINE
7. PIMAVANSERIN
8. TRACE AMINE-ASSOCIATED RECEPTOR 1
9. XANOMELINE & TROSPIUM (KarXT)
10. MIN-101(ROLUPERIDONE)



ASENAPINE TRANSDERMAL SYSTEM

- Asenapine transdermal system is the only transdermal medication approved for the treatment of schizophrenia, achieving approval in October 2019.
- Asenapine is a second-generation antipsychotic that acts as antagonist at 5HT_{2A} and D₂ receptors.
- Asenapine transdermal were statistically superior to placebo in the primary end point with a least squares mean change of – 22.1 for asenapine 3.8 mg/24 hours and -20.4 for asenapine 7.6 mg/24 hours compared with approximately 15.5 with placebo (P <.01 for both).
- The most commonly observed AEs were EPS, application-site reactions, and weight gain.

	Sublingual Asenapine	Transdermal Asenapine
C _{max}	4 ng/mL	1.72 ng/mL
T _{max}	1 hr	16 hrs
T _{1/2}	24 hrs	30 hrs
Peak:Trough	>3:1	1:1
Food Intake	Can Affect Absorption	SAFE
Heated Blanket	SAFE	Double Absorption (T _{max} : 8 hrs)
Summer Heat	SAFE	SAFE
Plasma Levels	Sublingual = Transdermal Asenapine	Sublingual = Transdermal Asenapine
Efficacy		

Table 1. Transdermal Asenapine Clinical Trial Results¹

Regimen	PANSS Total Score ²	
	Baseline	Change ³
Asenapine 3.8 mg/24 hrs	97.0	-22.1*
Asenapine 7.6 mg/24 hrs	95.6	-20.4*
Placebo	97.4	-15.5

* Statistically significant vs placebo

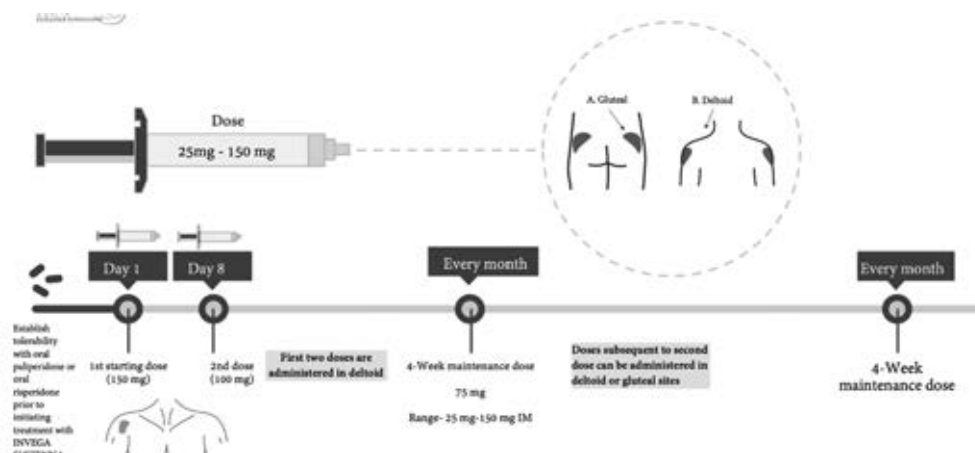
1. CDER multi-discipline review. Available at: <https://bit.ly/2WetXdk>.

2. PANSS=Positive and Negative Syndrome Scale, a 30-item scale that measures positive and negative symptoms and general psychopathology, each on a scale of 1 (absent) to 7 (extreme). Total PANSS scores ranged from 30–210, with lower scores indicating improvement.

3. Least-squares mean change from baseline at 6 weeks, the primary endpoint.

PALIPERIDONE PALMITATE

- Paliperidone palmitate once-monthly long-acting injection (PP-LAI) has been approved for the treatment of schizophrenia by the FDA in 2009 and by the EMA in 2011.
- PP-LAI is hydrolysed to paliperidone, the primary active metabolite of risperidone.
- Water based formulation. No refrigeration needed.
- It has been proposed that the drug's therapeutic activity in schizophrenia is mediated through a combination of central dopamine Type 2 (D2) and serotonin Type 2 (5HT2A) receptor antagonism.
- Similar to risperidone, paliperidone demonstrates high affinity to α_1 , α_2 , D2, H1, and 5-HT2A receptors and low affinity for muscarinic receptors. In contrast to risperidone, paliperidone displays nearly 10-fold lower affinity for α_2 and 5-HT2A receptors, and nearly three- to fivefold less affinity for 5-HT1A and 5-HT1D, respectively.
- 90% of patients were relapse free over 40 weeks trial.
- Delays relapse time > 6months over one year treatment.
- Better alternative in psychosis with co-morbid substance abuse.
- 67 % & 48 % of patients achieved > 30% & 50 % improvements in PANSS.
- Generally well tolerated.
- Lower weight gain & good injection site tolerability.
- Initiation dose is 150 mg day 1, 100mg day 8(deltoid)
- Maintenance dose day 38 (25-150mg) depending upon patient (deltoid/gluteal).
- Availability: (150mg, 100mg, 75mg).

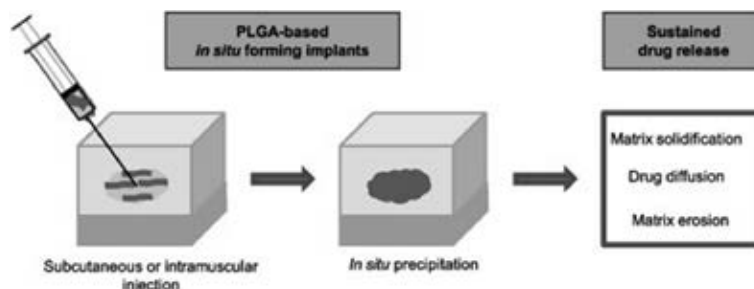


OLANZAPINE/ SAMIDORPHAN

- (a μ -opioid receptor antagonist) and olanzapine.
- Samidorphan is an opioid antagonist
- The intended purpose of this combination therapy is to help reduce the olanzapine associated weight gain and adverse metabolic effects with samidorphan while maintaining the established therapeutic effect of olanzapine in the treatment of schizophrenia.

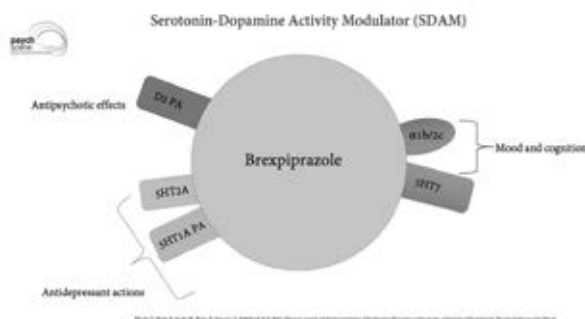
RISPERIDONE IN SITU MICROPARTICLE

- ISM is a technological advancement that allows for the release of drugs based on in situ formulation of biodegradable matrices after the administration of a liquid carrier.
- ISM allows for therapeutic blood levels of LAI antipsychotic to be achieved without coadministration of initial oral antipsychotics, loading doses, or booster injections, potentially improving adherence.
- Risperidone ISM® is a monthly intramuscular injection that does not require loading doses or concurrent oral risperidone.



BREXPIPRAZOLE

- Novel serotonin-dopamine activity modulator, a partial agonist of the dopamine D2 receptors and is structurally similar to its predecessor, aripiprazole.
- Partial agonist at serotonin 1A (5-HT_{1A}) receptors and a potent antagonist at 5-HT_{2A}, α_1 B, and α_2 C adrenergic receptors
- Less intrinsic agonist activity at the D2 receptor compared to aripiprazole and, as a result, may be less activating (as manifested by agitation and restlessness) than aripiprazole.
- Antagonism of 5-HT_{2A} and α_1 B receptors and agonism of 5-HT_{1A} receptors decrease side effects related to D2 receptor blockade in the striatum including akathisia and other extrapyramidal side effects (EPS) due to an increased release of dopamine downstream
- Brexpiprazole has increased potency at 5-HT_{2A}, 5-HT_{1A}, and α_1 B leading to fewer potential treatment-emergent movement effects.
- Brexpiprazole - lower antihistamine activity at the H₁ receptor, less sedation and weight gain than aripiprazole.
- Brexpiprazole has no apparent anticholinergic side-effects given its minimal activity and affinity for the muscarinic acetylcholine receptors.



Pharmacokinetics

- CYP3A4 and CYP2D6 primarily metabolize brexpiprazole to DM-3411, an inactive metabolite.
- 95% bioavailability after oral administration.
- Peak plasma concentration 4 h.
- Steady state concentration -
- 10-12 d of daily administration.
- FDA approval for maintenance treatment in schizophrenia and maintenance treatment of MDD (2015).

Safety and efficacy data of brexpiprazole in schizophrenia

- Brexpiprazole was well-tolerated in schizophrenia trials with akathisia, headache, somnolence, tremor, weight gain as commonly reported side effect.
- VECTOR and BEACON trials are the two major studies establishing the efficacy of brexpiprazole in schizophrenia treatment.
- Brexpiprazole demonstrated statistically significant improvement in the Positive and Negative Syndrome Scale (PANSS) and the Clinical Global Impressions-Severity (CGI-S) in both studies.
- VECTOR trial - statistically significant reduction in PANSS scores with both 2 and 4 mg brexpiprazole compared to placebo.
- BEACON trial - statistically significant decrease in PANSS scores with the 4 mg brexpiprazole dose group only, not with 1 or 2 mg doses, compared to placebo.

Cariprazine

- Dopamine D3/D2 receptor partial agonist with a 10-fold higher affinity for D3 receptors than D2 receptors.
- Cariprazine differs from aripiprazole and brexpiprazole, by its distinct receptor-binding characteristics not only at dopamine D2/D3 receptors but also at serotonin 5HT_{1A}, 5HT_{2B}, 5HT_{2A}, 5HT_{2C}, and histamine H₁ receptors
- Antagonist at the dopamine D3 receptor but functionally acts as a partial agonist with 70% intrinsic agonism.
- Hypothesized to play a role in motivation, depression, and reward by increasing dopamine release in the prefrontal cortex .
- FDA approval in 2015 for maintenance treatment of schizophrenia.

Pharmacokinetics

- Cariprazine is highly plasma protein bound,
- Time to peak concentration is 3-6 h
- Primarily metabolized by CYP 3A4, and by CYP 2D6, to a lesser extent.
- Active metabolites, desmethyl cariprazine, and didesmethyl cariprazine.



- Didesmethyl-cariprazine (ddcar) has a long half-life of 1-3 wk.
- A longer half-life might protect against the rapid onset of relapse following non-adherence in patients with schizophrenia

Safety and efficacy data of cariprazine

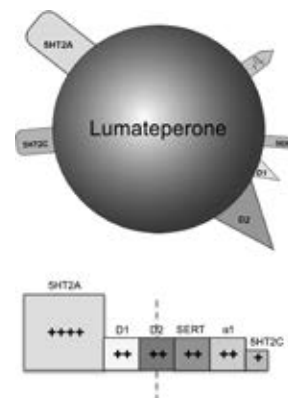
- Cariprazine dosages of 1.5, 3, 4.5, 6, 3-6, and 6-9 mg/d, were superior to placebo in reducing the PANSS and CGI-S scores..
- Safety data reported a lower discontinuation rate in the patients who received cariprazine 1.5-6 mg/d compared to patients on placebo.
- Pooled data on adverse effects noted a higher likelihood of weight gain, hypertension, akathisia, and EPS that led the FDA to recommend the lower dose range of 1.5 to 6 mg/d in schizophrenia.
- Most common adverse effect was akathisia ,EPS, headache, insomnia, and weight gain.

Safety and efficacy data of cariprazine in mood & anxiety disorders

- Cariprazine is also approved in the United States for mania and mixed episodes related to bipolar mood disorder type I in adults.
- In bipolar mania, more cariprazine treated patients had improved CGI-S scores than patients on placebo; that is, more cariprazine-treated patients shifted from the severely ill to the mildly ill or better category as compared to the placebo-treated patients
- Post hoc analyses of three randomized, double-blind, placebo-controlled clinical studies showed that a significantly higher proportion of patients with cariprazine achieved response and remission in bipolar mania on all evaluated measures when compared with the placebo-treated group

LUMATEPERONE

- Lumateperone, received United States FDA approval to treat schizophrenia in adults in December 2019.
- Lumateperone possesses unique pharmacologic actions on the serotonin, glutamine, and dopamine systems. It is a presynaptic partial agonist and postsynaptic antagonist at D2 receptors, an antagonist at serotonin 5-HT_{2A} receptors, and a glutamate modulator.
- The presynaptic partial agonism and postsynaptic antagonism at dopamine D2 receptors allow a lowered presynaptic release of dopamine and postsynaptic blockade of dopamine, leading to a more efficient reduction of dopaminergic signalling than other antipsychotic medications
- At a lower dose, Lumateperone antagonizes the 5-HT_{2A} receptor and promotes sleep and reduces aggression, but at a higher dose, antipsychotic and antidepressant effects emerge.
- Indirectly modulates the glutamatergic phosphoprotein associated with D1- dependent augmentation of N-methyl-D-aspartate (NMDA) and α -amino-3-hydroxy-5-methyl-4-isoxazole propionic acid (AMPA) activity via the mammalian target of the rapamycin (mTOR) pathway, which could contribute to a potent and rapid antidepressant action



Pharmacokinetics

- Steady-state concentration - five days
- Metabolized by several enzymes, including but not limited to uridine 5'- diphospho-glucuronosyltransferases (UDP glucuronosyltransferase, UGT) 1A1, 1A4, and 2B15, aldoketoreductase (AKR)1C1, 1B10, and 1C4, and cytochrome P450 (CYP) 3A4, 2C8, and 1A2.
- Half-life - 13 to 21 h which allows a once a day dosing regimen.

Safety and efficacy data of Lumateperone

- Correll et al, in a four-week, randomized phase 3 clinical trial, , demonstrated that 42 mg of lumateperone brought significant improvement as compared to placebo from baseline to day 28 on the PANSS total score and the CGI-S.
- Lumateperone was also favorable to risperidone in terms of safety and tolerability, including a lower risk of hyperprolactinemia, hyperglycemia, hyperlipidemia, and weight gain.
- The most common side effect reported by Correll et al was sedation (9.3%-12.7%), followed by fatigue (4.7%-5.3%), and constipation (4%-6.7%) among lumateperone- treated patients.

PIMAVANSERIN

- Atypical antipsychotic indicated for the treatment of hallucinations and delusions associated with Parkinson's disease psychosis.

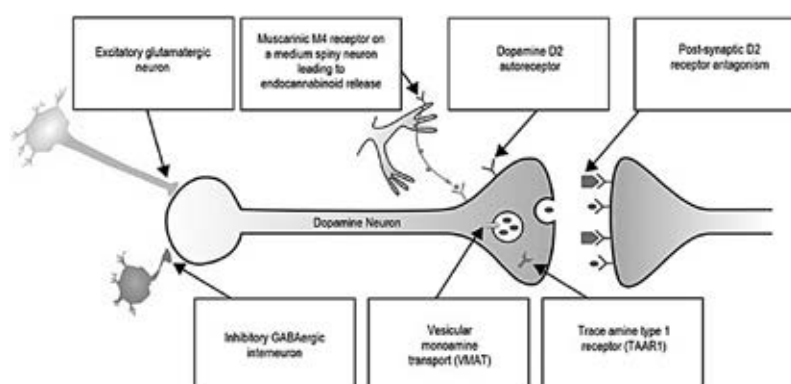


- Recommended dose is 34 mg, taken orally as two 17 mg tablets once daily, without titration.
- Effect of pimavanserin could be mediated through a combination of inverse agonist and antagonist activity at serotonin 5-HT_{2A} receptors and to a lesser extent at serotonin 5-HT_{2C} receptors.
- Pimavanserin demonstrates dose-proportional pharmacokinetics after single oral doses from 17 to 255 mg (0.5- to 7.5-times the recommended dosage).
- Mean plasma half-lives for pimavanserin and the active metabolite (N desmethylated metabolite) are approximately 57 hours and 200 hours.
- Metabolized by CYP3A4 and CYP3A5 and to a lesser extent by CYP2J2, CYP2D6, and various other CYP and FMO enzymes
- Eliminated as unchanged drug in urine and 1.53% was eliminated in feces after 10 days.

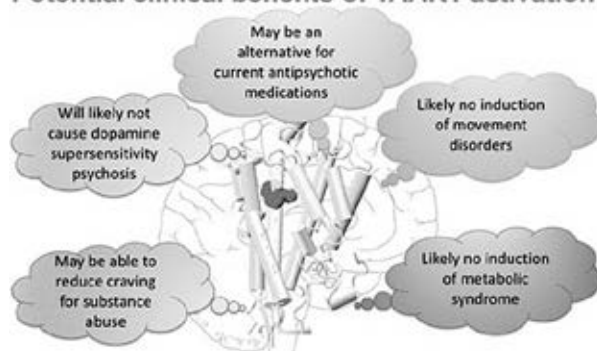
(ULOTARONT) TRACE AMINE-ASSOCIATED RECEPTOR 1 AGONIST

- TAAR-1 is a G-protein–coupled receptor found in the central nervous system, olfactory epithelium, and various other tissues.
- It has serotonin 5HT_{1A} agonist activity while lacking dopamine D₂ or serotonin 5HT_{2A} receptor binding.
- The TAAR-1 receptor is activated via endogenous trace amines that are structurally similar to monoaminergic neurotransmitters
- Agonists of the TAAR-1 receptor include amphetamine and methamphetamine. Furthermore, the TAAR-1 receptor seems to respond the most to dopamine, followed by glutamine, compared with tryptamine, norepinephrine, and serotonin.
- As a result of these features, TAAR-1 agonists are being targeted for treatment of schizophrenia. Two TAAR-1 agonists are currently in development: SEP-363856 and R05263397.

TRACE AMINE-ASSOCIATED RECEPTOR 1



Potential clinical benefits of TAAR1 activation



XANOMELINE & TROSPIUM(KarXT)

- Xanomeline acts on both M1&M4 receptors, and trospium negates the GI side effects.
- Reduction in positive and negative symptoms is the focus so far but it is promising in reducing cognitive symptoms as well.
- Acts on M1 receptor in prefrontal cortex and reduces production of dopamine.

The FDA will decide on the approval of xanomeline-trospium for the treatment of schizophrenia patients by September 26, 2024.

System	Potential Impact on Symptoms			Commentary
	xanomeline	+ trospium	= KarXT	
Central Nervous System	↑	N/A	↑	Improvement in psychosis and cognition
Salivary Glands	↑	↓	↔	Tolerability from neutralization of peripheral activation
Sweat Glands	↑	↓	↔	
GI Tract	↑	↓	↔	
Bladder	↑	↓	↔	

↑ Increase Activity ↓ Decrease Activity ↔ Offsetting Effect

MIN-101(ROLUPERIDONE)

- ROLUPERIDONE currently in phase 3 trials.
- Targets negative symptoms of schizophrenia.
- Roluperidone is a 5-HT_{2A} and sigma₂ receptor antagonist in development for the treatment of certain symptoms in patients with schizophrenia

- The new era shows shift of focus of drugs acting other receptors rather than dopamine.
- The new drugs target the negative symptoms more.
- Limitation of side effects seems of paramount importance.

Neuroprotective or Neurotoxic?



- Use of antipsychotics associated with decreased risk of relapse
 - Relapses associated with reduced brain volume
- Longitudinal imaging suggest that greater intensity of antipsychotic treatment associated with smaller gray matter volumes

Neuroprotective Antipsychotics

The new 21st century antipsychotic drugs will aim to:

- › protect against gray matter loss,
- › slow functional decline following the onset of psychosis,
- › maintain functional integrity of the brain in response to neurobiological stress.



Research Opportunities in Psychiatric Private Practice

Dr. Sanjay K. Munda, Professor of Psychiatry, Central Institute of Psychiatry, Ranchi

Private Practice in Psychiatry

- Diagnosis, treatment, and prevention of mental illness by qualified psychiatrists acting on their own authority and responsibility, rather than as paid employee of an institution or organisation.
- As your own boss, you have the flexibility to determine when and how to practice, set policies in line with your values, and choose the patient population for whom to provide care.

Psychiatrists who do private practice have

- Huge untapped opportunities to contribute to the science of our field.
- Grapple daily with the full range of psychopathology and the associated psychosocial determinants.
- Learned important skills to promote change and to personalize care for each individual they treat
- Opportunity to collect many types of observational, self-report, and other data to guide their work

These are rich longitudinal data

- that observe change as it unfolds over time, shed light on understudied populations and problems,
- permit tests of important hypotheses about psychopathology and the change process in treatment have high external validity.

Gap between practice and science in our field is ripe for change

- Recent developments in practice, science, and technology make it easier than ever before, and easier than practitioners may realize, for them to contribute to the science of our field.

Gap between practice and science in our field is ripe for change

Practice

- field is embracing evidence-based practice and measurement-based care
- Systematic data collection by practitioners is now an essential element of clinical practice

Research

- Increasing recognition of the limitations of group-based research designs has led to the development of new methodologies for studying intensive longitudinal data from a single case,
- the open science movement is increasing access to the scientific literature and to free open-source software for collecting data, conducting statistical analyses, and more

Gap between practice and science in our field is ripe for change

New developments in technology

- Easy and inexpensive to collect assessment data during treatment using secure online tools that patients can access from their smartphone
- To access the scientific literature and other tools (e.g., statistical packages) needed for research, and
- to collaborate with investigators anywhere in the world

Simultaneous Practice and Research: Model for conducting research in practice

- Many of the research and practice activities happen simultaneously



- Clinicians develop and data they collect as they go about their daily clinical work.
- Good clinical work itself relies on hypothesis-testing, especially about the mechanisms that maintain a patient's symptoms and underpin the change process.
- These hypotheses are of central importance to both the clinician who is working to help his or her patient and to the science of our field, and for that reason, the data clinicians collect to guide their clinical work can also contribute to the advance of knowledge in our field

Other models Practice based Research

- Practice focused Research (Wolfgang Lutz)
- Practice based Evidence Model (Michael Barkham)
- Practice Research Network Model (Lousis Castonguay)

Guidelines for selecting research questions and hypotheses

- Select a research question that arises in your clinical work
- State your question as a hypothesis, make a prediction about what you will find, and offer a rationale for your prediction
- Identify a clear and specific hypothesis you want to test, not just a topic or interest area
- Check the current state of the literature to see if your hypothesis has already been tested

Conducting a Single Case Experimental Design (SCED)

- Methodology of conducting a single case experimental design overlaps quite a bit with high quality evidence-based practice
- Oxford Centre for Evidence-Based Medicine has rated the SCED as Level 1 evidence for treatment decisions, alongside systematic reviews of randomized controlled trials
- Different from a case report, & involves
 - repeated measurements,
 - sequential introduction and/or withdrawal of interventions, &
 - analysis of the findings to test hypotheses about the effects of interventions on the dependent variables of interest
- Involves tight controls that can provide experimental tests of hypotheses about relationships between interventions and outcomes

Conducting a single case experimental design: Guidelines

- Start by identifying an outcome measure you'll use to evaluate the effectiveness of your intervention
- Consider also selecting measures to assess control variables (variables you do not expect will change), other variables you expect might change as a result of your intervention, measures that demonstrate implementation of your intervention, measures of the mechanism you expect your intervention to change, and standardized assessments
- An AB design, where A is baseline and B is when you introduce your intervention, that is, you show that your patient's scores on the outcome measure change during B but not A, does not provide sufficient control to meet criteria for a SCED
- To meet minimal criteria for a SCED, your study must demonstrate at least two phase changes (that is, from A to B and back to A, or show in at least 3 participants or behaviors or contexts that the outcome variable changes only when the intervention is introduced in all 3 cases or behaviors or contexts

Finding Collaborators and Assistants

- Research investigators, other professionals, and students at local universities, professional schools, or hospitals
- Practitioners who share your interests
- Research investigators you meet at a IAPP conference
- Graduate and undergraduate students at a local university
- Statistical consultants or students you can pay by the hour

Collecting the Data

- Collect data at every session
- Collect data to monitor the outcome and process of therapy

- Collect data online
- Rely on software tools that allow you to download the data into a database
- Rely on measures that are widely used by researcher

Analyzing the Data

- Data analysis can be simple, perhaps just a calculation of pre- and post-test scores on key measures
- Rely on open-source software to store your database and analyze your data
- If your skills are weak or outdated, consider inviting a collaborator who has up-to-date statistical skills to work with you and share authorship on the project
- If you hire a statistical consultant to analyze your data, review the hypotheses and data collection plan with the consultant before you collect the data
- Rely on measures that are widely used by researcher

Writing the Paper and Getting it Published

- Before you write the paper, select the journal you plan to submit to, and write with that journal in mind.
- Select a journal by noting what journals you read most often as you developed your research ideas, and what journals are read by those who want to read your paper.
- Obtain a copy of the APA Publication manual and follow it.
- Begin your paper by describing a phenomenon your grandmother would be interested in, rather than stating, "Previous researchers have found. . ."
- Write in active, not passive voice.
- Be prepared to respond to reviewers' critiques and resubmit repeatedly until your paper is accepted for publication. Persistence is the key to success.

To Conclude..

Psychiatrists who work in private practice have huge opportunities to contribute to the science of our field. But they rarely do so.

Psychiatrists who have research training can capitalize on recent developments in practice, science, and technology to conduct research in their private practice.

It entails tightly integrating the research into clinical practice.

Update on ICD-11: Change in Mood Disorders

Prof. R. K. Lenin Singh, Consultant Psychiatrist

Bipolar Disorder (Changed from Bipolar affective disorder)

Both of these:

Pervasive Irritable/Euphoric mood

Increased energy or subjective experience of increased energy

'Several' of these:

Pressure of Speech

Flight of ideas

Raised self esteem/grandiosity

Decreased Need for Sleep

Distractibility

Impulsiveness/Recklessness

Raised sexual drive/sociability/GDA

ICD-10 - Mood [affective] disorders F30-F39

ICD-10	ICD-11
1) Bipolar Affective Disorder	1) Replaced with Bipolar or related disorders(the word Affective has been removed)
2) At least two episodes of mania are required for diagnosis of Bipolar disorder	2) Occurrence of one or more manic or mixed episodes is sufficient for diagnosis
3) Single episodes have been distinguished separately and diagnosed separately-manic episode;hypomania;mania without psychotic symptoms	3) No separate diagnosis for a single episode.One episode is enough for diagnosis of Bipolar disorder.
4) Bipolar II disorder is included in 'Other bipolar affective disorder'	4) A separate diagnostic criteria is given for Bipolar type II disorder as in DSM 5
5) Though there are different specifiers for Bipolar affective disorder,current episode mild depression;moderate depression and severe depression,there is no different specifiers for "Unspecified severity"	5) A new specifier is introduced ,that is Bipolar type I disorder,current episode depressive, Unspecified severity(6A60.8) and also for Bipolar type II disorder ,current episode depressive,Unspecified severity(6A61.8)
6) There is a different specifier for Bipolar Affective disorder,currently in remission but it is not mentioned whether it is a partial or a full remission(F31.7)	6) There is a different specifier for a partial remission and a full remission
7) Patients with Bipolar Affective disorder may have anxiety symptoms,panic attacks or symptoms with a seasonal pattern but there are no specifiers given for it	7) There are different specifiers for both Bipolar type I and type II disorder for patients with prominent anxiety symptoms(6A80.0);with panic attacks(6A80.1);current depressive episode persistent(6A80.2);current depressive episode melancholia(6A80.3);with seasonal pattern of onset(6A80.4);with rapid cycling(6A80.5)

DEPRESSIVE DISORDERS:

ICD-10	ICD-11
1) Depressed mood, loss of interest and enjoyment and increased fatigability are regarded as the typical symptoms which must be present for any severity for a definite diagnosis.	1) The core criteria are depressive mood (e.g., sad mood, irritable, empty) or loss of pleasure accompanied by other cognitive, behavioural or neurovegetative symptoms
2) In defining the severity, which is mild, moderate, severe, at least two, three, four other symptoms, as mentioned in the criteria should be present	2) No such conditions in ICD-11 for the severity.
3) Psychotic symptoms are present only in severe depression	3) Psychotic symptoms can be present even in moderate depression
4) There is no specifier for unspecified severity	4) Different specifier for unspecified variety
5) There is no different specifier for partial and full remission	5) There is different specifier for partial and full remission
6) Mixed Anxiety and depressive disorder was included under "NEUROTIC, STRESS-RELATED AND SOMATOFORM DISORDERS (F41.2)"	6) Mixed Depressive and anxiety disorder is included under mood disorders (6A73)
7) No specifiers for prominent anxiety symptoms, panic attacks in mood episodes, etc	7) Different specifiers for prominent anxiety symptoms, panic attacks in mood episodes, with melancholia, with seasonal pattern and rapid cycling

DSM 5	ICD-11
1) Disruptive Mood Dysregulation Disorder (DMDD) is described under Depressive disorders	1) DMDD is described under Disruptive behaviours or dissocial disorders.
2) Pre-Menstrual Dysphoric Disorder is described under Depressive Disorders	2) Pre-menstrual disturbances which include significant mood symptoms are described in Chapter 16 of ICD-11: Diseases of the genito-urinary system
3) Persistent Depressive disorder (Dysthymia) is described as the same	3) Recurrent Depressive disorder and dysthymic disorder are described separately

ICD-10 F00-F99 Mental and Behavioural Disorders chapter	ICD-11 06 Mental, Behavioural or Neurodevelopmental Disorders chapter (and relevant disorder groupings from other ICD-11 chapters)
F00-F09 Organic, including symptomatic, mental disorders	6D70-6E0Z Neurocognitive disorders (8A20-8A2Z Disorders with neurocognitive impairment as a major feature)
F10-F19 Mental and Behavioural disorders due to psychoactive substance use	6C40-6C5Z Disorders due to substance use or addictive behaviors
F20-F29 Schizophrenia, schizotypal and delusional disorders	6A20-6A2Z Schizophrenia or other primary psychotic disorders 6A40-6A4Z Catatonia
F30-F39 Mood (affective) disorders	6A60-6A8Z Mood disorders
F40-F48 Neurotic, stress-related and somatoform disorders	6B00-6B0Z Anxiety or fear-related disorders 6B20-6B2Z Obsessive-compulsive or related disorders 6B40-6B4Z Disorders specifically associated with stress 6B60-6B6Z Dissociative disorders 6C20-6C2Z Disorders of bodily distress or bodily experience
F50-F59 Behavioural syndromes associated with physiological disturbances and physical factors	6B80-6B8Z Feeding or eating disorders 6E20-6E2Z Mental or Behavioural disorders associated with pregnancy, childbirth, or the puerperium 6E40-6E40Z Psychological or Behavioural factors affecting disorders or diseases classified elsewhere

F69 Disorders of adult personality behaviour	6C70-6C7Z Impulse control disorders 6D10-6D11.5 Personality disorders and related traits 6D30-6D3Z Paraphilic disorders 6D50-6D5Z Factitious disorders (7A00-7A0Z Insomnia disorders) (7A20-7A2Z Hypersomnolence disorders) (7A60-7A6Z Circadian rhythm sleep-wake disorders) (HA60-HA6Z Gender incongruence)
F79 Mental retardation	6A00-6A00.Z Disorders of intellectual development
F89 Disorders of psychological development	6A00-6A06.Z Neurodevelopmental disorders
F98 Behavioural and emotional disorders with onset usually occurring in childhood or adolescence	6C00-6C0Z Elimination disorders 6C90-6C9Z Disruptive behavioural or dissocial disorders
Unspecified mental disorder	6E60-6E6Z Secondary mental or Behavioural syndromes associated with disorders or diseases classified elsewhere

I. Disorder groupings in the ICD-11 Mental, Behavioural or Neurodevelopmental Disorders chapter and in the ICD-11 Physical and Behavioural Disorders chapter (and relevant disorder groupings from other ICD-11 chapters).

Bipolar and related disorders

6A60	Bipolar type I disorder
<i>Specify type of current or most recent episode and/or remission:</i>	
6A60.0	... current episode manic, without psychotic symptoms
6A60.1	... current episode manic, with psychotic symptoms
6A60.2	... current episode hypomanic
6A60.3	... current episode depressive, mild
6A60.4	... current episode depressive, moderate, without psychotic symptoms
6A60.5	... current episode depressive, moderate, with psychotic symptoms
6A60.6	... current episode depressive, severe, without psychotic symptoms
6A60.7	... current episode depressive, severe, with psychotic symptoms
6A60.8	... current episode depressive, unspecified severity
6A60.9	... current episode mixed, without psychotic symptoms
6A60.A	... current episode mixed, with psychotic symptoms
6A60.B	... currently in partial remission, most recent episode manic or hypomanic
6A60.C	... currently in partial remission, most recent episode depressive
6A60.D	... currently in partial remission, most recent episode mixed
6A60.E	... currently in partial remission, most recent episode unspecified
6A60.F	... currently in full remission
6A60.Y	Other specified bipolar type I disorder
6A60.Z	Bipolar type I disorder, unspecified

Postcoordination for bipolar type I disorder:

For all above bipolar type I disorder categories, *specify* additional features of current presentation or course by using additional code(s) if applicable:

6A80.0	with prominent anxiety symptoms
6A80.1	with panic attacks
6A80.2	current depressive episode persistent
6A80.3	current depressive episode with melancholia
6A80.4	with seasonal pattern of mood episode onset
6A80.5	with rapid cycling

For all above bipolar type I disorder current or most recent episodes, *specify* if episode onset was during pregnancy or within 6 weeks after delivery by using additional code:

6E20	Mental and behavioural disorders associated with pregnancy, childbirth or the puerperium, without psychotic symptoms
6E21	Mental and behavioural disorders associated with pregnancy, childbirth or the puerperium, with psychotic symptoms
6E2Z	Mental and behavioural disorders associated with pregnancy, childbirth or the puerperium, unspecified

6A61	Bipolar type II disorder
<i>Specify type of current or most recent episode and/or remission:</i>	
6A61.0	... current episode hypomanic
6A61.1	... current episode depressive, mild
6A61.2	... current episode depressive, moderate, without psychotic symptoms
6A61.3	... current episode depressive, moderate, with psychotic symptoms
6A61.4	... current episode depressive, severe, without psychotic symptoms
6A61.5	... current episode depressive, severe, with psychotic symptoms
6A61.6	... current episode depressive, unspecified severity
6A61.7	... currently in partial remission, most recent episode hypomanic
6A61.8	... currently in partial remission, most recent episode depressive
6A61.9	... currently in partial remission, most recent episode unspecified
6A61.A	... currently in full remission
6A61.Y	Other specified bipolar type II disorder
6A61.Z	Bipolar type II disorder, unspecified

Postcoordination for bipolar type II disorder

For all above bipolar type II disorder categories, *specify* additional features of current presentation or course by using additional code(s) if applicable:

6A80.0	with prominent anxiety symptoms
6A80.1	with panic attacks
6A80.2	current depressive episode persistent
6A80.3	current depressive episode with melancholia
6A80.4	with seasonal pattern of mood episode onset
6A80.5	with rapid cycling

For all above bipolar type II disorder current or most recent episodes, *specify* if episode onset was during pregnancy or within 6 weeks after delivery by using additional code:

6E20	Mental and behavioural disorders associated with pregnancy, childbirth or the puerperium, without psychotic symptoms
6E21	Mental and behavioural disorders associated with pregnancy, childbirth or the puerperium, with psychotic symptoms
6E2Z	Mental and behavioural disorders associated with pregnancy, childbirth or the puerperium, unspecified

6A62	Cyclothymic disorder
6A6Y	Other specified bipolar or related disorder
6A6Z	Bipolar or related disorder, unspecified

Depressive disorders**6A70 Single episode depressive disorder**

Specify severity or remission of current episode:

6A70.0	... mild
6A70.1	... moderate, without psychotic symptoms
6A70.2	... moderate, with psychotic symptoms
6A70.3	... severe, without psychotic symptoms
6A70.4	... severe, with psychotic symptoms
6A70.5	... unspecified severity
6A70.6	... currently in partial remission
6A70.7	... currently in full remission
6A70.Y	Other specified single episode depressive disorder
6A70.Z	Single episode depressive disorder, unspecified

6A71 Recurrent depressive disorder

Specify severity or remission of current episode:

6A71.0	... current episode mild
6A71.1	... current episode moderate, without psychotic symptoms
6A71.2	... current episode moderate, with psychotic symptoms
6A71.3	... current episode severe, without psychotic symptoms
6A71.4	... current episode severe, with psychotic symptoms
6A71.5	... current episode, unspecified severity
6A71.6	... currently in partial remission
6A71.7	... currently in full remission
6A71.Y	Other specified recurrent depressive disorder
6A71.Z	Recurrent depressive disorder, unspecified

6A72 Dysthymic disorder**6A73 Mixed depressive and anxiety disorder****6A7Y Other specified depressive disorder****Postcoordination for single episode depressive disorder**

For all above single episode depressive disorder categories, specify additional features of current presentation or course by using additional code(s) if applicable:

6A80.0	with prominent anxiety symptoms
6A80.1	with panic attacks
6A80.2	current depressive episode persistent
6A80.3	current depressive episode with melancholia
6A80.4	with seasonal pattern of mood episode onset

For all above single episode depressive disorder current or most recent episodes, specify if episode onset was during pregnancy or within 6 weeks after delivery by using additional code:

6E20	Mental and behavioural disorders associated with pregnancy, childbirth or the puerperium, without psychotic symptoms
6E21	Mental and behavioural disorders associated with pregnancy, childbirth or the puerperium, with psychotic symptoms
6E2Z	Mental and behavioural disorders associated with pregnancy, childbirth or the puerperium, unspecified

Postcoordination for recurrent depressive disorder

For all above recurrent depressive disorder categories, specify additional features of current presentation or course by using additional code(s) if applicable:

6A80.0	with prominent anxiety symptoms
6A80.1	with panic attacks
6A80.2	current depressive episode persistent
6A80.3	current depressive episode with melancholia
6A80.4	with seasonal pattern of mood episode onset

For all above recurrent depressive disorder current or most recent episodes, specify if episode onset was during pregnancy or within 6 weeks after delivery by using additional code:

6E20	Mental and behavioural disorders associated with pregnancy, childbirth or the puerperium, without psychotic symptoms
6E21	Mental and behavioural disorders associated with pregnancy, childbirth or the puerperium, with psychotic symptoms
6E2Z	Mental and behavioural disorders associated with pregnancy, childbirth or the puerperium, unspecified

6A7Z Depressive disorder, unspecified**6A8Y Other specified mood disorder****6A8Z Mood disorder, unspecified****References:**

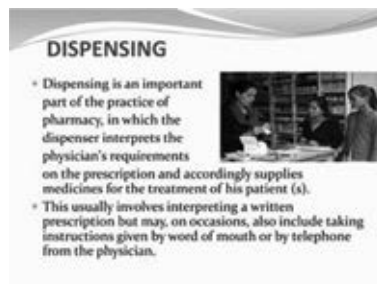
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Dispensing medicines from private psychiatry clinics: is it safe in the current scenario????

Dr Soumya Chatterjee, DCH,MD, Antara Psychiatric Hospital

Praveen

This dual role of
prescribing and dispensing
of medication
what law says????



Good dispensing practice (GDP)

- Refers to the delivery of the correct drug and medical supply to the right patient, in the required dosage and quantities, in the package that maintains acceptable potency and quality for the specified period, and clear drug information. → Rational Drug Use

In India, manufacturing, storing, transportation, distribution, and dispensing of drugs are licensed and regulated under the

- drugs and cosmetic act, 1940;
- Indian Medical Council Act, 1956;
- the Pharmacy Act, 1948;
- and the Narcotic Drugs and Psychotropic Substances Act, 1985.

RMPs can supply drugs to their own patients provided the following conditions are fulfilled:

- The RMP must not keep an open shop
- He must not sell across the counter
- He must not be engaged in the import, manufacture, distribution or sale of drugs in India to such an extent that makes him liable for the breach of provisions of Chapter IV, DCA or the Rules.
- The drugs must be purchased by a licensed manufacturer or dealer, and records of such purchase should be maintained and shall be open for examination at all times by the Inspector appointed under DCA.
- The drugs must be stored under proper conditions as prescribed on the label.
- No drug shall be sold beyond its expiry date mentioned on its label or wrapper.

Soumitra da

- The findings suggest that with dispensing doctors, the quality of health care provided was less when compared to non-dispensing doctors in terms of number of drugs prescribed, time spent per patient, patient safety, and treatment cost.....Your opinion

Partha da

products sold in my office are the best

- Can we restrict patients' access to alternative, more economical brand or generic drugs ????
- Are we making the patient dependent on us for medicine refilling ????
- without adequate evidence about the medical benefit.....Selling/ promoting agents or devices as being therapeuticyour opinion????

selling medicines at their clinics to their patients may represent a significant potential conflict of interest against the medical ethical principles of autonomy, beneficence, and non-maleficence.

Autonomy	Patients basically have the right to determine their own health care. From this ethical principle, if access to equally effective alternative products exists, RMPs should not restrict patients' access to alternative, more economical brand or generic drugs
Beneficence	• Medical practitioners are to act in a way that contributes to the patient's health and well-being and have to refrain from doing anything that would cause harm to the patient, including financial damages.exploiting patients' trust to leverage personal financial gain by selling medicines at their office. • RMPs nevertheless have a fiduciary responsibility to the patient in all aspects of their clinical care and practice. • This fiduciary responsibility of RMPs flows from the medical knowledge about the illness, medicine, rehabilitation, license to prescribe medicine, and autonomy to choose medicines of varying prices or brands gives a disproportionate advantage over patients.
Non-maleficence	RMPs are not harming the patient. The greed of selling more expensive medicine should not compromise the patient's health.

BY purchasing medicines from the RMPs,	dispensing medicines by the RMPs
• the patient can almost be sure that the prescription will not be misread • and that the RMPs will help clarify and provide counsel about how the medicine needs to be administered such as frequency, precautions, and side effects. • Further, purchasing medicines at the RMPs dispensary save a patient the time and effort	• can limit the freedom of choice of the patient in various aspects of buying the medicines. • The patient will be coerced to buy what is offered by the RMPs dispensary and is left with no choice even if the prescribed medicine is expensive and alternative medicine and brand is available outside for a lesser price. • An RMPs may also prescribe unnecessary medicines which a patient does not require, just to increase the sales, thereby resulting in a profit for their dispensary • the kind of branded medicines, a patient gets from the clinics will come wrapped in a huge profit margin for the RMPs, and this has been an alternative source of income.

Round 2, 2 minutes each

Private psychiatrists can only prescribe buprenorphine to drug-dependants

Sanjeev Verma / TNN / Updated: Sep 12, 2019, 08:07 IST



New For You



To check overcharging of drug-dependant patients for buprenorphine medicine by private psychiatrists, Punjab government has decided that private psychiatrists can only prescribe the medicine but it would be dispensed only from pharmacy of government de-addiction centre and Out Patient Opioid Assisted Treatment (OOAT) clinics.

[Read Less](#)

Praveen

If the dispensed medicine belongs to Schedule G, H, or X.....what are the additional conditions need to mention

- the medicine shall be labeled with the name and address of the RMPs by whom it is supplied;
- the route of administration shall be labeled;

- the name of the medicine or ingredients of the preparation
- and the quantities,
- the dose prescribed,
- the name of the patient and the date of supply
- and the name of the person who gave the prescription shall be entered at the time of supply in the register to be maintained;
- the entry in the register shall be given a number and that number shall be entered on the label of the container,
- the register and the prescription, if any, on which the medicines are issued shall be preserved for not <2 years from the date of the last entry in the register or the date of the prescription
- and the drug will be stored under proper storage conditions as directed on the label.

Partha da

- The registration authority can suspend the registration of a clinic if on inspection or on receipt of complaint it is found not adhering to the minimum standards as specified under rules or indulging in any malpractice. In case of complaint, the clinic will not be permitted to dispense buprenorphine till the final decision of the registering authority.
- What are these minimum standards ????

Private psychiatric clinics to dispense drugs to treat addicts but with....

- To overcome the problem of shortage of trained psychiatrists in the government set up, the Punjab government has decided to allow psychiatric clinics to dispense detoxification medicines—buprenorphine and naloxone—to drug addicts, albeit with riders

ANNUAL REPORT

The clinics will have to submit an annual report to the state mental health authority on patients registered, dose tapering off statistics and number of persons weaned off from buprenorphine

MINIMUM STANDARDS

GENERAL

- 1 Doctor room Not less than 100 sq feet
- 2 Dispensing room with storage not less than 100 sq feet
- 3 A room for counselling the patients
- 4 Waiting room for OPD more than 50 per day

STAFF

- 1 Full time psychiatrist
- 2 Staff nurse/ pharmacist at clinics
- 3 Counsellor for patients
- 4 Data entry operator for online entry

EQUIPMENT

1. Biometric system for tracking of patients at the clinics
2. Equipment for basic medical examination of patients

FAILED ATTEMPT

Taking note of the less availability of buprenorphine and naloxone and lack of access of these medicines to trained psychiatrists, the Centre had earlier this year decided to make these two medicines available to psychiatric clinics and hospitals. The director general of health services, central drugs standard control organization, had asked drug controllers of all states and UTs to allow psychiatric clinics and hospitals to dispense buprenorphine. The Punjab and Haryana high court had put a stay on direction following a petition moved by a Punjab resident



INCREASE COVERAGE

The move will help the government increase the coverage of substance abuse treatment. There are 191 government OQAT clinics and about 90 private centres

MINIMUM STANDARDS

GENERAL

- > Doctor room
- > Dispensing room
- > 2 beds for day care
- > Room for counselling patients
- > Waiting room for OPD

EQUIPMENT

- > Biometric system for tracking of patients
- > Equipment for basic medical examination

STAFF

- > Full time psychiatrist
- > Staff nurse/pharmacist
- > Counsellor
- > Data entry operator for online entry



Soumitra da

- E-pharmacy is a new avenue may have the potential to alter the existing in-house pharmacy practice of making a huge profit margin from patients.....how much practical it is for a country like India with vast diversity
- “one medicine, one price” across all brands.....can it be possible???

Code of conduct for doctors in their relationship with pharmaceutical and allied health sector industry.

- **Physician Payments Sunshine Act, 2010** of the United States health-care law was enacted to increase transparency of financial relationships between health care providers and pharmaceutical manufacturers. However, the Act does not “ban” any payments but simply requires reporting of payments and transfers of value.
- Central Government had published a set of guidelines in December 2014 called “**Uniform Code of Pharmaceutical Marketing Practices**” as guidance to the industry for promotion and marketing of drugs and medical devices.

Round 3, 1 minute

- Allowing doctors to also dispense drugs, some say, is cheaper and more convenient for patients. Critics aren't so sure.

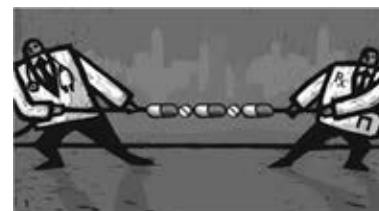
Praveen

In the era of consumerism.....one has to blame

- Do you think doctors are only made scapegoat while the political parties have no will to control at all these multinational companies.....not bringing all medicines under essential list for price control

There is an urgent need to bring all medicines under price control to benefit the population at large.

- Unfortunately, not all the drugs marketed in the country are under price control: Only the National List of Essential Medicines (NLEM) are the scheduled medicines for the purpose of price control. A Core-Committee was constituted for NLEM by the ministry of health



and family welfare, Government of India. The committee drafted the criteria for inclusion and deletion of medicines in the NLEM. The primary purpose of NLEM is to promote the rational use of medicines considering the three important aspects, i.e., cost, safety, and efficacy. Furthermore, it promotes prescription by generic names. At present, 376 drugs are included in NLEM

Partha da

physician-assisted opioid treatment delivery..... practiced across the US, Europe, and Australia.

- Buprenorphine dispensing has increased significantly in the United States, across a range of physician specialties and among nurse practitioners and physician assistants, and in most U.S. counties.
- The Comprehensive Addiction and Recovery Act (CARA) of 2016 authorized nurse practitioners (NPs) and physician assistants (PAs) to obtain a DATA-waiver to prescribe buprenorphine.
-what about India???
- in response to the COVID-19 pandemic, in 2020, the Food and Drug Administration (FDA) actually loosened regulations on the distribution of drug samples to allow efficient treatment delivery for more patients. However, the state-by-state regulations are often more restrictive and health care providers should ensure they remain compliant.
- Track all samples by lot, NDC and expiry date
- Ensure consistent record-keeping for dispensing and disposing of medication samples
- Follow storage guidelines(including temperature reporting if refrigerated or frozen) from medication sample manufacturers and limit access for authorized uses only
- Provide appropriate patient education for medication usage
- Thoroughly document and monitor patient health outcomes over time

Opportunities for Research In Private Practice

Dr Surjeet Sahoo, Bhubaneswar

Software Advice's 2023 Independent Practice Survey was conducted in July 2023 among 1,000 patients in the U.S. who had visited a healthcare provider within the past two years.

- The biggest advantage of an independent practice was a stronger doctor-patient relationship,
- 78% appreciating the more personal relationship with their provider,
- 60% indicating a greater sense of trust, and
- 57% saying the quality of care is higher.

Why Conduct Research in Your Practice?

- Opportunities to contribute to the clinical science
- Different set of important skills learned over private practice.
- To promote change and to personalize care for each individual they treat
- Rich longitudinal data that observe change as it unfolds over time
- Understudied populations and problems in clinic
- Can improve the quality of care provided to patient with outcomes obtained.

Scope of research in private practice

Research: Creation of new knowledge and/or the use of existing knowledge in a new and creative way so as to generate new concepts, methodologies and understandings.

- This could include synthesis and analysis of previous research to the extent that it leads to new and creative outcomes.
- Clinical Trials: Investigating new treatments or medications.
- Effectiveness Studies: Assessing the impact of interventions on patient outcomes.
- Outcomes Research: Examining long-term effects and quality of life measures.
- Epidemiological Studies: Studying the prevalence and distribution of mental health disorders.
- Qualitative Research: Exploring patient experiences and perceptions.

Challenges and consideration

- Time constrains to engage in clinical research
- Affiliation to an academic or training institution
- Ethical concern and ethical committee clearance
- Keeping up to date with scientific literature.

Selecting Research Questions and Hypotheses

- Select a research question that arises in your clinical work: "Does intervention X help improve memory in moderate dementia patients in 3 months?" or "Does the depressive symptoms in this patient improves with this medication in 8 weeks?"
- State your question as a hypothesis, make a prediction about what you will find, and offer a rationale for your prediction.
- Identify a clear and specific hypothesis you want to test, not just a topic or interest area.
- Check the current state of the literature to see whether your hypothesis has already been tested.

SCED: Single case experimental design

Conducting a SCED: Guidelines

- Start by identifying an outcome measure you will use to evaluate the effectiveness of your intervention.
- you expect might change as a result of your intervention, measures that demonstrate implementation of your intervention, measures of the mechanism you expect your intervention to change, and standardized assessments.
- An AB design, where A is baseline and B is when you introduce your intervention—To meet minimal criteria for a SCED, your study must demonstrate at least two phase changes (i.e., from A to B and back to A, or show in at least three participants or behaviors or contexts that the outcome variable changes only when the intervention is introduced in all three cases or behaviors or contexts.
- In an elegant example (Wallenstein and Nock, 2007) published a letter to the editor of the American Journal of Psychiatry:
- they showed that their patient's non-suicidal self-injury decreased markedly following introduction of an aerobic exercise intervention, returned when she stopped the exercise, and remitted again when she restarted exercising.
- Practitioner–researcher may be able to use simple visual inspection, or simple t tests to analyze the data.
- Obtaining informed consent from patient.
- Fulfilling the dual role of treatment provider and research investigator.
- Ethical committee clearance for research proposal.
- Good clinical practice(GCP) training certificate is mandatory for investigator conducting clinical trials (preferably within five years)
- Minimum 3 years record keeping, 5 years for regulatory clinical trials

Good clinical practice (GCP) is an international ethical and scientific quality standard for designing, recording and reporting trials that involve the participation of human subjects.

- Compliance with this standard provides public assurance that the rights, safety and wellbeing of trial subjects are protected and that clinical-trial data are credible.

Keeping up to date with Scientific literature

- Access to an University library.
- PubMed (<https://www.ncbi.nlm.nih.gov/pubmed>)
- ResearchGate (www.researchgate.net)
- Google scholar (<https://scholar.google.com/>)

Data collection

- Collect data at every session.
- Clinician needs initial data response for diagnosis, progress monitoring data to monitor progress of treatment.
- For progress monitoring standardize scales to be used.(HAM-A, YBOCS)

Analysing data

- Aggregate data, tabulate into a database.
- Simple study designs and results like calculating mean and standard deviation of pre and post treatment on standardize scales can be analyzed using Excel.
- Research involving complex statistical question can be analyzed using Statistical package for social science (SPSS).
- Statistical consultant can be hired, but should be consulted early in data collection process.

Collaboration and networking

- A mentor who is already established in the field may guide.
- Research investigators, other professionals, and students at local universities, professional schools, or hospitals
- Practitioners who share your interests
- Research investigators you meet at a local grand rounds or similar, or at a professional conference
- Graduate and undergraduate students at a local university
- e.ips group, whats app group, sponsored groups

Publication

- Publishing a research paper can have many advantages for researchers, including:
 1. Career advancement,
 2. professional recognition,
 3. opportunities for collaboration,
 4. increased visibility,
 5. impact on society,
 6. credibility and trust,
 7. professional development,
 8. inspiration for future research, and
 9. contribution to the field

Aripiprazole and Its Usage in Childhood Psychiatric Disorders

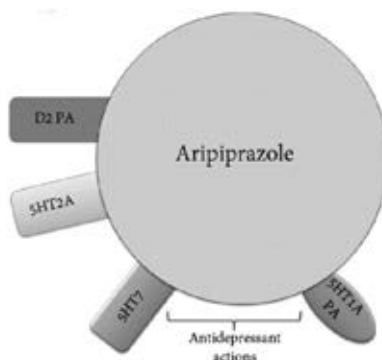
Dr Sanjay Garg, HOD - Psychiatry, Fortis Hospitals, Kolkata

Introduction

Psychiatric Disorders include a plethora of mental illnesses which manifest very commonly in children but often remain undiagnosed and untreated due to multiple reasons including lack of awareness, stigma and myths about psychiatric medications. Unfortunately, mental illnesses are spectrum disorders and the response to medications may be unpredictable adding to the uncertainty.

Antipsychotic medications constitute a major group of medications which are often used in multiple mental illnesses due to their versatility. They are generally classified as first generation or typical antipsychotics (e.g. haloperidol, trifluoperazine, etc) and second generation or atypical antipsychotics (e.g. olanzapine, risperidone, etc) considering their side effect profile mainly extrapyramidal side effects.

Aripiprazole is the first partial dopamine receptor agonist. It has been shown to exert greater agonist activity at presynaptic D2 autoreceptors than at the postsynaptic D2 receptors. The ability of Aripiprazole to act as either a functional agonist or antagonist sets it apart and hence it is often labelled as a third-generation antipsychotic. As it has a stabilising effect on the neurotransmission of Dopamine, it is said to be a Dopamine System Stabilizer (DSS).



(Image: Dr Sanil Rege, Psych Scene)

US Food and Drug Administration (US FDA) in September 2004 approved it for treatment of acute bipolar mania, including manic and mixed episodes associated with bipolar disorder. In November 2007, it was approved for treatment of schizophrenia in adolescents aged 13-17 years. Later, in November 2009 it was granted approval for treatment of irritability associated with autism spectrum disorders in children aged 6 to 17 years. In December 2014, it was approved for treatment of Tourette's Disorder.

Schizophrenia

In a study carried out by Findling et al, 302 children diagnosed with Schizophrenia of the age between 13 - 17 years, were randomised to receive either placebo or 10mg/day aripiprazole or 30mg/day aripiprazole for 6 weeks. Aripiprazole was found to have a significant reduction in the overall PANSS (Positive and Negative Symptom Scale) score in both the 10 and 30 mg/day groups compared to placebo.

The recommended starting dose is 2 mg/day up to a target dose of 10 mg/day.

Acute Treatment of Manic and Mixed Episodes in Bipolar I Disorder

296 patients aged 10 - 17 years with the diagnosis of bipolar I disorder, manic or mixed episode, with or without psychosis were studied by Werner et al by giving placebo or aripiprazole 10mg or 30mg daily. On YMRS (Young Mania Rating Scale), both the aripiprazole groups showed significant reductions as early as week one.

The recommended starting dose is 2 mg/day up to a target dose of 10 mg/day.

Irritability Associated with Autism Spectrum Disorders

Owen et al carried out a study in 218 patients aged 6 – 17 years with behavioural problems associated with Autism. A fixed dose of aripiprazole 5, 10 or 15 mg/day or placebo was used over a period of 8 weeks. Using ABC-I (Aberrant Behaviour Checklist-Irritability), a significant improvement was observed over placebo.

The recommended starting dose is 2 mg/day up to a target dose of 10 to 15 mg/day.

Tourette's Disorder

In a 12-week open label trial with flexible dosing, 15 participants within the age range of 7 to 19 years were evaluated by the Yale Global Tic Severity Scale over a period of 9 weeks. Significant decreases in the motor and phonic tics, global impairment and global severity was observed from 3 weeks onwards with no major adverse events.

The recommended starting dose is 2 mg/day up to a target dose of 5 to 20 mg/day.

Attention Deficit Hyperactivity Disorder

Findling et al recruited 23 youths between the ages of 8 – 12 years for a 6-week open label trial. ADHD Rating Scale-IV, CGI and Children's Global Assessment scale were used to monitor outcome. At a mean dose of 6.7 mg/day, a significant improvement was observed in ADHD and functional outcome measures.

Safety in Children

Aripiprazole does not cause any significant weight gain and has a significantly lower propensity for metabolic syndrome compared to olanzapine and risperidone.

Risk of hyperprolactinemia is very low.

Summary

Aripiprazole may represent an important alternative for children and adolescents who have experienced poor efficacy or significant metabolic adverse effects with their current antipsychotic treatment regimen. Aripiprazole provides a valuable additional therapeutic option for use in children with Bipolar Disorder. It improves irritability and aggressive behaviour and improves quality of life in Autism Spectrum Disorder. Low dose of aripiprazole can be used to control tic symptoms effectively in children and adolescents with TD and chronic tic disorders. It improves symptoms of Attention Deficit Hyperactivity Disorder.

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Our Armamentarium

BRAINSURE

L - Carnosine 100mg/5ml Syrup
L - Carnosine 200mg Tablet
Syrup -L carnosine 400mg/5ml
Plus -L Carnosine 200mg
 + DHA 150mg + Vit. D3 400IU)



ESI ROCK 5/10/FORTE/ LITE

Escitalopram Oxalate 5/10mg Tablet
 Escitalopram Oxalate 10mg+ Clonazepam 0.5/0.25mg Tablet



DIAL-OD

(Divalproex Sodium 1000/750/500/250 mg Extended Release Tablets)

FLUVOSTAR

(Fluvoxamine Maleate 50mg/100mg)



ARIOLA 5/10

Aripiprazole 5/10mg

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ER 50/100 TAPAIN

Tapentadol 50/100mg tablet



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Plus

Risperidone 3mg+ Trihexyphenidyl 2mg Tblet

Forte

Risperidone 4mg+ Trihexyphenidyl 2mg Tblet

LS

Risperidone 2mg+ Trihexyphenidyl 2mg Tblet

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Flupenthixol 0.5mg+ Melitracen 10mg Tablet

GABAGUARD

NT(200/400)

Gabapentin 200/400mg & Nortryptiline 10mg

PGBEST NT MSR 75 MSR 150 SR 75

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