Creating Community for Residents with Mental Illness – Behavioral Challenges

Quality Care Community Conference XIII
December 13, 2012
Today’s Facilitators

Lois Schram

Founder, LS Gerontology Seminars
This workshop will provide knowledge about the diagnosis of:

- Schizophrenia
- Bipolar disorder
- Depression

...and their resulting behaviors and Interventions which will result in new skills to build relationships and promote comfort within a sometimes stormy community.
Staff will be able to intervene more effectively when residents with mental illness exhibit behaviors not easily understood in the past.

“In the end, we will work more effectively as a team to build a Community where residents can thrive!”
The workshop will provide:

- **Information on:**
  Diagnostic criteria and the behaviors demonstrated by those with the diagnosis

  Interventions to reduce behaviors and promote resident comfort in the community.

- **Video clips** of people with schizophrenia

- **Sensitivity Exercise**
  What does it feel like to experience hallucinations, delusions, and disorganized thinking while being physical cared for
Schizophrenia is probably the most debilitating and unforgiving of all the mental disorders.

It keeps people from functioning at school, at work, in relationships, and in society.
Schizophrenia

- is a complex, biologically based mental disorder caused by genetics, brain physiology, and other risk factors.

- Its course is probably influenced by a person's environment, as well as biological makeup.

- Although it can be incapacitating and is typically incurable, it is treatable with continual medication.
People with schizophrenia usually have a history of acute psychosis.

_Psychosis is a disturbance of mental health that is severe enough to cause a change in normal personality, normal emotional balance, as well as detachment from reality._
Schizophrenia is a disorder characterized primarily by psychotic symptoms, including the following:

- **Hallucinations** – false visual, auditory, or tactile perceptions without a realistic basis or external cause
- **Delusions** – exaggerated or distorted thoughts and perceptions of self and others; or unrealistic belief in ability, knowledge, or ideas
- **Disorganized thought** – including nonsensical associations and disorganized speech
- **Disorganized behavior** – including aggressiveness and wild gestures
- **Difficulty showing or expressing emotion** – including flattened behavior (rigid posture, inability to move or talk, unresponsiveness)
Hallucinations:

... can pertain to any of the senses, but auditory hallucinations are the most common in schizophrenia.

It is especially common for people with schizophrenia to hear voices, which are usually insidious and threatening.

These voices, which are sometimes familiar and other times unknown, are always identified as separate from the person's own voice.

These hallucinations can include several voices that comment continually on the person's behavior...
* Delusions common in schizophrenia, like schizophrenic hallucinations, are characteristically antagonistic and threatening. 

* For example, delusions of persecution, which cause paranoia, are most common. People may claim that they are being harassed, followed, and provoked or that they are victims of conspiracy.

* Delusions that are unbelievable or fantastic are referred to as bizarre.

* For example, people have delusions of repeated alien contact, or that someone has read their mind and either stolen or replaced their thoughts-things for which there is no established truth.
Disorganized thinking and speech:

Considered by some to be the defining symptom of schizophrenia.

It often results in severely impaired communication.

Mild disorganization may cause people with schizophrenia to switch subjects during a conversation.

Moderately impaired thinking may result in speech that is vaguely or loosely related.

Severely disorganized thinking often results in "word salad," or incoherent and incomprehensible speech.
Occasional confusion and disorganization is normal for most people.

In schizophrenia, however, the degree of confusion and disorganization significantly reduces or destroys a person's ability to communicate.
Disorganized and bizarre behavior that is aggressive, childlike, exaggerated, emotive, or socially unacceptable is another definitive symptom of schizophrenia.

Unprovoked shouting, public exhibition, and constant irritation are common examples.

Appearance-based behaviors constitute a significant portion of the spectrum.

For example, people with schizophrenia have been known to routinely wear many layers of clothing, regardless of the weather. They may be disheveled or extremely dirty.
Disorganized behavior is not goal driven.

The person does intend to behave a certain way. This differs from delusional behavior, in which delusions motivate a person's behavior.

Disorganized thinking
Flattened affect is the clinical term for the emotionless state that is common in schizophrenia.

People with schizophrenia often do not express emotion and may appear unaffected, distant, or unresponsive.

Although flattened affect is found in other mental disorders, it is especially common in schizophrenia.
The deterioration of function is probably the most important symptom of the disorder. Major areas of dysfunction include the following:

* Interpersonal relationships
* School (i.e., for children, especially)
* Self-care
* Work
Positive and negative symptoms associated with schizophrenia include the following:

* Agitation (i.e., psychomotor agitation that can cause rocking or pacing)
* Confusion and disorientation
* Hyperactivity and distractibility
* Impaired coordination
* Insomnia and sleep deprivation
* Loss of appetite or delusional motivation to resist eating
* Loss of pleasure
* Poor judgment and lack of insight
* Sleeping too much
* Slowed reaction, including poor eye movement and tracking
* Unexpected or inappropriate smiling, laugher, or excitement
Concerns

* Reducing risk of suicide.
* Close monitoring of those with high risk.
* Identification and treatment of depression.
* Identification and treatment of command auditory hallucinations.
* Increasing social support.
* Improving a sense of productivity in patients.
Metabolic issues in schizophrenia

- High rates of smoking, poor dietary habits, inactivity, metabolic syndrome (abdominal obesity, presence of excess triglycerides, low HDL, HTN, Impaired fasting glucose or DM), obesity, DM.

- More for women than men.

- Clozapine and olanzapine (zyprexa) have the highest risk of metabolic complications.

- Doubling of mortality due to cardiovascular disease.
Being Schizophrenic
Treatment for Schizophrenia

* Schizophrenia is seldom curable; the disorder requires chronic treatment to reduce suffering and to restore daily function.
* Schizophrenia is a biological disease, it does not respond to changes in environment or to support therapy alone.
* Medication that influences brain activity is the cornerstone of treatment, and behavioral management therapy is used to support medication in most cases.
3 Basic Concepts

* Bio psychosocial, spiritual, cultural approach. Address the biological, psychological, social and spiritual needs.

* Rehabilitation. Focus on maintaining existing strengths and accommodating deficits.

* Person centered. Knowing the person well and individualizing the treatment plan to reflect the values and strengths of the person.
# Intervention and Treatment

- Team approach
- Primary care provider
- Psychiatrist
- Social worker
- Nurse
- Nursing assistant
- Occupational therapist
Intervention and Treatment

* Psychosocial interventions-Approach

* Normalizing of symptoms (hearing of voices is not restricted to people with psychiatric disorders alone)

* Correcting long standing schemas (eg ‘I am useless’) and linking their effect to depression and delusions, tackling belief about voices, such as their perceived power

* Apologizing for inadvertently upsetting the patient

* Addressing problems with self-monitoring,

* Attribution biases, reasoning biases (such as jumping to conclusions),

* Finding alternative explanations, disconfirmation strategies.
Although medication is the primary method of treatment for schizophrenia, additional therapy supports drug treatment, self-care, and daily routine. Other therapies common to treatment include the following:

* Inpatient therapy
* Partial hospitalization and intensive outpatient services
* Social skills training
* Family therapy
Hospitalization is used primarily to achieve the following goals, often at the onset of schizophrenia:

* To evaluate and diagnose a person
* To stabilize dangerous behavior
* To begin medication
* To monitor and ensure self-care and safety
* To familiarize a person with treatment
Intervention and Treatment

Social skills training (focused on to regain and strengthen function):

* Forming and maintaining relationships
* Learning to be a coworker
* Caring for the body (e.g., hygiene)
* Providing for needs, shopping, cooking, dressing, and so on
* Managing emotion
* Communicating with others
* Solving problems, creating solutions to life's daily dilemmas
* Self-sufficiency
Intervention and Treatment

* Psychosocial interventions.

* Social skills training and cognitive remediation aimed at improving memory and attention.

* Family intervention: Education and improved communication (particularly listening and negotiating skills), problem solving, and processing of emotions such as anger, reducing criticism, hostility, over-involvement.

* Cognitive behavior therapy for non responding psychotic symptoms. 40% have distressing symptoms despite medications.
Psychosocial interventions

* If a person does go out and no one follows, does that mean that it is an unusual day, that they have been “mad” to have worried about this, or that perhaps it is possible to go out because not all of their fears may be justified.

* Supportive therapy: Talking about distress and symptoms of psychosis can be helpful, taking patient’s views seriously about the difficulties that voices or delusions cause, while trying to improve their understanding of the issues, encouraging socialization to reduce isolation, etc.
Diet and Exercise

* **Diet**: reducing or eliminating desserts, offering healthier snacks, encouraging water intake, eliminating double portions should be considered.

* **Exercise**: at least one hour program twice a week or 45 min program three times a week should be considered.

* **Concept of recovery**: Patients with chronic mental illness can recover substantially from the illness and can regain a large part of their previous life. May apply to some residents in long term care.
* Stress management techniques

* Simple breathing exercises. Visualization exercises.


* Books, Relaxation CDs and other resources to reduce stress.
Medications to Treat Schizophrenia

Medications used to treat schizophrenia include the following:

- Traditional antipsychotics (neuroleptic drugs)
- Atypical antipsychotics
Antipsychotics

* Antipsychotics: consider reducing the dose, changing to safer and less toxic antipsychotics.

* In some residents, combination of two antipsychotics may be necessary.
Antipsychotics

New antipsychotics in general may be better for residents with chronic mental illness in long term care facilities because older antipsychotics have higher incidence of adverse effects (especially parkinsonism and tardive dyskinesia's) in this population particularly.

If resident is stable on older antipsychotic and has no obvious adverse effects, do not reduce the dose or change the medication but review tolerability every 6 months or if new problems arise.
Acetylcholine is important in the brain in counterbalancing dopamine levels. **Neuromuscular and neurological side effects** are less common with low-potency antipsychotics, but may occur in some people. These include the following:

* Acute dystonia (brief involuntary muscle spasm and twisting)
* Akathisia (severe restlessness that leads to agitation and anxiety)
* Mask-like expression
* Pseudo-Parkinson's disease (muscle tremor)
* Shuffling, unstable gait
Newer Atypical Antipsychotics to Treat Schizophrenia

The search for other drugs that work like clozapine without the harmful side effects has resulted in a new group, also considered atypical antipsychotics. They typically cause fewer side effects than traditional antipsychotics, including a lower risk of TD and agranulocytosis. Like clozapine, they help control negative symptoms, and patients tend to comply with their use.
This new group of drugs includes the following:

* Aripiprazole (Abilify®)
* Risperidone (Risperdal®)
* Olanzapine (Zyprexa®)
* Quetiapine (Seroquel®)
* Ziprasadone (Zeldox®, Geodon®)
* Paliperidone (Invega®, approved in December 2006 for adults and in April 2011 for adolescents 12 to 17)
* Lurasidone HCl (Latuda®, approved in October 2010)

These drugs control psychosis by blocking dopamine D2 receptors and the serotonin 5HT2 receptors in the brain. The addition of a serotonin blocker may be what boosts their efficacy.

* In August 2009, the U.S. Food and Drug Administration (FDA) approved the atypical antipsychotic drug asenapine (Saphris®) to treat schizophrenia and bipolar I disorder in adults.
The following are common side effects for these medications:

**Aripiprazole**
- Headache
- Nausea
- Restlessness accompanied with anxiety and agitation (called acathisia or akathisia)

**Risperidone**
- Agitation
- Anxiety
- Headache
- Insomnia
- Muscle tremor
Medications

Olanzapine
Drowsiness
Headache
Insomnia
Nasal congestion
Weight gain

Asenapine
Decreased sensitivity in the mouth
Drowsiness
Inability to remain still or motionless

Quetiapine
Dizziness and vertigo
Drowsiness
Headache
Loperidone (Fanapt®) to treat adults with schizophrenia. Side effects associated with this medication include the following:

* Congestion
* Dizziness
* Drowsiness
* Dry mouth
* Fatigue
* Rapid heart rate (tachycardia)
* Sudden, severe drop in blood pressure (orthostatic hypotension)
* Weight gain
Ziprasadone produces less weight gain and fewer metabolic side effects (e.g., insulin resistance) than other medications.

Side effects include excessive sleepiness (somnolence), nausea, dizziness, and upper respiratory infection.
* Bipolar disorder

* History of hypomania or mania. Usually also history of depressive episodes.

* Need mood stabilizers (lithium) and / or anticonvulsants (valproate [depakote][pills, capsules, sprinkles, liquid], lamotrigine [lamictal]) and / or antipsychotics.

* High risk of suicide, hospitalization. Comorbid cardiovascular illnesses.
Bipolar Disorder

* DSM IV TR diagnostic criteria

* Manic and hypomanic episode

* Period of elated or irritable mood,

* Grandiosity/boastfulness/inflated self esteem, decreased need for sleep, increased psychomotor activity, excessive talking and flight of ideas/racing thoughts.

* Depressive episode. Same as major depression.

* Mixed episode. Combination of manic and depressive symptoms.
Intervention and Treatment

* Psychosocial interventions

* Behavior therapy: or Behavior cognitive therapy: Many experts believe that behavioral strategies (focused on activation in depressed patients) more important than cognitive strategies.

* Interpersonal social rhythm therapy (IPSRT): Interpersonal issues plus ensuring daily rhythm of sleep, work and family life.

* Program structure: workshop, individualized pleasant/meaningful activity schedule, group activities.
NOTE: Older persons experience considerable disability and functional loss with fewer than five symptoms.
A. Five (or more) of the following symptoms have been present during the same 2-week period and represent a change from previous functioning.

At least one of the symptoms is either:

- depressed mood or
- loss of interest or pleasure.
1. Depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g., feels sad or empty) or observation made by others (e.g., appears tearful).

2. Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated by either subjective account or observation made by others).

3. Significant weight loss when not dieting or weight gain (e.g., a change of more than 5% of body weight in a month), or decrease or increase in appetite nearly everyday.

4. Insomnia or hypersomnia nearly every day.
5. Psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down).

6. Fatigue or loss of energy nearly every day.

7. Feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick).

8. Diminished ability to think or concentrate; or indecisiveness, nearly every day (either by subjective account or as observed by others).

9. Recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide.
B. The symptoms do not meet criteria for a Mixed Episode.

C. The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

D. The symptoms are not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g., hypothyroidism).

E. The symptoms are not better accounted for by Bereavement, i.e., after the loss of a loved one, the symptoms persist for longer than 2 months or are characterized by marked functional impairment, morbid preoccupation with worthlessness, suicidal ideation, psychotic symptoms, or psychomotor retardation.
Examples of Depressed Actions

**MOOD**
- Frequent crying
- Continuous complaining
- Being irritable
- Talking about feeling “blue” or “down in the dumps”

**THOUGHTS**
- Described hopelessness or worthlessness
- Suicidal comments
- Comments reflecting continuous negative observations
- Difficulty concentrating
Examples of Depressed Actions

PHYSICAL SIGNS

* Lack of participation
* Increased or decreased movement
* Changing eating habits
* Slowed speech
* Preoccupation with health
* Difficulty initiating activity on a daily basis
* Low energy, easily fatigued
Common Causes of Depressed Actions

INTERNAL CAUSES

* Physical illness, or disabilities
* Psychiatric disorders
* Medications
* Personal losses
* Poor vision, hearing, or mobility
* Sad thoughts, or memories
* Pessimistic habits of explaining problems
Common Causes of Depressed Actions

EXTERNAL CAUSES

* Absence of family and friends
* Death of loved ones
* Lack of meaningful work or recreational activity
* Unpleasant events or other people’s actions
* Poor lighting
* Lack of stimulation
* Staff “overcaring” or “doing for” rather than encouraging resident independence (learned helplessness or “excess disability”)
These are some of the tools which are used in the assessment of depression in the elderly:

1. **The Geriatric Depression Scale (GDS)**
   Developed by JA Yasavage et al in 1983 is a thirty question instrument that is useful in the screening of depression.

2. **The Geriatric Depression Scale** (short form)
   The GDS was modified by Yasavage in 1986 to 15 questions.

3. **Cornell Scale for Depression in Dementia**
   This assessment is administered by staff. It’s results are based upon observation rather than interview.

These tools help us to determine when a resident should be seen by mental health professionals.
# Depression

## Geriatric Depression Scale

**Patient:________________________**  **Examiner:________________________**  **Date:________________________**

**Directions to Patient:** Please choose the best answer for how you have felt over the past week.

**Directions to Examiner:** Present questions VERBALLY. Circle answer given by patient. Do not show to patient.

1. Are you basically satisfied with your life? yes no (1)  
2. Have you dropped many of your activities and interests? yes (1) no  
3. Do you feel that your life is empty? yes (1) no  
4. Do you often get bored? yes (1) no  
5. Are you hopeful about the future? yes no (1)  
6. Are you bothered by thoughts you can't get out of your head? yes (1) no  
7. Are you in good spirits most of the time? yes no (1)  
8. Are you afraid that something bad is going to happen to you? yes (1) no  
9. Do you feel happy most of the time? yes no (1)  
10. Do you often feel helpless? yes (1) no  
11. Do you often get restless and fidgety? yes (1) no  
12. Do you prefer to stay at home rather than go out and do things? yes (1) no  
13. Do you frequently worry about the future? yes (1) no  
14. Do you feel you have more problems with memory than most? yes (1) no  
15. Do you think it is wonderful to be alive now? yes (1) no  
16. Do you feel downhearted and blue? yes (1) no  
17. Do you feel pretty worthless the way you are now? yes (1) no  
18. Do you worry a lot about the past? yes (1) no  
19. Do you find life very exciting? yes no (1)  
20. Is it hard for you to get started on new projects? yes (1) no  
21. Do you feel full of energy? yes no (1)  
22. Do you feel that your situation is hopeless? yes (1) no  
23. Do you think that most people are better off than you are? yes (1) no  
24. Do you frequently get upset over little things? yes (1) no  
25. Do you frequently feel like crying? yes (1) no  
26. Do you have trouble concentrating? yes (1) no  
27. Do you enjoy getting up in the morning? yes no (1)  
28. Do you prefer to avoid social occasions? yes (1) no  
29. Is it easy for you to make decisions? yes no (1)  
30. Is your mind as clear as it used to be? yes no (1)

**TOTAL:** Please sum all bolded answers (worth one point) for a total score.

**Scores:** 0 - 9 Normal 10 - 19 Mild Depressive 20 - 30 Severe Depressive

Geriatric Depression Scale (Short Form)

1. Are you basically satisfied with your life?  Yes  No
2. Have you dropped many of your activities and interests?  Yes  No
3. Do you feel that your life is empty?  Yes  No
4. Do you often get bored?  Yes  No
5. Are you in good spirits most of the time?  Yes  No
6. Are you afraid that something bad is going to happen to you?  Yes  No
7. Do you feel happy most of the time?  Yes  No
8. Do you often feel helpless?  Yes  No
9. Do you prefer to stay at home, rather than going out and doing new things?  Yes  No
10. Do you feel you have more problems with memory than most?  Yes  No
11. Do you think it is wonderful to be alive?  Yes  No
12. Do you feel pretty worthless the way you are now?  Yes  No
13. Do you feel full of energy?  Yes  No
14. Do you feel that your situation is hopeless?  Yes  No
15. Do you think that most people are better off than you are?  Yes  No

Scoring:
Assign one point for each of these bolded answers:
A score of 0 to 5 is normal. A score above 5 suggests depression.

# Depression

## Cornell Scale for Depression in Dementia

Ratings should be based on symptoms and signs occurring during the week before interview. No score should be given if symptoms result from physical disability or illness.

### SCORING SYSTEM

<table>
<thead>
<tr>
<th>a</th>
<th>0</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

### A. MOOD-RELATED SIGNS

1. Anxiety; anxious expression, rumination, worrying
2. Sadness; sad expression, sad voice, tearfulness
3. Lack of reaction to pleasant events
4. Irritability; annoyed, short tempered

### B. BEHAVIORAL DISTURBANCE

5. Agitation; restlessness, hand wringing, hair pulling
6. Retardation; slow movements, slow speech, slow reactions
7. Multiple physical complaints; score 0 if gastrointestinal symptoms only
8. Loss of interest; less involved in usual activities; score 0 only if change occurred acutely, i.e., in less than one month

### C. PHYSICAL SIGNS

9. Appetite loss; eating less than usual
10. Weight loss; score 2 if greater than 5 pounds in one month
11. Lack of energy; fatigues easily, unable to sustain activities

### D. CYCLIC FUNCTIONS

12. Diurnal variation of mood; symptoms worse in the morning
13. Difficulty falling asleep; later than usual for this individual
14. Multiple awakenings during sleep
15. Early morning awakening; earlier than usual for this individual

### E. IDEATIONAL DISTURBANCE

16. Suicidal; feels life is not worth living
17. Poor self-esteem; self-blame, self-deprecation, feelings of failure
18. Pessimism; anticipation of the worst
19. Mood congruent delusions; delusions of poverty, illness or loss

### NOTES/CURRENT MEDICATIONS:

<table>
<thead>
<tr>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>
# PLEASANT EVENTS FOR CONFINED ELDERS

<table>
<thead>
<tr>
<th>Looking out the window at nature</th>
<th>Remembering family events</th>
<th>Meeting someone new</th>
<th>Seeing the sunset, sunrise</th>
<th>Planning a trip</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eating a snack</td>
<td>Buying something for yourself</td>
<td>Praising someone</td>
<td>Reading a good story, play, or poem</td>
<td>Talking on the phone</td>
</tr>
<tr>
<td>Doing a task well</td>
<td>Kissing and hugging family</td>
<td>Breathing fresh clean air</td>
<td>Feeling the Lord in his/her life</td>
<td>Expressing something clearly</td>
</tr>
<tr>
<td>Being told he/she is needed</td>
<td>Being understood</td>
<td>Going to a party</td>
<td>Seeing someone else happy</td>
<td>Being invited out</td>
</tr>
<tr>
<td>Watching TV</td>
<td>Sleeping under warm covers when it is cold outside</td>
<td>Thinking about something good in the future</td>
<td>Having peace and quiet</td>
<td>Finishing a task</td>
</tr>
<tr>
<td>Snuggling in a comfortable chair</td>
<td>Laughing</td>
<td>Holding hands</td>
<td>Doing a puzzle</td>
<td>Eating lunch with friends</td>
</tr>
<tr>
<td>PLEASANT EVENTS FOR CONFINED ELDERS</td>
<td>Watching people</td>
<td>Being with animals</td>
<td>Taking a walk</td>
<td>Having a good open talk with a friend</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>-----------------</td>
<td>--------------------</td>
<td>---------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>Helping someone else</td>
<td>Being complimented</td>
<td>Wearing clean clothes</td>
<td>Having family members do something that makes him/her proud</td>
<td>Combing his/her own hair</td>
</tr>
<tr>
<td>Hearing a joke</td>
<td>Watching the clouds in the sky</td>
<td>Getting a manicure</td>
<td>Having his/her hair brushed</td>
<td>Getting letters, cards or notes</td>
</tr>
<tr>
<td>Having visitors</td>
<td>Listening to the radio</td>
<td>Hearing nature sounds</td>
<td>Wearing new clothes</td>
<td>Taking care of plants and gardens</td>
</tr>
<tr>
<td>Hearing about family activities</td>
<td>Having a new/original idea</td>
<td>Talking with grandchildren</td>
<td>Expressing love</td>
<td>Taking a nap</td>
</tr>
<tr>
<td>Playing with family</td>
<td>Taking a bath</td>
<td>Being with happy people</td>
<td>Solving a problem</td>
<td></td>
</tr>
</tbody>
</table>
Conclusions

* Bottom Line
* Chronic mental illness is prevalent and associated with high resource utilization.
* Concept of rehabilitation (such as having a workshop, exercise program, social skills training)
* Along with palliative care (includes social support, symptom control with medications and counseling,
* Treatment of comorbidity (such as metabolic issues, cardiovascular disease)
* Should be the basis of treatment plan.