Evidence-Based Practice

A GUIDE TO EVIDENCE-BASED PRACTICES

for PSYCHIATRIC HOSPITALIZATION:

ADULTS WITH MENTAL ILLNESSES *and* CO-OCCURRING SUBSTANCE USE DISORDERS

SAGINAW COUNTY COMMUNITY MENTAL HEALTH AUTHORITY

This report was produced with the support of the Saginaw County Community Mental Health Authority

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Compiled by Barbara Glassheim

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FOREWORD

This document was prepared as a resource for service delivery planning targeted to adults hospitalized with mental illnesses and co-occurring substance use disorders. It is designed to provide guidance to facilitate effective inpatient treatment through the use of practices that have shown to be beneficial with the ultimate goal of preventing rehospitalization.

A review of relevant literature was conducted to compile the information contained in this report. It is derived primarily from research in the fields of mental health and substance use disorder treatment. Much of the content can be found in previous evidence-based practice reports (on individuals with mental illness and substance use disorders) published by the Saginaw County Community Mental Health Authority and available on the Web at http://sccmha.org/quality.html.

The electronic version of this report has hyperlinks to web sites and sections within it (denoted by blue underlined text) embedded within the document so that the reader can find additional information quickly. A variety of resources are provided in Appendix B for readers who wish to pursue more information on topics of interest. Hyperlinks to web sites for programs and interventions discussed within the report are included where available.

It should be noted that this report is a snapshot in time and depicts practices currently available. As this area of study develops, and new evidence accumulates, revisions and updates will be needed.

 The writer gratefully acknowledges the support and sponsorship of SCCMHA in the production of this report and commends the organization for its endeavors to offer the highest quality services and supports to the community.

Barbara Glassheim[1]
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[1] Barbara Glassheim, LMSW, ACSW, BCD a consultant to the Saginaw County Community Mental Health Authority, has extensive public and private sector behavioral health care clinical and administrative experience.

INTRODUCTION AND OVERVIEW

This report consists of a review of the literature on evidence-based practices that have been shown to be of benefit to consumers (and their supporters) with mental illnesses and co-occurring substance use disorders and can be applied within inpatient settings.

A significant number of evidence-based practices, approaches, treatments, and programs have been developed over the past several decades. However, it is clear that most consumers do not have the opportunity to benefit from them because they are not used in everyday practice in mental health settings. This access disparity is even greater for consumers from ethnic and racial minority groups. Moreover, even when they are available, they frequently deviate from the original model that demonstrated success. This can lead to lack of positive benefits. When results do not match anticipated benefits, practices are often abandoned. It is hoped that this document will help foster more widespread adoption of evidence-based practices in inpatient settings.

The first section of this report offers information related to understanding evidence-based practices. The next section discusses consumer empowerment and the recovery context. It contains information on consumer-run and self-help programs as well as interventions designed to help consumers manage their illnesses.

The third section provides information regarding working with families and an overview of Family Psychoeducation. This is followed by a section on various psychotherapeutic interventions that have been found to produce beneficial outcomes for consumers. The next section offers information on medications and issues related to medications including nonadherence, polypharmacy, and the use of algorithms. It also contains a discussion of electroconvulsive therapy. The final section offers information on service delivery and includes a discussion of case management and assertive community treatment as well as acute care.

Three appendices are attached to the report. The first includes references, the second offers resources that can be readily accessed on the internet, and the third presents some of the highlights of the Michigan Implementation of Medication Algorithms.

AN OVERVIEW OF EVIDENCE-BASED CONCEPTS

The term "evidence-based" practice refers to a clinical intervention that has a strongly rooted scientific foundation and produces consistent results in assisting consumers achieve their desired goals or outcomes. An evidence-based practice is comprised of three components:

1. The highest level of scientific evidence
2. The clinical expertise of the practitioner
3. The choices, values and goals of the consumer

The strength of evidence for any given practice is referred to as the level of evidence. The highest level of evidence is based on a research methodology that is known as the randomized clinical or controlled trial (RCT). RCTs use sufficiently large number of participants (usually a minimum of thirty), or "subjects", who are randomly assigned to a specific intervention (the experimental group), or to a group that receives a routine or another intervention (the control group). In some studies, the control group does not receive any intervention (e.g., they are put on a waiting list). Randomization reduces the potential for bias in the results. Outcomes from RCTs that are then replicated in typical clinical settings are assigned the highest level in the hierarchy of evidence.

In the most robust RCT the investigators and participants are "doubled blinded" as to which subjects are in the experimental group and which are in the control group. In most studies examining interventions of a psychosocial nature (e.g., assertive community treatment), it is impossible to keep practitioners and consumers unaware of the intervention. However, it may be possible to keep interviewers and/or individuals who are conducting the data analysis blind until data are collected and analyzed.

The next level of scientific evidence comes from RCTs that have not been replicated outside the controlled experimental situation. Less rigorous research designs are correlational research designs which entail observation of relationships to discern whether factors are associated or correlated, quasi-experimental studies which do not assign subjects to control and experimental groups on a random basis, and pilot studies. Pilot studies are evaluations or demonstrations that allow a comparison of the "before and after" the introduction of the intervention. They typically include findings from uncontrolled studies that can be used to refine the interventions and investigational methodologies in subsequent controlled studies.

Promising practices are those which show potential for positive results and or have significant evidence or expert consensus for their use. Emerging practices are innovative practices that deal with specific needs, but are not supported by the strongest scientific evidence. Expert consensus is another level of evidence that represents the incorporation of the opinions of practitioners who are deemed subject matter experts in their fields. Case reports or case studies constitute anecdotal evidence.

Meta-analyses use statistical techniques to combine the results of multiple research studies in order to determine the magnitude and consistency of the effect of a specific intervention detected across studies. In other words, the goal of a meta-analysis is to determine the magnitude and consistency of the outcome (i.e., the size or clinical significance) of a particular intervention detected across studies. It is important for a reviewer of a meta-analysis to ascertain whether the report includes studies with negative or insignificant results, and whether all of the studies are randomized or not. Omitting studies with negative or insignificant results and/or mixing differing levels of quality research can skew the results of a meta-analysis.

The different research designs found in the literature and need to confer significance to their findings has lead to use of a grading system known as Sackett's rules of evidence that is based on five levels of evidence:

Level I: Large randomized trials, producing results with high probability of certainty. These include studies with positive effects that show statistical significance and studies demonstrating no effect that are large enough to avoid missing a clinically significant effect

Level II: Small randomized trials, producing uncertain results. These are studies which have a positive trend that is not statistically significant to demonstrate efficacy or studies showing a negative effect that are not sufficiently large to rule out the possibility of a clinically significant effect

Level III: Non-randomized prospective studies of concurrent treatment and control groups, i.e. cohort comparisons between contemporaneous subjects who did and did not receive the intervention

Level IV: Non-randomized historical cohort comparisons between subjects who did receive the intervention and earlier subjects who did not

Level V: Case series without controls. The clinical course of a group of consumers is described, but no control of confounding variables is undertaken. This is a descriptive study which can generate hypotheses for future research but does not demonstrate efficacy

A guideline consists of a set of intervention strategies designed to assist practitioners in the process of clinical decision-making by synthesizing research and expert consensus into a practical form. Guidelines have been written for a number of illnesses including major depression, bipolar disorder, acute stress disorder, posttraumatic stress disorder, postnatal depression, and others are available from a variety sources including professional associations, such as the American Psychiatric Association, as well as the Agency for Healthcare Research and Quality, among others. An example is the Patient Outcomes Research Team (PORT) guideline for the treatment of schizophrenia.

An algorithm is a series of sequential steps that are to be precisely followed without deviation in the administration of an intervention. It is usually constructed as a flow chart that functions as a decision guide with recommendations regarding what changes are to occur based upon the consumer's response to the intervention. Thus, the results of each step determine the next step. The Texas Implementation of Medication Algorithm (TIMA) for the treatment of schizophrenia, bipolar disorder, and major depression represents the most extensive application of algorithms thus far. The Michigan Implementation of Medication Algorithms (MIMA) is based on TIMA.

The use of guidelines and algorithms for medication has been shown to improve the quality of care and outcomes for consumers. They are designed to reduce practice variation, reduce polypharmacy, increase predictability of costs, as well as provide a benchmark for monitoring care and evaluating interventions. It is also thought that their use reduces liability exposure as well. In sum, they are tools designed to help practitioners in making clinical decisions to optimize outcomes; they are not a substitute for clinical judgment.

Effectiveness refers to whether an intervention works in typical clinical settings. One of the biggest challenges is moving an efficacious intervention into routine settings to generate effective results. Most efficacy studies only include participants who are in good physical health, do not have any comorbid conditions such as a substance use disorder, and/or are adherent to treatment regimens. Moreover, highly trained and supervised specialists adhering to strict protocols that require frequent monitoring of the participants often conduct them. Thus, many interventions work better in clinical research then in everyday practice settings. This so-called efficacy-effective gap is now a matter of national concern with the drive to make evidence-based practices widely available. This report

contains information about practices with demonstrated effectiveness – that is, they have been consistently applied in everyday practice settings with success.

Fidelity refers to the level of adherence to the original model as specified in written materials, typically a manual, or by researchers. The degree of fidelity to the model affects outcomes. Research has demonstrated that the level adherence to the model strongly affects the ability to achieve the desired outcomes. However, it is sometimes necessary to adapt a practice to fit actual practice settings so that complete adherence to the original model is not maintained. This is referred to as adoption. This occurs because, as previously noted, controlled trials typically use individuals who are not representative of populations in typical settings. In order to be most effective, interventions need to be tailored to individuals with respect to gender, age, ethnicity, and culture.

The extent to which a practice can be explained in a manual, appraised for fidelity to the model and adopted in everyday service settings is the gold standard of evidence-based practices. A manual needs to clearly articulate the goals and standardized techniques of the intervention, to allow for comparison of practice with the original model. When used with a fidelity scale, a manual can reduce drift from the original model.

A reader should review empirical literature with critical appraisal. The methodological features of a study need to be scrutinized when evaluating its significance. The design of the study, whether it is experimental or quasi-experimental, is of critical importance. The choice of outcome measures should reflect independent living outcomes, as well as reduction or remission of symptoms. The criteria for inclusion and exclusion should also be analyzed since many studies do not take into consideration differential effects on ethnocultural groups. The length of follow-up is important to assess, as it can be an indicator of enduring effects of an intervention. Finally, a fidelity instrument allows for comparison with the original model in subsequent studies.

EMPOWERMENT AND RECOVERY

Studies indicate that individuals who actively participate in their own treatment and who develop effective coping skills have the most favorable outcomes and enjoy a better quality of life. People who experience mental illness are experts in their experience of symptoms, the manner in which other people respond to them, and they know what is helpful to them and what is not.

Self-help has been demonstrated to reduce feelings of isolation, improve practice knowledge, and support coping efforts. Studies show that consumers who participate in self-help programs have more hopefulness about the future, enhanced self-esteem, more satisfying interpersonal relationships, fewer symptoms and fewer hospitalizations.

The recovery paradigm regards consumers as individuals who require accommodations to perform tasks to accomplish life's activities, rather than as individuals who cannot function due to a disability.

THE RECOVERY CONTEXT

Driven by a burgeoning consumer/survivor movement and documented in many personal accounts, along with the Surgeon General's report on mental health as well as the report of the President's New Freedom Commission, there has been increasing emphasis on recovery in mental health care systems. Described in various ways, recovery is generally seen as a process of consumer empowerment wherein consumers learn to overcome daily challenges wrought by illness and symptoms, live independently, and have the opportunity to make decisions regarding their lives in a self-determined manner. Recovery does not denote cure, but is rather a process of acquiring the skills needed to learn to live with an illness so that the illness and its symptoms are not the dominant, prevailing force in the person's life. Recovery is thus the means by which consumers live, work, learn, and participate fully in community life. It is a person-centered experience. It requires a commitment on the part of the service delivery system to help consumers move ahead with their lives and pursue their individual goals instead of just achieving clinical stability.

The recovery framework is characterized by shared decision-making in which consumers and providers are full partners in the treatment process. Providers are a source of hope, affirmation, and education and collaborate with consumers and their support systems (e.g., family) in a manner that fosters opportunity for choice and building resilience. In an evidence-based organizational culture, practitioners are professionals with expertise who convey information to consumers about the various options available to them to work on their goals and objectives. Consumers determine what will work for themselves based on their own perspectives.

The critical components of recovery include:

- Choices among good clinical care options
- Peer support and relationships
- Support of family and friends
- Work or other meaningful daily activity
- A feeling of power and control over one's life
- Overcoming stigma individually and collectively
- Productive involvement in the community
- Access to needed resources
- Education about the illness and about helpful behaviors to manage symptoms and triggering stressors

Resilience is an important concept in understanding the recovery paradigm. It is the ability to weather stresses, both large and small, bounce back from trauma and get on with life, learn from negative experiences and translate them into positive ones, gather the strength and confidence to change directions when a chosen path becomes blocked or nonproductive. It encompasses strengths that function as protective factors to enable one to withstand adversity and maintain well being. Supporting protective factors helps prevent the negative impact of stress and adversity and promotes health.

There is a growing movement to restore full citizenship to individuals with disabilities. Central to this movement is the concept of self-determination, which encompasses the right of individuals to exercise full power over their own lives irrespective of the presence of illness or disability. Michigan became the first state to formally put forward self-determination for individuals with mental illness when the Michigan Department of Community Health issued its policy and practice guideline on this subject on July 18, 2003.

Self-determination offers individuals the right to direct their own services using a personal budget to select and fund supports and services, make decisions regarding their health and welfare, and have freedom from involuntary treatment. It also promotes consumers playing vital roles in the design, delivery, and evaluation of services and supports. The development of a personal recovery plan and an individualized budget to procure services and supports are the hallmarks of self-determination.

At present, no evidence-based recovery practice per se exists due to the lack of randomized clinical trials with established results. However, the wealth of information from the recovery literature does provide ample evidence that recovery takes place and that the processes can be described in manuals, and taught to consumers. In fact, long-term follow-up studies indicate that two-thirds of people with a serious mental illness are able to leave the mental health system and attain independent living.

SELF-CARE AND CONSUMER-DELIVERED SERVICES

As consumers have become more active as participants in planning and directing service delivery, there has been a growing emphasis on self-care approaches and peer-delivered supports. Additionally, consumers are increasingly being employed as members of formal mental health treatment teams in traditional provider roles. The latter category includes consumers with professional training (who are sometimes referred to as “prosumers”) as well as those who are “survivors”.

Consumer-delivered and consumer-operated services, which are planned, managed, and operated by consumers, are increasingly integrated into traditional mental health systems. Consumer partnership services where consumers deliver services, but program control is shared with non-consumers, are also becoming more prevalent. Drop-in centers, clubhouses, housing programs (including outreach to individuals who are homeless), vocational programs, advocacy programs, benefits acquisition services, and anti-stigma programs (including repertory companies, speakers bureaus, video productions, and others) are salient examples of both consumer-delivered and consumer partnership programs.

Consumers are being hired as employees in increasing numbers in positions such as case manager, peer counselor, and peer specialist. Consumers have also been added to crisis and respite service programs, telephone hotlines, crisis residential services, in vocational programs as job coaches, psychoeducational programs, residential services, and supported education programs, etc.

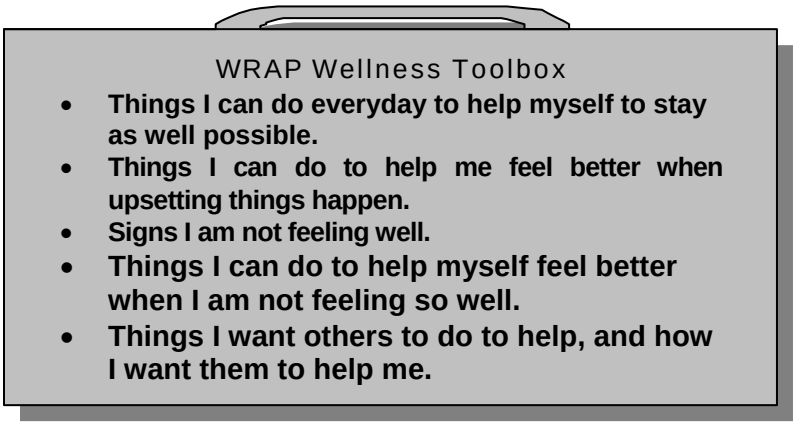
Research has demonstrated consistently positive outcomes for the various consumer-delivered and operated services. In fact, consumer run case management programs have been shown to be as effective as professionally delivered case management services. Crisis teams that include

consumers are as effective as those with professionals. Vocational services provided by consumers are associated with higher rates of employment.

Self-help has taken many forms including self-help groups, peer counseling, illness self-management, advocacy, and others. These include Recovery, Inc., GROW, the Depression and Bipolar Support Alliance (DBSA), Schizophrenics Anonymous, Double Trouble in Recovery, and Emotions Anonymous, to name a few. In addition, consumers have developed a number of noteworthy self-help programs.

WRAP

The Wellness Action Recovery Plan (WRAP) developed by Mary Ellen Copeland is a recovery-oriented practice in which individuals develop their own system for monitoring and responding to symptoms to attain wellness. In this program consumers and providers train and are trained together to encourage empowerment. The program helps professionals understand mental illness from the consumer's perspective. Copeland uses case vignettes to exemplify the approach using the development of a wellness toolbox, changing the title of the case manager to recovery specialist, and having the consumer complete a recovery plan instead of a treatment plan.



The Wrap is divided into six sections:

❶ Daily Maintenance Plan (including Wellness Toolbox)
❷ Triggers
❸ Early Warning Signs
❹ Symptoms that Occur When the Situation is Worse
❺ Crisis Plan
❻ Post Crisis Plan

RECOVERY MANAGEMENT PLAN

Wilma Townsend's **Recovery Management Plan** process is based on what she terms the core principles of recovery:

- The consumer directs the recovery process; therefore, consumer input is essential throughout the process.
- Consumers are able to recover more quickly when their hope is encouraged, enhanced, and/or maintained; life roles with respect to work and meaningful activities are defined; spirituality is considered; culture is understood; educational needs as well as those of their family/significant others are identified, and socialization needs are identified.

- The clinician's initial emphasis on "hope" and the ability to develop trusting relationships influences the consumer's recovery.
- Clinicians operate from a strengths/assets model.
- Clinicians and consumers collaboratively develop a recovery management plan. This plan focuses on the interventions that will facilitate recovery and the resources that will support the recovery process.
- Family involvement may enhance the recovery process. The consumer defines his/her family unit.
- Mental health services are most effective when delivery is within the context of the consumer's community.

BRIDGES

The Building Recovery of Individual Dreams and Goals through Education and Support (BRIDGES) program is a recovery education model. Classes are held weekly for fifteen weeks in two-hour blocks. Class leaders are always consumers and work in groups of three with a leader/facilitator, a site coordinator, and an assistant. After finishing the course, leaders assist class members in starting peer support groups for participants to facilitate. BRIDGES is part of the SAMHSA Consumer Operated Services Program.

Researchers have documented a number beneficial effects for consumers who participate in self-help programs including enhanced self-esteem and well being, reduced hospitalizations, better community adjustment, decreased substance abuse, the opportunity to serve as positive role models, and avoidance of stigma and discrimination. Participants experience the "helper's principle" wherein individuals who assist others derive enhanced self-esteem and feeling of self-worth. The SAMHSA Consumer Operated Services Programs found that efforts to develop and sustain consumer-operated services require effective technical assistance, strategic planning, and adequate funding. Self-care is an evidence-based practice based on research that confirms its significance. It is used both as an adjunct to traditional services and as an alternative to traditional services.

FAMILY-TO-FAMILY EDUCATION PROGRAM (FFEP)

There are also family self-help and advocacy programs designed to assist families in coping with a loved one's illness. The most noteworthy of these is the National Alliance for the Mentally Ill's (NAMI) Family-to-Family Education Program (FFEP). It is a free twelve week, peer-based structured program for family members of individuals with severe mental illness, including schizophrenia, major depression, bipolar disorder, borderline personality disorder, anxiety disorder, obsessive-compulsive disorder, and co-occurring substance use disorders. The program is being run by trained NAMI members in forty-four states. It was developed by Joyce Burland, Ph.D. in the early 1990s and uses a structured, scripted manual that offers families information about mental illness, treatment options, medications, and rehabilitation programs. Families also learn self-care and communication skills along with problem-solving and advocacy approaches.

Two studies have been conducted on results of participation in the Family-to-Family Education Program. Both showed that participants had an increased sense of empowerment regarding the mental health system, felt better able to cope with their family member and experienced diminished subjective burden.

The above-noted programs are examples of illness self-management programs, which are peer operated, and focus on helping people cope more effectively with their illness. Illness management programs, on the other hand, are professionally-based approaches designed to help consumers cope more effectively with their symptoms, gain skills to enhance their effective collaboration with

professionals, and reduce their vulnerability to relapses. SAMHSA's Illness Management and Recovery Program is an evidence-based intervention that exemplifies the latter approach.

ILLNESS MANAGEMENT AND RECOVERY (IMR)

Illness Management and Recovery consists of psychoeducation which includes the provision of information to consumers about their illnesses, including symptoms, stress management strategies, side effects of medications, and warning signs of impending relapse. Illness Management and Recovery uses both individual and group formats, as well as combinations of both formats, depending upon need. The individual format is easier to tailor to the specific needs of the individual, allowing for more time on specific elements, whereas the group format has the advantage of providing more sources for feedback, role modeling, and social support. The program consists of a series of weekly sessions designed to help consumers develop and implement strategies for the management of their illness and moving forward with their lives. It generally lasts for three to six months and can be provided in the community, the person's home, or can be office-based.

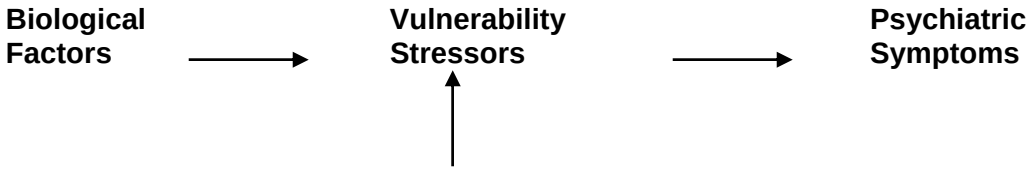
The goals of Illness Management and Recovery are to:

- Instill hope that change is possible
- Develop a collaborative relationship with a treatment team
- Help people establish personally meaningful goals to strive towards
- Teach information about mental illness and treatment options
- Develop skills for reducing relapses, dealing with stress, and coping with symptoms
- Provide information about where to obtain needed resources
- Help people develop or enhance their natural supports for managing their illness and pursuing goals

The following topics are covered in nine educational handouts:

1. Recovery Strategies
2. Practical Facts about Schizophrenia/Bipolar Disorder/ Depression
3. The Stress-Vulnerability Model and Strategies for Treatment
4. Building Social Support
5. Using Medication Effectively
6. Reducing Relapses
7. Coping with Stress
8. Coping with Problems and Symptoms
9. Getting Your Needs Met in the Mental Health System

The stress-vulnerability model is used to teach relapse prevention by disputing beliefs that relapses occur randomly and cannot be prevented. It suggests that vulnerability to relapses may be reduced by biological factors (such as by taking medications as prescribed and avoiding drugs and alcohol), environmental factors (such as enhanced social supports and reduced stress), as well as personal factors (such as meaningful structure and improved coping skills).



According to this model, a person has a biological vulnerability for a particular mental illness. The person with a biological vulnerability to the illness may develop that illness spontaneously or when

experiencing stress. When the illness develops under the latter condition, it may recur intermittently. Vulnerability appears to increase with repeated recurrences for some individuals.

Illness Management and Recovery practitioners incorporate a number of cognitive-behavioral techniques designed to help the consumer learn to cope with symptoms and develop skills to deal with stress and relapses. Behavioral tailoring for using medications as prescribed encompasses teaching consumers strategies to incorporate medication use into their daily lives. This entails the use of cues as reminders to minimize forgetting to take medications. Examples include placing medication next to a toothbrush or deodorant, on the kitchen counter (to pair them with meal preparation), and wearing a watch with an alarm. Coping skills training is comprised of cognitive-behavioral interventions to cope with symptoms. For example, distraction techniques (e.g., listening music) are used to cope with auditory hallucinations. Relaxation training teaches muscles relaxation and breathing techniques paired with relaxing thoughts, which can be used when the person is in situations that evoke anxiety. Relapse prevention is also a significant element of the program. A discussion of this intervention is included in the section on prevention. Cognitive restructuring is also part of the program and used on a formal as well as informal basis. Information on cognitive restructuring can be found in the section on psychotherapeutic interventions. The practitioner uses a number of behavioral interventions to help people master skills including reinforcement, shaping, modeling, role-playing, and practice. Skills are practiced during sessions and homework assignments are given so that the person can practice techniques in vivo. Family members are encouraged to become involved and assist the consumer.

The more than twenty-five studies conducted on Illness Management and Recovery indicate that psychoeducation is effective in improving consumers' knowledge about their illness, but does not affect other outcomes. On the other hand, cognitive-behavioral interventions are effective in helping those consumers who elect to take medication incorporate it in their daily lives. Consumers are able to learn to recognize and respond to early warning signs of relapse and thus prevent relapse and hospitalization. Cognitive-behavioral interventions are successful in assisting consumers to develop more effective coping strategies for dealing with symptoms which leads to reduced symptom severity and distress.

The SAMHSA Illness Management and Recovery toolkit is available for download from http://mentalhealth.samhsa.gov/cmhs/communitysupport/toolkits/illness/.

PSYCHIATRIC ADVANCE DIRECTIVES (PADS)

Psychiatric advance-directives (PADs) are an emerging method of treatment planning that is self-directed. Advance directives are designed to establish an individual's preferences for intervention should the individual become unable to communicate those preferences as result of a crisis or incapacity. There are two forms of advance directives. The instructional directive informs providers what to do about treatment in the event that the individual becomes incapacitated. The proxy directive designates an individual the consumer wants to make treatment decisions in the event that he or she becomes unable to do so.

On January 3, 2005, the Michigan Mental Health Code was amended to allow individuals to create Psychiatric Advance Directives. Under the law, providers must comply with consumer advocate directives unless treatment is not consistent with generally accepted mental health best practices. The consumer is allowed to waive the right to revoke a consumer advocate designation for 30 days and allow the advocate to make mental health treatment decisions only if both a physician and a mental health practitioner have examined the consumer and certify, in writing, that the consumer is incapable of making decisions on their own behalf.

Online psychiatric advance directives are available form the Bazelon Center for Mental Health Law at http://www.bazelon.org.advir.html/. There are also a number of self-directed PAD

programs that create a dialogue with the user who is then guided through a series of questions about key areas such as medication, emergency responses, specific interventions, and treatments. The answers to the queries drive the branching logic and enable a concise presentation of the material. AD MAKER is an example. The National Mental Health Association (http://www.nmha.org/), in conjunction with SAMHSA has developed an implementation resource kit for creating and implementing PADs that is available on line.

While there have been no empirical investigations of the effects of PADs, they are a promising practice to increase consumer empowerment and autonomy and improve crisis intervention planning. It is thought that they also have the potential to reduce hospitalizations, court proceedings, and costs. Studies indicate that compliance with advance directives can only be assured when they are disseminated to providers. The literature also provides the caveat that proxy decisions are effective only when consistent with the person's wishes.

ALTERNATIVES TO SECLUSION AND RESTRAINT

Seclusion[2] and restraint[3] are violent, stressful, and humiliating incidents for both patients and the staff members who impose them and physical injuries to patients and staff are quite common. The use of restraint and seclusion can be lethal due to asphyxia being held face down with staff sitting or putting pressure on an individual's person's back or abdomen, or when staff have placed blankets or towels around the face; aspiration from swallowing one's own secretions while being restrained face up; and cardiac events brought on by exertion, medication interactions, and unknown cardiac anomalies. Moreover, these risks are elevated by numerous medical conditions (e.g., obesity, asthma, bronchitis, or intoxication) and by psychotropic medications that alone can lead to hyperthermia. Restraint and seclusion traumatize the person, impair therapeutic relationships, and can significantly impede recovery. Restraints are particularly traumatizing to people who have been victims of physical and sexual abuse. Restraints eliminate the ability of patients who are deaf and use American Sign Language to communicate to express physical or emotional distress, increasing the risk of harm or death.

Restraint and seclusion have historically been used to control the behavior of people with mental health conditions in psychiatric treatment facilities and hospitals. These practices have come under intense scrutiny as researchers and clinicians have documented significant physical and psychological risks noted above inherent in their use. Such scrutiny has resulted in a legal and regulatory environment that discourages their use and increases the risks of litigation for clinicians and facilities that rely on these practices. National consensus and regulations view restraint and seclusion as a last resort and indicate use of such coercive measures can and should be significantly curtailed. In other words, seclusion and restraint should only be used when there is an imminent risk of danger to the individual or others and no other safe and effective intervention is possible.

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[2] The Centers for Medicare and Medicaid Services (CMS) defines seclusion as the involuntary confinement of the patient alone in a room or an area where the patient is physically prevented from leaving. A situation where a patient is restricted to a room or area alone and staff physically intervenes to prevent the patient from leaving is also considered seclusion.

[3] The Centers for Medicare and Medicaid Services (CMS) defines restraint as any manual method, physical or mechanical device, material, or equipment that immobilizes or reduces the ability of a patient to move his or her arms, legs, body, or head freely; or a drug or medication when it is used as a restriction to manage the patient's behavior or restrict the patient's freedom of movement and is not a standard treatment or dosage for the patient's condition.

Seclusion and restraint are not evidence-based practices and their use is an indication of treatment failure. There is no evidence to support these interventions as having any therapeutic value. Research on the use of restraint and seclusion indicates that these practices are generally not instituted on the basis of patients' clinical needs or characteristics. Non-clinical factors, such as cultural bias, staff role perceptions, and the attitudes of hospital administrators have been found to have a greater influence on the use of these practices than any clinical factors. Moreover, while it is generally believed that restraint and seclusion are used only to insure safety, studies have demonstrated that they are actually used most often for loud, disruptive, or non-compliant (but not violent) behavior.

Research indicates multilevel approaches can be effective in reducing the use of seclusion and restraint including techniques such as altering organizational policies, providing specialized staff training, and teaching patients self-management strategies, including anger control, adaptive behaviors, and interpersonal self-awareness and symptom reduction. Efforts to reduce restraint and seclusion have been found to be most successful in facilities with policies, procedures, and practices that are based on the principles of recovery and feature trauma-informed care. Effective alternatives to restraint and seclusion have been identified to significantly reduce the need for such measures including the following:

- Patient assessments to identify risks for violence (including previous restraint and seclusion history)
- Patient assessments to identify medical risk factors for death and injury (e.g., obesity, respiratory disease, cardiac anomalies, medication issues, recent ingestion of food, prone positioning, and past trauma histories)
- Patient assessments to identify psychological risk factors that suggest the need for a trauma assessment
- The development of de-escalation or safety plans in partnership with patients (including psychiatric advance directives) that support patients in learning illness self-management by identifying emotional triggers and environmental stressors that can lead to conflict or lack of emotional control
- Alterations to the physical environment, including comfort and sensory rooms
- Implementation of daily, meaningful, and engaging treatment activities

It is recommended that staff assess whether patients have a history of sexual, physical or emotional abuse or have experienced other trauma, including trauma related to seclusion and restraint or other prior psychiatric treatment as part of the intake and ongoing assessment process,. Individual strategies to reduce agitation which can lead to the use of seclusion and restraint (e.g., types of treatment or interventions that are most helpful and least traumatic for the individual) should be discussed with each patient. It is further recommended that patients not be automatically secluded or restrained following a staff assault, which is a response that is often the result of fear or the conviction that the person needs consequences. Seclusion or restraint should never be used to introduce consequences; other approaches to supporting behavior change can be instituted once a crisis has ended.

Risk factors include age, gender, and psychopathy, the nature of any previous criminal behaviors, relationship instability, a history of sexual abuse, psychiatric symptoms, substance use, and personality disorder. Focused interventions should be used to address these factors, reduce their impact, and strengthen protective factors, thereby reducing risk. Protective factors include positive, stable social relationships; positive self esteem; treatment adherence; and, shared vigilance with caregivers. The latter entails involving patients in discussions of triggers and alternatives and ways staff can be of assistance.

Administrative support is required to change organizational culture to eliminate the use of restraint and seclusion including:

- Policies and procedures that foster progress toward a seclusion and restraint-free environment
- Adequate staffing
- Staff training and continuous in-service training
- Placing seclusion and restraint training on all meeting agendas from the housekeeping department to the board of directors
- Administrative involvement in debriefing after every incident of seclusion or restraint in a supportive and problem-solving manner

The literature recommends involving patients, other mental health consumers, family members, and external advocates in a variety of roles in organizations as administrators, managers, and direct service providers as a primary prevention strategy to reduce the use of restraint and seclusion and to convey positive images and messages of recovery to both patients and staff. Consumer advocates can represent the perspectives of consumers/families/guardians and promote quality standards of care. Suggested roles include administering de-escalation forms, making regular rounds on units, being part of policy making and new initiatives (e.g., comfort rooms, special programs, recognition, and festivities), being present during team meetings, and functioning as the eyes and ears for administrators.

An Office of Consumer Affairs (OCA) can help ensure the input of a variety of consumer/survivor perspectives are incorporated into meaningful system change initiatives. Areas of responsibility can include policy and regulation development, program planning, evaluation and monitoring, training, finance and contract management, as well as handling complaints and grievances. A number of benefits of such an office have been identified including the de-stigmatization of people diagnosed with a mental illness or psychiatric disability, an ongoing process of consumer participation, and recognition of the civil and human rights of consumers.

The **Four S Model**, developed by Delaney, Pitula, and Perraud, is a way of reducing the use of seclusion and restraint. The four Ss are safety, support, structure, and symptom management:

THE FOUR SS	
S**afety**	Assuring the individual's physical and emotional well-being via interventions such as modifying the environment to reduce stimuli and induce a calming ambiance.
S**upport**	Listening and talking in a supportive way, offering comfort measures or whatever the individual identifies is needed, and using verbal de-escalation.
S**tructure**	Using techniques such as limit setting, conveying behavioral expectations, and assisting in constructive problem solving.
S**ymptom management**	Management of specific symptoms using stress management and relaxation techniques, diversionary activities, or medication.

A number of de-escalation techniques have been identified including:

- Assessing the situation promptly and intervening early if signs and symptoms of the onset of a crisis are observed
- Maintaining a calm demeanor and voice
- Using problem solving (e.g., asking "What will help now?")
- Being empathic
- Reassuring the individual that no harm will come to them or to others
- Avoiding an argumentative stance
- Offering to help

- Engaging the individual
- Using stress management or relaxation techniques (e.g., breathing exercises)
- Avoidance of crowding the person; giving them their space
- Being aware of one's own demeanor (i.e., countenance and tone)
- Offering choices
- Using open-ended questions
- Giving the individual time to think
- Reducing the tension with relaxation techniques
- Ignoring challenges; redirecting challenging questions
- Telling the persons what one can do to help them
- Allowing the person to vent
- Allowing the person to pace
- Refraining from stating "you must"
- Avoid power struggles.
- Setting limits and telling the person what the expectation is
- Staff awareness of their own nonverbal behaviors
- Being aware of the individual's nonverbal behaviors.
- Using clear, simple language
- Language that follows the rule of five (i.e., no more than five words in sentence, five letters in a word as in "Would you like a chair?")
- Using reflective technique (e.g., "Am I hearing you?")
- Agreeing to disagree
- Sensory modalities (e.g., weighted blankets or calming rooms with stress reduction tools)

Safety guidelines during situations of potential violence include:

- Taking a position just outside the individual's personal reach (i.e., out of arm's reach) on their non-dominant side
- Maintaining an open posture
- Keeping the individual within visual range
- Ensuring the door is readily accessible (i.e., avoiding letting the individual get between oneself and the door)
- Summoning help if the individual's aggression escalates to violence
- Requesting other patients in the vicinity to leave the room in order to decrease distractions and preserve the person's dignity

In general, effective restraint reduction programs are comprised of two components: (1) teaching patients to recognize what triggers their anger or aggression and advance crisis management strategies training that can be used to manage agitation or anger; and (2) training hospital staff about factors that precipitate aggressive behaviors and nonviolent interventions for managing patient crises.

A nonviolent crisis intervention component, developed by Crisis Prevention Institute, Inc., in Brookfield, Wisconsin (http://www.crisisprevention.com), teaches staff members about factors that precipitate crises and nonviolent methods for managing aggressive behaviors. It entails collecting crisis management information during brief interviews conducted by staff at intake or within the first twenty four hours of admission to elicit patients' crisis triggers and determine de-escalation strategies. Events that led to agitation and escalation in the past are discussed and patients' unique calming techniques are subsequently identified. Patients' restraint histories and medication preferences are then elicited. Information from interviews are used to construct individualized crisis management plans, a copy of which is given to patients and another stored in an easily available desktop organizer on the unit. Each plan is reviewed on a weekly basis during regular unit meetings of nurses, physicians, aides, and residents. De-escalation strategies are discussed with patients, both informally and subsequent to the occurrence of critical incidents.

Staff members immediately implement the patient's crisis management plan using that patient's unique strategies to avert a crisis if the individual experiences difficulty managing symptoms or their emotions begin to escalate. If the patient's primary calming strategy can be performed independently by the patient, the patient is reminded of the strategy and encouraged to use it. Staff assistance is provided as needed. If a crisis is averted, staff members and the patient review the crisis management plan and determine which strategies are most effective. If a crisis was not averted and the person is restrained, a staff-patient debriefing takes place after the patient has been released from restraint. This debriefing involves discussing the events precipitating the restraint as well as any needed revisions to the patient's plan. If revised, the patient's new plan is presented to all staff members during the next unit meeting.

Debriefing activities are recommended subsequent to a restraint or seclusion event. The first is an immediate, post-event debriefing led by a nursing supervisor or other senior staff person who was not involved in the event to confirm the safety of all involved parties, review documentation, interview staff and others who were present, and, as much as possible, return the unit to the pre-crisis milieu. The use of an interview or event guide and the documentation of activities immediately following the event are strongly recommended. A second more formal debriefing activity takes place a few days later. It includes the treatment team, the attending psychiatrist, and a representative from the facility's management team. It entails the use of rigorous problem-solving methods (e.g., root cause analysis procedures) to review and analyze the event in order to identify changes that can be made to avoid an event in the future and assure that trauma is mitigated as much as possible for all involved parties. Patients' perspectives are a critical component. However, provisions may be needed for consumers to appoint staff advocates to present their perspectives since attending a large meeting of staff can be intimidating for patients who have recently experienced restraint or seclusion. In addition to debriefing following the use of seclusion or restraint, a review of the consumer's treatment plan is warranted and should be undertaken.

WORKING WITH FAMILIES

The involvement of family members and other supporters is important to recovery; they should be engaged in treatment, as appropriate.

Working with families and/or other supporters of consumers who are hospitalized is important and incorporates the following:

INFORMATION/EDUCATION PROVIDED FOR FAMILIES
• Provide information on evidence-based treatments from medications to rehabilitation to self-help. • Provide relevant supportive information and coping strategies for the recipient and his or her family and support network at appropriate times. • Provide information about navigating the mental health system: community resources and services available, advocating for services. • Provide education on the nature of mental illness: biological causes, identifying symptoms, course of illness, what helps improve outcomes, what hurts. • Provide education on optimum medication management: the side effects of medications, the importance of medication adherence, and strategies to improve adherence, alternatives to medication, how to effectively stop using medication without side-effects. • Provide education on relapse prevention: identifying early warning signs, triggers of relapse, early intervention planning, self-help and peer support, coping strategies. • Provide an explicit crisis plan and an appropriate response, or use of Advance Directives and the family's awareness of where the Advance Directive is filed and what the wishes of the recipient are. • Provide training for the family in structured problem-solving techniques.

FAMILY PSYCHOEDUCATION (FPE)

Statistics indicate that between twenty-five and sixty percent of individuals with a serious mental illness live with their families, and many others maintain contact with relatives. The relationship of the family and the person with a mental illness has been shown to have a significant impact on that person's capacity to cope with symptoms and illness as well as family members' capacity to sustain their own lives. Supporting a family member with a serious mental illness carries high costs for relatives and creates what is known as burden of illness. Burden of illness can be distinguished by objective stress which refers to such activities as paying medical care costs, obtaining services, providing help with activities of daily living, and subjective stress, which is the family's emotional response such as worry and displeasure. Extensive research demonstrates that a negative emotional climate in families directly correlates to a more severe course of illness.

Family Psychoeducation is an evidence-based practice that reduces relapse rates and facilitates recovery by partnering with families and providing education about the illness and teaching specific problem-solving strategies for dealing with difficulties arising from the illness. It is derived from theories of expressed emotion (EE), which are based on observations that individuals with schizophrenia discharged home from hospitalizations to families with high expressed emotion are more likely to suffer a relapse. Expressed emotion has two components: criticism (CR) and emotional overinvolvement (EOI). Expressed emotion is characterized unsupportive, critical, negative interactions. It has been shown to be a significant and strong predictor of relapse with studies

demonstrating that individuals living in household with high levels of EE are much more likely to relapse than those living in households with low-EE.

The SAMHSA implementation resource kit strongly recommends offering Family Psychoeducation as early in the course of an illness as possible since it can help prevent relapse and disability, maintain and improve family relationships and social supports for the consumer's recovery. According to the implementation resource kit, family Psychoeducation represents the approach with the greatest potential cost effective benefit on the early and perhaps entire course of a mental illness.

Family Psychoeducation is designed to replace individual meetings with consumers. It is an approach to working with families in a partnership to help them acquire coping skills for dealing with difficulties posed by mental illness in the family and supporting the recovery of a family member with a mental illness. The partnership is engendered by collaborating with families as consultants to help with the management of the illness. Family Psychoeducation is not family therapy; the focus of intervention is the illness, not the family.

Family Psychoeducation can be provided in the home, community settings, mental health offices, hospitals, or other settings. In the context of Family Psychoeducation, family is defined as anyone the consumer designates as such. It does not have to be a relative, and can be anyone committed to the support of the person including friends, relatives, landlords, neighbors, etc. The requirement is that at least one person in the consumer's life participates as a "sponsor" or "supporter".

The following are the core components of family Psychoeducation:

- Joining with consumers and their families.
- Education about the illness and useful coping skills. This includes an education curriculum comprised of the following modules:
  - The psychobiology of mental illness
  - Diagnosis and treatment
  - Family reaction and its stages
  - Psychosis as a family trauma, relapse prevention and family guidelines
- Problem-solving strategies for difficulties caused by illness. This includes the following problem solving techniques and process from the multifamily format:

  Techniques:

  1. Select a problem for one consumer / family
  2. Define the problem in behavioral terms
  3. Generate at least eight suggestions for solution to the problem
  4. Explore with the consumer and family pros and cons for each suggestion
  5. Have consumer and family select the best suggestion
  6. With consumer and family, develop a step-by-step plan

  Process:

  Step 1. Define the problem or goal (family, consumer, and practitioners)
  Step 2. List all possible solutions (all group members)
  Step 3. Discuss first advantages and then disadvantages of each in turn (family, consumer, and practitioners, group members)

Step 4. Choose the solution that best fits the situation (consumer and family)
Step 5. Plan how to carry out this solution by forming a detailed, written action plan (consumer, family, and practitioners)
Step 6. Review implementation (practitioners in concert with consumer and family)

- Creating an optimal environment for recovery by establishing a strengths-based environment where all members are respectful of one another.
- Creating social and support groups wherein families establish connections with others who have similar experience and gain a broader social network.

Families meet every two weeks for the first months, then once a month for as long as they choose to meet. Programs last from nine months to five years. There are both single[4] and multi-family formats. The multifamily format consists of six to eight families and consumers. Both entail referrals and encouragement to participate in family support groups such as NAMI's Family-to-Family Education Program to reduce social isolation and stigma. Both formats aim to reduce expressed emotion, with multifamily models addressing stigma and social isolation as well.

PRINCIPLES OF WORKING WITH FAMILIES OF PERSONS WHO HAVE MENTAL ILLNESS

- Coordinate all elements of treatment and rehabilitation to ensure that everyone is working toward the same goals in a collaborative, supportive relationship
- Pay attention to both the social and the clinical needs of the consumer
- Provide optimum medication management
- Listen to families' concerns and involve them as equal partners in the planning and delivery of treatment
- Explore family members' expectations of the treatment program and expectations for the consumer
- Assess the strengths and limitations of the family's ability to support the consumer
- Help resolve family conflict by responding sensitively to emotional distress
- Address feelings of loss
- Provide relevant information for the consumer and his or her family at appropriate times
- Provide an explicit crisis plan and professional response
- Help improve communication among family members
- Provide training for the family in structured problem-solving techniques
- Encourage family members to expand their social support networks – for example, to participate in family support organizations such as NAMI
- Be flexible in meeting the needs of the family
- Provide the family with easy access to another professional in the event that the current work with the family ceases

Family Psychoeducation has been demonstrated to be beneficial for persons with schizophrenia, schizoaffective disorder, bipolar disorder, major depression, borderline personality disorder, anorexia nervosa, and obsessive-compulsive disorder. Researchers have documented significantly greater reductions in relapse and rehospitalization rates among consumers whose families participate in Family Psychoeducation than among those who receive typical individual services. The differences have ranged from twenty to fifty percent over two years indicating enduring effects, especially when programs are more than three months duration. Additionally, families report reduced burden and enhanced well being when participation is ongoing for at least nine months. Consumer participation

[4] Researchers have found African American families with low expressed emotion and consumers who have a good response to medication benefit more from the single-family format.

in vocational rehabilitation increases and costs of care decreases. Thus, the longer the participation, the greater the improvement; families who participate for up to two years show the most favorable outcomes. FPE has been shown to be extremely effective in reducing the cost of care with significant reductions in hospital admissions, hospital days, and crisis intervention contacts. Ratios of $1 spent for this service to $10 in saved hospital costs have been routinely reported.

The initial costs of providing Family Psychoeducation are estimated to be about $350 per year per consumer in staff time for an ongoing multi family group using a mater's prepared practitioner (based on East Coast salaries). The single-family format costs about twice that of the multifamily format. The initial implementation costs are approximately $250 per practitioner.

The SAMHSA implementation resource kit on FPE discusses multifamily group models of Family Psychoeducation for bipolar illness, major depressive disorder, borderline personality disorder, and obsessive-compulsive disorder, all which have demonstrated potential. The strongest evidence base is for FPE for schizophrenia.

PSYCHOTHERAPY

INTERPERSONAL THERAPY (IPT)

Interpersonal therapy is based on research that has demonstrated the protective function of interpersonal support as well as the associations between interpersonal adversity and depression. It is derived from theories that view depression as the result of interpersonal conflicts and/or deficits. It is a time-limited, manualized psychotherapy. IPT is usually provided in one-hour weekly sessions for up to twenty sessions.

Interpersonal Therapy focuses on the following areas:

- Interpersonal disputes (non-reciprocal role expectations with a significant other)
- Role transitions (life changes leading to a change in one's interpersonal role and sense of self in a new context)
- Grief (prolonged, complicated bereavement)
- Interpersonal/social deficits (lack of supports; absence of life events; interpersonal sensitivity)

Studies have demonstrated that IPT is equally as effective in the short-term treatment of depression as antidepressant medication therapy; IPT is also provided as part of multimodal approach in conjunction with medications. IPT has also been found to be an effective treatment for depression from adolescence to late life, for women with postpartum depression and for individuals with comorbid medical problems. For recurrent depression in the continuation and maintenance phases of treatment, "low-dose", once-monthly maintenance IPT can reduce relapse rates and prolong periods between depressive episodes. IPT has been found moderately beneficial for dysthymia. (The model has also been adapted for eating disorders, social anxiety, and bipolar disorder.)

INTERPERSONAL AND SOCIAL RHYTHM THERAPY (IPSRT)

Interpersonal and Social Rhythm Therapy is a treatment program that stresses maintaining a regular schedule of daily activities and stability in personal relationships. IPSRT combines interpersonal principles with behavioral techniques (e.g., self-monitoring) to help consumers with bipolar disorder maintain regular routines of eating, sleeping, and daily activities. It is provided during the acute phase of the illness.

IPSRT postulates that stressful events, sleep deprivation, disruptions in circadian rhythms, and personal relationship conflicts, as well as conflicts that arise out of difficulties in social adjustment often lead to relapses (i.e., recurrence of manic and depressive episodes). IPSRT consists of assisting consumers to understand how changes in daily routines and the quality of their social relationships and their social roles (e.g., parent, spouse or caregiver) can affect their moods. Subsequent to the identification of situations that can trigger mania or depression, participants are taught how to manage stressful events and maintain positive relationships more effectively.

Consumers are taught to track their mood states, daily activities, and body rhythms. They record when they eat, sleep, shop, etc. on a social rhythm metric chart and also complete an interpersonal inventory, noting social interactions (e.g., conflicts and stresses) that impact their daily body rhythms and thus their emotional stability. For example, an argument with one's spouse is recorded, particularly if that argument led to insomnia and agitation. The social rhythm metric chart is analyzed and discussed during therapy sessions where it is used to increase

awareness of the interrelationship between body rhythms and mood. Therapists help consumers establish and maintain steady and stable routines (e.g., taking medicine consistently and going to sleep at regular times) and to recognize the types of activities and interactions that cause their body rhythms to become disturbed in order to avoid these activities and interactions.

IPSRT has been shown to be effective for bipolar disorder in preventing relapses over a two-year period, particularly in patients who do not have other chronic medical problems[5] (e.g., diabetes or heart disease). The intensity of the benefit has been found to be directly related to the extent of increase in the regularity of social routines. When used in combination with pharmacotherapy gains in targeted lifestyle regularities, reductions in manic and depressive symptoms, and increases days of euthymia have been found. In addition, withdrawal of IPSRT has been found to be associated with significantly higher relapse rates. IPSRT may also decrease suicidal behavior, but is not associated with a faster recovery from either manic[1] or depressive episodes.

SOLUTION-FOCUSED BRIEF THERAPY (SFBT)

Solution-focused therapy is a form of brief therapy that builds upon individuals' strengths by helping them evoke and construct solutions to their problems. It has been refined over the years since its development and applied in a number of settings (e.g., hospitals, residential treatment settings, outpatient office settings), and for a variety of problems (e.g., substance abuse, panic attacks, phobias, eating disorders, family relationship problems). The therapy focuses on the future rather than the past or present, and on hope and achievement, rather than problems and their causes. It entails developing a solution to a problem and discerning the resources to accomplish the solution. A central aspect of solution-focused therapy is the active exploration of the person's strengths and resources, and acknowledgement of them. It is not driven by diagnostic formulations or problem exploration.

The first session entails four therapeutic tasks as depicted below:

Task of therapist	Examples of opening questions
Find out what the person is hoping to achieve from the meeting or the work together	What are your best hopes of our work together? How will you know if this is useful?
Find out what the small, mundane and everyday details of the person's life would be like if these hopes were realized	If tonight while you were asleep a miracle happened and it resolved all the problems that bring you here what would you be noticing different tomorrow?
Find out what the person is already doing or has done in the past that might contribute to these hopes being realized	Tell me about the times the problem does not happen When are the times that bits of the miracle already occur?
Find out what might be different if the person made one very small step towards realizing these hopes	What would your partner/doctor/friend notice if you moved another 5% towards the life you would like to be leading?

(Iveson 2002)

A zero to ten scale is used to assist the person to rate their achievements. It is used to distinguish different characteristics of the problem, as well as the solution. A ten indicates that all of the identified goals have been achieved. A zero signifies that none of the person's goals have been achieved.

[5] Individuals with bipolar disorder are at an increased risk for a number of serious medical illnesses, including cardiovascular disease, diabetes and pulmonary problems.

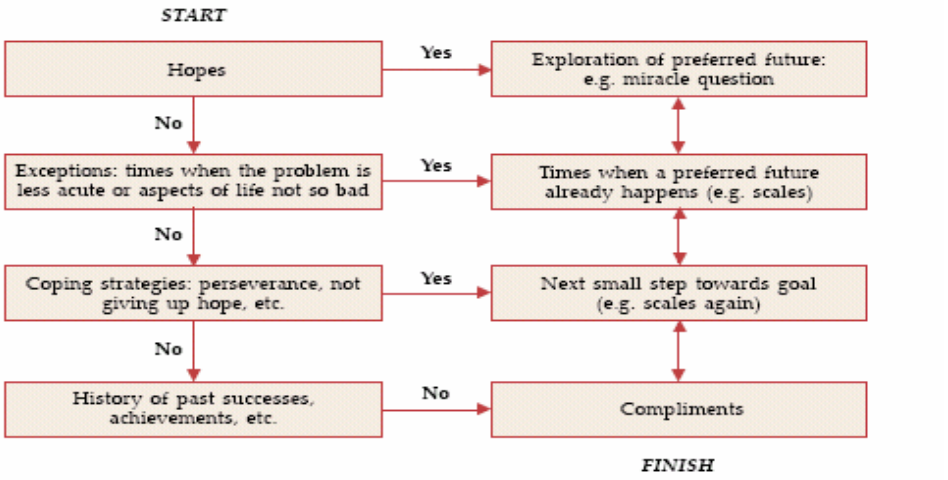
Scaling is used to determine progress during each session in response to the therapist's opening question: "What is better?" The therapist verbally commends the person's reports of progress.

	Points to mark	*What to explore*
10	The perfect solution	The miracle question as a means to encourage creative thinking
7	A good but realistic outcome	A realistic description of the consumer getting on with his/her life without the problem interfering too much. The more concrete and realistic the better, since it is the small, mundane aspects of living that go together to make a acceptable life
3	Where the consumer is now	Everything the consumer is doing that has helped him/her reach this point on the scale and/or everything he-she is doing to prevent matters getting worse
0	The worst scenario	Best not to delve into

(Iveson 2002)

The average duration of solution-focused therapy is five (to eight) forty-five minute sessions. If there is not demonstrable improvement after three sessions, it is unlikely that this therapy will prove effective for the person. The time between sessions is typically extended as the person makes progress so that a five-session course of treatment takes place over several months. It should also be noted that there are reports in the literature of effective single-session successes, but these typically involve individuals who are "stuck" in a problem and can be assisted to see a clear way out through the explication of a desired future, or have already solved their problem, but do not realize it.

Most sessions start with the top left of the flow chart, then move down through the right column. Subsequent sessions are more likely to focus on the second and third boxes in each column, more to the left if progress is minimal and more to the right if progressing well.



(Iveson 2002)

There are more than thirty published research studies on solution-focused brief therapy demonstrating successful outcomes in sixty-five to eighty-three percent of cases. However, due to the lack of diagnostic specificity, and the fact that most of these outcome studies rely on subjective reports from consumers or referral sources, they have limited objective validity. A large multi-site research project using more rigorous scientific methodologies is currently being conducted in Europe. The European Brief Therapy Association (EBTA) has developed a training manual. It is available on the web at http://www.ebta.nu/.

BRIEF INTERVENTION

Brief intervention focuses on the reduction or elimination of substance use to minimize or prevent the harm associated with such use either via the technique itself or through referral for treatment. It is conducive to primary care and other opportunistic settings because it can be conducted within a limited number of (three ten to fifteen-minute) sessions that encompass assessment and motivational counseling to decrease substance abuse or promote entry into treatment.

Brief intervention incorporates five basic steps irrespective of the number of sessions or length of intervention:

1. Introduction of the issues within the context of the individual's health
2. Screening, evaluation, and assessment
3. The provision of feedback regarding screening results, impairment, and risks
4. Discussion of change strategies and goal-setting
5. Summarization and reaching closure

There are six components of brief intervention designed to alter substance use behavior captured in an acronym called **FRAMES**:

- **Feedback** regarding personal risk or impairment is given in a non-confrontational manner following assessment of substance use patterns and associated problems. Such feedback usually entails presenting information from standardized instruments and compares consumers' scores with normative data from the general population or groups receiving treatment.
- **Responsibility** for change is placed directly and explicitly on consumers in a manner that respects their rights to make choices for themselves in order to empower them so they are more invested in the process of change. Consumers are thus deemed the leading experts regarding their own needs.
- **Advice** regarding changing (i.e., reducing or stopping substance use) is given clearly in a nonjudgmental manner. This is best accomplished via suggestions rather than directives. Research indicates that educational advice based on scientific evidence is effective.
- **Menus** of self-directed change options and treatment alternatives are offered. A menu of options contributes to enhancing the effectiveness of treatment and reducing premature termination from treatment and resistance to change.
- **Empathic** counseling offered in a warm, respectful, and understanding manner using reflecting listening skills. Positive outcomes are associated with this style.
- **Self-efficacy,** or optimistic empowerment, is engendered to encourage change.

The 5 As of Brief Intervention for Tobacco use
Ask about tobacco use. Identify and document tobacco use status for every patient at every visit.
Advise to quit. In a clear, strong, and personalized manner urge every tobacco user to quit.
Assess willingness to make a quit attempt. Is the tobacco user willing to make a quit attempt at this time?
Assist in quit attempt. For the patient willing to make a quit attempt, use counseling and pharmacotherapy to help him or her quit.
Arrange follow-up. Schedule follow-up contact, preferably within the first week after the quit date.

Brief intervention has been demonstrated to be effective in reducing or eliminating alcohol consumption and associated problems in adolescents, adults, and older adults in a variety of settings. Studies have found that a reduction in drinking occurs after the first follow-up visit, and, even without repeated follow-up sessions, discernible behavior change occurs immediately. Some research indicates that individuals who experience recurrent and significant substance use difficulties that have lead to social, interpersonal or legal problems, and have previous histories of substance abuse treatment are less apt to be responsive to brief intervention.

COGNITIVE BEHAVIORAL THERAPY (CBT)

Cognitive behavioral therapy (CBT) has a strong evidence base for a number of mental illnesses including anxiety disorders, depressive disorders, eating disorders, and personality disorders. Cognitive behavioral therapies are also used to ameliorate the neurocognitive deficits of some serious mental illness and various CBTs are employed as part of many of the SAMHSA evidence-based practice protocols (e.g., behavioral tailoring, motivational interviewing, relapse prevention, psychosocial skill enhancement, relaxation training, and so forth). A multimodal approach that involves the combination of CBT and medication has been shown to enhance outcomes. CBT can be provided in either individual or group therapy sessions.

Cognitive–behavioral therapy for panic attacks, phobias and PTSD, addresses the individual's threat appraisal process through repeated exposure. It is combined with stress inoculation training using breathing exercises, relaxation training, thought stopping, role playing and cognitive restructuring to desensitize the person to trauma related triggers. Homework exercises are given so that the techniques can be practiced and used in vivo where triggers are encountered. It is usually a brief intervention typically lasting for twelve to twenty weeks. According to the research, cognitive-behavior therapy has more long-lasting effects than medication. In other words, individuals who have been treated with CBT are less likely to become symptomatic following treatment cessation than those previously treated with medication. Studies have also shown that stress inoculation appears to be more effective in the short run, while prolonged exposure therapy appears to be more effective on a long-term basis.

COGNITIVE RESTRUCTURING

Cognitive restructuring is an effective intervention for reducing the severity of psychotic symptoms as well as distress. Such techniques involve assisting the person in evaluating the evidence supporting their delusional beliefs, testing out their beliefs and generating alternative, more realistic explanations when confronted with facts that are not consistent with their beliefs. Cognitive therapy helps consumers evaluate the evidence supporting their delusional beliefs, test out those convictions, and formulate alternative, more feasible explanations when confronted with evidence that is contrary to their beliefs.

Cognitive restructuring involves teaching people about common cognitive distortions that are used to interpret events. These include overgeneralization, jumping to conclusions, black and white thinking,

catastrophizing, and selective attention. Cognitive restructuring teaches that negative feelings associated with cognitive distortions are the result of thoughts, and that such thoughts are not accurate. The person's thinking can be changed based on assessment of the evidence.

Cognitive therapy has been found to be effective in reducing the severity of symptoms of psychosis and distress with some studies suggesting reductions in psychiatric service use in numerous studies. All of the studies indicate it is far superior to supportive counseling in decreasing the severity of psychotic symptoms and that it reduces negative symptoms such as social withdrawal and anhedonia. It is a component of the SAMHSA Illness Management and Recovery program.

Cognitive restructuring has also been found to be effective for individuals with PTSD. It focuses on helping the person recognize self-defeating thoughts and distortions related to traumatic experiences. As with this technique for psychosis, common cognitive distortions (e.g., "no one can be trusted") are evaluated in conjunction with manifest evidence. New ways of evaluating that evidence are taught.

EXPOSURE THERAPY FOR PTSD

Prolonged Exposure Therapy (PE) is a cognitive behavioral therapy for individuals suffering from PTSD with a significant research base to support its effectiveness in reducing symptoms of PTSD, anger, depression, and general anxiety. It is a SAMHSA model program.

The standard treatment protocol consists of nine to twelve ninety-minute individual therapy sessions conducted in accordance with a manual that specifies the agenda and content for each session. It includes three components:

- Psychoeducation about common reactions to trauma and the cause of chronic post trauma difficulties
- Imaginal exposure: repeated recounting of the traumatic memory (emotional reliving)
- In vivo exposure gradually approaching trauma reminders (e.g., situations, objects) that, despite being safe, are feared and avoided.

Research shows that PE reduces intrusive thoughts, nightmares and flashbacks, irritability, avoidance, emotional numbing, excessive avoidance, sleep disturbances, attention and concentration difficulties, sleep disturbances, and hypervigilance which are the hallmarks of PTSD.

A number of studies have also demonstrated that PE is very effective in reducing symptoms of PTSD in female victims of rape, aggravated assault, and childhood sexual abuse. It has been shown to be very beneficial for both men and women whose PTSD symptoms are related to combat exposure, traffic and industrial accidents, and violent crime. Finally, PE is effective for individuals with mental illness and co-occurring substance use disorders when it is combined with substance abuse intervention.

INTEGRATED DUAL DISORDERS TREATMENT (IDDT) FOR CO-OCCURRING DISORDERS (COD)

Substance abuse is the most common and clinically significant comorbid disorder among adults who have a serious mental illness. Estimates are that at least fifty percent of consumers who have schizophrenia are affected by substance use. About thirty percent of individuals with anxiety and depression experience a substance use disorder at some point. Moreover, these co-occurring disorders are associated with a number of negative outcomes including increased rates of relapse, hospitalization, violence, legal problems, incarceration, suicide attempts, homelessness, and serious infections such as HIV and hepatitis. Consumers with co-occurring disorders challenge traditional service delivery systems, frequently are high utilizers of costly services, and rarely fit into the parallel

substance abuse and mental health systems where they are often extruded or drop out. Studies show that these separate systems do not deliver appropriate services for this population and are ineffective.

PRINCIPLES OF TREATING CO-OCCURRING MENTAL HEALTH & SUBSTANCE USE DISORDERS
♦ Comorbidity should be expected, not considered an exception.
♦ Psychiatric and substance use disorders should be regarded as primary disorders when they coexist, each requiring specific and appropriately intensive assessment, diagnosis and treatment, in accordance with established practice guidelines.
♦ Serious psychiatric and substance use disorders are chronic, relapsing illnesses that can be conceptualized by using a disease and recovery model, with parallel phases of treatment or recovery.
♦ Within each subtype of the treatment population, consumers are in different stages of change with regard to their illness. Thus a comprehensive array of interventions that are phase and stage specific is required.
♦ Whenever possible, treatment of persons with complex comorbid disorders should be provided by individuals, teams, or programs with expertise in mental health and substance use disorders.
♦ The system should promote a longitudinal perspective on the treatment of consumers with dual diagnoses, emphasizing the value of continuous relationships with integrated treatment providers, independent of participation in specific programs.
♦ Admission criteria should not be designed to prevent consumers from receiving services, but rather to promote acceptance of consumers at all levels of motivation and readiness and with any combination of comorbid disorders.
♦ The service system should not begin or end at the boundaries of formal treatment programs; rather, it should include interventions to engage the most detached individuals (e.g., those who are homeless).
♦ The fiscal and administrative operation of the system should support the accomplishment of the system's mission and the implementation of these principles.
♦ Assessment for either disorder should begin as early as possible, without the imposition of arbitrary waiting periods of sobriety, and without a requirement of psychiatric stabilization, on the basis of data collection for an integrated, longitudinal history.
♦ For each disorder, assessment should include a definition of the stage of change or level of motivation.
♦ When mental illness and a substance use disorder coexist, each disorder should be considered primary, and integrated dual primary treatment should be provided; the treatment for each disorder should be matched to the diagnosis and the stage of change.
♦ Medication for known serious mental illness should never be discontinued on the grounds that the consumer is using substances.
♦ Benzodiazepines and other medications with addiction potential are not recommended in the ongoing treatment of consumers with known substance dependence with or without a comorbid psychiatric disorder. If a prescriber believes that an exception is warranted, this belief should be considered an indication for peer review, expert consultation, or a second opinion.

The core components of the integrated approach are as follows:

- Interventions are **staged**:

- *Engagement* is the first stage when the consumer is in a *precontemplation* stage and the practitioner endeavors to form a trusting relationship with the consumer.
- The next stage is *persuasion*, which entails helping the consumer develop the motivation to become involved in recovery-oriented interventions.
- The third stage is *active treatment* wherein the consumer acquires the skills and supports for controlling both illnesses and pursuing their goals.
- The last stage is *relapse prevention*, which is aimed at helping the consumer develop and use strategies to maintain recovery.

> **Relapse prevention** includes designing a relapse prevention plan, supporting and using previously acquired skills for sobriety, foster social skills to enhance friendships with persons who are sober, fostering social and leisure pursuits, exploring opportunities for employment, and encouraging and facilitating participation in self-help groups (e.g., Alcoholics Anonymous, Rational Recovery, Narcotics Anonymous, Double Trouble and Dual Recovery Anonymous).

It should be noted that consumers do not necessarily move through these stages in a linear progression and they may be in different stages with respect to substance abuse and mental illness.

- Since many individuals with dual disorders have had trouble engaging with the service system, providers use **assertive outreach** and meet with consumers and their support systems in the community to offer services.
- **Motivational interventions** are used to help consumers during the engagement and persuasion stages when they are not yet exhibiting readiness to reduce substance use or become abstinent to achieve their goals. They are matched to the individual's stage of recovery.

  The five key principles of motivational enhancement are:

  - Expressing empathy
  - Noting discrepancies between the consumer's current behavior and their stated desired behavior
  - Avoiding arguments
  - Refraining from directly confronting resistance
  - Encouraging the consumer's belief in their ability to change

  Motivational interviewing differs from traditional substance abuse treatment in that confrontation is avoided. If a consumer does not want to move on a certain path, or exhibits what has typically been termed "resistance" or is in "denial", the practitioner does not challenge it. Instead, the practitioner "rolls with it" allowing the consumer to express their opinions and views. The practitioner focuses on magnifying the discrepancy between what the consumer's goals are and their behavior. The consumer is helped to identify their goals, break them down into realistic steps, and ascertain that, in order to attain one's goals, one must manage the illnesses.

PRINCIPLES OF MOTIVATIONAL INTERVIEWING	
Express empathy (i.e., acceptance of the individual's perspectives without judgment) through reflective listening	• Acceptance facilitates change • Skillful reflective listening is fundamental • Ambivalence is normal
Develop discrepancy between consumers' goals or values and their current behavior	• The consumer rather than the counselor should present the arguments for change • Change is motivated by a perceived discrepancy between present behavior and important personal goals or values
Roll with resistance (i.e., avoid argument and direct confrontation)	• Avoid arguing for change • Resistance is not directly opposed • New perspectives are invited, but not imposed • The consumer is a primary resource in finding answers and solutions • Resistance is a signal to respond differently
Support self-efficacy and optimism; focus on consumers' strengths to support optimism and hope needed for change	• An individual's belief in the possibility of change is an important motivator • The consumer, rather than the clinician, is responsible for selecting and carrying out change • The clinician's own belief in the person's ability to change becomes a self-fulfilling prophecy

- **Social support enhancement**. Working with families and other supporters is extremely important for an individual with a dual disorder. Interventions include providing education and information about the illnesses, family therapy, helping them get involved family support groups and involvement in treatment planning.
- Since **recovery** tends to occur over months or even years and it often takes many attempts to achieve stable remission or abstinence, effective programs take a long-term perspective.

  Recovery in the context of co-occurring disorders means that the individual becomes skilled at gaining mastery over both illnesses in order to pursue meaningful goals.
- The service system incorporates integrated intervention into all aspects of service delivery from medication management, laboratory screening, hospitalization, assessment, crisis intervention, and all other services.

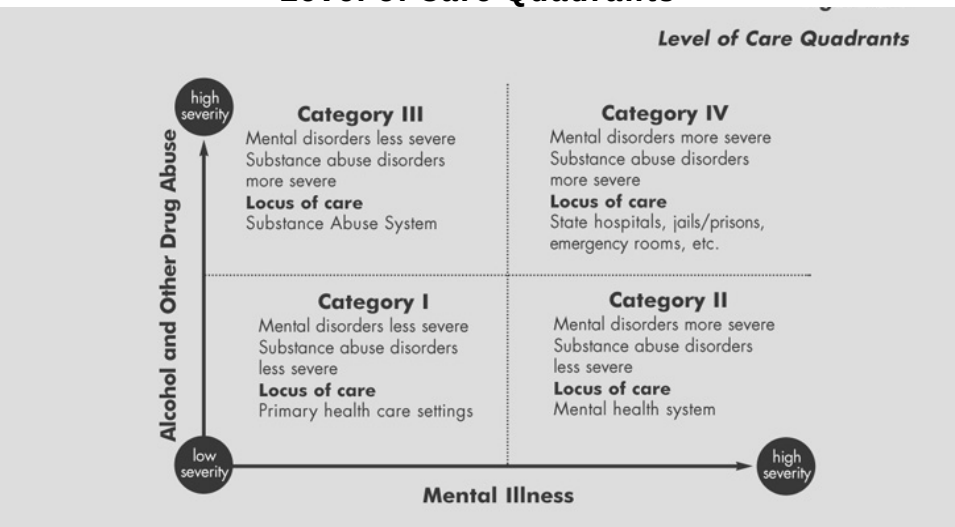
A number of behavioral interventions are used to reduce or stop substance use. These include conversational skill development, assertive training, relaxation skills development, and enjoyable leisure activities development.

Since the majority of individuals who have a substance use disorder have experienced traumatic events, and many have posttraumatic stress disorder, all individuals with co-occurring disorders need to be screened for PTSD. Support groups and trauma education groups are used along with cognitive-behavioral therapy as interventions.

It is important to work with the families of individuals with co-occurring disorders since many have very limited social networks. They are often cut off from family and lack social supports. Interventions for families include involvement in treatment planning, education about the illnesses, family therapy, and support groups.

The four-quadrant model of care developed by the National Association of State Mental Health Program Directors (NASMHPD) and the National Association of State Alcohol and Drug Abuse Directors (NASADAD) is a useful paradigm for delineating a continuum of responsibility for the provision services and supports for individuals with co-occurring disorders.

Level of Care Quadrants



Quadrant I: This quadrant includes individuals with low severity substance abuse and low severity mental disorders. These low severity individuals can be accommodated in either intermediate outpatient mental health or substance abuse treatment settings with consultation or collaboration between settings, if needed. Alternatively, some individuals will be identified and managed in primary care settings with consultation from mental health and/or substance abuse treatment providers.

Quadrant II: This quadrant includes individuals with high severity mental disorders who are usually identified as priority consumers within the mental health system and who also have low severity substance use disorders (e.g., substance dependence in remission or partial remission). These individuals typically receive continuing care in the mental health system and are likely to be served in a variety of intermediate level mental health programs using integrated case management.

Quadrant III: This quadrant includes individuals who have severe substance use disorders and low or moderate severity mental disorders. They are generally well accommodated in intermediate level substance abuse treatment programs. In some cases there is a need for coordination and collaboration with affiliated mental health programs to provide ongoing treatment of the mental disorders.

Quadrant IV: Quadrant IV is divided into two subgroups. One subgroup includes individuals with serious and persistent mental illness (SPMI) who also have severe and unstable substance use disorders. The other subgroup includes individuals with severe and unstable substance use disorders and severe and unstable behavioral health problems (e.g., violence, suicidality) who do not (yet) meet criteria for SPMI. These individuals require intensive, comprehensive, and integrated services for both disorders. The locus of treatment can be specialized residential substance abuse treatment programs such as modified therapeutic communities, state hospitals, jails, or even in settings that provide acute care such as emergency rooms.

The SAMHSA Integrated Dual Disorders toolkit is available for download from http://mentalhealth.samhsa.gov/cmhs/communitysupport/toolkits/cooccurring/.

MOTIVATIONAL INTERVIEWING (MI)

Motivation for change is a critical component in addressing substance use disorders. Longitudinal research studies indicate that level of motivation, or readiness for change, is a significant predictor of a positive therapeutic alliance, treatment retention, treatment outcomes (e.g., substance use, employment, and psychological functioning), and whether substance use will change or remain static. Different kinds of assistance are required depending upon which stage of change individuals are in and are moving towards. Motivational Interviewing is designed to foster intrinsic motivation for change through the exploration and resolution of ambivalence. It involves accepting consumers' levels of motivation as the basis for change and avoiding argument and confrontation in order to focus on establishing rapport.

Motivational Interviewing was originally developed for intervention for alcohol consumption problems. MI has been found to be effective for people who are initially ambivalent or reluctant to change, particularly when the problematic behavior is rewarding (e.g. smoking and drinking excessively). This technique avoids confrontation (e.g., disagreeing, emphasizing evidence of impairment, and arguing), as this is associated with higher levels of resistance and reductions in the likelihood of behavior change. Instead, reasons for concern and change are elicited from the person. These are then explored in a supportive manner. The goal is to highlight any discrepancies between present behavior and desired goals to trigger behavior change.

PRINCIPLES OF MOTIVATIONAL INTERVIEWING	
Express empathy (i.e., acceptance of the individual's perspectives without judgment) through reflective listening	• Acceptance facilitates change • Skillful reflective listening is fundamental • Ambivalence is normal
Develop discrepancy between clients' goals or values and their current behavior	• The client rather than the counselor should present the arguments for change • Change is motivated by a perceived discrepancy between present behavior and important personal goals or values
Roll with resistance (i.e., avoid argument and direct confrontation)	• Avoid arguing for change • Resistance is not directly opposed • New perspectives are invited, but not imposed • The client is a primary resource in finding answers and solutions • Resistance is a signal to respond differently
Support self-efficacy and optimism; focus on clients' strengths to support optimism and hope needed for change	• An individual's belief in the possibility of change is an important motivator • The client, rather than the clinician, is responsible for selecting and carrying out change • The clinician's own belief in the person's ability to change becomes a self-fulfilling prophecy

Research has shown that some treatment approaches can lead to reductions in motivation for positive changes in substance use. Confrontation has long been used in substance abuse treatment to break through defenses in order to overcome denial. However, research indicates that such techniques are less effective in helping alter substance use behavior, can be construed as attacking, and have an adverse effect on the therapeutic alliance and process. Moreover, confrontational group processes, programs, and clinicians have been demonstrated to produce adverse outcomes (especially when applied to individuals who use stimulants). Techniques that employ confrontation regarding substance use behaviors by significant others, such as the Johnson Intervention,[6] have been shown to be effective when used by significant

[6] The Johnson Intervention was developed in the 1960s at the Johnson Institute in Minneapolis. It is a method for mobilizing, coaching, and rehearsing with family members, friends, and associates to help them confront someone they believe to have a substance use disorder. During the intervention they articulate their concerns, strongly push for entry into treatment, and explain consequences in the event of

others, but to have adverse outcomes when used in treatment programs. On the other hand, supportive accurately empathic clinical styles have been shown to be effective. Confrontation is now viewed as a goal rather than a style or technique that permits consumers to face difficult situations.

Motivational interventions have been adapted for use with individuals who have serious mental illnesses and/or co-occurring disorders as well as for people who are homeless. In order to be effective, motivational enhancement techniques must be matched to the consumer's stage of recovery. Such techniques are integrated as part of the Stages of Change Transtheoretical Model.

STAGES OF CHANGE TRANSTHEORETICAL MODEL AND MOTIVATIONAL STRATEGIES

Stage of Change	Motivational Strategies

Precontemplation
 	
The person has no intention to change in the foreseeable future and may not be aware of problems.
	• Establish rapport, ask permission, and build trust.
	• Raise doubts or concerns in the client about substance-using patterns by
	  • Explore the meaning of events that brought the client to treatment or the results of previous treatments
	  • Elicit the client's perceptions of the problem
	  • Offer factual information about the risks of substance use
	  • Provide personalized feedback about assessment findings
	  • Explore the pros and cons of substance use
	  • Help a significant other intervene
	  • Examine discrepancies between the client's and others' perceptions of the problem behavior
	• Express concern and keep the door open.

Contemplation
 	
The person is aware that a problem exists and is thinking seriously about overcoming it, but has not made a commitment to take action. During this stage the person is weighing the pros and cons of the problem and its solution.
	• Normalize ambivalence.
	• Help the client tip the decisional balance scales toward change by:
	  • Eliciting and weighing pros and cons of substance use and change
	  • Changing extrinsic to intrinsic motivation
	  • Examining the client's personal values in relation to change
	  • Emphasizing the client's free choice, responsibility, and self-efficacy for change
	• Elicit self-motivational statements of intent and commitment from the client.
	• Elicit ideas regarding the client's perceived self-efficacy and expectations regarding treatment.
	• Summarize self-motivational statements.

Preparation Intention and behavior are combined: action is planned within the next month. Action has been taken to no avail in the past year. Some reductions in problems behaviors have been made, but the person has not set a criterion for effective action.	• Clarify the client's own goals and strategies for change. • Offer a menu of options for change or treatment. • With permission, offer expertise and advice. • Negotiate a change - or treatment - plan and behavior contract. • Consider and lower barriers to change. • Help the client enlist social support. • Explore treatment expectancies and the client's role. • Elicit from the client what has worked in the past either for him or others whom he knows. • Assist the client to negotiate finances, child care, work, transportation, or other potential barriers. • Have the client publicly announce plans to change.
Action Modifications in behavior, experience, or environment are made to overcome the problem. The person has successfully altered the addictive behavior for one to six	• Engage the client in treatment and reinforce the importance of remaining in recovery. • Support a realistic view of change through small steps. • Acknowledge difficulties for the client in early stages of change.

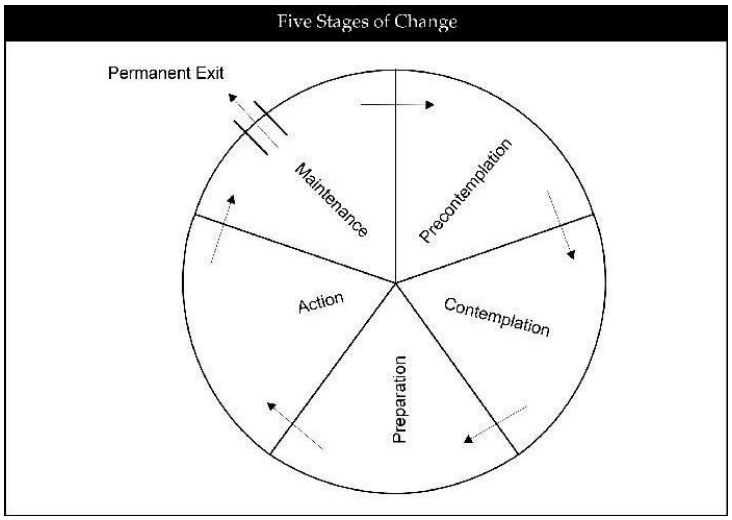
refusal (e.g., divorce or loss of a job). They typically prepare in secret to use the element of surprise. This approach has mostly been applied to problematic alcohol consumption, but has also been adapted for other types of substance abuse.

STAGES OF CHANGE TRANSTHEORETICAL MODEL AND MOTIVATIONAL STRATEGIES	
months. (Action does not denote change, however.)	• Help the client identify high-risk situations through a functional analysis and develop appropriate coping strategies to overcome these. • Assist the client in finding new reinforcers of positive change. • Help the client assess whether she has strong family and social support.
Maintenance The individual is actively working to prevent relapse and consolidate gains achieved during the Action stage. The person is remaining free from addictive behavior and is consistently engaging in a new incompatible behavior for more than six months.	• Help the client identify and sample drug-free sources of pleasure (i.e., new reinforcers). • Support lifestyle changes. • Affirm the client's resolve and self-efficacy. • Help the client practice and use new coping strategies to avoid a return to use. • Maintain supportive contact (e.g., explain to the client that you are available to talk between sessions). • Develop a "fire escape" plan if the client resumes substance use. • Review long-term goals with the client.
Recurrence The individual has experienced a recurrence of symptoms and must now cope with consequences and decide what to do next.	• Help the client reenter the change cycle and commend any willingness to reconsider positive change. • Explore the meaning and reality of the recurrence as a learning opportunity. • Assist the client in finding alternative coping strategies. • Maintain supportive contact.

(Adapted from SAMHSA TIP # 35)

The process of change is cyclical and individuals usually move back and forth between the stages of change and cycle through them at different rates. Progress through the stages of change is circular or spiral, not linear; many individuals go through several revolutions of the different stages several times prior to achieving stable change. Recurrence of substance use (i.e., relapse) is not considered a failure and does not need to be calamitous or prolonged.

As consumers move through the different stages of recovery, treatment needs to move with them; interventions that are effective early in treatment may be ineffective and perhaps harmful if provided in the same manner later on in treatment.



Studies show that there is a strong tendency toward relapse during the early part of the treatment process and that individuals in the early part of recovery face greater risks for returning to substance use than those who have been abstinent for three, six, or eighteen months. In addition, total abstinence has been demonstrated to be strongly associated with

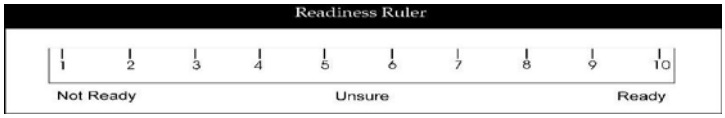
beneficial long-term outcomes; studies show that almost ninety percent of individuals who maintain abstinence for two years remain abstinent at ten-year follow-up.

The elements of Motivational Interviewing include:

- **The FRAMES approach**
  - **Feedback** regarding personal risk or impairment is given in a non-confrontational manner following assessment of substance use patterns and associated problems. Such feedback usually entails presenting information from standardized instruments and compares consumers' scores with normative data from the general population or groups receiving treatment.
  - **Responsibility** for change is placed directly and explicitly on consumers in a manner that respects their rights to make choices for themselves in order to empower them so they are more invested in the process of change. Consumers are thus deemed the leading experts regarding their own needs.
  - **Advice** regarding changing (i.e., reducing or stopping substance use) is given clearly in a nonjudgmental manner. This is best accomplished via suggestions rather than directives. Research indicates that educational advice based on scientific evidence is effective.
  - **Menus** of self-directed change options and treatment alternatives are offered. A menu of options contributes to enhancing the effectiveness of treatment and reducing premature termination from treatment and resistance to change.
  - **Empathic** counseling offered in a warm, respectful, and understanding manner using reflecting listening skills. Positive outcomes are associated with this style.
  - **Self-efficacy,** or optimistic empowerment, is engendered to encourage change.
- **Decisional balance exercises** that explore the benefits and disadvantages of change are used. This entails a cognitive appraisal or evaluation of the reasons not to change (i.e., the positive or good aspects of substance use) and the reasons to change (i.e., the less positive aspects of substance use). The person is assisted to recognize and weigh the negative aspects of substance use so that the scale tips toward beneficial behavior. The person takes both sides of the argument and articulates the competing sides of their ambivalence regarding change. Psychoeducation regarding the interaction of substance abuse with other problems (e.g., health, legal, parenting, employment, and mental illness) can be incorporated into the technique. Decisional balancing can be very effective during the contemplation stage in assisting consumers in moving to the action stage.

- **Discrepancies between personal goals and current behavior** are developed to help consumers recognize gaps between their future goals and current behavior.
- **Flexible pacing** that takes into account the consumer's stage of change.

  The **Readiness Ruler** is a simple method that can be used to ascertain readiness to change by asking where consumers are on a scale of one to ten. Individuals in the precontemplation stage will score between zero and three.



- **Personal contact with consumers not in treatment** to enhance continuity of communication and the therapeutic relationship. Such contacts can include phone calls, handwritten letters, etc., and have been shown to be effective in helping consumers return to treatment after an absence, remain involved, and/or adhere to treatment regimens.

A motivational style of counseling can be used to instill motivation at the outset as well as throughout the treatment process. In addition, it has been found helpful as:

- A means of rapid engagement in general medical settings to facilitate referrals to treatment
- A first session to increase the likelihood that consumers will return, and to offer a beneficial intervention for those who do not return
- An empowering brief consultation for consumers placed on waiting lists
- Preparation for treatment to increase retention and participation
- A means to help individuals coerced into treatment move beyond initial feelings of anger and resentment
- A means to overcoming defensiveness and resistance
- A stand-alone intervention in settings where there is only brief contact
- A counseling style used throughout the process of change

Motivational techniques have a strong base of evidence to support their use for all age groups and can be used in individual, family, and group session formats as well as in numerous settings. Such techniques are associated with increased participation in treatment and beneficial outcomes (e.g., reductions in consumption and high-risk lifestyle behaviors, and improvements in social adjustment, rates of abstinence and treatment referral acceptance). In addition to its effectiveness, motivational interviewing is a low cost intervention that that can be delivered in two to four outpatient sessions; Motivational Interviewing does not assume a long-term consumer-therapist relationship. Even a single session of MI has been found to invoke behavior change so that even if consumers are not engaged in a long course of treatment (as is often the case), immediate help has been provided. Additional information on motivational interviewing can be found on the web site of the Motivational Interviewing Network of Trainers (MINT), http://www.motivationalinterview.org/.

SOMATIC THERAPY

The evidence base that supports the effectiveness of medication for severe mental illness greatly exceeds all other interventions. However, the rapid development of new medications creates challenges for prescribers attempting keep up to date with those developments and incorporate them into clinical practice. This has been addressed by the development of practice guidelines and algorithms based upon research and expert consensus. Despite the availability of these guidelines and algorithms, evidence indicates that medications are often used inconsistently. In particular, antipsychotic medication prescribing patterns have been shown to lack adherence expert recommendations. Moreover, it has also been shown that medication is often poorly documented in the clinical record and often does not adequately address residual side effects and symptoms. The Michigan Implementation of Medication Algorithms (MIMA) consists of medication algorithms for major depression, bipolar disorder, and schizophrenia adapted from the Texas Implementation of Medication Algorithm (TIMA). Highlights of MIMA are presented in Appendix C.

MEDICATIONS USED TO TREAT MENTAL ILLNESSES

Trade Name	Generic Name
Combination Antipsychotic and Antidepressant Medication	
fluoxetine & olanzapine	Symbyax (Prozac & Zyprexa)
Antipsychotic Medications	
Abilify	aripiprazole
Clozaril	clozapine
Geodon	ziprasidone
Haldol	haloperidol
Lidone	molindone
Loxitane	loxapine
Mellaril	thioridazine
Moban	molindone
Navane	thiothixene
Orap (for Tourette's syndrome)	pimozide
Permitil	fluphenazine
Prolixin	fluphenazine
Risperdal	risperidone
Serentil	mesoridazine
Seroquel	quetiapine
Stelazine	trifluoperazine
Taractan	chlorprothixene
Thorazine	chlorpromazine
Trilafon	perphenazine
Vesprin	trifluopromazine
Zyprexa	olanzapine
Antimanic Medications	
Cibalith-S	lithium citrate
Depakote	valproic acid, divalproex sodium
Eskalith	lithium carbonate
Lamictal	lamotrigine
Lithane	lithium carbonate

Lithobid	lithium carbonate
Neurontin	gabapentin
Tegretol	carbamazepine
Topamax	topiramate
Antidepressant Medications	
Adapin	doxepin
Anafranil	clomipramine
Asendin	amoxapine
Aventyl	nortriptyline
Celexa (SSRI)	citalopram
Desyrel	trazodone
Effexor	venlafaxine
Elavil	amitriptyline
Lexapro (SSRI)	escitalopram
Ludiomil	maprotiline
Luvox (SSRI)	fluvoxamine
Marplan (MAOI)	isocarboxazid
Nardil (MAOI)	phenelzine
Norpramin	desipramine
Pamelor	nortriptyline
Parnate (MAOI)	tranylcypromine
Paxil (SSRI)	paroxetine
Pertofrane	desipramine
Prozac (SSRI)	fluoxetine
Remeron	mirtazapine
Serzone	nefazodone
Sinequan	doxepin
Surmontil	trimipramine
Tofranil	imipramine
Vivactil	protriptyline
Wellbutrin	bupropion
Zoloft (SSRI)	sertraline
Antianxiety Medications	
(All of these antianxiety medications except BuSpar are benzodiazepines)	
Ativan	lorazepam
Azene	clorazepate
BuSpar	buspirone
Centrax	prazepam
Librax, Libritabs, Librium	chlordiazepoxide
Klonopin	clonazepam
Paxipam	halazepam
Serax	oxazepam
Tranxene	clorazepate
Valium	diazepam
Xanax	alprazolam

TREATMENT OF BEHAVIORAL EMERGENCIES

Inpatient units frequently treat individuals who display aggressive behaviors as hospitalization has increasingly focused on persons who are dangerous to themselves or others. Despite the need for effective interventions in this area there is a paucity of empirical data regarding

effective treatments for behavioral emergencies. This has led to the development of expert consensus guidelines.

Behavioral emergencies are generally treated with parenteral medications, restraints, and seclusion. The deleterious effects and wide variability in application accounted for by institutional culture rather than individual patient characteristics) of restraint and seclusion discussed earlier have led to calls for a reduction or elimination of them.

Therapeutic agents are used to treat behavioral symptoms (rather than as chemical restraints[7]) and, when administered during a crisis, can calm agitation, help the patient concentrate, and render them more accessible to interpersonal intervention. Medications most commonly used for behavioral symptoms include the atypical antipsychotics (olanzapine, quetiapine, risperidone, and ziprasidone). Other, older antipsychotics such as haloperidol are still used. A benzodiazepine such as lorazepam can be used as an adjunct for its calming effect.

Four medications are often used to decrease agitation: droperidol[8], lorazepam, haloperidol, and atypical antipsychotics. Studies indicate differential effectiveness among first generation antipsychotics (e.g. haloperidol, molindone, loxapine, chlorpromazine, and thiothixene) that can be accounted for by dosage levels and pharmacokinetics. Studies appear to suggest that droperidol is more potent and faster acting than haloperidol which is frequently used in behavioral emergencies. However, reduced extrapyramidal side effects of second generation antipsychotics favor their use. It is recommended that high-potency conventional antipsychotics be avoided for patients who have a history of extrapyramidal side effects. Benzodiazepines have been bound to be as effective, or more so, than haloperidol in emergencies. Benzodiazepines are generally avoided for patients with histories of substance abuse or dependence or drug seeking behavior with the exception of patients with significant blood alcohol levels and for whom withdrawal syndromes and seizures are of concern (Benzodiazepines can be initiated while alcohol is present in the system.) They are also avoided in patients with chronic obstructive pulmonary disease and older persons who are frail. They are preferred over antipsychotics for persons with cardiac arrhythmias or conduction defects. Second generation antipsychotics are preferred for patients with developmental delays or mental retardation. Haloperidol in combination with lorazepam is frequently used despite lack of research validating the efficacy of this approach. First generation antipsychotics appear to be preferred for use during pregnancy due to their lack of teratogenicity.

It should be noted that communication strategies are preferred by consumers and advocates including advance directives, wellness and recovery action plans and other consumer-driven planning methods.

NONADHERENCE

Nonadherence is defined as not taking medication as prescribed. The term nonadherence is used instead of compliance as the latter implies the lack of a partnership with the consumer and connotes paternalism and authority; compliance indicates that the consumer is subordinate to the prescriber who issues medical orders, whereas a partnership allows for consumer choice regarding treatment.

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[7] A chemical restraint is a medication used to control behavior or to restrict the patient's freedom of movement and is not a standard treatment for the patient's medical or psychiatric condition.

[8] Droperidol is a parenterally administered butyrophenone. It a potent D_2 (dopamine receptor) antagonist with some histamine and serotonin antagonist activity and has a central antiemetic action. It is frequently used in the treatment of postoperative nausea and vomiting. In 2001 the FDA changed the labeling requirements for droperidol injection to include a Black Box Warning citing concerns of QT prolongation and torsades de pointes.

While there is overwhelming evidence of the effectiveness of medications for treatment of the symptoms of serious mental illness, nonadherence remains a concern and is strongly associated with relapse. Studies indicate that as many as fifty percent of individuals with schizophrenia do not follow their medication regimens, and that many people with depressive disorders stop taking medication before the minimal time required to effectively treat an episode of depression. This especially true in primary care settings where studies show the rate of nonadherence to antidepressant medication surpasses fifty percent within six months of the initial prescription.

Psychoeducation about medications (e.g., medication education groups) has been shown to improve participants' knowledge about medication but is ineffective in improving adherence to medication regimens. Motivational interviewing, behavioral tailoring, and simplifying medication regimens, on the other hand, have all been shown to be highly effective. Motivational interviewing entails linking medication adherence to personal goals. Behavioral tailoring entails the use of self-monitoring cues and fitting medication into one's daily routine.

The use of a liquid suspension (e.g., risperidone, haloperidol), a fast dissolving tablet (e.g., olanzapine, risperidone), or a short-acting intramuscular form of medication (e.g., ziprasidone, haloperidol), are options for concealed nonadherence (e.g., cheeking). Both depot and SGAs (second generation antipsychotics) should be used before an FGA (first generation antipsychotic) is considered.

PHARMACOLOGY FOR CO-OCCURRING DISORDERS

In general, it is recommended that individuals with co-occurring disorders receive the most clinically effective psychopharmacologic interventions available for their mental illnesses irrespective of the status of comorbid substance disorders, and that comorbid substance use disorders be treated with appropriate psychopharmacologic intervention (e.g., disulfiram, naltrexone, and opiate maintenance therapy) irrespective of the status of comorbid psychiatric disorders.

The most common agents used to treat anxiety disorders are benzodiazepines (e.g., alprazolam and lorazepam) and antidepressants. Because benzodiazepines can cause significant problems they are generally not recommended for people with substance use disorders or for the long-term treatment of anxiety or depressive disorders. Selective serotonin reuptake inhibitors (SSRIs) for the treatment of co-occurring depressive disorders and buspirone (a partial 5-HT1A agonist) for anxiety disorders are examples of psychoactive drugs with low abuse potential.

Abuse Potential of Common Psychiatric Medications

Medication Class	High Abuse Potential	Moderate Abuse Potential	Low Abuse Potential
Sleep medications	Benzodiazepines: • Diazepam • Flurazepam • Chlordiazepoxide • Clonazepam (Klonopin) and others • Chloral hydrate • Barbiturates • Meprobamate	• Diphenhydramine • Hydroxyzine (Vistaril) • TCAs	• Trazodone (Desyrel)
Antianxiety	• Benzodiazepines	None	• TCAs • Buspirone
Antidepressants	• Methylphenidate • Dextroamphetamine	None	• Fluoxetine and others • SSRIs • TCAs • Bupropion • Venlafaxine (Effexor)

Abuse Potential of Common Psychiatric Medications			
			• Nefazodone (Serzone) • Mirtazapine
Mood stabilizers	• Clonazepam	None	• Lithium carbonate • Carbamazepine • Sodium valproate (Depakote) • Gabapentin (Neurontin) • Phenytoin (Dilantin)
Antipsychotics	None	None	All, for example: • Chlorpromazine • Thioridazine • Haloperidol • Risperidone (Risperdal) • Olanzapine (Zyprexa)
Anti-Parkinsonian medications	None	• Trihexyphenidyl (Artane) • Benztropine (Cogentin)	None
Agents for treating substance abuse	• Methadone • LAAM • Buprenorphine	• Clonidine (Catapres) (should be prescribed with caution since it can be used to self-administer for heroin withdrawal and can cause a rapid drop in blood pressure.)	• Naltrexone (ReVia) • Disulfiram (Antabuse) • Bupropion (Zyban)

(SAMHSA TIP # 37)

Buspirone has been found to be effective for patients with alcohol abuse/dependence and co-occurring anxiety disorders. When combined with cognitive behavioral therapy, it leads to reductions in symptoms of anxiety and increases in treatment retention. It also appears to exert modest effects on decreasing the frequency of alcohol consumption and the risk for resumption of heavy drinking. Fluoxetine has been shown to be effective for people with co-occurring alcohol disorders and major depression. Venlafaxine and bupropion have shown promise in pilot studies for comorbid depression and substance use disorders. In addition, studies of desipramine and imipramine have shown improved mood and reduced risk of relapse.

Bipolar disorder can be complicated by the use of substances with resulting increased likelihood for episodes of depression, mania, and rapid cycling. A manic state can be produced by stimulants (e.g., cocaine) during intoxication and from depressants (e.g., alcohol) during withdrawal. A period of confirmed abstinence, generally one to two weeks, is usually required prior to initiating treatment with mood stabilizers in order to assess the role of substances in inducing manic symptoms. Anticonvulsant mood stabilizers, (e.g., divalproex sodium and carbamazepine) have been shown to be effective in controlling mania and in treating co-occurring substance use disorders.

Medications used to treat HIV/AIDS (e.g., protease inhibitors) can interfere with the metabolism of medications used for the treatment of psychiatric and substance use disorders (e.g., methadone), as well as with that of substances that are abused. Medications that have anticholinergic effects (e.g., tricyclics and antipsychotics) block saliva flow, produce dry mouth, cause or exacerbate oral candidiasis, other mouth infections, and dental caries. The stimulation from antidepressant medications can trigger mania or hyperactivity, particularly in individuals with co-existing HIV infection and substance use disorders who may have mild central nervous system impairment from HIV. Individuals with HIV infection are more sensitive to extrapyramidal symptoms produced by antipsychotic medications (e.g., haloperidol). Second generation antipsychotics (e.g., risperidone, olanzapine, and quetiapine), with the exception of clozapine (which should not be used due to the potential for agranulocytosis), are recommended. Sedative-hypnotics and other central nervous system depressants can cause confusion,

memory impairment, and depression. In addition, some medications used to treat HIV/AIDS and its complications can affect treatment for hepatitis since a number of HIV/AIDS treatment drugs are processed through the liver; their effects can be either increased or decreased due to hepatitis or chronic alcohol use.

NICOTINE REPLACEMENT THERAPY (NRT)

Cigarette smoking accounts for more deaths each year than AIDS, alcohol, cocaine, heroin, homicides, suicides, motor vehicle accidents, and fires combined. Individuals who smoke are at increased risk for a number of medical problems (e.g., myocardial infarction, coronary artery disease, hypertension, stroke, peripheral vascular disease, chronic obstructive lung disease, chronic bronchitis, several types of cancer [lung, stomach, head and neck, and bladder], gastro-esophageal reflux disease, gastric ulcerations, and cataracts) as well as premature wrinkling of the skin. Smoking also appears to have an anti-estrogen effect that may lead to the early development of osteoporosis in women.

It is estimated that ninety percent of persons entering substance abuse treatment programs and fifty to ninety-five percent of individuals with co-occurring psychiatric disorders use nicotine. Individuals with serious mental illnesses who smoke display more positive symptoms, are prescribed more medications, experience more side effects from medications, and are hospitalized more frequently than those who do not smoke.

Individuals with co-occurring disorders need to be monitored for changes in mental status and psychopharmacotherapeutic side effects because some psychotropic medications interact with tobacco smoke. Tobacco is metabolized by the CYP 450/Ia2 isoenzyme in the liver. The metabolism of tobacco increases the metabolism of some psychotropic medications such as fluphenazine, haloperidol, clozapine, and olanzapine secondary to aromatic polynuclear hydrocarbons (i.e., tar). The cessation of smoking reduces the activity of the CYP 40/Ia2 enzymes and, hence, the metabolism of psychotropic medications. This, in turn, increases the blood level of the medications which can increase their side effects and reduce adherence to treatment regimens.

Effects of Abstinence from Smoking on Blood Levels of Psychiatric Medications		
Abstinence Increases Blood Levels	**Abstinence Does Not Increase Blood Levels**	**Effect of Abstinence on Blood Levels Is Unclear**
Clomipramine Clozapine Desipramine Desmethyldiazepam Doxepin Fluphenazine Haloperidol Imipramine Oxazepam Nortriptyline Propranolol	Amitriptyline Chlordiazepoxide Ethanol Lorazepam Midazolam Triazolam	Alprazolam Chlorpromazine Diazepam

(SAMHSA TIP # 45)

Tobacco dependence was not generally addressed in treatment programs until rather recently due to a concern that the additional stress of quitting smoking would adversely affect recovery. However, research indicates that this is a false assumption. In fact, research has demonstrated that interventions for nicotine cessation do not interfere with recovery or increase the risk for relapse. Some studies indicate that recovery from substance use disorders may assist in abstinence from nicotine. In addition, there is data suggesting that tobacco craving may increase craving for illicit drugs so that individuals who smoke may not be as successful in abstaining from them.

Integration of tobacco dependence treatment (based on motivation/stage of commitment to quit) into mental health and substance abuse treatment is supported by the literature. It is recommended that all consumers be screened for tobacco use. Cotinine (a primary metabolite of nicotine that remains in the body for several weeks and can be measured from hair, blood, urine or saliva samples) and carbon monoxide (CO) levels (which can be measured with a CO meter) can be used to ascertain the amount of nicotine use. An additional measurement option is the Fagerstrom Test for Nicotine Dependence (FTDN) is a six item self-report tool that has been shown to be predictive of withdrawal symptoms and severity of craving. Two questions from the scale that assess the number of cigarettes smoked per day and amount of time prior to the first cigarette are as predictive as the full scale.

Tobacco dependence treatment guidelines recommend addressing the problem during all clinical encounters along with the use of medications approved by Food and Drug Administration as first-line interventions (e.g., bupropion SR/zyban and nicotine replacement treatments including nicotine polacrilex [gum], nicotine transdermal patch, nicotine nasal spray, nicotine lozenge, sublingual tablet and nicotine inhaler). All NRTs have been shown to be effective with one-year quit rates between eleven and thirty-four percent. In addition, Nicotine Anonymous (http://www.nicotine-anonymous.org/) can provide support to consumers and their families.

Bupropion SR was approved by the FDA for smoking cessation in 1997 and was marketed under the trade name of Zyban. It has been shown to be effective, but is contraindicated in the presence of a history of seizures, head trauma, anorexia bulimia, and heavy alcohol consumption. Varenicline tartrate (Chantix) was approved by the FDA in May, 2006 for smoking cessation. It binds to nicotine receptors in the brain and reduces withdrawal symptoms, and blocks the effects of nicotine if smoking is resumed. A course of treatment is twelve weeks in duration. Individuals who achieve cessation can continue treatment for an additional twelve weeks to increase potential for long-term cessation. Clonidine, nortriptyline, and moclobemide have also been found to be effective treatments, but are not approved by the FDA for smoking cessation therapy. Nortriptyline and clonidine are second-line treatments according to the U.S. Public Health Service's guideline on the treatment of tobacco use and dependence.

NRTs provide less than half of the nicotine plasma levels achieved through smoking cigarettes. Combination therapies (e.g., the patch and gum) have been used to augment nicotine levels and increase the effectiveness of therapy. There is some evidence to support the combination of the patch (a passive nicotine delivery system) with an active, self-administered therapy (e.g., gum and nasal spray) when monotherapy has not been successful. The combination of bupropion SR and the transdermal patch has been found to lead to higher quit rates over a twelve-month period.

The majority of smokers make several quit attempts on their own. Seventy-five to eighty percent of individuals who attempt to quit experience relapse. Fear of weight gain is a common barrier to quit attempts, especially in women. However, dieting during smoking cessation has been shown to lead to relapse (as has alcohol consumption). There is also some evidence showing that women do not benefit as much as men from NRT, but may benefit more from non-NRT treatments such as bupropion and naltrexone which can attenuate weight gain.

Research shows that extending treatment longer than typical smoking cessations programs improves quit rates to fifty percent at one year post intervention. Evidence indicates that these medications are effective when used alone, but the addition of psychosocial interventions potentiates their effectiveness by fifty percent. Moreover, there is a direct correlation between the intensity of counseling and quitting success and that even very brief counseling improves success rates. In sum, NRTs in combination with behavioral interventions (ranging from self-

help materials to individual cognitive-behavioral interventions that teach people to recognize high risk smoking situations, develop alternative coping strategies, manage stress, enhance problem-solving skills, and increase social supports) have been shown to be effective.

COMBINED BEHAVIORAL & NICOTINE REPLACEMENT THERAPY

It is estimated that ninety percent of persons entering substance abuse treatment programs and fifty to ninety-five percent of individuals with co-occurring psychiatric disorders use nicotine. Individuals with serious mental illnesses, who smoke display more positive symptoms, are prescribed more medications, experience more side effects from medications, and are hospitalized more frequently than those who do not smoke. The literature recommends that nicotine addiction be addressed in all programs.

Combined Behavioral and Nicotine Replacement Therapy consists of the use of a transdermal nicotine patch or nicotine gum to reduce symptoms of withdrawal for initial abstinence and a concurrent behavioral component to provide support and reinforcement for coping skills. The latter component consists of behavioral skills training designed to help individuals learn to avoid high risk situations for smoking relapse early on and plan strategies to cope with such situations later on. Participants practice skills during treatment and in social and work settings. Other coping techniques (e.g., cigarette refusal skills, assertiveness, and time management) are also taught.

ETHNOPSYCHOPHARMACOLOGY

Ethnopsychopharmacology is the examination of ethnocultural variation that affects the effectiveness of psychotropic medications. For example, there is evidence that suggests that one third of African Americans have genetic polymorphisms of some enzymes that metabolize psychotropic medications which results in altered metabolism and side effect risk. Also, individuals of Jewish descent have been noted to be at a greater risk for clozapine-induced agranulocytosis than other individuals with schizophrenia. The majority of the research in this area has focused on gene polymorphisms (variations of DNA) in the liver that affect enzymes that metabolize psychotropic drugs. After a medication is ingested, it enters the blood and is circulated to the liver where it is metabolized by enzymes (proteins encoded by genes). Certain genetic variations affecting the functions of these enzymes are more common in certain racial or ethnic groups. Such variations affect the speed of metabolism of drugs.

While there is considerable overlap in the distribution of metabolic rates across racial and ethnic groups, and there is usually more diversity within a population than between populations, lifestyle factors (e.g., diet, use of alternative or complementary treatments, smoking[9], alcohol consumption, etc.) are thought to outweigh genetic factors. Nonetheless, genetic polymorphisms need to be considered in prescribing practices. Two common substrates and implications regarding medication dosages are reviewed below.

[9] Cigarette smoking is a strong inducer of Cytochrome P450 1A2, an isoenzyme involved in the metabolism of a number of medications including clozapine, haloperidol, and olanzapine, which may increase the metabolism of such medications and reduce their serum levels. It has been estimated that between seventy and eighty percent of individuals with schizophrenia smoke cigarettes. The serum concentrations of individuals who take Clozapine and smoke are thirty-two percent lower than those of nonsmokers. Studies indicate that Clozapine is associated with reductions in cigarette smoking; serum levels of clozapine can increase when such individuals quit smoking. Reductions in enzymatic activity occur following smoking cessation. This can lead to seizures and other harmful events.

Genetic polymorphisms in hepatic Cytochrome P450 (CYP) enzymes occur in variable numbers in certain ethnic groups and, since most psychotropic medications are metabolized through the CYP 450 system, isomorphic variation can affect response to dosages of the medications. Genetic polymorphisms for the Cytochrome P450 isoenzymes 2C19 and 2D6 are two examples discussed below.

2D6 and 2C19 metabolize several psychotropic medications. There are three phenotypes for the CYP 2D6: poor metabolizers (PMs), extensive metabolizers (EMs), and ultra rapid metabolizers (URMs). Poor metabolizers are unable to synthesize the active form of the CYP 2D6 enzyme so that when given standard doses of medications that are metabolized predominantly by CYP 2D6, higher blood levels are reached or toxicity occurs. Sub-therapeutic levels occur in people given standard doses who have ultra rapid metabolism. This may be mistakenly ascribed to nonadherence. The most common phenotype is extensive metabolism, which lies between these two. Haloperidol, perphenazine, fluphenazine, risperidone, chlorpromazine, nortriptyline, amitriptyline, clomipramine, desipramine, imipramine, fluoxetine, and paroxetine are CYP 2D6 substrates. (Fluoxetine and paroxetine have a wide therapeutic index so genetic polymorphism is not of critical concern in their metabolism.)

The activity of the enzyme encoded by the CYP 2D6 gene is very low or absent in about five to eight percent of Caucasians and in about two to five percent of African Americans and Asians. One percent of Asians (Chinese, Korean, Japanese) are poor metabolizers. One to three percent of Middle Europeans and twenty nine percent of Ethiopians have very rapid metabolism by means of the CYP 2D6 enzymes.

The only known phenotypes for 2C19 are poor metabolizers and extensive metabolizers, the latter dependent upon the genotype of the person. About twelve to twenty-two percent of Asians are poor metabolizers of 2C19. Researchers have discovered that about three to six percent of Caucasians are poor metabolizers of CYP 2C19 substrates. However, although Asians have a low incidence of poor metabolizers, they have been found to require lower doses of tricyclic antidepressants and haloperidol than Caucasians. Studies have also demonstrated that Asians require lower does of diazepam, a CYP 2C19 substrate, than Caucasians. (Imipramine, diazepam, and phenytoin are also substrates of CYP 2C19.)[10]

In addition to the genetic polymorphisms mentioned above, there is also significant evidence of differential diagnosis and prescribing patterns for individuals from ethnic and minority groups, and that consumers from racial and ethnic minorities are less likely than Caucasians to receive second generation antipsychotics and are more likely to receive long-acting depot medications. The PORT study showed that consumers from racial and ethnic minority groups, especially African Americans, receive doses higher than the recommended ranges. Higher dosing, along with genetic polymorphisms that alter metabolism of psychotropic medications, increases the risk for side effects. This can lead to increased rates of nonadherence, hospitalizations, and other adverse outcomes.

[10] It is estimated that between twenty-five and sixty percent of the general population metabolize drugs ineffectively. A genetic test, called the AmpliChip CYP450, allows prescribers to tailor medication doses to a person's genetic composition, was approved for use by the United States Food and Drug Administration in December 2004. It is about the size of a matchbox and contains millions of DNA molecules in a DNA chip. It uses the chip to analyze the genetic material from a person's blood to identify fast metabolizers (who end up with too little medicine in their bodies) and slow metabolizers (who can build up dangerous levels of a drug). This will allow more accurate pinpointing of doses.

POLYPHARMACY ISSUES

Polypharmacy is the prescription of multiple medications to the same person. Same-class Polypharmacy is the use of more than one medication from the same medication class (e.g., two SSRIs, two SGAs, etc.). Multi-class Polypharmacy refers to the use of more than one medication from different medication classes for the same symptoms (e.g., prescription of one of the SGAs with lithium for the treatment of bipolar illness). Adjunctive polypharmacy entails the use of medication to treat the side effects of another medication from a different medication class (e.g., use of an antiparkinsonian drug with a first generation antipsychotic medication). Augmentation is the use of one medication at a lower than standard dose with a medication from a different class at its full dose for the same symptoms or the addition of a medication that would not be used alone for the same symptoms.

There are a number of concerns regarding polypharmacy noted in the literature:

- The risks for drug-drug interactions are increased[11]
- Multiple medications can create a regimen that becomes complex and can lead to nonadherence because of that complexity
- Polypharmacy can contribute to adverse medication effects
- Polypharmacy can increase costs

There are situations where polypharmacy is justified. For example, research supports the use of tricyclic antidepressants (TCAs) in combination with monoamine oxidase inhibitors (MAOIs) for the treatment of major depression, the use of tricyclic antidepressants with SSRIs, and combinations of antipsychotic agents with mood stabilizers for the treatment of mania. The TMAP algorithm for schizophrenia includes the use of more than one antipsychotic agent at the sixth step of the algorithm, after the consumer has not responded to as many as five steps of monotherapy. Both the TMAP and the APA guidelines for major depressive disorder recommend using different classes of antidepressants after several trials of different single antidepressants. The TMAP guideline recommends using augmentation polypharmacy with non-antidepressant medication as early as the second step after using a single antidepressant and before using multiple antidepressants. The APA guideline presents either antidepressant polypharmacy or augmentation polypharmacy as being appropriate following multiple trials of a single antidepressant. For bipolar disorder, the use of more than one mood stabilizer is considered appropriate early in the course of treatment. The TMAP algorithm for bipolar disorder recommends adding a second mood stabilizer in the second step of the treatment process. Finally, there is justification for polypharmacy during cross tapering of medications where one is being used to replace another and both are used together for a limited period.

In general, same class (same mechanism) medications should not be used concurrently. It has shown that more than one medication from the FGAs, SGAs, TCAs, MAOIs, benzodiazepines, or stimulants should not be prescribed concurrently.

MEDICATIONS FOR SUBSTANCE USE DISORDERS

Pharmacotherapy for substance use disorders is utilized:

[11] Most drug-drug interactions are due to the Cytochrome P450 system. Medications that activate hepatic enzymes (e.g., carbamazepine, which is metabolized through Cytochrome P450 isoenzyme 3A3/4) cause a reduction in serum tricyclic antidepressant levels, can reduce the level of valproate, and reduce the activity of clonidine. Carbamazepine levels can be increased by medications that inhibit Cytochrome P450 isoenzyme 3A3/4 such as fluoxetine and fluvoxamine. The use of tricyclic antidepressants with monoamine oxidase inhibitors, norepinephrine, and epinephrine can result in hypertensive crises. There can be a lethal interaction between SSRIs and MAOIs.

- To replace a harmful substance with a safer drug of the same class (e.g., methadone)
- To suppress symptoms of withdrawal
- To discourage continued substance use by precipitating an unpleasant reaction or reducing the euphoric effects of a substance (e.g., disulfiram and naltrexone)
- For agonist substitution therapy (which replaces an illicit drug with a prescribed medication)
- To treat co-occurring psychiatric disorders
- To decrease potential relapses

Generic	Brand
Alcohol	
Alcohol withdrawal agents	
benzodiazepines (e.g., lorazepam)[12]	Ativan
anticonvulsants (e.g., carbamazepine, divalproex sodium, gabapentin)	Tegretol, Depakote, Neurontin
barbiturates	
Alcohol relapse prevention agents	
disulfiram	Antabuse
naltrexone hydrochloride	ReVia, Depade
acamprosate	Campral
nalmefene hydrochloride	Revex
topiramate[13]	Topamax
Opioids	
Opioid withdrawal agents	
buprenorphine	Subutex
buprenorphine and naloxone	Suboxone
clonidine	Catapres
methadone hydrochloride	Methadone
nalmefene hydrochloride	ReVia, Depade
naltrexone hydrochloride	Revex
Opioid maintenance agents	
buprenorphine	Subutex
buprenorphine and naloxone	Suboxone
LAAM (levo-alpha-acetyl-methadol)[14]	
methadone hydrochloride	Methadone

[12] Baclofen (gamma-aminobutyric acid B (GABA(B)), a receptor agonist used for spasticity) has been found to be as effective as diazepam in treatment of uncomplicated alcohol withdrawal syndrome and is a promising pharmacological compound for use in the treatment of alcohol dependence. It has been found to reduce cocaine use.

[13] There is some evidence indicating topiramate (an anticonvulsant) is effective in reducing craving and heavy drinking and improving abstinence among people with alcohol dependence. It may also be effective for cocaine addiction.

[14] While LAAM has been shown to be as effective as methadone and buprenorphine in decreasing opioid use and enhancing treatment retention, it is no longer available due to adverse effects.

Nicotine	
Nicotine replacement agents	
Nicotine	Nicoderm CQ, Nicotine Transdermal System, Nicotrol Inhaler, Nicotrol NS
nicotine polacrilex	Commit, Nicorette, Nicotine Gum
Nicotine cessation agents	
bupropion SR[15]	Zyban
varenicline tartrate	Chantix

ELECTROCONVULSIVE THERAPY (ECT)

While years of research clearly demonstrate the effectiveness and general safety of ECT for selected mental illnesses, it remains controversial and its use varies. It is estimated that less than eight percent of psychiatrists in this country provide ECT.

ECT has been found to be beneficial for major depression, bipolar depression, and mania. The average response rate of between sixty and seventy percent for depression or mania accompanied by psychosis or catatonia is comparable to that of results from pharmacotherapy, but evidence indicates its effects occur more rapidly than with medication. There is also sufficient evidence for its use for the treatment of schizophrenia. The three TMAP algorithms use it as a fifth or sixth level approach for individuals who have not responded to medications alone or in combination. It is most well established for treatment refractory mood disorders and catatonia (that has not responded to lorazepam). Its safety for mother and fetus make it a choice for use during pregnancy. It has also been shown to have good results in the treatment of neuroleptic malignant syndrome.

A typical course of ECT consists of six to twelve treatments, three times a week on either an inpatient outpatient basis. The production of an adequate, generalized seizure is required for therapeutic effect. Research indicates that bilateral electrode placement produces results if an adequate seizure is produced, whereas with unilateral electrode placement, a therapeutic response cannot be obtained without increasing the electrical dose above the seizure threshold.

Some medications interact negatively with ECT and it is recommended that they be avoided during ECT. For instance, clozapine can raise the seizure threshold which makes it more difficult to obtain a therapeutic effect from ECT. Lithium adds to confusion and cognitive impairment when taken during a course of ECT.

[15] Bupropion for nicotine dependence appears to have an effect on reward pathways associated with nicotine use and, when combined with nicotine replacement therapies, tends to result in better outcomes than either alone.

SERVICE DELIVERY

Transition planning should commence upon admission to an inpatient unit. It is critical to ensure that needed services and supports are immediately accessible at the time of discharge both for continuity of care to maintain treatment gains and ongoing community tenure. Linkages with resources for medical care, psychiatric care, housing, employment, transportation, self-help groups, income supports and benefits and others should be initiated prior to discharge. The participation of community-based case managers and ACT team members in hospital-based treatment and discharge planning can facilitate a smooth transition to the community.

CASE MANAGEMENT

Even though case management is widely applied in mental health service delivery systems, it takes many different forms. There is no consensus regarding how to specify models of case management. In fact, the literature is replete with different labels including, but not limited to, strengths-based, broker, advocacy, social network, rehabilitation, intensive, and generalist models. ACT is also frequently mistakenly categorized as an intensive case management model. Case management models are typically depicted along a continuum of intensity with more intense models providing outreach to individuals who are reluctant to engage in services. Models that are more intensive also typically provide more consumer contacts per month.

Core Functions of Case Management
❶ **Assessment**
❷ **Planning**
❸ **Linking**
❹ **Monitoring**
❺ **Advocacy**

Since case management is not a well-defined program model, it may be more instructive to review the commonalities with an evidence base across the various "types" of case management.

- Assertive community outreach for individuals who are reluctant to engage in services (usually a prominent feature in working with individuals who are homeless and/or have co-occurring substance use disorders and serious mental illnesses).
- A psychosocial assessment to determine strengths, difficulties, and needs.
- Development of a comprehensive plan for services and supports based upon the individual's own established goals and documented in the assessment.
- Assistance with obtaining necessary resources either through direct service provision or through linkages with services, systems and resources.
- Ongoing evaluation of progress and needs through monitoring.
- Advocacy activities to ensure access to appropriate services, supports, and resources.
- Crisis intervention either through direct intervention or by mobilizing needed services and supports.
- Discharge planning to help with transitions between service settings and programs.
- Supportive counseling.

The following stages are common to more intensive models of case management are used in working with people who are homeless and those who have co-occurring mental illnesses and substance use disorders:

- Engagement: developing a therapeutic/helping relationship and provision of basic services such as food, clothing, and shelter.
- Persuasion: recognizing and accepting treatment.
- Active treatment: developing skills and supports and pursuing goals
- Relapse prevention: using strategies to maintain recovery.

Outcome studies on case management indicate that inclusion of consumers as peer specialists produce results that are more positive. In fact, teams totally comprised of consumers produce the same results as those comprised of professional staff. Those that are more intensive produce better outcomes in terms of community tenure, independence, and reduction of days spent in the hospital.

ASSERTIVE COMMUNITY TREATMENT (ACT)

Through it is often characterized as intensive case management, Assertive Community Treatment is a service delivery model; it is not a case management program. The core of ACT is a transdisciplinary team that is comprised of ten to twelve practitioners including psychiatrists nurses, master's and doctoral level professionals, consumers, employment specialists, substance abuse specialists, and a program assistant, who serve approximately one hundred consumers. The ratio of staff to consumers is recommended to be one to ten. ACT teams work together in a highly integrated fashion across professional boundaries to the maximum extent possible to support a consumer's life in the community. They are available twenty-four hours a day, seven days a week. Services are provided in vivo rather than office-based settings, allowing for the delivery of supports in natural contexts where problems arise and skills are needed. The team provides care coordination on a continuous basis, including when the consumer is in the hospital.

ACT team members do not have individual caseloads. ACT teams are organized around specific tasks: keeping consumers out of the hospital and supporting their recovery. This means that there is no predetermined configuration of resources and services. Resources and services are organized around the tasks to be accomplished.

ACT is designed for a relatively small group of consumers who experience the most serious and intractable symptoms, have the greatest difficulties in activities of daily living, and have not responded well to services that are more traditional. Typically, such consumers have been extensive users of inpatient hospitalization services, have a co-occurring substance use disorder, involvement in the criminal justice system, as well as experiences of homelessness, and unemployment.

Consumers are not excluded from ACT services due to severity of illness, disruptive behaviors, refusal to participate in other services, or take medication. There is no specific time limit on services; they can be provided indefinitely.

AREAS IN WHICH ASSERTIVE COMMUNITY TREATMENT TEAMS PROVIDE ASSISTANCE	
Daily Activities/Community Living Skills • Grocery shopping and cooking • Purchasing and caring for clothing • Using transportation • Hygiene • Nutrition • Housekeeping	**Health Promotion** • Education to prevent health problems • Medical screening • Scheduling routine visits • Linking with medical providers for acute care • Sex education and counseling on reproductive health
Family Life • Crisis management • Counseling and psychoeducation for family members • Coordination with child welfare and family service agencies • Supporting people in carrying out their roles as parents	**Medication Support** • Ordering medications from pharmacies • Deliver medications, if needed • Education about medications • Reminding individuals to take medications • Monitor adherence and side effects

Housing Assistance • Finding suitable housing • Helping negotiate leases and pay rent • Purchasing and repairing household items • Developing relationships with landlords • Improving housekeeping skills	**Work Opportunities** • Educating employers about serious mental illness • Help preparing for employment • Help finding and keeping employment Employment support (Job Coaching)
Financial Management • Planning a budget • Troubleshooting financial problems e.g., disability payments • Assisting with bills • Increasing independence in money management	**Entitlements** • Assisting with applications • Accompanying consumers to entitlement offices • Managing food stamps if needed • Assisting with redetermination of benefits
Counseling • Use problem solving approach • Built into all activities • Goals addressed by all team members • Includes development of illness management skills	**Substance Abuse Treatment** • Substance abuse treatment provided directly by team members • Individual and group interventions are available

The team develops a comprehensive assessment and a psycho/social timeline with information that allows for the identification of previous events (e.g., hospitalizations), an evaluation of what has been effective and what has not, and pinpoints possible antecedents of stress-inducing events. Such information leads to the development of a treatment plan that covers the services and supports the consumer will receive.

The team meets on a daily basis, with meetings structured around a daily communication log. The team develops a daily team schedule for planned activities. Team members work in shared space allowing for ease of communication and maintain a weekly consumer schedule.

TEN PRINCIPLES OF ASSERTIVE COMMUNITY TREATMENT
❶ Services are targeted to a specified group of individuals with severe mental illness.
❷ Rather then brokering services, treatment, support, and rehabilitation services are provided directly by the assertive community treatment team.
❸ Team members share responsibility for the individuals served by the team.
❽ The staff-to-consumer ratio is small (approximately 1 to 10).
❾ The range of treatment and services is comprehensive and flexible.
❾ Interventions are carried out at the locations where problems occur and support is needed rather than in hospital or clinic settings.
❽ There is no arbitrary time limit on receiving services.
❽ Treatment and support services are individualized.
❾ Services are available on a 24-hour basis.
❿ The team is assertive in engaging individuals in treatment and monitoring progress.

ACT teams also engage consumer's family members in a collaborative relationship designed to alleviate stress and burden on the family as caregivers. They assist consumers with a range of activities related to fulfilling responsibilities as parents by helping them with obtaining services such as parent training, child care and respite services as well as in relating to schools and other systems.

The SAMHSA ACT manual lists the following activities related to parenting and pregnancy:

- Arranging prenatal, physical, and practical care
- Soliciting and using appropriate social services agencies

- Facilitating admission to the hospital and effective communication with hospital staff during the birth process and immediate neonatal period
- Supporting neonatal, infant, and childhood parenting at home
- Changing psychiatric treatment, particularly psychotropic medications, to match the needs of pregnancy, and delivery
- Educating the consumer about birth control

The ACT team works to involve partners and other members of the consumer's support system. The team also offers support to consumers in carrying out their parental responsibilities and in coordinating services for the children of consumers. This includes dealing with other systems such as schools, and securing needed services, such as parent training, respite services, childcare. The mother-child relationship can be a specific focus. This is important because of the significant number of mothers with a mental illness who face the loss of custody, either voluntarily (to other family members, foster and adoptive parents), or involuntarily.

An extensive research base for ACT exists. Studies show that it is very effective in reducing hospitalization and improving housing stability. Its effects on quality of life, social functioning, and symptoms are similar to those of other interventions such as case management. Reduced levels of substance abuse are found when a substance specialist is part of the team. Higher rates of competitive employment are achieved when employment specialists are part of the team. Most studies have also shown that consumers and their families are more satisfied with ACT than other types of services.

It is estimated that the per-consumer annual cost of ACT is about $9,000 to $12,000 per annum. It is cost effective for individuals with extensive hospital utilization. This is why it is generally reserved for a specific subset of consumers, as indicated above.

ACUTE CARE

HOSPITAL-BASED EXTENDED OBSERVATION SERVICES

Extended observation beds may be provided on a twenty three-hour or seventy two-hour basis, depending upon need. Either model is essentially a crisis hospitalization approach for an individual who requires observation during an acute crisis when exhibiting suicidality, homicidality, and intoxication. Unlike crisis residential, individuals who do not voluntarily accept intervention can use this service. Extended observation has been shown to be an effective hospital diversion program for individuals whose crises are of transient nature, particularly when they occur in the context of a substance abuse episode and for self-harm behaviors exhibited by individuals with personality disorders.

PARTIAL HOSPITALIZATION

Partial hospitalization services can be used as a diversion from inpatient hospitalization or as a step-down from inpatient to shorten length of stay and assist in transition back to community living. Partial hospital programs provide the same types of services and supports as those found in the inpatient milieu. The advantage is that services are provided in a less restrictive, more integrated environment and are less disruptive than an inpatient stay. Partial hospitalization also does not appear to have the stigma that inpatient hospitalization carries.

Some studies of partial hospitalization indicate that it is as effective acute inpatient care; others show it is more effective in reducing symptoms, hospitalization, and maintaining the person's role functioning in the community. Partial hospitalization is less costly than inpatient hospitalization, typically half of the daily inpatient rate.

INPATIENT HOSPITALIZATION

The research on hospital care indicates that intensive behavioral treatment combined, with appropriate pharmacotherapy (provided in accordance with established algorithms), produces the best outcomes. A functional assessment of behavior and individualized interventions to provide feedback for appropriate and inappropriate behaviors along with milieu management, group skills training, and cognitive remediation are all evidence-based inpatient interventions. Illness Management and Recovery, Family Psychoeducation, and Integrated Dual Disorders Treatment are all applicable to the inpatient setting.

Standardized screening instruments with established validity and behavioral anchors should be used to assess the consumer's status upon admission and subsequent to the initiation of intervention to ascertain progress. Screening and assessment for co-occurring mental illness and substance use disorders should be conducted. Individual and group interventions should address recovery from both disorders. Consumers should also be screened for trauma exposure. The use of seclusion and restraint should be avoided, especially for consumers who have previously experienced trauma, as these have been found to have deleterious effects as discussed above.

Inpatient treatment should include the provision of information about the consumer's illness, including symptoms and treatment options. Opportunities for helping consumers learn skills to manage their illness and teaching strategies for reducing relapses and coping with symptoms should be the focus of group and individual interventions. Techniques include motivational, educational, and cognitive-behavioral strategies. Education regarding the benefits and risks of medication should be included. The goal is to place the consumer in charge of his or her illness and set personal goals for recovery.

Token economies are used to create a social learning milieu in which points are earned for meeting specific target behaviors. Points can be redeemed for various privileges (e.g., recreational activities found enjoyable by the consumer) or tangibles (e.g., special foods). Inpatient behavior therapy includes feedback given for appropriate and inappropriate behaviors through prompting the consumer in a manner that stresses the consequences of behavior. The consumer is assisted in selecting appropriate behavior when necessary. Behaviors such as hygiene and grooming, attending and participating in groups can be enhanced with such methods. As the consumer's behavior becomes more appropriate, external reinforcers (tokens) are used less frequently and replaced more and more by social reinforcers. Studies show that cognitive-behavioral interventions, combined with medication, reduce the frequency of incidents, use of seclusion and restraints, and rehospitalizations.

Discharge planning for community re-entry begins upon admission to the hospital. It is designed to ensure that the consumer is connected to community-based services and supports for follow-up and maintenance of progress. This includes medication, benefits, housing, case management or outpatient therapy, vocational and educational services, etc. Effective discharge planning is intended to reduce recidivism and is considered preventive in nature in that successfully engaging the individual with the range of services and supports needed to maintain community tenure can lead to reductions in unnecessary readmissions.

Research consistently demonstrates that length of stay is unrelated to outcome. Brief stays produce the same outcomes as longer term stays including improved community adjustment, symptom reduction, and readmission rates. However, while short stays are typical, there is still a small subset of individuals for whom longer-term hospitalization may be necessary.

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APPENDIX B: SELECTED RESOURCES

Co-Occurring Psychiatric and Substance Use Disorders:

SAMHSA's Co-Occurring Center for Excellence (COCE): http://coce.samhsa.gov/
Dual Diagnosis Recovery Network (DDRN): www.dualdiagnosis.org
Support Together for Emotional/Mental Serenity and Sobriety (STEMSS)
Michael G. Bricker, Executive Director
STEMSS Institute and Bricker Clinic
140 E. Dekora Street
Saukville, WI 53080
(414) 268-0899
STEMSS is a psychoeducational group intervention. The model has been developed to train facilitators to initiate, implement, and maintain support groups for consumers. The six steps of the program and the support groups are intended to complement participation in traditional twelve-step programs.
Consumer Organization and Networking Technical Assistance Center (CONTAC): www.contac.org
CONTAC distributes a list of names and contacts for resources and information on substance addictions, co-occurring disorders, services, and mutual help support. CONTAC also offers the Leadership Academy, a training program that is designed to help consumers learn how to engage in and develop consumer services. Recently, a training component focusing on substance abuse/dependence was developed and incorporated into the program.
National Council on Alcoholism and Drug Dependence (NCADD): www.ncadd.org
NCADD has a nationwide network of nearly one hundred affiliates that provide information and referrals to local services, including counseling and treatment. NCADD also offers a variety of publications and resources.
National Empowerment Center: www.power2u.org
The National Empowerment Center has prepared an information packet, which includes a series of published articles, newspaper articles, and a listing of organizations and federal agencies that provide information, resources, and technical assistance related to substance abuse and dependence, co-occurring disorders, services, and mutual help support.
National Mental Health Association: www.nmha.org
The National Mental Health Association has expanded its mission to encompass substance abuse/addictions and co-occurring disorders. The organization continues to develop resources, documents, and publications. A designated section on the organization's Web site is dedicated to co-occurring disorders.
National Mental Health Consumers' Mutual Help Clearinghouse: www.mhselfhelp.org
The organization has developed and offers a resource kit, which provides the names and contacts for resources and information on substance addictions, co-occurring disorders, services, and mutual help support.

SUBSTANCE USE DISORDERS:

National Alcohol & Drug Addiction Recovery Month
Recovery Month is sponsored SAMHSA's Center for Substance Abuse Treatment (CSAT). An annual observance that takes place during September that highlights the societal benefits of substance abuse treatment, lauds contributions of treatment providers, and promotes the message that recovery from substance abuse in all its forms is possible.

National Clearinghouse for Alcohol and Drug Information (NCADI), SAMHSA
SAMHSA's National Clearinghouse for Alcohol and Drug Information (NCADI) a resource for information about substance abuse prevention and addiction treatment.
The National Center on Addiction and Substance Abuse (CASA), Columbia University
A unique think/action tank that engages all disciplines to study every form of substance abuse as it affects our society.

Federal Health Information Centers and Clearinghouses:

The National Guideline Clearinghouse (NGC): http://www.guideline.gov/
Sponsored by the Agency for Healthcare Research and Quality (AHRQ), the site contains over 1000 diseases and condition treatment guidelines.
National Library of Medicine: http://www.nlm.nih.gov/nichsr/nichsr/html
National Resource Center on Homelessness And Mental Illness:
http://www.nrchmi.samhsa.gov/
SAMHSA's National Mental Health Information Center:
http://www.mentalhealth.samhsa.gov/
National Quality Measures Clearinghouse: http://www.qualitymeasures.ahrq.gov/
The Chronic Care Model (CCM): http://www.wpic.pitt.edu/dppc
SAMHSA Evidence Based Practices Project Toolkits: http://www.mentalhealthpractices.org/

Evidence-Based Practices:

New York State Office of Mental Health Initiatives: www.omh.state.ny.us/omhweb
The National Association of State Mental Health Program Directors' (NASMHPD): http://www.nasmhpd.org
The Human Services Research Institute (HSRI): http://www.hsri.org/
The American Association of Community Psychiatrists:
http://www.wpic.pitt.edu/aacp/default.htm
The American Psychiatric Association: http://www.psych.org/
Drug interactions: http://medicine.iupui.edu/flockhart
Texas Medication Algorithm Project/Texas Implementation of Medication Algorithms (TMAP/TIMA): http://www.mhmr.state.tx.us/centraloffice/medicaldirector/TIMA.html
http://www.mhmr.state.tx.us/centraloffice/medicaldirector/IMAP.html
Michigan Implementation of Medication Algorithms:
U.S. Department of Health and Human Services (HHS): http://www.hhs.gov/
Substance Abuse and Mental Health Services Administration: http://www.samhsa.gov/
Health Resources and Services Administration: http://www.hrsa.gov/
Centers for Medicaid and Medicare Services: http://www.cms.gov/
U.S. Department of Housing and Urban Development (HUD): http://www.hud.gov/
U.S Department of Veteran's Affairs (VA): http://www.va.gov/

Consumer-Delivered Services:

National Mental Health Consumers' Self-Help Clearinghouse: http://www.mhselfhelp.org/
Consumer-Operated Services Program: http://www.cstprogram.org/
Consumer Organization & Networking Technical Assistance Center:
http://www.contact.org/
The National Alliance for the Mentally Ill (NAMI): http://www.anmi.org/

Advance Directives:

Bazelon Center for Mental Health Law: http://www.bazelon.org.advir.html/
Duke University Program on Psychiatric Advance Directives
National Mental Health Association: http://www.nmha.org/

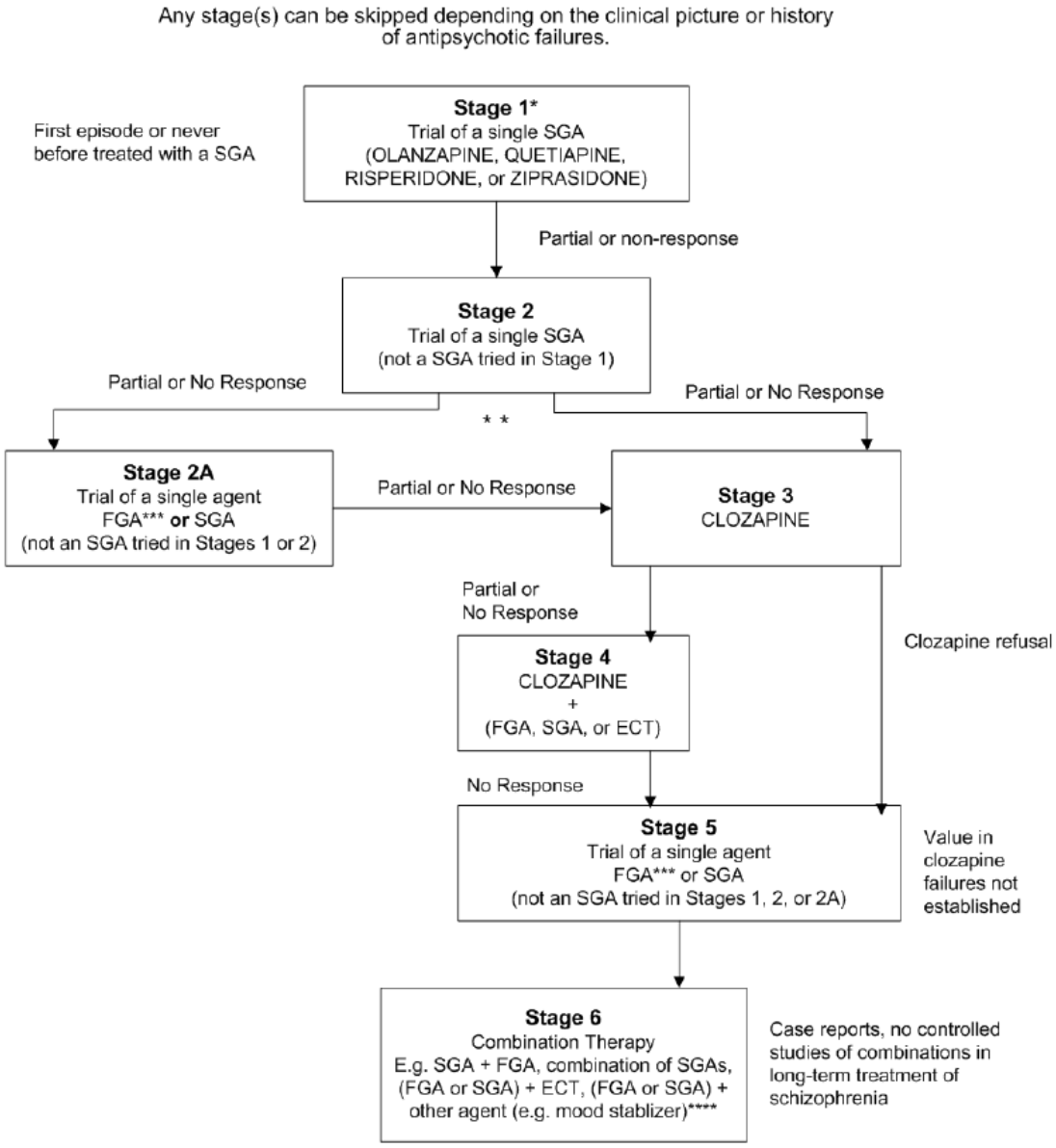
Recovery:

Advocacy Unlimited: http://www.mindlink.org/
Awakenings Project: http://www.ucpsychrehab.org/programs/awakenings/
Boston University's Center for Psychiatric Rehabilitation: http://www.bu.edu/cpr/
Consumer Organization and Networking Technical Assistance Center (CONTACT): http://www.contact.org/
WRAP: http://www.mentalhealthrecovery.com/
Mental Health Client Action Network (MHCAN): http://www.mhcan.org/
Mental Illness Education Project: http://www.miepvideos.org/booklist.html
National Empowerment Center (PACE): http://www.power2u.org/
Peoplewho: http://www.peoplewho.net/
Recovery, Inc.: http://www.recovery-inc.com/

APPENDIX C: MIMA HIGHLIGHTS

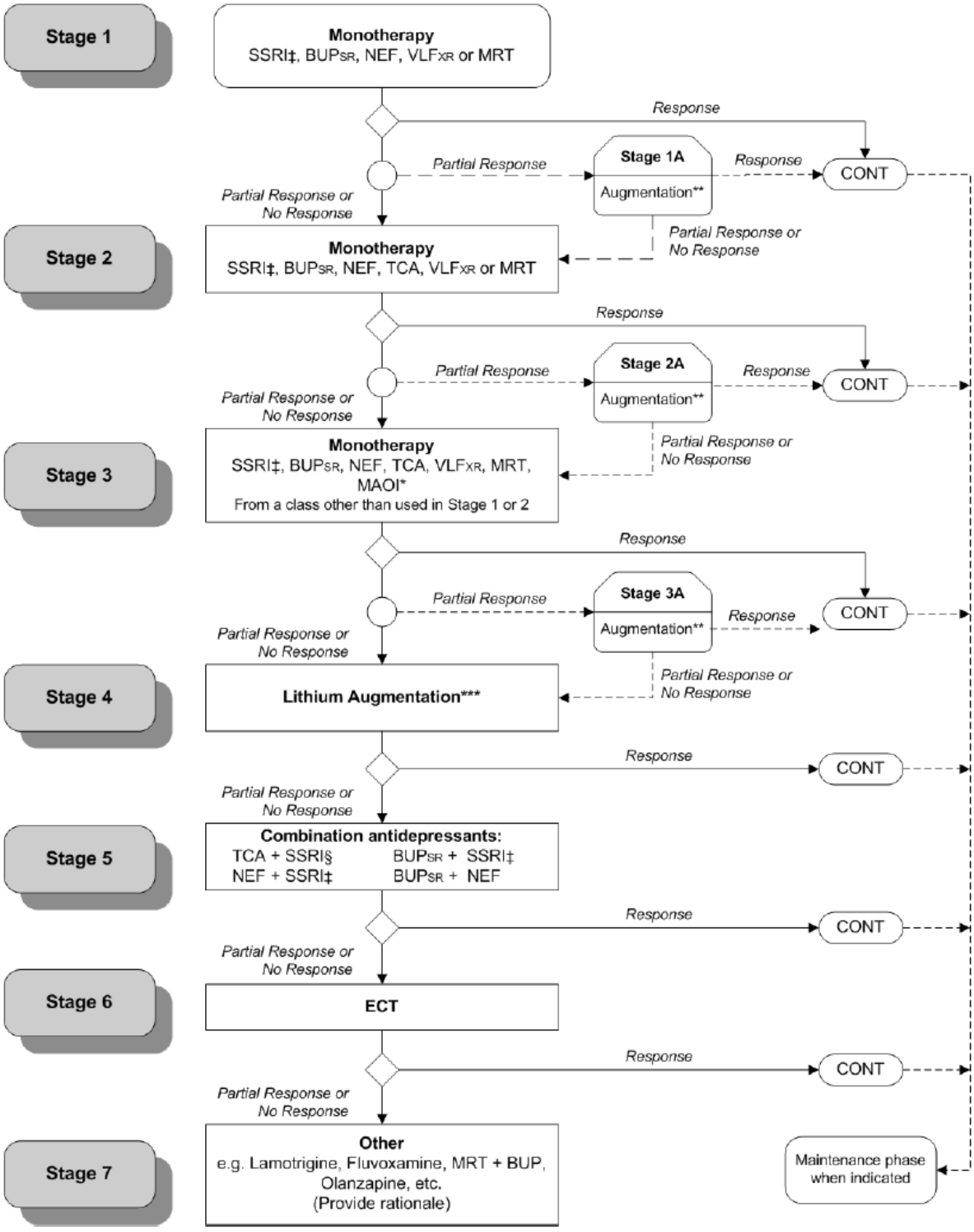
An overview of the algorithms for the treatment of schizophrenia, major depression, and bipolar is presented in the following diagrams taken from the Michigan Implementation of Medication Algorithms (MIMA).

Algorithm for the Treatment of Schizophrenia

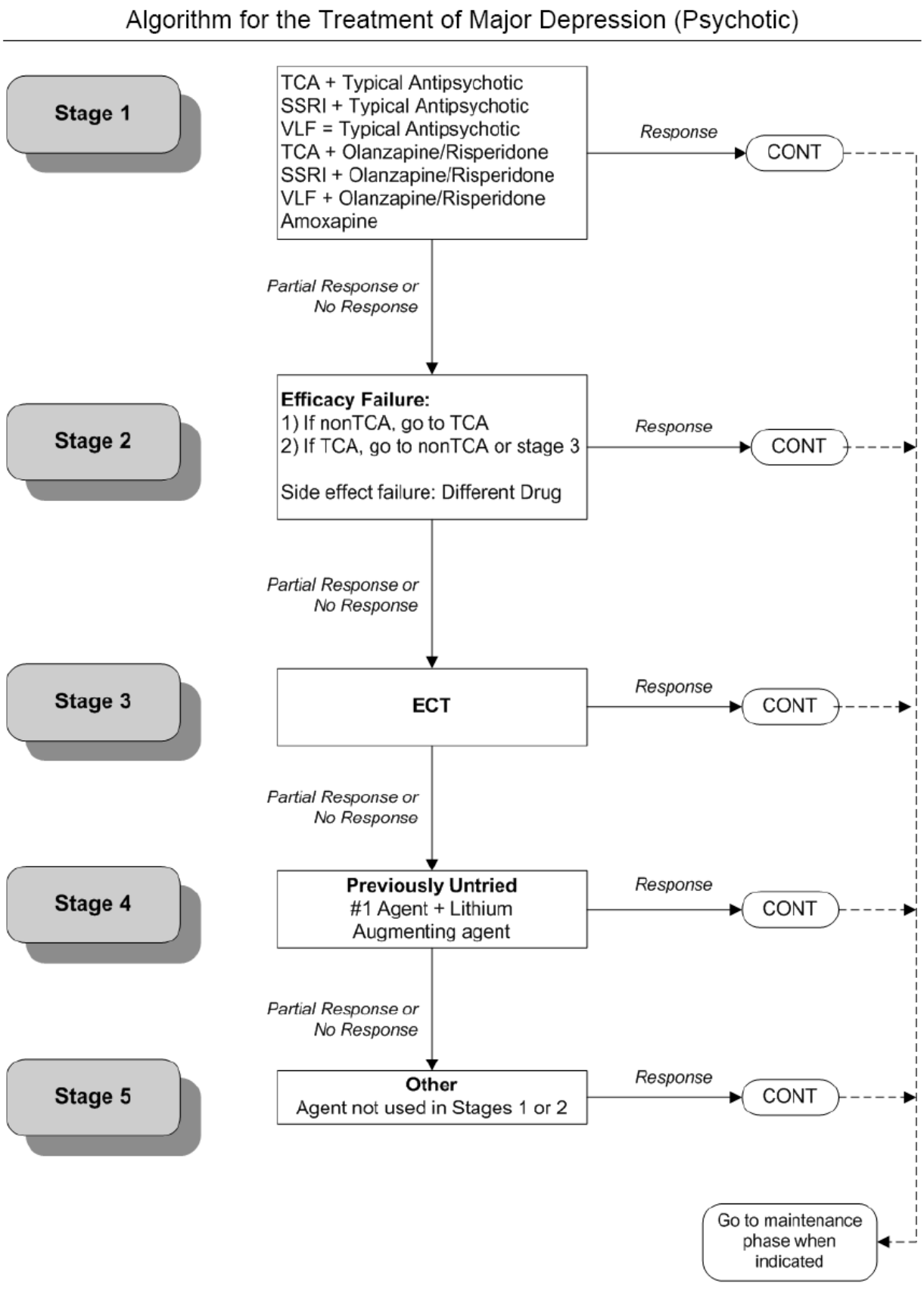


*If patient is nonadherent to medication, the clinician may use haloperidol decanoate or fluphenazine decanoate at any stage, but should carefully assess for unrecognized side effects and consider a different oral AP if side effects could be contributing to nonadherence.
** See text for discussion. Current expert opinion favors choice of clozapine.
***Assuming no history of failure on FGA.
****Whenever a second medication is added to an antipsychotic (other than clozapine) for the purpose of improving psychotic symptoms, the patient is considered to be in Stage 6. See Description of Tactics and Critical Decision Points section for more explanation.
FGA = First generation AP
SGA = Second generation AP

Algorithm for the Treatment of Major Depression (Nonpsychotic)



*Consider TCA/VLF if not tried.
**Lithium, thyroid, buspirone.
***Skip if Li augmentation has already failed.
§ Most studied combination
‡ SSRI = Fluox, Sert, Parox, Cital.


Algorithm for the Treatment of Major Depression (Psychotic)
Stage 1
TCA + Typical Antipsychotic
SSRI + Typical Antipsychotic
VLF = Typical Antipsychotic
TCA + Olanzapine/Risperidone
SSRI + Olanzapine/Risperidone
VLF + Olanzapine/Risperidone
Amoxapine
Response
CONT
Partial Response or No Response
Stage 2
Efficacy Failure:
1) If nonTCA, go to TCA
2) If TCA, go to nonTCA or stage 3
Side effect failure: Different Drug
Response
CONT
Partial Response or No Response
Stage 3
ECT
Response
CONT
Partial Response or No Response
Stage 4
Previously Untried
#1 Agent + Lithium
Augmenting agent
Response
CONT
Partial Response or No Response
Stage 5
Other
Agent not used in Stages 1 or 2
Response
CONT
Go to maintenance phase when indicated

Strategies for Acute Phase Treatment of Major Depressive Episodes

Stage	Nonpsychotic depression	Psychotic depression
Stage 1	Monotherapy[a]	Antidepressant + Antipsychotic
	SSRI,[b] Bupropion (BUP), Nefazodone (NEF), Venlafaxine (VLF), Mirtazapine (MRT) (A evidence[c])	TCA + Antipsychotic (A-B evidence)[d] SSRI + Antipsychotic (B-C evidence) Amoxapine (B evidence) VLF + Antipsychotic (B-C evidence)
Stage 2	Monotherapy	Antidepressant + Antipsychotic
	SSRI, BUP, NEF, VLF, Mirtazapine (MRT) **OR** a TCA **EFFICACY FAILURE:** Switch to another antidepressant. **SIDE EFFECT FAILURE:** Switch classes, or consider staying within the class if a contrasting SE profile is available or expected.	**EFFICACY FAILURE:** If nonTCA used in Stage 1, switch to TCA. If TCA used, try an antidepressant from a different class. **SIDE EFFECT FAILURE:** Switch to an agent from a different class.
Stage 3	Monotherapy	ECT
	SSRI, BUP, NEF, VLF, MRT, TCA or MAOI Choose a medication from a different class than used in Stage 1 or 2.	If the patient refuses ECT or does not respond, go to the next stage or repeat an earlier stage with a different agent.
Stage 4	Augmentation	Augmentation
	Previously untried antidepressant + lithium, thyroid,[e] or buspirone Begin medications simultaneously.	Previously untried treatment + lithium, thyroid, or buspirone Begin medications simultaneously.
Stage 5	Combination Therapy	Other
	TCA + SSRI, SSRI + BUP, SSRI + NEF, BUP_{SR} + NEF	Any antidepressant + antipsychotic not tried in Stage 1 or 2
Stage 6	ECT	Other
	If patient refuses ECT or does not respond, go to next stage or repeat an earlier stage with a different agent.	Any antidepressant + antipsychotic not tried previously
Stage 7	Other	Other
	Any antidepressant or combination not previously tried	Any antidepressant + antipsychotic not tried previously

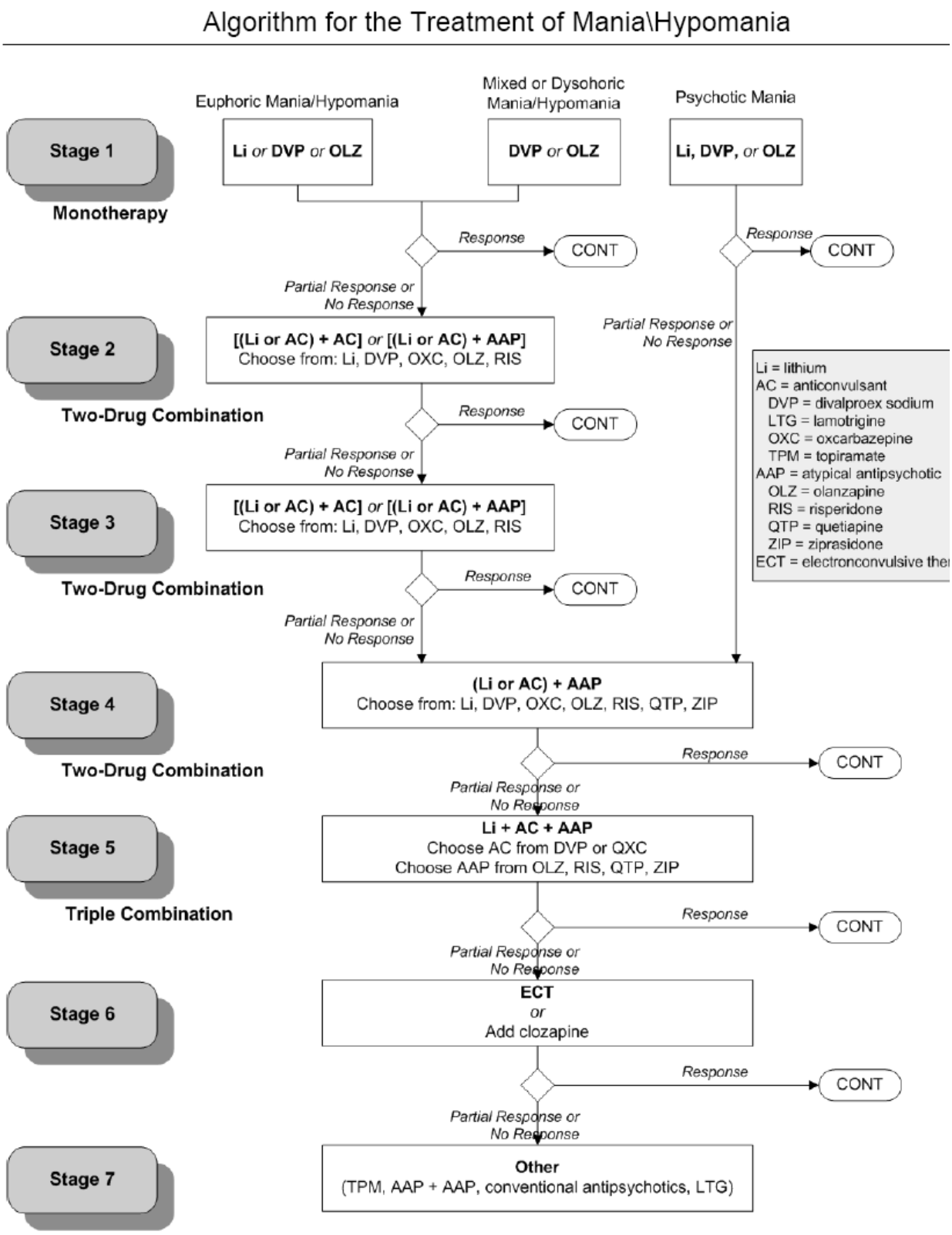
[a] Acceptable antidepressants for Stage 1: Discuss treatment options with the patient and depending on prior treatment history, patient's clinical presentation, life style, and personal preferences, etc., assess the relative advantages of Stage 1 medications and make an initial treatment selection.

[b] FDA-approved SSRIs for depression include: fluoxetine (FLU), paroxetine (PRX), sertraline (SERT), and citalopram (CIT).

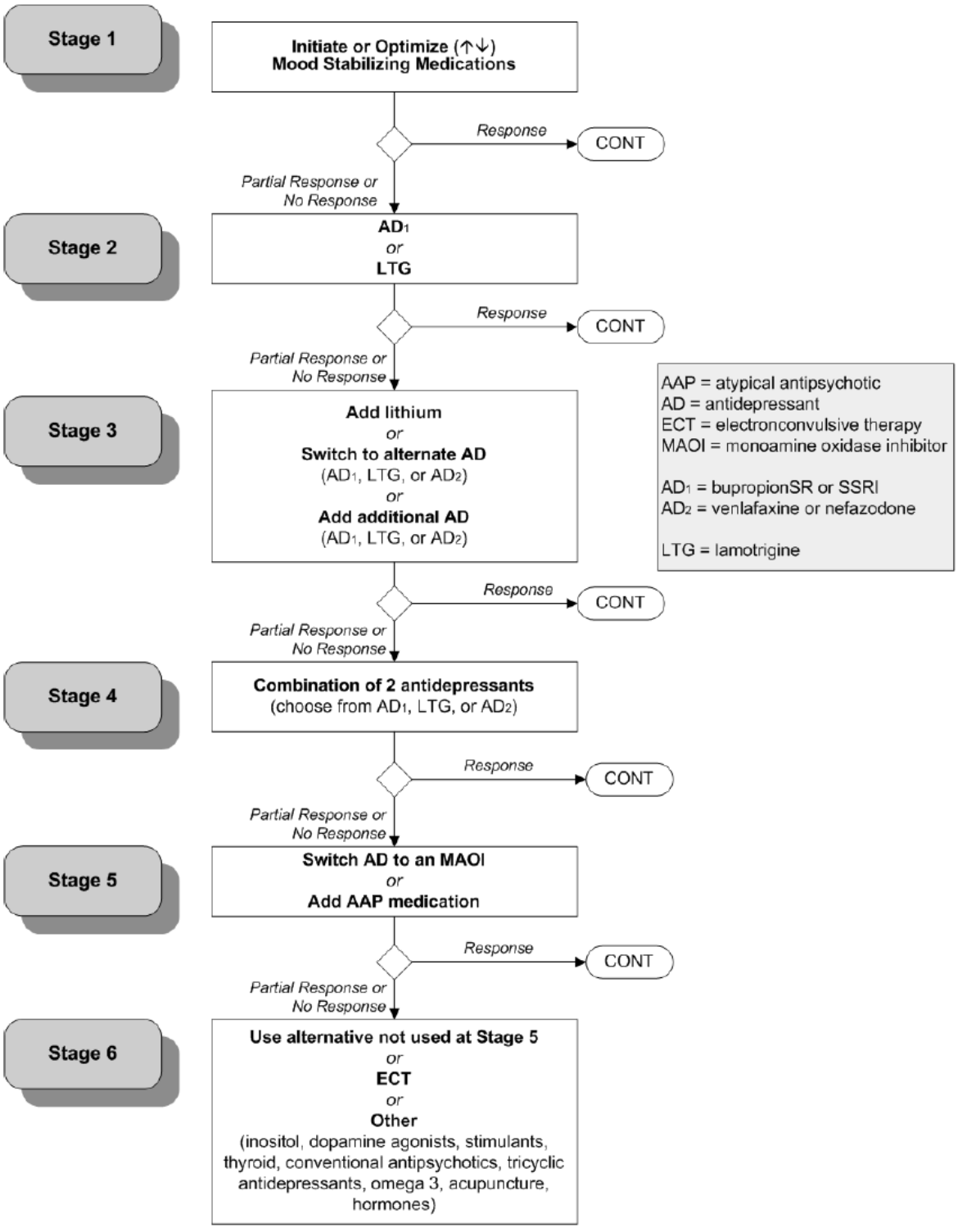
[c] Evidence level: A = controlled clinical trials; B = open trials and retrospective data analyses; C = clinical consensus and/or case reports.

[d] Acceptable TCAs for psychotic depression include: desipramine (DMI), nortriptyline (NT), amitriptyline (AMI), clomipramine (CMI), or imipramine (IMI).

[e] T_3 thyroid medication Cytomel (triiodothyronine) is suggested before T_4 Synthroid.


Algorithm for the Treatment of Mania\Hypomania
Euphoric Mania/Hypomania
Mixed or Dysohoric Mania/Hypomania
Psychotic Mania
Stage 1
Monotherapy
Li or DVP or OLZ
DVP or OLZ
Li, DVP, or OLZ
Response
CONT
Partial Response or No Response
Stage 2
Two-Drug Combination
[(Li or AC) + AC] or [(Li or AC) + AAP]
Choose from: Li, DVP, OXC, OLZ, RIS
Stage 3
Two-Drug Combination
Stage 4
Two-Drug Combination
(Li or AC) + AAP
Choose from: Li, DVP, OXC, OLZ, RIS, QTP, ZIP
Stage 5
Triple Combination
Li + AC + AAP
Choose AC from DVP or QXC
Choose AAP from OLZ, RIS, QTP, ZIP
Stage 6
ECT
or
Add clozapine
Stage 7
Other
(TPM, AAP + AAP, conventional antipsychotics, LTG)
Li = lithium
AC = anticonvulsant
DVP = divalproex sodium
LTG = lamotrigine
OXC = oxcarbazepine
TPM = topiramate
AAP = atypical antipsychotic
OLZ = olanzapine
RIS = risperidone
QTP = quetiapine
ZIP = ziprasidone
ECT = electronconvulsive ther

Algorithm for the Treatment of Depression in Bipolar Disorder*



*To be used in conjunction with primary treatment algorithm.