



## Treatment of the psychotic patient who is violent

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Few issues, if any, in mental health have received such widespread attention as the topic of violence and mental illness. It is of long-standing controversy [1], and views have shifted substantially back and forth over time. Clinicians vary in their appreciation and consequently their management of patients with serious mental illness who are at risk of becoming violent. This all-too-common circumstance of the patient with serious mental illness requiring treatment because of a perceived (even remote) risk of violence and who denies the need for care poses complex, interrelated (and often contradictory) clinical and social dilemmas. On the one hand, health care ethics dictate that professionals provide care to patients with serious mental illness in a manner that respects their dignity and autonomy. On the other hand, mental health services have responsibilities to provide care when this is necessary to protect the ill person and the public at large from the “imminent” risk of harm. Balancing the human rights of patients with complex legal and societal responsibilities is difficult at best and in some instances

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untenable (Fig. 1). This juxtaposition is complicated by the limited efficacy of current pharmacologic and nonpharmacologic treatment approaches. This article provides a current, comprehensive account of the relationship between violence and psychosis and of the management of the patient with schizophrenia who is at risk for or has exhibited violent behavior. Because the management of comorbid aggression extends well beyond somatic treatments and encompasses clinical risk management, principles of forensic risk management and legal aspects of care also are briefly covered.

### **Epidemiology of violence and mental illness**

The public generally perceives mentally ill patients as more violent than the average individual. This perception is due in part to the frequent portrayal of mentally ill patients as behaving violently in films, books, and television dramas. Violent incidents involving mentally ill patients often receive exhaustive coverage by the news media [1]. The perception that mental illness automatically equates with increased violence risk is a source of major stigma for mentally ill patients and their families and often results in discrimination and denial of opportunities available to non-mentally ill persons. As the relationship between mental illness and violence is explored, however, indications are that the relationship is one of association, not of causation [2].

### *Violence and the general population*

Humans live in a society that is violent. Homicide is the 11th most common cause of death in the United States. Violence base rates among the general population have been falling in more recent years, however, after reaching all-time highs in the early 1990s. Violent crime in general

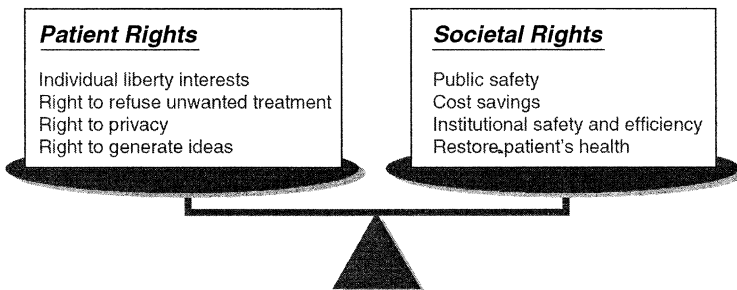


Fig. 1. Treatment of the psychotic patient who is violent: the clinician's dilemma.

increased 81% between 1973 and 1992, but a steady decline in violent crime has been observed since 1994 [3]. In 2000, violent crimes (rape, sexual assault, robbery, and assault) and property crimes (burglary, theft, and motor vehicle theft) were at their lowest levels since 1973. In 2000, there were an estimated 28 violent victimizations per 1000 adult U.S. residents and an estimated 178 completed or attempted property crimes per 1000 U.S. households. Offenders used a weapon in one third of all violent offenses in 2000. Approximately 55% of robbery victims faced a weapon, as did 6% of rape or sexual assault victims [4]. Risk factors predictive of future violence in the general population include past history of violence, male gender, and age (highest violence risk during late teens and early 20s). Military experience or weapons training is associated with violence, in that these individuals are more lethal should they decide to commit a violent offense.

### *Risk factors for violence and mental illness*

The notion that mental illness uniformly and inexorably leads to increased violence risk has been increasingly challenged by research findings [1,5,6,7]. The presence or absence of specific psychiatric symptoms better defines the risk of violence in an individual [8]. Violent behavior is associated more closely with substance use and personality disorders than with major mental illnesses, such as psychotic and mood disorders [9,10]. In a community-based study funded by the MacArthur Foundation, Steadman and colleagues [11] found that as a group, 27.5% of all mentally ill patients (psychotic or mood-disordered) committed a violent act during a 1-year period. An important distinction is, however, that the prevalence of violence varies greatly among mentally ill patients, depending on the presence or absence of a comorbid substance use disorder [12]. In the MacArthur study [11], 17.9% of mentally ill patients without a substance use diagnosis were violent, which was equal to the rate of violence among non-mentally ill persons who did not abuse substances. In essence, the presence of mental illness did not affect the violence prevalence rate among non-substance-abusing persons. In comparison, persons with mental illness and substance use were 73% more likely to commit a violent act than were non-substance abusers (mentally ill and non-mentally ill). Patients with personality disorders and substance use disorders were 240% more likely to become violent than mentally ill patients without substance abuse. Steadman and colleagues [11] underscored the inappropriateness of referring to mentally ill patients as a homogeneous class when predicting violence rates. In another study [13], 36.9% of convicted killers were found to have participated in psychiatric treatment at some point before the offense. As in the Steadman study, the bulk of this association was due to personality disorder or substance use.

Swartz and colleagues [12] found that substance abuse and medication noncompliance were the strongest predictors of violence among patients with schizophrenia. In the Swartz study, 331 involuntarily admitted inpatients, predominantly with psychotic disorders, were evaluated at the time of hospital admission for sociodemographic characteristics, illness history, clinical status, medication compliance, substance use, insight into illness, and violent behavior during the 4 months preceding hospitalization. Medical records were reviewed, and patient families were interviewed. Of the inpatients, 17.8% had engaged in serious violent acts involving weapon use or serious physical injury in the 4 months preceding admission. Serious violent acts were more likely to be committed by subjects who were male, who had been a crime victim themselves in the prior 4 months, or who had comorbid substance abuse. Overall, a complex linkage emerged between assaultiveness and noncompliance, substance abuse, and poor clinical outcomes. Respondents with noncompliance and substance abuse were more than twice as likely to commit serious violence, whereas individuals with either of these problems alone had no greater violence risk.

The MacArthur study [11] and another study [14] of risk of violence over the course of illness in patients with schizophrenia provide compelling evidence that the risk of violence decreases when psychotic symptoms are treated appropriately and effectively. Link and Stueve [7], in summarizing the findings on epidemiologic studies, concluded that the relationship between active, untreated psychosis and risk for violence is compelling.

The relationships between substance use, schizophrenia, and violence risk are complex [15], and substance abuse can heighten violence risk through several mechanisms. Disinhibition frequently occurs during intoxication with alcohol, cocaine, hallucinogens, and sedative-hypnotics. Paranoid thinking may result from cocaine or hallucinogen use, and grandiosity may result from cocaine. Irritability may result from alcohol intoxication or alcohol withdrawal.

Understanding of the neurobiology of violence itself is limited [16]. There is, however, accruing evidence of a biologic basis for violent behavior. Biologic correlates of violence indicate a clear association between low levels of cerebrospinal fluid concentrations of 5-hydroxyindoleacetic acid (a metabolite of serotonin) and impulsive aggression, suicide, and early onset of alcohol dependence [17–19]. Hibbeln and associates [20] postulated that serotonin turnover rate is modulated by docosahexaenoic acid, a component of cell membranes, and that violent persons may have a defect in the mechanisms that regulate the transportation and selective concentration of docosahexaenoic acid in the brain. Studies also have shown a relationship between violence and a blunted response to challenge with serotonin agonists [21]. A more detailed account of the neurobiology of violence is beyond the scope of this article, but this topic is well covered elsewhere [16].

After taking into account the large increase in violence risk resulting from substance use and personality disorders, several specific risk factors exist

among persons with schizophrenia that are predictive of future violence, as follows:

- Past history of violence
- Male gender
- Age (late teens, early 20s)
- Substance use disorder
- Persecutory delusions
- Command hallucinations
- Treatment noncompliance
- Impulsivity
- Low intelligence
- Head trauma or neurologic impairment
- Low Global Assessment of Functioning score
- Homicidal thinking, intent, or plan
- Depression
- Feelings of hopelessness and despair
- Suicidal thinking, intent, or plan
- Paired homicide and suicide plan
- Dissociation or depersonalization
- Feasibility of homicidal plan
- Military or weapons training
- Access to weapons
- Recently moving a weapon from storage place

Past violence is the best predictor of future violence [22], and the number of past violent acts correlates with the increase in violence risk [23]. Command hallucinations present increased violence risk [24,25]. Command hallucinations may instruct a psychotic person to commit violence or otherwise act in conjunction with persecutory delusions resulting in violence. Compliance with command hallucinations increases if the hallucination is the voice of a familiar person and if the hallucination is associated with a delusion [24]. It has been suggested that the relationship between psychopathology and violence in patients with schizophrenia is most pronounced when persecutory delusions, command hallucinations, and experiences of alien control coexist—the “threat-override” complex [26].

A large body of research exists regarding the impact of delusions on violence rates, some of which is in conflict. Earlier work indicated that systemized delusions increase violence risk [27]. Persons with persecutory delusions may strike out preemptively in an effort to protect themselves [28,29]. Persecutory delusions are especially worrisome in that paranoid persons (compared with disorganized persons) often retain excellent thought organization and are able to carry out a logical plan of action [30]. Mentally ill patients experiencing threatening persecutory delusions are twice as likely to become violent compared with nonparanoid psychotic patients [31], and the addition of substance use to paranoid delusions increases the risk for violence 10-fold compared with

nonparanoid persons. In contrast with earlier work, however, Appelbaum and coworkers [32] showed that the presence of delusions of any content type, specifically threat/control override delusions, does not increase violence rates among recently discharged patients with psychotic illnesses.

Tengstrom and colleagues [33] identified an early-start and late-start offender typology of schizophrenia. They found distinct differences between individuals who began their criminal careers in adolescence (early) compared with individuals who had their first offenses in adulthood (late). For the onset of illness between the two groups, the early-start offenders had been hospitalized for the first time, on average, 2 years earlier than the late-start offenders. The early starters were found to have been convicted of more crimes and more violent crimes and had higher criminal recidivism rates than the late starters. In addition, 76% of the early starters (compared with only 42% of the late starters) had a diagnosis of an alcohol or drug use disorder. They had higher rates of psychopathology (Psychopathy checklist total score, mean of 24.73 versus 15.62) and antisocial personality disorder diagnoses (26% versus 2% for the late starters).

Low intelligence, mental retardation, and a history of head trauma increases violence risk. Brain injury resulting from head trauma may lead to disinhibition or subtle psychotic symptoms that may result in violence [16]. Persons with borderline intellectual function or mental retardation often resort to violence in response to psychosocial stressors because their intellectual deficits prevent them from developing more sophisticated, nonviolent response patterns. Among patients with low Global Assessment of Functioning scores, frequent contact with family and friends increased violence risk [34]. These findings suggest that, in assessing violence risk, the most salient feature of psychiatric impairment is the impairment of social relationships—the ways in which disorders of thought and mood not only distort one's subjective appraisal of experience and threat, but also impair the ability to relate meaningfully to others, resolve conflict, and derive necessary support from family and friends. Social contact may be a mixed blessing for patients with severe mental illness and who have a propensity for violence. Estroff and colleagues [35] reported mothers who lived with an adult child diagnosed with schizophrenia and concurrent substance abuse bore a substantially elevated risk of becoming a target of violence compared with other social network members. Other risk factors for becoming a target of violence included being an immediate family member, being more time in residence with the respondent, and the respondent being financially dependent on the family. Respondents with the most mental health center visits had less likelihood of committing an act or threat of violence against a social network member [35].

### *Inpatient violence*

Violence on inpatient psychiatric units is of a distinct character from outpatient violence [14,36,37]. Although persons with persecutory delusions are

at highest risk to commit violence as an outpatient, when hospitalized, paranoid persons become less violent, owing to the protection afforded by the hospital and staff from perceived persecutors and by treatment.

Of inpatients, 18% to 25% exhibit violent behavior while in the hospital [38,39]. Manic and demented patients are the most likely to commit inpatient violence, usually striking out at random victims or bystanders. Owen and colleagues [37] reported that inpatient violence occurred at a rate of 0.5 incidents per inpatient week, most of which were preceded by a warning sign, commonly agitation. Of violent acts, 78% are directed at hospital nursing staff, with other targets being (in descending order of frequency) fellow patients, property, self, physicians, psychologists, family members, and housekeeping staff. Relative risk for violent acts increased with more nursing staff (of either sex) present on the unit, more nonnursing staff on planned leave, more patients known to instigate violence, a greater number of disoriented patients, more patients involuntarily hospitalized, and more use of seclusion [37]. The relative risk decreased with more staff younger than age 30, more nursing staff with unplanned absenteeism, more admissions, younger patients, suicidal patients, and more patients with substance abuse or physical illness. Most violent acts occur during the morning or evening.

Arango and colleagues [39] reported that clinical not sociodemographic variables are predictive of inpatient violence among patients with schizophrenia or schizoaffective disorder. Violent inpatients have more suspiciousness and hostility, more severe hallucinations, little insight into delusions, greater thought disorder, and poorer control of aggressive impulses compared with nonviolent inpatients. Violent patients also have greater hospital lengths of stay, owing to more severe psychopathology or a greater reluctance of clinicians to discharge recently violent patients [40].

### **Violence risk assessment of mentally ill persons**

Psychiatrists increasingly are called on to predict accurately who will commit a violent act and to develop treatment interventions to reduce violence risk. Clinicians are increasingly being held liable when a mentally ill patient commits a violent act, based on the premise that the clinician should have detected the violence risk and developed an appropriate treatment plan. Clinicians are notoriously inaccurate, however, in predicting who will become violent and tend to overpredict violence [41,42]. An argument in support of overpredicting violence is that false positives (resulting in unneeded admissions and breach of confidentiality) are much less damaging to the patient and society than underpredicting violence, which may result in morbidity, mortality, and victimization.

When undertaking a violence risk assessment, the clinician should gather as much data as is reasonably accessible. The patient should be interviewed.

Components of the patient interview for violence risk assessment are as follows:

- History of present illness
- Past psychiatric history
- Substance abuse history
- Violence history
- Military history
- Legal history
- Mental status examination

When obtaining a history of present illness and past psychiatric history, the clinician should elicit past or present persecutory delusions; command hallucinations; identified grudges; and symptoms of psychosis, depression, mania, or dementia. A careful violence history should be taken, assessing the frequency and severity of past violent acts and any known precipitants of violence (see earlier list of violence risk factors). When patients disclose grudges or outright homicidal thoughts, an in-depth analysis of the situation is in order, including inquiry into the nature of the grudge and presence of homicidal intent or homicidal plan. If present, the feasibility of the homicidal plan and availability of the means to carry out the plan should be assessed. Collateral informants are often a good source of information regarding violence risk, especially in uncooperative or unreliable patients. Past medical records are an important component of a violence risk assessment. It is often not feasible to gather all past medical records, but an effort should be made to obtain at least the most recent treatment records. These records should be reviewed, with an eye toward the violence risk factors listed earlier.

Careful review of the data elicited in the patient interview, medical record review, collateral interviews, and discussion with other relevant clinical staff should result in a list of violence risk factors present in the subject. These risk factors should be analyzed, and the clinician should describe the patient's violence risk as low, moderate, or high, depending on the number and severity of risk factors present [42]. All threats of violence should be taken seriously and thoroughly assessed (Box 1). A treatment plan should be devised addressing all violence risk factors that are amenable to intervention. Even though it is important for clinicians to be aware that relative youth is a violence risk factor, it is a fixed risk factor. Dynamic risk factors, such as delusions, hallucinations, mania, treatment noncompliance, substance use, and access to weapons, should be addressed specifically in the patient's treatment plan via a reasonable therapeutic intervention. Delusions and hallucinations should be treated with the appropriate antipsychotic medications, whereas mania and depression also should be addressed pharmacologically. Noncompliance may be addressed by decanoate injections of long-term antipsychotics, blood level monitoring, or staff monitoring the patient taking oral medications (also see later section). Substance use disorders should be addressed by inpatient or outpatient chemical dependency

**Box 1. Key questions when assessing the patient who makes a threat of violence**

- What is the magnitude of the intended harm?
- Why is the threat being made now?
- What does the threatener want?
- How developed is the plan for executing violence?
- Is the threat absolute and without alternative courses of action?
- Does the patient have a lethal weapon in mind?
- How available is the weapon of choice?
- How accessible is the potential victim?
- How soon is the patient likely to carry out the threat?
- Has the patient taken any action toward fulfillment of the threat?
- Is the patient likely to be disinhibited by substance abuse?
- Is the patient willing to undergo the consequences of the violent act?
- Has the patient been able to form a therapeutic alliance with a therapist?

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*From Resnick PJ, Scott CL. Legal issues in treating perpetrators and victims of violence. *Psychiatr Clin N Am* 1997;20:473–487; with permission.*

treatment with follow-up unannounced urine toxicology screens at random intervals. Weapons or other methods of committing violence should be secured or removed from the patient's access. Outpatients at high risk for violence should be hospitalized on a voluntary or involuntary basis (see later section).

### **Nonpharmacologic management of aggression**

A thorough risk assessment is central to the management of hostile psychotic patients (see previous section). Thereafter, especially if the risk of violence is imminent, containment is a major consideration. Patients who exhibit serious violent behavior and patients at immediate risk of repeating such behavior require intensive inpatient care. The requirements for consent to treatment and for involuntary commitment for hospitalization are discussed further in this section.

#### *Treatment setting*

It is important in treating the hostile patient that consideration be given to the environment and milieu of the inpatient setting. Many of the basic

elements of environment design are mandated by the Centers for Medicare and Medicaid Services (CMS), formerly known as the Healthcare Financing Administration, and are subjected to close scrutiny for safety by the Joint Commission on Healthcare Accreditation (JCAHO). The safety design of toilet and shower units is crucial so that parts cannot be broken off to inflict injury to self or others. These standards are detailed in the accreditation documents for JCAHO [43] and CMS [44].

The level of intensity on the inpatient unit is also important [36]. Violent patients are managed best on a unit that is well staffed and that is not overcrowded. The situation in which a unit is at its patient volume capacity or has more than one violent patient simultaneously under close observation is particularly worrisome. Important elements to attend to in the general management of hostile patients are enumerated in Box 2. Behavioral management techniques and seclusion are two approaches that are employed in treating psychotic patients who are persistently violent.

### *Behavioral management*

Behavioral management draws on classic and operant conditioning principles to reduce persistently inappropriate behavior [45]. In the case of persistent aggression, a behavioral plan should be developed with input from all members of the treatment team and with expert guidance from a psychologist who is trained in this technique. It is important that the elements of the plan are explicit, relevant, attainable, and agreeable to the patient and the treat-

#### **Box 2. Nonpharmacologic management of aggression in patients with schizophrenia**

- Staff training and education: identify cues for violence, maintain calm, avoid intrusion of personal space, avoid direct confrontation, manage immediate crisis and ensure the protection of others
- Verbal redirection
- Patient education on relaxation and calming techniques
- Behavioral management plan
- One-to-one observation
- Open seclusion in single room
- Seclusion alone
- Restraint alone
- Restraint and seclusion with one-to-one observation
- Modify ward environment: avoid overcrowding, promote low noise level, avoid rooming agitated patients together, promote good sleep hygiene, ensure appropriate furniture (eg, are not potential weapons)

ment team. It is also crucial that the plan is applied consistently by all staff at all times of the day. Wherever possible, education and positive reinforcement should be used, with an attempt to avoid aversive techniques. If more restrictive methods are clinically necessary, clinicians should employ methods that are least likely to harm the patient. Inpatient facilities that treat patients who are likely to be hostile should have a psychologist on staff who is experienced in behavioral management. If not, the facility should have access to a consultant who can help the staff develop expertise in this area. There now exists a clear expectation from CMS and JCAHO that the staff in facilities that treat such patients can show core competencies and ongoing training in this aspect of care [44,43]. The 2002 JCAHO standards require that for each patient, qualified staff review, evaluate, and approve all behavior management plans and that each plan conforms to hospital policies and to the individual patient's treatment plan. The elements of a behavioral management plan for a patient with persistent aggression are as follows:

1. State background information and rationale for plan (diagnostic and treatment details; characterization and chronology of violent incidents).
2. Define target behaviors (clearly described, what, where, and when).
3. Describe how each occurrence of target behavior will be recorded (checklist, form, time, date).
4. Define objectives (eg, when striking behavior seems imminent, will respond to verbal prompts).
5. Define success criteria (eg, no occurrence of striking others for 21 consecutive days).
6. Specify target date.
7. Define procedures clearly and in detail (describe clearly how staff should respond when behavior occurs; describe interventions, describe reinforcers and contingencies clearly; describe each step of training procedures).
8. Review plan between patient and team.
9. All participants sign plan; distribute copies.

### *Seclusion and restraint*

Seclusion or restraint should be considered a serious and “treatment-of-last-resort” option in managing the hostile psychotic patient. Many facilities are not equipped to use this technique. There are specific safety standards for the design of seclusion rooms, and there are explicit guidelines on when and how seclusion or restraint may be used. Less restrictive options include levels of observation, “time-out,” and open door containment in the patient's own room. Whether seclusion or restraint is therapeutic is at best questionable, and accordingly these options should be used sparingly. The National Alliance for the Mentally Ill (NAMI) does not consider either seclusion or restraint a form of treatment [46].

Restraint is a potentially dangerous management option because highly agitated patients may be harmed physically or develop medical complications during the intervention. Also, staff are at risk of injury from patients as they attempt to place a hostile patient in restraint. These concerns have come under close public attention, and they have been the subject of a U.S. Senate review. This review followed the publication of patient deaths and abuses during seclusion or restraint. Stringent guidelines for the use of seclusion or restraint have been developed and have been mandated by CMS [44]. During the process of creating these mandates, CMS asked the public to submit written comments on the standards. Although the original mandates have remained in effect since August 1, 1999, CMS has not yet finalized the standards, which eventually will be published in the *Federal Register*. Best practices for use of seclusion or restraint and the new CMS guidelines are highlighted in Boxes 3 and 4.

### **Pharmacologic management of aggression**

Currently, there is no medication approved by the Food and Drug Administration (FDA) for the treatment of aggression. “Current pharmacotherapy of aggression often involves the use of polypharmacy on a trial-and-error basis, with varying degrees of response. Unfortunately, this approach often leads to untoward side effects that further complicate management” [47].

There is a lack of consensus among clinicians as to which drug to use to treat aggression. Often practices are idiosyncratic and based on experience with augmentation trials, most often as case series rather than more rigorous clinical trials [48,49]. The greater choice with the availability of new antipsychotics further complicates this dilemma. This expanded choice with drugs with more benign side-effect profiles also provides opportunities for better management of hostile psychotic patients. The profiles of these drugs in the management of patients with schizophrenia who are not violent are detailed in other articles in this issue.

There is some direction on the appropriate choice of medications from available practice guidelines for schizophrenia. The Patient Outcomes Research Teams (PORT) guidelines are a set of 30 recommendations that are based on a comprehensive literature review of the care of patients with schizophrenia [50]. They span medication, psychotherapeutic, and rehabilitative domains. Although the PORT guidelines barely mention the issue of comorbid aggression, they state that clozapine is indicated specifically for the management of patients with persistent psychosis who are hostile. Because the development of PORT recommendations preceded the introduction of olanzapine, quetiapine, and ziprasidone, there is no mention in these guidelines of the role of these other atypical agents for aggression. In contrast, the revised and published Expert Consensus Guidelines 1999

**Box 3. Best practices for seclusion or restraint**

- Use of seclusion or restraint is preceded by less restrictive therapeutic interventions (eg, counseling, anger management, oral or intramuscular medication).
- Seclusion or restraint alone strongly preferred; combined seclusion and restraint as a last-resort option.
- Prior evaluation by a physician of need for seclusion or restraint and physician assessment for potential medical or other contraindications.
- Close monitoring—every 15 minutes for seclusion or restraint alone; continuous for combined seclusion and restraint.
- Appropriate documentation of need for seclusion or restraint, of patient safety and tolerability during intervention, and of patient response to treatment.
- Physician order for seclusion or restraint for no longer than 4 hours for adults.
- Patient debriefing after the intervention.
- Treatment team review of care plan after use of seclusion or restraint intervention.
- Quality management data and monitoring process: number of patients requiring seclusion or restraint; type and duration of seclusion or restraint; appropriateness of documentation; subsequent patient response and outcome; use of alternative treatments; root cause analysis when incident (patient or staff injury) occurs during intervention).
- Performance improvement initiatives: pilot projects of new approaches to anger management; administrative review of potential to reduce total hours allowed in seclusion or restraint; use of consultations (eg, behavioral management, psychopharmacology consultation).
- Continuous staff education and training.

provide recommendations for the management of hostile psychotic patients. These guidelines are based on a consensus rating method that involved clinicians, psychiatrists, and mental health administrators and advocates. They specify the range and choice of medication using a primary psychotropic treatment and for the role of adjunctive medications (Table 1 and Box 5). These guidelines distinguish between agitation/excitement and aggression/violence (Table 1). For the former category, high-potency typical antipsychotics, olanzapine, clozapine, and risperidone are recommended (in that order of choice). For aggression, the order is reversed with the primary recommended options being clozapine, high-potency typical antipsychotic, risperidone, and olanzapine.

#### **Box 4. Federal directions on the use and standards for seclusion or restraint**

- Physician or other independent licensed practitioner must see and evaluate patient within 1 hour of initiating intervention.
- Use of seclusion or restraint only when clinically justified and after consideration of alternative treatment options.
- Time-limited orders: 4 hours for adults; 2 hours for adolescents; 1 hour for children (<9 years old).
- Continuous in-person patient monitoring and periodic re-evaluation with the intent to discontinue intervention at the earliest possible time; face-to-face re-evaluation before each renewal of initial time-limited orders.
- Notification of clinical leadership (ie, medical director) after 12 hours of continuous seclusion or restraint and every 24 hours thereafter.
- With patient informed consent, prompt family notification when seclusion or restraint is initiated.
- Debriefing with patient and staff after intervention has been discontinued.
- Deaths must be reported to CMS.

More recently, a comprehensive monograph has been published on the management of aggression [51]. These important guidelines were developed with input from psychiatric emergency department directors. They focus more on immediate management of aggression, as observed in the emergency department setting. The reader is encouraged to consult these guidelines, detailed coverage of which here is beyond the scope of this article.

Table 1

Pharmacologic options in the management of agitation and aggression in patients with schizophrenia

Agitation	Aggression
High-potency typical antipsychotic	Clozapine
Olanzapine	High-potency typical antipsychotic
Clozapine	Risperidone
Risperidone	Olanzapine
Low-potency typical antipsychotic	Low-potency typical antipsychotic
Midpotency typical antipsychotic	Midpotency typical antipsychotic
Quetiapine	Quetiapine
Ziprasidone	Ziprasidone

*Data from Expert Consensus Guidelines Series.*

Treatment of Schizophrenia 1999. *J Clin Psychiatry* 1999.

**Box 5. Options for use of adjunctive medications when aggression in schizophrenia persists despite adequate antipsychotic pharmacotherapy**

Valproic acid  
Lithium  
Benzodiazepine  
Carbamazepine\*  
 $\beta$ -Blocker  
Gabapentine  
Lamotrigine  
Buspirone  
Topiramate  
Trazodone  
Diphenylhydantoin

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\* Cannot be used in combination with clozapine.

Data from Expert Consensus Guidelines Series. Treatment of schizophrenia 1999. *J Clin Psychiatry* 1999.

*Drug choice for acute aggression*

Short-term management of aggression currently favors the typical antipsychotics, especially midpotency to high-potency agents, because of their efficacy; ease of use and titration (eg, ability to use as-needed dosing, lower liability to induce hypotension); and, particularly, their availability in tablet, liquid, and intramuscular forms [52]. Haloperidol, fluphenazine, and loxapine are appropriate choices. These older, typical antipsychotics are available in parenteral form, and there is extensive clinical experience with their use in highly agitated patients. The weight of choice could change if atypical antipsychotic medications become available in acute intramuscular form; this is imminent for ziprasidone [53] and olanzapine [54]. There still is relatively limited experience with as-needed dosing of atypical antipsychotics. This is a significant drawback because these drugs are known to induce hypotension and autonomic instability during the initial titration period. Studies addressing the acute use of atypical antipsychotic medication are lacking. An alternative strategy to PRN dosing of atypicals (which currently is not validated by any empirical research) is to combine the use of an atypical antipsychotic with benzodiazepines in the acute management of aggression. This strategy merits scientific study.

The study of acute use of atypical antipsychotics has been advanced substantially by several studies that have applied sound clinical trial methodology to the assessment of acute (ie, first 24–48 hours) efficacy and tolerability in aggressive patients [53–56]. There is now evidence for acute care efficacy

and tolerability among hostile psychotic patients with the use of risperidone (liquid preparation), olanzapine (intramuscular preparation), and ziprasidone (intramuscular preparation). At the time of writing, an acute intramuscular form of ziprasidone had just entered clinical practice. This development is likely to influence substantially the acute pharmacotherapy of the hostile psychotic patient.

### *Drug choice for persistent aggression*

When violence persists, atypical antipsychotics (preferably as monotherapy) are the drugs of choice. This can be stated with some confidence based on the overall more favorable side-effect profile (especially the low propensity for tardive dyskinesia) of these drugs [52]. Also, there are now emerging data that suggest efficacy in treating aggression. The most compelling data to date exist for clozapine (see later).

The choice of adjunctive medication when aggression persists despite adequate antipsychotic pharmacotherapy is presently unclear. The Expert Consensus Guidelines [57] provide a long list of options (see Box 5), the most popular being the addition of a benzodiazepine, valproic acid, or lithium. There is also some anecdotal support (but no empirical data) for adding a typical antipsychotic to the atypical drug. There is evidence that clinicians at state hospitals who treat this patient population frequently combine medications [58]. Polypharmacy has serious limitations, however, and can obfuscate the clinician's efforts to determine which drug is having a beneficial effect [59]. Polypharmacy may undermine the therapeutic advantage of prescribing an atypical antipsychotic.

These points also are relevant when considering a change in medication in these patients. Changing from one antipsychotic to another (especially when clozapine is involved) is a challenging clinical situation that runs the risk of psychotic relapse [60,61]. This occurrence is most worrisome for the patient who is at risk for violent behavior. Accordingly, although polypharmacy should be avoided, it is important to consider a careful, lengthy period of cross-tapering of medications when switching to an atypical antipsychotic in these patients. The issue of antipsychotic polypharmacy is controversial [59], and further discussion is beyond the scope of this article. Current information on the efficacy of different psychotropic agents in the management of hostile psychotic patients is reviewed next.

### *Typical antipsychotics*

Typical antipsychotics, particularly high-potency agents, have been the mainstay of the treatment of aggression, especially in the context of active psychosis [16,52]. Typical antipsychotics often are prescribed in inordinately high doses, however, to patients with schizophrenia who are violent, despite the absence of efficacy in controlling aggression in such patients [62]. High-dose neuroleptic therapy has been shown to aggravate aggression, probably

by worsening akathisia [63]. High-potency and midpotency antipsychotics have been preferred because low-potency agents are more likely to cause sedation, confusion, anticholinergic toxicity, and postural hypotension. There have been few head-to-head studies between typical antipsychotics comparing their efficacy in treating aggression. Haloperidol was compared with flunitrazepam in the management of acute agitation; these drugs proved to be equiefficacious [64].

With the inevitable change in practice to the greater use of atypical antipsychotics, perhaps the only remaining role for typical antipsychotic drugs in the long-term management of schizophrenia is for the use of depot preparations [65,66]. This is most relevant for the “forensic” patient with limited insight, who is likely otherwise to discontinue oral medications. Often such patients are court-ordered, as part of a conditional release program, to continue on a depot antipsychotic medication after discharge to community care [67]. Such an approach ensures adequate pharmacotherapy for high-risk patients who have a history of noncompliance and subsequent psychotic relapse and violent behavior. The failure to appear for a scheduled visit to receive intramuscular medication is a valuable “alarm bell” that the patient is likely decompensating and is in need of more intensive treatment. There also are advanced clinical trials data [68] on the use of risperidone in long-acting injectable form. If this and other atypicals become available in clinical practice over the next few years, the role of depot (long-acting) typical antipsychotics is likely to diminish.

### *Clozapine*

Clozapine was not until recently considered to have any impact on hostility. Since its introduction, however, clinical experience and accruing empirical data suggest that clozapine may be particularly useful for psychotic patients with injurious behavior, either to self or toward others [48]. This effect first was reported by Wilson [69], who documented dramatic and sustained reduction in seclusion and restraint in 37 patients with schizophrenia at Oregon State Hospital. Similar accounts were provided from other state hospital and forensic facilities [48,52]. Ebrahim and colleagues [70] noted a total cessation of seclusion and restraint during the first 6 months of clozapine therapy in 27 forensic patients. Chiles and associates [71] observed a similar effect in 115 patients receiving a mean dose of 700 mg of clozapine. They also noted that this effect was sustained for the 1-year period of observation. Mallya and colleagues [72] also noted a sustained reduction in seclusion over a 13-month period in 107 schizophrenic patients. Buckley and coworkers [73] observed significant reductions in seclusion and restraint in aggressive patients with schizophrenia who had a preclozapine mean of 100.4 hours in seclusion and restraint compared with a mean of 37.9 hours at 6 months of clozapine therapy. Buckley [52] subsequently evaluated the cost of management of seclusion and restraint in the 6 months

before and during clozapine therapy in this cohort of 11 aggressive patients. Summing up staffing, damage-related, and management cost for all incidents of seclusion and restraint during this 6-month before and after period of evaluation, a cost-efficiency reduction of \$1400 per patient was recorded during clozapine therapy. Spivak and colleagues [74] noted a 98% reduction in aggression in 14 patients receiving clozapine. Maier [75] reported that more than half of 25 treatment-refractory, forensic patients improved with clozapine therapy.

Volavka and colleagues [76] were the first to suggest that clozapine might possess a specific antiaggressive effect. They examined the hostility and psychosis scores derived from serial Brief Psychiatric Rating Scale (BPRS) assessments in state hospital patients with aggression. Using regression analysis, they observed that improvement in the hostility subscale was greater than that of the psychosis factor. Buckley and coworkers [73] noted that the overall response on BPRS in aggressive patients was comparable to nonaggressive patients, suggesting that the amelioration of aggressive symptoms was not related to a preferential antipsychotic response in the violent patients. Rabinowitz and associates [77] showed a weak relationship between the BPRS psychosis factor and changes in hostility score in 75 patients who had received clozapine for at least 6 months, lending further credence to the notion that clozapine may have a selective antiaggressive effect. This selectivity of clozapine for treating hostility was examined in a patient group who were unresponsive to olanzapine therapy [78]. Among 26 patients who then received clozapine, there was a significant improvement in BPRS hostility factor scores even when change in positive symptoms was taken into account. This pattern was not observed during the prior treatment with olanzapine. There is a consistency across these studies, most of which are of rudimentary methodology, which suggests a distinct role for clozapine in the patient population. It has been reported that patients with schizophrenia who have a criminal history are less likely to have subsequent convictions during treatment with clozapine [79]. This is a provocative finding that requires replication and clarification. Although it is plausible that this effect may relate to clozapine's putative antiaggressive action, it is also possible that other factors (eg, enhanced treatment compliance, more close monitoring, better case management) might explain this effect.

Clozapine is not available in liquid or intramuscular form. Also, it is not used in acute circumstances. Clozapine therapy must be planned and must involve commitment from the patient. This commitment may be difficult to obtain in this violent subgroup. Nevertheless, clinicians should persist, particularly given the weight of evidence in favor of clozapine's efficacy in these patients.

### *Risperidone*

Risperidone has been shown to be efficacious in treating schizophrenia within the state hospital patient population [80,81]. There are fewer data

directly addressing the issue of aggression and risperidone in this population. One study of patients found risperidone equiefficacious to conventional neuroleptics [82], and another study noted a pronounced decline in seclusion and restraint in a pretreatment and posttreatment comparison among 142 patients receiving risperidone [80]. In a subanalysis of the U.S. multicenter comparative trial between risperidone and haloperidol, Czobor and associates [83] reported a superior effect of risperidone in aggression/agitation. These findings are buttressed by studies of risperidone in nonpsychotic conditions in which agitation is a significant clinical issue. A large multicenter study of risperidone in the treatment of behavioral disturbance in dementia reported favorable reductions in agitation and good tolerability at the 1-mg dose of risperidone [84]. Another study reported that risperidone was efficacious in controlling agitation in adult patients with autism [85]. There is also emerging evidence for risperidone's efficacy in childhood conduct disorder [86]. The availability of risperidone in liquid form is an advantage in treating hostile patients who are likely to spit out tablets. Data from two studies [55,56] confirm that liquid risperidone is efficacious and well tolerated. In the second study [56], liquid risperidone was superior to haloperidol plus lorazepam. These two studies are important because they indicate the role of risperidone in the acute, emergency department management of aggressive psychotic patients.

### *Olanzapine*

The efficacy of olanzapine in patients with schizophrenia who exhibit persistent aggression is presently undetermined because of a lack of empirical research. Olanzapine's efficacy in treating schizophrenia [87] suggests that it may be useful in the hostile psychotic patient. Preliminary data are derived from an analysis of the multicenter clinical trials of olanzapine that showed equiefficacy between olanzapine and haloperidol in treating agitation/aggression [88]. In a subgroup ( $n = 18$ ) among 56 patients who received olanzapine for 10 weeks or more at a state hospital [89], mixed effects of olanzapine were observed on seclusion and restraint. In contrast, another study ( $n = 18$ ) of olanzapine at a state facility reported that this agent might induce agitation in psychotic patients [90]. As is the case with risperidone, reports are emerging of olanzapine's efficacy in treating behavioral disturbance and agitation in elderly patients [91] and in adolescents with autism [92]. Olanzapine is expected to become available in intramuscular form in the near future. The data from studies in acutely hostile schizophrenia patients are compelling [54] and suggest that intramuscular olanzapine is a safe and efficacious choice for management of acute aggression.

### *Quetiapine*

Quetiapine is an effective antipsychotic with a favorable side-effect profile [93]. There are as yet no published data on the efficacy of quetiapine in

patients with persistent aggression. An analysis of the multicenter trials of quetiapine showed evidence of a selective effect on hostility that was not observed with haloperidol [94]. There also are data from an open trial of quetiapine in elderly patients that suggest quetiapine is effective in reducing agitation in this population [95]. Quetiapine is currently unavailable in either liquid or intramuscular forms. A dissolvable form is under investigation in clinical trials, and this form subsequently may be used for acutely agitated patients.

### *Ziprasidone*

Ziprasidone is another atypical antipsychotic with demonstrated efficacy in the treatment of schizophrenia [96,97]. This drug has just become available in short-acting intramuscular form, which would be a significant advantage for acute care of psychotic patients. Preliminary data from a study of an intramuscular preparation of ziprasidone suggest that a dose of 10 to 20 mg is effective in treating agitation and is well tolerated [53].

### *Other psychotropic drugs*

A variety of other drugs have been tried, with variable success, in the management of aggression [47,48,98]. Lithium has been reported to have an anti-aggressive effect, especially in mental retardation and prison inmate populations [99]. Lithium is not effective, however, as an adjunctive treatment for schizophrenia, and similar conclusions can be made for carbamazepine [100,101]. Valproate also has been shown to be effective in aggression in elderly demented patients [102]. Valproate may be helpful as an adjunctive agent in hostile psychotic patients; many of these patients may be receiving this drug in combination with clozapine. It has been shown that valproic acid given as an adjunct to either risperidone or olanzapine may accelerate the early control of agitation and psychosis in acutely relapsing psychotic patients [103].

$\beta$ -Blockers have been proposed as a treatment approach for persistent aggression [104]. It is the experience of many clinicians, however, that often the high doses of  $\beta$ -blockers required result in problematic side effects of sedation and postural hypotension. This adjunctive approach is used infrequently now.

Benzodiazepines, which are available in tablet, liquid, and intramuscular preparations, also are a mainstay of the treatment of aggression [64]. Short-acting agents, such as lorazepam, have a rapid onset of calming effect that lasts for several hours. These drugs are not advisable for treating persistent aggression because long-term use may result in pharmacologic tolerance, delirium, cognitive impairments, respiratory depression, and the potential for paradoxical aggression.

The Expert Consensus Guidelines [57] lists other agents (lamotrigine, trazodone, gabapentin, topiramate) that may be used as adjunctive agents alongside antipsychotic medication. The efficacy for these agents in treating

aggression is not determined, and the selection of any of these drugs is largely based on either favorable side-effect profile or efficacy in refractory mood disorders.

### **Forced medications and the right to refuse treatment**

The balance of patient rights and protection of others is at the center of the effective risk management of violence in patients with schizophrenia [87]. Containment on an involuntary basis to a hospital is an immediate step that is effective in the short term but does not affect long-term risk. It seriously compromises the therapeutic relationship because most patients continue to feel victimized and do not perceive any benefit from involuntary hospitalization [105]. Because forced hospitalization merely provides containment and is not of itself an adequately effective therapeutic option, consideration must be given to forced medication—an approach that is vehemently opposed by many consumer advocates and civil libertarians [106].

The right of an involuntarily committed patient to refuse treatment has been a relatively recent development since the 1970s in mental health law. Currently, most jurisdictions recognize a particular model of handling a patient's treatment refusal. An exception to the requirement of obtaining informed consent is the emergency situation. This situation arises frequently with the violent and chronically ill patient. In an emergency, a physician is permitted to take whatever steps are reasonably necessary to prevent serious harm. Legal definitions of emergencies vary but usually describe a situation in which there is a substantial probability of imminent physical harm to the patient or others [107].

#### *Assessment of capacity to consent to treatment*

In determining the need for forced medication in a patient who may pose a risk of violence, treatment refusal prompts an evaluation of the patient's capacity to consent to treatment. The concept of competency involves an individual's mental ability to carry out a specific decision-making task [108]. The phrase *capacity to consent* often is used to refer specifically to the ability to make medical decisions. Many attempts have been made to identify standard criteria for capacity to consent, yet varying legal standards have made this task difficult [109]. The model outlined here was proposed by Appelbaum and Grisso [110]. Four general skills needed for making medication decisions are identified: (1) the ability to communicate a choice, (2) understanding relevant information, (3) appreciating the situation and consequences, and (4) manipulating information rationally (Box 6).

Beginning with the ability to communicate a choice, the patient must be able to communicate and maintain the choice long enough for it to be implemented. A practical clinical test of this ability would be to have the patient repeat the choice over a sustained period of time. The ability to understand

**Box 6. Components of capacity to consent to treatment**

Ability to communicate a choice test = repeating the question or choice

Understanding relevant information test = paraphrasing in own words, interpreting probabilities

Appreciation of situation and its consequences test = elicit conception of illness, need for treatment, likely outcome

Manipulate information rationally test = discuss decision-making factors and importance assigned to them

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*Data from Appelbaum P, Grisso T. Assessing patient's capacities to consent to treatment. N Engl J Med 1988;319:1635–8*

information relevant to the decision requires adequate memory, attention span, and intellect. The clinical test of this ability would involve having patients paraphrase information in their own words or interpret treatment outcomes. An appreciation of the current situation and its consequences requires that the patient have an awareness of the presence of mental illness. This awareness would be critical to appraising consequences of refusing treatment.

Also needed is an appreciation of treatment risks and benefits. Eliciting the patient's conception of his or her mental illness, the need for treatment, and the likely outcomes would test this ability appropriately. Finally the ability to manipulate information rationally involves weighing risks and benefits in a rational process of reasoning. To test this ability, the patient should be made to discuss decision-making factors used and the importance assigned to them. It is the patient's chain of reasoning that needs assessment.

Researchers have developed a structured assessment tool designed to aid the clinician in analyzing a patient's treatment decision-making capacities [111]. The MacArthur Competence Assessment Tool for Treatment (MacCAT-T) is a structured interview schedule offering practical guidance to health professionals. The above-listed four areas are systematically assessed and rated. The MacCAT-T does not provide a determinable score but allows results to be integrated with clinical considerations. For pediatric patients, a 19-item questionnaire has been developed to assess competency to consent to treatment (CQ-Peds) [112].

In most cases in which there is a demonstrable risk of violence, the patient's treatment refusal is overridden. Depending on the jurisdiction, the court may use a best interests or a substituted judgment model to proceed. When the court has ordered a patient to receive medications, it is desirable to continue to engage the patient in treatment and to respect treatment concerns when reasonable [67,113].

### *Brief history of the right to refuse treatment*

Before the late 1960s, the accepted criterion for involuntary commitment was simply that the person was in need of psychiatric treatment. The fact that the patient was committed was considered evidence in and of itself that he or she was incompetent to make decisions. By the 1970s, there had been a shift in the criteria for involuntary commitment toward a dangerous standard. In addition, the law came to recognize that patients were not to be presumed incompetent simply by virtue of their commitment. This was a result of a forceful patients' rights advocacy movement [106] and litigation involving patients' constitutional rights [114].

The early beginnings of the right to refuse treatment movement can be found in the right-to-treatment suits that preceded it. In the right-to-treatment case *Wyatt v. Stickney* [115], the court held that patients were entitled to the least restrictive conditions, freedom from unnecessary medications, and the right not to be subjected to experimental research. Other foundations of the right to refuse treatment could be found in many constitutional arguments, such as the right to privacy, freedom from cruel and unusual punishment, and freedom to generate ideas (an extension of the right to free speech). Ultimately the Supreme Court held in *Washington v. Harper* [116] that the right to refuse treatment was based on a fundamental liberty interest that was guaranteed by the Fourteenth Amendment.

### *Three legal models for treatment refusals*

The courts have recognized three major models of handling treatment refusals. These are based on the holdings of three landmark cases: (1) *Rennie v. Klein* [117], (2) *Rogers v. Commissioner* [118], and (3) *A.E. and R.R. v. Mitchell* [119], which is referred to as the *Utah model*.

In the Rennie case, a New Jersey Federal District Court held that the existing New Jersey system of appeal by a patient to the medical director was sufficient. It was reasoned that a second physician was suitable as a decision maker, and deference was shown by the court to medical decision making in general. This is sometimes referred to as a *treatment-driven* model because of the primacy it places on physician decision making and therapeutic goals [113].

The Massachusetts State Supreme Court decided in the Rogers case that the committed patient is competent to make treatment decisions until adjudicated incompetent to do so by a judge. Because of the requirement of a formal legal proceeding and the goal of protecting the patient's right to determine the course of treatment, this model is often referred to as a *rights-driven* model [120]. This model has been adopted by Oklahoma, New York, Colorado, and Wisconsin.

The Utah model derives its name from a case that was decided in that state. In this model, the patient is automatically incompetent to make treatment decisions as part and parcel of the civil commitment procedure. It was

reasoned that the patient's inability to make medication decisions was shown by their inability to consent voluntarily to hospitalization in the first place. Proponents of this model stress the minimization of economic costs and the fact that the concept has been endorsed by the American Psychiatric Association Model Civil Commitment Law. This model also has been adopted by Kansas and Iowa. Critics of this model point out that it resembles a "throwback" to the pre-patient's rights era and does not provide sufficient individual autonomy.

Taken broadly, the differing judicial approaches can be viewed as either rights driven or treatment driven. An initial concern with the adoption of the rights-driven model was the fear that patients in need of treatment would be deprived of it. Empirical research has shown, however, that treatment refusals are overridden in 90% to 95% of cases, regardless of the model employed [121]. Some deference is being shown to medical decision making even when court supervision is required.

Jurisdictions also may vary within their application of a rights-driven model. After an adjudication of incompetence, a court may use either a *best interests* standard or a *substituted judgment* standard. In the best interests standard, a substitute decision maker (who may be a judge, guardian, or family member) decides what would be the patient's best medical interests. Risks and benefits are weighed by the decision maker in an objective manner. In a substituted judgment standard, the decision maker is required to determine what the patient would want if competent. In a sense, the decision maker must don the cloak of the incompetent patient, in an effort to decide as the patient would have decided when competent. Theoretically, this decision may not be what is in their best interests.

### *Types of treatment refusal*

As stated earlier, treatment noncompliance is a major factor associated with a heightened risk of violence in patients with schizophrenia [12]. Of patients, 80% are medication noncompliant during their illness [122], and most patients are not violent. Factors that underlie poor compliance are complex and interrelated (Box 7). Often clinicians fail to identify clearly and appreciate the weight of judgments that might underlie the patient's decision, and they may conclude prematurely that treatment refusal is the result of lack of insight into one's illness. When considering a patient's refusal to take medications, however, the basis for the refusal must be elucidated fully. Often the management of the refusal may be dealt with by other than formal legal means. Wettstein [107] categorized treatment refusals into four basic types: (1) Physician-patient relationship, (2) treatment-based, (3) illness-based, and (4) religion-based. In practice, an individual patient's refusal may involve overlap between one or more of these types.

The physician-patient relationship refusal can stem from an inadequate dialogue about the patient's medication concerns. Neglecting a frank discus-

**Box 7. Factors associated with poor compliance with medication treatment of schizophrenia**

*Illness related*

Delusions: lack of insight; attentional, memory components

*Personal*

Illness attitudes in general

Relationship with clinician

*Social*

Relatives' attitudes toward illness and medication

Relatives' involvement and support

Social support: medication costs and insurance coverage

sion about side effects may result in a missed opportunity to establish a stronger therapeutic alliance. Patients who already have begun taking a medication are particularly likely to refuse further treatment when they experience unwarned side effects. Akathisia is well recognized as associated with poor compliance with typical antipsychotics [123,122]. More recently, weight gain on atypical antipsychotics has emerged as a reason for poor compliance [124]. In this type of refusal, it is crucial to recognize the involvement of transference issues. In their refusals to accept treatment, patients frequently are struggling with issues of control, anger, and trust.

A treatment-based refusal is when a patient objects to adverse side effects or the method of administration of the proposed treatment. The possibility of tardive dyskinesia, akathisia, weight gain, sedation, or sexual dysfunction is frequently cause for concern [124]. There also may be strong objection to an intrusive method of administration, such as intramuscular injection or electroconvulsive therapy. If patients have had a past unfavorable or traumatic experience with a particular treatment, they will be less inclined to accept it.

Illness-based refusal often involves the patient's lack of insight or outright denial of illness. Lack of insight is common. It is underappreciated as a domain of schizophrenia [125]. Disorganized thought may interfere with a patient's ability to understand important medication information or to make rational decisions. For some, the stigma of being considered mentally ill contributes to a desire to avoid treatment.

Religion-based refusals are the result of a long-held belief, rooted in an organized religion or culture. An example would be a practicing Christian Scientist who believes in not taking medications. The clinician always should investigate the possibility of an idiosyncratic delusion or a psychotic pretext for a religion-based refusal.

### *Management of treatment refusals*

A legal solution to treatment refusal is often not of immediate necessity, and it may not be in the best interest for long-term care. Many patients, however recalcitrant they appear at first interview, ultimately comply with some form of treatment after a period of negotiation and discussion is attempted [113]. Approaches to overcome treatment refusal among schizophrenia patients include the following:

- Identify and assess reasons
- Persuasion
- Inform and clarify
- Accommodation
- Involve family
- Consultation

During the period of negotiation, persuasion may be used to help the patient accept the proposed treatment. This is best accomplished in the spirit of working in the patient's best interests, as opposed to making veiled threats of a coercive nature. All treatment staff should be involved similarly in this process. The clinician should ensure that the patient has been informed fully of the risks, benefits, and alternatives to the proposed treatment. The opportunity may present itself at this stage to clarify any misconceptions and allay unrealistic fears.

Efforts next should be made to accommodate reasonably the patient's concerns. This accommodation may take the form of changing medications, lowering doses, changing dosing schedules, or otherwise treating medication side effects. An important but often overlooked step is the involvement of family members. In the eyes of the patient, the family may hold greater authority than the physician. Supportive family may assist in reassuring and persuading the patient to accept treatment [126].

Finally, consultation with an uninvolved colleague may prove especially useful in protracted cases. Transference and countertransference issues are addressed better with input from an objective viewpoint. In practice, the clinician's approach to negotiation is not always demarcated clearly. Suggestion may blur into persuasion, and persuasion may blur into direction. It is possible to view voluntary and forced treatment as lying on a continuum (Fig. 2) [67,127].

The Group for the Advancement of Psychiatry has referred to coercion and persuasion as legitimate dimensions of treatment [128,129]. They stress, however, that the clinician be "scrupulously reflective" in their use. Coerced patients tend not to be grateful for treatment, even if they later acknowledge having needed it [130]. In cases in which it is ultimately impossible to negotiate a reasonable outcome with the patient, it may be necessary to seek an override of the patient's refusal through formal legal mechanisms. At that



authority. When a PAD is created without a designated surrogate decision maker, that legal form is an instructional directive, akin to a living will. PADs have been supported strongly by patient advocacy groups to increase autonomy and decrease treatment coercion [32,133].

As of 1996, only three states allowed persons to create PADs, including Oregon. One study conducted in Oregon concluded that clinicians, patients, and families had not been educated about PADs, but that when PADs were used, the patient's wishes were honored. More than one third of the prepared PADs did not select a substitute decision maker [134]. A more recent study of individuals in the Massachusetts mental health system found that only 10% had meaningful PADs (called a *health care proxy*) in their charts and that owing to individual patient circumstances, only 25% were in a position to have a PAD that would have affected their hospitalization. Of the 37 patients without a PAD, 28 already had had a court determine substituted judgment regarding psychotropic medication. As a result of his findings, Geller [135] concluded that outcome studies are required to determine effectively if PADs increase patient autonomy and have an impact on psychiatric care.

Despite their limited use so far, the benefits of PADs are becoming a topic of discussion in many states and articles. PADs now are permitted in all 50 states, and 13 states have laws specifically addressing their use [136]. Actual outcomes research is still lacking. Proponents suggest that PADs increase patient empowerment; improve relationships between providers, consumers, and their families; and may reduce the need for hospitalization [137]. Such outcomes could minimize the consequences of recurrent psychosis. The individual may receive previously specified care before entering an inpatient facility, eliminating the loss of liberty, or receive more rapid, appropriate treatment when entering a hospital, decreasing the risk of violence.

CMS specifically requires that hospitalized patients be afforded the opportunity to formulate advance directives, not limited to PADs, and that hospital staff comply with such directives, as applicable through state laws [44]. When CMS adopts the 2000 Life Safety Code from JCAHO, as expected in the near future, it will require hospital staff to document patient wishes in the medical record, even in the absence of an advance directive. Such a requirement would increase greatly awareness of PADs for clinicians, patients, and families. With more widespread use, PADs may become another common method of reducing the risk of violence in patients with psychosis.

### *Outpatient commitment*

Just as the procedures for inpatient involuntary commitment were informal before the civil rights era, so too were procedures for outpatient commitment. After the late 1960s, "coerced community treatment" that avoided judicial procedure was challenged [138]. Although many judicially

mandated procedures have been developed to handle outpatient commitment, the informal procedures of coercion are still in use today. Informal procedures for coerced treatment may include persuasion, threats, tying benefits to treatment, and repeated community-based hearings. When persuasion is used, it is made clear to the patient in some way that hospitalization will result from noncompliance. If mental health center agents are appointed as patient's payees, benefits may be given to the patient contingent on compliance with treatment.

Some types of judicially mandated and supported procedures in use today include conditional release, state statutes, guardianship, advance directives, and initial commitment to outpatient treatment (to avoid hospitalization) [67]. Outpatient commitment generally is defined as a court order mandating an individual suffering from a mental illness to comply with a detailed, individualized treatment plan. The plan usually is constructed with clinician input and is designed to prevent the patient from discontinuing recommended treatment and relapsing.

As of 1999, 40 states and the District of Columbia had statutes permitting outpatient commitment. Fewer than half of those appeared to apply the laws systematically, however [139]. State officials are poorly informed about the extent of its use [138].

Clinicians continue to debate the benefits of outpatient commitment, in part because the research to validate outpatient commitment effectiveness is lacking. Individuals committed to outpatient treatment often are not tracked systematically, which contributes to the paucity of research. In addition, many methodologic problems have made it difficult to extrapolate conclusions from studies that have been conducted. Studies have indicated that without a formal outpatient commitment plan, patients require more frequent hospitalizations, require longer hospital stays, and are significantly more ill on rehospitalization [140,141].

Three randomized, controlled studies were completed in North Carolina and New York to address this issue of impact on course of illness [142–144]. In the North Carolina study, for 1 year, Swartz and associates [142] followed 135 patients randomly assigned to voluntary outpatient follow-up after discharge from hospitalization and 129 patients randomly assigned to outpatient commitment after discharge from hospitalization. Although results showed no difference in the number of hospital readmissions or total days spent in the hospital for the two groups overall, patients who were on continued outpatient commitment for greater than 6 months had significantly fewer of each compared with the control group. Swartz and associates [142] related this difference to the provision of more intensive outpatient services delivered to patients on outpatient commitment for longer intervals. Patients with serious mental illness, such as psychosis, who received high-intensity treatment while on outpatient commitment, showed the greatest reduction in hospitalization. In that same group, the incidence of violent behavior was significantly less than for individuals in the control group or

individuals who did not continue outpatient commitment for at least 6 months. In 2001, Swartz and associates [143] expanded their focus in looking at data from the North Carolina outpatient commitment system, including a total of 331 randomly assigned patients. They drew conclusions similar to those previously mentioned and noted that patients assigned to outpatient commitment were more likely to adhere to recommended treatment, were less likely to be victimized, and had lower rates of violent behavior. Outpatient commitment greater than 6 months was associated with less frequent arrest in patients who had a history of multiple previous arrests and hospitalizations. Patients with psychotic disorders received the most overall benefit from outpatient commitment.

Steadman and colleagues [144] examined the effectiveness of outpatient commitment as used through Bellevue Hospital in New York for an 11-month period. There were 78 patients randomly assigned to outpatient commitment with intensive services and 46 patients randomly assigned to voluntary outpatient intensive services. No significant difference was found on measures of rehospitalization, treatment noncompliance, perceived level of coercion, symptoms, quality of life, or arrest. The authors specifically noted the reluctance of the New York City Police Department to pick up patients on outpatient commitment when they became noncompliant with treatment. Subjects may have been aware that the outpatient commitment had no actual consequences, and their situation was no different than that of the control group. A clinically significant difference between hospitalization rates was found on closer examination of the data, however, with an average of 43 days of hospitalization for the outpatient commitment group compared with an average of 101 days for the control group [145].

Apart from hospitalization rates, O'Reilly [145] reviewed studies measuring medication compliance, attendance at follow-up appointments, and violence rates for patients on outpatient commitment. He concluded that both forms of treatment engagement are enhanced by outpatient commitment, and both remain increased even after outpatient commitment is discontinued. Studies of violent behavior have not tended to show a marked difference with respect to outpatient commitment, however.

Studies reporting success resulting from outpatient commitment suggest that enthusiastic support from community clinicians is crucial. This must be considered against the outpatient clinician's fear of liability, which has been an important reason for opposition to outpatient commitment in the past. It is recommended that for outpatient commitment to be effective, community clinicians must become involved directly in treatment planning before outpatient treatment begins. There should be formal and explicit provisions set forth for handling noncompliance [138].

With the support of the American Psychiatric Association's Council on Psychiatry and Law, the Resource Document on Mandatory Outpatient Commitment [139] was developed. The document describes the history of outpatient commitment, addresses the current use of outpatient com-

mitment in the United States, briefly reviews the research literature, and proposes criteria and recommendations for outpatient commitment as a guideline for states that plan to draft specific outpatient commitment legislation. It delineates eligibility criteria for patients who may benefit from outpatient commitment, including the provision that the patient suffer from a severe mental disorder that can be expected reasonably to respond to the mandated treatment. It supports intensive outpatient treatment, in the form of Program for Assertive Community Treatment (PACT model), first developed in Wisconsin. Based on the literature, it recommends that mechanisms be created to allow continued extensions of outpatient commitment and that law enforcement be empowered to assume custody of patients who become noncompliant. On the issue of forced medication, currently not part of many outpatient commitment statutes, the document emphasizes the importance of outpatient commitment having coercive power to enforce compliance, even if intramuscular injections are not permitted without patient consent. The Resource Document concludes that policy decisions no longer need to be postponed until further research on outcomes is completed because studies have not shown outpatient commitment to be a detriment to patients, and the trend of the evidence shows it improves treatment compliance, reduces rates of hospitalization, and decreases the rate of violence among a subset of severely and chronically mentally ill.

The research to validate the effectiveness of outpatient commitment is lacking, owing in part to the fact that commitment to outpatient treatment seldom is tracked in an organized manner. State officials are informed poorly about the extent of its use [138]. Nevertheless, legislators have relied on court-mandated outpatient treatment as a “quick fix” to ensure public safety [146]. One example is “Kendra’s Law,” which establishes procedures for court-ordered outpatient commitment in New York state [147]. The statute was passed after an unusual tragedy in which a chronically mentally ill man pushed a young woman in front of a subway train.

### *Liability and documentation*

Voluntarily hospitalized patients always have had a right to refuse unwanted treatment. The same holds true for involuntarily hospitalized patients who have not yet been adjudicated incompetent to make decisions. Professional liability may result from forcing medications or inappropriately compelling treatment in these circumstances. Causes of action for civil suits may include trespass and battery, professional negligence, and intentional infliction of emotional distress. In addition, federal or state civil rights actions may be cited [107].

It is important to provide adequate documentation of the process undertaken when a treatment refusal is made. The clinician should start with recording the reasons given by the patient for refusal. Evidence of the

patient's current condition and reasons for needing medication should be given. Documentation should reflect that risks, benefits, and alternatives were discussed and whether or not the patient was able to participate in the discussion in a reality-based manner. The process and outcome of the negotiation phase should be summarized, in addition to other clinical management steps taken. The main point of the documentation should be to provide a clear outline of the clinician's decision-making process [107,108,148].

### *Duty to protect*

Legal regulations regarding the duty to protect third parties from violent acts committed by patients vary by jurisdiction. Many jurisdictions have passed legislation stating that mental health clinicians have an affirmative duty to take reasonable steps to protect the intended victim of their patients. Courts have imposed the duty to protect on clinicians, even when an explicit threat has not been made or when the general public is at risk, not a specific individual [149]. Other jurisdictions have passed "Tarasoff-limiting statutes" [150], in which specific steps are articulated that a mental health clinician must carry out to discharge their duty. If these steps are carried out, the mental health worker is immune from liability, even if the patient commits a violent act. Other jurisdictions are silent on the issue, not having addressed this issue via legislation or case law.

It is important for the clinician to understand that even if his or her jurisdiction does not address the duty to protect third parties, the standard of care clearly does require clinicians to take reasonable steps to protect third parties from violent patients, given an explicit threat of violence against an identifiable target. Reasonable steps that a clinician may undertake include hospitalization of the patient and informing the potential victim or police of the nature of the threat. Clinicians also may protect third parties by undertaking a reasonable plan of treatment designed to address the violence risk factors present. Consultation with a colleague or supervisor may provide additional clinically relevant assistance and limit liability in the event of a bad outcome.

McNeil and colleagues [151] reported that clinicians rarely discharged their duty to protect in the manner prescribed by law. In one jurisdiction, most of the notifications were made by nonphysician staff working in state hospitals and public crisis clinics. Few of the notifications were made by private sector mental health workers. The patients whose threats result in notification had a substantial criminal history. The victims of threats included family members (16%), spouse or boyfriend/girlfriend (14%), psychotherapists (10%), and former spouse or former boyfriend/girlfriend (8%).

Harm to third parties by a psychiatric patient is not a common cause of malpractice suits. It is clear that such a supremely bad result would be likely to lead to a lawsuit. When this occurs, it is the bad result itself that correlates most highly with jury verdicts against physicians, rather than an objec-

tive evaluation of medical negligence [152]. Despite this sobering finding, clinicians may take comfort in the fact that documentation is a central issue in most lawsuits, and proper documentation is crucial for managing liability risk [153]. Documentation need not take the form of elaborate narratives but should address certain key clinical items. Following are listed common documentation deficiencies relevant to malpractice suits involving violence to third parties:

- Failure to document assessment of risk
- Failure to document violence risk reduction plan
- Failure to document rationale for treatment decisions
- Failure to document rationale for *not* hospitalizing
- Failure to document clear outpatient treatment plans
- Failure to document efforts to obtain medical records

### **Advocacy and political efforts to reduce violence**

As stated earlier, the conflicting duties to uphold patient care and avert harm to others pose dilemmas that reach well beyond the treating psychiatrist's daily sphere of influence. NAMI is aware of the stigma that emanates from the relationship between violence and mental illness [46]. It also views that this relationship has been distorted and strengthened through the failure of the mental health system to provide adequate care for patients with serious mental illness who consequently come into contact with legal services and are incarcerated (instead of being hospitalized). NAMI's position on the criminalization of people with mental illness is summarized in Box 8. NAMI strongly endorses the provision of high-quality services that, if delivered consistently and effectively, reduce the risk of violence in psychotic patients. NAMI also advocates strategies, mostly aimed at improving access to mental health services rather than jail services, to decriminalize mental illness.

Various diversion projects are proposed—at the prebooking and postbooking points of entry. Postbooking models of diverting mentally ill from incarceration include PACT-styled treatment teams with professionals who specialize in severe mental illnesses and criminal justice issues. Individuals still have a criminal record but are diverted to these community-based treatment teams to address the range of psychiatric and social factors thought to have contributed to the criminal behaviors.

“Mental health courts” have been proposed and developed to divert appropriate cases of misdemeanor offenses away from incarceration and into mental health services. These mental health courts have shown some limited successful outcomes for the participants, but virtually all exclude violent offenses from the list of qualifying offenses.

A prebooking model, known as the Crisis Intervention Team (CIT) or Memphis Model is aimed at increasing the competency of police to recognize and respond effectively to mentally ill persons who are in crisis [154].

**Box 8. National Alliance for the Mentally Ill (NAMI) position on the criminalization of people with mental illness***Treatment, not punishment, and treatment while in correctional settings*

NAMI believes that persons who have committed offenses because of state of mind or behavior caused by a brain disorder require treatment, not punishment. NAMI believes that a prison or jail is never an optimal therapeutic setting. NAMI believes that mental health systems have an obligation to develop and implement systems of appropriate care for individuals whose untreated brain disorders may cause them to engage in inappropriate or criminal behaviors.

*Violence*

NAMI believes that in most cases dangerous or violent acts committed by persons with brain disorders are the result of inappropriate or inadequate treatment of their illness.

*Insanity defense*

NAMI supports the retention of the “insanity defense” and favors the two-prong test that includes the volitional and the cognitive standard. NAMI opposes the adoption of “guilty but mentally ill” statutes. NAMI endorses the adoption of state systems providing comprehensive care and treatment for individuals found “not guilty by reason of insanity” in hospital and community settings.

*Parole and probation, transitional services*

NAMI believes that states must adopt systems for assisting persons with serious brain disorders who have served sentences and are eligible for release on parole with appropriate treatment and services to aid their transition back into the community.

*Death penalty*

NAMI opposes the death penalty for persons with brain disorders.

Officers volunteer to participate in intensive training in crisis intervention techniques specific to severe mental illnesses. CIT officers are dispatched to the scene and become the primary officer to coordinate the handling of the situation. Steadman and associates [154] found that the prebooking diversion resulted in only 7% of “mentally disturbed” calls being arrested (most individuals were diverted to community treatment options). In a subsequent review of prebooking diversion, Steadman and associates [155] identified several key elements necessary to the success of these prebooking diversion programs. These elements require the establishment of strong cooperative relationships among law enforcement and crisis mental health services, including a highly visible centralized crisis response site, having a single point of entry, having a no-refusal policy and streamlined intake for police referrals, and establishing legal foundations to detain certain individuals.

These are laudable objectives that require the broad support of mental health and policy-making communities. Such support is necessary and long overdue. Some have argued that the United States has pursued an unspoken policy of “benign neglect” of this issue so that jails would become the new and less expensive repository for the mentally ill [156]. There is ample evidence of high rates of mental illness in the jail system [5,157]. Statistics also attest to this problem [158]. In 1998, approximately 283,800 mentally ill persons were registered in the U.S. penal system. Of inmates, 16% of state prison inmates, 7% of federal inmates, and 16% of local jail inmates reported having a mental condition or an overnight stay in a psychiatric hospital [158]. The plight of these individuals, particularly the endemic problems of access and continuity of care, has become a topic of current political interest.

## **Summary**

Aggression among patients with serious mental illness occurs relatively infrequently, but it is a significant concern for patients, relatives, mental health professionals, and the public. Recognition of this risk and providing access and continuity of appropriate psychiatric care should be major clinical and administrative objectives in the management of violence in psychotic patients. To date, pharmacologic approaches have been unclear and inconsistent. At present, typical antipsychotics continue to have a primary role in acute management and in long-term management, in which noncompliance necessitates the use of long-acting depot neuroleptic preparations. Atypical antipsychotics in acute and long-acting intramuscular forms doubtless will influence and expand the choice for acute management of hostile psychotic patients and the long-term management of poorly compliant patients who are at risk to become violent on relapse. Persistent aggression should be managed by atypical antipsychotics with a preferential indication for clozapine, for which the most data on efficacy are available. The role of adjunctive medications is presently unclear. A major focus of care should be

to refine legal processes and to conduct intervention studies aimed at enhancing treatment compliance. Violence risk reduction is not only crucial from a societal perspective, but also it is a humanitarian necessity to alleviate the burden and stigma for patients with serious mental illness.

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