The Expert Consensus Guideline Series

Treatment of Behavioral Emergencies

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The Expert Consensus Panel for Behavioral Emergencies

The following participants in the Expert Consensus Survey were identified from several sources: members of the American Association of Emergency Psychiatry and individuals who have published research on emergency psychiatry or psychopharmacology. Of the 52 experts to whom we sent the behavioral emergencies survey, 50 (96%) replied. The recommendations in the guidelines reflect the aggregate opinions of the experts and do not necessarily reflect the opinion of each individual on each question.

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ABSTRACT

Objectives. **Behavioral emergencies are a common and serious problem for consumers, their communities, and the healthcare settings on which they rely to contain, assess, and ultimately help the individual in a behavioral crisis. Partly because of the inherent dangers of this situation, there is little research to guide provider responses to this challenge. Key constructs such as agitation have not been adequately operationalized so that the criteria defining a behavioral emergency are vague. The significant progress that has been made for some disease states with better treatments and higher consumer acceptance has not penetrated this area of practice. A significant number of deaths of patients in restraint has focused government and regulators on these issues, but a consensus about key elements in the management of behavioral emergencies has not yet been articulated by the provider community. The authors assembled a panel of 50 experts to define the following elements: the threshold for emergency interventions, the scope of assessment for varying levels of urgency and cooperation, guiding principles in selecting interventions, and appropriate physical and medication strategies at different levels of diagnostic confidence and for a variety of etiologies and complicating conditions.**

Method. **In order to identify issues in this area on which there is consensus, a written survey with 808 decision points was developed. The survey was mailed to a panel of 52 experts, 50 of whom completed it. A modified version of the RAND Corporation 9-point scale for rating appropriateness of medical decisions was used to score options. Consensus on each option was defined as a non-random distribution of scores by chi-square "goodness-of-fit" test. We assigned a categorical rank (first line/preferred choice, second line/alternate choice, third line/usually inappropriate) to each option based on the 95% confidence interval around the mean rating. Guideline tables were constructed describing the preferred strategies in key clinical situations.**

Results. **The expert panel reached consensus on 83% of the options. The relative appropriateness of emergency interventions was ascertained for a continuum of behaviors. When asked about the frequency with which emergency interventions (parenteral medication, restraints, seclusion) were required in their services, 47% of the experts reported that such interventions were necessary for 1%–5% of patients seen in their services and 32% for 6%–20%. In general, the consensus of this panel lends support to many elements of recent Health Care Financing Administration regulations, including the timing of clinician assessment and reassessment and the intensity of nursing care. However, the panel did not endorse the concept of "chemical restraint," instead favoring the idea that medications are treatments for target behaviors in behavioral emergencies even when the causes of these behaviors are not well understood. Control of aggressive behavior emerged as the highest priority during the emergency; however, preserving the physician-patient relationship was rated a close second and became the top priority in the long term. Oral medications, particularly concentrates, were clearly preferred if it is possible to use them. Benzodiazepines alone were top rated in 6 of 12 situations. High-potency conventional antipsychotics used alone never received higher ratings than benzodiazepines used alone. A combination of a benzodiazepine and an antipsychotic was preferred for patients with suspected schizophrenia, mania, or psychotic depression. There was equal support for high-potency conventional or atypical antipsychotics (particularly liquids) in oral combinations with benzodiazepines. Droperidol emerged in fourth place in some situations requiring an injection.**

Conclusions. **To evaluate many of the treatment options in this survey, the experts had to extrapolate beyond controlled data in comparing modalities with each other or in combination. Within the limits of expert opinion and with the expectation that future research data will take precedence, these guidelines provide some direction for addressing common clinical dilemmas in the management of psychiatric emergencies and can be used to inform clinicians in acute care settings regarding the relative merits of various strategies. (Postgrad Med Special Report. 2001[May]: 1–88)**

Portions of this article were adapted with permission from Allen MH. Managing the agitated psychotic patient: a reappraisal of the evidence. J Clin Psychiatry 2000;61(suppl 14):11–20

WHY ARE GUIDELINES ON BEHAVIORAL EMERGENCIES NEEDED?

The number of episodes of psychiatric care more than doubled between 1970 and 1994 while the number of inpatient beds was cut by half.[1] This shift toward treatment in the least restrictive setting, which was fueled by economic factors, has occurred in the context of increasing public concern about violence committed by individuals with severe mental illness in the community. Concern has also increased about the potential for physicians to abuse their so-called police powers, and this had led to a debate on the use of physical and chemical restraints or seclusion.[2] All these factors have created an urgent need to establish coherent policy concerning the delivery of psychiatric emergency care that will help psychiatric emergency services balance the rights of patients with considerations of safety and good standards of care. However, the process of developing such policies is complicated by a number of problems. First, key constructs, such as agitation, have not been adequately operationalized,[3] so that the criteria defining a behavioral emergency are vague. Second, there are few data on which to base clinical policies, given the relative lack of research data in this area.

In a related development, payment for psychiatric hospital care is now often linked with dangerousness more than need for treatment. This has led to an increased concentration of aggressive patients in the hospital and emergency setting.[4] Mental health professionals are asked to make rapid decisions about interventions in situations in which the safety of patients and staff may be at risk. In an extensive review of the literature, Fisher concluded that restraint and seclusion "work" in the limited sense that they "can prevent injury and reduce agitation." However, Fisher and others have also described deleterious effects on patients, who perceive such interventions as coercive and traumatic.[5–8]

The perception that at least some use of restraint and seclusion is unnecessary was reinforced by the finding published by Way and Banks[9] in 1990 that there was wide variability in the use of restraints and seclusion across sites that was accounted for by institutional culture rather than by characteristics of individual patients. Relatively few data are available on the actual extent to which restraint and seclusion are used in emergency settings. Based on the results of a recent survey of approximately 50 psychiatric emergency services in the United States, it was estimated that 37.2% of patients presented involuntarily but that only 8.5% were restrained at any point during their time in the emergency setting. The mean duration of restraint reported in this survey was 3.3 ± 2.9 hours.[10]

The controversy in this area was heightened by a number of reports of patient deaths while in restraint or seclusion. In 1994, the New York State Commission on Quality of Care reported 111 patient deaths over the 10-year period ending in 1993, a finding that led the Commission to undertake a statewide review of restraint and seclusion practices.[8] The controversy was further heightened by the publication in 1998 of a 5-part series in the *Hartford Courant* entitled "Deadly Restraint," which reported 142 deaths of patients in restraint or seclusion over a 10-year period and estimated that 50–150 such deaths occur each year.[11] The New York State Commission and the National Association of State Mental Health Program Directors have both issued statements questioning the therapeutic value of restraint and seclusion and stressing their traumatic nature.[8, 12] The National Alliance for the Mentally Ill (NAMI) has also published reports concerning adverse outcomes associated with the use of restraints and seclusion.[13]

Such concerns led the Health Care Financing Administration (HCFA) to introduce interim final rules for conditions of participation for facilities receiving Medicare and Medicaid payments.[14] These rules address patients' rights in general and specifically discuss issues related to restraint and seclusion. The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) has also produced regulations concerning the use of restraints and seclusion in psychiatric and medical settings.[15]

Behavioral emergencies are not rare events. For example, it has been reported that there are approximately 135,000 psychiatric emergency visits per year in New York State alone.[16] Whether in the emergency room or in an inpatient psychiatric setting, immediate assessment and effective intervention can reduce the danger to patients and staff and more quickly speed patients to recovery. Behavioral emergencies are often traumatic for the patient and can result in a humiliating and even injurious experience. It is therefore important for clinicians to remember that they must first do no harm.

Behavioral emergencies are complex situations. Routine care generally involves a cooperative patient and adequate time to perform an assessment and to reach agreement with the patient on a course that maximizes benefits and minimizes risk. By contrast, emergencies are dynamic situations; the diagnosis is often unknown or provisional at best; there is a sense of urgency, limited time for decision making, and a need both to intervene immediately despite limited data and to change course rapidly as new information becomes available, including responses to prior interventions. Any course of action or inaction may have serious adverse effects. Even an objectively good response may leave the patient feeling traumatized and angered by the process.

Recent developments and innovations in pharmacology have combined with a rapidly changing regulatory environment to increase the level of complexity and difficulty already inherent in managing behavioral emergencies. The subspecialty of Emergency Psychiatry is emerging in

the context of these demands. Unfortunately, high-quality, empirical data on the most effective and appropriate methods of managing behavioral emergencies are quite limited. As a result, there are no comprehensive evidence-based practice guidelines on the best treatment approaches for managing these situations. This has resulted in a need to create new and useful educational materials and programs to help train emergency physicians to meet current standards for behavioral emergency treatment. We therefore undertook a consensus survey of expert opinion on the management of behavioral emergencies.

In developing our survey and the guidelines that appear in this publication, we had a number of important goals in mind.

1. To help clinicians address the many overlapping and complex factors involved in the management of behavioral emergencies, such as varying local and state practices governing the use of restraint and seclusion, the appropriate use of pharmacological agents, the selection and application of alternatives to physical restraints, and the use of physical restraint itself.
2. To assist hospitals and clinics to establish policies for the management of behavioral emergencies as has been increasingly mandated by regulatory requirements.
3. To assist hospitals and other clinical services to provide structured staff training in the management of behavioral emergencies and the documentation of adherence to pertinent policies, as required by regulatory agencies. Such educational resources are especially necessary because many emergency settings are very active venues for training and education. In a recent survey of Psychiatric Emergency Service administrators, more than 90% of respondents reported that medical residents rotated through their service and 74% reported that their services were involved in training medical students.[10]
4. To promote adoption and use of new knowledge concerning the treatment of acute behavioral dyscontrol. Up to now, the integration of newer drugs and formulations into standard practice has been slow. Such a lag in the application of new knowledge has a significant adverse impact on patients and their families.
5. To address 2 important issues that have not previously been well addressed in educational protocols for behavioral emergencies: the patient's perspective and a focus on specific diagnostic treatments. For the patient who has lost control or is in danger of losing control, how the episode is resolved can have enormous implications for the remaining course of illness. However, there has been little careful study on how patients experience such episodes and which crisis intervention approaches are preferred by patients. The lack of focus on specific diagnostic treatments has led to the prolific use of "blanket" regimens, nonspecific treatments meant to simplify decision-making by covering as broad a range of medical presentations as possible. Little attention has been paid to developing treatment regimens that would be more specific and appropriate for the underlying cause of the behavioral emergency and would, as a result, lead to a more rapid resolution of the problem underlying the behavioral emergency.

METHOD OF DEVELOPING EXPERT CONSENSUS GUIDELINES

The contribution of expert consensus to practice guideline development continues to evolve throughout medicine, alongside the "gold standard" of meta-analysis of clinical trials and other experimental data. The sheer number of possible combinations and sequences of available treatments for many diseases makes it difficult to provide comparative recommendations based entirely on clinical trial data.[17, 18] A method for describing expert opinion in a quantitative, reliable manner to help fill some of the gaps in evidence-based guidelines has been developed. This method has been applied to a variety of psychiatric disorders.[19–27]

Creating the Surveys

We first created a skeleton algorithm based on a literature review. We sought to identify key decision points in the management of behavioral emergencies as well as a list of feasible options for intervention. We highlighted important clinical questions that had not yet been adequately addressed or definitively answered in the literature.[28] A written questionnaire was then developed with 61 questions with a total of 808 options. We asked about the types of assessments, how to select the most appropriate emergency interventions, when and how to use restraints and medication, and how to tailor selection of interventions to the most likely etiology of the behavioral dyscontrol. We also addressed lack of adequate response to initial intervention and safety and tolerability issues, such as management of behavioral emergencies in pregnant women, children, and individuals with complicating conditions.

The Rating Scale

For most of the options in the survey, we asked raters to evaluate appropriateness by means of a 9-point scale slightly modified from a format developed by the RAND Corporation for ascertaining expert consensus.[29] (In some questions, we asked raters to write in answers.) We explicitly asked the raters to consider what would be the best possible approach ***for the first few hours of intervention*** in order not to have a negative impact on the clinician's ability to diagnose and then treat the disorder in continuing care. We

asked the experts to draw on both their knowledge of the research literature (we did not provide a literature review) and their best clinical judgment in making their ratings, but not to consider financial cost. We presented the rating scale to the experts with the anchors shown in figure 1.

Figure 1. The Rating Scale

Extremely Inappropriate ← 1 2 3 4 5 6 7 8 9 → Extremely Appropriate

9 = Extremely appropriate: this is your treatment of choice

7–8 = Usually appropriate: a first-line treatment you would often use

4–6 = Equivocal: a second-line treatment you would sometimes use (e.g., patient/family preference or if first-line treatment is ineffective, unavailable, or unsuitable)

2–3 = Usually inappropriate: a treatment you would rarely use

1 = Extremely inappropriate: a treatment you would never use

Figure 2 shows Survey Question 22 as an example of our question format.

Figure 2. Sample Survey Question

22. Please rate the extent to which you would consider the following options appropriate interventions for an imminently violent patient. Note that by *emergency medication*, we mean medication given without consent. *Voluntary medication* refers to medication given with the patient's assent or consent.

Show of force	1 2 3 4 5 6 7 8 9
Unlocked seclusion (quiet room)	1 2 3 4 5 6 7 8 9
Locked seclusion	1 2 3 4 5 6 7 8 9
Emergency medication	1 2 3 4 5 6 7 8 9
Physical restraints	1 2 3 4 5 6 7 8 9
Voluntary medication	1 2 3 4 5 6 7 8 9
Offer food, beverage, or other assistance	1 2 3 4 5 6 7 8 9
Verbal intervention	1 2 3 4 5 6 7 8 9
Leave the area	1 2 3 4 5 6 7 8 9

Composition of the Expert Panel

We identified 52 leading American experts in psychiatric emergency medicine. The experts were identified from several sources: members of the American Association of Emergency Psychiatry who are board certified and have administrative responsibilities for a psychiatric emergency service as well as academic affiliations and individuals who have published research on emergency psychiatry or psychopharmacology. We offered a $500 honorarium. Panelists reported taking 2 or more hours to complete the survey.

We received responses from 50 of the 52 experts to whom the survey was sent. Of the respondents, 49 hold an M.D. degree and 1 a D.O. degree. 76% are male. The experts' mean age was 47 years (S.D. 7.2, range 36–66), with a mean of 16 years in practice (S.D. 7.9, range 4–41) and a mean of 11 years in emergency psychiatric care (S.D. 5.5, range 1–25). 70% reported spending at least half their work time seeing patients. 59% practice in a general hospital, 18% in a psychiatric hospital, and 4% in a V.A. medical center. Of those practicing in a general hospital, 61% work in a separate psychiatric emergency service, 17% in a component of the medical emergency department, and 22% as consultants to the medical emergency department. The respondents reported the following percentages of patients by diagnostic group:

	Mean %	*S.D.* %	*Range* %
Dual diagnosis	41	23	2–85
Psychotic disorder	27	16	5–65
Major depression	22	11	5–45
Axis II disorder	17	12	1–50
Bipolar disorder	14	6	5–25
Primary substance abuse	14	10	5–50
Other Axis I disorder	13	13	2–45
Dementia	6	6	1–25
No psychiatric disorder, required social services	4	6	0–25

78% of the respondents' departments sponsor clinical research. 24% of their psychiatric emergency services evaluate fewer than 250 patients each month, 41% 250–500 patients, and 35% more than 500 patients. The authors acknowledge that many panel members were drawn from urban academic medical centers, which may affect the applicability of their recommendations for rural settings. The respondents reported that a mean of 31% of patients were treated involuntarily (S.D. 29%, range 0%–100%).

Data Analysis for Options Scored on the Rating Scale

For each option, we first defined the presence or absence of consensus as a distribution unlikely to occur by chance by performing a chi-square test ($P<0.05$) of the distribution of scores across the 3 ranges of appropriateness (1–3, 4–6, 7–9). Next we calculated the mean and 95% confidence interval (C.I.). A categorical rating of first, second, or third line was designated based on the lowest category in which the

C.I. fell, with boundaries of 6.5 or greater for first line, and 3.5 or greater for second line. Within first line, we designated an item as "treatment of choice" if at least 50% of the experts rated it as 9.

Displaying the Survey Results

The results of Question 22 (figure 2) are presented graphically in figure 3. The C.I.s for each treatment option are shown as horizontal bars and the numerical values are given in the table on the right.

The Ratings

- ✻ *Treatment of choice*
- *First line*
- *Second line*
- *Third line*
- *No consensus*

First-line treatments are those strategies that came out on top when the experts' responses to the survey were statistically aggregated. These are options that the panel feels are usually appropriate as initial treatment for a given situation. ***Treatment of choice***, when it appears, is an especially strong first-line recommendation (having been rated as "9" by at least half the experts). In choosing between several first-line recommendations, or deciding whether to use a first-line treatment at all, clinicians should consider the overall clinical situation, including the patient's prior response to treatment, side effects, general medical problems, and patient preferences.

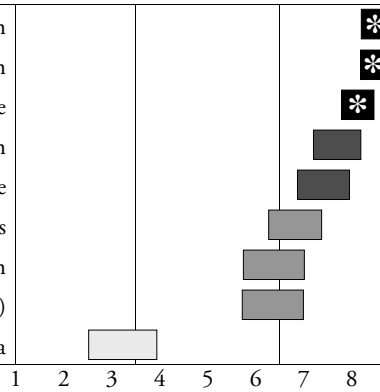
Second-line treatments are reasonable choices for patients who cannot tolerate or do not respond to the first-line choices. A second-line choice might also be used for initial treatment if the first-line options are deemed unsuitable for a particular patient (e.g., because of poor previous response, inconvenient dosing regimen, particularly annoying side effects, general medical contraindication, potential drug interaction, or if the experts do not agree on a first-line treatment). For some questions, second-line ratings dominated, especially when the experts did not reach any consensus on first-line options. In such cases, to differentiate within the pack, we label those items whose C.I.s overlap with the first-line category as "high second line."

Third-line treatments are usually inappropriate or used only when preferred alternatives have not been effective.

No consensus. For each item in the survey, we used a chi-square test to determine whether the experts' responses were randomly distributed across the 3 categories, which suggests a lack of consensus. These items are indicated by an unshaded bar in the survey results.

Statistical differences between treatments. While we did not perform tests of significance for most treatments, the reader can perform an "eyeball" test to see whether C.I.s overlap (indicating no significant difference between options by *t*-test). The wider the gap between C.I.s, the smaller the *P* value would be (i.e., the more significant the difference). In some questions there are striking and important differences within levels, which we occasionally point out. Often, however, differences within levels are not significant from a statistical perspective. Also, there are sometimes no statistical differences between choices at the bottom of first line and those at the top of second line.

Figure 3. Results of Survey Question 22



	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Verbal intervention	8.5(1.0)	*76*	94	6	0
Voluntary medication	8.4(1.0)	*65*	98	2	0
Show of force	8.1(1.2)	*51*	92	8	0
Emergency medication	7.7(1.8)	*45*	82	10	8
Offer food, beverage, or other assistance	7.4(1.9)	*39*	78	18	4
Physical restraints	6.8(2.0)	*27*	65	27	8
Locked seclusion	6.4(2.2)	*23*	54	31	15
Unlocked seclusion (quiet room)	6.4(2.2)	*21*	56	29	15
Leave the area	3.2(2.5)	*4*	14	22	63
		%	%	%	%

From Survey Results to Guidelines

After the survey results were analyzed and ratings assigned, the next step was to turn these recommendations into user-friendly guidelines. We distinguish 2 levels, *preferred* options and *alternate* options, that generally correspond to first- and higher second-line ratings. Whenever the guideline gives more than 1 treatment in a rating level, we list them in the order of their mean scores. As an example, the full results of the question presented above are shown on page 60 and are used in *Guideline* 2B*:* Interventions for an Imminently Violent Patient (p. 27). As initial strategies in this situation, the expert's treatments of choice are verbal intervention, voluntary medication, and a show of force. As noted in the legend of the guideline table, bold italics indicate a treatment of choice rating, an especially strong opinion. Other first-line options are offering food, beverage, or other assistance and emergency medication. High second-line (alternate) options are the use of restraints or locked or unlocked seclusion.

Degree of Consensus

Of the 739 options rated on the 9-point scale, consensus was reached on 617 options (83%) as defined by the chi-square test. When there is no first-line recommendation, we choose the highest-rated second-line option as the "preferred" treatment and indicate this in the guideline.

RESULTS AND COMMENTARY

We have employed the expert consensus survey method in an attempt to describe an inherently complex, nonlinear process in which a variety of actors are potentially engaged in a number of conflicting parallel processes within a compressed time frame. Furthermore, the clinical problem we are addressing here differs from others for which these methods have been used.[18–26] Most of the treatment algorithms on which previous expert consensus guidelines have been based begin with a diagnosis, whereas this set of guidelines must deal with situations in which the diagnosis is unknown. Hence, many of these guidelines on behavioral emergencies are derived from the results of questions that involved forced decisions based on various assumptions about urgency, cooperation, amount of available information, diagnostic confidence, and individual risk factors.

What do the survey results tell us about the state of optimum practice in treating behavioral emergencies? In the following sections, we summarize the key recommendations from the guidelines and consider how the experts' recommendations relate to the available research literature. The complete set of data from the survey is presented on pages 51–88. The guidelines derived from the data are presented on pages 24–50. A summary of the key recommendations is presented graphically in the Treatment Selection Algorithms on pages 22–23.

Readers are referred to a recently published supplement for more detailed discussions of the research literature on the acute care of agitated psychotic patients.[30] Note that literature in this area is relatively limited, because studies of agitation in emergency settings are difficult to justify ethically and are also difficult to conduct from a practical point of view. This was a major reason why this survey of expert opinion was undertaken.

Initial Assessment

The goal in a behavioral emergency is to facilitate the resumption of a more typical patient-physician relationship, with an emphasis on informed consent and long-term treatment outcome. Target symptoms associated with agitation interfere with assessment and treatment during a period when immediate intervention appears to be needed because of dangerous behavior or warning signs of such behavior. Since assessment clearly plays a key role in selecting the most appropriate intervention in a behavioral emergency, we asked the experts about the kinds of assessments they considered most appropriate.

A key step in the initial evaluation is to identify the medical etiology for the agitation, if one is present. This is especially important, because available data suggest that delirium, in particular, should be managed according to the underlying etiology, if it can be identified. If the psychiatric emergency service personnel are responsible for performing the initial medical evaluation, the experts consider it most important to obtain vital signs, a medical history, and perform a visual examination of the patient. They also consider a urine toxicology screen and a cognitive examination (e.g., a Mini-Mental State Examination) key assessments to perform. If the patient is a woman of childbearing age, the experts also recommend obtaining a pregnancy test, since this will have a bearing on subsequent treatment selection, especially if medication is needed. The experts gave somewhat less support to more complete forms of physical examinations, probably reflecting issues related to time constraints and availability of personnel. Obviously, the level of examination will depend on the specific signs and symptoms with which a patient presents. More complete evaluations will be indicated in some circumstances, and may also be indicated later in the patient's treatment.

According to the HCFA interim final rules, the distinction between what is considered a chemical restraint versus a treatment appears to hinge on whether medication is being given as part of a plan of care for the patient's condition or merely to control the patient's behavior. The HCFA document specifies that "A drug used as a restraint is a medication used to control behavior or to restrict the

patient's freedom of movement and is not a standard treatment for the patient's medical or psychiatric condition" (42CFR 482.13(e)).[14] A subsequent HCFA bulletin[31] (for "guidance only") appears to suggest that the distinction between a chemical restraint and treatment is the extent to which the patient has been assessed and medication prescribed as part of a plan of care. To create such a plan of care, the experts consider a brief assessment leading to the determination of a general category of presentation (e.g., intoxication, psychosis) adequate. A more comprehensive assessment leading to a specific diagnosis was also supported but may be impractical for various reasons. The experts believe that such assessments are most appropriately performed by attending psychiatrists, preferably with training or experience in emergency psychiatry, by psychiatric residents, or by nurses with psychiatric experience or advanced training.

Before intervening with medication, the experts consider it most important to determine if there is a causal medical etiology that should be managed first, to review the patient's records if available, and to determine if substance abuse may be complicating the presentation. The experts consider it appropriate but less imperative to obtain a history of the patient's previous medication response, if this information is available, and to determine the patient's treatment preferences.

What Is Considered a Treatment Versus a Restraint

We asked the experts to rate a number of interventions in terms of whether they consider them a form of treatment. We defined a treatment to mean an intervention that follows from an assessment of the patient and a plan of care intended to improve the patient's underlying condition. Nearly all the experts strongly agreed that medication used to treat a specific psychiatric diagnosis would be considered a treatment rather than a chemical restraint. A majority of the experts also felt that medication used to treat symptoms, even in the absence of a clear diagnosis, would be considered a treatment. There was less agreement on how to view other interventions, such as unlocked or locked seclusion or physical restraint.

In a separate question, we asked the experts how strongly they agreed or disagreed with a number of statements about what can be considered a treatment (Question 12, p. 55). As described in the previous section, the HCFA interim final rules specify that a medication must be prescribed as part of a plan of care to be considered a treatment. Three quarters of our panel rejected the notion that such a plan of care is necessary to consider medication a treatment. Instead they endorsed the idea that administering medication in a behavioral emergency is a form of treatment and comports with the standard of care. They thus appear to be more in agreement with the JCAHO guidelines on restraints and seclusion,[15] which reject the concept of chemical restraint, maintaining instead that if a medication is used to treat behavioral symptoms, then it can be considered a treatment.

Voluntary Versus Involuntary Treatment

We also asked the experts about what constitutes voluntary treatment (Question 12, p. 55). For the most part, the experts feel that any dose of oral medication to which a patient assents in an emergency situation can be considered voluntary. They rejected the idea that the situation is so coercive that any medication must be considered involuntary even if it the patient appears to accept it.

Defining a Behavioral Emergency

We asked the experts specifically what types of presentations they feel justify use of emergency intervention (involuntary medication or physical restraint). The experts would always consider it appropriate to initiate an emergency intervention when a patient is directly threatening or assaultive. They would usually consider initiating such interventions for a patient with a constellation of symptoms that includes refusal to cooperate, intense staring, motor restlessness, purposeless movements, affective lability, loud speech, irritability, intimidating behavior, aggression to property, and demeaning or hostile verbal behavior. They would sometimes consider emergency interventions for patients with only some of these symptoms and behaviors, with their willingness to consider more restrictive interventions increasing as the behavior suggests an increased potential for violence. The experts do not consider an emergency intervention appropriate for a patient who displays only a refusal to cooperate with unit routine and intense staring.

We also asked the experts what methods they use to document the need for an emergency intervention. Most of the experts (83%) use unstructured clinical observation and assessment; a good number (39%) also use structured checklists. Only 4 of the experts indicated that they use structured rating scales for this purpose.

Selecting Emergency Interventions

We attempted to determine the relative value of different initial strategies in dealing with a patient who appears imminently violent. There was strong support for efforts to reduce tension and de-escalate the crisis by approaching the patient in a calm and solicitous manner. Therefore, the experts recommend beginning with the least paternalistic or aggressive approaches—verbal intervention, offering food, beverage, or other assistance, or voluntary medication—before moving to more intrusive strategies. The experts

believe these initial interventions are associated with the least risk of acute injury and negative long-term sequelae. Their next step would be a show of force. If those interventions were not successful, the experts would then consider use of emergency medication or physical restraints or seclusion. They do not recommend leaving the patient alone, which the experts consider to be associated with the greatest risk of injury and negative sequelae.

In terms of the goals of different interventions, the experts consider safety issues (e.g., control of aggressive behavior) somewhat more important in the short-term, whereas they place more emphasis on collaboration between patient and physician and honoring the wishes of the patient in achieving the most favorable long-term outcome.

We asked the experts about their perceptions of consumer preferences. The experts believe that consumers consider oral medication most acceptable, followed by injectable medication or seclusion, but that they do not favor the use of physical restraints. Among the various classes of medications, the experts believe that benzodiazepines and atypical antipsychotics are most acceptable to consumers. These responses agree with the results of a survey of patient preferences in a psychiatric emergency service, which found that patients favored medication over restraint or seclusion by a 2:1 margin, that their first choice was generally benzodiazepines, and that almost one third of the respondents considered conventional antipsychotics a last resort.[32]

Use of Restraints

When to use restraints. As noted above, the experts consider restraints a last resort. The HCFA interim rules[14] specify that use of restraint for "managing behavioral emergencies is allowed only when all less restrictive measures have failed and unanticipated severely aggressive or destructive behavior places the patient or others in imminent danger…" We asked the experts about situations in which they felt that the use of physical restraints was appropriate. They consider them extremely or usually appropriate in situations in which patients pose an acute danger to other patients, bystanders, staff, or themselves. They consider restraints sometimes appropriate to prevent an involuntary patient from leaving prior to assessment or transfer to a locked facility. The experts would not generally consider use of physical restraints appropriate in other situations, such as a patient who has a history of previous self-injury or aggression but does not appear to pose any immediate risk at the moment, when adequate resources are not available to supervise the patient adequately, to maintain an orderly treatment environment, or to prevent a voluntary patient from leaving prior to assessment. 47% of the experts reported that emergency interventions (parenteral medication, restraints, seclusion) were required for 1%–5% of patients seen in their services, and 32% said they were required for 6%–20% of patients. This means that, in this sample, more than 80% of patients are managed without the need for parenteral medication, restraints, or seclusion.

Personnel issues. There are basically 3 different sets of personnel involved in the restraint process. First, someone makes the decision to initiate restraints. Then, a group of staff members physically places the patient in restraints. Finally, a face-to-face assessment is done to evaluate the need for restraints. The HCFA interim rules state that hospitals should have a protocol "to specify who can initiate restraints or seclusion in an emergency prior to obtaining a physician's or licensed independent practitioner's order." They further specify that "a physician or other licensed independent practitioner must see and evaluate the need for restraint or seclusion within 1 hour after the initiation of the intervention." However, this regulation has caused some confusion, since the categories of providers who are licensed as independent practitioners vary from state to state. To try to clarify the situation, we asked the experts who they believe can most appropriately initiate restraints and who should perform the subsequent face-to-face evaluation. In both situations, they believe that attending psychiatrists or psychiatric residents, preferably with training and/or experience in emergency psychiatry, or nurses with psychiatric experience or advanced training are the most appropriate personnel both to initiate restraints and perform subsequent face-to-face evaluation. It should be noted that there was less support for psychologists and physicians in other specialties performing these functions, and that the experts generally do not consider it appropriate for social workers, licensed counselors, or unlicensed clinical staff to perform these functions, given the current state of training of these categories of providers. The experts are in agreement with the HCFA rules that 1 hour is the most appropriate minimum interval between when a patient is put in restraints (or seclusion) and the initial face-to-face evaluation is performed. There have been some objections to this 1-hour rule, mainly because of logistical difficulties, from the American Medical Association and the American Psychiatric Association; it is therefore interesting that the experts confirmed that this is the appropriate standard of care.

We also asked the experts some questions about the mechanics of placing and maintaining a patient in restraints. The experts consider nursing staff and trained security officers the most appropriate personnel to participate in actually placing a patient in restraints, although they would also consider physicians sometimes appropriate. They do not consider untrained security personnel appropriate to perform this function. They would generally use leather restraints, but would also consider cloth or other soft restraints, with less support for the use of plastic and velcro restraints or restraint chairs.

Duration of episode. The HCFA interim rules specify that restraint orders are limited to 4 hours for adults.[14] The experts favored an interval of 2 hours (69% first line) but also supported 4 hours (57% first line). This may reflect the pattern of regulations already in place in the states where the panel members practice.

Intensity of monitoring. The experts recommend continuous monitoring while a patient is in restraints (either in person or using a combination of audiovisual and direct personal observation). Many of the experts also considered in-person evaluation at 15 minute intervals reasonable, but they do not support longer intervals (30–60 minutes) between observations. The HCFA interim final rules specify continuous audio and visual monitoring while in restraints.[14] The JCAHO regulations specify continuous in-person monitoring for individuals in restraints (with continuous audiovisual monitoring allowed after the first hour for patients in seclusion).[15]

Use of medication while in restraints. We also asked the experts about the appropriateness of using medication while a patient is in restraints. If the patient becomes calmer in restraints, the experts are divided as to whether to use no medication or to offer oral medication. They would not recommend parenteral medication in this situation. However, if a patient continues to be violent and agitated in restraints, the experts strongly support the use of parenteral medication in combination with the restraints and would also consider using oral medication in this situation. They would not consider it appropriate to leave such a patient unmedicated in restraints. Overall, these recommendations appear to reflect the experts' view that the goal in this situation is to use medication to minimize time in and/or complications of restraints.

Use of Medications

Factors influencing selection. A number of factors may influence selection of a specific medication for use in a behavioral emergency. These include diagnostic or etiologic considerations, issues related to effectiveness or side effects, and pragmatic considerations related to route of administration, onset and duration of action, and available formulations. The experts consider the following factors most important in the selection of an initial emergency medication: availability of an intramuscular (I.M.) or liquid formulation, speed of onset, the patient's history of response to the medication if known, production of clinically useful sedation, limited liability for dangerous or intolerable side effects, and patient preference. Secondary but still important considerations are the likelihood that the medication selected would promote long-term compliance and the availability of a depot formulation of the medication for a patient who has a history of noncompliance.

Effectiveness. We asked the experts to compare the effectiveness for decreasing agitation and the level of sedation associated with 4 types of medications that are often used in the psychiatric emergency setting: droperidol, lorazepam, haloperidol, and atypical antipsychotics. The experts consider droperidol, lorazepam, and haloperidol the most effective agents for decreasing agitation, followed by the atypical antipsychotics. The experts considered lorazepam and droperidol most sedating, followed by haloperidol and the atypical antipsychotics.

There is very little evidence in the literature of differential effectiveness among the different conventional antipsychotics that cannot be accounted for by dosage levels or pharmacokinetics. The largest number of studies have been done with haloperidol,[33, 34] though a number of studies have looked at other antipsychotics, including thiothixene,[35] molindone,[36] and loxapine,[37, 38] and have found comparable effectiveness with haloperidol. Although chlorpromazine is often mentioned for behavioral emergencies because of its sedative side effects, haloperidol has been found to be superior to chlorpromazine at usual doses.[39, 40]

Droperidol is a butyrophenone approved by the U.S. Food and Drug Administration (FDA) that is available only for parenteral administration and has been used primarily in anesthesia. There is strong anecdotal support for the use of droperidol as a calming agent in behavioral emergencies.[41] One of the few placebo-controlled studies of droperidol demonstrated its effectiveness for agitation.[42] However, only 3 studies comparing droperidol to other agents have been done, all of which have methodological problems.[43–45] The largest prospective, randomized study of agitation compared droperidol to lorazepam and found that droperidol produced greater sedation than lorazepam.[45] However, this study was open label and only looked at 3 outcome measures: an idiosyncratic improvement rating, need for additional medication, and total time in the emergency department. Another study[43] used total Brief Psychiatric Rating Scale Score (BPRS)[46] as the criterion for need for additional injections and found that subjects treated with haloperidol required more injections that those treated with droperidol to reach a BPRS of 17 or less. Thomas et al[44] found that I.M. droperidol had a faster onset of action than haloperidol but that the 2 medications were equivalent in effect at 1 hour. These studies seem to suggest that droperidol is certainly faster and perhaps more potent but not necessarily more efficacious.

The atypical antipsychotics are associated with a much lower risk of extrapyramidal side effects (EPS) than high-potency conventional antipsychotics. Although they are recommended as the first-line agents for treatment of schizophrenia in most situations,[23] they have not up to now

been as widely used as the conventional agents in emergency settings. This may be due in part to the slower titration schedules recommended for some of these agents and the fact that, until very recently, none of the atypical agents was available in an I.M. formulation.

Data on the use of atypical agents in psychiatric emergency settings or on their use to treat acute aggression or agitation are very limited. However, a number of studies in more chronic care settings have demonstrated that the atypical antipsychotics appear to be more effective than the conventional antipsychotics in treating aggression and agitation.[47–55]

A recent study examined the relative efficacy, safety, and tolerability of oral risperidone (liquid concentrate) plus lorazepam versus I.M. haloperidol plus lorazepam.[56] This is 1 of the only studies of atypical antipsychotics in the emergency setting that has been published to date. Both treatment groups showed improvement over time, with no significant differences between the groups. One patient in the haloperidol group developed a dystonic reaction; there were no adverse reactions in the risperidone group. Olanzapine has also recently become available in a wafer that dissolves to form a liquid in the oral cavity.

New acute I.M. formulations of atypical antipsychotics will also be available in the near future. These were investigational at the time the survey was done and the guidelines were being developed. Published studies have appeared for acute I.M. forms of both olanzapine and ziprasidone but have focused mainly on the treatment of psychosis and safety issues, rather than agitation or behavioral emergencies.[57–59]

Studies concerning the use of benzodiazepines in psychiatric emergencies suggest that they are at least as effective as haloperidol alone. Most of the studies have been done with lorazepam,[45, 60–64] but controlled data have also been published concerning midazolam,[65] clonazepam,[66] and flunitrazepam.[67] Studies comparing 5 mg of haloperidol with 2 mg of lorazepam found that the 2 agents were equal on some measures,[60, 62, 63] but that 2 mg of lorazepam was superior on measures of aggression[62] and clinical global improvement.[63] Flunitrazepam 1 mg was compared with haloperidol 5 mg and found to be superior using the Overt Aggression Scale as a measure of outcome.[67] Midazolam 5 mg was reported to be superior to haloperidol 10 mg in its effect on a measure of motor agitation.[65] These studies suggest that benzodiazepines used at the doses that are currently usual in emergency settings may be more effective than haloperidol. Battaglia et al[60] found lorazepam used alone to be more sedating than haloperidol used alone.

Use of combination treatment. The most common medication strategy in psychiatric emergency settings today is the use of haloperidol and lorazepam in combination (usually 5 mg haloperidol and 2 mg of lorazepam in the same injection).[68] Although this strategy is generally considered to be safe and effective, research evidence concerning this practice is very limited, with only 2 randomized, controlled studies comparing the use of the combination versus the component agents alone published to date.[60, 61] These studies found that the combination was more effective early in treatment, but that differences in treatment tended to disappear within 2–4 hours, perhaps because additional doses were given in the interval. One study[56] has also been done that compared a combination of haloperidol and lorazepam with a combination of risperidone and lorazepam and found they were equally efficacious (see discussion in preceding section).

When asked about the advantages of using combination treatment, the experts consider the most important potential benefits to be greater efficacy for symptoms of arousal, faster onset of action, and reduced side effect liability. The authors note that the limited literature is inconclusive as to whether combination treatment does indeed produce these benefits. However, the literature does appear to support the advantage of being able to use lower doses of each of the component medications, thus reducing the liability for side effects, especially from haloperidol[64]; the experts also rated this as another benefit of this strategy.

Onset. Time to onset is also an important characteristic. In managing the agitated and potentially violent patient, faster onset may reduce the chance of injuries and the need for, or time in, restraints. We therefore asked the experts to consider the speed of onset of a number of medications and formulations that are used in psychiatric emergency settings. The experts consider intravenous (I.V.) medication of any class to have the fastest onset of action, followed by the I.M. medications midazolam, lorazepam, haloperidol, and droperidol (we did not include droperidol among the options for this question but have added it to this list based on the literature, as discussed below). The next highest ratings for speed of onset went to the I.M. medications chlorpromazine, thiothixene, loxapine, and diazepam, followed by liquid (concentrate or orally dissolving) formulations of antipsychotics. These findings generally agree with the research literature, which reports that I.V. administration of most compounds is associated with an onset of effect in 1–5 minutes. However, the experts did not give strong support to the idea of making I.V. access available in psychiatric emergency settings. This may reflect the fact that I.V. access requires a different staffing pattern and that it is only rarely available in psychiatric emergency services.[10] Although I.M. administration is generally slower than I.V., I.M. droperidol is absorbed so rapidly that there is not much difference between I.V. and I.M. administration in terms of speed of onset.[69] The onset of haloperidol is usually reported to be 30–60 minutes and it has been found that the effect of haloperidol was still rising at 1 hour when

the offset of the droperidol was already beginning.[44] In the same study, it was reported that subjects treated with droperidol spent significantly less total time in the emergency department than those treated with lorazepam (5.9 versus 8.6 hours). These rapid and profound effects are doubtless the reason this agent is commonly used in certain parts of the country. However, droperidol is not considered to be a part of the usual treatment of any psychiatric condition, which would seem to place it more in the class of a chemical restraint than a medication treatment. It should also be noted that droperidol was recently withdrawn from the European market due to concerns about prolongation of the QTc interval.

The experts' recommendations agree with the literature concerning the rapidity of effect of I.M. formulations of lorazepam, midazolam, and haloperidol, while I.M. diazepam and chlordiazepoxide are absorbed slowly and erratically, so that they are not recommended for this use.[70] The authors note that published pharmacokinetic data suggest that some oral preparations are absorbed more rapidly than some parenteral preparations.[70]

It should be noted that the rapid offset of droperidol's effect may be a disadvantage, since it may leave the patient uncovered during transfer and admission to subsequent services, whereas the duration of effects of the other antipsychotics and lorazepam may be more suitable for this purpose.

Route of administration. The experts consider speed of onset and reliability of delivery the 2 most important factors to consider in choosing a route of administration; they also consider patient preference quite important. When asked which route of administration they would prefer to use to treat a behavioral emergency, assuming the medication is available in both oral and I.M. formulations, the experts gave their highest ratings to oral liquid concentrates, orally dissolving formulations, and I.M. formulations. Oral tablets were not preferred, presumably because of slower onset and the risk of "cheeking."

The experts' recommendations are consistent with the results of another recent survey of approximately 50 directors of psychiatric emergency services, in which the majority advocated the use of oral medication whenever possible, with liquid formulations preferred to tablets because of their more rapid onset and because it is easier to verify compliance with liquid medication.[10] In that same survey, the medical directors estimated that only 1 in 10 patients in their emergency services require an injection. It has been reported elsewhere that most agitated patients will assent to oral medications.[71] As noted earlier, the experts felt that consumers' first preference in an emergency situation is oral medication. The HCFA rules[14] specify that "chemical restraint" be considered a last resort, suggesting that oral medication should be offered to the patient first, if possible.

When asked about factors that limit their willingness to use an I.M. formulation, the experts considered risk of side effects, mental or physical trauma to the patient, and the danger of compromising the patient-physician relationship most important.

When asked about their preferences among the oral atypical antipsychotics, the experts prefer risperidone and olanzapine, with quetiapine an alternate choice (note that ziprasidone had not yet been approved at the time of this survey and was therefore not included as an option) and would prefer to use a liquid formulation of the atypical antipsychotic.

Dose levels and frequency. The experts' recommendations concerning dosing levels and intervals between doses are summarized in Guideline 4H (p. 36). The experts recommend a minimum single dose of 1.0 mg and a maximum single dose of 10 mg for haloperidol; in a separate question the experts indicated that they considered a dose equivalent to 2.0–5.0 mg haloperidol most appropriate as initial treatment (either oral or parenteral) for a patient with a behavioral emergency. The experts recommend a minimum single dose of 0.5 mg of lorazepam and a maximum single dose of 2 mg; in a separate question, they recommend a dose of 2.0 mg of lorazepam (or its equivalent) to achieve the same degree of benefit as would be obtained with a dose of 5.0 mg haloperidol.

Only 3 studies have compared different doses of medication for agitation, all of which looked at haloperidol.[33, 34, 39] Baldessarini et al[72] combined the results of these studies and produced a dose-response curve. Their results suggest that a single dose of 7.5–10 mg of haloperidol might be expected to produce the most benefit possible with fewest side effects, and that higher doses, which are associated with an increased incidence of side effects, are not likely to produce much additional benefit. These findings are consistent with the experts' recommendations.

The literature concerning the most appropriate initial doses of benzodiazepines for agitation is very limited. Most published studies concerning the use of lorazepam in agitation have used a dose of 2.0 mg. There is, however, some controversy in the literature as to the most appropriate dose of benzodiazepine with which to begin in a behavioral emergency. Bienek[61] discussed the use of a higher initial dose of 3–4 mg, which would seem to agree with the results of Baldessarini's meta-analysis,[72] which supported the use of 7.5 mg haloperidol as a starting dose.

Selecting Interventions Based on Etiology/Diagnosis

Agitation in patients who present in a psychiatric emergency setting may be associated with several different etiologies. Identifying the underlying cause of the patient's agitation can help the clinician more accurately tailor the

intervention to the presentation. We therefore asked the experts to recommend the most appropriate interventions for patients with agitation due to 3 general classes of suspected etiology: a general medical condition (e.g., delirium, HIV encephalopathy), substance intoxication (e.g., with cocaine, PCP), and a primary psychiatric disturbance (e.g., schizophrenia, mania). For each situation, we asked the experts what general strategies they would begin with during the first hour after presentation in 1) a very agitated, uncooperative patient whose behavior appears to require immediate intervention to prevent injury to self or others, and 2) a patient who is agitated but responsive to direction and does not appear to present an immediate danger to self or others.

General medical etiology. If a patient is very confused and a general medical etiology is suspected, the experts recommend taking vital signs, gathering history from the family or other sources, talking to the patient if possible, performing a visual examination of the patient, requesting a consultation from the medical emergency department, and performing tests such as pulse oximetry, blood glucose and a toxicology screen. If the patient's behavior appears to require immediate intervention to prevent danger to self or others, the experts would next consider intervening with physical restraints, administering parenteral medication or offering oral medication, and performing a focused or cursory physical examination. If the patient is responsive to direction and does not appear to pose any immediate danger to self or others, the experts consider performing a focused physical examination a first-line strategy, presumably because the patient is more likely to cooperate with such an examination. They do not recommend the use of parenteral medication or physical restraints for a cooperative patient.

If it is decided to use medication, either oral or parenteral, to treat agitation in a behavioral emergency that appears to have a general medical etiology, the majority of experts would begin with a conventional antipsychotic, a benzodiazepine, or a combination of the 2. Among oral medications, 43% also consider risperidone a first-line option in this situation. If a parenteral medication is needed, 44% also consider droperidol first line.

Available data suggest that delirium should be managed according to the underlying etiology, if this can be identified. Delirium due to a general medical etiology has usually been treated with high-potency conventional antipsychotics. For example, Breitbart et al found that conventional antipsychotics were superior to lorazepam in efficacy and side effects in a group of prospectively defined patients with AIDS delirium.[73] As reported in the *Expert Consensus Guidelines for the Treatment of Agitation in Older Persons with Dementia*,[22] a panel of experts on the treatment of dementia in older patients recommend conventional high-potency antipsychotics for delirium due to a general medical etiology (e.g., congestive heart failure, urinary tract or upper respiratory infections) in patients with dementia, with risperidone a high second-line choice.

Substance intoxication. If it is strongly suspected that the patient's agitation is associated with substance intoxication and the patient's behavior appears to require immediate intervention to prevent danger to self or others, the experts recommend attempting to take vital signs, talking to the patient if possible, gathering history from the family or other sources, performing tests such as a toxicology screen, and a visual examination of the patient. High second-line interventions in this situation (presumably interventions the experts would recommend performing next) are offering oral medication or administering parenteral medication, performing a cursory physical examination, and testing for breath alcohol content.

Note that the use of restraints received higher ratings for an uncooperative and imminently violent patient whose symptoms appear to have a medical etiology (e.g., a patient with delirium) (restraints rated first line by 67% of the experts) than for a patient whose symptoms appears to be related to substance intoxication (restraints rated first line by 51% of the experts but third line by 43%). This difference may reflect a number of concerns, including worry that a delirious patient may wander, concern about the risk of vomiting and aspiration in an intoxicated patient, and a reluctance to use medication that might increase confusion in a delirious patient.

The experts' recommendations are similar for a patient who is responsive to direction and does not appear to pose any immediate danger to self or others, except that they consider testing for breath alcohol content first line in this situation and they would be more inclined to perform a focused physical examination and to observe the patient and wait for the substance intoxication to resolve or else to offer oral medication. The experts do not recommend the use of parenteral medication or restraints for a cooperative patient who does not appear to pose a danger to self or others.

If it is decided to use oral or parenteral medication to treat agitation associated with substance intoxication, the experts give the strongest support to the use of a benzodiazepine alone. For stimulant or hallucinogen intoxication, the next choice would be a benzodiazepine plus a high-potency conventional antipsychotic. A report in the literature suggests that individuals who abuse stimulants may be more prone to EPS,[74] which may be the reason that the experts prefer benzodiazepines in this situation (i.e., antipsychotics are not likely to have any special benefits for this population but may be more likely to cause EPS). Cocaine toxicity may also involve seizures, and the experts may prefer benzodiazepines to antipsychotics for their protective effect in this situation.

The preference for benzodiazepines in the treatment of hallucinogen intoxication may reflect the experts' recognition that some hallucinogens are anticholinergic and their wish to avoid treating the patient with another drug with anticholinergic properties or that might require the use of an adjunctive anticholinergic agent for EPS.

The experts had no first-line recommendations for treatment of agitation due to alcohol intoxication, but did rate a benzodiazepine alone as high second line. The slight preference for benzodiazepines for patients intoxicated with alcohol may reflect the fact that a component of withdrawal may be contributing to the agitation for which the benzodiazepine might be specifically indicated. The American Psychiatric Association *Guideline for the Treatment of Substance Use Disorders*[75] recommends benzodiazepines for alcohol withdrawal states. The HCFA bulletin[31] referred to earlier in this article also mentions the use of benzodiazepines for behavioral disturbances associated with alcohol withdrawal as an appropriate use of medication for treatment rather than as a chemical restraint.

There was not much support for the use of any medication in patients intoxicated with opioids. This may reflect the belief that patients intoxicated with opioids are usually not agitated enough to risk adding a medication that might cause unwanted sedation or respiratory depression.

Primary psychiatric disturbance. If the presentation or history suggest that the patient's agitation is due to a primary psychiatric disturbance and the patient is uncooperative and appears to require immediate intervention to prevent danger to self or others, the experts recommend attempting to take vital signs, talking to the patient if possible, gathering history from the family or other sources, administering parenteral medication or offering oral medication, a visual examination of the patient, and performing tests such as a toxicology screen. High second-line interventions in this situation (presumably interventions the experts would recommend performing next) are intervening with physical restraints to ensure patient safety and performing a cursory physical examination.

The experts' recommendations are similar for a patient who is responsive to direction and does not appear to pose any immediate danger to self or others, except that the experts do not recommend using parenteral medication or restraints in this situation.

The experts' recommendations for medication to treat agitation that appears to be due to a primary psychiatric disturbance depend on the provisional diagnosis. We will first describe their recommendations for oral medications and then review those for parenteral agents.

If it is decided to use an ***oral*** medication to treat a patient with a provisional diagnosis of ***schizophrenia*** or ***mania***, the experts recommend a benzodiazepine plus a high-potency conventional or atypical antipsychotic. High second-line options for schizophrenia or mania are monotherapy with risperidone, a high-potency conventional antipsychotic, or olanzapine. Monotherapy with a benzodiazepine is also a high second-line option for a patient with a provisional diagnosis of mania.

There were no first-line recommendations for ***oral*** medication for a provisional diagnosis of ***psychotic depression*** or ***personality disorder***. High second-line recommendations for psychotic depression are a benzodiazepine used either in combination with an atypical or conventional antipsychotic or alone, or risperidone alone; a benzodiazepine alone is rated high second line for personality disorder. A benzodiazepine alone is the first-line recommendation for a provisional diagnosis of ***posttraumatic stress disorder (PTSD)***.

If it is decided to use a ***parenteral*** medication to treat a patient with a provisional diagnosis of ***schizophrenia***, the experts recommend a benzodiazepine plus a high-potency conventional antipsychotic as first line, with a high-potency conventional antipsychotic alone a high second-line option.

If it is decided to use a ***parenteral medication*** for a patient with a provisional diagnosis of ***mania***, a benzodiazepine in combination with a high-potency conventional antipsychotic or used alone is first line, with a high-potency conventional antipsychotic alone high second line. For a provisional diagnosis of ***psychotic depression***, a benzodiazepine plus a conventional antipsychotic is first line, with a benzodiazepine alone a high second-line option for parenteral treatment. There were no first-line recommendations for a provisional diagnosis of ***personality disorder***; a benzodiazepine alone or in combination with a high-potency conventional antipsychotic is high second line. For a provisional diagnosis of ***PTSD***, a benzodiazepine alone is the first-line recommendation, with a benzodiazepine combined with a high-potency conventional antipsychotic high second line.

There are situations in which an immediate response is required but no data are available on which to base even a provisional diagnosis. If it is decided to use an ***oral*** medication in this situation, the experts consider a benzodiazepine alone first line and a benzodiazepine plus a high-potency conventional or atypical antipsychotic high second line. There was no first-line consensus on choice of ***parenteral*** medication when there are ***no data*** on which to base a more specific provisional diagnosis; high second-line options are a benzodiazepine alone or in combination with a high-potency conventional antipsychotic.

Note that oral high-potency conventional antipsychotics used alone did not receive much support in most situations and that the experts gave equal or greater support to the atypical antipsychotics for patients with a primary psychiatric etiology. These results are consistent with the recommendations presented in the recently published Expert Consensus Guidelines on schizophrenia[23] and

mania,[25] in which atypical antipsychotics were generally preferred over conventionals for the treatment of schizophrenia and in which atypicals received equal or greater support for use in psychotic mania and were preferred for the treatment of nonpsychotic mania. See Ghaemi[76] for a review of recent findings concerning the role of atypical antipsychotics in the treatment of bipolar disorder.

Among parenteral medications, high-potency conventional antipsychotics used alone received somewhat more support, perhaps because of the lack of injectable atypical antipsychotics at the time of the survey. However, they were generally viewed as inferior to benzodiazepines alone.

In a survey of emergency psychiatrists, it was reported that, if a mood stabilizer is needed in this setting, 90% would use divalproex/valproate, while only 8% would choose lithium and only 2% another mood stabilizer.[10] We did not, therefore, ask about choice of mood stabilizer in this survey, but we did ask about dosing strategies for divalproex. The experts clearly favor divalproex dosing strategies that employ higher doses over usual titration. They would recommend either beginning with 20 mg/kg and continuing until blood levels are available or starting with a loading dose of 30 mg/kg for 2 days, followed by 20 mg/day beginning on day 3. Factors that would encourage the experts to use a loading dose strategy for divalproex include history of response to divalproex in the past, normal liver function tests, and a desire on the part of the patient and family to try to avert hospitalization. The experts consider the use of a loading dose appropriate for all types of manic episodes, probably reflecting the fact that lithium is not generally used in emergency settings and that loading doses of divalproex may help to stabilize the patient more quickly.[77]

Next Steps If There Is an Inadequate Response

If a patient was initially treated with a single agent, either a benzodiazepine alone or an antipsychotic alone, and there has not been an adequate response after 45–60 minutes, the experts recommend either proceeding to a combination of a benzodiazepine and an antipsychotic or giving another dose of the initial agent alone. They would also consider giving a dose of the medication that was not yet tried.

We also asked the experts when they would recommend changing medication strategies—switching to a different agent or using a combination of agents if they had begun with a single agent.

If the patient was initially treated with a single agent, the experts would recommend a change of strategy after 2 doses of the single agent have been totally ineffective (i.e., the patient is still extremely agitated and uncooperative) or 3–4 doses have been only partially effective (i.e., the patient is somewhat calmer but is still not able to converse with caregivers or take oral medication).

If the patient was initially treated with a combination of an antipsychotic and a benzodiazepine, the experts appear to be willing to continue the same treatment strategy somewhat longer, probably reflecting the more limited options available at this point. In this situation, they would recommend a change of strategy after 3 doses of the combination have been totally ineffective or 4 doses have been only partially effective.

Safety and Tolerability

In general, differences in the effectiveness of the various medications in the first few hours are hard to discern. In this situation, considerations of safety and tolerance become more important in selecting a particular medication. As we noted earlier, it is very important to first do no harm.

Pregnancy. We asked the experts about the most appropriate medication strategies for a pregnant woman who is agitated, psychotic, and unresponsive to direction and for whom immediate medical intervention is judged necessary to prevent harm to the mother or fetus or to reduce the deleterious effects that the stress of agitation may have on the maternal-fetal system. In this situation the experts clearly prefer a conventional high-potency antipsychotic (rated first line by 76% of the experts), probably reflecting the much larger database concerning the use of this type of agent and the lack of teratogenicity reported for high-potency conventional antipsychotics.[78] There was also some support for the use of benzodiazepines alone (rated first line by 40% of the experts) and for droperidol (rated first line by 35% of the experts). The experts' recommendations concerning choice of antipsychotics for a pregnant patient agree with the recommendation for treating psychotic depression in pregnant women in the recently published *Expert Consensus Guidelines on the Treatment of Depression in Women 2001.*[27] It is interesting that, while the FDA rates conventional and atypical antipsychotics similarly in their Use-in-Pregnancy ratings[79] (category C: "risk cannot be ruled out"), the experts were less willing to endorse the use of atypical antipsychotics, presumably because of less experience with these agents in pregnant women. Note that, in selecting an atypical antipsychotic for a pregnant woman in this setting, the experts showed a slight preference for risperidone.

Children. The experts had no first-line consensus on the most appropriate medication strategy for a child who is unmanageable and violent. A low-dose benzodiazepine or an antihistamine received high second-line ratings in this situation. The experts' responses probably reflect the desire to be as conservative as possible in terms of safety and to minimize antipsychotic exposure in treating a child. If an antipsychotic is needed, the experts showed a slight prefer-

ence for risperidone or olanzapine over a conventional antipsychotic and they would prefer to use lower doses of the antipsychotic.

It should be noted that, while the experts support the use of a combination of an antipsychotic and a benzodiazepine in a number of other emergency situations (see Guidelines 5–7), they would not generally recommend use of combination medication for children.

Complicating conditions and side effects. The experts' recommendations for choice of medication classes when complications are present are consistent with the general literature. The experts would avoid using high-potency conventional antipsychotics in patients with a history of EPS. They are reluctant to use benzodiazepines in patients with a history of substance abuse/dependence or drug-seeking behavior. However, the authors note that a benzodiazepine rather than an antipsychotic is recommended for a patient with a significant blood alcohol level, which probably reflects the experts' concern about withdrawal syndromes and the risk of seizures. As noted earlier, this recommendation is consistent with the examples provided in the HCFA bulletin concerning the treatment of alcohol withdrawal.[31] Note that benzodiazepines may be initiated even while alcohol is still present in the patient's system. Benzodiazepines are also preferred for patients with a history of seizures (e.g., because of substance or alcohol abuse). Although concerns have been raised on theoretical grounds about the risk of respiratory depression when benzodiazepines are used in combination with alcohol or other sedatives and about the possibility of behavioral disinhibition with benzodiazepines, these concerns are not reflected in the high ratings the experts generally gave benzodiazepines throughout the survey nor are they supported by the research.[80] The experts would use benzodiazepines with caution in patients with chronic obstructive pulmonary disease or in frail older patients. It should also be noted that the experts prefer atypical antipsychotics to conventional antipsychotics for frail older patients. The experts preferred benzodiazepines to antipsychotics for patients with cardiac arrhythmia or conduction defects, probably because of concern about adverse effects on cardiac function. Atypical antipsychotics are preferred for patients with mental retardation/developmental delay. This agrees with the recommendations in the *Expert Consensus Guidelines on the Treatment of Psychiatric and Behavioral Problems in Mental Retardation*, in which atypical antipsychotics were strongly preferred over conventional antipsychotics for the treatment of agitation, aggression, or self-injurious behavior in this population.[26]

We also asked the experts which of the atypical antipsychotics they would use, if it is decided to use an atypical, when a variety of complicating conditions are present. Their recommendations are consistent with the literature and the side-effect profiles of the specific medications. As would be expected, the experts do not recommend olanzapine for patients with diabetes or concern about weight gain and they prefer quetiapine for patients with a history of EPS. Risperidone is preferred for delirious patients, probably because the other atypicals have anticholinergic properties that might increase confusion and sedation. The experts did not rate any of the atypical antipsychotics first line for patients with seizures, probably reflecting the lack of significant differences in the potential for seizures among the atypical antipsychotics other than clozapine and also the experts' preference for using benzodiazepines rather than antipsychotics in this patient population (see above).

CONCLUSIONS AND DIRECTIONS FOR FUTURE RESEARCH

When does an emergency exist? In this survey, the authors have "piloted" an empirical approach to this question—that is, most of the experts would advocate an emergency intervention in a given set of circumstances. This case-based approach might be expanded to include a wider variety of scenarios using this methodology.

Structured approaches to assessment should also be examined. A number of the experts in our expert panel reported that they use structured instruments, although few use rating scales per se. The lack of a good operational definition of agitation, much less of an emergency, also constitutes a significant barrier to both social and scientific progress in this area.

Given the existence of an emergency, who decides what to do? The core problems in a behavioral emergency are the perceived need to do something immediately and the lack of agreement between the individual at the center of the emergency and those responsible for managing it. This guideline is an effort to reach an agreement among providers. But how do we deal with the problem of agreement between patients and providers? Strategies with a narrow focus on the technical issues that determine short-term outcome may do so at the cost of relationship issues that influence long-term outcome. No medication that is now available has a large enough immediate effect to outweigh the importance of facilitating collaboration between patient and provider over time. Although the attitudes and behaviors that foster autonomy and respect are difficult to incorporate into guidelines, there is evidence from our survey that providers would use information concerning patient preferences if it were available.

Since communication in emergencies is problematic, a number of communication strategies can be envisioned. Strategies that are popular in the consumer community are advance directives, wellness and recovery action plans, and other methods of care planning driven by the individual consumer. Another solution would be to develop a "guide-

line" based on a consumer perspective—a document similar to this one that would attempt to represent the consumer attitudes and beliefs that might operate in a behavioral emergency if they could be communicated to providers. There is a striking lack of information on this topic. Research is also needed concerning the influence of race, ethnicity, and culture.

What data are available suggest that consumers understand the need for emergency interventions but often feel frightened and abandoned in the midst of them. In this respect, recent regulations that stress continuing contact with the patient during the episode and debriefing afterward may bring improvement in this area. The inclusion of consumer perspectives in the training of providers should help to sensitize providers and peer counselors. Advocates and families can also give providers proxy data that might help avoid or shorten episodes.

Can we also narrow the gap between consumers and providers on pharmacological management issues? A survey of a representative "expert panel" of consumers with personal experience with restraint, seclusion, or emergency medications would be very instructive. Given the relatively modest differences between available agents, consumer preferences, as manifested either in individual advance directives or credible consumer surveys, could play the deciding role. The results of this expert survey and of an older survey of consumers[32] suggest some convergence of opinion concerning the preferential use of benzodiazepines. A new survey of consumers that includes the newer atypical antipsychotics is needed.

Even as tremendous strides are made in the treatment of psychiatric illness, behavioral emergencies will continue to be a problem because of their tendency to occur outside the usual context of health care. This will remain a difficult and controversial area of practice because it involves limitations on patient autonomy and control, although it is hoped that better practices will contribute to improvement in this area. This guideline is dedicated to a new climate of increased respect and an effort to move from control to care.

LIMITATIONS AND ADVANTAGES OF EXPERT CONSENSUS GUIDELINES

These guidelines can be viewed as an expert consultation, to be weighed in conjunction with other information and in the context of each individual patient-physician relationship. The recommendations do not replace clinical judgment, which must be tailored to the particular needs of each clinical situation. We describe groups of patients and make suggestions intended to apply to the average patient in each group. ***However, individual patients will differ greatly in their treatment preferences and capacities, history of response to previous treatments, family history of treatment response, and tolerance for different side effects. Therefore, the experts' first-line recommendations certainly will not be appropriate in all circumstances.***

We remind readers of several other limitations of these guidelines:

1. The guidelines are based on a synthesis of the opinions of a large group of experts. From question to question, some of the individual experts would differ with the consensus view.
2. We have relied on expert opinion precisely because we are asking crucial questions that are not yet well-answered by the literature. One thing that the history of medicine teaches us is that expert opinion at any given time can be very wrong. Accumulating research will ultimately reveal better and clearer answers. Clinicians should therefore stay abreast of the literature for developments that would make at least some of our recommendations obsolete. We hope to revise the guidelines periodically based on new research information and on reassessment of expert opinion to keep them up-to-date.
3. The guidelines are financially sponsored by the pharmaceutical industry, which could possibly introduce biases. Because of this, we have made every step in guideline development transparent, reported all results, and taken little or no editorial liberty.
4. These guidelines are comprehensive but not exhaustive; because of the nature of our method, we omit some interesting topics on which we did not query the expert panel.

Despite the limitations, these guidelines represent a significant advance because of their specificity, ease of use, and the credibility that comes from achieving a very high response rate from a large sample of the leading experts in the field.

FINAL WORD

Advances in public health do not always require technological breakthroughs or long periods of waiting for new data. Immediate gains can be made by increasing the speed with which best practices are implemented. Guidelines offer a rapid means for communicating a distillate of expert opinion. When reaching a clinical decision point, practitioners and patients can use guidelines to generate a menu of reasonable choices and then select the option that is judged best for each individual. This process drives the next round of expert opinion and the next round of empirical studies.

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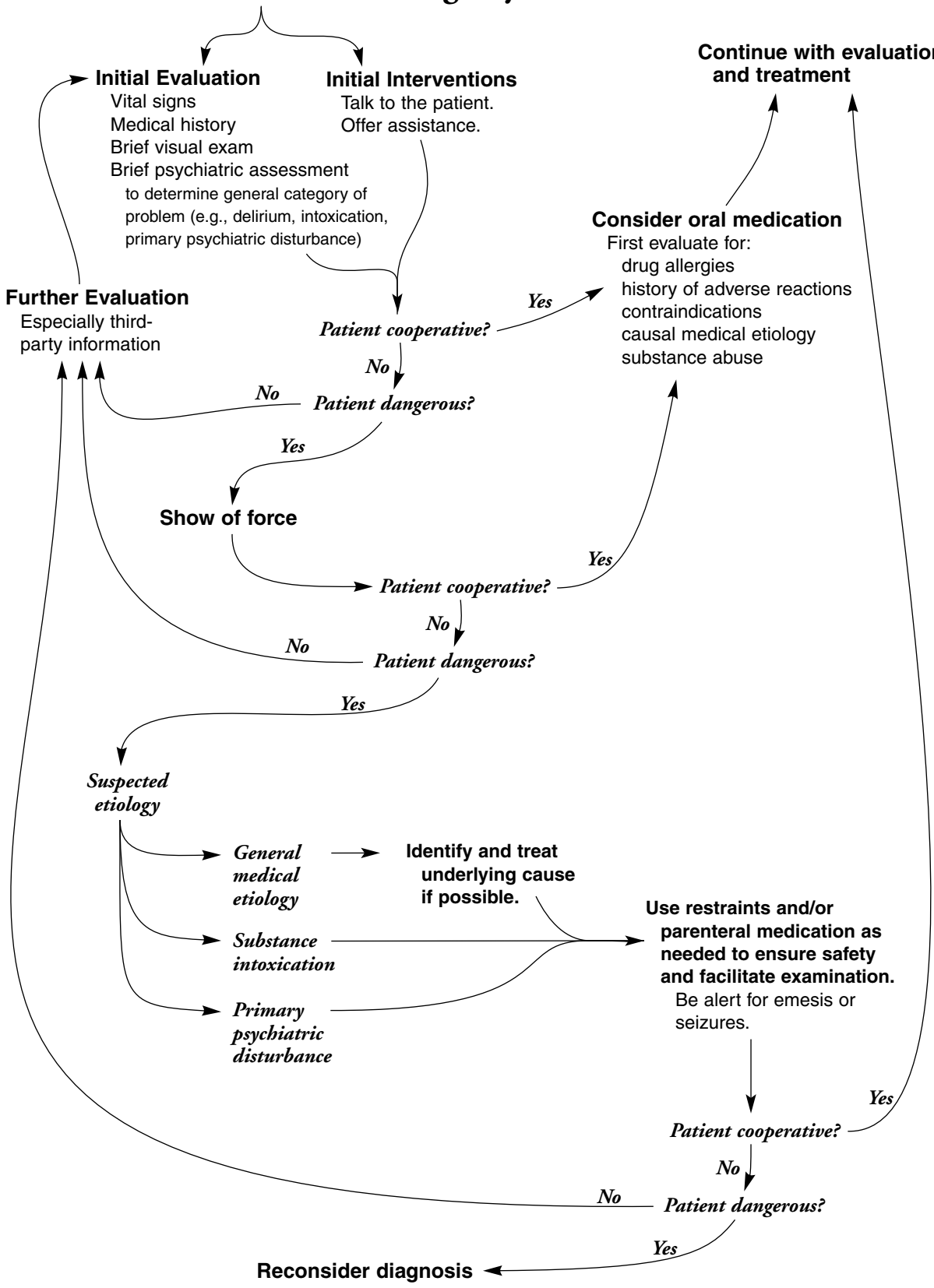
Treatment of a Behavioral Emergency



Summary of Preferred Medications by Etiology

HPCA/hpca = high potency conventional antipsychotic
BNZ/bnz = benzodiazepine
AA/aa = atypical antipsychotic

	Oral Medications		Parenteral Medications	
	PREFERRED	Alternate	PREFERRED	Alternate
General Medical Etiology		hpca bnz		hpca bnz bnz + hpca
Substance Intoxication				
Stimulant	BNZ	bnz +hpca hpca	BNZ	bnz +hpca hpca
Alcohol		bnz		bnz
Hallucinogen		bnz bnz + hpca	BNZ	bnz + hpca
Opioids		*		*
Other/Unknown substance		*		*
Primary Psychiatric Disturbance				
No data	BNZ	bnz +hpca bnz + aa		bnz bnz + hpca
Schizophrenia	BNZ + HPCA BNZ + AA	risperidone hpca olanzapine	BNZ + HPCA	hpca
Mania	BNZ + HPCA BNZ + AA	bnz hpca olanzapine risperidone	BNZ + HPCA BNZ	hpca
Psychotic depression		bnz + aa bnz + hpca bnz risperidone	BNZ + HPCA	bnz
Personality disorder		bnz		bnz bnz + hpca
PTSD	BNZ		BNZ	bnz + hpca

**No medications received strong support for these indications.*

I. INITIAL ACUTE INTERVENTIONS: GENERAL STRATEGIES

Guideline 1: Initial Assessment

Please note that this guideline refers to a situation in which a psychiatrist has assumed responsibility for the care of a patient. It refers to a situation in which a patient is agitated, uncooperative, or dangerous in ways that prevent the assessment that might otherwise be recommended. The same factors that interfere with assessment may compel the psychiatrist to intervene with only limited data available. As such, it is intended to provide guidance as to those procedures the panel considered the most efficient, practical, and useful in detecting a causal or contributory medical condition and promptly directing further efforts toward medical rather than psychiatric care. It is not intended to define a minimum medical assessment or to limit medical assessment in any way. Procedures with the highest ratings might be viewed as most critical and should be attempted quickly in all cases. Those with lower ratings may occur later in the process and in some cases may be deferred to another setting. However, the ultimate scope of medical assessment and care in a particular setting is defined by a facility's medical staff and is described in written policies and procedures for which this guideline is not intended as a substitute.

1A. Initial Medical Evaluation[1]

The experts consider vital signs, medical history, urine toxicology screening, a cognitive examination (e.g., Mini-Mental State Examination), and a visual examination the most important procedures to include as part of an initial medical evaluation of a patient presenting to the psychiatric emergency service, assuming they were responsible for performing such an assessment. The experts also consider pregnancy testing an extremely important assessment for fertile women, especially when medication treatment is being contemplated.

A physical examination also received high ratings. Obviously, the level of examination will depend on the specific signs and symptoms with which a patient presents. More complete evaluations will be indicated in some circumstances, and may also be indicated later in the patient's treatment.* The second-line rating given to other procedures (e.g., CBC/electrolytes) is consistent with findings that such tests do not appear to improve outcomes in this situation. The experts would not generally recommend (third-line rating) routinely performing an electrocardiogram, computed tomography, or chest radiography as part of the initial medical evaluation, unless specifically indicated.

bold italics = assessment of choice

Rank order of medical screening procedures
Vital signs
Medical history
Visual examination of patient (i.e., eyeballing)
Urine toxicology screening
Cognitive examination
Pregnancy testing for fertile women
Cursory physical examination (i.e., medical clearance)
Focused methodical physical examination

*For more detailed discussion of assessment issues, readers are referred to American College of Emergency Physicians Clinical Policies Committee. Clinical policy for the initial approach to patients presenting with altered mental status. Ann Emerg Med 1999;33:251–81.

[1]Question 20

1B. Scope of Psychiatric Assessment Necessary to Create a "Plan of Care" [2]

Current regulations mandate that, for a medication to be considered a treatment rather than a chemical restraint, it must be administered in the context of an assessment and plan of care. We asked the experts what type of assessment they considered adequate to create such a plan of care. Most of the experts supported a brief assessment leading to determination of a general category (e.g., intoxication, psychosis). A more comprehensive assessment leading to a specific diagnosis is also appropriate but may be impractical for various reasons. Screening examinations that might be used for triage or Emergency Medical Transportation Labor Act purposes and that lead only to identification of major symptoms were not supported. Presumably, if only data of this quality were available, a medication intervention might be considered a restraint.

The experts think that these assessments are appropriately performed by attending psychiatrists with training and/or experience in emergency psychiatry, other psychiatrists, or psychiatric residents. Preferences in order after that were for nurses with psychiatric experience or advanced training, other physicians, psychologists, residents in other specialties, and social workers. Nurses without psychiatric experience or advanced training, licensed counselors, nurses aides, and technicians and other unlicensed staff were viewed as inappropriate to perform this function.

We also asked the experts how they currently document the need for emergency intervention. Most of the experts (83%) indicated that they use unstructured clinical observation and assessment, while a good number (39%) also use structured checklists. Only 4 of the experts use structured rating scales.[3]

bold italics = personnel of choice

	Preferred	**Also consider**
Type of assessment needed to create a plan of care	Brief assessment leading to determination of a general category (e.g., intoxication, psychosis)	Comprehensive assessment leading to a specific diagnosis
Most appropriate personnel to perform such an assessment	***Attending psychiatrists with training and/or experience in emergency psychiatry*** Attending psychiatrists without training and/or experience in emergency psychiatry Psychiatric residents	Nurses with psychiatric experience or advanced training

[2]Questions 15 & 16

[3]Question 24

1C. Other Information to Obtain Before Intervening With Medication[4]

Before intervening with medication in a patient presenting with a behavioral emergency, the experts believe that it is most important to determine if the patient has any drug allergies, history of adverse reactions to the medication the clinician is considering using, or medical contraindications to medication. They also think it is very important to determine if there is a causal medical etiology that should be managed first, to review the patient's records if they are available, and to determine if substance abuse may be complicating the presentation. The experts consider it appropriate but less imperative to obtain a history of the patient's previous medication response, if this information is available, and to determine the patient's treatment preferences.

bold italics = information of choice

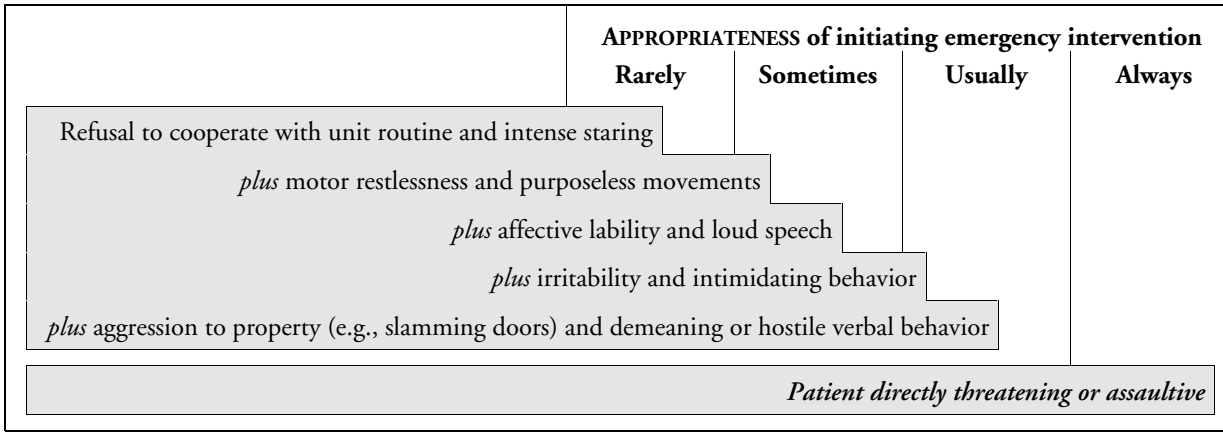
Most important initial information to obtain	**Also useful**
Determining if patient has any drug allergies	Obtaining a history of prior medication response (if available)
Determining if there is a causal medical etiology that should be managed first	Determining patient preference for treatment
Determining if patient has history of adverse reactions to the medication you are considering (e.g., neuroleptic malignant syndrome)	
Determining if a medical contraindication to medication is present (e.g., use of low-potency conventional antipsychotics in seizure disorder)	
Locating and reviewing prior patient records (if available)	
Determining presence of substance abuse	

[4]Question 21

Guideline 2: Appropriate Emergency Interventions

2A. Range of Behavioral Emergencies and Appropriate Responses[5]

We asked the experts about the appropriateness of initiating an emergency intervention (medication or restraints) for patients with a range of clinical presentations. As shown in the graphic below, the results reflect a continuum, with the experts increasingly supporting the use of emergency interventions as patients move from quiet negativism to overt hostility. As patients' behavior suggests an increased potential for violence, the experts are increasingly likely to consider more restrictive interventions. The experts do not consider an emergency intervention appropriate for a patient who displays only a refusal to cooperate with unit routine and intense staring.



[5]Question 23

2B. Interventions for an Imminently Violent Patient[6]

The experts consider the following interventions of choice for an imminently violent patient: verbal intervention, voluntary medication (medication given with the patient's assent or consent), and a show of force. Emergency medication (medication given without patient consent) and offering food, beverage, or other assistance were other first-line options. The experts would next consider the use of physical restraints or locked or unlocked seclusion (high second-line options). The authors note that, even for a patient who appears imminently violent, the experts recommend beginning with less paternalistic or aggressive interventions.

bold italics = intervention of choice

Preferred initial interventions	Alternate interventions
Verbal intervention	Physical restraints
Voluntary medication	Locked or unlocked (quiet room) seclusion
Show of force	
Emergency medication	
Offer food, beverage, or other assistance	

[6]Question 22

2C. Relative Importance of Potential Benefits of Different Interventions[7]

We asked the experts which factors were most important to consider in selecting an acute intervention, both in terms of the short-term goal they want to achieve and in terms of promoting the most favorable long-term outcome. The experts clearly consider safety issues more important in the short-term, while they place more emphasis on collaboration between patient and clinician and considering the wishes of patient and family in fostering better long-term outcomes.

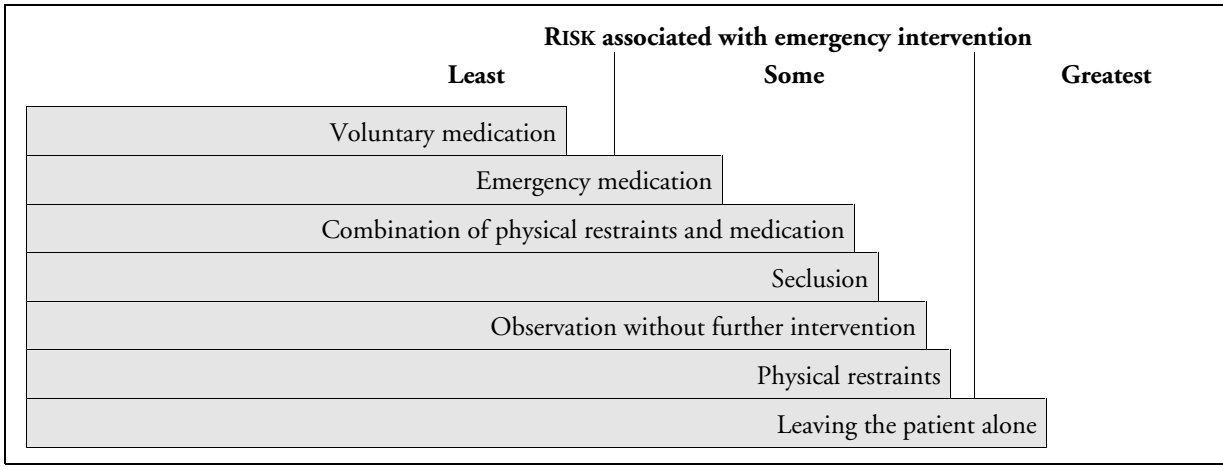
bold italics = factors of choice

Most important factors to consider in order of importance	
In achieving short-term goal	**For a favorable long-term outcome**
Control of aggressive behavior	***Collaboration between patient and clinician whenever possible***
Collaboration between patient and clinician whenever possible	Honoring the wishes of the patient
Protecting the community	Control of aggressive behavior
Control of undesirable behavior	Control of undesirable behavior
Honoring the wishes of the patient	Protecting the community
	Honoring the wishes of family members

[7]Question 3

2D. Relative Risk of Various Acute Interventions for a Behavioral Emergency[8]

We asked the experts to rate the various types of interventions for acute behavioral dyscontrol in terms of both acute risk of injury during the intervention *and* long-term risks of traumatic sequelae. The experts felt that leaving the patient alone involved the highest level of risk and that voluntary medication was the least risky intervention.



[8]Question 13

2E. Perceptions of Consumer Preferences: Types of Interventions[9]

We asked the experts to rate different types of interventions based on their perception of consumer preferences. While the experts clearly felt that consumers would find oral medications most acceptable and physical restraints least acceptable, they were divided as to how they thought consumers would consider injectable medication and seclusion.

bold italics = treatment of choice

Most acceptable interventions	Second-line interventions	Least acceptable (third-line) interventions
Oral medication	Injectable (parenteral) medication Seclusion	Physical restraints

[9]Question 59

2F. Perceptions of Consumer Preferences: Classes of Medications[10]

We asked the experts to rate different classes of medications based on their perception of consumer preferences. The experts felt that consumers would prefer treatment with benzodiazepines and atypical antipsychotics, with conventional antipsychotics and droperidol only receiving lower second-line ratings.

bold italics = treatment of choice

Preferred medications	Lower second-line medications
Benzodiazepines Atypical antipsychotics	Conventional antipsychotics Droperidol

[10]Question 60

2G. Perceptions of Effect of Restraints on Long-Term Adherence to Treatment[11]

There was no clear-cut consensus among the experts as to the effect of chemical and physical restraints on patients' long-term adherence to treatment, although a larger percentage felt that they are likely to have a negative impact (38% strongly agreed that restraints are likely to have a negative impact on long-term adherence, versus 23% that they do not have an effect and 15% that they have a positive effect).

[11]Question 1

Guideline 3: Use of Restraints

In the survey, we asked the experts a number of questions about when and how to use restraints and the effect their use is likely to have on patient outcomes.

Frequency of restraints: We asked the experts what percentage of patients they think are likely to require the use of restraints, seclusion, or parenteral medication in the psychiatric emergency service.[12] Of the 19 experts who answered this question based on actual data from their services, 9 (47%) reported that these interventions were likely to be required for 1%–5% of patients, 6 (32%) for 6%–20% of patients, and 4 (21%) for 21% or more of patients. This means that, in this sample, more than 80% of patients are managed without the need for parenteral medication, restraints, or seclusion.

[12]Question 5

3A. When to Use Physical Restraints[13]

Situations in Which Physical Restraints Are:		
Extremely or usually appropriate	**Sometimes appropriate**	**Rarely or never appropriate**
Acute danger to other patients, bystanders, staff, or self	To prevent an involuntary patient from leaving prior to assessment or transfer to a locked facility	A history of previous self-injury or aggression Lack of resources to supervise patient adequately To maintain an orderly treatment environment To prevent a voluntary patient from leaving prior to an assessment

[13]Question 6

3B. Staff to Initiate and Order Restraints or Seclusion[14]

The experts feel that psychiatrists, psychiatric residents, and trained nursing staff (RNs/LPNs with psychiatric experience and/or training or higher level qualifications) are the main personnel who should be involved in deciding to place patients in restraints or seclusion and in performing assessments to confirm the appropriateness of and necessity for restraints. The HCFA interim final rules specify that "a physician or other licensed independent practitioner must see and evaluate the need for restraint or seclusion within 1 hour after the initiation of the intervention." However, this regulation has caused some confusion, since the categories of providers who are licensed as independent practitioners vary from state to state. The authors note that there was less support for psychologists and physicians in other medical specialties performing these functions. The experts do not consider it appropriate for social workers, licensed counselors, or unlicensed clinical staff to make these sorts of decisions or perform these assessments, given the current state of training of these categories of providers.

bold italics = personnel of choice

Preferred	**Alternate**
Attending psychiatrists*	RNs/LPNs with psychiatric experience and/or training
Psychiatric residents	Nurse practitioners
	Master's level nurses

*Training and/or experience in emergency psychiatry preferred

[14]Questions 17 & 18

3C. Staff to Participate in Placing a Patient in Restraints[15]

The most appropriate staff to actually place a patient in restraints are nurses and trained security officers, although the experts also think it is sometimes appropriate for physicians to participate. They do not believe untrained security officers should be involved in placing a patient in restraints.

Participating Staff		
Extremely or usually appropriate	**Often or sometimes appropriate**	**Rarely appropriate**
Nursing staff Trained security officers	Physicians	Untrained security officers

[15]Question 7

3D. Most Appropriate Equipment for Restraint[16]

Leather restraints were preferred by the majority of the experts (75% first line), followed by cloth or other soft restraints (52% first line). There was less support of the use of plastic and velcro restraints (44% first line) and restraint chairs (29% first line).

[16]Question 8

3E. Use of Medications for a Patient While in Restraints[17]

If a patient becomes calmer and quiets down when put in restraints, the experts are divided between using no medication or only oral medication; they would not generally recommend parenteral medication in this situation. However, if a patient continues to be violent and extremely agitated while in restraints, the experts strongly support the use of parenteral medication in combination with the restraints. They would also consider using oral medication in this situation. They do not consider it appropriate to leave such a patient unmedicated in restraints. Overall, the experts responses appear to reflect the view that the goal in this situation is to use medication to reduce time in and complications of restraints.

bold italics = treatment of choice

Patient continues to be violent and extremely agitated in restraints	**Patient becomes calmer and quiets down in restraints**
Physical restraint plus parenteral medication (Consider use of oral rather than parenteral medication)	Physical restraint alone or in combination with oral medication*

*High second line

[17]Question 14

3F. Levels of Monitoring and Observation for an Adult Patient While in Restraints or Seclusion[18]

The experts consider continuous monitoring most appropriate, either in person or using a combination of audiovisual and personal observation. Many of the experts also consider in-person evaluation at 15 minute intervals reasonable (rated first line by 49% and treatment of choice by 8%). The experts do not support longer intervals (30–60 minutes) between observations.

Level of Monitoring and Observation		
Most appropriate	**Appropriate**	**Not appropriate**
Continuous audiovisual monitoring (e.g., using closed circuit TV) with in-person evaluation every 15 minutes *or* Constant observation (sitter)	In-person evaluation at 15-minute intervals	In-person evaluation at 30-minute intervals In-person evaluation at 60-minute intervals

[18]Question 11

3G. Time Periods for Evaluation and New Orders for Restraints[19]

We asked the experts to rate the appropriateness of a range of time frames for initial in-person evaluation and for giving new orders for restraints. The experts recommend that no more than 1 hour should elapse between the time when a patient is put into restraints or seclusion and the initial in-person evaluation is done by an M.D. or licensed independent practitioner (L.I.P.). There was also some support for a 2-hour minimum, but longer intervals were not considered appropriate by most experts. The experts believe that new orders should be required every 2–4 hours in order to continue restraints (with 37% considering 2 hours the interval of choice versus 22% for 4 hours).

We also asked the experts how they would define a new episode of restraint. They gave substantial support to the idea that each episode of restraints or seclusion should be considered a new episode, requiring new orders and a face-to-face evaluation. There was some support for the idea of being able to remove and return a patient to restraints or seclusion within a single 4-hour period without reassessment and a new order on the basis of fluctuating levels of agitation. However, the experts strongly disagreed with the idea that orders for restraints should be valid for 24 hours.[20]

Minimum time between when patient is put in restraints or seclusion and initial in-person evaluation by M.D. or L.I.P.	1 hour
Time period for requiring a new order to continue restraints	2–4 hours

[19]Question 9

[20]Question 10

Value of debriefing. The experts strongly agree that debriefing patients and staff after an episode is helpful in preventing future episodes and reduces the traumatic consequences of seclusion or restraints for patients, but they do not support providing exploratory psychotherapy in the immediate aftermath of the events.[21]

[21]Question 19

Guideline 4: Use of Medication: Drug, Route of Administration, and Dose

4A. Factors Determining the Initial Choice of Medication[22]

The experts consider the following factors most important in determining the selection of an initial emergency medication (medication that is needed because of the urgency of the situation): availability of an I.M. formulation or liquid formulation, speed of onset, the patient's history of response to the medication, production of clinically useful sedation, limited liability for causing intolerable or dangerous side effects, and patient preference. They would also consider the likelihood that the medication would promote long-term compliance with treatment and the availability of a depot formulation of the medication if the patient has a history of noncompliance. The authors note that the experts are less concerned about continuity with the next phase of treatment or liability for milder, more tolerable side effects, and that they do not consider cost a significant factor in selection of initial medication.

bold italics = factors of choice

Most important factors to consider	Other factors to consider
Availability of I.M. formulation	Promoting long-term compliance
Speed of onset	History of noncompliance and availability of a depot formulation
History of medication response	
Produces clinically useful sedation	
Limited liability for causing intolerable or dangerous side effects	
Patient preference	
Availability of liquid formulation	

[22]Question 52

4B. Rationale for Using Combination Treatment[23]

When a combination of a benzodiazepine and an antipsychotic is used, the experts indicated that greater efficacy, rapid onset of action, and reduced side-effect liability were the most important potential benefits. The authors note that the literature is inconclusive as to whether combination treatment actually produces these benefits, although the literature does appear to support the advantage of being able to use lower doses of each of the component medications.

Most important factors to consider	Other factors to consider
Greater efficacy for symptoms of arousal	Ability to use lower doses of each of the component medications
Faster onset of action	Inducing sleep
Reduction of side effects	Greater efficacy for underlying condition

[23]Question 53

4C. Medication Characteristics[24]

We asked the experts which of the 4 types of medication (droperidol, lorazepam, haloperidol, atypical antipsychotics) they considered most effective for decreasing agitation and producing sedation. The experts gave first-line ratings to droperidol, lorazepam, and haloperidol for decreasing agitation and to lorazepam and droperidol for producing sedation. Although the experts gave high ratings to droperidol in these areas, consistent with findings in the literature, droperidol is not widely used because it is not available in oral form and has not been used routinely for psychiatric indications in the United States. This is reflected in the experts' ratings of droperidol in Questions 31, 36, and 39, where some experts rated it treatment of choice while others considered it third line (see Guidelines 5–7).

We then asked the experts to rate the speed of onset of a number of different types of medications and formulations. For speed of onset, the experts gave first-line ratings to I.V. medication of any class, followed by fast-acting I.M. medications (midazolam, lorazepam, haloperidol, droperidol*). Their next highest ratings went to the medium-speed I.M. medications (chlorpromazine, thiothixene, loxapine, diazepam), followed by liquid (concentrate or orally dissolving) formulations of antipsychotics. However, the authors note that published pharmacokinetic data suggest that some oral preparations are absorbed more rapidly than some parenteral preparations.**

bold italics = treatment of choice

	First line	**Higher second line**
Most effective for decreasing agitation	***Droperidol*** Lorazepam Haloperidol	Atypical antipsychotic
Most sedating	Lorazepam Droperidol	Haloperidol Atypical antipsychotic
Fastest onset of action	***I.V. medication of any class*** I.M. midazolam, lorazepam, haloperidol, droperidol*	I.M. chlorpromazine, thiothixene, loxapine, diazepam Orally dissolving or liquid concentrate formulations of antipsychotics

*We did not ask about I.M. droperidol in this question but the authors have included it here based on the literature.

**American Hospital Formulary Service Drug Information 28:24:08. Bethesda, MD: American Society of Health System Pharmacists, 1998

[24]Questions 54–56

4D. Choice of Oral Atypical Antipsychotics[25]

The experts consider risperidone and olanzapine the first-line choices for emergency medication among the oral atypical antipsychotics, with 48% rating risperidone treatment of choice and 21% rating olanzapine treatment of choice.

Preferred agents	**Alternate agents**
Risperidone Olanzapine	Quetiapine

[25]Question 50

4E. Important Factors in Choosing Route of Administration[26]

The experts consider speed of onset and reliability of delivery the 2 most important factors to consider in choosing a route of administration for emergency medication. They also consider patient preference important.

bold italics = factors of choice

Most important factors	High second-line factors
Speed of onset	Patient preference
Reliability of delivery	Interactions with other medications

[26]Question 27

4F. Preferred Routes of Administration[27]

The preferred routes of administration for medications to treat behavioral emergencies are oral liquid concentrate, orally dissolving formulation, and I.M. Oral tablets were only a second-line option. In keeping with the lower ratings given to I.V.s, the experts did not give strong support to making I.V. access available in psychiatric emergency service settings (19% first line and 43% second line).[28] The authors note that this may reflect the fact that I.V. access requires a different staffing pattern and is rare in psychiatric emergency settings. Among the atypical antipsychotics, oral liquid concentrate was rated the formulation of choice (100% first line).[29]

Preferred routes
Oral liquid concentrate or orally dissolving formulation
I.M.

[27]Question 26

[28]Question 25

[29]Question 28

4G. Factors Limiting Use of I.M. Medication[30]

We asked the experts which factors would make them most likely to avoid use of an I.M. formulation. Their responses clearly indicate concern about the possible adverse effects of the use of I.M. medication on the patient and the therapeutic relationship.

Limiting factors in order of importance
Risk of side effects
Mental trauma to patient
Compromising patient-physician relationship
Physical trauma to patient
Exposure to contaminated needles
Effects on long-term compliance

[30]Question 57

4H. Dosing Levels[31]

Medication	Minimum single dose (mg)	Maximum single dose (mg)	Minimum interval between doses (minutes)	Maximum total dose in 24 hours (mg)	Would never use this medication in PES*
Chlorpromazine	25	100	74	500–900	37%
Diazepam	2	10	75	30–50	22%
Droperidol	2.5	5	54	15–25	26%
Haloperidol**	1.0	10	58	25–50	0%
Lorazepam***	0.5	2	53	10–15	2%
Loxapine	10	50	78	100–175	50%
Midazolam	–	–	–	–	90%
Olanzapine	2.5	10	110	20–30	4%
Perphenazine	2.0	16	66	36–56	24%
Quetiapine	25	100	102	300–575	33%
Risperidone	0.5	2	91	6–10	4%
Thiothixene	2	10	78	25–45	40%

*psychiatric emergency service

**The experts consider a dose equivalent to 2.0–5.0 mg haloperidol most appropriate as initial treatment (either oral or parenteral) for a patient with a behavioral emergency.[32]

***In initiating treatment with a benzodiazepine in a behavioral emergency, the experts recommend a dose of 2.0 mg of lorazepam (or its equivalent) to achieve the same degree of benefit as would be obtained with a dose of 5.0 mg of haloperidol.[33]

[31]Question 61

[32]Question 32

[33]Question 33

II. SELECTION OF INTERVENTIONS BASED ON ETIOLOGY

Guideline 5: Initial Interventions for Agitation Due to a General Medical Etiology

5A. Choice of Initial Strategies for Agitation Due to a General Medical Etiology[34]

We asked the experts to recommend the strategies they consider most appropriate to begin with ***during the first hour*** after a patient presents with a behavioral emergency that is believed to have a ***general medical etiology***.

For a patient who is ***uncooperative and whose behavior appears to require immediate intervention to prevent injury to self or others***, the experts recommend attempting to take vital signs, gathering history from family or other sources, talking to the patient, visual examination of the patient, requesting consultation with the emergency medical department, and performing tests such as pulse oximetry, blood glucose, and a toxicology screen. High second-line interventions in this situation (presumably interventions the experts would recommend performing next) are intervening with physical restraints, administering parenteral medication or offering oral medication, attempting to transfer the patient to the medical emergency department, and performing a focused or cursory physical examination.

The recommendations for a patient who is agitated and confused but ***responsive to direction and does not appear to present an immediate danger to self or others*** are similar, except the experts consider performing a focused physical examination first line in this situation, and do ***not*** recommend the use of parenteral medication or physical restraints (both rated third line). This reflects the fact that the most aggressive treatments drop to third line when the patient is at least somewhat cooperative.

bold italics = interventions of choice

	Patient confused, uncooperative, and requires immediate intervention	**Patient confused but responsive to direction; no immediate danger to self or others**
Preferred strategies	***Vital signs*** Gather history from family or other sources ***Talk to the patient*** ***Visual examination of patient (i.e., "eyeballing")*** Request consultation with medical emergency department Perform tests such as pulse oximetry, blood glucose, toxicology screen	***Vital signs*** ***Talk to the patient*** ***Gather history from family or other sources*** Perform tests such as pulse oximetry, blood glucose, toxicology screen Request consultation with medical emergency department Focused methodical physical examination ***Visual examination of patient (i.e., "eyeballing")***
Alternate strategies	Intervene with physical restraints to ensure patient safety Administer parenteral medication Attempt to transfer patient to the medical emergency department Focused methodical physical examination Cursory physical examination (i.e., medical clearance) Offer oral medication	Attempt to transfer patient to the medical emergency department Cursory physical examination (i.e., medical clearance) Complete history and physical examination Offer oral medication

[34]Question 29

5B. Initial Choice of Oral Medication for Agitation Due to a General Medical Etiology[35]

If it is decided to offer oral medication to treat agitation in a behavioral emergency that appears to have a ***general medical etiology***, there was no first-line consensus among the experts as to the most appropriate medication with which to begin. A majority considered a conventional antipsychotic, a benzodiazepine, or a combination of the 2 as first line, and 43% rated risperidone as first line.

High second-line choices	**Also consider**
High-potency conventional antipsychotic alone*	Benzodiazepine + high-potency conventional antipsychotic
Benzodiazepine alone**	Risperidone alone

*Rated treatment of choice by 15% of the experts

**Rated treatment of choice by 26% of the experts

[35]Question 30

5C. Initial Choice of Parenteral Medication for Agitation Due to a General Medical Etiology[36]

If it is decided to intervene with parenteral medication to treat agitation in a behavioral emergency that appears to have a ***general medical etiology***, the experts prefer a high-potency conventional antipsychotic or a benzodiazepine or a combination of both (rated high second line). An alternate choice is droperidol alone.

High second-line choices	**Also consider**
High-potency conventional antipsychotic alone*	Droperidol*** alone
Benzodiazepine alone**	
Benzodiazepine + high-potency conventional antipsychotic*	

*Rated treatment of choice by 21% of the experts

**Rated treatment of choice by 25% of the experts

***Note that droperidol was withdrawn from the European market due to concerns about QTc prolongation after this survey was completed.

[36]Question 31

Guideline 6: Initial Interventions for Agitation Due to Substance Intoxication

6A. Choice of Initial Strategies for Agitation Due to Substance Intoxication[37]

We asked the experts to recommend the strategies they considered most appropriate to begin with ***during the first hour*** after a patient presents with a behavioral emergency that is believed to be due to ***substance intoxication***.

For a patient who is ***uncooperative and whose behavior appears to require immediate intervention to prevent injury to self or others***, the experts recommend attempting to take vital signs, talking to the patient, gathering history from family or other sources, performing tests such as a toxicology screen, and visual examination of the patient. High second-line interventions in this situation (presumably interventions the experts would recommend performing next) are offering oral medication or administering parenteral medication, performing a cursory physical examination, and testing for breath alcohol content.

First-line recommendations for a patient who is agitated and intoxicated but ***responsive to direction and who does not appear to present an immediate danger to self or others*** are similar, except that the experts consider testing for breath alcohol content first line in this situation. High second-line recommendations in this situation are to perform a focused or cursory physical examination and to observe the patient and wait for the substance intoxication to resolve or to offer oral medication. The use of parenteral medication or restraints, which were both rated second line in the first situation, are third-line options for the patient who is responsive to direction and does not appear to present immediate danger to self or others.

bold italics = interventions of choice

	Patient intoxicated, uncooperative, and requires immediate intervention	**Patient intoxicated but responsive to direction; no immediate danger to self or others**
Preferred strategies	***Vital signs*** ***Talk to the patient*** Gather history from family or other sources Perform tests such as toxicology screen ***Visual examination of patient (i.e., "eyeballing")***	***Vital signs*** ***Talk to the patient*** ***Perform tests such as toxicology screen*** Gather history from family or other sources ***Breath alcohol content (e.g., Breathalyzer exam)*** ***Visual examination of patient (i.e., "eyeballing")***
Alternate strategies	Offer oral medication Administer parenteral medication Cursory physical examination (i.e., medical clearance) Breath alcohol content (e.g., Breathalyzer exam)	Focused methodical physical examination Cursory physical examination (i.e., medical clearance) Observe patient and wait for substance intoxication to resolve Offer oral medication

[37]Question 34

6B. Initial Choice of Oral Medication for Agitation Due to Substance Intoxication[38]

We asked the experts about choice of medications for an intoxicated patient who is extremely agitated and definitely appears to require some intervention. If it is decided to offer oral medication to treat agitation in a behavioral emergency that appears to be due to ***substance intoxication***, the experts give the strongest support to the use of a benzodiazepine alone, with this option receiving the highest number of treatment of choice ratings for each class of substance. For stimulant intoxication, a benzodiazepine alone is first line, followed by the combination of a benzodiazepine plus a conventional antipsychotic. The same recommendations were made for hallucinogen intoxication, although they were only rated high second line. The experts did not give high ratings to any oral medications in the treatment of alcohol, opioid, or other or unknown substance intoxication. The lack of support for use of medications in these situations may reflect specific characteristics of these patients (e.g., patients intoxicated with opioids may not be agitated enough to require medication for sedation and there may also be concern about additive effects). The slight preference for benzodiazepines for patients intoxicated with alcohol may reflect the fact that a component of withdrawal is contributing to the agitation for which the benzodiazepine might be specifically indicated. The preference for benzodiazepines in the treatment of hallucinogen intoxication may reflect knowledge that some hallucinogens are anticholinergic and the wish to avoid treating the patient with another drug with anticholinergic properties or that might require the use of adjunctive anticholinergic medication. Note the experts did not recommend the use of low-potency conventional antipsychotics, such as chlorpromazine, in any situation.

Suspected substance of abuse	**First-line medications**	**High second-line medications**	**Also consider**
Stimulant	Benzodiazepine (BNZ) alone	BNZ + high-potency conventional antipsychotic (HPCA) HPCA alone	BNZ + atypical antipsychotic (AA) Risperidone alone
Alcohol		BNZ alone	HPCA alone
Hallucinogen		BNZ alone BNZ + HPCA	HPCA alone BNZ + AA
Opioid	*No medications recommended*		
Other or unknown			HPCA alone BNZ alone

[38]Question 35

6C. Initial Choice of Parenteral Medication for Agitation Due to Substance Intoxication[39]

We asked the experts about choice of medications for an intoxicated patient who is extremely agitated and definitely appears to require some intervention. If it is decided to intervene with parenteral medication to treat agitation in a behavioral emergency that appears to be due to ***substance intoxication***, the experts again give the strongest support to the use of a benzodiazepine alone. For stimulant or hallucinogen intoxication, a benzodiazepine alone is first line, followed by the combination of a benzodiazepine plus a conventional antipsychotic. A conventional antipsychotic alone is another high second-line option for stimulant intoxication. The experts had no first-line recommendation for alcohol intoxication but did rate a benzodiazepine alone as high second line. The experts did not give first- or high second-line ratings to any parenteral medications in the treatment of opioid, or other or unknown substance intoxication Benzodiazepines as a class generally seem to be preferred for patients with substance abuse.

Suspected substance of abuse	**First-line medications**	**High second-line medications**	**Also consider**
Stimulant	Benzodiazepine (BNZ) alone	BNZ + high-potency conventional antipsychotic (HPCA) HPCA alone	Droperidol alone
Alcohol		BNZ alone	BNZ + HPCA HPCA alone
Hallucinogen	BNZ alone	BNZ + HPCA	HPCA alone Droperidol alone
Opioid			BNZ alone HPCA alone BNZ + HPCA
Other or unknown			BNZ alone HPCA alone BNZ + HPCA

[39]Question 36

Guideline 7: Initial Interventions for Agitation Due to a Primary Psychiatric Disturbance

7A. Choice of Initial Strategies for Agitation Due to a Primary Psychiatric Disturbance[40]

We asked the experts to recommend the strategies they considered most appropriate to begin with ***during the first hour*** after a patient presents with a behavioral emergency that is believed to be due to ***primary psychiatric disturbance***.

For a patient who is ***uncooperative and whose behavior appears to require immediate intervention to prevent injury to self or others***, the experts recommend attempting to take vital signs, talking to the patient, gathering history from family or other sources, administering parenteral medication or offering oral medication, visual examination of the patient, and performing tests such as a toxicology screen. High second-line interventions in this situation (presumably interventions the experts would recommend performing next) are intervening with physical restraints to ensure patient safety and performing a cursory physical examination.

First-line recommendations for a patient who is agitated but ***responsive to direction and who does not appear to present an immediate danger to self or others*** are similar, except that the experts do not recommend using parenteral medication or restraints in this situation.

bold italics = interventions of choice

	Patient agitated, uncooperative, and requires immediate intervention	**Patient agitated but responsive to direction; no immediate danger to self or others**
Preferred strategies	***Vital signs***	***Vital signs***
	Talk to the patient	***Talk to the patient***
	Gather history from family or other sources	Offer oral medication
	Administer parenteral medication	Gather history from family or other sources
	Visual examination of patient (i.e., "eyeballing")	Perform tests such as toxicology screen
	Offer oral medication	***Visual examination of patient (i.e., "eyeballing")***
	Perform tests such as toxicology screen	
Alternate strategies	Intervene with physical restraints to ensure patient safety	Cursory physical examination (i.e., medical clearance)
	Cursory physical examination (i.e., medical clearance)	Focused methodical physical examination

[40]Question 37

7B. Initial Choice of Oral Medication for Agitation Due to a Primary Psychiatric Disturbance[41]

If it is decided to intervene with oral medication to treat agitation in a behavioral emergency that appears to be due to a ***primary psychiatric disturbance***, the experts' preferences depend on the provisional diagnosis. If there are no data on which to base a provisional diagnosis, the experts consider a benzodiazepine alone first line and a benzodiazepine plus a high-potency conventional or atypical antipsychotic high second line. For a patient with a provisional diagnosis of schizophrenia or mania, the experts consider a combination of a benzodiazepine plus a high-potency conventional or atypical antipsychotic first line. For a patient with a provisional diagnosis of schizophrenia, high second-line options are monotherapy with risperidone, a high-potency conventional antipsychotic, or olanzapine. High second-line options for a provisional diagnosis of mania are monotherapy with a benzodiazepine, a high-potency conventional antipsychotic, olanzapine, or risperidone. There were no first-line recommendations for a provisional diagnosis of psychotic depression or personality disorder. High second-line recommendations for psychotic depression are a benzodiazepine used either in combination with an atypical or conventional antipsychotic or alone or risperidone alone; a benzodiazepine alone is rated high second line for personality disorder. A benzodiazepine alone is the first-line recommendation for a provisional diagnosis of posttraumatic stress disorder (PTSD). Note that high-potency conventional antipsychotics used alone did not receive much support in most situations.

Provisional diagnosis	**First-line medications**	**High second-line medications**	**Also consider**
No data	Benzodiazepine (BNZ) alone	BNZ + high-potency conventional antipsychotic (HPCA) BNZ + atypical antipsychotic (AA)	HPCA alone Risperidone alone
Schizophrenia	BNZ + HPCA BNZ + AA	Risperidone alone HPCA alone Olanzapine alone	BNZ alone
Mania	BNZ + HPCA BNZ + AA	BNZ alone HPCA alone Olanzapine alone Risperidone alone	
Psychotic depression		BNZ + AA BNZ + HPCA BNZ alone Risperidone alone	Olanzapine alone HPCA alone
Personality disorder		BNZ alone	BNZ + AA Risperidone alone BNZ + HPCA Olanzapine alone
PTSD	BNZ alone		BNZ + AA BNZ + HPCA

[41]Question 38

7C. Initial Choice of Parenteral Medication for Agitation Due to a Primary Psychiatric Disturbance[42]

If it is decided to initiate parenteral medication to treat agitation in a behavioral emergency that appears to be due to a ***primary psychiatric disturbance***, the experts' preferences depend on the provisional diagnosis. If there are no data on which to base a provisional diagnosis, there was no first-line consensus on choice of medication; high second-line options are a benzodiazepine alone or in combination with a high-potency conventional antipsychotic. For a patient with a provisional diagnosis of schizophrenia, the experts consider a combination of a benzodiazepine plus a high-potency conventional antipsychotic first line, with a conventional antipsychotic alone a high second-line option. For a patient with a provisional diagnosis of mania, a benzodiazepine in combination with a high-potency conventional antipsychotic or used alone is first line, with a high-potency conventional antipsychotic alone high second line. For a provisional diagnosis of psychotic depression, a benzodiazepine plus a conventional antipsychotic is first line, with a benzodiazepine alone a high second-line option. There were no first-line recommendations for a provisional diagnosis of personality disorder; a benzodiazepine alone or in combination with a high-potency conventional antipsychotic is high second line. For a provisional diagnosis of PTSD, a benzodiazepine alone is the first-line recommendation, with a benzodiazepine combined with a high-potency conventional antipsychotic high second line. Note that, among parenteral medications, high-potency conventional antipsychotics used alone received somewhat more support, perhaps because of the lack of injectable atypical antipsychotics at the time of the survey. However, they were generally viewed as inferior to benzodiazepines alone.

Provisional diagnosis	**First-line medications**	**High second-line medications**	**Also consider**
No data		Benzodiazepine (BNZ) alone BNZ + high-potency conventional antipsychotic (HPCA)	HPCA alone Droperidol alone
Schizophrenia	BNZ + HPCA	HPCA alone	BNZ alone Droperidol alone
Mania	BNZ + HPCA BNZ alone	HPCA alone	Droperidol alone
Psychotic depression	BNZ + HPCA	BNZ alone	HPCA alone
Personality disorder		BNZ alone BNZ + HPCA	HPCA alone
PTSD	BNZ alone	BNZ + HPCA	

[42]Question 39

7D. Factors Affecting the Decision to Use a Loading Dose of Divalproex[43]

In an earlier survey of emergency psychiatrists,* it was reported that, if a mood stabilizer was needed in this setting, 90% would use divalproex/valproate, while only 8% chose lithium and 2% other mood stabilizers. Therefore, we did not ask about choice of mood stabilizer in this survey, but did ask the experts about divalproex dosing strategies. In deciding to use a loading dose of divalproex to treat a manic episode in a psychiatric emergency, the experts consider the patient's history of previous response to divalproex, normal liver function, and patient's and family's desire to try to avert hospitalization the most important factors to consider. The experts support using divalproex loading doses in all types of manic episodes, probably reflecting the fact that lithium is not generally used in the emergency setting, as noted above, and that loading doses of divalproex may help stabilize the patient quickly.

bold italics = treatment of choice

Most important factors	High second-line factors
Patient has responded to divalproex in the past	Current episode appears to be mixed mania
Liver function tests are normal	Current episode appears to be dysphoric mania
Patient and family are eager to try to avert hospitalization	Current episode appears to be classic euphoric mania

*Currier GW, Allen MH. American Association for Emergency Psychiatry Survey 1: Psychiatric emergency service structure and function. Presented at the American Psychiatric Association Institute for Psychiatric Services, New Orleans, LA, October 30–November 2, 1999.

[43]Question 44

7E. Dosing Strategies for Divalproex[44]

The experts clearly favor divalproex dosing strategies that employ higher doses over usual titration (e.g., beginning with 250 mg tid and titrating as tolerated). The experts note that a loading dose strategy (i.e., beginning with 30 mg/kg) received quite strong support for use in the emergency setting (rated treatment of choice by 24% of the experts while beginning with 20 mg/kg was rated treatment of choice by 28%).

Preferred strategies
Initiate at 20 mg/kg and continue until blood levels are available
Loading dose: 30 mg/kg for 2 days, followed by 20 mg/kg beginning on day 3*

*Very high second-line option

[44]Question 45

III. INADEQUATE RESPONSE TO INITIAL INTERVENTION

Guideline 8: Next Steps for Inadequate Response

8A. Strategies After Nonresponse to Either a Benzodiazepine or an Antipsychotic Alone[45]

If a single agent, either a benzodiazepine alone or an antipsychotic alone, was used as the initial medication intervention and there has not been an adequate response after 45–60 minutes, the experts recommend either giving a combination of a benzodiazepine and an antipsychotic or giving another dose of the initial agent tried. They would also consider giving a dose of the agent not yet tried.

Preferred strategies	**Alternate strategy**
Give a combination of a benzodiazepine and an antipsychotic Give another dose of the initial agent tried	Give a dose of the agent not yet tried (benzodiazepine if you began with an antipsychotic, antipsychotic if you began with a benzodiazepine)

[45]Question 40

8B. When to Change Strategies After Nonresponse to Single Agent Alone[46]

We asked the experts when they would recommend changing medication strategies (i.e., switching to a different agent, using a combination of agents) if a patient were not responding to treatment with a single agent (e.g., an antipsychotic or a benzodiazepine), assuming that the goal is to get to the point where the patient is sufficiently improved to be able to converse with caregivers and take oral medication. The experts recommend changing strategies after 2 or more doses of medication have been totally ineffective or after 3–4 doses of medication have been only partially effective. The experts would consider making a change after 2 doses of medication that have been only partially effective.

Changing medication strategies is recommended	**Consider changing strategies**
After 2 doses of medication have been totally ineffective* *or* After 3–4 doses of medication have been only partially effective**	After 2 doses of medication have been only partially effective

*By totally ineffective, we mean that the patient is still extremely agitated and uncooperative.

**By partially effective, we mean that the patient is somewhat calmer but is still not able to converse with caregivers or take oral medication.

[46]Question 41

8C. When to Change Strategies After Nonresponse to a Combination of an Antipsychotic Plus a Benzodiazepine[47]

We then asked the experts when they would recommend changing medication strategies if a patient were not responding to treatment with a ***combination*** of medications (e.g., an antipsychotic ***plus*** a benzodiazepine), assuming that the goal is to get to the point where the patient is sufficiently improved to be able to converse with caregivers and take oral medication. The experts recommend changing strategies after 3 or more doses of the combination of medications have been totally ineffective or after 4 or more doses of the combination have been only partially effective. They would consider making a change after 3 doses that had been only partially effective or 2 doses that had been totally ineffective. The experts' ratings for this question reflect their willingness to continue treatment longer when they have begun with a combination of medications, reflecting the more limited options available at this point.

Changing medication strategies is recommended	**Consider changing strategies**
After 3 doses of the combination of medications have been totally ineffective*	After 2 doses of the combination of medications have been totally ineffective
After 4 doses of the combination of medications have been only partially effective**	After 3 doses of the combination of medications have been only partially effective

*By totally ineffective, we mean that the patient is still extremely agitated and uncooperative.

**By partially effective, we mean that the patient is somewhat calmer but is still not able to converse with caregivers or take oral medication.

[47]Question 42

IV. SAFETY AND TOLERABILITY

Guideline 9: Medication Strategies for a Pregnant Woman Who Is Agitated, Psychotic, and Unresponsive to Direction[48]

We asked the experts what medication strategy they would recommend for a pregnant woman for whom immediate medical intervention is judged necessary (i.e., to prevent the mother from harming herself or her unborn child or to reduce the risk of deleterious effects due to the stress of agitation on the maternal/fetal system). The experts rated a **high-potency conventional antipsychotic alone** as the first-line option for such a patient (rated first line by 76% of the experts). No consensus was reached on other options that were ranked second line, although a benzodiazepine alone was rated first line by 40% of the experts. Among the atypicals, the experts showed a slight preference for risperidone. The authors note that, although droperidol received fairly low ratings overall, 35% of the experts rated it first line and 13% rated it treatment of choice in this situation.

[48]Question 43

Guideline 10: Initial Medication Strategies for a Violent and Unmanageable Child[49]

We asked the experts to recommend the most appropriate medication strategy for a child with oppositional defiant disorder who is unmanageable and violent, attempts to bite the nurses, and does not respond to therapeutic hold or other lesser interventions. There was no first-line consensus on the most appropriate medication in this situation, although a low dose benzodiazepine or an antihistamine were high second-line options. An antipsychotic alone received lower second-line ratings, while the experts do not generally support the use of combination treatment (49% would rarely or never use it). The experts' responses probably reflect the desire to be as conservative as possible in terms of safety and to minimize antipsychotic exposure when treating a child. If an antipsychotic is needed, the experts show a slight preference for risperidone or olanzapine over a conventional antipsychotic and they prefer to use lower doses of the antipsychotic.

High second-line choices
Low-dose benzodiazepine
Antihistamine (e.g., diphenhydramine)

[49]Questions 46 & 47

Guideline 11: Preferred Classes of Medication for an Agitated, Aggressive Patient With a Complicating Condition[50]

The experts' recommendations for choice of medication classes when complications are present are consistent with the general literature. The experts would avoid using high-potency conventional antipsychotics in patients with a history of extrapyramidal side effects. They are reluctant to use benzodiazepines in patients with a history of substance abuse/dependence or drug-seeking behavior. However, the authors note that a benzodiazepine rather than an antipsychotic is recommended for a patient with a significant blood alcohol level, which probably reflects the experts' concern about withdrawal syndromes and the risk of seizures. Note that benzodiazepines may be initiated even while alcohol is still present in the patient's system; the experts do not appear concerned about respiratory depression in this setting. Benzodiazepines are also preferred for patients with a history of seizures (e.g., because of substance or alcohol abuse). The experts would use benzodiazepines with caution in patients with chronic obstructive pulmonary disease or in frail older patients. It should also be noted that the experts prefer atypical antipsychotics to conventional antipsychotics for frail older patients.

bold italics = treatment of choice

Complicating condition	**Preferred classes***	**Alternate classes**	**Not recommended (rated third line)**
Chronic obstructive pulmonary disease (COPD)	HPCA	AA	BNZ
Cardiac arrhythmia or conduction defect	BNZ	HPCA AA	
Delirium	HPCA	AA	
Dementia	AA HPCA		
Frail old age	AA	HPCA	BNZ
History of akathisia	BNZ AA		HPCA
History of tardive dyskinesia, neuroleptic malignant syndrome, dystonic reactions, or parkinsonian symptoms	BNZ	AA	HPCA
Mental retardation/developmental delay	AA		
History of "drug seeking" behavior or drug abuse or dependence		AA HPCA	BNZ
History of seizures	BNZ	AA	
Patient with significant blood alcohol level who also has prominent signs of alcohol withdrawal	***BNZ***		

*HPCA = high-potency conventional antipsychotic; AA = atypical antipsychotic; BNZ = benzodiazepine

[50]Question 48

Guideline 12: Choice of Oral Atypical Antipsychotic for an Agitated, Aggressive Patient With a Complicating Medical Condition[51]

Just as in Guideline 11, the experts' recommendations for choice of atypical antipsychotics when complicating conditions are present are consistent with the literature and the side-effect profiles of the specific medications. As would be expected, the experts do not recommend olanzapine for patients with diabetes or concern about weight gain and they prefer quetiapine for patients with a history of extrapyramidal side effects. Risperidone is preferred for delirious patients, probably because the other atypicals have anticholinergic properties that might increase confusion and sedation. The experts did not rate any of the atypical antipsychotics first line for patients with seizures, probably reflecting the lack of significant differences in the potential for seizures among the atypical antipsychotics other than clozapine and also the experts preference for using benzodiazepines rather than antipsychotics in this patient population (see Guideline 11). In general, when a patient with a complicating condition presents with a behavioral emergency, risperidone appears to be the preferred atypical antipsychotic. The 2 exceptions were a preference for quetiapine for patients with a history of extrapyramidal side effects, or amenorrhea and/or galactorrhea.

Complicating condition	**Preferred atypical antipsychotics**	**Alternate atypical antipsychotics**	**Not recommended (third line)**
Delirium	Risperidone		
Cardiac arrhythmia or conduction defect		Risperidone Olanzapine	
Dementia	Risperidone	Olanzapine Quetiapine	
Concern about weight gain	Risperidone	Quetiapine	Olanzapine
Personal history of diabetes	Risperidone	Quetiapine	Olanzapine
Family history of diabetes	Risperidone	Quetiapine	
History of tardive dyskinesia, neuroleptic malignant syndrome, dystonic reactions, or parkinsonian symptoms, or akathisia	Quetiapine	Olanzapine	
Mental retardation/developmental delay	Risperidone	Olanzapine Quetiapine	
History of amenorrhea and/or galactorrhea	Quetiapine	Olanzapine	
History of seizures		Risperidone Olanzapine Quetiapine	
Frail older patient	Risperidone		

[51]Question 51

Expert Survey Results and Guideline References

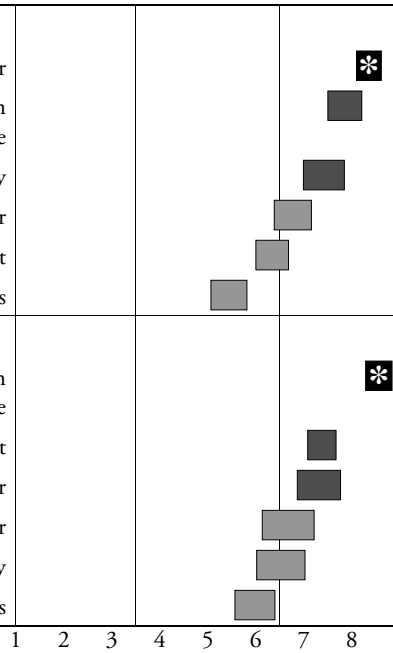
1 Based on your understanding of the literature and clinical experience, what effect do you believe ***use of chemical or physical restraints*** has on patients' long-term adherence to treatment? Rate your level of agreement with the following options, giving your highest ratings to those you agree with most strongly.

	95% CONFIDENCE INTERVALS Third Line	Second Line	First Line	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Has a negative impact on patients' long-term adherence to treatment				5.6 (2.0)	*6*	38	50	13
Does not affect patients' long-term adherence to treatment				4.4 (2.4)	*4*	23	38	38
Has a positive impact on patients' long-term adherence to treatment				4.1 (1.8)	*0*	15	48	38
	1 2 3 4 5 6 7 8 9				%	%	%	%

2 Please give your highest ratings to the factors you consider the most important causes of recidivism in psychiatric emergency services.

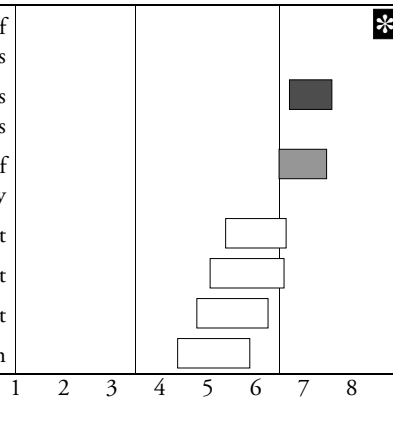
	95% CONFIDENCE INTERVALS Third Line	Second Line	First Line	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Substance abuse				7.8 (0.8)	*19*	94	6	0
Medication nonadherence				7.5 (1.4)	*29*	88	13	0
Lack of insight into illness or need for treatment				7.2 (1.6)	*27*	71	27	2
Lack of appropriate case management (e.g., assertive community treatment)				7.1 (1.4)	*15*	73	25	2
Unstable living environment				7.0 (1.1)	*10*	77	23	0
Lack of community services				7.0 (1.8)	*19*	66	30	4
Homelessness				6.9 (1.4)	*13*	65	33	2
Insufficient length of inpatient stay				6.0 (1.7)	*6*	42	50	8
Insufficient use of long-acting (depot) injectable medication				5.2 (1.7)	*0*	25	52	23
Patient prefers to use emergency services				4.8 (1.9)	*2*	19	52	29
Lack of insurance				4.7 (1.8)	*2*	15	60	25
	1 2 3 4 5 6 7 8 9				%	%	%	%

3 Rate the importance of considering the following factors when selecting an acute intervention for a patient presenting with a behavioral emergency: 1) in terms of your short-term goal and 2) as your guiding principle for achieving a favorable long-term outcome. Give a 9 to the single factor you consider most important in each case.



	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
In achieving short-term goal					
Control of aggressive behavior	8.4 (0.9)	*58*	94	6	0
Collaboration between patient and clinician whenever possible	7.9 (1.2)	*40*	90	8	2
Protecting the community	7.4 (1.5)	*27*	81	15	4
Control of undesirable behavior	6.8 (1.4)	*8*	63	38	0
Honoring the wishes of the patient	6.3 (1.2)	*0*	53	45	2
Honoring the wishes of family members	5.4 (1.3)	*0*	19	73	8
For a favorable long-term outcome					
Collaboration between patient and clinician whenever possible	8.6 (1.0)	*79*	94	6	0
Honoring the wishes of the patient	7.4 (1.0)	*10*	85	15	0
Control of aggressive behavior	7.3 (1.6)	*21*	77	21	2
Control of undesirable behavior	6.7 (1.9)	*17*	63	30	7
Protecting the community	6.5 (1.8)	*10*	58	33	8
Honoring the wishes of family members	6.0 (1.5)	*4*	31	65	4
		%	%	%	%

4 Rate the extent to which you consider each of the following interventions a form of treatment. By treatment, we mean an intervention that follows from an assessment of the patient and a plan of care intended to improve the patient's underlying condition. Give higher ratings to those you consider a treatment.



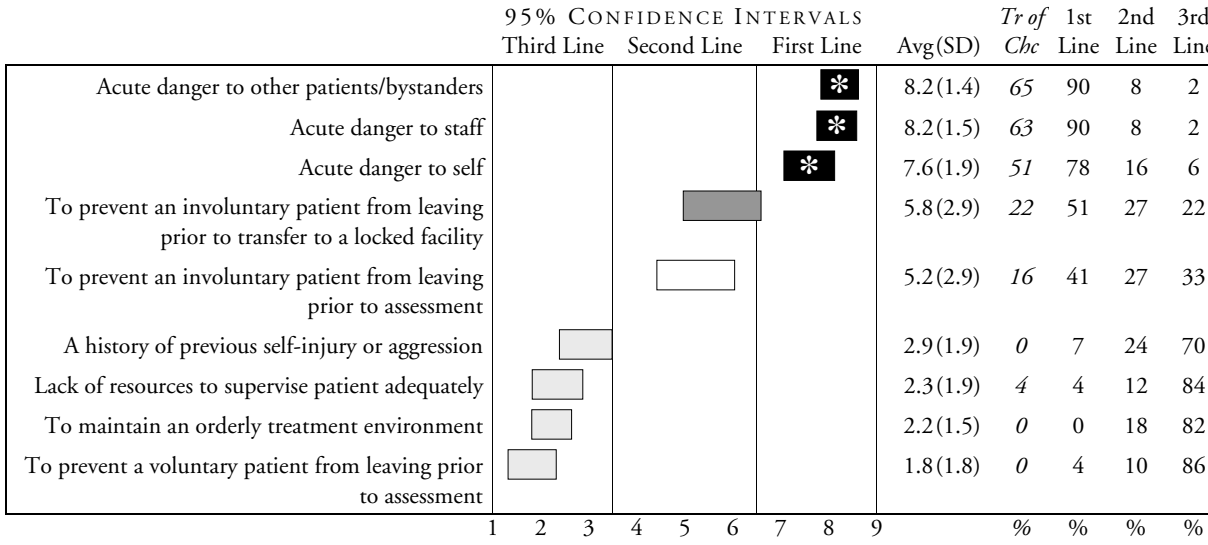
	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Medication used for the treatment of a specific psychiatric diagnosis	8.7 (0.8)	*82*	98	2	0
Medication used to treat symptoms in the absence of a clear diagnosis	7.1 (1.6)	*22*	69	27	4
Medication used to treat the target symptoms of potentially dangerous behavior only	7.0 (1.8)	*24*	61	35	4
Unlocked seclusion or time out	6.0 (2.2)	*16*	47	31	22
Chemical restraint	5.8 (2.8)	*22*	43	31	27
Physical restraint	5.5 (2.6)	*22*	39	33	29
Locked seclusion	5.1 (2.7)	*16*	39	27	35
		%	%	%	%

5 Based on your understanding of the literature and your clinical experience, what percentage of patients do you think are likely to require the use of restraints, seclusion, or parenteral medication in the psychiatric emergency service (PES)? Check 1 answer only.

N	Never	1%–5%	6%–20%	>20%
19*	0	9 (47%)	6 (32%)	4 (21%)

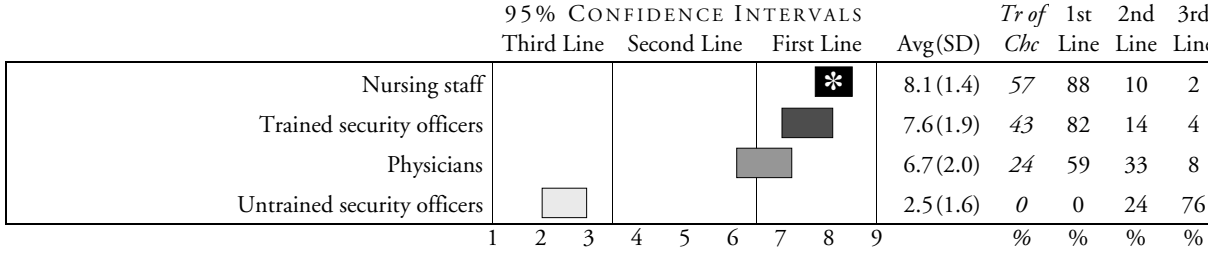
*Includes only those respondents who indicated that their answer was based on actual data from their service.

6 Rate the appropriateness of each of the following as a reason for physically restraining a patient. If you would never use a physical restraint under any circumstances, check here and skip to the next question.



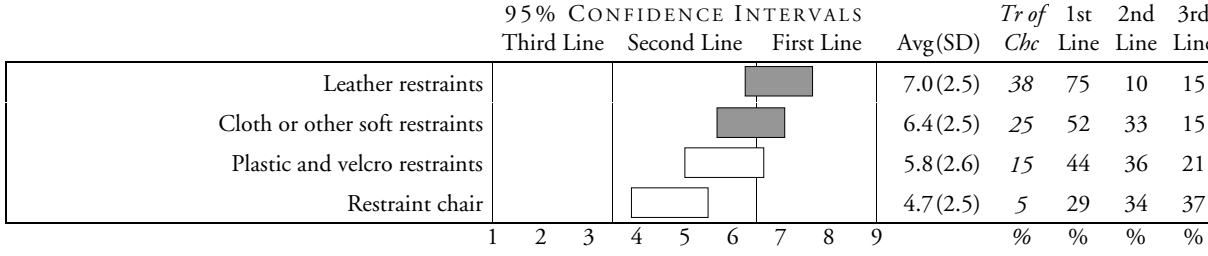
	95% Confidence Intervals: Third Line / Second Line / First Line	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Acute danger to other patients/bystanders		8.2 (1.4)	*65*	90	8	2
Acute danger to staff		8.2 (1.5)	*63*	90	8	2
Acute danger to self		7.6 (1.9)	*51*	78	16	6
To prevent an involuntary patient from leaving prior to transfer to a locked facility		5.8 (2.9)	*22*	51	27	22
To prevent an involuntary patient from leaving prior to assessment		5.2 (2.9)	*16*	41	27	33
A history of previous self-injury or aggression		2.9 (1.9)	*0*	7	24	70
Lack of resources to supervise patient adequately		2.3 (1.9)	*4*	4	12	84
To maintain an orderly treatment environment		2.2 (1.5)	*0*	0	18	82
To prevent a voluntary patient from leaving prior to assessment		1.8 (1.8)	*0*	4	10	86
	1 2 3 4 5 6 7 8 9		*%*	%	%	%

7 Rate the appropriateness of the following personnel participating in the act of restraining a patient. Give higher ratings to those you consider most appropriate to participate.



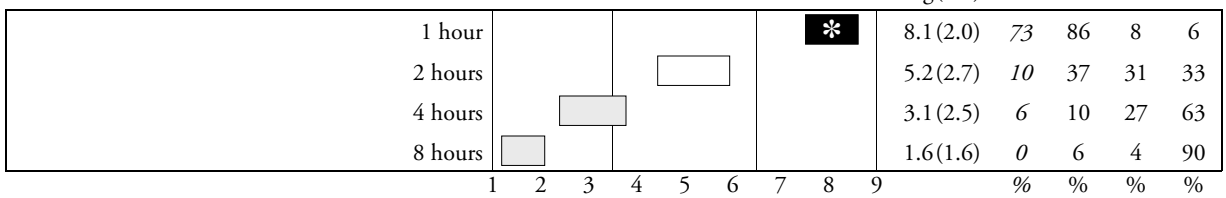
	95% Confidence Intervals: Third Line / Second Line / First Line	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Nursing staff		8.1 (1.4)	*57*	88	10	2
Trained security officers		7.6 (1.9)	*43*	82	14	4
Physicians		6.7 (2.0)	*24*	59	33	8
Untrained security officers		2.5 (1.6)	*0*	0	24	76
	1 2 3 4 5 6 7 8 9		*%*	%	%	%

8 Rate the appropriateness of the following methods of restraint. Give higher ratings to those you consider most appropriate.



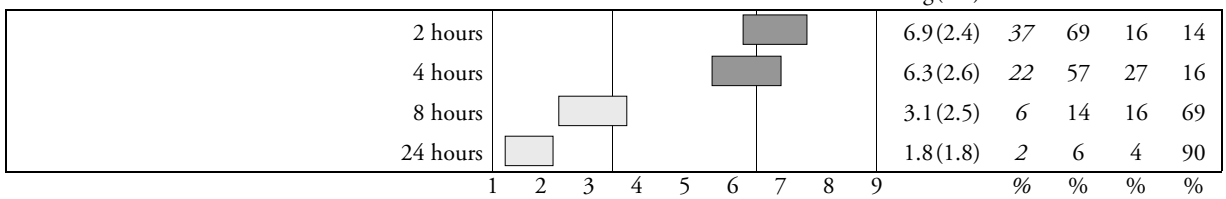
	95% Confidence Intervals: Third Line / Second Line / First Line	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Leather restraints		7.0 (2.5)	*38*	75	10	15
Cloth or other soft restraints		6.4 (2.5)	*25*	52	33	15
Plastic and velcro restraints		5.8 (2.6)	*15*	44	36	21
Restraint chair		4.7 (2.5)	*5*	29	34	37
	1 2 3 4 5 6 7 8 9		*%*	%	%	%

9a Rate the appropriateness of the following increments as the minimum time between when a patient is put into restraints or seclusion and the initial in-person evaluation by an M.D. or licensed independent practitioner (L.I.P.).



	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
1 hour	8.1(2.0)	*73*	86	8	6
2 hours	5.2(2.7)	*10*	37	31	33
4 hours	3.1(2.5)	*6*	10	27	63
8 hours	1.6(1.6)	*0*	6	4	90
		%	%	%	%

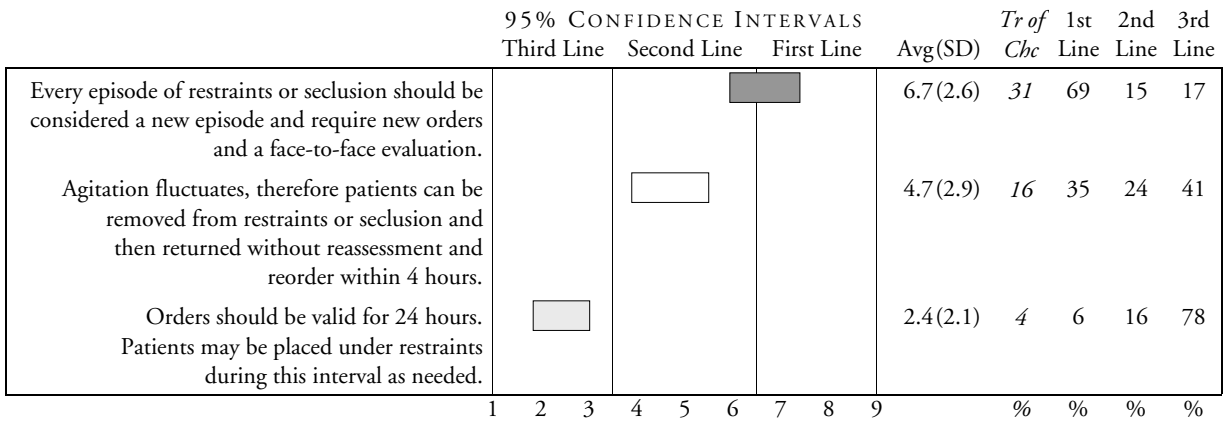
9b Rate the appropriateness of the following periods for requiring a new order to continue restraints for a patient.



	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
2 hours	6.9(2.4)	*37*	69	16	14
4 hours	6.3(2.6)	*22*	57	27	16
8 hours	3.1(2.5)	*6*	14	16	69
24 hours	1.8(1.8)	*2*	6	4	90
		%	%	%	%

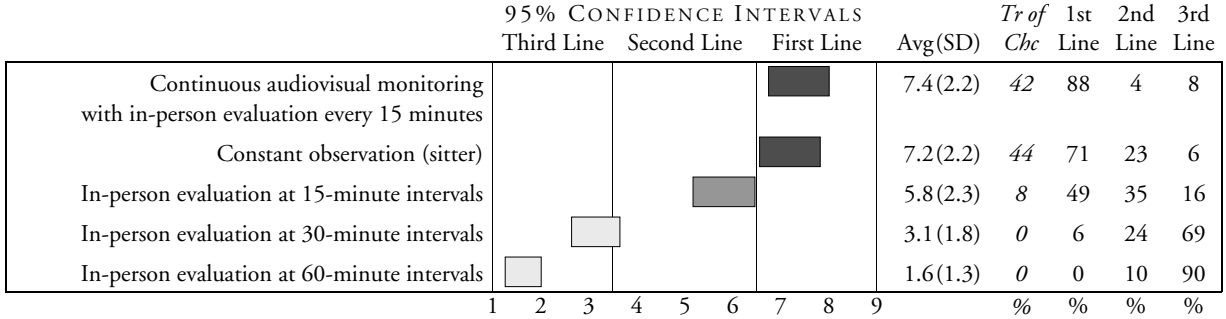
What time period did state regulations in your jurisdiction stipulate during 2000? **7.8 (15.6) hrs**

10 Rate the level of your agreement with the following statements concerning episodes in which patients are put into restraints or seclusion.



	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Every episode of restraints or seclusion should be considered a new episode and require new orders and a face-to-face evaluation.	6.7(2.6)	*31*	69	15	17
Agitation fluctuates, therefore patients can be removed from restraints or seclusion and then returned without reassessment and reorder within 4 hours.	4.7(2.9)	*16*	35	24	41
Orders should be valid for 24 hours. Patients may be placed under restraints during this interval as needed.	2.4(2.1)	*4*	6	16	78
		%	%	%	%

11 Taking into consideration the safety of both patient and staff, rate the appropriateness of the following levels of monitoring and observation for an adult patient in restraints or seclusion.

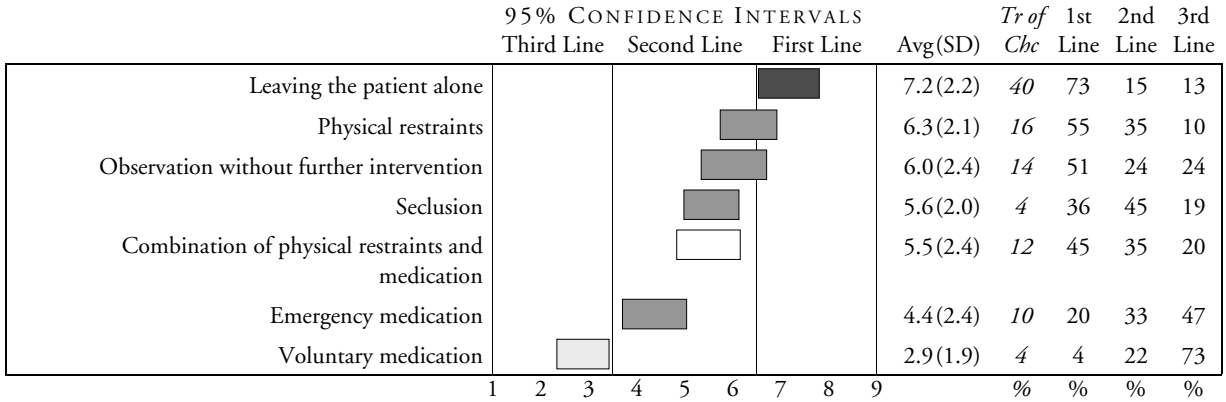


	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Continuous audiovisual monitoring with in-person evaluation every 15 minutes	7.4(2.2)	*42*	88	4	8
Constant observation (sitter)	7.2(2.2)	*44*	71	23	6
In-person evaluation at 15-minute intervals	5.8(2.3)	*8*	49	35	16
In-person evaluation at 30-minute intervals	3.1(1.8)	*0*	6	24	69
In-person evaluation at 60-minute intervals	1.6(1.3)	*0*	0	10	90
		%	%	%	%

12 When an individual presents in an agitated state and appears imminently dangerous, which of the following assumptions is most appropriate? Assume that you have determined that some intervention is required and summoned the staff necessary to intervene in various ways. Give your highest ratings to the statements with which you most strongly agree and your lowest ratings to those with which you most strongly disagree.

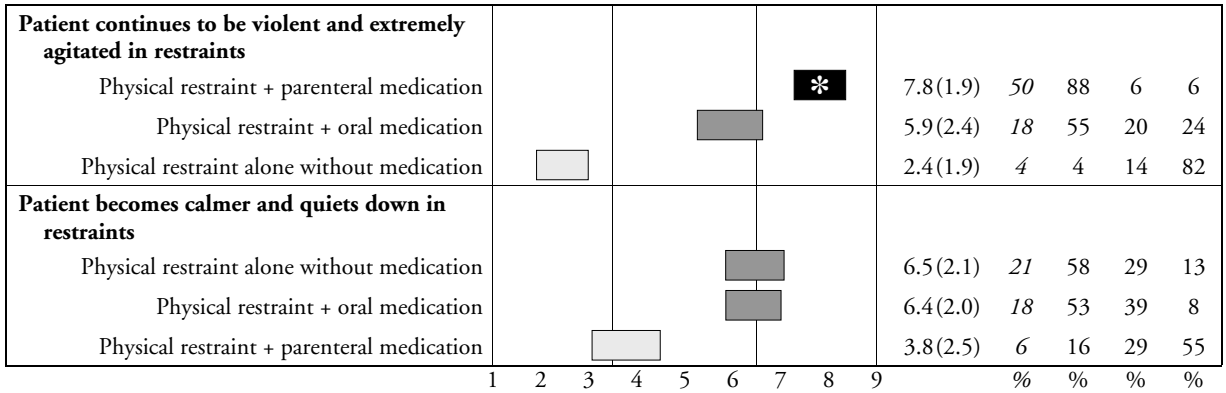
	95% CONFIDENCE INTERVALS Third Line / Second Line / First Line	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Defining a treatment						
Administering medication in a behavioral emergency is a form of treatment and comports with the standard of care.		7.2 (2.1)	*34*	74	17	9
There is a high likelihood the individual is suffering from a mental disorder with high levels of arousal. The specific diagnosis may not be known but medications are likely to benefit the state of arousal associated with any presumptive diagnosis.		6.5 (2.3)	*22*	63	22	14
The individual may or may not be suffering from a mental disorder. Medication ordered prior to a reasonably detailed assessment and specific plan of care directed at the disorder cannot be considered a treatment.		4.9 (2.6)	*12*	33	24	43
Unless it is administered in the context of a preexisting assessment and plan of care that includes medication for potentially dangerous behavior, medication for a behavioral emergency is chemical restraint rather than treatment.		4.5 (2.7)	*10*	29	31	41
Defining *voluntary*						
If a patient assents to a dose of oral medication in these circumstances, it can be considered voluntary.		7.0 (2.0)	*24*	76	16	8
If a patient is given parenteral medication in these circumstances, it must be considered involuntary unless the patient evinces a choice in favor of medication.		5.4 (2.5)	*8*	41	31	29
If a patient does not actively refuse parenteral medication (I.M. or I.V.) in these circumstances, it can be considered voluntary.		4.5 (2.4)	*4*	20	39	41
If a patient assents to a dose of oral medication in these circumstances, it must be considered coerced.		2.7 (1.8)	*0*	8	14	78
This is such an inherently coercive situation that any medication must be considered involuntary even if the patient appears to accept medication. Only an advance directive indicating that the patient had previously formed the intent to accept the treatment might mitigate against this view.		2.6 (2.0)	*2*	6	18	76
	1 2 3 4 5 6 7 8 9		%	%	%	%

13 Taking into account both acute risk of injury during the intervention and the long-term risks of traumatic sequelae, rate the level of hazard/risk you believe to be associated with each of the following types of interventions for acute behavioral dyscontrol. Give your highest ratings (7–9) to those interventions that you believe are associated with the ***greatest*** risk of acute injury or long-term negative sequelae. Note that by ***emergency medication***, we mean medication given without consent. ***Voluntary medication*** refers to medication given with the patient's assent or consent.



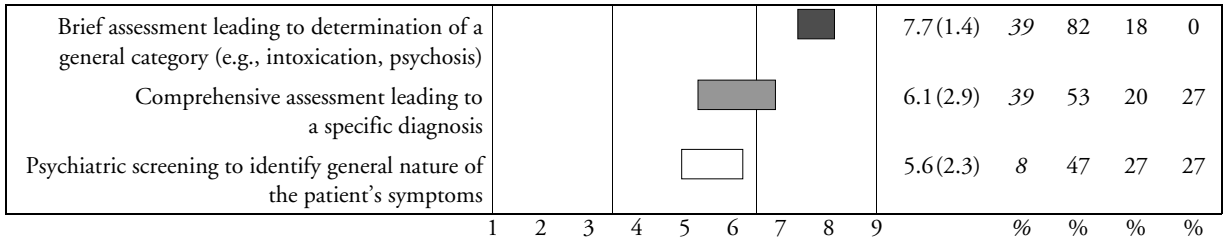
	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Leaving the patient alone	7.2 (2.2)	*40*	73	15	13
Physical restraints	6.3 (2.1)	*16*	55	35	10
Observation without further intervention	6.0 (2.4)	*14*	51	24	24
Seclusion	5.6 (2.0)	*4*	36	45	19
Combination of physical restraints and medication	5.5 (2.4)	*12*	45	35	20
Emergency medication	4.4 (2.4)	*10*	20	33	47
Voluntary medication	2.9 (1.9)	*4*	4	22	73
		%	%	%	%

14 Rate the appropriateness of the following medication strategies for a patient who has been put in physical restraints depending on the patient's current condition.



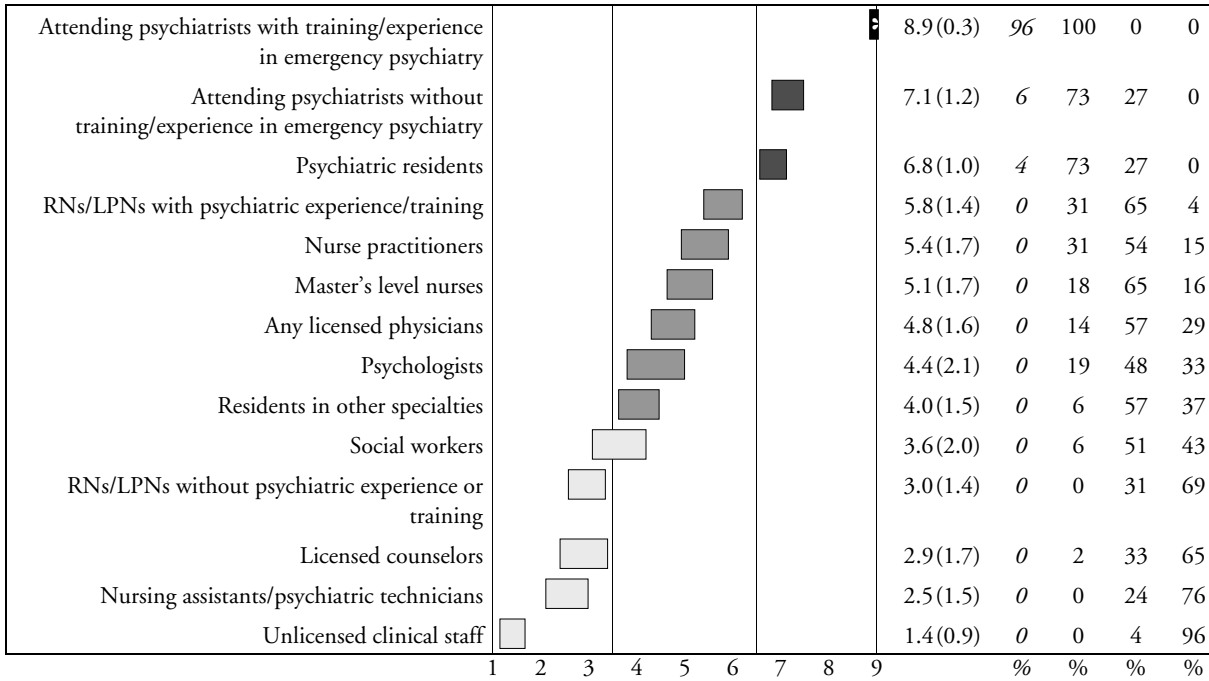
	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Patient continues to be violent and extremely agitated in restraints					
Physical restraint + parenteral medication	7.8 (1.9)	*50*	88	6	6
Physical restraint + oral medication	5.9 (2.4)	*18*	55	20	24
Physical restraint alone without medication	2.4 (1.9)	*4*	4	14	82
Patient becomes calmer and quiets down in restraints					
Physical restraint alone without medication	6.5 (2.1)	*21*	58	29	13
Physical restraint + oral medication	6.4 (2.0)	*18*	53	39	8
Physical restraint + parenteral medication	3.8 (2.5)	*6*	16	29	55
		%	%	%	%

15 Current regulations mandate that for medication to be considered a treatment (rather than a chemical restraint) it must be administered in the context of an assessment and plan of care. Which of the following levels of assessment do you consider necessary to create such a plan of care? Give a 9 to the type of assessment that you consider the most appropriate.



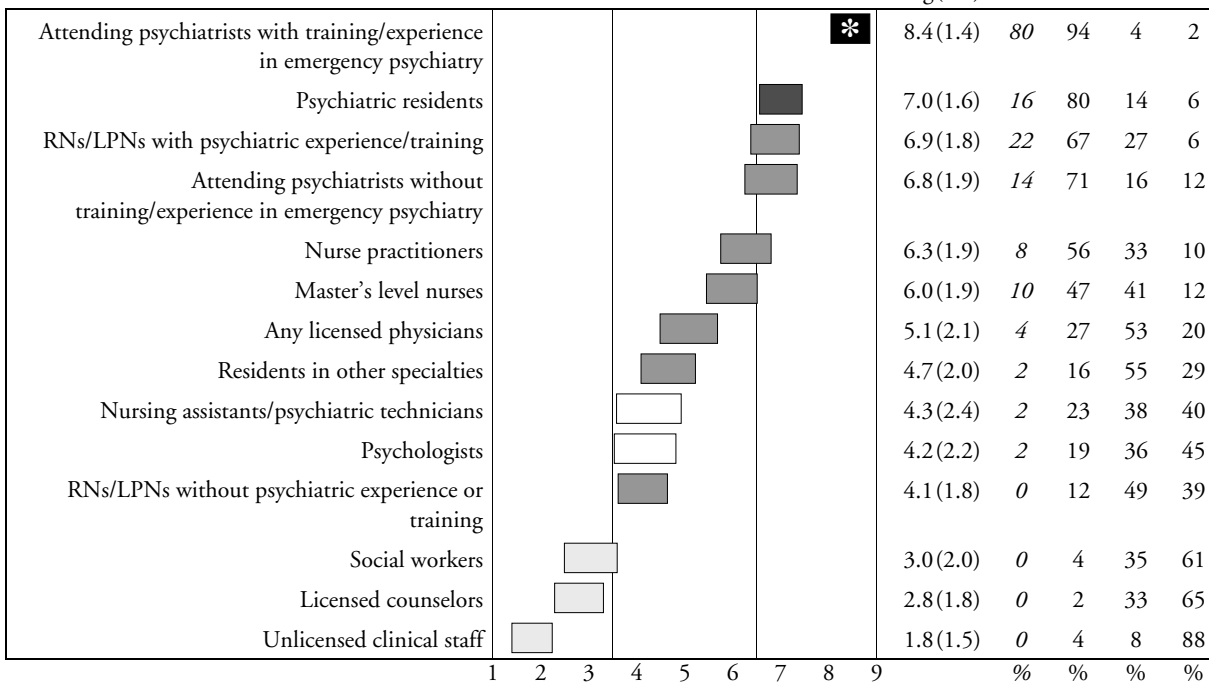
	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Brief assessment leading to determination of a general category (e.g., intoxication, psychosis)	7.7 (1.4)	*39*	82	18	0
Comprehensive assessment leading to a specific diagnosis	6.1 (2.9)	*39*	53	20	27
Psychiatric screening to identify general nature of the patient's symptoms	5.6 (2.3)	*8*	47	27	27
		%	%	%	%

16 Rate the appropriateness of the following staff to perform the evaluation you rated most highly in question 15.



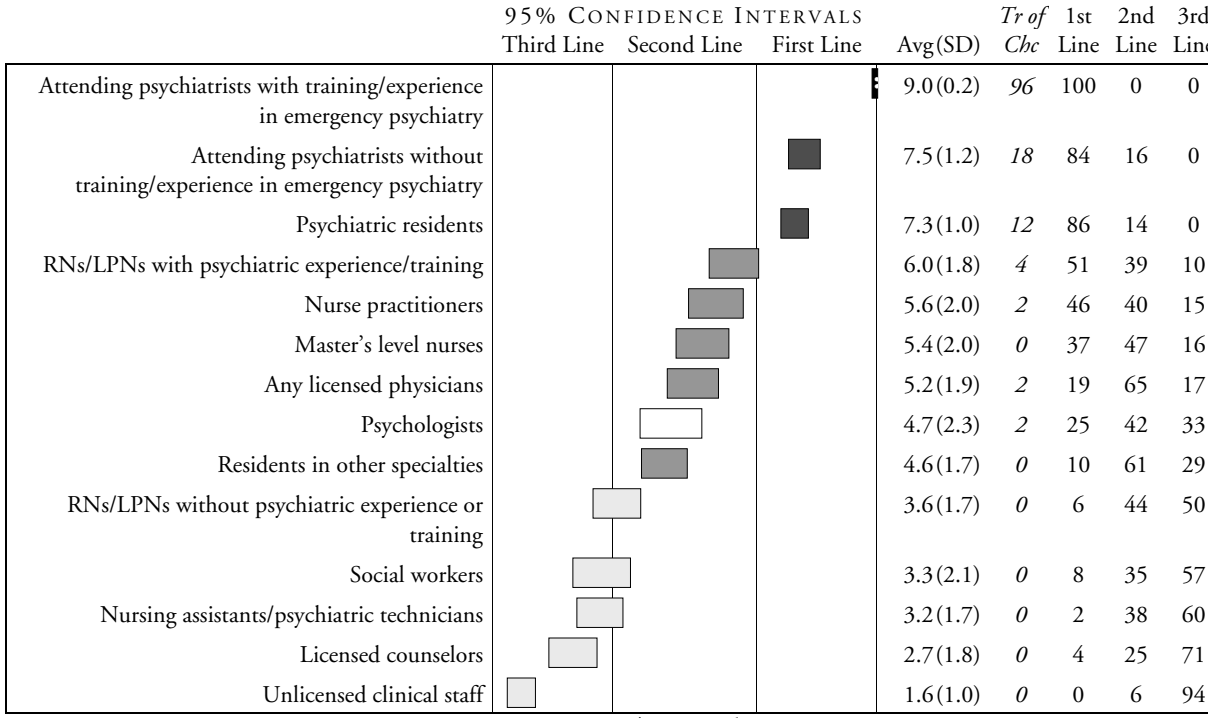
	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Attending psychiatrists with training/experience in emergency psychiatry	8.9 (0.3)	*96*	100	0	0
Attending psychiatrists without training/experience in emergency psychiatry	7.1 (1.2)	*6*	73	27	0
Psychiatric residents	6.8 (1.0)	*4*	73	27	0
RNs/LPNs with psychiatric experience/training	5.8 (1.4)	*0*	31	65	4
Nurse practitioners	5.4 (1.7)	*0*	31	54	15
Master's level nurses	5.1 (1.7)	*0*	18	65	16
Any licensed physicians	4.8 (1.6)	*0*	14	57	29
Psychologists	4.4 (2.1)	*0*	19	48	33
Residents in other specialties	4.0 (1.5)	*0*	6	57	37
Social workers	3.6 (2.0)	*0*	6	51	43
RNs/LPNs without psychiatric experience or training	3.0 (1.4)	*0*	0	31	69
Licensed counselors	2.9 (1.7)	*0*	2	33	65
Nursing assistants/psychiatric technicians	2.5 (1.5)	*0*	0	24	76
Unlicensed clinical staff	1.4 (0.9)	*0*	0	4	96
		%	%	%	%

17 Please rate the appropriateness of the following staff being able to place patients in physical restraints or seclusion.



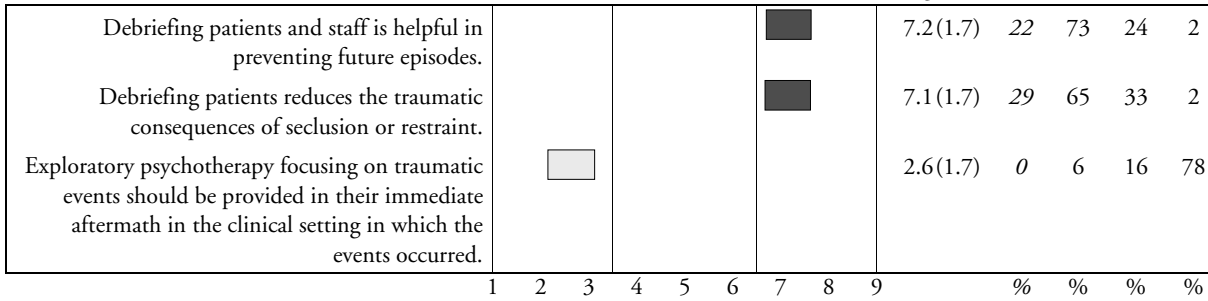
	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Attending psychiatrists with training/experience in emergency psychiatry	8.4 (1.4)	*80*	94	4	2
Psychiatric residents	7.0 (1.6)	*16*	80	14	6
RNs/LPNs with psychiatric experience/training	6.9 (1.8)	*22*	67	27	6
Attending psychiatrists without training/experience in emergency psychiatry	6.8 (1.9)	*14*	71	16	12
Nurse practitioners	6.3 (1.9)	*8*	56	33	10
Master's level nurses	6.0 (1.9)	*10*	47	41	12
Any licensed physicians	5.1 (2.1)	*4*	27	53	20
Residents in other specialties	4.7 (2.0)	*2*	16	55	29
Nursing assistants/psychiatric technicians	4.3 (2.4)	*2*	23	38	40
Psychologists	4.2 (2.2)	*2*	19	36	45
RNs/LPNs without psychiatric experience or training	4.1 (1.8)	*0*	12	49	39
Social workers	3.0 (2.0)	*0*	4	35	61
Licensed counselors	2.8 (1.8)	*0*	2	33	65
Unlicensed clinical staff	1.8 (1.5)	*0*	4	8	88
		%	%	%	%

18 Which staff do you believe has the specific training and skills to perform face-to-face assessments to determine the appropriateness of and necessity for restraints? Please rate the appropriateness of the following staff to perform such assessments.



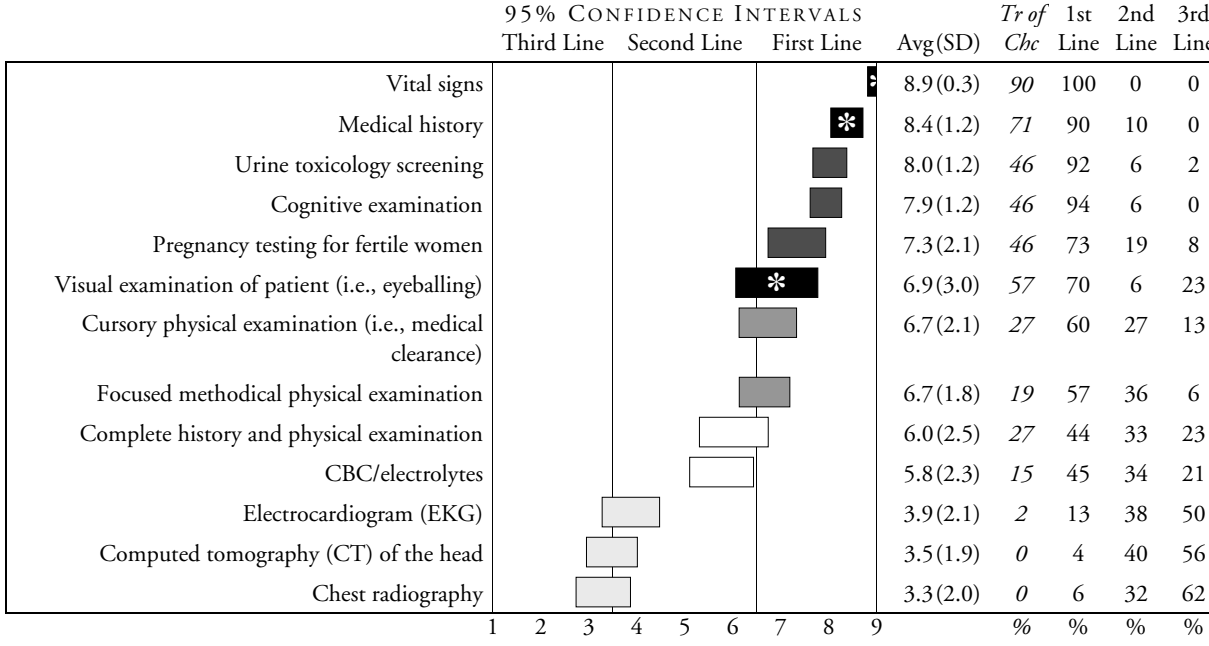
	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Attending psychiatrists with training/experience in emergency psychiatry	9.0(0.2)	*96*	100	0	0
Attending psychiatrists without training/experience in emergency psychiatry	7.5(1.2)	*18*	84	16	0
Psychiatric residents	7.3(1.0)	*12*	86	14	0
RNs/LPNs with psychiatric experience/training	6.0(1.8)	*4*	51	39	10
Nurse practitioners	5.6(2.0)	*2*	46	40	15
Master's level nurses	5.4(2.0)	*0*	37	47	16
Any licensed physicians	5.2(1.9)	*2*	19	65	17
Psychologists	4.7(2.3)	*2*	25	42	33
Residents in other specialties	4.6(1.7)	*0*	10	61	29
RNs/LPNs without psychiatric experience or training	3.6(1.7)	*0*	6	44	50
Social workers	3.3(2.1)	*0*	8	35	57
Nursing assistants/psychiatric technicians	3.2(1.7)	*0*	2	38	60
Licensed counselors	2.7(1.8)	*0*	4	25	71
Unlicensed clinical staff	1.6(1.0)	*0*	0	6	94
		%	%	%	%

19 How strongly do you agree with the following statements about debriefing. Give a 9 if you strongly agree and a 1 if you strongly disagree with the statement. Use intervening ratings to indicate levels of agreement in between.



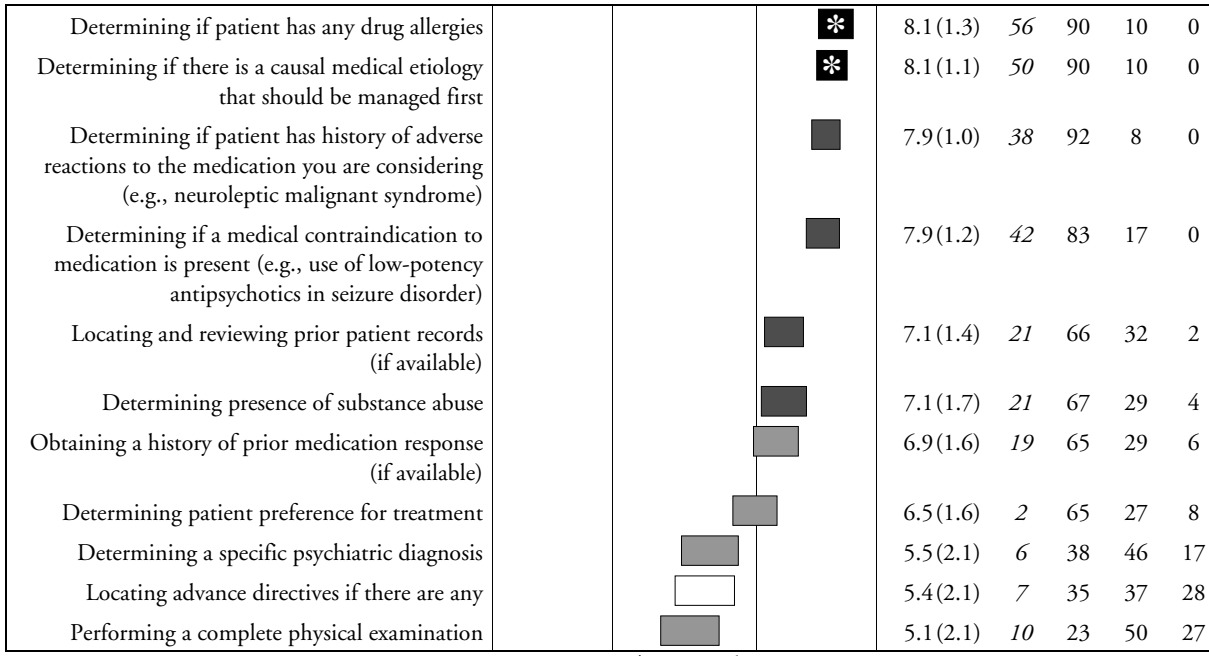
	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Debriefing patients and staff is helpful in preventing future episodes.	7.2(1.7)	*22*	73	24	2
Debriefing patients reduces the traumatic consequences of seclusion or restraint.	7.1(1.7)	*29*	65	33	2
Exploratory psychotherapy focusing on traumatic events should be provided in their immediate aftermath in the clinical setting in which the events occurred.	2.6(1.7)	*0*	6	16	78
		%	%	%	%

20 Assume that you are responsible for the initial ***medical*** evaluation and assessment of a patient presenting to the PES. Please rate the appropriateness of including each of the following procedures as part of the initial medical assessment in the absence of focal physical complaints.



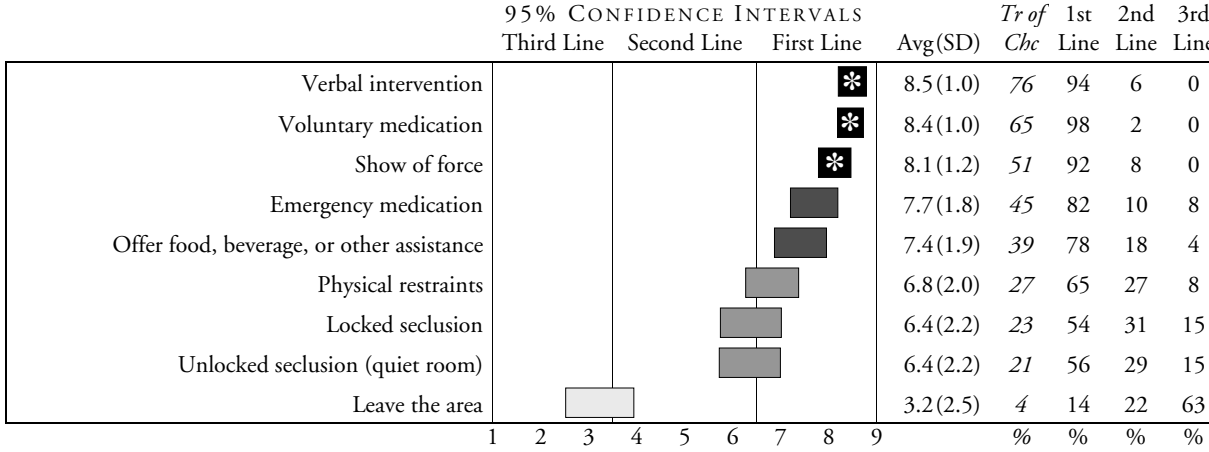
	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Vital signs	8.9(0.3)	*90*	100	0	0
Medical history	8.4(1.2)	*71*	90	10	0
Urine toxicology screening	8.0(1.2)	*46*	92	6	2
Cognitive examination	7.9(1.2)	*46*	94	6	0
Pregnancy testing for fertile women	7.3(2.1)	*46*	73	19	8
Visual examination of patient (i.e., eyeballing)	6.9(3.0)	*57*	70	6	23
Cursory physical examination (i.e., medical clearance)	6.7(2.1)	*27*	60	27	13
Focused methodical physical examination	6.7(1.8)	*19*	57	36	6
Complete history and physical examination	6.0(2.5)	*27*	44	33	23
CBC/electrolytes	5.8(2.3)	*15*	45	34	21
Electrocardiogram (EKG)	3.9(2.1)	*2*	13	38	50
Computed tomography (CT) of the head	3.5(1.9)	*0*	4	40	56
Chest radiography	3.3(2.0)	*0*	6	32	62
		%	%	%	%

21 Please rate the importance of gathering the following information before you intervene with medication in a patient presenting with a behavioral emergency. Give a rating of 7–9 to those items that you consider absolutely essential.



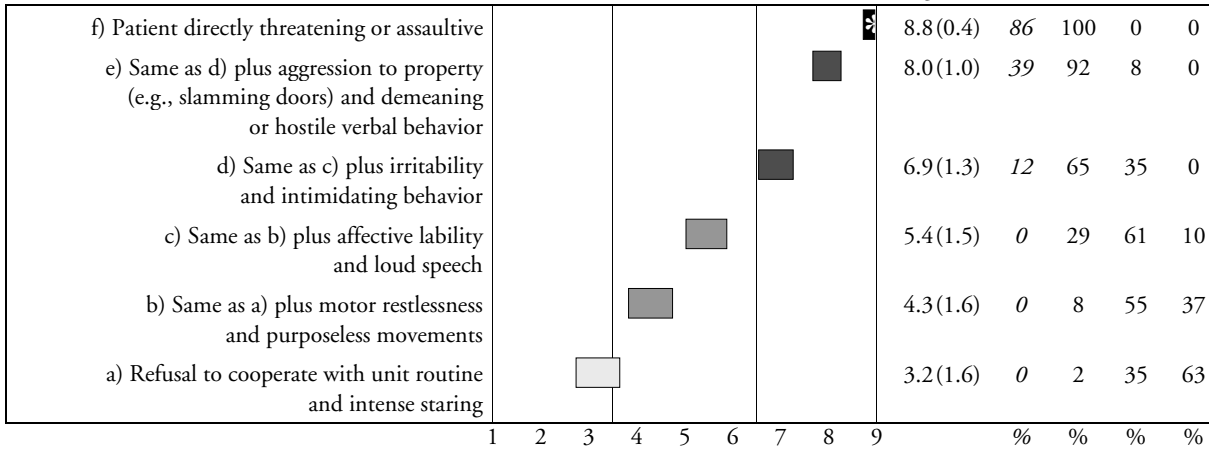
	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Determining if patient has any drug allergies	8.1(1.3)	*56*	90	10	0
Determining if there is a causal medical etiology that should be managed first	8.1(1.1)	*50*	90	10	0
Determining if patient has history of adverse reactions to the medication you are considering (e.g., neuroleptic malignant syndrome)	7.9(1.0)	*38*	92	8	0
Determining if a medical contraindication to medication is present (e.g., use of low-potency antipsychotics in seizure disorder)	7.9(1.2)	*42*	83	17	0
Locating and reviewing prior patient records (if available)	7.1(1.4)	*21*	66	32	2
Determining presence of substance abuse	7.1(1.7)	*21*	67	29	4
Obtaining a history of prior medication response (if available)	6.9(1.6)	*19*	65	29	6
Determining patient preference for treatment	6.5(1.6)	*2*	65	27	8
Determining a specific psychiatric diagnosis	5.5(2.1)	*6*	38	46	17
Locating advance directives if there are any	5.4(2.1)	*7*	35	37	28
Performing a complete physical examination	5.1(2.1)	*10*	23	50	27
		%	%	%	%

22 Please rate the extent to which you would consider the following options appropriate interventions for an imminently violent patient. Note that by *emergency medication*, we mean medication given without consent. *Voluntary medication* refers to medication given with the patient's assent or consent.



	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Verbal intervention	8.5(1.0)	*76*	94	6	0
Voluntary medication	8.4(1.0)	*65*	98	2	0
Show of force	8.1(1.2)	*51*	92	8	0
Emergency medication	7.7(1.8)	*45*	82	10	8
Offer food, beverage, or other assistance	7.4(1.9)	*39*	78	18	4
Physical restraints	6.8(2.0)	*27*	65	27	8
Locked seclusion	6.4(2.2)	*23*	54	31	15
Unlocked seclusion (quiet room)	6.4(2.2)	*21*	56	29	15
Leave the area	3.2(2.5)	*4*	14	22	63
		%	%	%	%

23 Please rate the appropriateness of initiating an emergency intervention (medication or restraints) for a patient with each of the following clinical presentations. Give a 7–9 to those situations in which you would generally use an emergency intervention, a 4–6 to those situations in which you might or might not use such an intervention depending on other factors, and a 1–3 to those situations when you would not generally consider such an intervention appropriate.



	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
f) Patient directly threatening or assaultive	8.8(0.4)	*86*	100	0	0
e) Same as d) plus aggression to property (e.g., slamming doors) and demeaning or hostile verbal behavior	8.0(1.0)	*39*	92	8	0
d) Same as c) plus irritability and intimidating behavior	6.9(1.3)	*12*	65	35	0
c) Same as b) plus affective lability and loud speech	5.4(1.5)	*0*	29	61	10
b) Same as a) plus motor restlessness and purposeless movements	4.3(1.6)	*0*	8	55	37
a) Refusal to cooperate with unit routine and intense staring	3.2(1.6)	*0*	2	35	63
		%	%	%	%

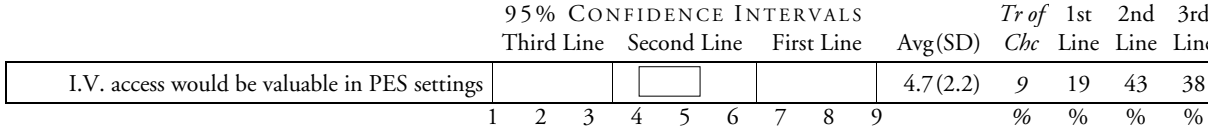
24 On the basis of which of the following do you currently document the need for emergency interventions (medication or restraints)? Check all options that apply.

	n	*%*
Unstructured clinical observation and assessment	40	83%
Structured checklist	19	39%
Structured rating scale	4	8%

If a brief, clinically useful structured checklist were available, would you use it to document your assessment of the need for emergency interventions?

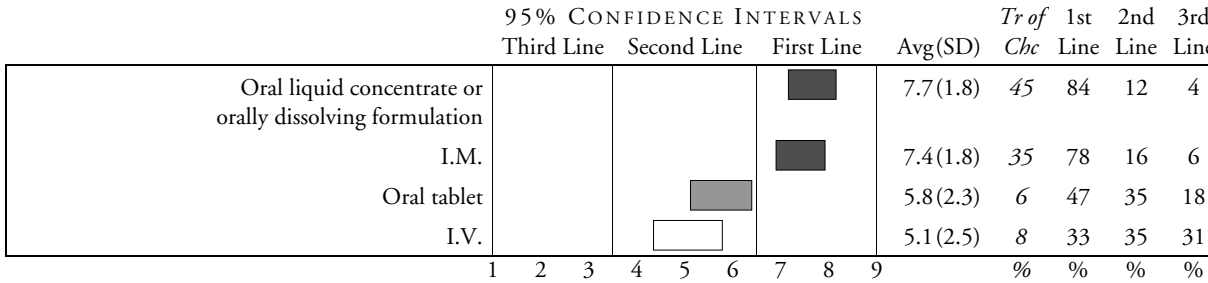
Yes = 47, No = 1

25 I.V. access is available in nearly all medical settings and we would like to know your opinion of the value of having I.V. access available in PES settings. Rate your level of agreement with the following statement, giving a higher rating if you strongly agree and a lower rating if you strongly disagree.



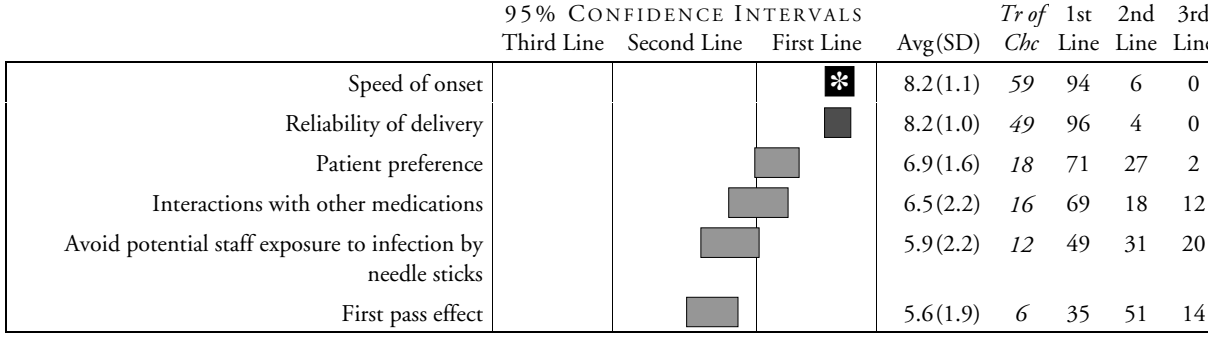
	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
I.V. access would be valuable in PES settings	4.7(2.2)	*9*	19	43	38
		%	%	%	%

26 Assume that you have decided to intervene with an emergency medication that is available in oral, I.M., and I.V. formulations ***and*** that appropriate nursing staff is available to initiate and maintain I.V. access. Which route of administration would you prefer to use in this situation? Rate the appropriateness of the following routes of administrations.



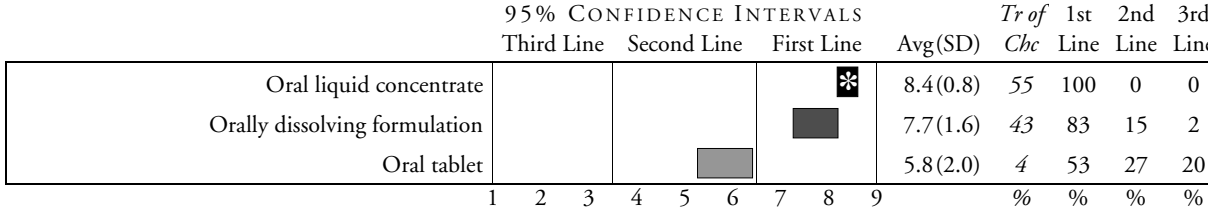
	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Oral liquid concentrate or orally dissolving formulation	7.7(1.8)	*45*	84	12	4
I.M.	7.4(1.8)	*35*	78	16	6
Oral tablet	5.8(2.3)	*6*	47	35	18
I.V.	5.1(2.5)	*8*	33	35	31
		%	%	%	%

27 Rate the importance of the following factors in your choice of route of administration. Give your highest ratings to the factors you consider most important.



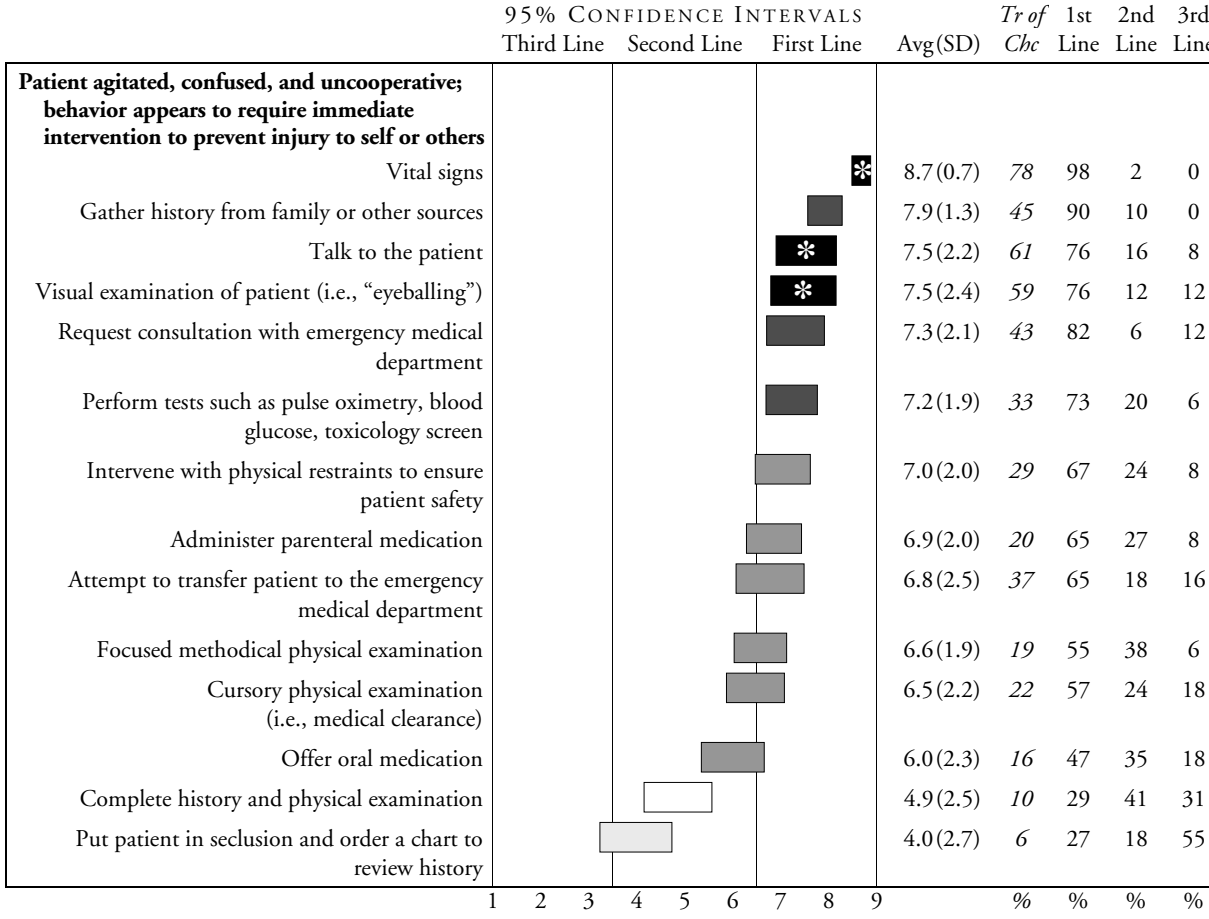
	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Speed of onset	8.2(1.1)	*59*	94	6	0
Reliability of delivery	8.2(1.0)	*49*	96	4	0
Patient preference	6.9(1.6)	*18*	71	27	2
Interactions with other medications	6.5(2.2)	*16*	69	18	12
Avoid potential staff exposure to infection by needle sticks	5.9(2.2)	*12*	49	31	20
First pass effect	5.6(1.9)	*6*	35	51	14
		%	%	%	%

28 Assume that you have decided to use an atypical antipsychotic to treat a patient in a behavioral emergency. Which type of formulation would you prefer to use in this situation? Rate the appropriateness of the following routes of administration.



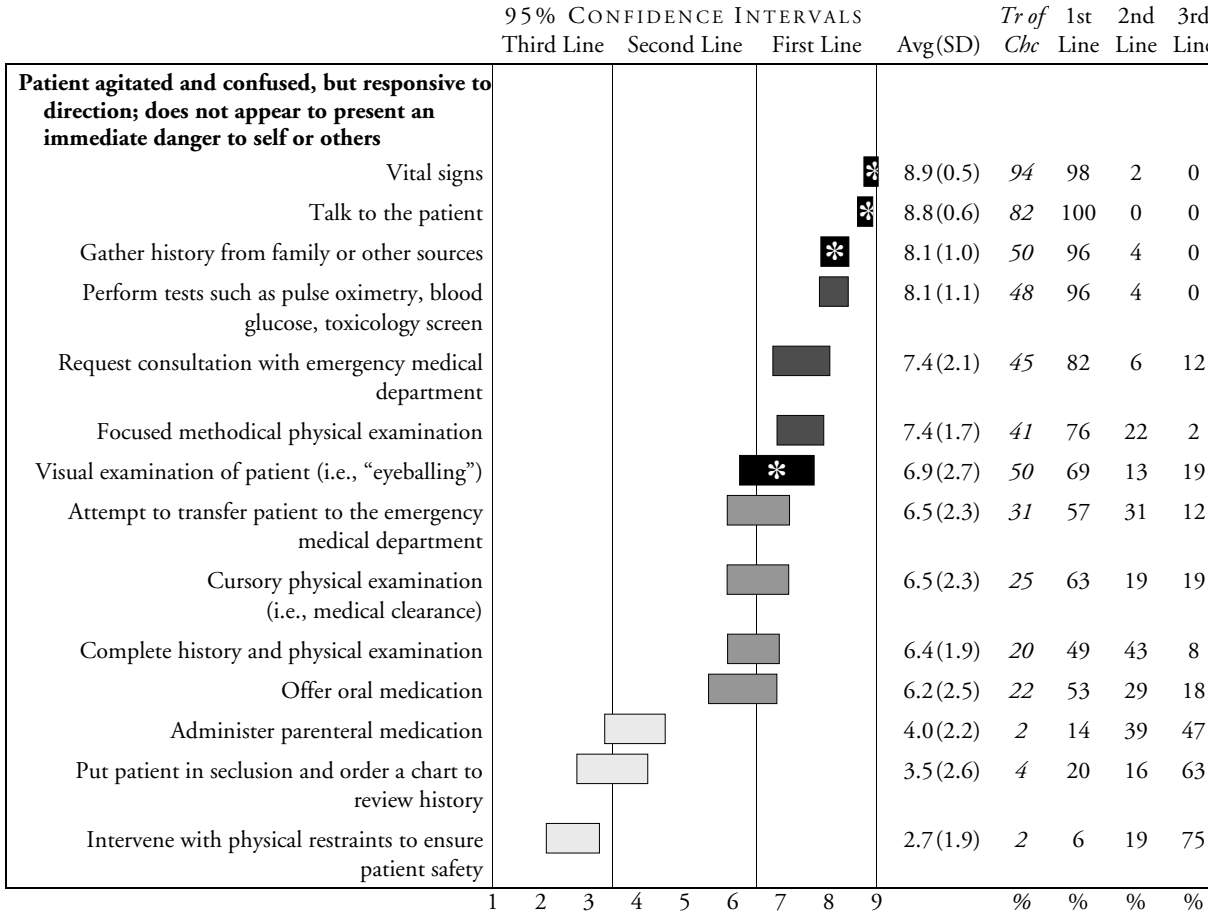
	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Oral liquid concentrate	8.4(0.8)	*55*	100	0	0
Orally dissolving formulation	7.7(1.6)	*43*	83	15	2
Oral tablet	5.8(2.0)	*4*	53	27	20
		%	%	%	%

29 **AGITATION DUE TO A GENERAL MEDICAL ETIOLOGY.** A patient presents to the PES who is agitated and confused. Based on your initial assessment, you strongly suspect that the patient's symptoms are related to a general medical etiology (e.g., delirium, HIV encephalopathy). There is no indication of substance intoxication or a primary psychiatric disorder. Please give your highest ratings to the intervention or interventions you consider most appropriate ***to begin with***, depending on the patient's level of cooperativeness. If you would begin with more than 1 intervention at the same time, please give these equal ratings.



	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Patient agitated, confused, and uncooperative; behavior appears to require immediate intervention to prevent injury to self or others					
Vital signs	8.7 (0.7)	*78*	98	2	0
Gather history from family or other sources	7.9 (1.3)	*45*	90	10	0
Talk to the patient	7.5 (2.2)	*61*	76	16	8
Visual examination of patient (i.e., "eyeballing")	7.5 (2.4)	*59*	76	12	12
Request consultation with emergency medical department	7.3 (2.1)	*43*	82	6	12
Perform tests such as pulse oximetry, blood glucose, toxicology screen	7.2 (1.9)	*33*	73	20	6
Intervene with physical restraints to ensure patient safety	7.0 (2.0)	*29*	67	24	8
Administer parenteral medication	6.9 (2.0)	*20*	65	27	8
Attempt to transfer patient to the emergency medical department	6.8 (2.5)	*37*	65	18	16
Focused methodical physical examination	6.6 (1.9)	*19*	55	38	6
Cursory physical examination (i.e., medical clearance)	6.5 (2.2)	*22*	57	24	18
Offer oral medication	6.0 (2.3)	*16*	47	35	18
Complete history and physical examination	4.9 (2.5)	*10*	29	41	31
Put patient in seclusion and order a chart to review history	4.0 (2.7)	*6*	27	18	55
		%	%	%	%

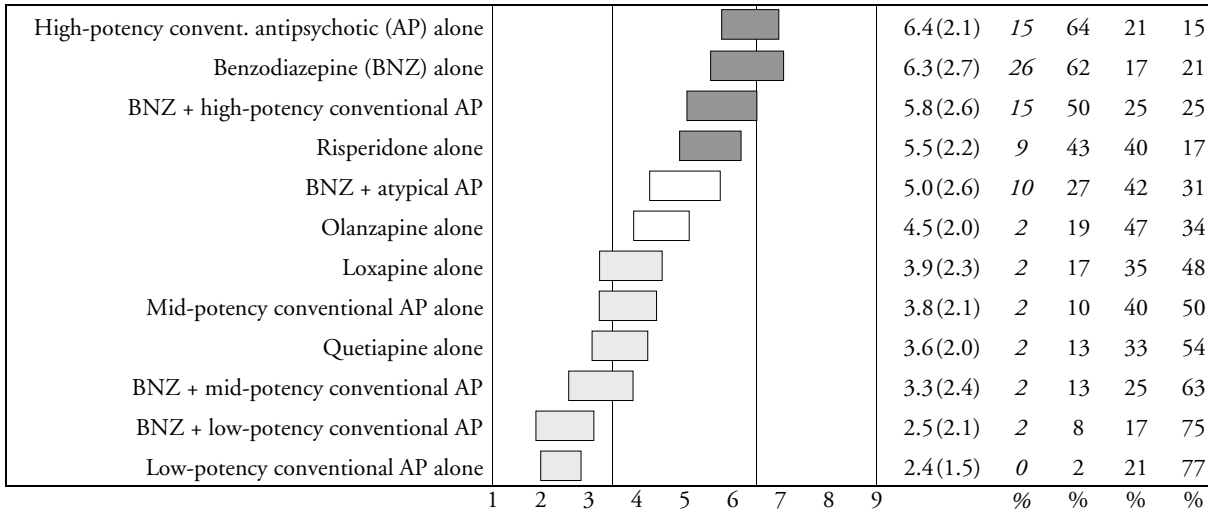
29 AGITATION DUE TO A GENERAL MEDICAL ETIOLOGY, *continued*



	95% Confidence Intervals Third Line	Second Line	First Line	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Patient agitated and confused, but responsive to direction; does not appear to present an immediate danger to self or others								
Vital signs				8.9 (0.5)	*94*	98	2	0
Talk to the patient				8.8 (0.6)	*82*	100	0	0
Gather history from family or other sources				8.1 (1.0)	*50*	96	4	0
Perform tests such as pulse oximetry, blood glucose, toxicology screen				8.1 (1.1)	*48*	96	4	0
Request consultation with emergency medical department				7.4 (2.1)	*45*	82	6	12
Focused methodical physical examination				7.4 (1.7)	*41*	76	22	2
Visual examination of patient (i.e., "eyeballing")				6.9 (2.7)	*50*	69	13	19
Attempt to transfer patient to the emergency medical department				6.5 (2.3)	*31*	57	31	12
Cursory physical examination (i.e., medical clearance)				6.5 (2.3)	*25*	63	19	19
Complete history and physical examination				6.4 (1.9)	*20*	49	43	8
Offer oral medication				6.2 (2.5)	*22*	53	29	18
Administer parenteral medication				4.0 (2.2)	*2*	14	39	47
Put patient in seclusion and order a chart to review history				3.5 (2.6)	*4*	20	16	63
Intervene with physical restraints to ensure patient safety				2.7 (1.9)	*2*	6	19	75
	1 2 3 4 5 6 7 8 9				*%*	%	%	%

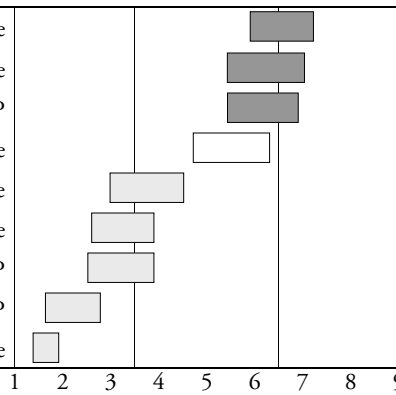
30

Based upon your initial assessment of the patient described in question 29, you decide to intervene by offering ***oral medication*** to treat the ***agitation*** before providing further medical intervention. Assume that the patient is able and willing to take oral medication. Please rate the appropriateness of the following initial medication strategies.



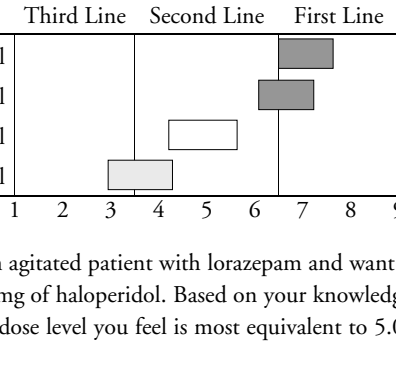
	95% Confidence Intervals Third Line	Second Line	First Line	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
High-potency convent. antipsychotic (AP) alone				6.4 (2.1)	*15*	64	21	15
Benzodiazepine (BNZ) alone				6.3 (2.7)	*26*	62	17	21
BNZ + high-potency conventional AP				5.8 (2.6)	*15*	50	25	25
Risperidone alone				5.5 (2.2)	*9*	43	40	17
BNZ + atypical AP				5.0 (2.6)	*10*	27	42	31
Olanzapine alone				4.5 (2.0)	*2*	19	47	34
Loxapine alone				3.9 (2.3)	*2*	17	35	48
Mid-potency conventional AP alone				3.8 (2.1)	*2*	10	40	50
Quetiapine alone				3.6 (2.0)	*2*	13	33	54
BNZ + mid-potency conventional AP				3.3 (2.4)	*2*	13	25	63
BNZ + low-potency conventional AP				2.5 (2.1)	*2*	8	17	75
Low-potency conventional AP alone				2.4 (1.5)	*0*	2	21	77
	1 2 3 4 5 6 7 8 9				*%*	%	%	%

31 Based on your initial assessment of the patient described in question 29, you decide to intervene with ***parenteral medication*** to treat the ***agitation*** before providing further medical intervention. Assume the patient is ***not*** able or willing to take oral medication. Please rate the appropriateness of the following initial medication strategies.



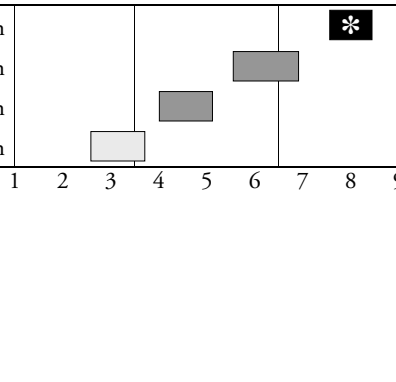
	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
High-potency convent. antipsychotic (AP) alone	6.6(2.3)	*21*	65	21	15
Benzodiazepine (BNZ) alone	6.2(2.8)	*25*	60	17	23
BNZ + high-potency conventional AP	6.2(2.6)	*21*	56	23	21
Droperidol alone	5.5(2.7)	*16*	44	29	27
Loxapine alone	3.8(2.7)	*4*	23	25	52
Mid-potency conventional AP alone	3.3(2.3)	*4*	10	31	58
BNZ + mid-potency conventional AP	3.2(2.4)	*2*	13	27	60
BNZ + low-potency conventional AP	2.2(2.0)	*2*	6	13	81
Low-potency conventional AP alone	1.6(0.9)	*0*	0	4	96
		%	%	%	%

32 What initial dose level of medication, either oral or parenteral, would you select for the patient described in question 29? Please rate the appropriateness of dose levels as exemplified by the following doses of haloperidol. If you would use another medication, consider an equivalent dose level of that medication.



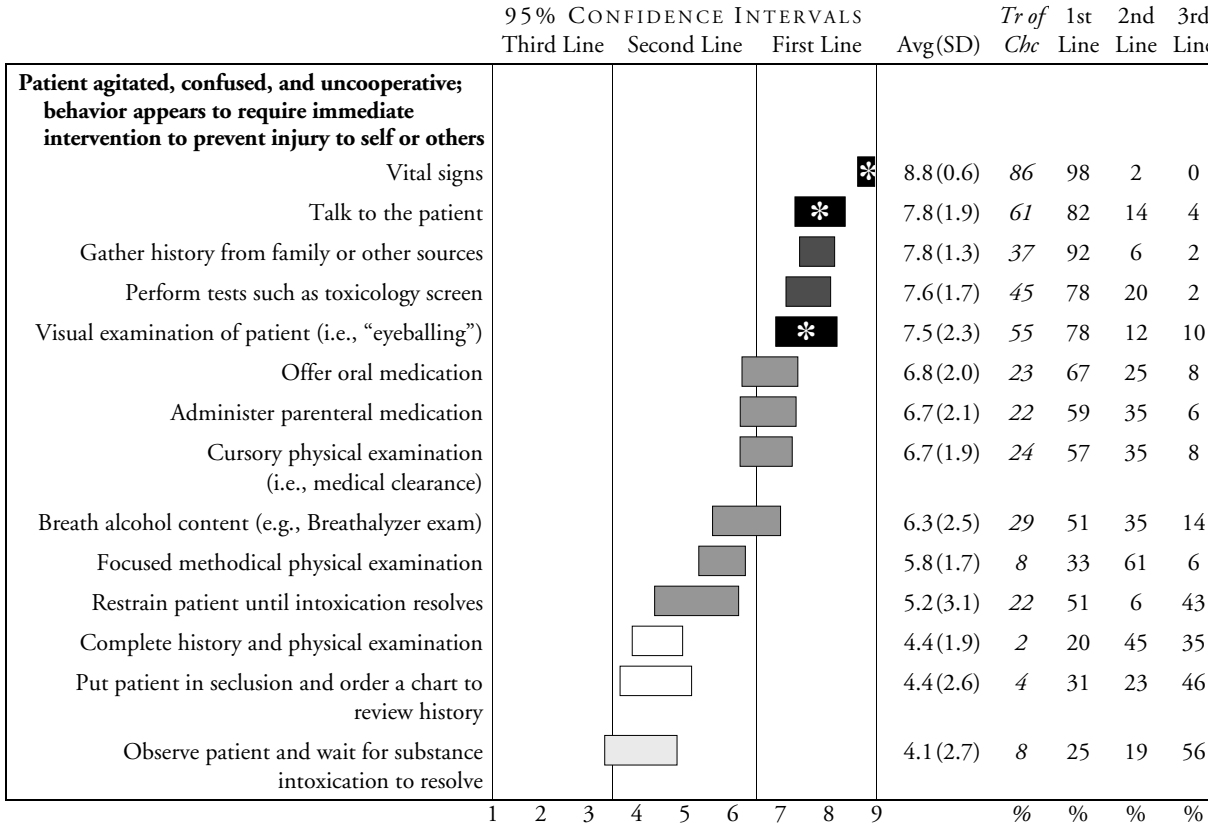
	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
5.0 mg haloperidol	7.1(2.0)	*29*	71	22	6
2.0–4.0 mg haloperidol	6.7(2.0)	*14*	67	24	8
1.0 mg haloperidol	4.9(2.5)	*12*	29	37	35
6.0–10.0 mg haloperidol	3.6(2.4)	*2*	12	33	55
		%	%	%	%

33 Assume that you have decided to treat an agitated patient with lorazepam and want to achieve the same degree of benefit as would be obtained with a dose of 5.0 mg of haloperidol. Based on your knowledge of the literature rather than what is considered usual practice, give a rating of 9 to the dose level you feel is most equivalent to 5.0 mg of haloperidol and then rate the other dose levels as appropriate.

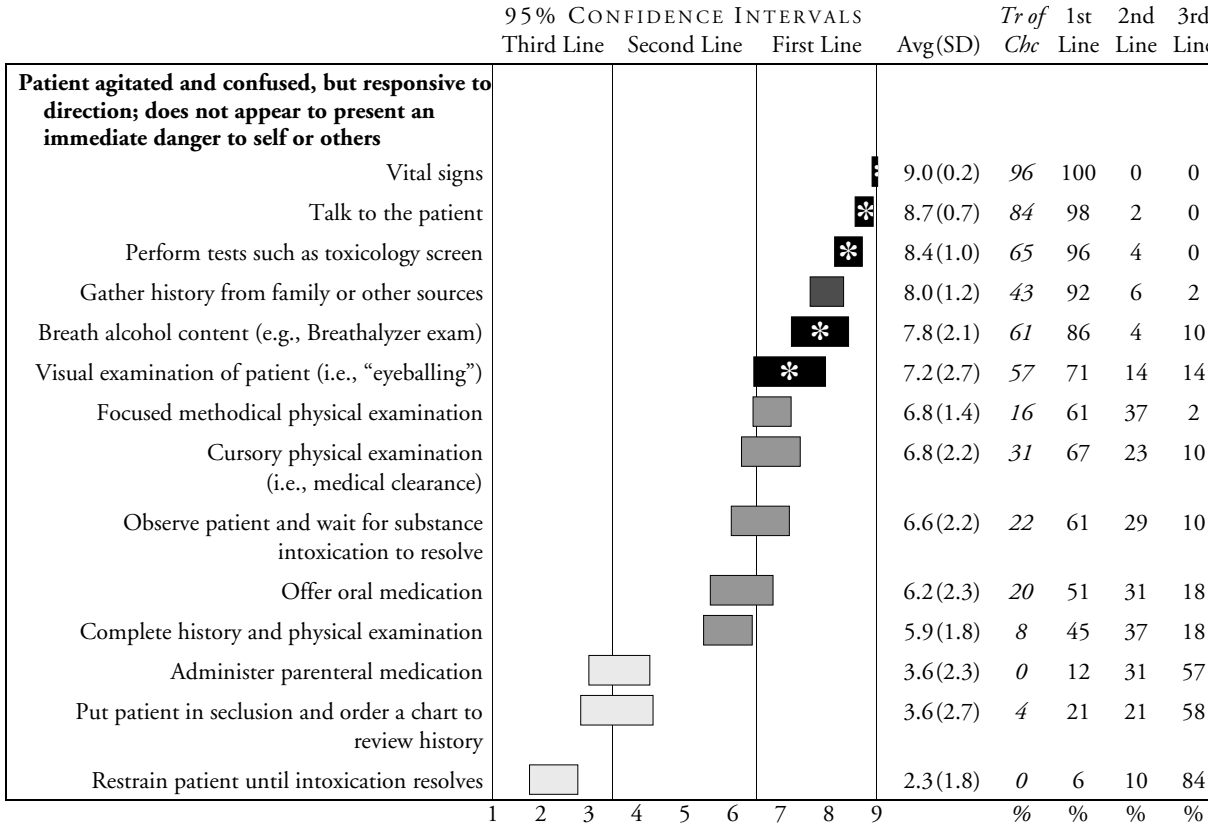


	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
2.0 mg lorazepam	8.0(1.6)	*53*	86	12	2
1.0 mg lorazepam	6.2(2.4)	*17*	60	23	17
3.0 mg lorazepam	4.6(1.9)	*0*	17	52	31
4.0 mg lorazepam	3.1(2.0)	*4*	8	17	75
		%	%	%	%

34 AGITATION DUE TO SUBSTANCE INTOXICATION. A patient presents to the PES who is very agitated. Based on your initial assessment, you strongly suspect that the patient's symptoms are related to intoxication with a substance of abuse. Please give your highest ratings to the intervention or interventions you consider most appropriate to begin with, depending on the patient's level of cooperativeness. If you would begin with more than 1 intervention at the same time, please give these equal ratings.

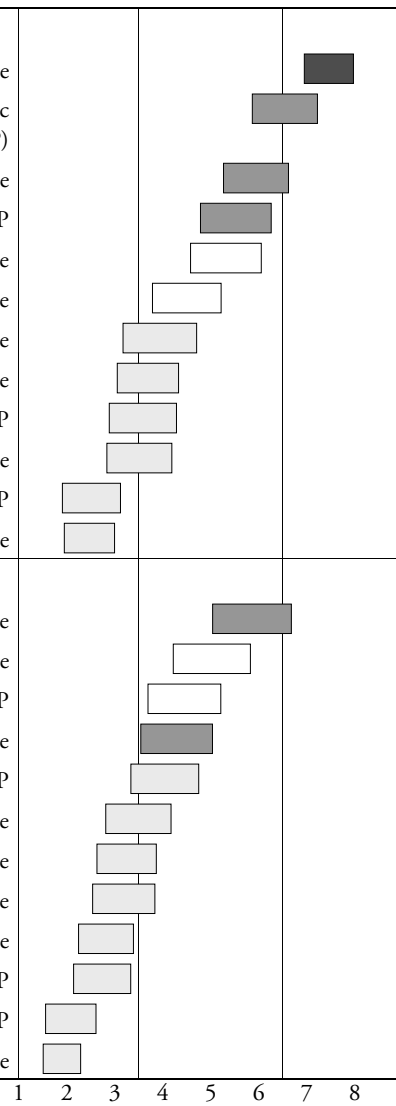


34 AGITATION DUE TO SUBSTANCE INTOXICATION, *continued*



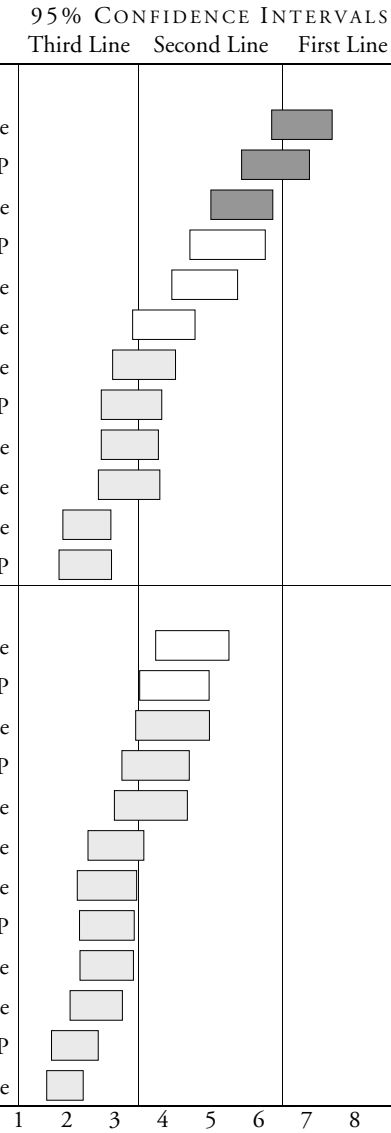
Patient agitated and confused, but responsive to direction; does not appear to present an immediate danger to self or others	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Vital signs	9.0 (0.2)	*96*	100	0	0
Talk to the patient	8.7 (0.7)	*84*	98	2	0
Perform tests such as toxicology screen	8.4 (1.0)	*65*	96	4	0
Gather history from family or other sources	8.0 (1.2)	*43*	92	6	2
Breath alcohol content (e.g., Breathalyzer exam)	7.8 (2.1)	*61*	86	4	10
Visual examination of patient (i.e., "eyeballing")	7.2 (2.7)	*57*	71	14	14
Focused methodical physical examination	6.8 (1.4)	*16*	61	37	2
Cursory physical examination (i.e., medical clearance)	6.8 (2.2)	*31*	67	23	10
Observe patient and wait for substance intoxication to resolve	6.6 (2.2)	*22*	61	29	10
Offer oral medication	6.2 (2.3)	*20*	51	31	18
Complete history and physical examination	5.9 (1.8)	*8*	45	37	18
Administer parenteral medication	3.6 (2.3)	*0*	12	31	57
Put patient in seclusion and order a chart to review history	3.6 (2.7)	*4*	21	21	58
Restrain patient until intoxication resolves	2.3 (1.8)	*0*	6	10	84
		%	%	%	%

35 **AGITATION DUE TO SUBSTANCE INTOXICATION.** Based upon your initial assessment of the agitated and intoxicated patient described in question 34, you decide to intervene by offering ***oral medication*** to treat the ***agitation.*** Assume that the patient is able and willing to take oral medication. Please rate the appropriateness of the following initial medication strategies depending on the substance of abuse involved.



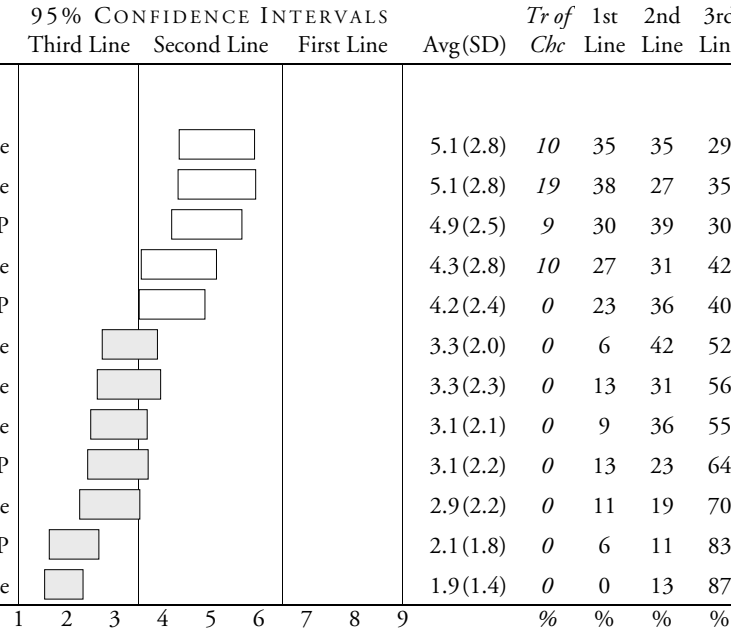
	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Stimulant (e.g., amphetamine, cocaine)					
Benzodiazepine (BNZ) alone	7.5 (1.8)	*40*	79	19	2
BNZ + high-potency conventional antipsychotic (AP)	6.5 (2.4)	*21*	60	25	15
High-potency conventional AP alone	5.9 (2.4)	*10*	51	33	16
BNZ + atypical AP	5.5 (2.6)	*6*	50	25	25
Risperidone alone	5.3 (2.6)	*6*	44	29	27
Olanzapine alone	4.5 (2.5)	*2*	31	33	35
Loxapine alone	3.9 (2.7)	*4*	23	29	48
Quetiapine alone	3.7 (2.3)	*0*	13	38	50
BNZ + mid-potency conventional AP	3.6 (2.5)	*2*	19	19	63
Mid-potency conventional AP alone	3.5 (2.4)	*2*	18	20	61
BNZ + low-potency conventional AP	2.5 (2.2)	*0*	10	12	78
Low-potency conventional AP alone	2.5 (1.9)	*0*	6	14	80
Alcohol					
BNZ alone	5.9 (2.9)	*29*	51	24	24
High-potency conventional AP alone	5.0 (2.9)	*12*	39	29	33
BNZ + high-potency conventional AP	4.4 (2.7)	*6*	24	31	45
Risperidone alone	4.3 (2.7)	*2*	31	22	47
BNZ + atypical AP	4.0 (2.5)	*0*	24	29	47
Olanzapine alone	3.5 (2.4)	*0*	20	22	57
Quetiapine alone	3.2 (2.2)	*0*	10	27	63
Loxapine alone	3.2 (2.3)	*0*	14	22	63
Mid-potency conventional AP alone	2.8 (2.0)	*0*	8	22	69
BNZ + mid-potency conventional AP	2.7 (2.1)	*0*	10	12	78
BNZ + low-potency conventional AP	2.1 (1.9)	*0*	6	8	86
Low-potency conventional AP alone	1.9 (1.4)	*0*	2	12	86
		%	%	%	%

35 AGITATION DUE TO SUBSTANCE INTOXICATION, *continued*



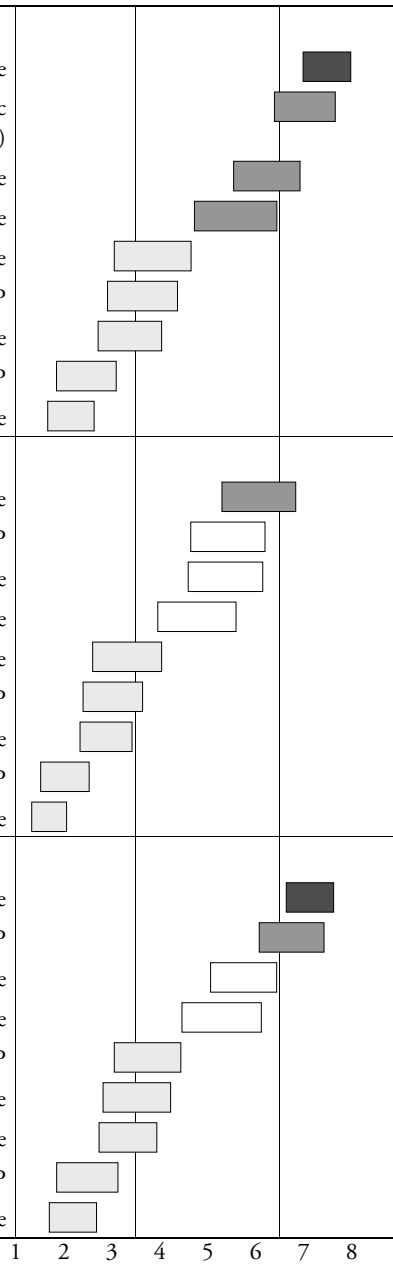
	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Hallucinogen (e.g., LSD, PCP)					
BNZ alone	6.9 (2.2)	*27*	75	15	10
BNZ + high-potency conventional AP	6.3 (2.4)	*22*	57	30	13
High-potency conventional AP alone	5.6 (2.3)	*8*	44	40	17
BNZ + atypical AP	5.3 (2.7)	*11*	46	26	28
Risperidone alone	4.9 (2.4)	*2*	34	38	28
Olanzapine alone	4.0 (2.3)	*0*	21	43	36
Quetiapine alone	3.6 (2.3)	*2*	13	37	50
BNZ + mid-potency conventional AP	3.3 (2.2)	*0*	15	26	59
Mid-potency conventional AP alone	3.3 (2.1)	*0*	8	33	58
Loxapine alone	3.3 (2.2)	*0*	4	38	57
Low-potency conventional AP alone	2.4 (1.8)	*0*	2	23	75
BNZ + low-potency conventional AP	2.4 (1.9)	*0*	4	21	74
Opioid					
BNZ alone	4.6 (2.7)	*12*	29	31	41
BNZ + high-potency conventional AP	4.2 (2.5)	*2*	22	37	41
High-potency conventional AP alone	4.2 (2.7)	*8*	27	24	49
BNZ + atypical AP	3.8 (2.4)	*2*	20	28	52
Risperidone alone	3.8 (2.7)	*6*	21	19	60
Olanzapine alone	3.0 (2.0)	*0*	8	25	67
Loxapine alone	2.8 (2.2)	*0*	10	13	77
BNZ + mid-potency conventional AP	2.8 (2.0)	*0*	8	25	67
Quetiapine alone	2.8 (1.9)	*0*	4	26	70
Mid-potency conventional AP alone	2.6 (1.9)	*0*	8	14	78
BNZ + low-potency conventional AP	2.2 (1.7)	*0*	4	15	81
Low-potency conventional AP alone	2.0 (1.4)	*0*	0	10	90
		%	%	%	%

35 AGITATION DUE TO SUBSTANCE INTOXICATION, *continued*



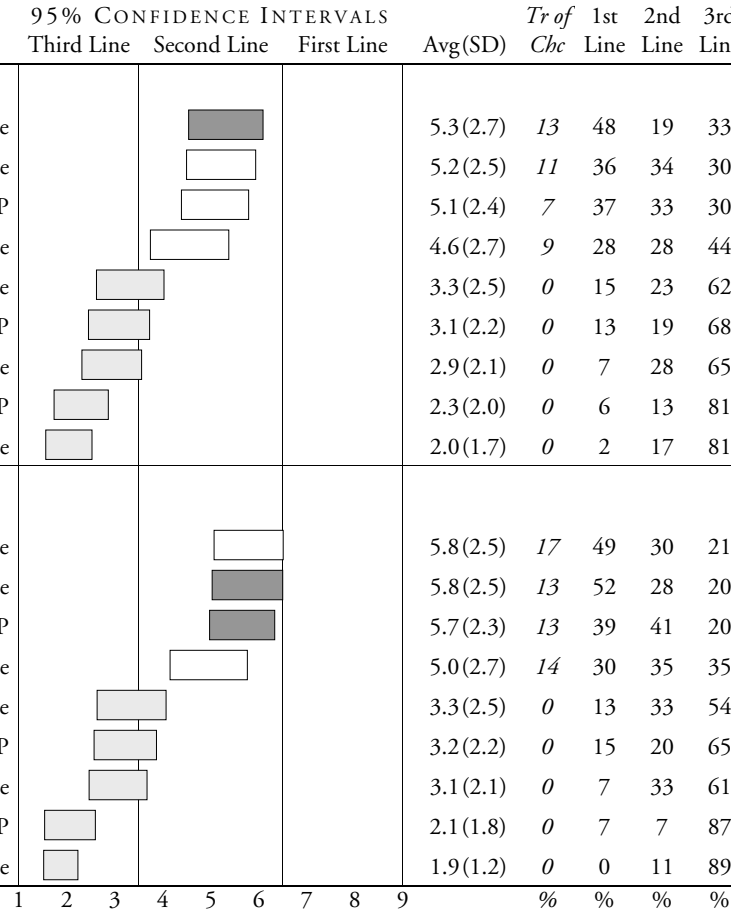
	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Other or unknown (e.g., inhalant, sedative/hypnotic)					
High-potency conventional AP alone	5.1 (2.8)	*10*	35	35	29
BNZ alone	5.1 (2.8)	*19*	38	27	35
BNZ + high-potency conventional AP	4.9 (2.5)	*9*	30	39	30
Risperidone alone	4.3 (2.8)	*10*	27	31	42
BNZ + atypical AP	4.2 (2.4)	*0*	23	36	40
Olanzapine alone	3.3 (2.0)	*0*	6	42	52
Loxapine alone	3.3 (2.3)	*0*	13	31	56
Quetiapine alone	3.1 (2.1)	*0*	9	36	55
BNZ + mid-potency conventional AP	3.1 (2.2)	*0*	13	23	64
Mid-potency conventional AP alone	2.9 (2.2)	*0*	11	19	70
BNZ + low-potency conventional AP	2.1 (1.8)	*0*	6	11	83
Low-potency conventional AP alone	1.9 (1.4)	*0*	0	13	87
		%	%	%	%

36 **AGITATION DUE TO SUBSTANCE INTOXICATION.** Based upon your initial assessment of the agitated and intoxicated patient described in question 34, you decide to intervene with ***parenteral medication*** to treat the ***agitation.*** Assume that the patient is ***not*** able or willing to take oral medication. Please rate the appropriateness of the following initial medication strategies.



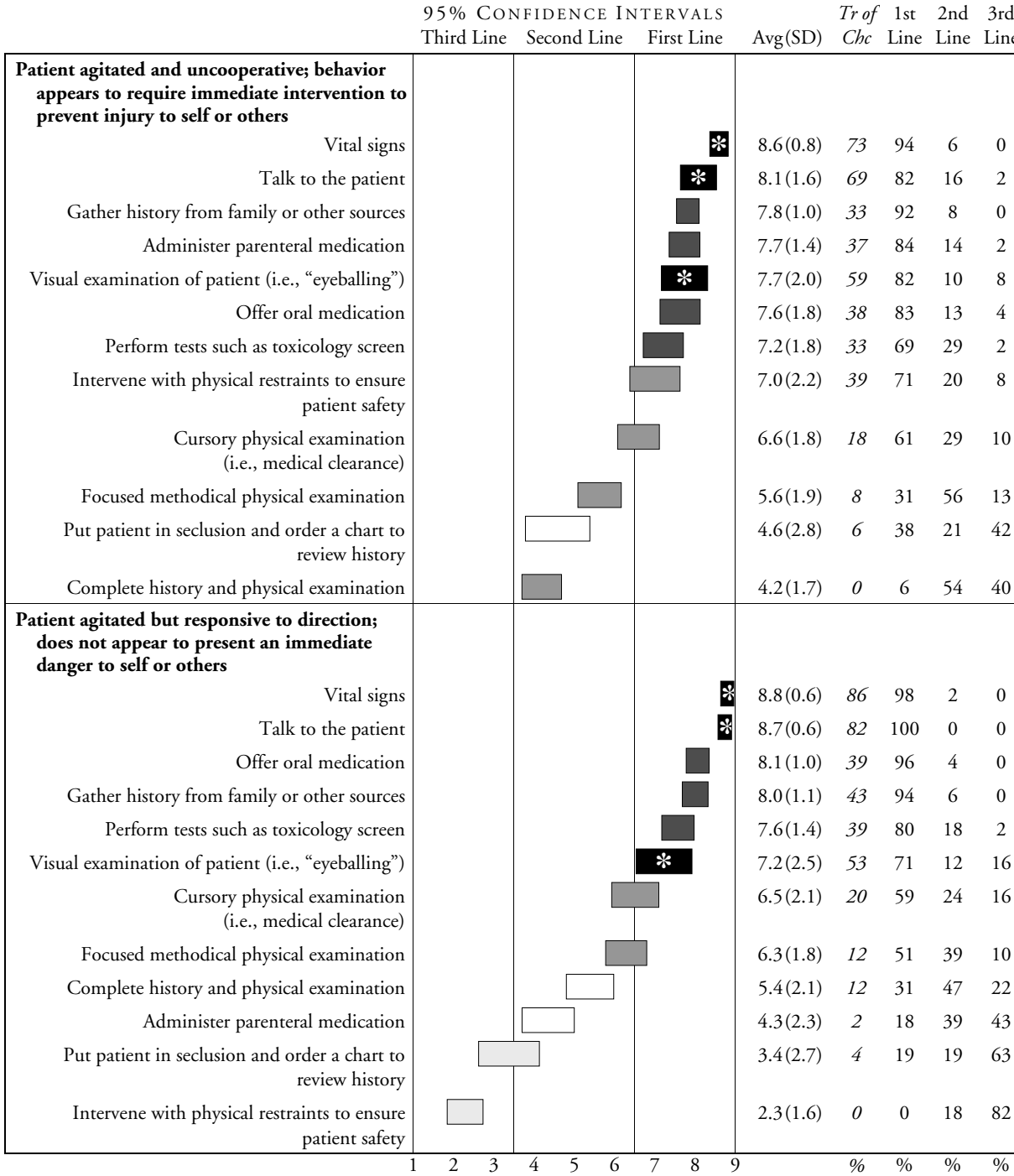
	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Stimulant (e.g., amphetamine, cocaine)					
Benzodiazepine (BNZ) alone	7.5(1.8)	*38*	77	19	4
BNZ + high-potency conventional antipsychotic (AP)	7.0(2.2)	*32*	79	13	9
High-potency conventional AP alone	6.2(2.4)	*15*	65	19	17
Droperidol alone	5.6(2.9)	*16*	53	16	31
Loxapine alone	3.9(2.8)	*0*	28	21	51
BNZ + mid-potency conventional AP	3.6(2.5)	*2*	19	28	53
Mid-potency conventional AP alone	3.4(2.3)	*0*	13	29	58
BNZ + low-potency conventional AP	2.5(2.2)	*0*	13	9	79
Low-potency conventional AP alone	2.1(1.7)	*0*	4	13	83
Alcohol					
BNZ alone	6.1(2.7)	*24*	55	22	22
BNZ + high-potency conventional AP	5.4(2.7)	*13*	44	31	25
High-potency conventional AP alone	5.4(2.8)	*12*	45	29	27
Droperidol alone	4.8(2.8)	*7*	39	20	41
Loxapine alone	3.3(2.5)	*0*	19	17	64
BNZ + mid-potency conventional AP	3.0(2.2)	*0*	10	21	69
Mid-potency conventional AP alone	2.9(1.9)	*0*	6	27	67
BNZ + low-potency conventional AP	2.0(1.8)	*0*	6	10	83
Low-potency conventional AP alone	1.7(1.3)	*0*	2	6	92
Hallucinogen (e.g., LSD, PCP)					
BNZ alone	7.1(1.7)	*21*	77	15	8
BNZ + high-potency conventional AP	6.7(2.4)	*26*	68	19	13
High-potency conventional AP alone	5.7(2.4)	*6*	49	30	21
Droperidol alone	5.3(2.7)	*12*	45	24	31
BNZ + mid-potency conventional AP	3.7(2.4)	*2*	17	30	53
Loxapine alone	3.5(2.5)	*0*	13	33	54
Mid-potency conventional AP alone	3.3(2.1)	*0*	8	35	56
BNZ + low-potency conventional AP	2.5(2.2)	*2*	9	17	74
Low-potency conventional AP alone	2.2(1.7)	*0*	2	21	77
		%	%	%	%

36 AGITATION DUE TO SUBSTANCE INTOXICATION, *continued*



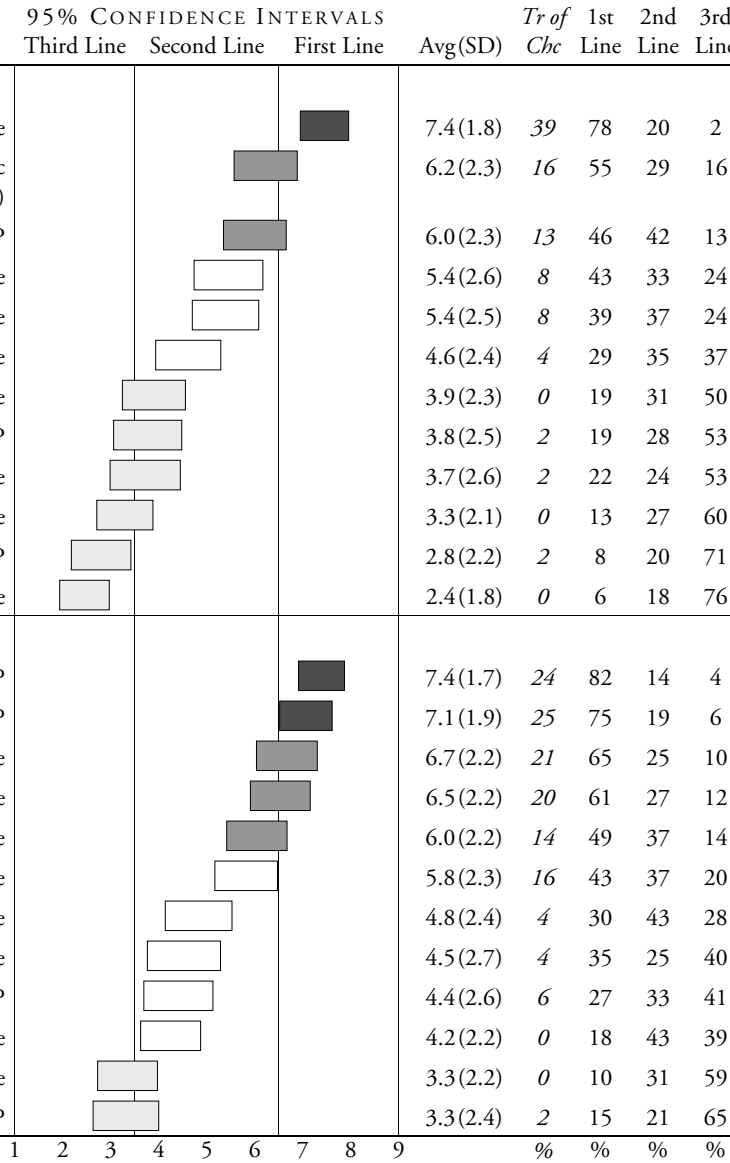
	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Opioid					
BNZ alone	5.3 (2.7)	*13*	48	19	33
High-potency conventional AP alone	5.2 (2.5)	*11*	36	34	30
BNZ + high-potency conventional AP	5.1 (2.4)	*7*	37	33	30
Droperidol alone	4.6 (2.7)	*9*	28	28	44
Loxapine alone	3.3 (2.5)	*0*	15	23	62
BNZ + mid-potency conventional AP	3.1 (2.2)	*0*	13	19	68
Mid-potency conventional AP alone	2.9 (2.1)	*0*	7	28	65
BNZ + low-potency conventional AP	2.3 (2.0)	*0*	6	13	81
Low-potency conventional AP alone	2.0 (1.7)	*0*	2	17	81
Other or unknown (e.g., inhalant, sedative/hypnotic)					
BNZ alone	5.8 (2.5)	*17*	49	30	21
High-potency conventional AP alone	5.8 (2.5)	*13*	52	28	20
BNZ + high-potency conventional AP	5.7 (2.3)	*13*	39	41	20
Droperidol alone	5.0 (2.7)	*14*	30	35	35
Loxapine alone	3.3 (2.5)	*0*	13	33	54
BNZ + mid-potency conventional AP	3.2 (2.2)	*0*	15	20	65
Mid-potency conventional AP alone	3.1 (2.1)	*0*	7	33	61
BNZ + low-potency conventional AP	2.1 (1.8)	*0*	7	7	87
Low-potency conventional AP alone	1.9 (1.2)	*0*	0	11	89
		%	%	%	%

37 AGITATION DUE TO A PRIMARY PSYCHIATRIC DISTURBANCE. A patient presents to the PES who is very agitated. Based on your initial assessment, you strongly suspect that the patient's symptoms are related to a primary psychiatric disturbance. There are no findings suggestive of substance abuse. Please give your highest ratings to the intervention or interventions you consider most appropriate to begin with, depending on the patient's level of cooperativeness. If you would begin with more than 1 intervention at the same time, please give these equal ratings.



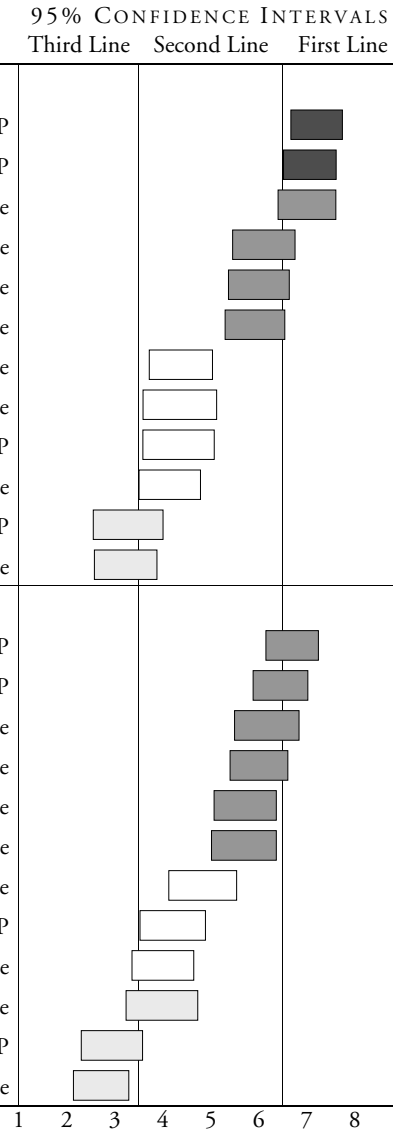
	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Patient agitated and uncooperative; behavior appears to require immediate intervention to prevent injury to self or others					
Vital signs	8.6 (0.8)	*73*	94	6	0
Talk to the patient	8.1 (1.6)	*69*	82	16	2
Gather history from family or other sources	7.8 (1.0)	*33*	92	8	0
Administer parenteral medication	7.7 (1.4)	*37*	84	14	2
Visual examination of patient (i.e., "eyeballing")	7.7 (2.0)	*59*	82	10	8
Offer oral medication	7.6 (1.8)	*38*	83	13	4
Perform tests such as toxicology screen	7.2 (1.8)	*33*	69	29	2
Intervene with physical restraints to ensure patient safety	7.0 (2.2)	*39*	71	20	8
Cursory physical examination (i.e., medical clearance)	6.6 (1.8)	*18*	61	29	10
Focused methodical physical examination	5.6 (1.9)	*8*	31	56	13
Put patient in seclusion and order a chart to review history	4.6 (2.8)	*6*	38	21	42
Complete history and physical examination	4.2 (1.7)	*0*	6	54	40
Patient agitated but responsive to direction; does not appear to present an immediate danger to self or others					
Vital signs	8.8 (0.6)	*86*	98	2	0
Talk to the patient	8.7 (0.6)	*82*	100	0	0
Offer oral medication	8.1 (1.0)	*39*	96	4	0
Gather history from family or other sources	8.0 (1.1)	*43*	94	6	0
Perform tests such as toxicology screen	7.6 (1.4)	*39*	80	18	2
Visual examination of patient (i.e., "eyeballing")	7.2 (2.5)	*53*	71	12	16
Cursory physical examination (i.e., medical clearance)	6.5 (2.1)	*20*	59	24	16
Focused methodical physical examination	6.3 (1.8)	*12*	51	39	10
Complete history and physical examination	5.4 (2.1)	*12*	31	47	22
Administer parenteral medication	4.3 (2.3)	*2*	18	39	43
Put patient in seclusion and order a chart to review history	3.4 (2.7)	*4*	19	19	63
Intervene with physical restraints to ensure patient safety	2.3 (1.6)	*0*	0	18	82
		%	%	%	%

38 AGITATION DUE TO A PRIMARY PSYCHIATRIC DISTURBANCE. Based upon your initial assessment of the patient described in question 37, you decide to intervene by offering ***oral medication*** to treat the ***agitation***. Assume that the patient is able and willing to take oral medication. Please rate the appropriateness of the following initial medication strategies depending on the provisional diagnosis. Assume you have no other information about the patient's history.



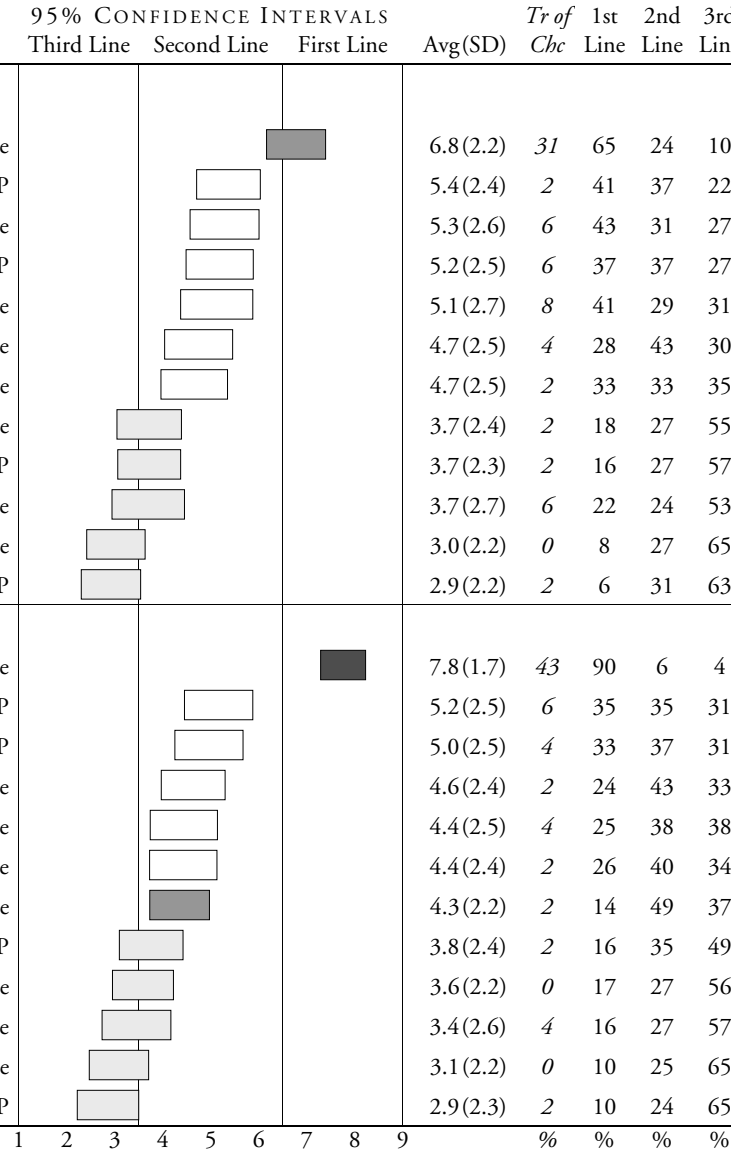
	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
No data					
Benzodiazepine (BNZ) alone	7.4(1.8)	*39*	78	20	2
BNZ + high-potency conventional antipsychotic (AP)	6.2(2.3)	*16*	55	29	16
BNZ + atypical AP	6.0(2.3)	*13*	46	42	13
High-potency conventional AP alone	5.4(2.6)	*8*	43	33	24
Risperidone alone	5.4(2.5)	*8*	39	37	24
Olanzapine alone	4.6(2.4)	*4*	29	35	37
Quetiapine alone	3.9(2.3)	*0*	19	31	50
BNZ + mid-potency conventional AP	3.8(2.5)	*2*	19	28	53
Loxapine alone	3.7(2.6)	*2*	22	24	53
Mid-potency conventional AP alone	3.3(2.1)	*0*	13	27	60
BNZ + low-potency conventional AP	2.8(2.2)	*2*	8	20	71
Low-potency conventional AP alone	2.4(1.8)	*0*	6	18	76
Schizophrenia					
BNZ + high-potency conventional AP	7.4(1.7)	*24*	82	14	4
BNZ + atypical AP	7.1(1.9)	*25*	75	19	6
Risperidone alone	6.7(2.2)	*21*	65	25	10
High-potency conventional AP alone	6.5(2.2)	*20*	61	27	12
Olanzapine alone	6.0(2.2)	*14*	49	37	14
BNZ alone	5.8(2.3)	*16*	43	37	20
Quetiapine alone	4.8(2.4)	*4*	30	43	28
Loxapine alone	4.5(2.7)	*4*	35	25	40
BNZ + mid-potency conventional AP	4.4(2.6)	*6*	27	33	41
Mid-potency conventional AP alone	4.2(2.2)	*0*	18	43	39
Low-potency conventional AP alone	3.3(2.2)	*0*	10	31	59
BNZ + low-potency conventional AP	3.3(2.4)	*2*	15	21	65
		%	%	%	%

38 AGITATION DUE TO A PRIMARY PSYCHIATRIC DISTURBANCE, *continued*



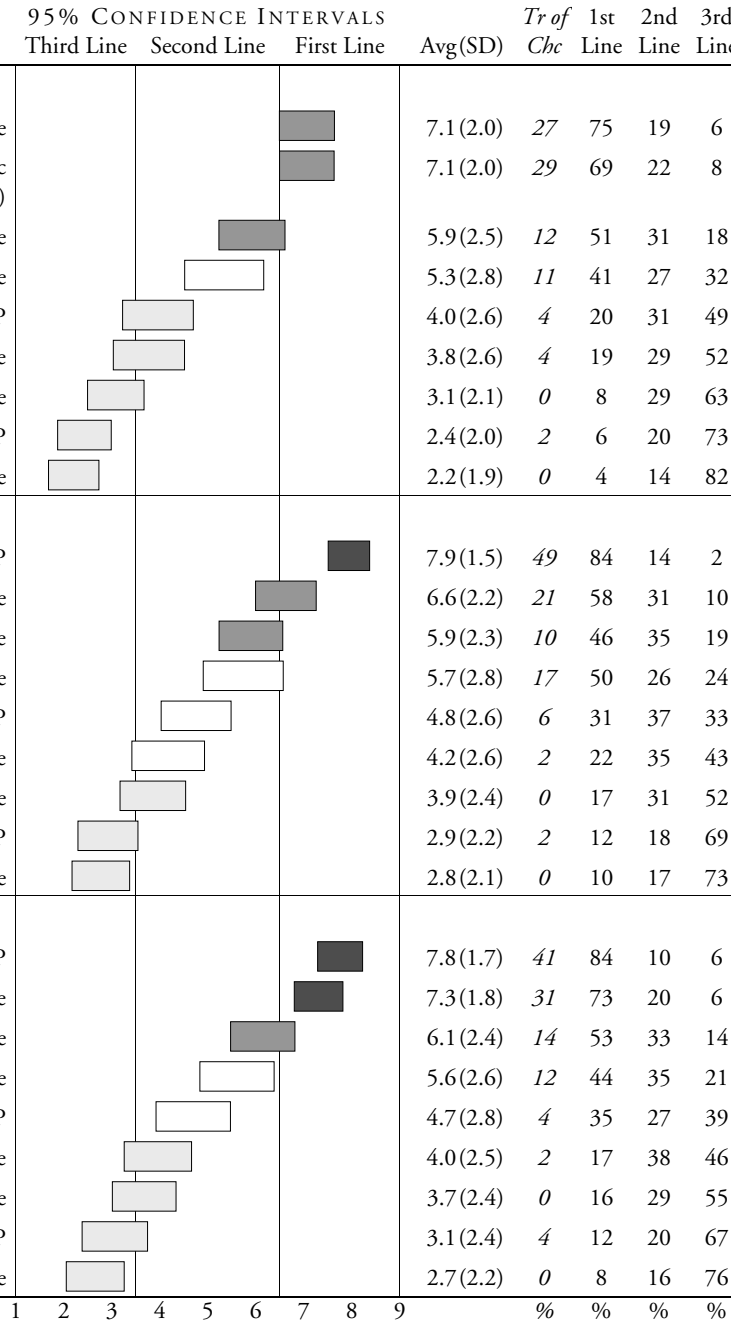
	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Mania					
BNZ + high-potency conventional AP	7.2 (1.9)	*29*	71	22	6
BNZ + atypical AP	7.1 (2.0)	*20*	69	24	6
BNZ alone	7.0 (2.1)	*29*	69	24	6
High-potency conventional AP alone	6.1 (2.3)	*17*	50	38	13
Olanzapine alone	6.0 (2.3)	*12*	45	43	12
Risperidone alone	5.9 (2.2)	*8*	41	47	12
Quetiapine alone	4.4 (2.3)	*2*	21	46	33
Loxapine alone	4.4 (2.7)	*4*	29	27	44
BNZ + mid-potency conventional AP	4.3 (2.6)	*6*	27	31	43
Mid-potency conventional AP alone	4.1 (2.3)	*0*	20	37	43
BNZ + low-potency conventional AP	3.3 (2.5)	*2*	15	26	60
Low-potency conventional AP alone	3.2 (2.3)	*0*	14	22	63
Psychotic depression					
BNZ + atypical AP	6.7 (1.9)	*10*	61	31	8
BNZ + high-potency conventional AP	6.4 (2.0)	*16*	53	39	8
BNZ alone	6.2 (2.4)	*20*	53	35	12
Risperidone alone	6.0 (2.1)	*8*	45	43	12
Olanzapine alone	5.7 (2.3)	*8*	43	43	14
High-potency conventional AP alone	5.7 (2.4)	*8*	42	42	17
Quetiapine alone	4.8 (2.5)	*4*	28	45	28
BNZ + mid-potency conventional AP	4.2 (2.4)	*4*	20	35	45
Mid-potency conventional AP alone	4.0 (2.3)	*0*	20	35	45
Loxapine alone	4.0 (2.6)	*2*	27	23	50
BNZ + low-potency conventional AP	2.9 (2.3)	*2*	6	27	67
Low-potency conventional AP alone	2.7 (2.1)	*0*	4	27	69
		%	%	%	%

38 AGITATION DUE TO A PRIMARY PSYCHIATRIC DISTURBANCE, *continued*



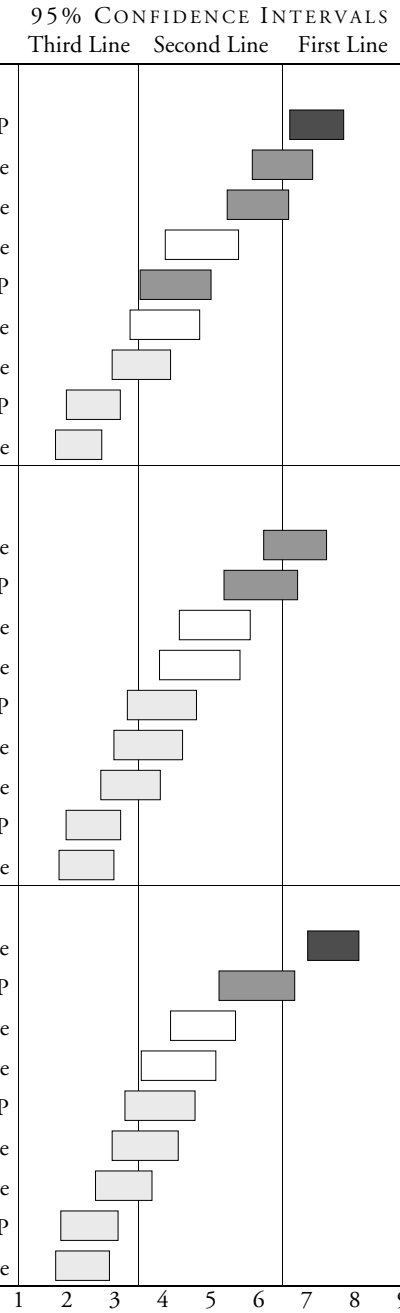
	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Personality disorder (e.g., borderline or antisocial)					
BNZ alone	6.8 (2.2)	*31*	65	24	10
BNZ + atypical AP	5.4 (2.4)	*2*	41	37	22
Risperidone alone	5.3 (2.6)	*6*	43	31	27
BNZ + high-potency conventional AP	5.2 (2.5)	*6*	37	37	27
Olanzapine alone	5.1 (2.7)	*8*	41	29	31
Quetiapine alone	4.7 (2.5)	*4*	28	43	30
High-potency conventional AP alone	4.7 (2.5)	*2*	33	33	35
Mid-potency conventional AP alone	3.7 (2.4)	*2*	18	27	55
BNZ + mid-potency conventional AP	3.7 (2.3)	*2*	16	27	57
Loxapine alone	3.7 (2.7)	*6*	22	24	53
Low-potency conventional AP alone	3.0 (2.2)	*0*	8	27	65
BNZ + low-potency conventional AP	2.9 (2.2)	*2*	6	31	63
Posttraumatic stress disorder					
BNZ alone	7.8 (1.7)	*43*	90	6	4
BNZ + atypical AP	5.2 (2.5)	*6*	35	35	31
BNZ + high-potency conventional AP	5.0 (2.5)	*4*	33	37	31
Risperidone alone	4.6 (2.4)	*2*	24	43	33
Olanzapine alone	4.4 (2.5)	*4*	25	38	38
Quetiapine alone	4.4 (2.4)	*2*	26	40	34
High-potency conventional AP alone	4.3 (2.2)	*2*	14	49	37
BNZ + mid-potency conventional AP	3.8 (2.4)	*2*	16	35	49
Mid-potency conventional AP alone	3.6 (2.2)	*0*	17	27	56
Loxapine alone	3.4 (2.6)	*4*	16	27	57
Low-potency conventional AP alone	3.1 (2.2)	*0*	10	25	65
BNZ + low-potency conventional AP	2.9 (2.3)	*2*	10	24	65
		%	%	%	%

39 **AGITATION DUE TO A PRIMARY PSYCHIATRIC DISTURBANCE.** Based upon your initial assessment of the patient described in question 37, you decide to intervene with ***parenteral medication*** to treat the ***agitation.*** Assume that the patient is ***not*** able or willing to take oral medication. Please rate the appropriateness of the following initial medication strategies depending on the provisional diagnosis. Assume you have no other information about the patient's history.



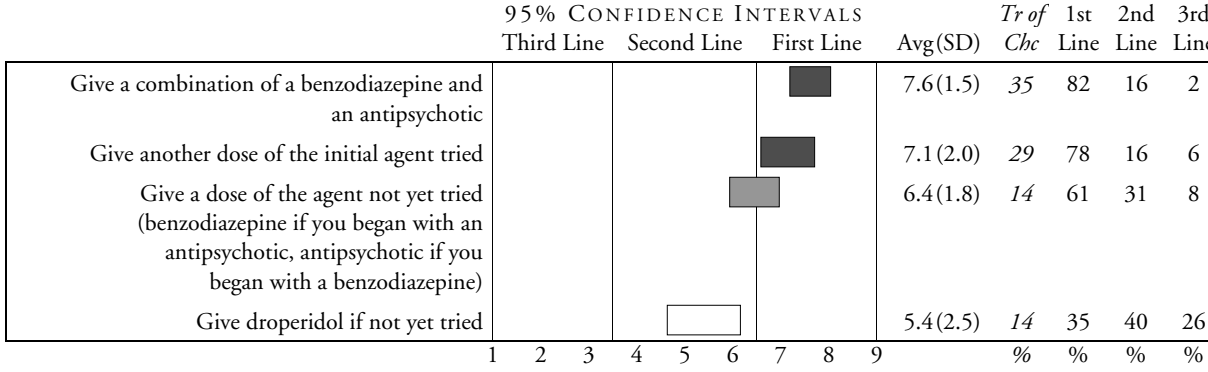
	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
No data					
Benzodiazepine (BNZ) alone	7.1(2.0)	*27*	75	19	6
BNZ + high-potency conventional antipsychotic (AP)	7.1(2.0)	*29*	69	22	8
High-potency conventional AP alone	5.9(2.5)	*12*	51	31	18
Droperidol alone	5.3(2.8)	*11*	41	27	32
BNZ + mid-potency conventional AP	4.0(2.6)	*4*	20	31	49
Loxapine alone	3.8(2.6)	*4*	19	29	52
Mid-potency conventional AP alone	3.1(2.1)	*0*	8	29	63
BNZ + low-potency conventional AP	2.4(2.0)	*2*	6	20	73
Low-potency conventional AP alone	2.2(1.9)	*0*	4	14	82
Schizophrenia					
BNZ + high-potency conventional AP	7.9(1.5)	*49*	84	14	2
High-potency conventional AP alone	6.6(2.2)	*21*	58	31	10
BNZ alone	5.9(2.3)	*10*	46	35	19
Droperidol alone	5.7(2.8)	*17*	50	26	24
BNZ + mid-potency conventional AP	4.8(2.6)	*6*	31	37	33
Loxapine alone	4.2(2.6)	*2*	22	35	43
Mid-potency conventional AP alone	3.9(2.4)	*0*	17	31	52
BNZ + low-potency conventional AP	2.9(2.2)	*2*	12	18	69
Low-potency conventional AP alone	2.8(2.1)	*0*	10	17	73
Mania					
BNZ + high-potency conventional AP	7.8(1.7)	*41*	84	10	6
BNZ alone	7.3(1.8)	*31*	73	20	6
High-potency conventional AP alone	6.1(2.4)	*14*	53	33	14
Droperidol alone	5.6(2.6)	*12*	44	35	21
BNZ + mid-potency conventional AP	4.7(2.8)	*4*	35	27	39
Loxapine alone	4.0(2.5)	*2*	17	38	46
Mid-potency conventional AP alone	3.7(2.4)	*0*	16	29	55
BNZ + low-potency conventional AP	3.1(2.4)	*4*	12	20	67
Low-potency conventional AP alone	2.7(2.2)	*0*	8	16	76
		%	%	%	%

39 AGITATION DUE TO A PRIMARY PSYCHIATRIC DISTURBANCE, *continued*



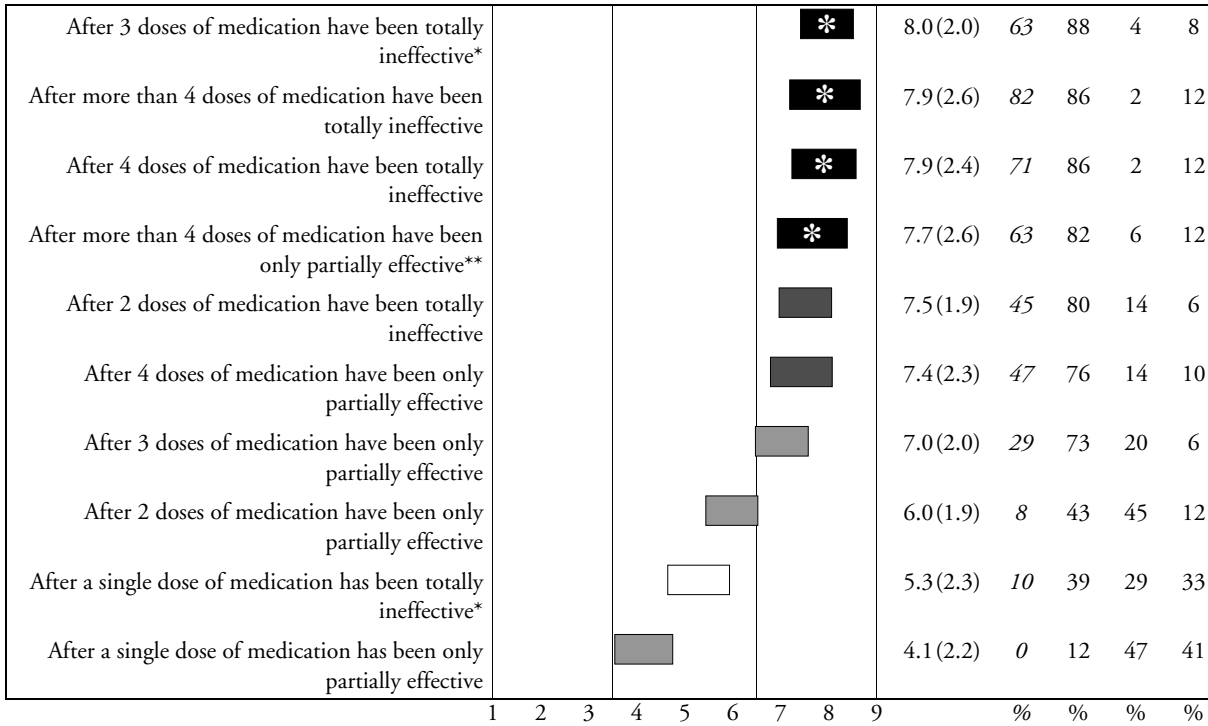
	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Psychotic depression					
BNZ + high-potency conventional AP	7.2 (2.0)	*31*	73	18	8
BNZ alone	6.5 (2.2)	*18*	59	27	14
High-potency conventional AP alone	6.0 (2.3)	*12*	47	41	12
Droperidol alone	4.8 (2.5)	*7*	30	37	33
BNZ + mid-potency conventional AP	4.3 (2.6)	*4*	31	22	47
Loxapine alone	4.0 (2.6)	*2*	23	33	44
Mid-potency conventional AP alone	3.6 (2.2)	*0*	12	35	53
BNZ + low-potency conventional AP	2.6 (2.0)	*2*	8	18	73
Low-potency conventional AP alone	2.2 (1.7)	*0*	4	20	76
Personality disorder (e.g., borderline or antisocial)					
BNZ alone	6.8 (2.3)	*29*	67	18	14
BNZ + high-potency conventional AP	6.0 (2.7)	*18*	57	20	22
High-potency conventional AP alone	5.1 (2.6)	*10*	37	33	31
Droperidol alone	4.8 (2.8)	*12*	40	21	40
BNZ + mid-potency conventional AP	4.0 (2.6)	*2*	22	27	51
Loxapine alone	3.7 (2.6)	*4*	20	24	55
Mid-potency conventional AP alone	3.3 (2.2)	*0*	12	24	63
BNZ + low-potency conventional AP	2.6 (2.0)	*2*	6	18	76
Low-potency conventional AP alone	2.4 (2.0)	*0*	8	16	76
Posttraumatic stress disorder					
BNZ alone	7.6 (1.9)	*39*	86	8	6
BNZ + high-potency conventional AP	6.0 (2.8)	*14*	59	16	24
High-potency conventional AP alone	4.8 (2.4)	*4*	27	45	29
Droperidol alone	4.3 (2.6)	*5*	26	35	40
BNZ + mid-potency conventional AP	3.9 (2.6)	*2*	24	29	47
Loxapine alone	3.6 (2.5)	*4*	12	37	51
Mid-potency conventional AP alone	3.2 (2.1)	*0*	10	27	63
BNZ + low-potency conventional AP	2.5 (2.1)	*2*	8	16	76
Low-potency conventional AP alone	2.3 (2.0)	*0*	6	16	78
		%	%	%	%

40 **Nonresponse to initial medication.** Assuming you have not achieved an adequate response to initial medication treatment for a behavioral emergency after 45–60 minutes, please rate the appropriateness of the following strategies as the next step. Assume you initially treated the patient with either a benzodiazepine or an antipsychotic alone.



	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Give a combination of a benzodiazepine and an antipsychotic	7.6 (1.5)	*35*	82	16	2
Give another dose of the initial agent tried	7.1 (2.0)	*29*	78	16	6
Give a dose of the agent not yet tried (benzodiazepine if you began with an antipsychotic, antipsychotic if you began with a benzodiazepine)	6.4 (1.8)	*14*	61	31	8
Give droperidol if not yet tried	5.4 (2.5)	*14*	35	40	26
		%	%	%	%

41 **Nonresponse to initial medication.** At what point would you change medication strategies if a patient is not responding? Rate the appropriateness of trying a different medication strategy (switching to a different agent, using a combination of agents) in each of the following situations. Assume you began treatment with ***a single agent*** (e.g., an antipsychotic or a benzodiazepine) and that your goal is to get to the point where the patient is sufficiently improved to be able to converse with caregivers and take oral medication.

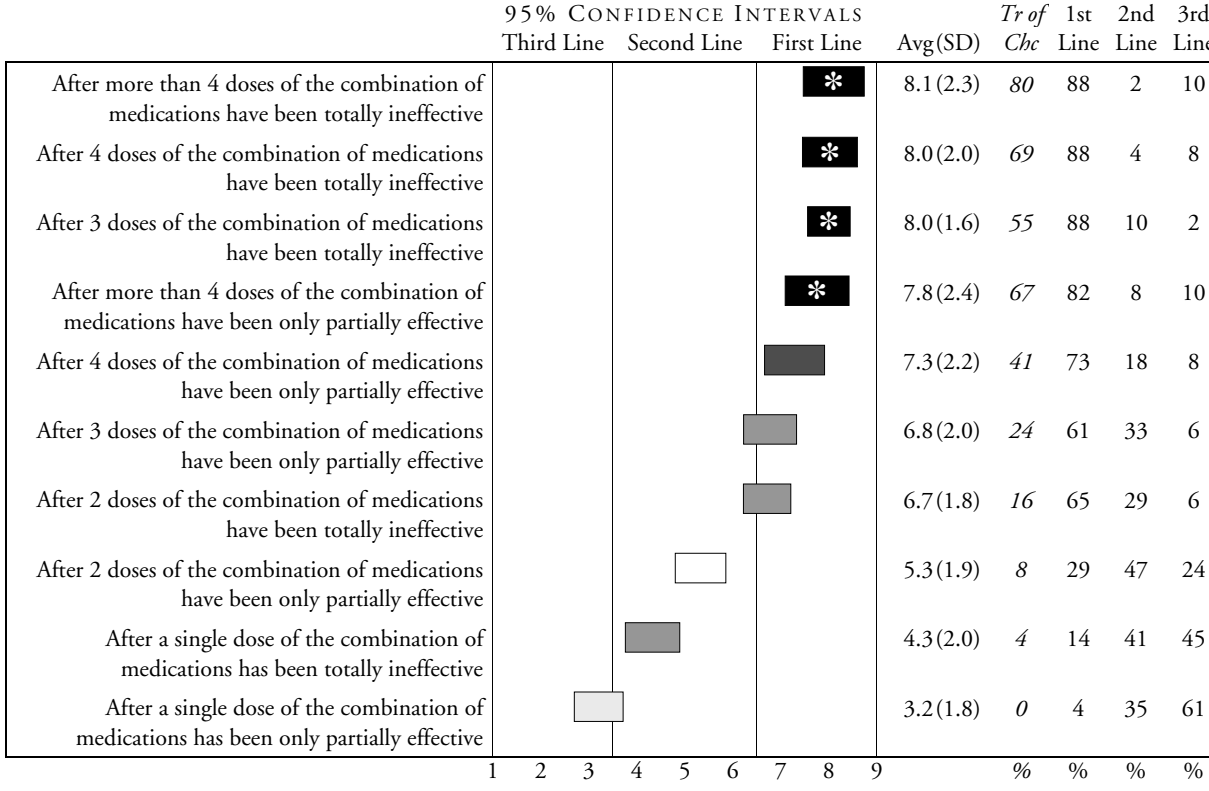


	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
After 3 doses of medication have been totally ineffective*	8.0 (2.0)	*63*	88	4	8
After more than 4 doses of medication have been totally ineffective	7.9 (2.6)	*82*	86	2	12
After 4 doses of medication have been totally ineffective	7.9 (2.4)	*71*	86	2	12
After more than 4 doses of medication have been only partially effective**	7.7 (2.6)	*63*	82	6	12
After 2 doses of medication have been totally ineffective	7.5 (1.9)	*45*	80	14	6
After 4 doses of medication have been only partially effective	7.4 (2.3)	*47*	76	14	10
After 3 doses of medication have been only partially effective	7.0 (2.0)	*29*	73	20	6
After 2 doses of medication have been only partially effective	6.0 (1.9)	*8*	43	45	12
After a single dose of medication has been totally ineffective*	5.3 (2.3)	*10*	39	29	33
After a single dose of medication has been only partially effective	4.1 (2.2)	*0*	12	47	41
		%	%	%	%

*By totally ineffective, we mean that the patient is still extremely agitated and uncooperative.

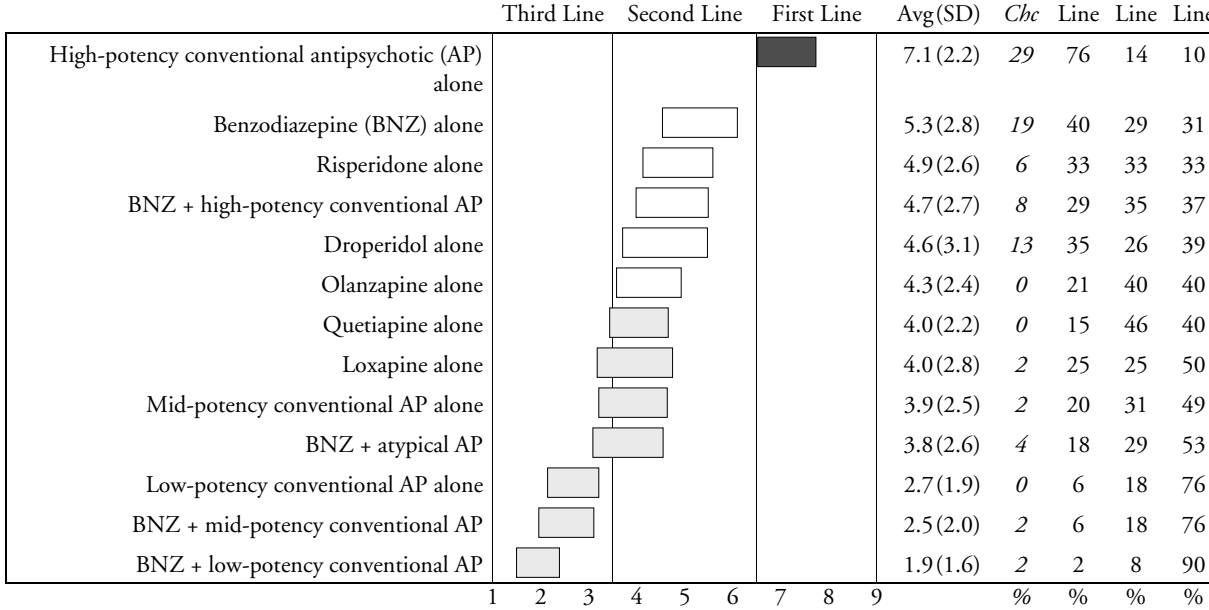
**By partially effective, we mean that the patient is somewhat calmer but is still not able to converse with caregivers or take oral medication.

42 **Nonresponse to initial medication.** We would like you to consider the same question as in 41, but this time rate the appropriateness of trying a different medication strategy in each of the following situations, assuming you began treatment with ***a combination of medications*** (e.g., an antipsychotic ***plus*** a benzodiazepine).



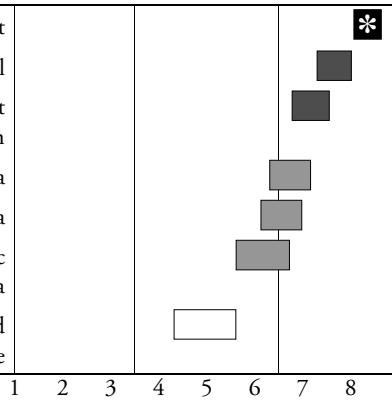
	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
After more than 4 doses of the combination of medications have been totally ineffective	8.1 (2.3)	*80*	88	2	10
After 4 doses of the combination of medications have been totally ineffective	8.0 (2.0)	*69*	88	4	8
After 3 doses of the combination of medications have been totally ineffective	8.0 (1.6)	*55*	88	10	2
After more than 4 doses of the combination of medications have been only partially effective	7.8 (2.4)	*67*	82	8	10
After 4 doses of the combination of medications have been only partially effective	7.3 (2.2)	*41*	73	18	8
After 3 doses of the combination of medications have been only partially effective	6.8 (2.0)	*24*	61	33	6
After 2 doses of the combination of medications have been totally ineffective	6.7 (1.8)	*16*	65	29	6
After 2 doses of the combination of medications have been only partially effective	5.3 (1.9)	*8*	29	47	24
After a single dose of the combination of medications has been totally ineffective	4.3 (2.0)	*4*	14	41	45
After a single dose of the combination of medications has been only partially effective	3.2 (1.8)	*0*	4	35	61
		%	%	%	%

43 A pregnant woman presents to the PES who is **agitated, psychotic, and unresponsive to direction.** You feel that the patient is at serious risk to harm herself, her unborn child, or staff, and that immediate medication intervention is necessary. Rate the appropriateness of each of the following medication strategies to treat the patient in this situation.



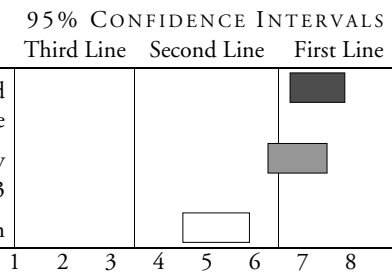
	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
High-potency conventional antipsychotic (AP) alone	7.1 (2.2)	*29*	76	14	10
Benzodiazepine (BNZ) alone	5.3 (2.8)	*19*	40	29	31
Risperidone alone	4.9 (2.6)	*6*	33	33	33
BNZ + high-potency conventional AP	4.7 (2.7)	*8*	29	35	37
Droperidol alone	4.6 (3.1)	*13*	35	26	39
Olanzapine alone	4.3 (2.4)	*0*	21	40	40
Quetiapine alone	4.0 (2.2)	*0*	15	46	40
Loxapine alone	4.0 (2.8)	*2*	25	25	50
Mid-potency conventional AP alone	3.9 (2.5)	*2*	20	31	49
BNZ + atypical AP	3.8 (2.6)	*4*	18	29	53
Low-potency conventional AP alone	2.7 (1.9)	*0*	6	18	76
BNZ + mid-potency conventional AP	2.5 (2.0)	*2*	6	18	76
BNZ + low-potency conventional AP	1.9 (1.6)	*2*	2	8	90
		%	%	%	%

44 A patient presents to the PES with an acute manic episode. The patient has a history of bipolar disorder. You are considering using loading doses of divalproex to stabilize the patient. Rate the importance of the following factors in supporting the decision to use loading doses in the PES, giving your highest ratings to the factors you consider most important.



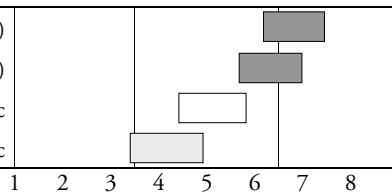
	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Patient has responded to divalproex in the past	8.3(1.0)	*59*	96	4	0
Liver function tests are normal	7.7(1.3)	*35*	80	20	0
Patient and family are eager to try to avert hospitalization	7.2(1.4)	*14*	71	27	2
Current episode appears to be mixed mania	6.7(1.5)	*8*	63	33	4
Current episode appears to be dysphoric mania	6.6(1.5)	*6*	57	39	4
Current episode appears to be classic euphoric mania	6.2(2.0)	*14*	47	43	10
History suggesting that substance use contributed to the current episode	5.0(2.3)	*6*	29	39	33
		%	%	%	%

45 Assume you have decided to treat an agitated patient with divalproex. Rate the appropriateness of initiating divalproex using the following dosing strategies.



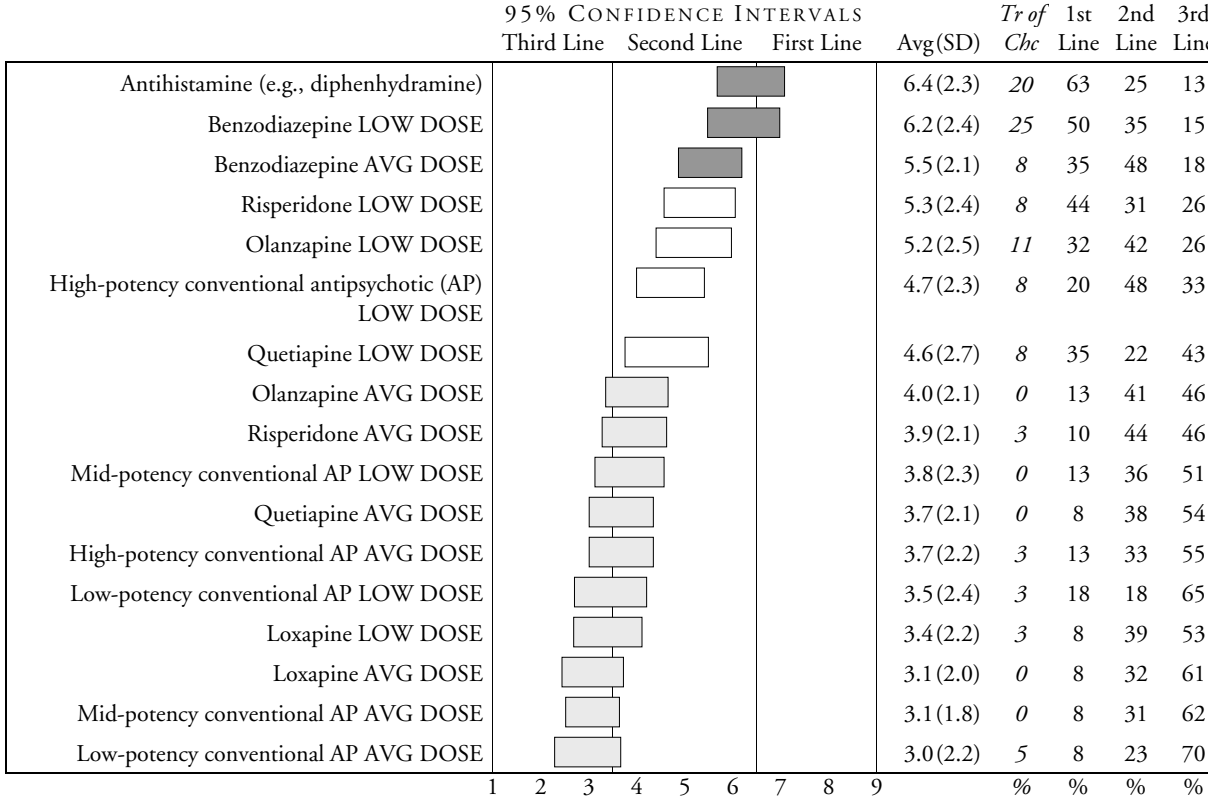
	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Initiate at 20 mg/kg and continue until blood levels are available	7.3(2.0)	*28*	83	11	7
Loading dose: 30 mg/kg for 2 days, followed by 20 mg/kg beginning on day 3	6.9(2.1)	*24*	69	22	9
Usual titration	5.2(2.4)	*9*	34	38	28
		%	%	%	%

46 A 10-year old child who has been diagnosed with oppositional defiant disorder is brought to the emergency department from a group home. The patient is unmanageable and violent, attempts to bite the nurses, and does not respond to therapeutic hold or lesser interventions and you decide that medication is needed. Please rate the appropriateness of the following as initial medication strategies in this situation.



	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Benzodiazepine (BNZ)	6.8(2.1)	*33*	58	33	9
Antihistamine (e.g., diphenhydramine)	6.3(2.2)	*12*	60	26	14
Antipsychotic	5.1(2.3)	*5*	33	40	28
Combination of a BNZ and an antipsychotic	4.2(2.5)	*2*	26	26	49
		%	%	%	%

47 Please rate the appropriateness of the following specific medications and dose levels for the child described in question 46. If you would use a combination of a benzodiazepine and an antipsychotic, rate the appropriateness of the different types and dose levels of these medications.

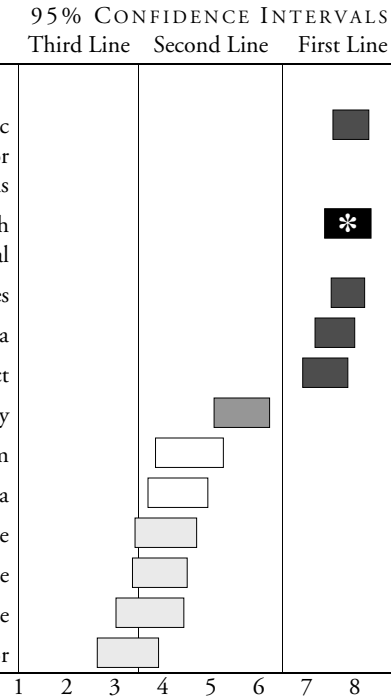


	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Antihistamine (e.g., diphenhydramine)	6.4 (2.3)	*20*	63	25	13
Benzodiazepine LOW DOSE	6.2 (2.4)	*25*	50	35	15
Benzodiazepine AVG DOSE	5.5 (2.1)	*8*	35	48	18
Risperidone LOW DOSE	5.3 (2.4)	*8*	44	31	26
Olanzapine LOW DOSE	5.2 (2.5)	*11*	32	42	26
High-potency conventional antipsychotic (AP) LOW DOSE	4.7 (2.3)	*8*	20	48	33
Quetiapine LOW DOSE	4.6 (2.7)	*8*	35	22	43
Olanzapine AVG DOSE	4.0 (2.1)	*0*	13	41	46
Risperidone AVG DOSE	3.9 (2.1)	*3*	10	44	46
Mid-potency conventional AP LOW DOSE	3.8 (2.3)	*0*	13	36	51
Quetiapine AVG DOSE	3.7 (2.1)	*0*	8	38	54
High-potency conventional AP AVG DOSE	3.7 (2.2)	*3*	13	33	55
Low-potency conventional AP LOW DOSE	3.5 (2.4)	*3*	18	18	65
Loxapine LOW DOSE	3.4 (2.2)	*3*	8	39	53
Loxapine AVG DOSE	3.1 (2.0)	*0*	8	32	61
Mid-potency conventional AP AVG DOSE	3.1 (1.8)	*0*	8	31	62
Low-potency conventional AP AVG DOSE	3.0 (2.2)	*5*	8	23	70
		%	%	%	%

48 Assume that you have decided to initiate medication for a patient who is agitated and aggressive, but who also has 1 of the following conditions. In this question, we want to know about your choice of ***classes*** of medication. Rate the appropriateness of using the following classes of medications to treat the patient in the presence of each of the conditions listed below.

	95% Confidence Intervals Third Line	Second Line	First Line	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
High-potency conventional antipsychotic (e.g., haloperidol)								
Delirium				7.9 (1.6)	*47*	94	2	4
Chronic obstructive pulmonary disease				7.4 (1.4)	*29*	85	13	2
Dementia				7.1 (1.7)	*19*	74	21	4
Cardiac arrhythmia or conduction defect				6.8 (1.6)	*15*	71	21	8
History of drug abuse or dependence				6.6 (1.7)	*10*	65	29	6
History of "drug seeking" behavior				6.4 (2.0)	*8*	63	27	10
Frail old age				6.3 (2.0)	*13*	55	28	17
Mental retardation/developmental delay				5.9 (1.9)	*4*	48	38	15
History of seizures				5.7 (1.7)	*4*	35	56	8
Patient with significant blood alcohol level with prominent signs of alcohol withdrawal				4.8 (2.4)	*8*	29	38	33
History of akathisia				3.4 (1.7)	*0*	4	40	56
History of tardive dyskinesia, neuroleptic malignant syndrome, dystonic reactions, or parkinsonian symptoms				2.5 (1.5)	*0*	2	21	77
Atypical antipsychotic (e.g., risperidone, olanzapine)								
Dementia				7.6 (1.4)	*35*	88	10	2
History of akathisia				7.3 (1.3)	*19*	79	21	0
Mental retardation/developmental delay				7.3 (1.5)	*19*	77	21	2
History of drug abuse or dependence				7.0 (2.0)	*23*	77	15	8
Frail old age				7.0 (1.8)	*23*	73	23	4
History of "drug seeking" behavior				7.0 (2.2)	*25*	77	10	13
Chronic obstructive pulmonary disease				6.9 (1.8)	*20*	65	33	2
Delirium				6.6 (1.9)	*15*	63	28	9
History of tardive dyskinesia, neuroleptic malignant syndrome, dystonic reactions, or parkinsonian symptoms				6.4 (2.0)	*13*	58	31	10
Cardiac arrhythmia or conduction defect				6.3 (2.0)	*9*	59	30	11
History of seizures				6.1 (1.7)	*4*	46	46	8
Patient with significant blood alcohol level with prominent signs of alcohol withdrawal				5.0 (2.0)	*2*	21	52	27
	1 2 3 4 5 6 7 8 9				*%*	%	%	%

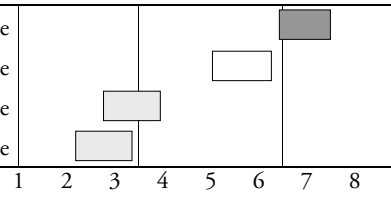
48 *continued*



	95% Confidence Intervals Third Line	Second Line	First Line	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Benzodiazepine								
History of tardive dyskinesia, neuroleptic malignant syndrome, dystonic reactions, or parkinsonian symptoms				7.9 (1.3)	*42*	90	8	2
Patient with significant blood alcohol level with prominent signs of alcohol withdrawal				7.9 (1.7)	*50*	85	10	4
History of seizures				7.9 (1.2)	*40*	88	13	0
History of akathisia				7.6 (1.5)	*40*	79	21	0
Cardiac arrhythmia or conduction defect				7.4 (1.6)	*30*	81	13	6
Mental retardation/developmental delay				5.6 (2.0)	*15*	29	56	15
Delirium				4.6 (2.5)	*11*	23	38	38
Dementia				4.3 (2.2)	*4*	19	42	40
Frail old age				4.1 (2.3)	*4*	15	35	50
Chronic obstructive pulmonary disease				3.9 (2.0)	*2*	13	38	50
History of drug abuse or dependence				3.7 (2.5)	*4*	19	21	60
History of "drug seeking" behavior				3.3 (2.3)	*0*	13	23	65
1 2 3 4 5 6 7 8 9					*%*	%	%	%

49

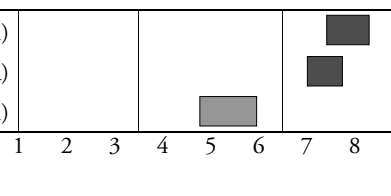
Assume that you have decided to treat a patient who is **agitated** with an antipsychotic. Rate the appropriateness of using a prophylactic anticholinergic medication (e.g., benztropine) for a patient treated with the following medications.



	95% Confidence Intervals Third Line	Second Line	First Line	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Conventional antipsychotic alone				7.0 (1.9)	*27*	67	27	6
Conventional antipsychotic + benzodiazepine				5.6 (2.2)	*8*	35	40	25
Atypical antipsychotic alone				3.4 (2.1)	*4*	10	21	69
Atypical antipsychotic + benzodiazepine				2.8 (2.1)	*4*	6	23	71
1 2 3 4 5 6 7 8 9					*%*	%	%	%

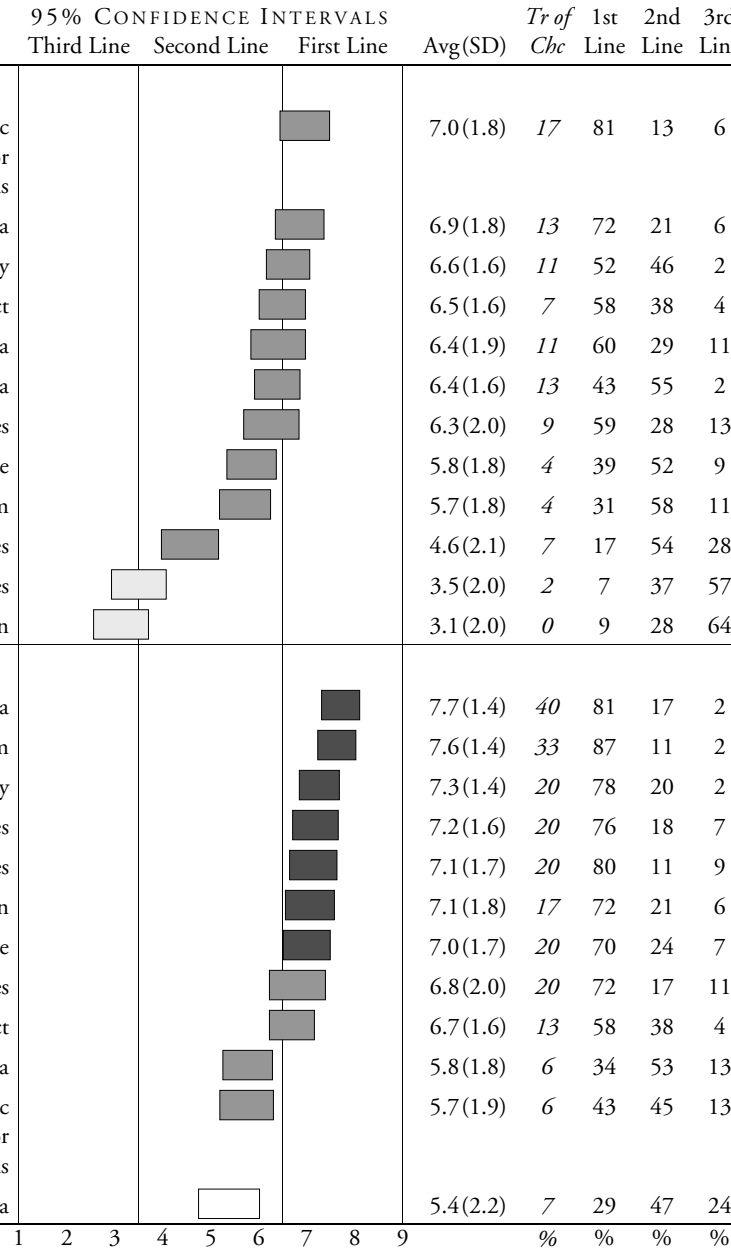
50

Assume that you have decided to initiate emergency medication for a patient who is agitated, hostile, and aggressive with ***an oral atypical antipsychotic***. Rate each of the following atypical antipsychotics as your first choice in this situation.



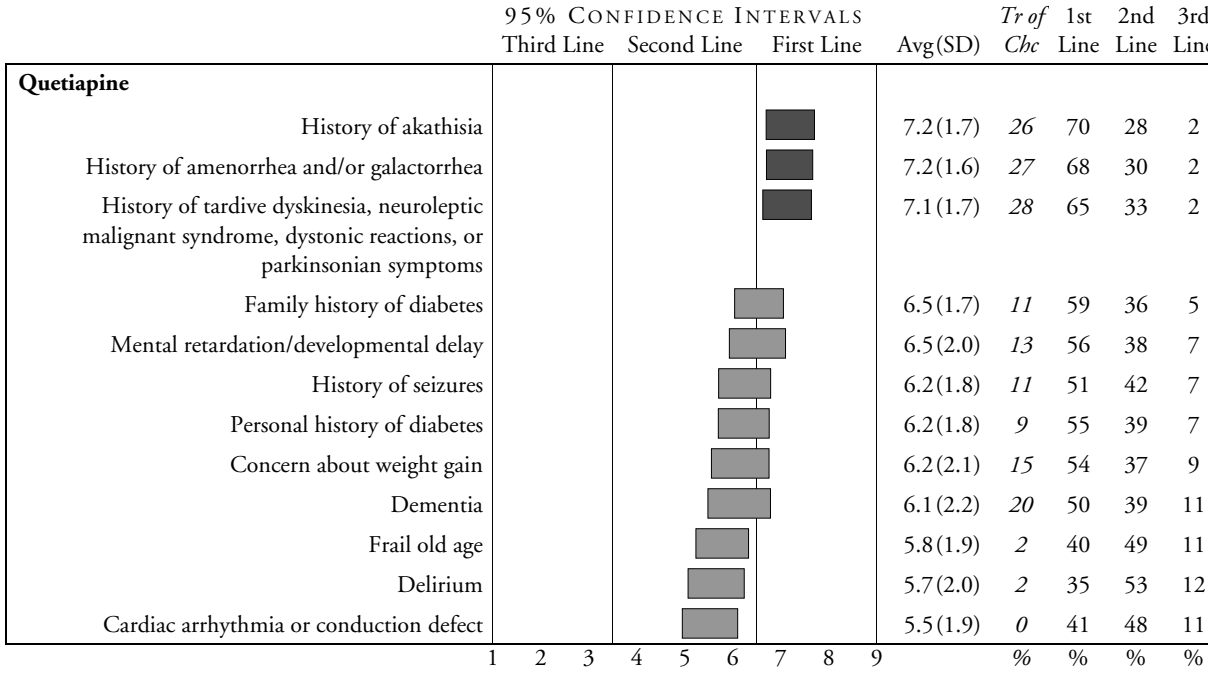
	95% Confidence Intervals Third Line	Second Line	First Line	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Risperidone (Risperdal)				7.9 (1.6)	*48*	83	13	4
Olanzapine (Zyprexa)				7.4 (1.3)	*21*	81	19	0
Quetiapine (Seroquel)				5.4 (2.1)	*4*	34	51	15
1 2 3 4 5 6 7 8 9					*%*	%	%	%

51 Assume that you have decided to initiate emergency medication using an **oral atypical antipsychotic** for a patient who is agitated and aggressive, but who also has 1 of the following conditions. In this question, we want to know about your selection of medications ***within the class of atypical antipsychotics***. Rate the appropriateness of using the following atypical antipsychotics to treat a patient with each of the conditions listed below.

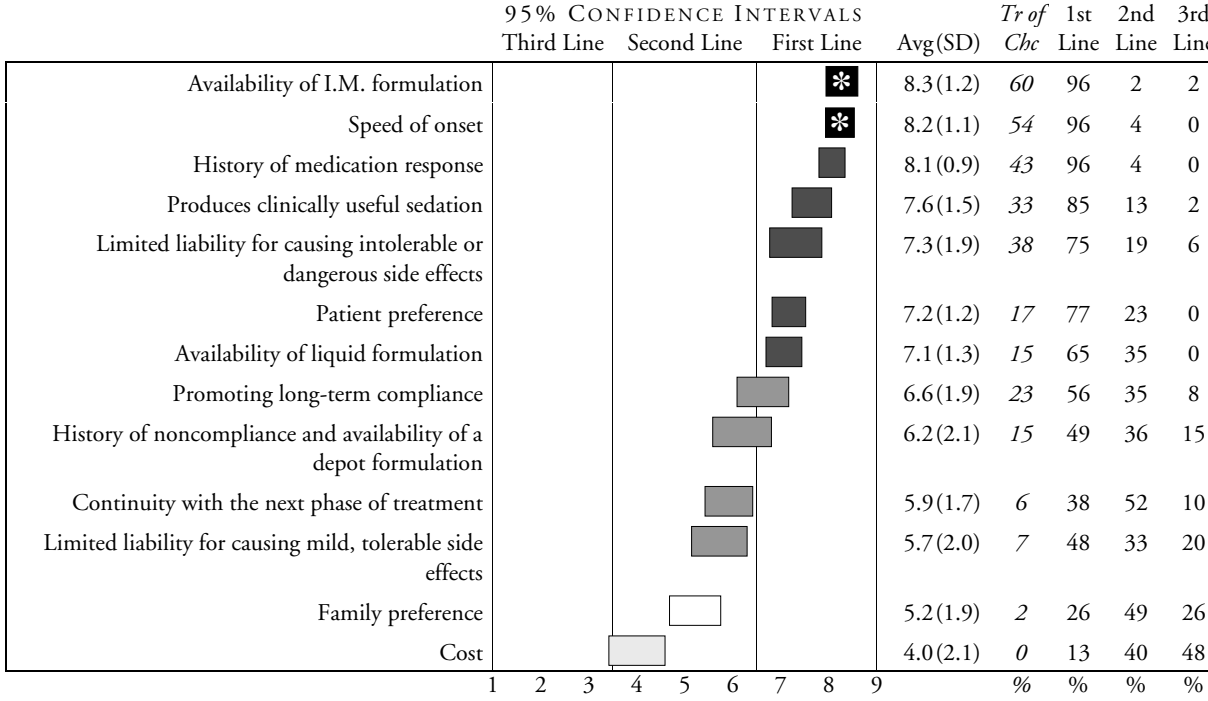


	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Olanzapine					
History of tardive dyskinesia, neuroleptic malignant syndrome, dystonic reactions, or parkinsonian symptoms	7.0(1.8)	*17*	81	13	6
History of akathisia	6.9(1.8)	*13*	72	21	6
Mental retardation/developmental delay	6.6(1.6)	*11*	52	46	2
Cardiac arrhythmia or conduction defect	6.5(1.6)	*7*	58	38	4
History of amenorrhea and/or galactorrhea	6.4(1.9)	*11*	60	29	11
Dementia	6.4(1.6)	*13*	43	55	2
History of seizures	6.3(2.0)	*9*	59	28	13
Frail old age	5.8(1.8)	*4*	39	52	9
Delirium	5.7(1.8)	*4*	31	58	11
Family history of diabetes	4.6(2.1)	*7*	17	54	28
Personal history of diabetes	3.5(2.0)	*2*	7	37	57
Concern about weight gain	3.1(2.0)	*0*	9	28	64
Risperidone					
Dementia	7.7(1.4)	*40*	81	17	2
Delirium	7.6(1.4)	*33*	87	11	2
Mental retardation/developmental delay	7.3(1.4)	*20*	78	20	2
Family history of diabetes	7.2(1.6)	*20*	76	18	7
Personal history of diabetes	7.1(1.7)	*20*	80	11	9
Concern about weight gain	7.1(1.8)	*17*	72	21	6
Frail old age	7.0(1.7)	*20*	70	24	7
History of seizures	6.8(2.0)	*20*	72	17	11
Cardiac arrhythmia or conduction defect	6.7(1.6)	*13*	58	38	4
History of akathisia	5.8(1.8)	*6*	34	53	13
History of tardive dyskinesia, neuroleptic malignant syndrome, dystonic reactions, or parkinsonian symptoms	5.7(1.9)	*6*	43	45	13
History of amenorrhea and/or galactorrhea	5.4(2.2)	*7*	29	47	24
		%	%	%	%

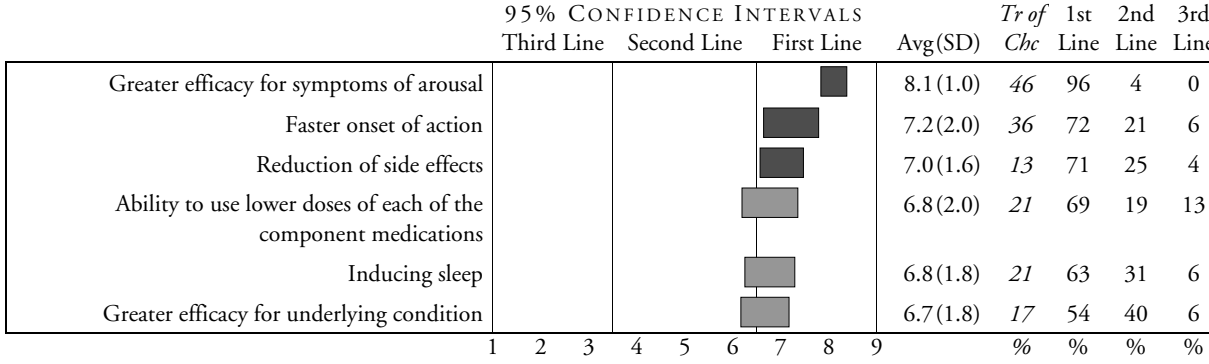
51 *continued*



52 Assuming you have decided to use emergency medication for a patient who is agitated, rate the importance of the following factors in determining your initial choice of medication for the first intervention. Give your highest ratings to those factors you consider most important.

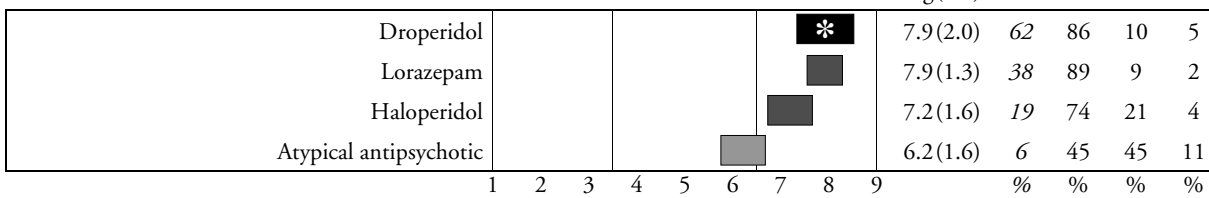


53 Rate the importance of the following factors in deciding to use a combination of a benzodiazepine and an antipsychotic. Give your highest ratings to those factors you consider most important.



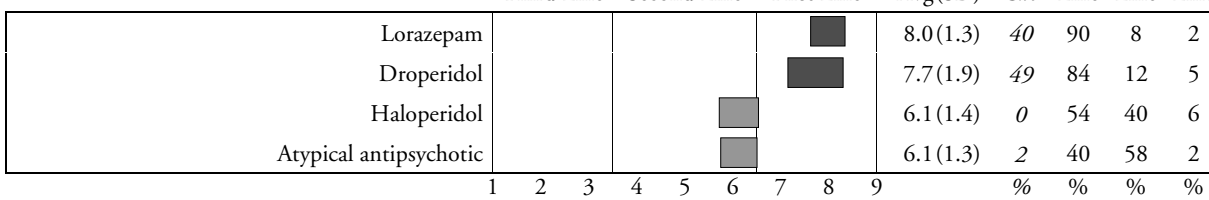
	95% Confidence Intervals	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Greater efficacy for symptoms of arousal		8.1(1.0)	*46*	96	4	0
Faster onset of action		7.2(2.0)	*36*	72	21	6
Reduction of side effects		7.0(1.6)	*13*	71	25	4
Ability to use lower doses of each of the component medications		6.8(2.0)	*21*	69	19	13
Inducing sleep		6.8(1.8)	*21*	63	31	6
Greater efficacy for underlying condition		6.7(1.8)	*17*	54	40	6
	1 2 3 4 5 6 7 8 9		%	%	%	%

54 Please rate the following medications in terms of their efficacy for decreasing agitation. Give your highest ratings to those medications that you consider most efficacious in decreasing agitation.



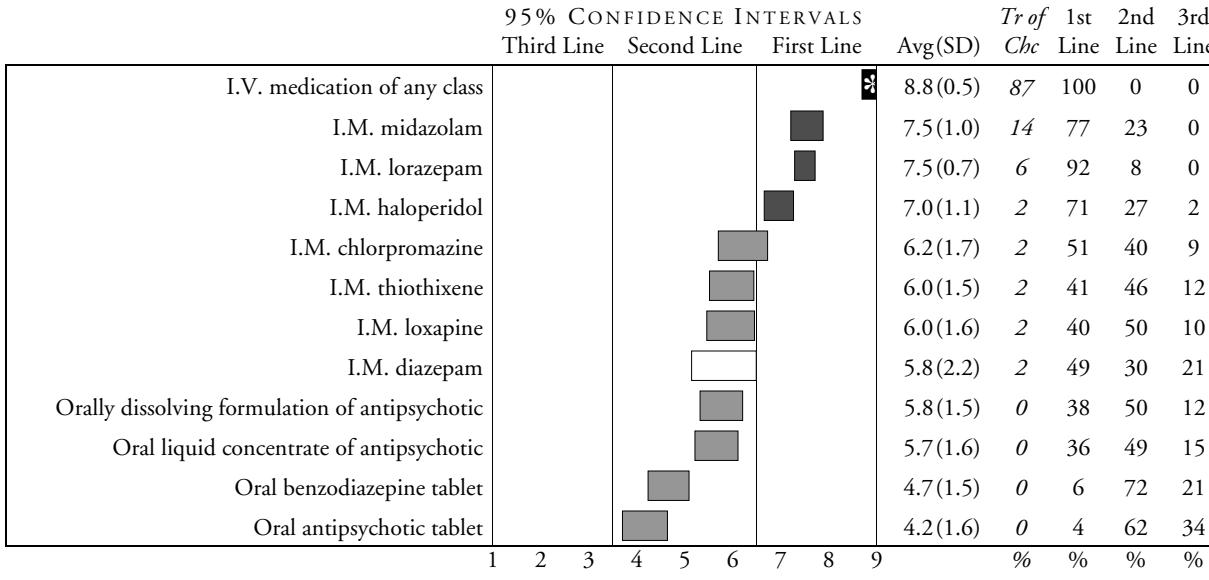
	95% Confidence Intervals	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Droperidol		7.9(2.0)	*62*	86	10	5
Lorazepam		7.9(1.3)	*38*	89	9	2
Haloperidol		7.2(1.6)	*19*	74	21	4
Atypical antipsychotic		6.2(1.6)	*6*	45	45	11
	1 2 3 4 5 6 7 8 9		%	%	%	%

55 Please rate the following medications in terms of the degree of sedation they induce at typical doses. Give your highest ratings to those medications you consider to induce the greatest degree of sedation.



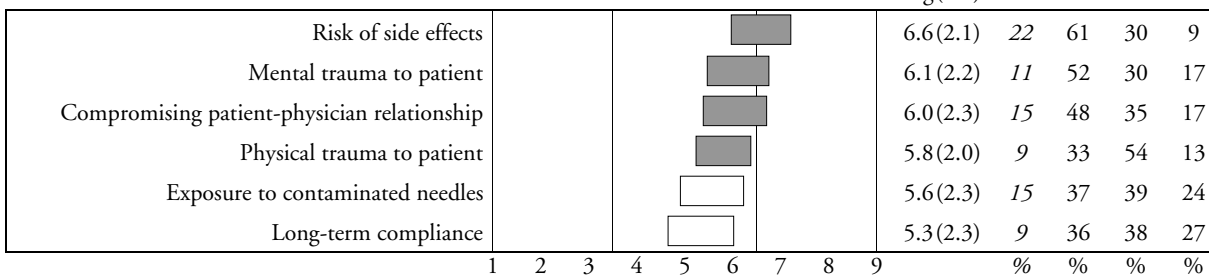
	95% Confidence Intervals	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Lorazepam		8.0(1.3)	*40*	90	8	2
Droperidol		7.7(1.9)	*49*	84	12	5
Haloperidol		6.1(1.4)	*0*	54	40	6
Atypical antipsychotic		6.1(1.3)	*2*	40	58	2
	1 2 3 4 5 6 7 8 9		%	%	%	%

56 Please rate the relative speeds of onset of action of the following preparations. Give your highest ratings to the preparations you consider to have the fastest onset of action.



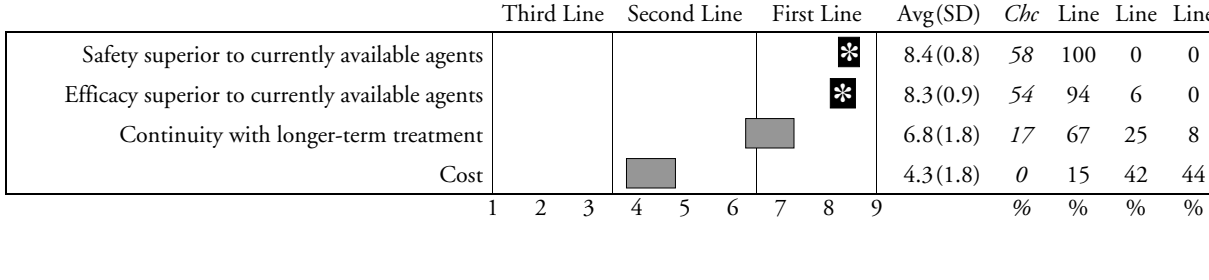
	95% CONFIDENCE INTERVALS Third Line	Second Line	First Line	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
I.V. medication of any class				8.8 (0.5)	*87*	100	0	0
I.M. midazolam				7.5 (1.0)	*14*	77	23	0
I.M. lorazepam				7.5 (0.7)	*6*	92	8	0
I.M. haloperidol				7.0 (1.1)	*2*	71	27	2
I.M. chlorpromazine				6.2 (1.7)	*2*	51	40	9
I.M. thiothixene				6.0 (1.5)	*2*	41	46	12
I.M. loxapine				6.0 (1.6)	*2*	40	50	10
I.M. diazepam				5.8 (2.2)	*2*	49	30	21
Orally dissolving formulation of antipsychotic				5.8 (1.5)	*0*	38	50	12
Oral liquid concentrate of antipsychotic				5.7 (1.6)	*0*	36	49	15
Oral benzodiazepine tablet				4.7 (1.5)	*0*	6	72	21
Oral antipsychotic tablet				4.2 (1.6)	*0*	4	62	34
1 2 3 4 5 6 7 8 9					*%*	%	%	%

57 Please rate the extent to which the following factors would limit your use of an I.M. formulation. Give your highest ratings to those factors that would make you most likely to ***avoid*** use of an I.M. formulation.



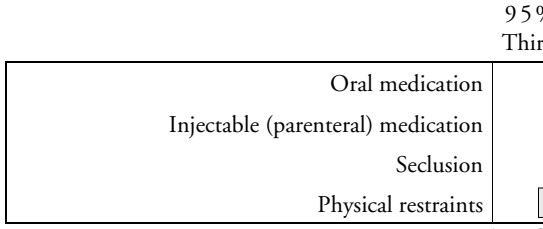
	95% CONFIDENCE INTERVALS Third Line	Second Line	First Line	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Risk of side effects				6.6 (2.1)	*22*	61	30	9
Mental trauma to patient				6.1 (2.2)	*11*	52	30	17
Compromising patient-physician relationship				6.0 (2.3)	*15*	48	35	17
Physical trauma to patient				5.8 (2.0)	*9*	33	54	13
Exposure to contaminated needles				5.6 (2.3)	*15*	37	39	24
Long-term compliance				5.3 (2.3)	*9*	36	38	27
1 2 3 4 5 6 7 8 9					*%*	%	%	%

58 If an I.M. formulation of an atypical antipsychotic were available, rate the importance of the following characteristics in terms of the usefulness of such a formulation in a PES. Give your highest ratings to those characteristics you would consider most useful.



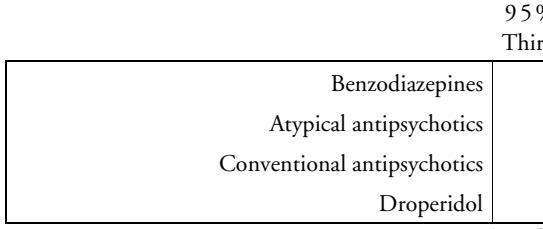
	95% CONFIDENCE INTERVALS Third Line	Second Line	First Line	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Safety superior to currently available agents				8.4 (0.8)	*58*	100	0	0
Efficacy superior to currently available agents				8.3 (0.9)	*54*	94	6	0
Continuity with longer-term treatment				6.8 (1.8)	*17*	67	25	8
Cost				4.3 (1.8)	*0*	15	42	44
1 2 3 4 5 6 7 8 9					*%*	%	%	%

59 **Consumer preferences.** In your opinion, from the perspective of consumers based on the data we have, rate the following interventions in terms of your assessment of patient preferences. Use a 9 = most highly acceptable/preferable and a 1 = unacceptable.



	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Oral medication	8.5(1.0)	*69*	96	4	0
Injectable (parenteral) medication	5.3(1.6)	*0*	31	52	17
Seclusion	4.7(2.2)	*4*	26	40	34
Physical restraints	2.4(1.5)	*0*	0	19	81
		%	%	%	%

60 **Consumer preferences.** In your opinion, from the perspective of consumers based on the data we have, rate the following medications in terms of your assessment of patient preferences. Use a 9 = most highly acceptable/preferable and a 1 = unacceptable.



	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Benzodiazepines	8.4(0.9)	*66*	94	6	0
Atypical antipsychotics	7.2(1.1)	*13*	72	28	0
Conventional antipsychotics	4.9(1.5)	*0*	17	60	23
Droperidol	4.2(1.8)	*0*	12	49	39
		%	%	%	%

61 **Dosing levels:** Please write in the following information for how you would use the medications listed below in a PES setting: minimum and maximum doses you would use as initial single doses, minimum interval to wait between doses, and the total dose you would use in a 24-hour period. Record the dose levels as p.o. mg equivalents. If you would never use this medication in a PES setting, check the box in the last column.

Medication	**Minimum single dose (mg)**			**Maximum single dose (mg)**			**Minimum interval between doses (minutes)**			**Maximum total dose in 24 hours (mg)**			**Would never use this medication in PES**	
	Avg	(SD)	Mode	Avg	(SD)	Mode	Avg	(SD)	Mode	Avg	(SD)	Mode	n	%
Chlorpromazine	41.2	(37.4)	25	159	(135)	100	74.3	(70.7)	60	716	(420)	1000	17	37%
Diazepam	3.3	(1.5)	2	11.1	(4.3)	10	75.3	(76.2)	30	42.1	(19.5)	40	10	22%
Droperidol	2.4	(1.3)	2.5	7.8	(4.1)	5	54.1	(41.4)	30	20.6	(10.3)	20	11	26%
Haloperidol	1.7	(1.5)	1	9.1	(4.0)	10	58.5	(59.3)	30	35.3	(20.0)	30	0	0%
Lorazepam	0.7	(0.5)	0.5	3.1	(1.4)	2	53.2	(62.1)	30	11.9	(5.1)	10	1	2%
Loxapine	11.0	(6.3)	10	36.4	(26.4)	50	77.6	(70.3)	60	143	(83.1)	100	22	50%
Midazolam	0.9	(0.3)	1	5.7	(4.0)	10	23.3	(11.5)	30	35.0	(43.6)	10	37	90%
Olanzapine	3.5	(1.4)	2.5	13.0	(5.7)	10	110	(160)	60	26.6	(8.9)	30	2	4%
Perphenazine	3.8	(1.9)	2	13.6	(5.8)	16	66.5	(58.4)	60	46.0	(18.5)	64	11	24%
Quetiapine	39.0	(34.8)	25	163	(116)	100	102	(132)	60	452	(248)	400	15	33%
Risperidone	0.7	(0.5)	0.5	3.2	(1.6)	2	90.7	(126)	60	8.3	(3.8)	10	2	4%
Thiothixene	3.3	(2.1)	2	12.2	(6.3)	10	77.8	(88.1)	60	36.0	(16.5)	30	19	40%