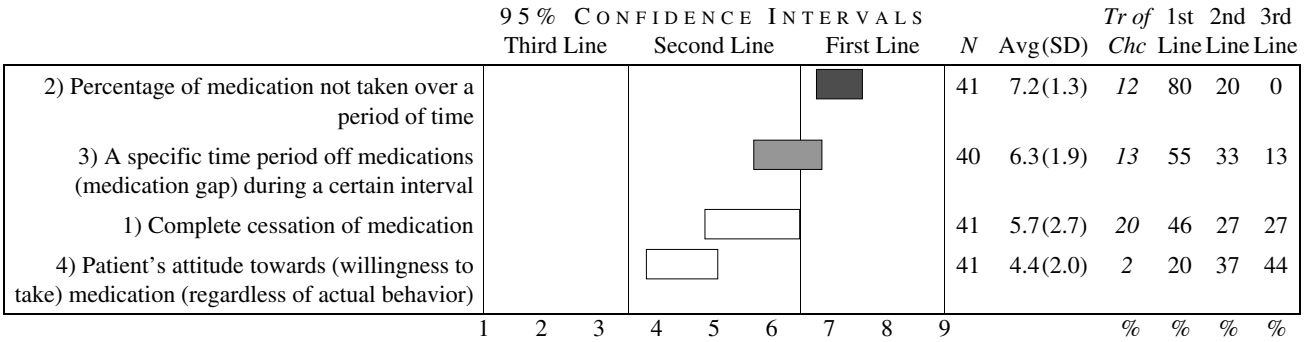
Results of Expert Consensus Survey on Adherence 2008

I. Definition and Epidemiology of Adherence Problems

1 **Defining nonadherence to antipsychotic medication in schizophrenia.** A number of different methods have been used to define nonadherence to medication in studies of schizophrenia. Please rate the usefulness of the following ways of defining nonadherence to treatment for clinical practice. Please use a rating of **7–9** for methods you consider **most useful**, a rating of **4–6** for methods that are **somewhat useful**, and a rating of **1–3** to methods that are **not very useful**.



	N	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
2) Percentage of medication not taken over a period of time	41	7.2 (1.3)	*12*	80	20	0
3) A specific time period off medications (medication gap) during a certain interval	40	6.3 (1.9)	*13*	55	33	13
1) Complete cessation of medication	41	5.7 (2.7)	*20*	46	27	27
4) Patient's attitude towards (willingness to take) medication (regardless of actual behavior)	41	4.4 (2.0)	*2*	20	37	44
				%	%	%	%

2 **Comments.** We are interested in your comments on this question and your ideas as to other useful ways of defining the concept and definition of adherence for patients with schizophrenia:

Since insight, judgment, episodic memory, and prospective memory are frequently impaired in these populations, I would question the use of any measure that relies on self-report of medication usage. These impairments might also limit the usefulness of using attitudes as a proxy for likelihood of adherence.

Consecutive days with no medication or percent of time where off for 3 or more consecutive days

I believe the majority of patients have partial adherence. Issue for clinician is to have an idea of how partial it is. The other concepts are important for clinical decisions—in particular, deciding whether decompensation could be key to lags or complete cessation. Attitudes are important to help with education process and maybe increase adherence.

Defining: intentional vs. unintentional; selective vs. total; intermittent vs. stable measuring: subjective (attitudes) vs. objective

My answer is influenced by the method I have used to measure adherence. Though attitude is important, measuring adherence accurately is crucial in research.

None to add.

1. Partially adherent patients may still benefit from medication. This depends on the amount of medication taken and the minimum therapeutic dose. Therefore, dichotomized adherence scores (such as cessation of medication or medication gaps) should if possible be avoided. Medication gaps can, however, give important additional information. 2. Attitude towards medication is one of many risk factors for nonadherence; however, it is not a valid indicator of adherence (e.g., patients may not like to take medication but realize that they have to in order to avoid relapse and admission). 3. It is common practice to give a patient one adherence score. If, however, a patient uses more then one agent, adherence rates should refer to the agent of interest, since this may vary among different agents. 4. Often adherence is rated on a 1 to 7, or 1 to 10 point scale. If possible, adherence rates should be expressed in terms of amount of pills actually taken (in a specific time interval) in order to be able to compare study results.

Stopping one medication and not the others; discrepancies between patient report, doctor report, reports from family members

Complete cessation is a fine definition—it just does not capture a lot of cases

Erratic adherence including taking part of the dose should also be included, not only missing days of treatment

Willingness to take a medication recommended by the clinician at the recommended dosage is probably an important quailifier for appropriate understanding of adherence data. Simply taking (or not taking) something can be misleading.

Attitude and behavior should be distinguished. They are not the same

Although attitudes are very important to me, they are not helpful as a definition

Best to obtain a percentage from overall medication goal.

Most useful is percent of prescribed med doses taken over a specific interval. Often, need to break down among med classes/types.

Likely complete cessation or longer gaps will be associated with more adverse outcomes than taking a less than specified amount over a longer period of time. Attitude and intention are interesting but another step removed from actual medication use.

People who are willing to take medication (attitude) do not necessarily take it (behavior).

It is very difficult to assess % time off meds, so complete cessation may be a more practical approach.

% adherent really depends on clinical consequence of low adherence.

Cessation is difficult to assess if a patient uses multiple pharmacies or healthcare systems, or there are problems with treatment retention in general. %s such as the Medication Possession Ratio, while useful in working with administrative data, can lead to flawed interpretations. So we have been finding more validity in refill "gaps", perhaps 2-3 months at least in admin data, highly correlated with relapse & admissions. Naturally, patient insight or willingness is also crucial when placing poor adherence in context.

3 **Adherence in schizophrenia defined as percentage of medication taken.** Assuming you would define adherence to medication in outpatients with schizophrenia as a percentage of antipsychotic medication consistently taken over the past 12 months, indicate how would you define full adherence, partial adherence, and nonadherence by checking the percentages you believe apply to each. For ***each*** percentage of medication taken listed below, please check the ***one*** category you think is most appropriate. You can check more than one percentage under each category but please do not check the same percentage twice.

	Total N	Fully adherent	Partially adherent	Nonadherent
25% or less	39		1	38
26%–50%	37		15	22
51%–60%	38		33	5
61%–70%	40		35	5
71%–80%	38	4	33	1
81%–90%	38	26	12	
91%–100%	40	38	1	1

4 **Levels of adherence of the average patient in your practice.** What percentage of antipsychotic medication do you think the average outpatient with schizophrenia ***in your practice*** has taken over the past 12 months (include patients who have dropped out of treatment)?

	n
25% or less	0
26%–50%	1
51%–60%	9
61%–70%	13
71%–80%	5
81%–100%	3
Do not see patients with schizophrenia in my practice	10

Supplementary material for Velligan DI, Weiden PJ, Sajatovic M, et al. The expert consensus guideline series: adherence problems in patients with serious and persistent mental illness. J Clin Psychiatry 2009;70 (suppl 4)

5 **Nonadherence in schizophrenia can be defined in terms of a medication gap.** Assuming you would use a period off medication to define nonadherence in outpatients with schizophrenia, please indicate which time period over the previous 3 months you believe is the most useful definition beyond which a medication gap (minimum period of time during which medication is stopped before restarting again) would be considered to meet criteria for nonadherence.

	n
At least 1 day	0
2 consecutive days	1
4 consecutive days	11
At least 1 week	19
2 consecutive weeks	6
At least 1 month	3
> 1 month (consecutive)	1

6 **Defining treatment nonadherence in bipolar disorder.** A number of different methods have been used to define medication nonadherence in studies of bipolar disorder. Please rate the usefulness of the following ways of defining nonadherence to treatment. Please use a rating of 7–9 for methods you consider most useful, a rating of 4–6 for methods that are somewhat useful, and a rating of 1–3 to methods that are not very useful.

	95% Confidence Intervals Third Line / Second Line / First Line	*N*	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
2) Percentage of medication not taken over a period of time		41	7.3 (1.2)	*10*	83	17	0
3) A specific time period off medications (medication gap) during a certain interval		41	6.4 (1.5)	*7*	54	41	5
1) Complete cessation of medication		41	5.8 (2.8)	*27*	46	27	27
4) Patient's attitude towards (willingness to take) medication (regardless of actual behavior)		41	4.2 (2.2)	*5*	20	29	51
	1 2 3 4 5 6 7 8 9			%	%	%	%

7 **Comments.** We are interested in your comments on this question and your ideas as to other useful ways of defining this concept:

In Question 5, the categories don't hit my preferred cut-point around 75-80%; 2 weeks is too short and at least 1 month is too long to capture the breakpoint (around 3 weeks).

The issue with bipolar is a bit different than with schizophrenia. Most patients with bipolar are taking more than mood stabilizers—the greater number of medications, the greater the chances for non-compliance (may take only one instead of two, may alternate depending on what they feel they need). Very specific issues arise concerning certain medications that would require slow titration back if partial adherence. Some different reasons for partial or non-adherence associated with nature of illness.

See comments on question 2.

Again, many patients are on multiple medications and often stop one but not the others. See also response to Question 2.

In bipolar patients, adherence may be different depending on the phase of the illness.

Again, agreement to take the clinician's recommendation for a medication and an appropriate dosing schedule is an important concept beyond whether or not something is taken during a given interval.

Same comment—I do not believe that attitude equals behavior

Best is percent of doses taken over interval

Because most patients with bipolar disorder are on multiple medications, the concept of percentage of medications over time is probably more useful than an absolute metric because patients tend to stop medications differentially.

See comments above for patients with schizophrenia

Same as for schizophrenia

Again restricting most of our work to analyzing administrative data, though also some recent surveys, it seems to suggest that both gaps and %s often fail to capture potential problems or reasons for non-adherence vs. schizophrenia. Current mania, anxiety, depression or psychotic episodes might partially explain this, also complex use of mood stabilizers and atypical antipsychotics. As such, patients' attitudes, health beliefs and the therapeutic alliance appear to be equally important as objective adherence measures.

8 **Defining treatment adherence in bipolar disorder.** A patient with bipolar disorder is prescribed both an atypical antipsychotic and a mood stabilizer. Assume that the prescribed doses are reasonable and that there is an appropriate clinical rationale for the patient to be prescribed this combination. Do you think that the patient needs to take both medications as prescribed to be considered adherent?

No	Yes
6	34

If you checked no, which medication do you think is required for the patient to be considered adherent?

Depends on their current level of symptomatology

If one med has been shown effective, then pt is adherent; if 2 meds are needed, then stopping one is nonadherent, so it cannot be separated from efficacy

Mood stabilizer

Mood stabilizer

Mood stabilizer—- BUT depends on current mental state

9 **Adherence in bipolar disorder defined as percentage of medication taken.** Assuming you would define adherence to medication in outpatients with bipolar disorder as a percentage of medication consistently taken over the past 12 months, indicate how would you define full adherence, partial adherence, and nonadherence by checking the percentages you believe apply to each. For ***each*** percentage of medication taken listed below, please check the ***one*** category you think is most appropriate. You can check more than one percentage under each category but please do not check the same percentage twice. Note we are asking about the primary psychiatric medication or medications the person is prescribed.

	Total *N*	Fully adherent	Partially adherent	Nonadherent
25% or less	39		2	37
26%–50%	39		13	26
51%–60%	38		29	9
61%–70%	40		34	6
71%–80%	39	6	32	1
81%–90%	38	24	13	1
91%–100%	39	36	1	2

10 **Levels of adherence in the average patient in your practice.** What percentage of his or her primary psychiatric medication(s) do you think the average outpatient with bipolar disorder ***in your practice*** has taken over the past 12 months (include patients who have dropped out of treatment)?

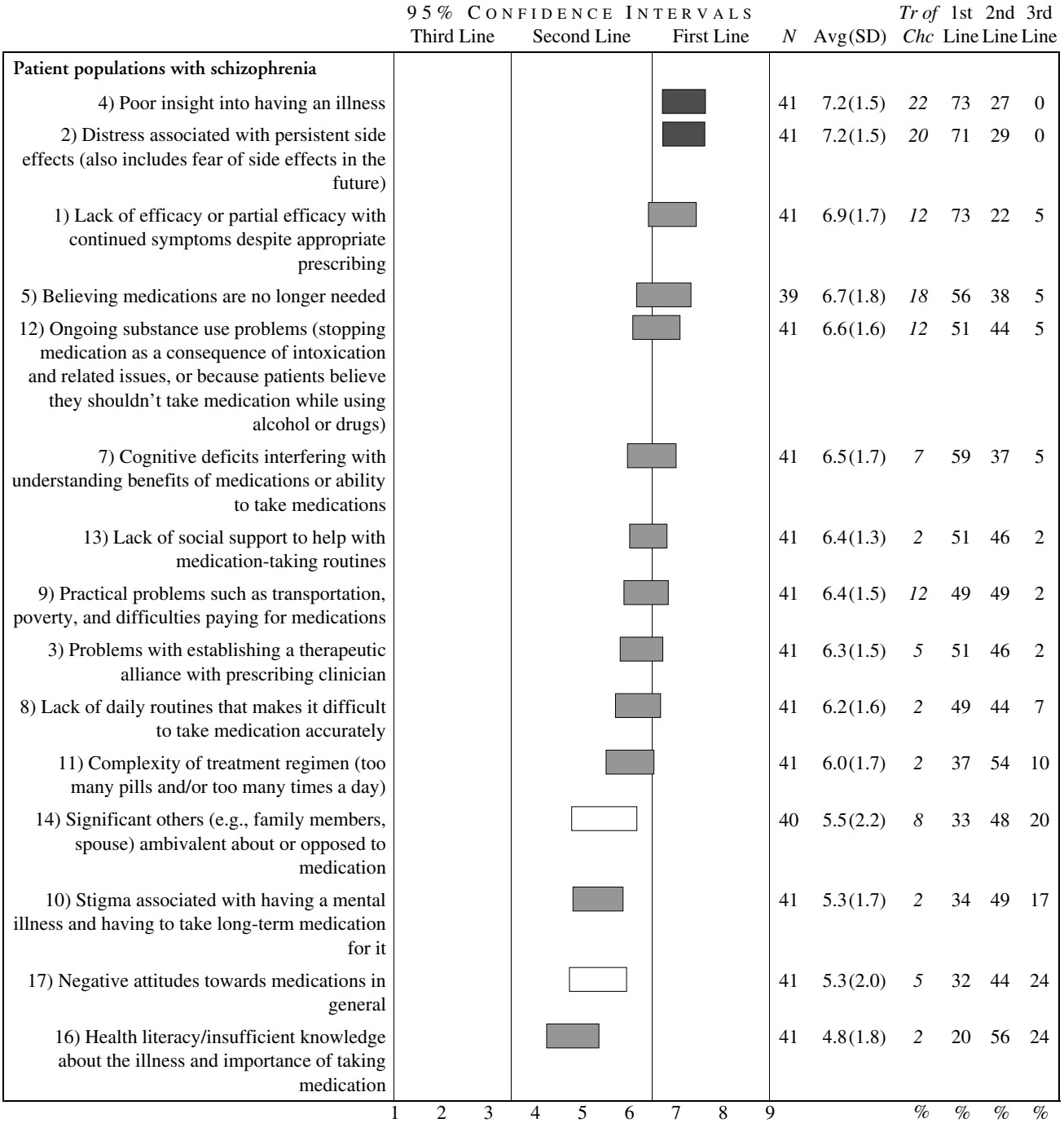
25% or less	0
26%–50%	4
51%–60%	4
61%–70%	14
71%–80%	6
81%–100%	4
Do not see patients with bipolar disorder in my practice	9

11 **Nonadherence in bipolar disorder can be defined in terms of a medication gap.** Assuming you would use a period off medication to define nonadherence in outpatients with bipolar disorder, please indicate which time period over the previous 3 months you believe is the most useful definition beyond which a medication gap (minimum period of time during which medication is stopped before restarting again) would be considered to meet criteria for nonadherence.

At least 1 day	0
2 consecutive days	0
4 consecutive days	13
At least 1 week	19
2 consecutive weeks	6
At least 1 month	1
> 1 month (consecutive)	2

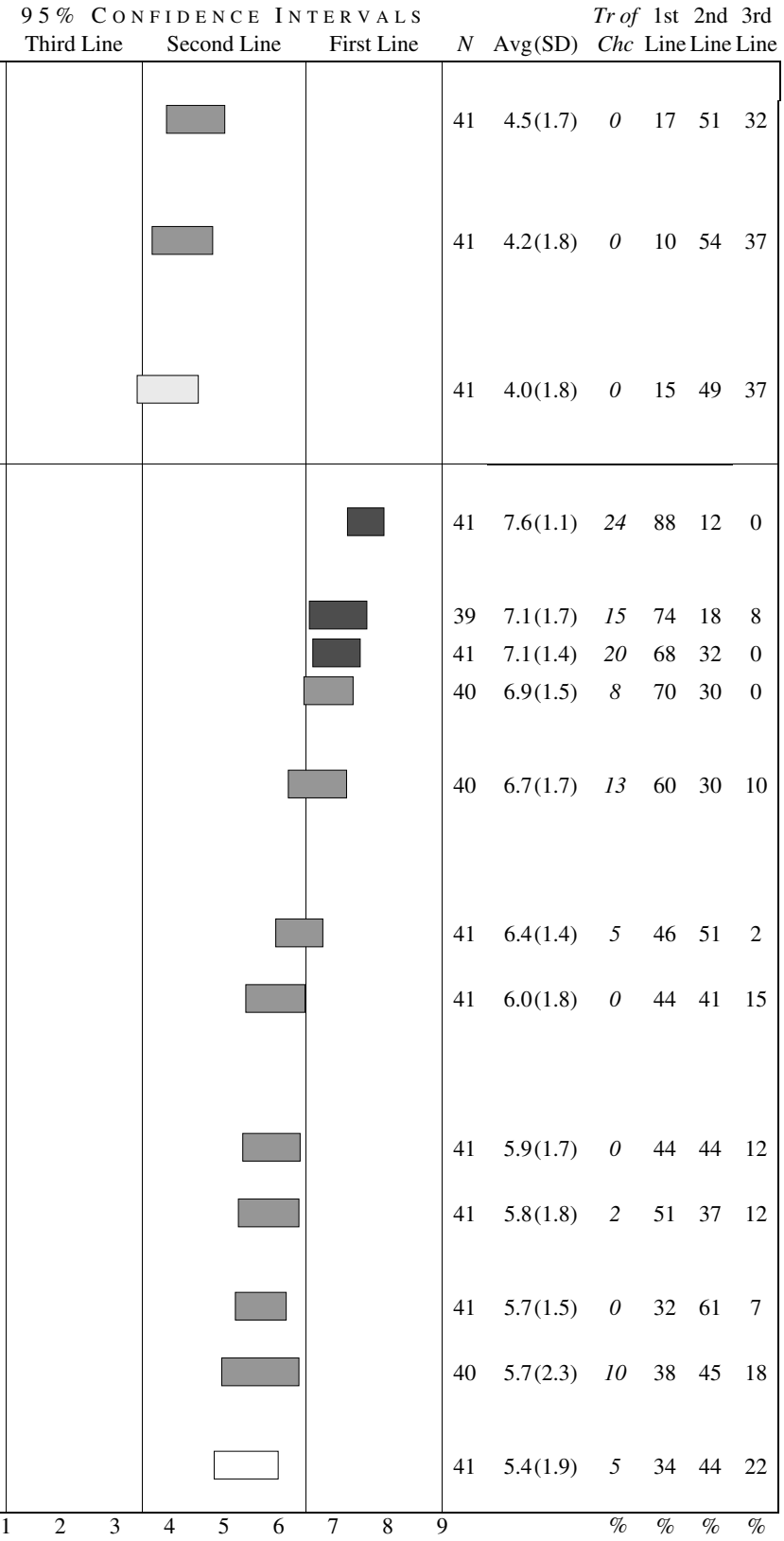
II. Factors That Affect Adherence

12 **Factors that affect adherence in patients with serious mental illness.** All of the following have been associated with adherence problems. In general, how important do you believe each of the following factors is as a potential contributor to problems with adherence to prescribed psychiatric medications in populations of patients with schizophrenia or bipolar disorder. Assume that the diagnosis is clearly established. We realize some factors may be more important as contributors to adherence problems in one disorder or the other, so feel free to give lower ratings to those items you think are less important. Please use a rating of 7–9 to those factors you believe are often very important, a rating of 4–6 to those factors that you believe are somewhat important, and a rating of 1–3 to those factors that you do not believe play much of a role in adherence problems in these populations of patients.



Supplementary material for Velligan DI, Weiden PJ, Sajatovic M, et al. The expert consensus guideline series: adherence problems in patients with serious and persistent mental illness. J Clin Psychiatry 2009;70 (suppl 4)

12 ***continued***



	N	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Patient populations with schizophrenia						
15) Issues related to the patient's cultural background (e.g., culture-specific attributions of the illness, such as spirits or curses or cultural preference for alternative medicine)	41	4.5(1.7)	*0*	17	51	32
6) Psychological reactions to symptomatic improvement (e.g., missing highs associated with mania/hypomania, increased insight into having a devastating illness such as schizophrenia)	41	4.2(1.8)	*0*	10	54	37
18) Preference for alternative treatment modalities (e.g., psychotherapy, spiritual approaches)	41	4.0(1.8)	*0*	15	49	37
Patient populations with bipolar disorder						
2) Distress associated with persistent side effects (also includes fear of side effects in the future)	41	7.6(1.1)	*24*	88	12	0
5) Believing medications are no longer needed	39	7.1(1.7)	*15*	74	18	8
4) Poor insight into having an illness	41	7.1(1.4)	*20*	68	32	0
1) Lack of efficacy or partial efficacy with continued symptoms despite appropriate prescribing	40	6.9(1.5)	*8*	70	30	0
12) Ongoing substance use problems (stopping medication as a consequence of intoxication and related issues, or because patients believe they shouldn't take medication while using alcohol or drugs)	40	6.7(1.7)	*13*	60	30	10
3) Problems with establishing a therapeutic alliance with prescribing clinician	41	6.4(1.4)	*5*	46	51	2
6) Psychological reactions to symptomatic improvement (e.g., missing highs associated with mania/hypomania, increased insight into having a devastating illness such as schizophrenia)	41	6.0(1.8)	*0*	44	41	15
11) Complexity of treatment regimen (too many pills and/or too many times a day)	41	5.9(1.7)	*0*	44	44	12
10) Stigma associated with having a mental illness and having to take long-term medication for it	41	5.8(1.8)	*2*	51	37	12
8) Lack of daily routines that makes it difficult to take medication accurately	41	5.7(1.5)	*0*	32	61	7
14) Significant others (e.g., family members, spouse) ambivalent about or opposed to medication	40	5.7(2.3)	*10*	38	45	18
17) Negative attitudes towards medications in general	41	5.4(1.9)	*5*	34	44	22
			%	*%*	*%*	*%*

12 *continued*

	95% Confidence Intervals					*Tr of Chc*	1st Line	2nd Line	3rd Line
	Third Line	Second Line	First Line	*N*	Avg(SD)				
Patient populations with bipolar disorder									
9) Practical problems such as transportation, poverty, and difficulties paying for medications				41	5.4(1.4)	*2*	24	68	7
13) Lack of social support to help with medication-taking routines				41	5.4(1.3)	*0*	15	78	7
18) Preference for alternative treatment modalities (e.g., psychotherapy, spiritual approaches)				41	5.2(2.0)	*0*	34	44	22
7) Cognitive deficits interfering with understanding benefits of medications or ability to take medications				41	4.9(1.7)	*2*	12	66	22
16) Health literacy/insufficient knowledge about the illness and importance of taking medication				40	4.6(1.7)	*0*	13	60	28
15) Issues related to the patient's cultural background (e.g., culture-specific attributions of the illness, such as spirits or curses or cultural preference for alternative medicine)				40	4.4(1.9)	*0*	18	43	40
	1 2 3	4 5 6	7 8 9				%	%	%	%

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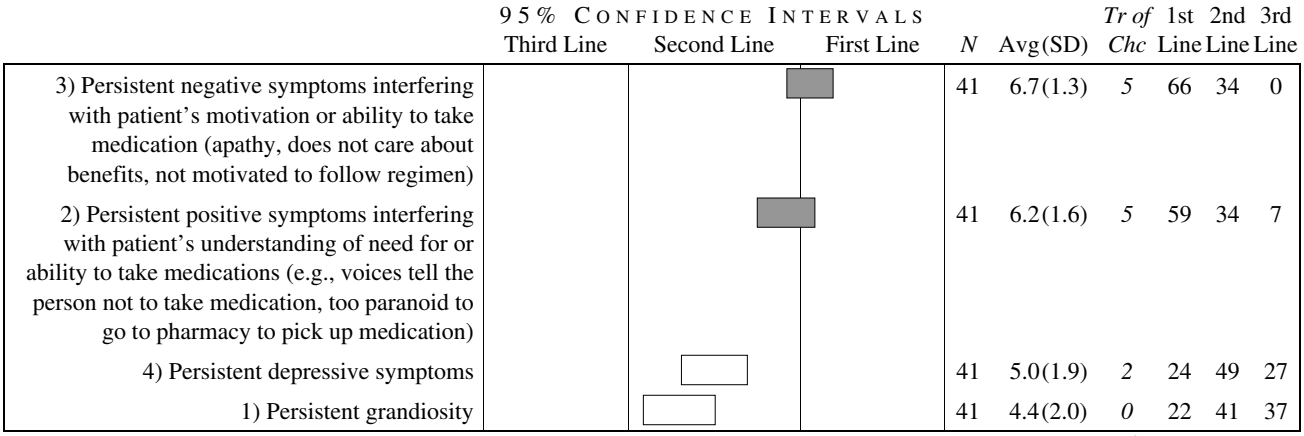
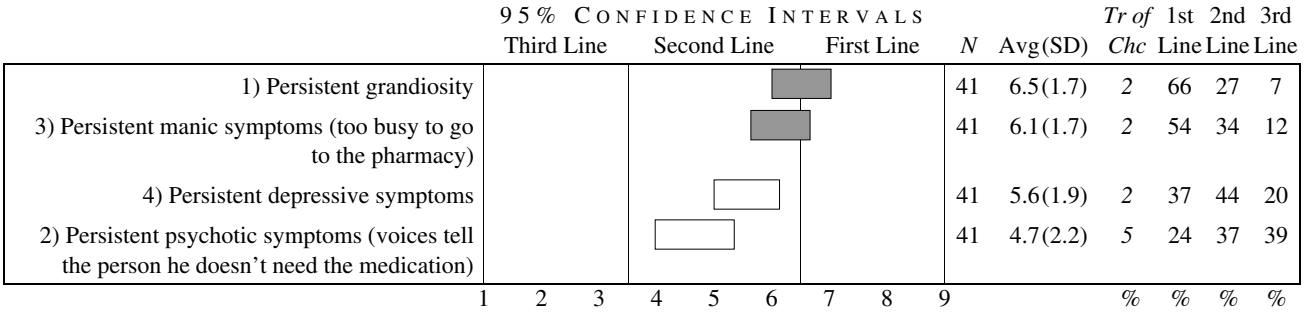
13 Partial efficacy with persisting symptoms as contributor to adherence problems in **schizophrenia**. Which types of persistent symptoms do you believe contribute the most to adherence problems in the population of patients with schizophrenia? Please use a rating of 7–9 to indicate those symptoms you believe are often very important, a rating of 4–6 to those symptoms you believe are somewhat important, and a rating of 1–3 to those symptoms you do not believe play much of a role in adherence problems in this populations of patients.



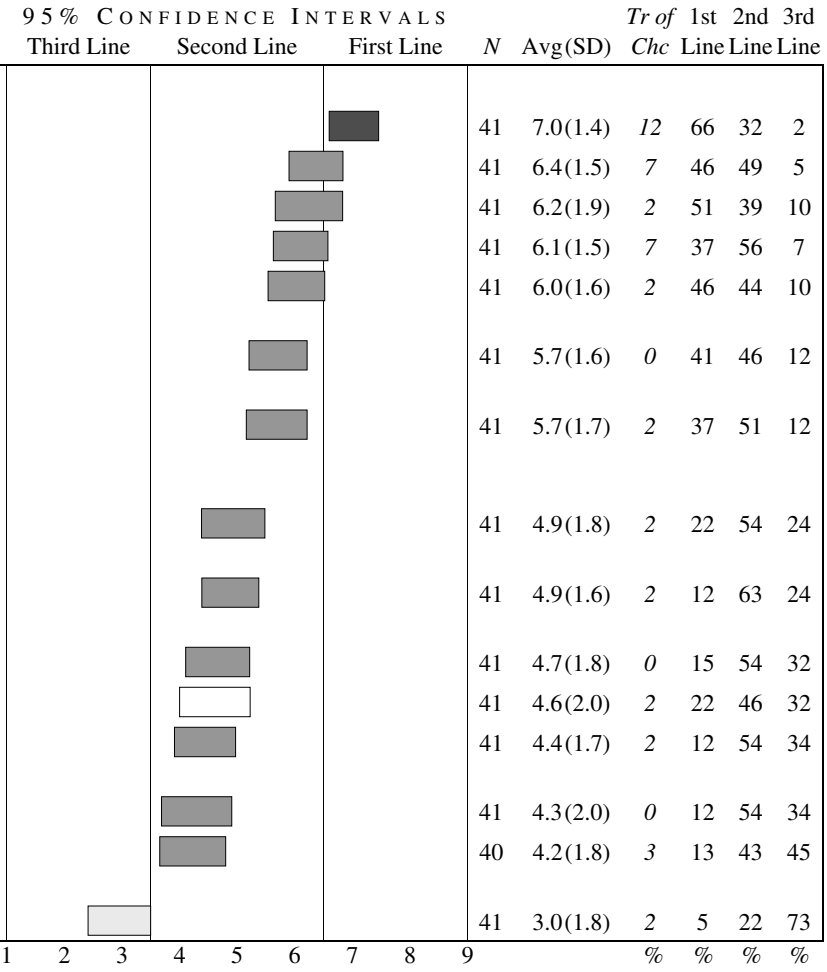
	N	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
3) Persistent negative symptoms interfering with patient's motivation or ability to take medication (apathy, does not care about benefits, not motivated to follow regimen)	41	6.7(1.3)	*5*	66	34	0
2) Persistent positive symptoms interfering with patient's understanding of need for or ability to take medications (e.g., voices tell the person not to take medication, too paranoid to go to pharmacy to pick up medication)	41	6.2(1.6)	*5*	59	34	7
4) Persistent depressive symptoms	41	5.0(1.9)	*2*	24	49	27
1) Persistent grandiosity	41	4.4(2.0)	*0*	22	41	37
			%	%	%	%

14 Partial efficacy with persisting symptoms as contributors to adherence problems in **bipolar disorder**. Which types of persistent symptoms do you believe contribute the most to adherence problems in the population of patients with bipolar disorder? Please use a rating of 7–9 to indicate those symptoms you believe are often very important, a rating of 4–6 to those symptoms you believe are somewhat important, and a rating of 1–3 to those symptoms you do not believe play much of a role in adherence problems in this populations of patients.



	N	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
1) Persistent grandiosity	41	6.5(1.7)	*2*	66	27	7
3) Persistent manic symptoms (too busy to go to the pharmacy)	41	6.1(1.7)	*2*	54	34	12
4) Persistent depressive symptoms	41	5.6(1.9)	*2*	37	44	20
2) Persistent psychotic symptoms (voices tell the person he doesn't need the medication)	41	4.7(2.2)	*5*	24	37	39
			%	%	%	%

15 **Distressing side effects as contributors to adherence problems.** Which types of side effects (anticipated or actual) do you believe contribute the most to adherence problems in the population of patients with schizophrenia and bipolar disorder? Please use a rating of 7–9 to indicate those side effects you believe are often very important, a rating of 4–6 to those side effects you believe are somewhat important, and a rating of 1–3 to those side effects you do not believe play much of a role in adherence problems in these populations of patients.



	N	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Patient populations with schizophrenia						
14) Weight gain (women)	41	7.0(1.4)	*12*	66	32	2
3) Excessive sedation	41	6.4(1.5)	*7*	46	49	5
7) Akathisia	41	6.2(1.9)	*2*	51	39	10
15) Weight gain (men)	41	6.1(1.5)	*7*	37	56	7
13) Sexual dysfunction that the patient associates with the medication (men)	41	6.0(1.6)	*2*	46	44	10
9) Parkinsonian symptoms (e.g., rigidity, parkinsonian tremor, akinesia)	41	5.7(1.6)	*0*	41	46	12
1) Cognitive problems the patient associates with the medication (e.g., inability to concentrate)	41	5.7(1.7)	*2*	37	51	12
5) Problems with diabetes mellitus (“blood sugar”)	41	4.9(1.8)	*2*	22	54	24
12) Sexual dysfunction that the patient associates with the medication (women)	41	4.9(1.6)	*2*	12	63	24
6) Peripheral anticholinergic problems	41	4.7(1.8)	*0*	15	54	32
4) GI side effects (e.g., nausea or diarrhea)	41	4.6(2.0)	*2*	22	46	32
10) Problems related to prolactin elevation (e.g., amenorrhea) in women	41	4.4(1.7)	*2*	12	54	34
8) Nonparkinsonian tremor	41	4.3(2.0)	*0*	12	54	34
11) Problems related to prolactin elevation (e.g., gynecomastia) in men	40	4.2(1.8)	*3*	13	43	45
2) Dermatological problems	41	3.0(1.8)	*2*	5	22	73
			%	%	%	%

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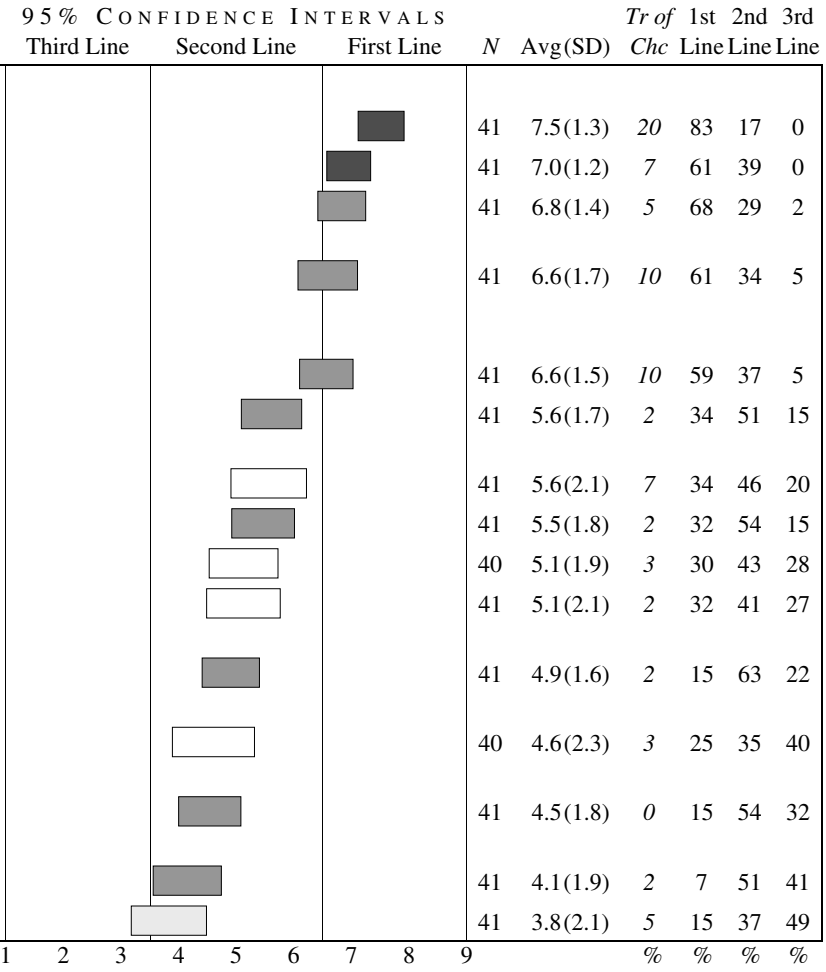
15 **continued**



	N	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Patient populations with bipolar disorder						
14) Weight gain (women)	41	7.5 (1.3)	*20*	83	17	0
3) Excessive sedation	41	7.0 (1.2)	*7*	61	39	0
13) Sexual dysfunction that the patient associates with the medication (men)	41	6.8 (1.4)	*5*	68	29	2
1) Cognitive problems the patient associates with the medication (e.g., inability to concentrate)	41	6.6 (1.7)	*10*	61	34	5
15) Weight gain (men)	41	6.6 (1.5)	*10*	59	37	5
12) Sexual dysfunction that the patient associates with the medication (women)	41	5.6 (1.7)	*2*	34	51	15
7) Akathisia	41	5.6 (2.1)	*7*	34	46	20
4) GI side effects (e.g., nausea or diarrhea)	41	5.5 (1.8)	*2*	32	54	15
8) Nonparkinsonian tremor	40	5.1 (1.9)	*3*	30	43	28
9) Parkinsonian symptoms (e.g., rigidity, parkinsonian tremor, akinesia)	41	5.1 (2.1)	*2*	32	41	27
5) Problems with diabetes mellitus ("blood sugar")	41	4.9 (1.6)	*2*	15	63	22
11) Problems related to prolactin elevation (e.g., gynecomastia) in men	40	4.6 (2.3)	*3*	25	35	40
10) Problems related to prolactin elevation (e.g., amenorrhea) in women	41	4.5 (1.8)	*0*	15	54	32
6) Peripheral anticholinergic problems	41	4.1 (1.9)	*2*	7	51	41
2) Dermatological problems	41	3.8 (2.1)	*5*	15	37	49
			%	*%*	*%*	*%*

16 **Unresolved psychological issues about illness and medication as contributors to adherence problems.** Which of the following psychological issues do you believe contribute the most to adherence problems in the population of patients with schizophrenia and bipolar disorder? Please use a rating of 7–9 to indicate those issues you believe are often very important, a rating of 4–6 to those issues you believe are somewhat important, and a rating of 1–3 to those issues you do not believe play much of a role in adherence problems in these populations of patients.

	95% Confidence Intervals Third Line / Second Line / First Line	*N*	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Patient populations with schizophrenia							
3) Stops medication due to distress resulting from increased insight into having a devastating illness		41	3.6(1.9)	*0*	7	39	54
1) Stops medication because wants to experience return of positive symptoms (e.g., voices)		41	3.3(1.9)	*0*	10	27	63
2) Stops medications because of missing the highs (excessive energy, feelings of invulnerability)		41	2.7(1.6)	*0*	0	32	68
Patient populations with bipolar disorder							
2) Stops medications because of missing the highs (excessive energy, feelings of invulnerability)		41	6.1(1.7)	*2*	61	27	12
3) Stops medication due to distress resulting from increased insight into having a devastating illness		41	3.4(1.9)	*2*	5	34	61
1) Stops medication because wants to experience return of positive symptoms (e.g., voices)		41	3.0(1.8)	*0*	7	22	71
	1 2 3 4 5 6 7 8 9			%	%	%	%

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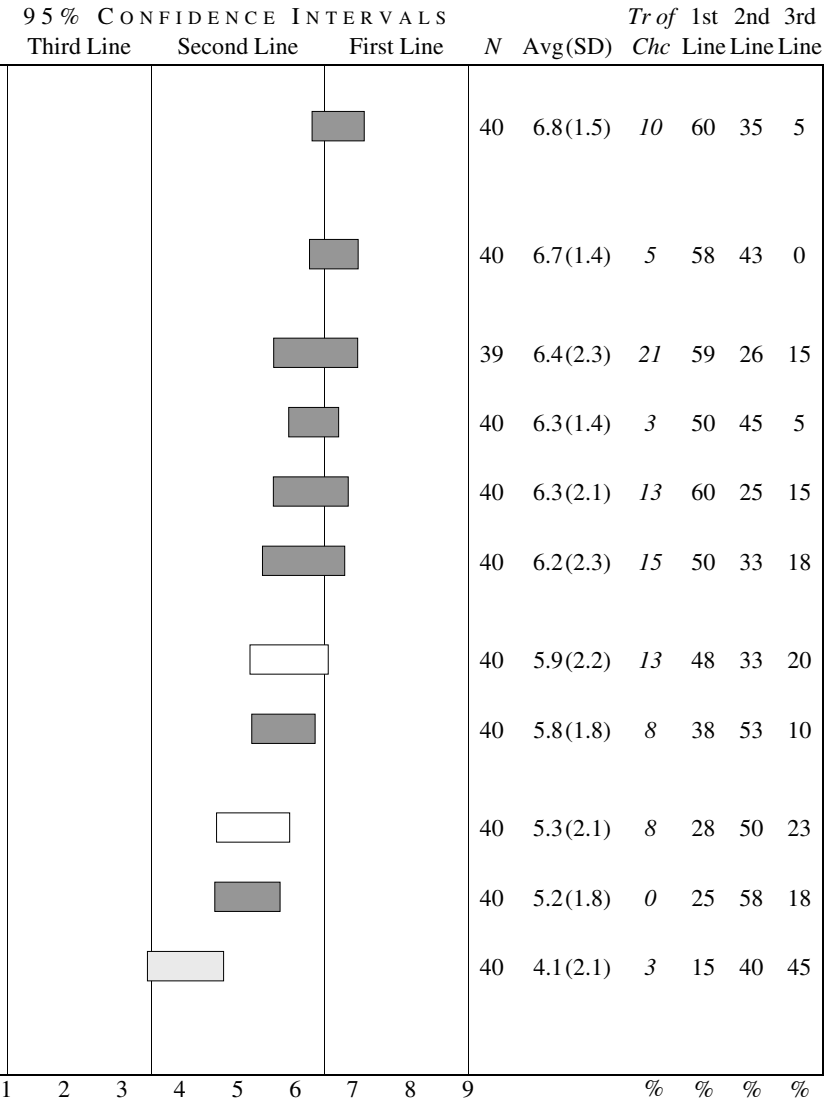
III. Assessing Adherence

17 **Sources and usefulness of information on adherence.** How do ***treating physicians*** get the majority of information about adherence to medication in their patients? Please rate the ***frequency*** with which clinicians actually use the following sources of information about adherence in routine clinical practice and their ***usefulness*** in obtaining an accurate assessment of adherence. Use a rating of 7–9 to indicate most frequently available or most useful sources, 4–6 for sources that clinicians sometimes have access to or that are sometimes useful, and a 1–3 for sources that are rarely available or not very useful.

	95% Confidence Intervals (Third Line / Second Line / First Line)	*N*	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Frequency in current practice							
1) Ask the patient about recent adherence to medication (behavior)		40	7.8 (1.4)	*38*	88	13	0
3) Ask the patient about any problems they have been having or anticipate in the near future taking medications (e.g., side effects, financial problems)		40	6.1 (2.0)	*15*	45	43	13
2) Ask the patient about their attitude towards medication		40	5.7 (1.8)	*8*	33	55	13
4) Use level of symptoms on mental status exam as a way to estimate adherence (equating response with adherence and lack of response with lack of adherence)		40	5.0 (2.5)	*8*	30	40	30
9) Speak with other (nonprescribing) members of the patient's treatment team (e.g., case manager)		40	4.8 (1.8)	*0*	15	65	20
6) Ask patients bring in their medication for review and/or pill count		40	4.6 (1.9)	*0*	18	48	35
5) Call patient's family or caregiver to ask about adherence, if patient has given permission to contact them		40	4.3 (2.1)	*0*	23	33	45
7) Obtain laboratory assessment (plasma levels of medications)		39	4.1 (2.2)	*3*	23	33	44
8) Review pharmacy records to see if patient picked up medication refills		40	2.9 (2.0)	*0*	10	18	73
11) Use a standardized adherence rating instrument (e.g., BARS, MARS*)		40	1.9 (1.1)	*0*	0	8	93
10) Technological tools such as smart pill containers that send adherence information via web to treatment team		40	1.8 (1.7)	*3*	5	3	93
	1 2 3 4 5 6 7 8 9			%	%	%	%

17 *continued*



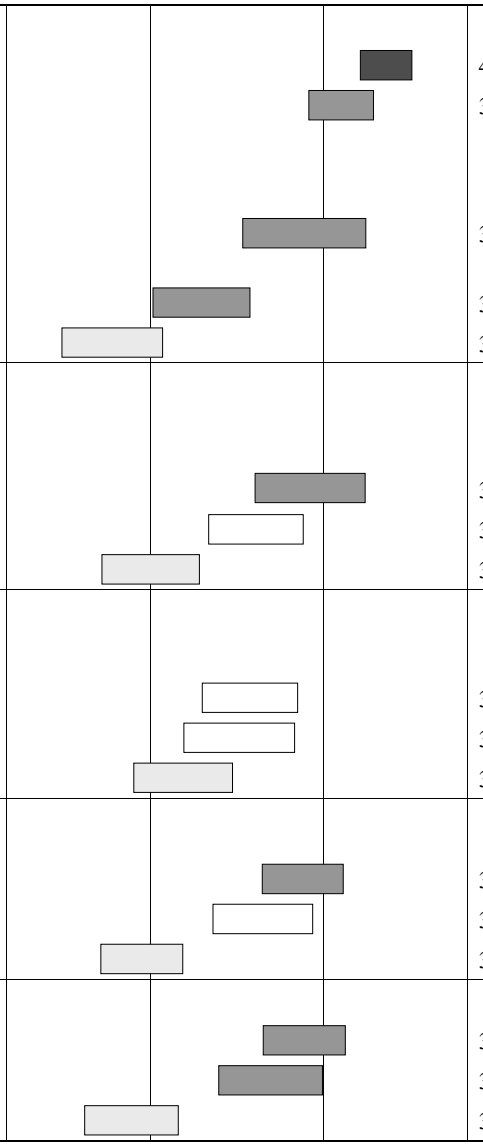
*Byerly MJ, Nakonezny PA, Rush AJ. The Brief Adherence Rating Scale (BARS) validated against electronic monitoring in assessing the antipsychotic medication adherence of outpatients with schizophrenia and schizoaffective disorder. Schizophr Res 2008;100:60–9; Thompson K, Kulkarni J, Sergejew AA. Reliability and validity of a new Medication Adherence Rating Scale (MARS) for the psychoses. Schizophr Res 2000;42:241–7

18 **Frequency and duration of adherence assessments.** Given the various clinical priorities in evaluating and treating patients with schizophrenia (e.g. symptom and side effect monitoring, substance abuse assessment, evaluating comorbid medical conditions), please rate the appropriateness of the following frequencies and durations for ***the prescriber or another member of the treatment team*** to do a focused clinical assessment of medication adherence in the different situations listed at the heads of the columns? Before rating the options, please write in the average frequency (e.g., 1 week, 2 weeks, 1 month, 2 months, etc.) with which you believe each type of patient would be seen in your practice.

Write in the average frequency such a patient would be seen at your site	A patient you know well and believe is regularly adherent to medication	A patient who is relatively new to you but at initial evaluation was regularly adherent to medication	A patient whose adherence is already known to be problematic	A patient who is not responding to medication
	7.4 ± 5.5 weeks	3.0 ± 2.1 weeks	2.1 ± 1.2 weeks	1.3 ± 0.7 weeks

Frequency	95% Confidence Intervals (Third Line / Second Line / First Line)	*N*	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
A patient you know well and believe is regularly adherent to medication							
5) Whenever there is a noticeable change in symptoms		38	6.7 (2.5)	*37*	63	21	16
3) Monthly		39	6.7 (2.4)	*28*	64	21	15
4) Every 3 months		40	6.2 (2.5)	*15*	58	25	18
2) Weekly		39	3.3 (2.1)	*3*	10	18	72
1)Daily (e.g., Program for Assertive Community Treatment [PACT] or other very structured outpatient case management services)		39	2.3 (1.5)	*0*	0	18	82
A patient who is relatively new to you but at initial evaluation was regularly adherent to medication							
5) Whenever there is a noticeable change in symptoms		39	6.4 (2.9)	*38*	59	21	21
3) Monthly		39	5.9 (2.3)	*10*	49	33	18
4) Every 3 months		39	4.7 (2.8)	*5*	36	26	38
2) Weekly		39	4.4 (2.3)	*3*	28	26	46
1) Daily (e.g., Program for Assertive Community Treatment [PACT] or other very structured outpatient case management services)		39	2.8 (1.9)	*0*	5	28	67
A patient whose adherence is already known to be problematic							
2) Weekly		39	7.1 (1.3)	*13*	74	26	0
5) Whenever there is a noticeable change in symptoms		39	6.2 (3.3)	*41*	62	5	33
1) Daily (e.g., Program for Assertive Community Treatment [PACT] or other very structured outpatient case management services)		39	5.6 (1.9)	*10*	31	56	13
3) Monthly		39	4.9 (2.6)	*13*	28	36	36
4) Every 3 months		39	3.3 (2.7)	*10*	18	15	67
	1 2 3 4 5 6 7 8 9			*%*	*%*	*%*	*%*

18 ***continued***



Frequency	*N*	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
A patient who is not responding to medication						
2) Weekly	40	7.6 (1.4)	*28*	88	8	5
1) Daily (e.g., Program for Assertive Community Treatment [PACT] or other very structured outpatient case management services)	39	6.8 (1.8)	*21*	62	33	5
5) Whenever there is a noticeable change in symptoms	39	6.2 (3.4)	*46*	62	5	33
3) Monthly	38	4.4 (2.6)	*8*	26	24	50
4) Every 3 months	39	2.8 (2.8)	*10*	13	13	74
Duration						
A patient you know well and believe is regularly adherent to medication						
1) 5 minutes	39	6.3 (3.0)	*31*	67	10	23
2) 10 minutes	38	5.3 (2.6)	*16*	34	39	26
3) 30 minutes	39	3.5 (2.7)	*10*	18	23	59
A patient who is relatively new to you but at initial evaluation was regularly adherent to medication						
2) 10 minutes	38	5.2 (2.6)	*13*	39	29	32
1) 5 minutes	39	5.1 (3.1)	*15*	44	18	38
3) 30 minutes	39	4.1 (2.7)	*10*	28	21	51
A patient whose adherence is already known to be problematic						
3) 30 minutes	39	6.2 (2.2)	*18*	51	33	15
2) 10 minutes	37	5.5 (2.7)	*8*	51	24	24
1) 5 minutes	39	3.4 (2.3)	*5*	13	28	59
A patient who is not responding to medication						
3) 30 minutes	39	6.2 (2.3)	*13*	54	28	18
2) 10 minutes	37	5.6 (2.8)	*11*	54	22	24
1) 5 minutes	39	3.2 (2.6)	*8*	18	8	74
			%	%	%	%

Supplementary material for Velligan DI, Weiden PJ, Sajatovic M, et al. The expert consensus guideline series: adherence problems in patients with serious and persistent mental illness. J Clin Psychiatry 2009;70 (suppl 4)

IV. Strategies for Identifying and Addressing Adherence Problems

In this section, we first ask about a number of interventions targeted at improving adherence to medication. We then present a series of vignettes and other questions in which we ask you to indicate the types of interventions that are most likely to help with specific types of adherence problems in real-world clinical situations.

Long-acting injectable antipsychotics. The following questions ask about the use of long-acting injectable formulations of antipsychotics. When no specific type of antipsychotic is specified, we are asking you to consider use of any currently available long-acting antipsychotic (haloperidol decanoate, fluphenazine decanoate, long-acting injectable risperidone). Additional long-acting formulations of atypical antipsychotics are in development and we expect that there will more drugs in this class in the future. However, in two questions (21 and 25) we focus specifically on long-acting risperidone because it is the only long-acting atypical antipsychotic currently available and we want to find out more about how it is being used clinically.

If you don't deal with a formulary in your practice, please check here and leave question 19 blank. ***18 checked***

19 **Long-acting antipsychotic medications.** Which of the following long acting injectable medications are on the formulary at your practice site for prescription to individuals with schizophrenia? schizoaffective disorder? bipolar disorder?

	Bipolar disorder	Schizoaffective disorder	Schizophrenia
1) Haloperidol decanoate	22	23	23
2) Fluphenazine decanoate	22	23	23
3) Long-acting injectable risperidone	15	19	21

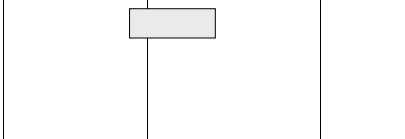
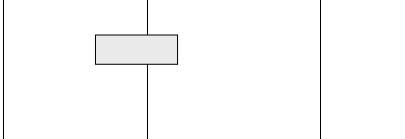
20 What percentage of patients with schizophrenia, schizoaffective disorder, and bipolar disorder at your practice site are prescribed **long-acting first generation depot medications** such as haloperidol decanoate or fluphenazine decanoate.

	Bipolar disorder	Schizoaffective disorder	Schizophrenia
Less than 10%	33	27	23
10%–20%	1	7	10
> 20%	1	1	2

21 What percentage of individuals diagnosed with schizophrenia, schizoaffective, and bipolar disorder at your practice site are prescribed long-acting injectable risperidone ?

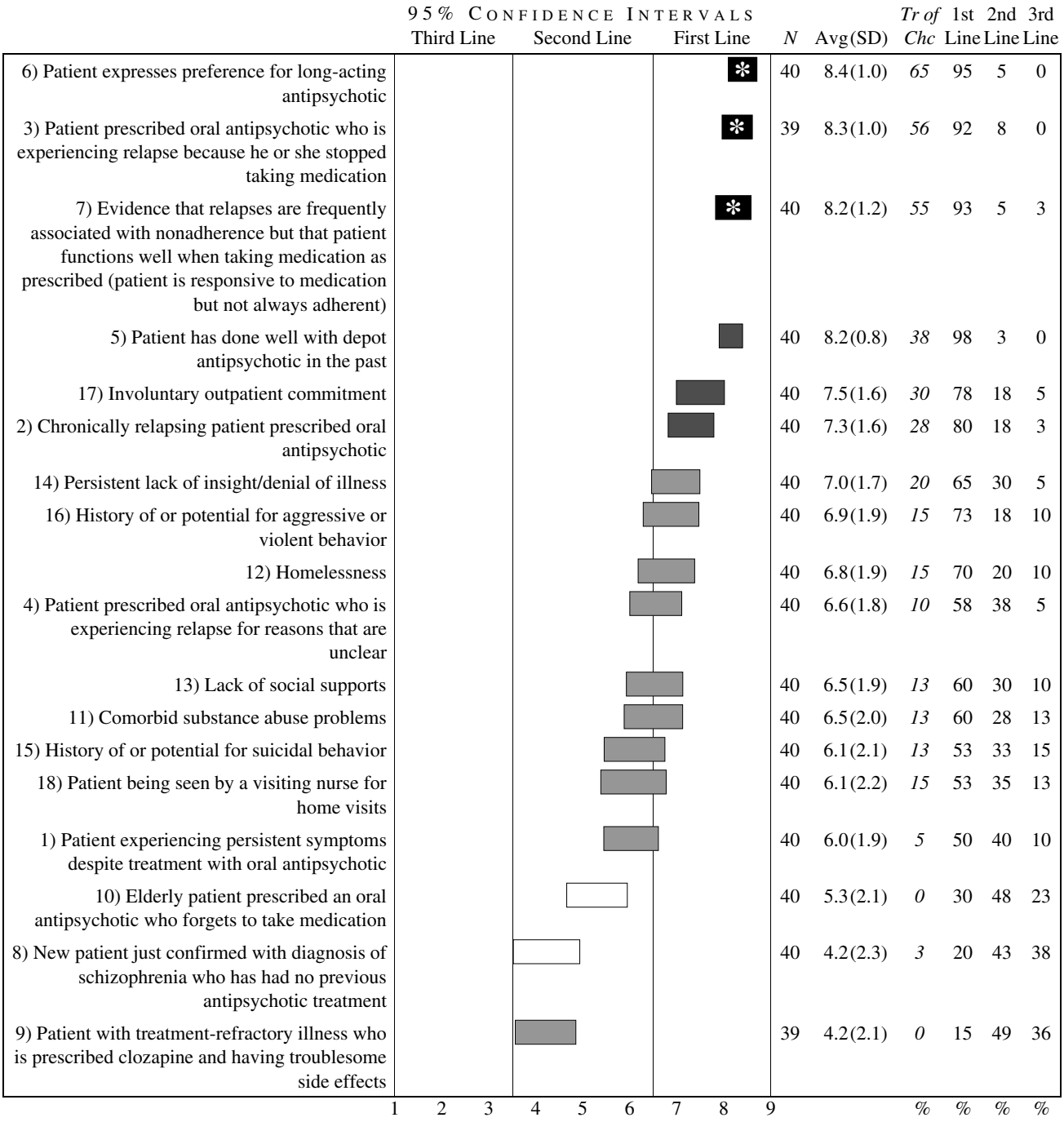
	Bipolar disorder	Schizoaffective disorder	Schizophrenia
Less than 10%	34	28	26
10%–20%	1	6	8
21%–30%	1		
51%–60%			1

22 We are interested in how strongly you agree or disagree with a number of statements concerning the use of long-acting injectable antipsychotics. Please give a rating of 7–9 to those statements with which you strongly agree, a rating of 4–6 to those statements with which you somewhat agree, and a rating of 1–3 to those statements with which you strongly disagree.

	95% Confidence Intervals Third Line / Second Line / First Line	*N*	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Long-acting injectable antipsychotics are useful in a wide range of patients who for a variety of reasons do not take all doses of oral medications prescribed by their physician.		40	7.5 (1.4)	*28*	78	23	0
Long-acting injectable antipsychotics are not particularly useful with the wide range of individuals with schizophrenia or other psychotic disorders who are willing to take oral medication.		40	3.9 (2.4)	*3*	23	23	55
Long-acting injectable antipsychotics are useful only for a handful of individuals with severe psychosis who refuse to take oral medications.		40	3.3 (2.3)	*3*	13	28	60
	1 2 3 4 5 6 7 8 9			%	%	%	%

Supplementary material for Velligan DI, Weiden PJ, Sajatovic M, et al. The expert consensus guideline series: adherence problems in patients with serious and persistent mental illness. J Clin Psychiatry 2009;70 (suppl 4)

23 Please rate the appropriateness of using ***a long-acting injectable atypical antipsychotic*** in each of the following clinical situations. Assume the patient is currently prescribed an oral antipsychotic at an adequate therapeutic dose. Use a rating of 7–9 to indicate situations in which you think it would be very appropriate to use a long-acting antipsychotic, a 4–6 for situations in which you think it would sometimes be appropriate, and a 1–3 for situations in which you think it would generally not be appropriate.



24 **Potential benefits of long-acting injectable antipsychotics.** Please review the following list of potential benefits of long-acting injectable antipsychotics and rate how important each is to you in prescribing or recommending these medications for patients with psychotic disorders. Use a rating of 7–9 to indicate benefits you consider very important, a 4–6 to indicate those you consider somewhat important, and a 1–3 those you do not consider very important.

	95% Confidence Intervals: Third Line / Second Line / First Line	*N*	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
5) Immediate recognition of nonadherence by the treatment team (i.e., when patient does not come in for injection)		40	8.0 (1.1)	*38*	93	8	0
6) Knowing when relapse has occurred despite adequate pharmacotherapy		40	7.6 (1.5)	*28*	80	20	0
9) Reduced risk of relapse		40	7.6 (1.3)	*28*	85	13	3
4) Convenience for the patient in not having to remember to take a pill every day		40	7.2 (1.5)	*25*	68	33	0
11) Some continuing medication coverage after a missed dose		40	7.1 (1.3)	*15*	70	30	0
10) Regular contact between patient and treatment team		40	6.8 (1.5)	*8*	68	28	5
8) Peace of mind for family members who want to ensure that their relative stays on his or her antipsychotic medication		40	6.4 (1.9)	*10*	58	35	8
7) More consistent plasma levels than with short-acting formulation of the medication		40	6.1 (1.7)	*0*	48	43	10
2) Better efficacy in long-term treatment than with short-acting formulation of the medication		40	6.0 (2.1)	*10*	50	35	15
3) Better side effect profile compared with short-acting formulation of the medication		40	5.6 (2.1)	*8*	38	43	20
1) Ability to use lower effective dose		39	5.2 (2.2)	*3*	33	36	31
	1 2 3 4 5 6 7 8 9			*%*	*%*	*%*	*%*

Supplementary material for Velligan DI, Weiden PJ, Sajatovic M, et al. The expert consensus guideline series: adherence problems in patients with serious and persistent mental illness. J Clin Psychiatry 2009;70 (suppl 4)

25 **Potential barriers to use of long-acting injectable risperidone.** Long-acting injectable risperidone (Risperdal Consta) is the first second-generation long-acting injectable antipsychotic available in the United States. Please rate the extent to which each of the following are ***barriers that limit your willingness or ability to prescribe this medication in your practice***. Use a rating of 7–9 to indicate those items that are a significant barrier to use of the medication, a rating of 4–6 to indicate those items that sometimes interfere with your willingness or ability to use this medication, and a rating of 1–3 to those items that rarely affect your decision to use or not use this medication.

	95% Confidence Intervals Third Line / Second Line / First Line	*N*	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
9) Negative attitudes towards injections by patients		39	5.3 (2.3)	*8*	28	51	21
3) Inability to stop medication immediately should side effects become a problem		39	5.0 (1.8)	*0*	21	54	26
2) Frequency of injections (i.e., every 2 weeks)		39	4.6 (2.0)	*3*	15	54	31
11) Problems with reimbursement for medication or injection visits		39	4.5 (2.3)	*3*	23	38	38
5) Lack of availability of nursing staff to give injections		38	4.3 (2.6)	*11*	24	24	53
12) Stigma associated with injections or depot clinics		39	4.1 (2.6)	*3*	26	26	49
4) Inadequately established benefits		39	3.9 (2.4)	*0*	21	28	51
1) I assume that my patients will refuse injections		39	3.6 (2.2)	*3*	15	31	54
10) Negative perception of injections (e.g., belief that benefits of injections are quite limited so that they are unnecessary for the majority of patients)		39	3.6 (2.3)	*3*	13	31	56
6) Local effects of repeated injections		39	3.5 (1.7)	*0*	8	33	59
8) Need for refrigeration of medication		39	3.5 (2.2)	*5*	10	33	56
7) Need for overlap of oral medication with injections for 3 or more weeks		39	3.3 (1.8)	*0*	8	33	59
	1 2 3 4 5 6 7 8 9			%	%	%	%

26 **Overall strategies for assessing adherence.** Please rate the appropriateness of the following strategies in assessing for adherence problems.

	95% Confidence Intervals Third Line / Second Line / First Line	*N*	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
1) Assess for **actual behavior** related to medication taking*		40	7.7 (1.4)	*40*	83	15	3
2)) Assess the patient's **attitude** toward taking medication**		41	7.1 (1.8)	*32*	66	32	2
	1 2 3 4 5 6 7 8 9			%	%	%	%

*e.g., Ask the patient "How many doses did you miss over the last week? How do you remember to take your medication? Does anyone help you remember to take your medication?"

**e.g., Ask the patient "Do you like/accept/feel at ease with the idea of taking the medication? Do you think it helps you? Do you plan to keep taking it in the future? Do you feel it is a necessary part of your treatment plan (if not why not)? What don't you like about the medication? Do you have any specific concerns about your medication? How does your family feel about you taking medication?"

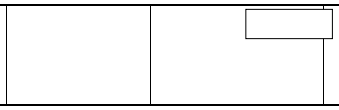
27 **Outpatient commitment.** Outpatient commitment is a controversial strategy for patients who are not aware of their illness and raises conflicting agendas involving a desire to allow the patient the most autonomy possible versus the desire to prevent the person from relapsing.

Is outpatient commitment or a variation thereof a treatment option available in your own treatment setting?

Yes	Not sure	No
20	5	15

Have you had patients in your treatment setting who have received outpatient commitment?

Yes	No
17	22

	95% Confidence Intervals (Third Line / Second Line / First Line)	N	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
1) If yes, please rate the effectiveness of outpatient commitment in your clinical experience		20	5.9(1.7)	*0*	55	30	15
	1 2 3 4 5 6 7 8 9				%	%	%	%

What problems have you experienced using outpatient commitment?

Unwillingness of court system to hold hearings and enforce requirements

1)Difficult to initiate due to some systems issues(paperwork, who is identified as contact person or agency); 2) if patient at time is IP at private facility, it may be a challenge to convince the IP physician; 3) lack of integration of systems

Some patients on outpatient commitment perceive themselves as being coerced into taking medications and this has affected therapeutic alliance.

Works only temporarily. Then enforcement becomes a hassle for the guardians.

None

Getting court order and law enforcement follow-through

None

Ultimately, patients disinterested in treatment will find a way out of it, regardless of commitment. It can also damage the therapeutic alliance.

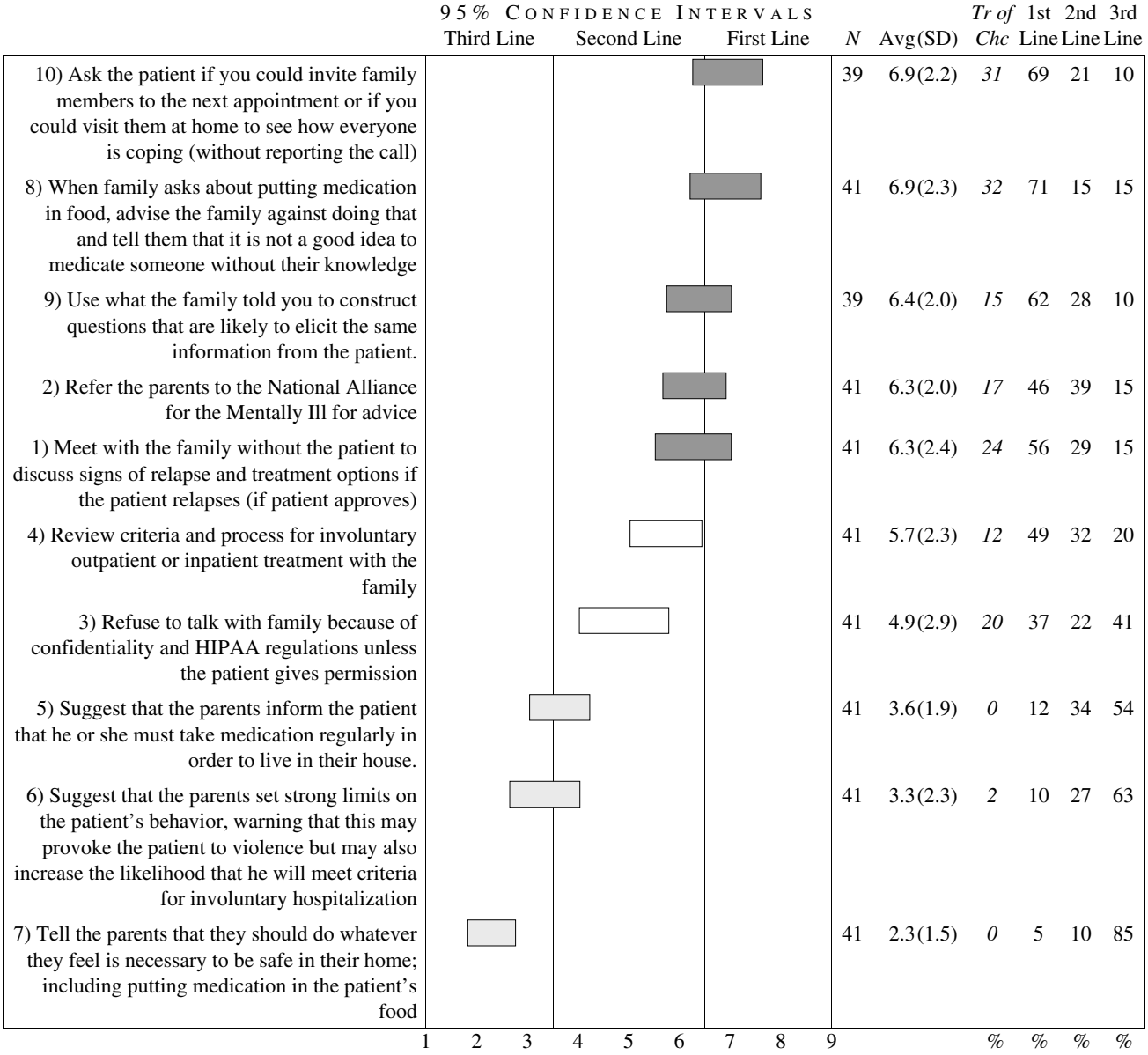
Patient left state. Logistics for rehospitalizing sometimes difficult.

Difficult to obtain

Very inconsistent criteria and quality of care after court decision, driver for commitment was more political than clinical (New York State 'Kendra's Law')

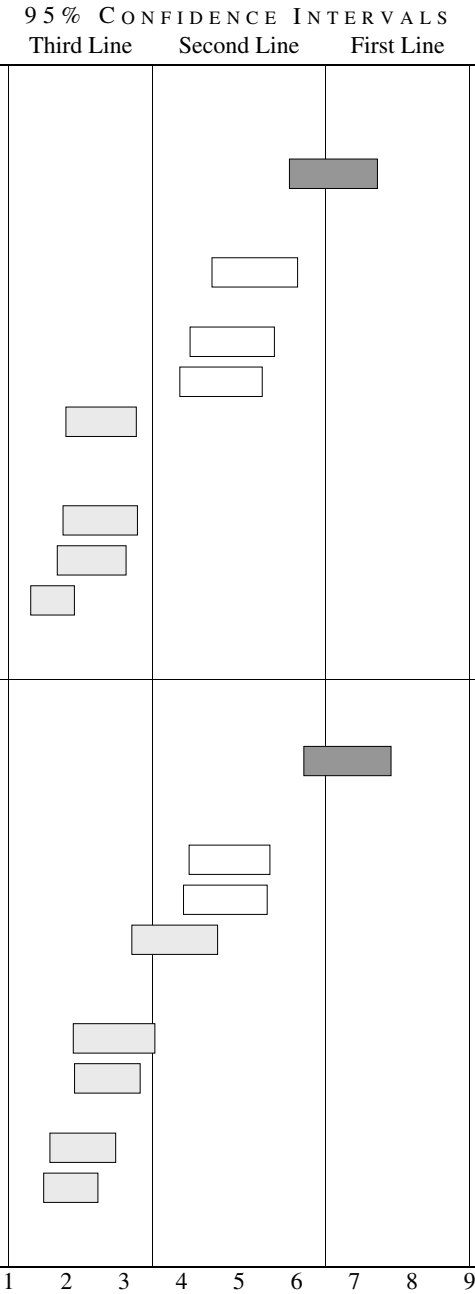
Supplementary material for Velligan DI, Weiden PJ, Sajatovic M, et al. The expert consensus guideline series: adherence problems in patients with serious and persistent mental illness. J Clin Psychiatry 2009;70 (suppl 4)

28 **Working with families.** A family members calls you about a patient's lack of adherence to medication you have prescribed and asks for advice. Please rate the appropriateness of the following strategies in this situation



	N	Avg(SD)	*Tr of Chc*	1st Line %	2nd Line %	3rd Line %
10) Ask the patient if you could invite family members to the next appointment or if you could visit them at home to see how everyone is coping (without reporting the call)	39	6.9(2.2)	*31*	69	21	10
8) When family asks about putting medication in food, advise the family against doing that and tell them that it is not a good idea to medicate someone without their knowledge	41	6.9(2.3)	*32*	71	15	15
9) Use what the family told you to construct questions that are likely to elicit the same information from the patient.	39	6.4(2.0)	*15*	62	28	10
2) Refer the parents to the National Alliance for the Mentally Ill for advice	41	6.3(2.0)	*17*	46	39	15
1) Meet with the family without the patient to discuss signs of relapse and treatment options if the patient relapses (if patient approves)	41	6.3(2.4)	*24*	56	29	15
4) Review criteria and process for involuntary outpatient or inpatient treatment with the family	41	5.7(2.3)	*12*	49	32	20
3) Refuse to talk with family because of confidentiality and HIPAA regulations unless the patient gives permission	41	4.9(2.9)	*20*	37	22	41
5) Suggest that the parents inform the patient that he or she must take medication regularly in order to live in their house.	41	3.6(1.9)	*0*	12	34	54
6) Suggest that the parents set strong limits on the patient's behavior, warning that this may provoke the patient to violence but may also increase the likelihood that he will meet criteria for involuntary hospitalization	41	3.3(2.3)	*2*	10	27	63
7) Tell the parents that they should do whatever they feel is necessary to be safe in their home; including putting medication in the patient's food	41	2.3(1.5)	*0*	5	10	85

29 **Prescribing other medications or treatment interventions for patients who refuse primary medication treatment.** Patients sometimes refuse to take the primary medication recommended for their condition, but will nonetheless request or accept other medications or treatments. In answering the following question, assume that you have a patient who is cooperative about coming in for regular appointments and, at the time of this evaluation, is not showing acute psychotic or manic symptoms. Please rate the appropriateness of prescribing/providing each of the following treatments for 1) a patient with schizophrenia who refuses treatment with a recommended maintenance antipsychotic medication or 2) a patient with bipolar disorder who refuses to take a mood stabilizer, in addition to discussing more appropriate alternatives for managing the illness.



	N	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Patient with schizophrenia who refuses recommended maintenance antipsychotic medication						
8) Provide ongoing psychotherapy even if patient refuses to take medication as noted above.	41	6.6 (2.5)	*29*	66	17	17
3) Selective serotonin reuptake inhibitor for depressive symptoms	41	5.3 (2.4)	*7*	37	37	27
1) Lorazepam for anxiety	41	4.9 (2.4)	*2*	39	24	37
2) Lorazepam for insomnia	41	4.7 (2.3)	*0*	34	24	41
6) Anticonvulsant not indicated for bipolar disorder (e.g., topiramate; gabapentin; pregabalin)	40	2.6 (2.0)	*0*	8	15	78
7) Natural or vitamin treatments	41	2.6 (2.1)	*0*	5	24	71
4) Modafanil for sleepiness	39	2.4 (1.9)	*0*	8	18	74
5) Methylphenidate or amphetamine for symptoms of attention-deficit/hyperactivity disorder (ADHD) or cognitive symptoms	41	1.8 (1.2)	*0*	0	10	90
Patient with bipolar disorder who refuses to take a mood stabilizer						
8) Provide ongoing psychotherapy even if patient refuses to take medication as noted above.	41	6.9 (2.5)	*34*	73	12	15
1) Lorazepam for anxiety	41	4.8 (2.3)	*2*	34	32	34
2) Lorazepam for insomnia	41	4.8 (2.4)	*0*	37	24	39
6) Anticonvulsant not indicated for bipolar disorder (e.g., topiramate; gabapentin; pregabalin)	41	3.9 (2.4)	*5*	12	34	54
7) Natural or vitamin treatments	40	2.8 (2.3)	*0*	10	23	68
3) Selective serotonin reuptake inhibitor for depressive symptoms	41	2.7 (1.9)	*0*	5	22	73
4) Modafanil for sleepiness	39	2.3 (1.8)	*0*	8	10	82
5) Methylphenidate or amphetamine for symptoms of attention-deficit/hyperactivity disorder (ADHD) or cognitive symptoms	41	2.1 (1.5)	*0*	0	20	80
			%	%	%	%

Supplementary material for Velligan DI, Weiden PJ, Sajatovic M, et al. The expert consensus guideline series: adherence problems in patients with serious and persistent mental illness. J Clin Psychiatry 2009;70 (suppl 4)

30 **Availability of treatment resources.** We are interested in the real-world availability of the following programs and interventions for the patients you treat. Please check all those modalities that are available to patients in your practice.

	n
Long-acting injectable first generation antipsychotics	37
Long-acting risperidone injections	35
Assertive community treatment	29
Intensive case management involving home visits	27
Family psychoeducation (e.g., NAMI Family-to Family Program)	29
Cognitive-behavioral therapy targeted for patients with schizophrenia	18
Cognitive-behavioral therapy targeted for patients with bipolar disorder	22
Compliance therapy	6
Family- focused therapy	13
Interpersonal and social rhythm therapy	6
Involuntary outpatient commitment	18

31 On what grounds are patients involuntarily hospitalized in your area?

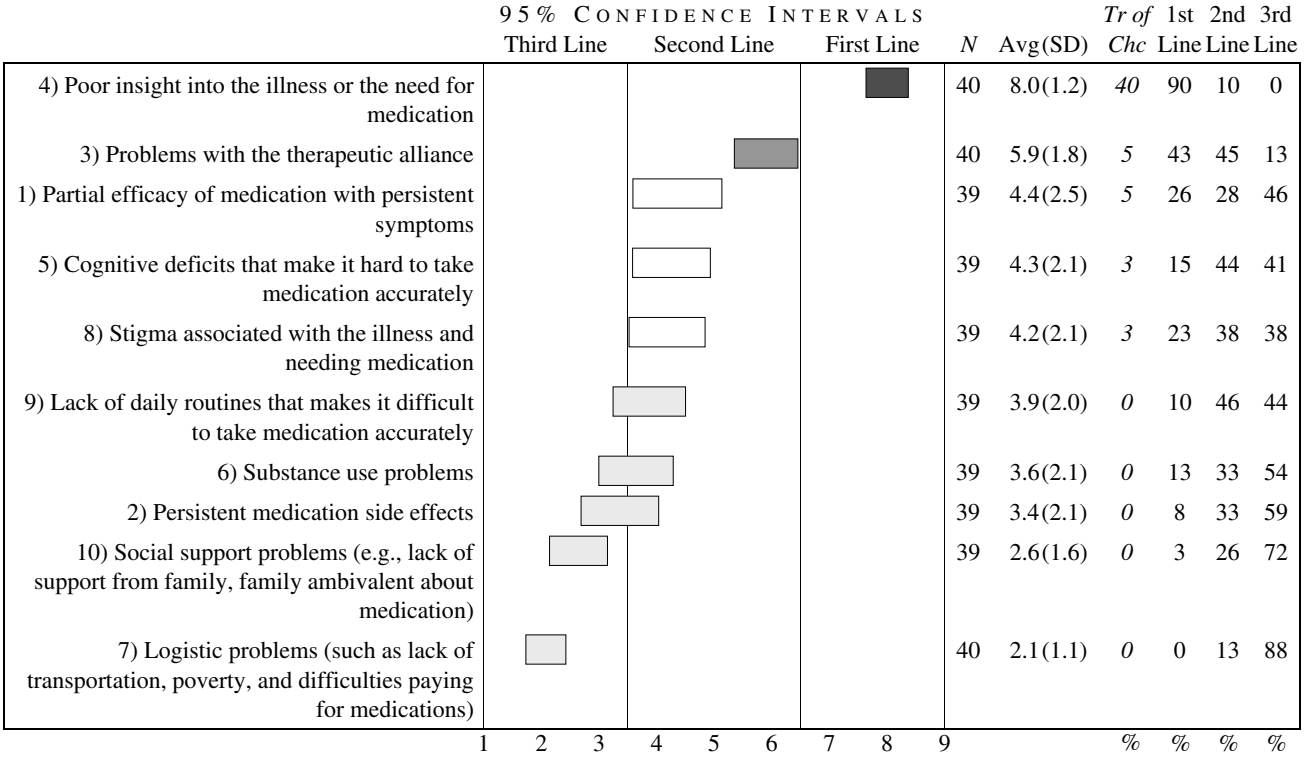
Danger to self	40
Danger to others	39
Threatening violence	25
Gravely disabled	25

In the questions that follow, we ask about a number of psychosocial and pharmacologic strategies that are used to improve adherence to treatment in patients with schizophrenia and/or bipolar disorder. We are aware that a number of programmatic strategies are also very helpful for adherence problems but have not included questions on programmatic interventions in this survey, since a considerable amount of research data on these programs is already available. They will, of course, be discussed in the monograph we will be producing based on a review of the research literature as well as the results of this survey.

Although we ask about psychosocial and pharmacologic strategies in separate questions, we are not suggesting that the different types of interventions are mutually exclusive. In rating the different options in the following questions, please give good ratings to all the interventions you believe may be helpful in the specific clinical situation being described. For the purpose of these questions, assume that all types of interventions listed are available to your patient.

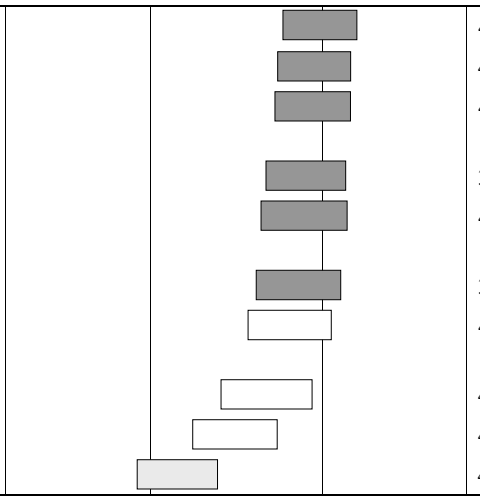
Patient 1. *Mr. A is a 38-year-old unmarried Hispanic male with a 20-year history of bipolar disorder with psychotic features. He began hearing voices while attending university. He was able to graduate with a master's degree but has never worked or supported himself financially. His parents pay his rent and give him an allowance to live on, which Mr. A uses to travel the world. He comes to the mental health clinic at the request of his parents who tell him they will not continue to support him unless he seeks treatment. Mr. A's speech is pressured and tangential, he makes inappropriate sexual comments to the doctor, and he appears distracted and excited. He is refusing medication and states that years ago, his mother put olanzapine in his coffee and that is what caused him to hear voices. At present, he hears voices continuously. The voices of famous people such as Duke Ellington and Benjamin Franklin do not bother him and he enjoys his scholarly interactions with them. However, he hears the voice of his father continually criticizing him. He reports that he cannot handle the continual badgering and wants it to stop immediately. Mr. A has attacked members of his family in the past because the voices have told him that these family members wanted to have sex with him. He is loud and speaks in a threatening manner about his family, but he does not meet current criteria for involuntary hospitalization according to the definition used in your area. The clinician is not sure what the best approach would be to assist this patient in accepting medication treatment.*

32 Listed below are a number of factors that can sometimes contribute to medication adherence problems. Please consider Mr. A's case and give your highest ratings (7–9) to those factors you believe are most likely to be contributing to the adherence problems, a rating of 4–6 to those factors that are somewhat likely to be contributing to the problems, and a rating of 1–3 to those factors you believe are unlikely to be involved.



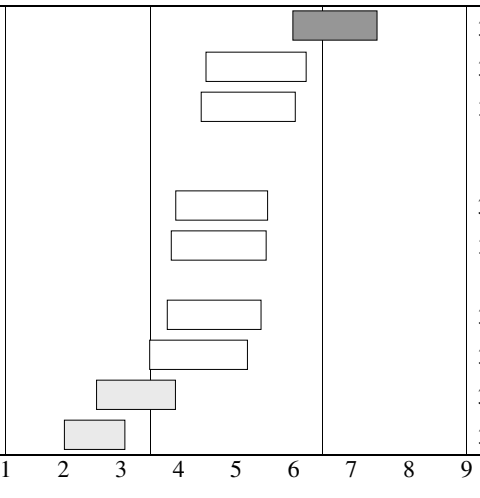
Supplementary material for Velligan DI, Weiden PJ, Sajatovic M, et al. The expert consensus guideline series: adherence problems in patients with serious and persistent mental illness. J Clin Psychiatry 2009;70 (suppl 4)

33 Rate the appropriateness of the following ***psychosocial strategies*** for addressing Mr. A's adherence problems. Assume that all options are available to you. We are aware that many of these strategies have a number of different goals and targets but here we are asking about their appropriateness for inclusion in the treatment regimen when a patient has adherence problems.



	N	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
3) Family-focused therapy	40	6.5 (2.1)	*13*	68	23	10
8) Patient psychoeducation	40	6.4 (2.0)	*10*	58	28	15
7) More frequent and/or longer visits if possible	40	6.3 (2.1)	*13*	65	20	15
2) Compliance therapy	39	6.2 (2.2)	*13*	54	33	13
5) Involuntary outpatient commitment (assume patient meets criteria)	40	6.2 (2.4)	*20*	58	25	18
10) Symptom and side effect monitoring	39	6.1 (2.3)	*18*	54	31	15
6) Medication monitoring/environmental supports	40	5.9 (2.3)	*20*	50	30	20
1) Cognitive-behavioral therapy (CBT)	40	5.5 (2.6)	*13*	45	25	30
4) Interpersonal and social rhythm therapy	40	5.0 (2.4)	*5*	35	38	28
9) Social work targeting logistic problems	40	4.0 (2.2)	*3*	15	30	55
			%	%	%	%

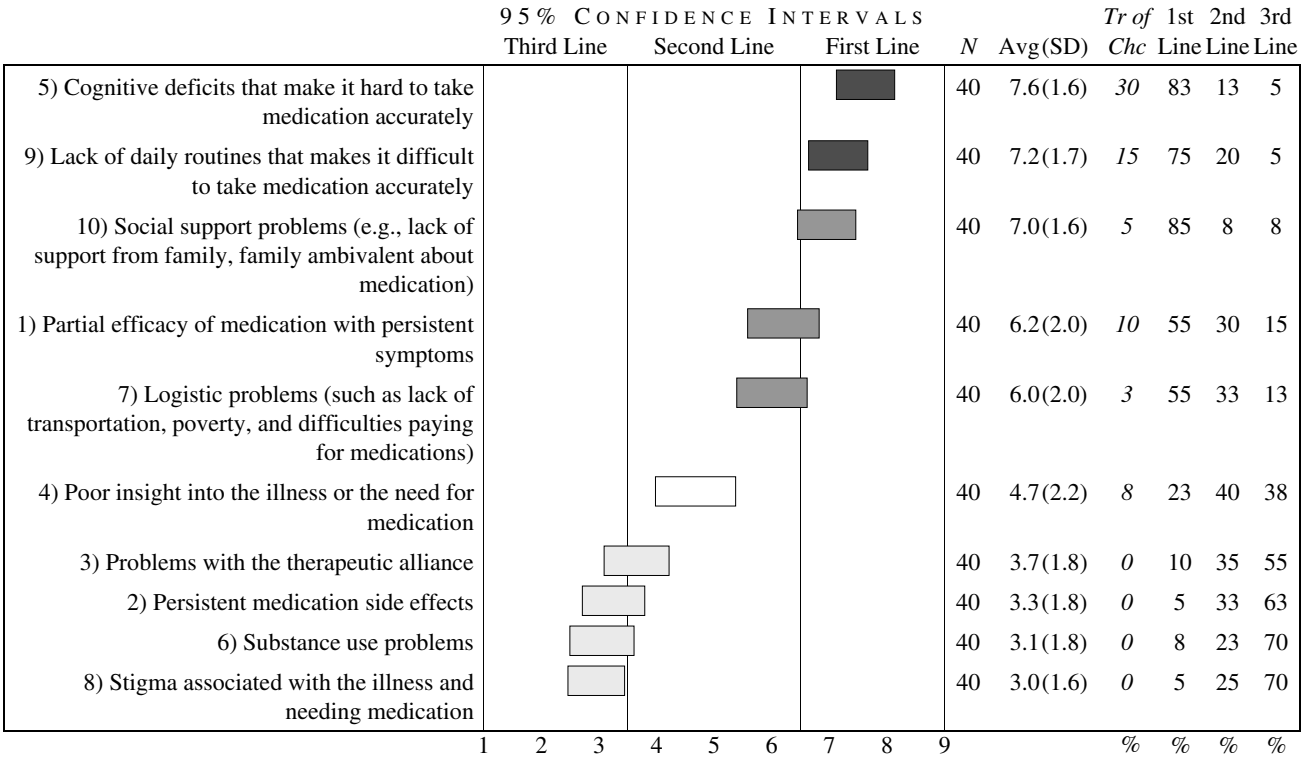
34 Rate the appropriateness of the following ***pharmacologic*** strategies for addressing Mr. A's adherence problems



	N	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
6) Switch to a long-acting antipsychotic	38	6.7 (2.3)	*26*	63	26	11
5) Add a long-acting antipsychotic	38	5.3 (2.7)	*13*	39	37	24
8) Simplify medication regimen (e.g., switch to medication that can be dosed once daily or to monotherapy)	39	5.2 (2.6)	*8*	41	28	31
4) Switch to a different oral antipsychotic	39	4.7 (2.5)	*5*	31	36	33
9) No change in medication; intensify psychosocial interventions	39	4.7 (2.6)	*8*	28	33	38
2) Increase dose of current antipsychotic	39	4.6 (2.6)	*5*	28	33	38
7) Monitor plasma levels of medication	38	4.3 (2.7)	*5*	32	21	47
3) Add an additional oral antipsychotic	39	3.3 (2.2)	*3*	8	28	64
1) Decrease dose of current antipsychotic	39	2.5 (1.7)	*0*	3	21	77
			%	%	%	%

Patient 2. *Ms. B is a 42-year-old unmarried Caucasian women with a 20-year history of schizoaffective disorder who comes in for an unscheduled visit due to increasing symptoms. She attends about half of her scheduled appointments, but often arrives very late or very early. When she misses appointments, she then comes into the clinic on a walk-in basis. Ms. B reports excellent compliance with her medications, but continues to hear voices and is so frightened by her neighbors that she refuses to leave her apartment. In addition, she complains of depression and loneliness. She is tearful during the interview. Ms. B guesses the day as Tuesday, but it is Friday. She does not wear a watch or have a cell phone. The patient's social worker reports that the apartment where she lives alone is in extreme disarray. She often cannot find her appointment cards, and she frequently searches for items she has misplaced.*

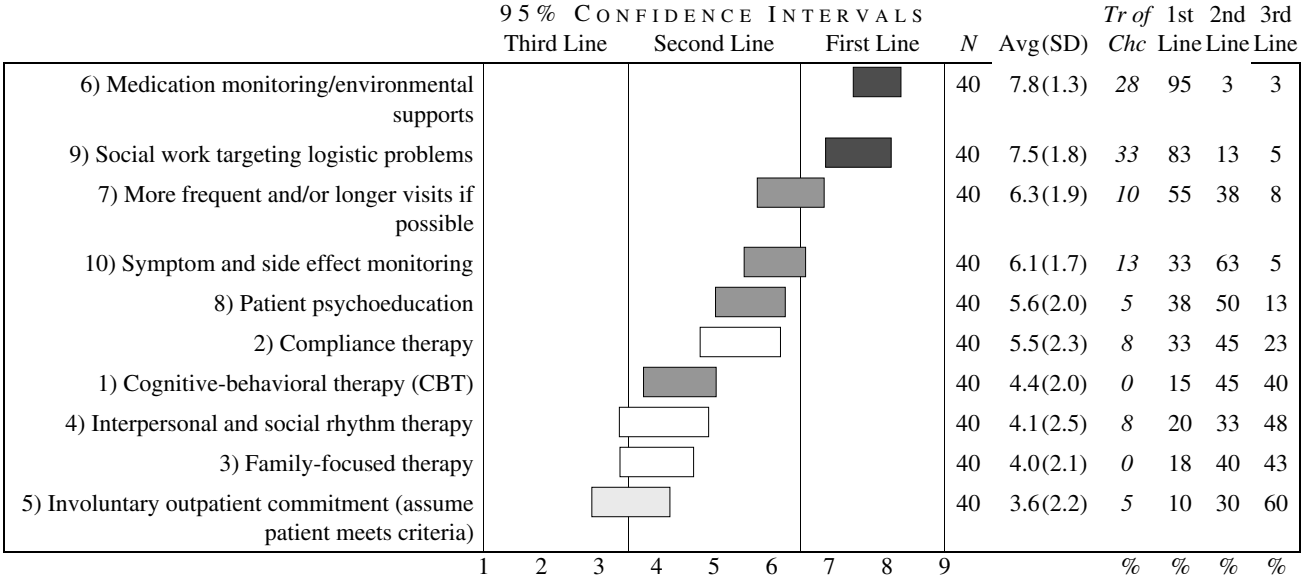
35 Listed below are a number of factors that can sometimes contribute to medication adherence problems. Please consider Ms. B's case and give your highest ratings (7–9) to those factors you believe are most likely to be contributing to the adherence problems, a rating of 4–6 to those factors that are somewhat likely to be contributing to the problems, and a rating of 1–3 to those factors you believe are unlikely to be involved.



	N	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
5) Cognitive deficits that make it hard to take medication accurately	40	7.6(1.6)	*30*	83	13	5
9) Lack of daily routines that makes it difficult to take medication accurately	40	7.2(1.7)	*15*	75	20	5
10) Social support problems (e.g., lack of support from family, family ambivalent about medication)	40	7.0(1.6)	*5*	85	8	8
1) Partial efficacy of medication with persistent symptoms	40	6.2(2.0)	*10*	55	30	15
7) Logistic problems (such as lack of transportation, poverty, and difficulties paying for medications)	40	6.0(2.0)	*3*	55	33	13
4) Poor insight into the illness or the need for medication	40	4.7(2.2)	*8*	23	40	38
3) Problems with the therapeutic alliance	40	3.7(1.8)	*0*	10	35	55
2) Persistent medication side effects	40	3.3(1.8)	*0*	5	33	63
6) Substance use problems	40	3.1(1.8)	*0*	8	23	70
8) Stigma associated with the illness and needing medication	40	3.0(1.6)	*0*	5	25	70
			%	%	%	%

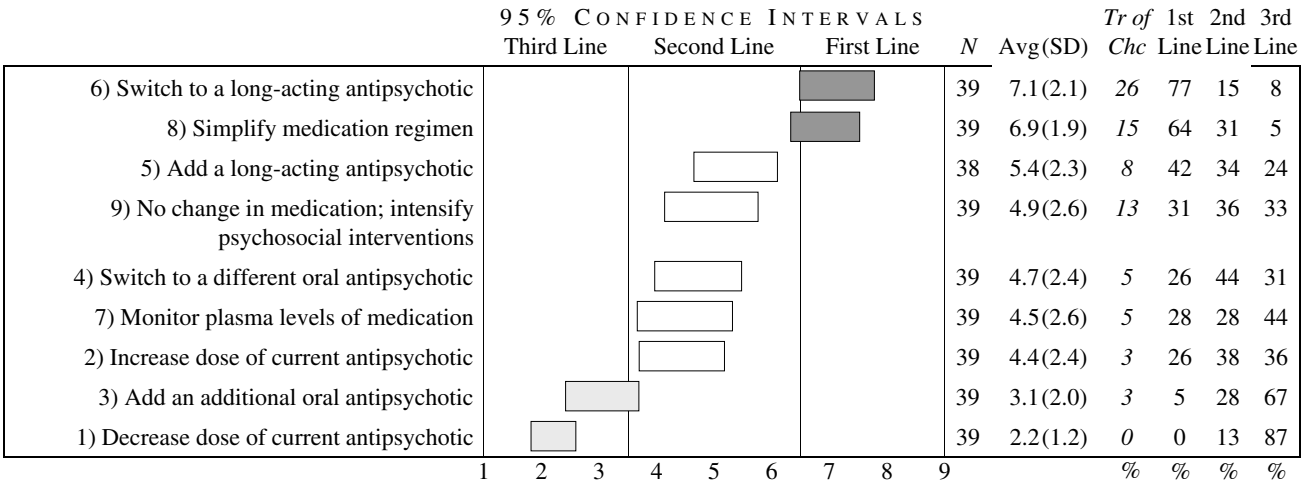
Supplementary material for Velligan DI, Weiden PJ, Sajatovic M, et al. The expert consensus guideline series: adherence problems in patients with serious and persistent mental illness. J Clin Psychiatry 2009;70 (suppl 4)

36 Rate the appropriateness of the following ***psychosocial*** strategies for addressing Ms. B's adherence problems. Assume that all options are available to you. We are aware that many of these strategies have a number of different goals and targets but here we are asking about their appropriateness for inclusion in the treatment regimen when a patient has adherence problems.



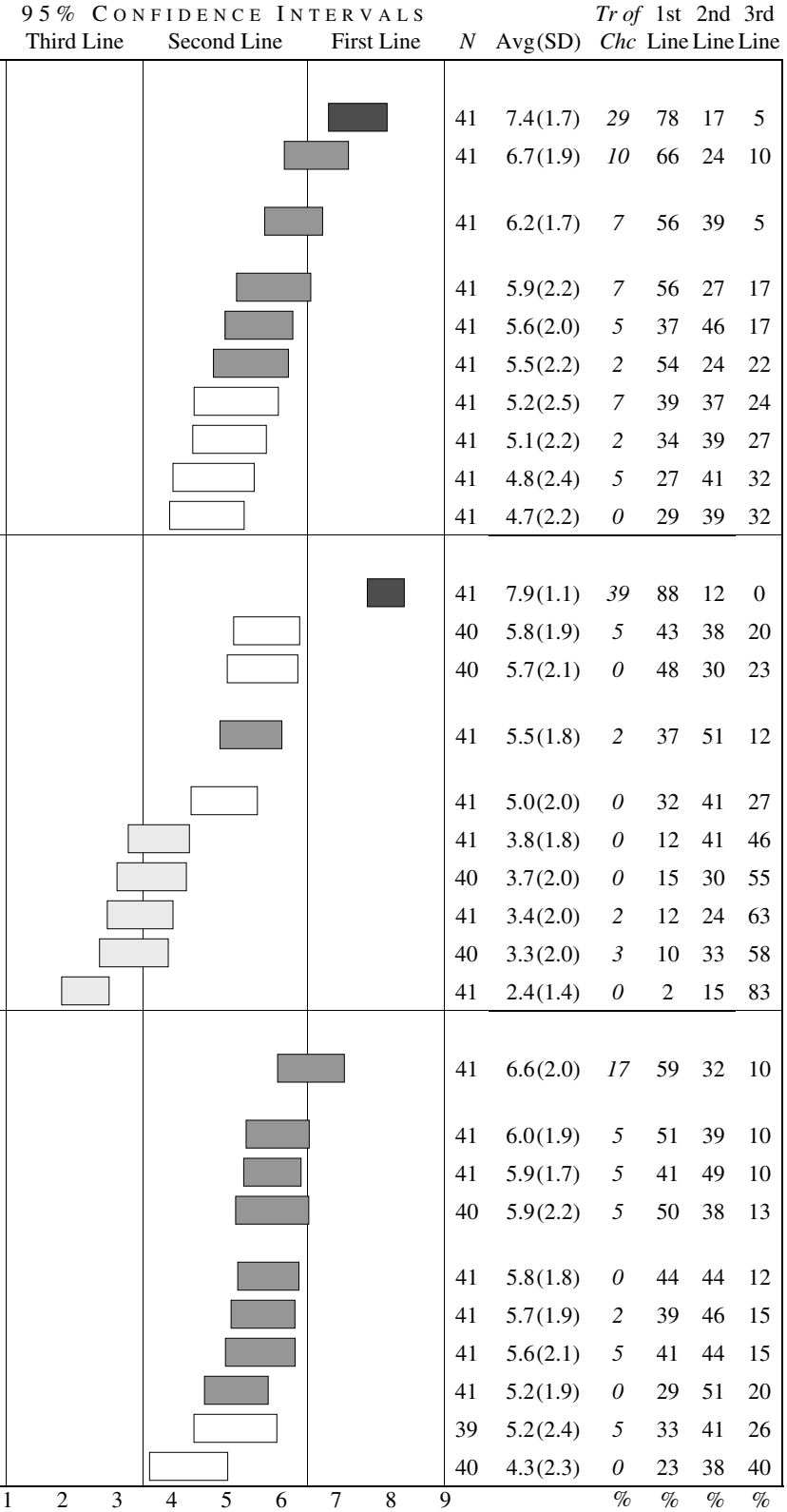
	N	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
6) Medication monitoring/environmental supports	40	7.8 (1.3)	*28*	95	3	3
9) Social work targeting logistic problems	40	7.5 (1.8)	*33*	83	13	5
7) More frequent and/or longer visits if possible	40	6.3 (1.9)	*10*	55	38	8
10) Symptom and side effect monitoring	40	6.1 (1.7)	*13*	33	63	5
8) Patient psychoeducation	40	5.6 (2.0)	*5*	38	50	13
2) Compliance therapy	40	5.5 (2.3)	*8*	33	45	23
1) Cognitive-behavioral therapy (CBT)	40	4.4 (2.0)	*0*	15	45	40
4) Interpersonal and social rhythm therapy	40	4.1 (2.5)	*8*	20	33	48
3) Family-focused therapy	40	4.0 (2.1)	*0*	18	40	43
5) Involuntary outpatient commitment (assume patient meets criteria)	40	3.6 (2.2)	*5*	10	30	60
			%	*%*	*%*	*%*

37 Rate the appropriateness of the following ***pharmacologic*** strategies for addressing Ms. B's adherence problems



	N	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
6) Switch to a long-acting antipsychotic	39	7.1 (2.1)	*26*	77	15	8
8) Simplify medication regimen	39	6.9 (1.9)	*15*	64	31	5
5) Add a long-acting antipsychotic	38	5.4 (2.3)	*8*	42	34	24
9) No change in medication; intensify psychosocial interventions	39	4.9 (2.6)	*13*	31	36	33
4) Switch to a different oral antipsychotic	39	4.7 (2.4)	*5*	26	44	31
7) Monitor plasma levels of medication	39	4.5 (2.6)	*5*	28	28	44
2) Increase dose of current antipsychotic	39	4.4 (2.4)	*3*	26	38	36
3) Add an additional oral antipsychotic	39	3.1 (2.0)	*3*	5	28	67
1) Decrease dose of current antipsychotic	39	2.2 (1.2)	*0*	0	13	87
			%	*%*	*%*	*%*

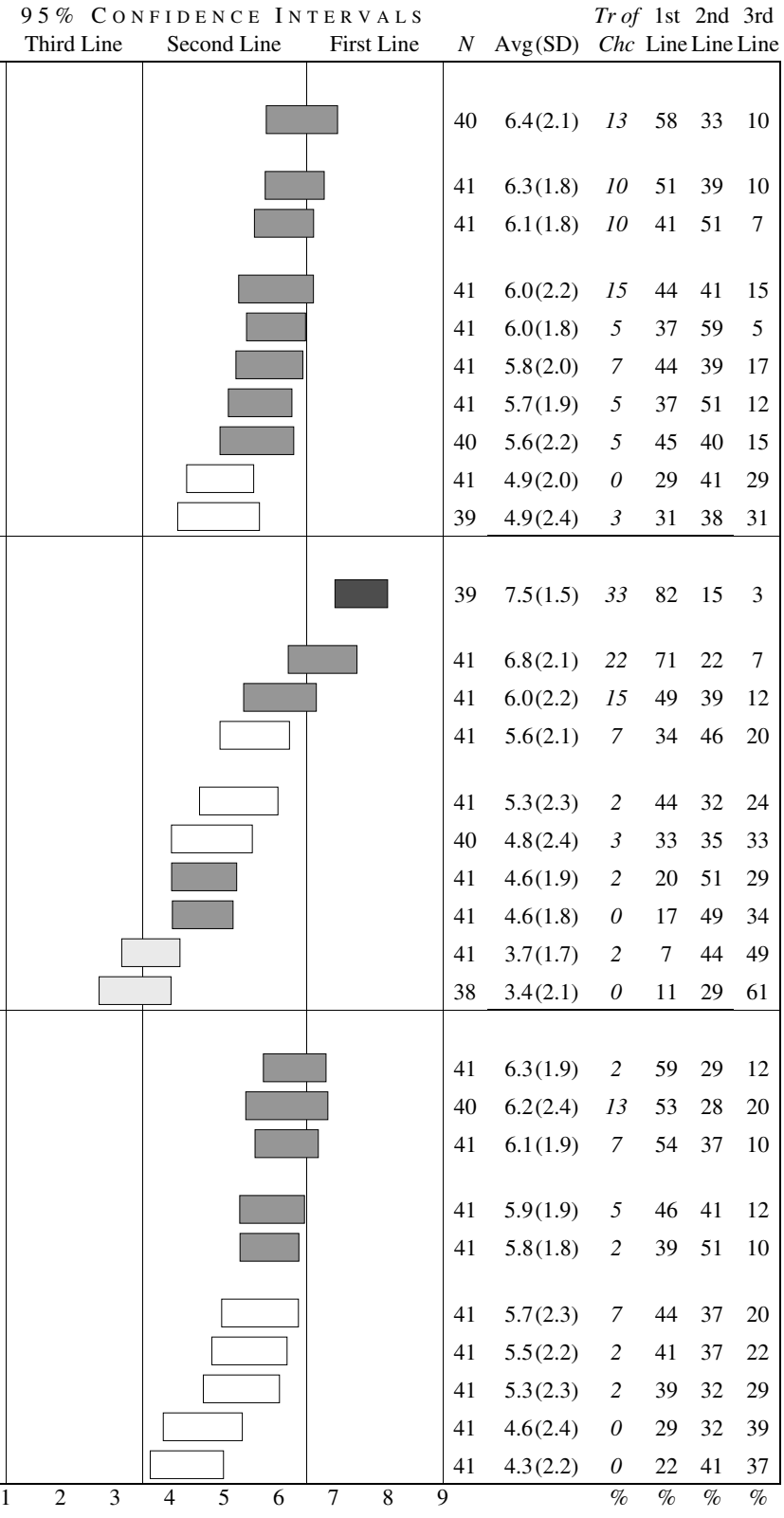
38 **PSYCHOSOCIAL SERVICES.** Rate the appropriateness of the following psychosocial services for a patient with adherence problems primarily due to each of the following



	N	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Persistent symptoms						
10) Symptom and side effect monitoring	41	7.4(1.7)	*29*	78	17	5
6) Medication monitoring/environmental supports	41	6.7(1.9)	*10*	66	24	10
7) More frequent and/or longer visits if possible	41	6.2(1.7)	*7*	56	39	5
1) Cognitive-behavioral therapy (CBT)	41	5.9(2.2)	*7*	56	27	17
8) Patient psychoeducation	41	5.6(2.0)	*5*	37	46	17
2) Compliance therapy	41	5.5(2.2)	*2*	54	24	22
5) Involuntary outpatient commitment*	41	5.2(2.5)	*7*	39	37	24
3) Family-focused therapy	41	5.1(2.2)	*2*	34	39	27
4) Interpersonal and social rhythm therapy	41	4.8(2.4)	*5*	27	41	32
9) Social work targeting logistic problems	41	4.7(2.2)	*0*	29	39	32
Persistent side effects						
10) Symptom and side effect monitoring	41	7.9(1.1)	*39*	88	12	0
8) Patient psychoeducation	40	5.8(1.9)	*5*	43	38	20
6) Medication monitoring/environmental supports	40	5.7(2.1)	*0*	48	30	23
7) More frequent and/or longer visits if possible	41	5.5(1.8)	*2*	37	51	12
2) Compliance therapy	41	5.0(2.0)	*0*	32	41	27
3) Family-focused therapy	41	3.8(1.8)	*0*	12	41	46
9) Social work targeting logistic problems	40	3.7(2.0)	*0*	15	30	55
1) Cognitive-behavioral therapy (CBT)	41	3.4(2.0)	*2*	12	24	63
4) Interpersonal and social rhythm therapy	40	3.3(2.0)	*3*	10	33	58
5) Involuntary outpatient commitment*	41	2.4(1.4)	*0*	2	15	83
Poor therapeutic alliance						
7) More frequent and/or longer visits if possible	41	6.6(2.0)	*17*	59	32	10
8) Patient psychoeducation	41	6.0(1.9)	*5*	51	39	10
2) Compliance therapy	41	5.9(1.7)	*5*	41	49	10
6) Medication monitoring/environmental supports	40	5.9(2.2)	*5*	50	38	13
3) Family-focused therapy	41	5.8(1.8)	*0*	44	44	12
10) Symptom and side effect monitoring	41	5.7(1.9)	*2*	39	46	15
1) Cognitive-behavioral therapy (CBT)	41	5.6(2.1)	*5*	41	44	15
9) Social work targeting logistic problems	41	5.2(1.9)	*0*	29	51	20
4) Interpersonal and social rhythm therapy	39	5.2(2.4)	*5*	33	41	26
5) Involuntary outpatient commitment*	40	4.3(2.3)	*0*	23	38	40
			%	*%*	*%*	*%*

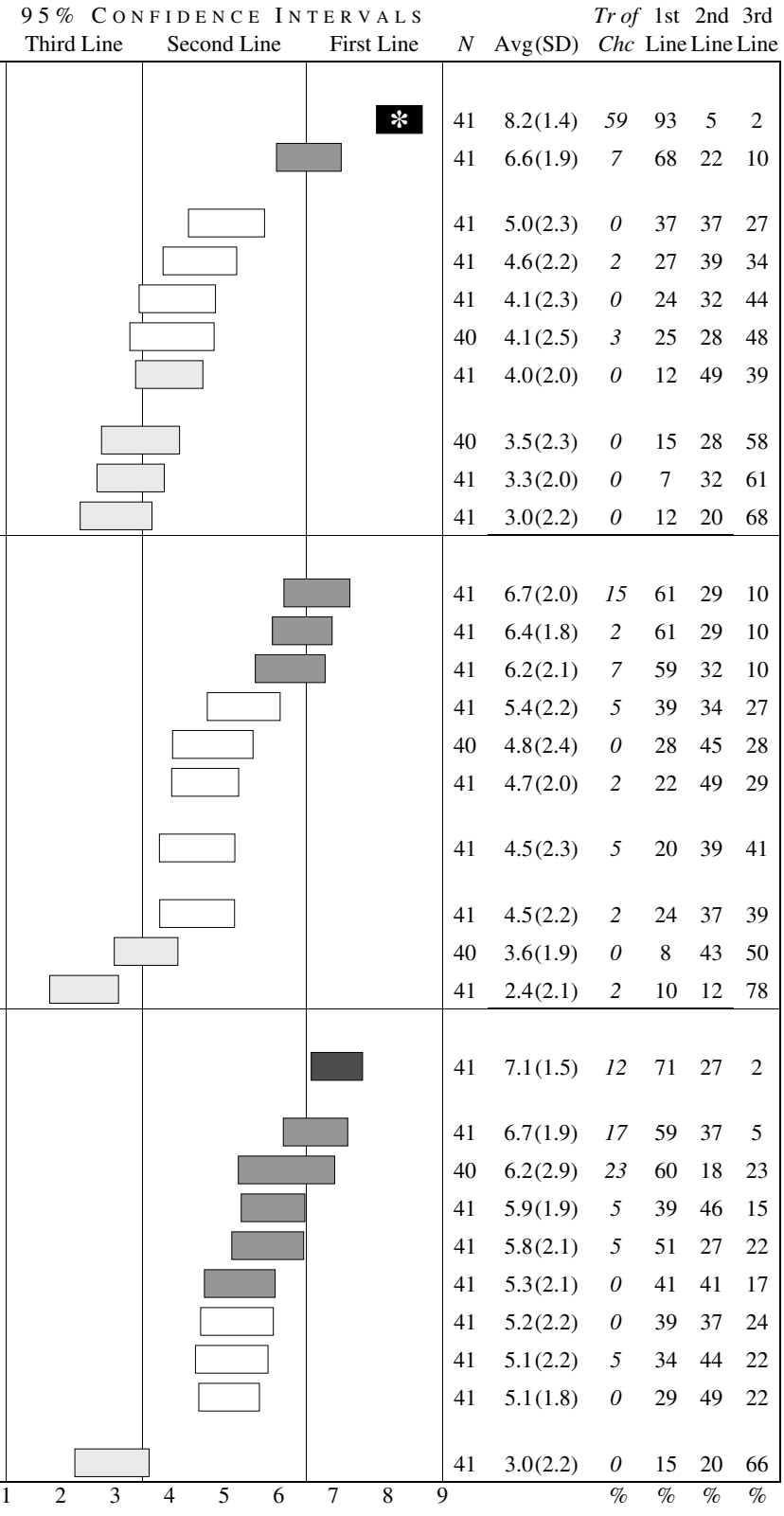
Supplementary material for Velligan DI, Weiden PJ, Sajatovic M, et al. The expert consensus guideline series: adherence problems in patients with serious and persistent mental illness. J Clin Psychiatry 2009;70 (suppl 4)

38 ***continued***



	N	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Lack of insight						
6) Medication monitoring/environmental supports	40	6.4 (2.1)	*13*	58	33	10
8) Patient psychoeducation	41	6.3 (1.8)	*10*	51	39	10
7) More frequent and/or longer visits if possible	41	6.1 (1.8)	*10*	41	51	7
1) Cognitive-behavioral therapy (CBT)	41	6.0 (2.2)	*15*	44	41	15
3) Family-focused therapy	41	6.0 (1.8)	*5*	37	59	5
2) Compliance therapy	41	5.8 (2.0)	*7*	44	39	17
10) Symptom and side effect monitoring	41	5.7 (1.9)	*5*	37	51	12
5) Involuntary outpatient commitment*	40	5.6 (2.2)	*5*	45	40	15
9) Social work targeting logistic problems	41	4.9 (2.0)	*0*	29	41	29
4) Interpersonal and social rhythm therapy	39	4.9 (2.4)	*3*	31	38	31
Cognitive deficits						
6) Medication monitoring/environmental supports	39	7.5 (1.5)	*33*	82	15	3
9) Social work targeting logistic problems	41	6.8 (2.1)	*22*	71	22	7
10) Symptom and side effect monitoring	41	6.0 (2.2)	*15*	49	39	12
7) More frequent and/or longer visits if possible	41	5.6 (2.1)	*7*	34	46	20
3) Family-focused therapy	41	5.3 (2.3)	*2*	44	32	24
5) Involuntary outpatient commitment*	40	4.8 (2.4)	*3*	33	35	33
8) Patient psychoeducation	41	4.6 (1.9)	*2*	20	51	29
2) Compliance therapy	41	4.6 (1.8)	*0*	17	49	34
1) Cognitive-behavioral therapy (CBT)	41	3.7 (1.7)	*2*	7	44	49
4) Interpersonal and social rhythm therapy	38	3.4 (2.1)	*0*	11	29	61
Substance use						
8) Patient psychoeducation	41	6.3 (1.9)	*2*	59	29	12
5) Involuntary outpatient commitment*	40	6.2 (2.4)	*13*	53	28	20
6) Medication monitoring/environmental supports	41	6.1 (1.9)	*7*	54	37	10
10) Symptom and side effect monitoring	41	5.9 (1.9)	*5*	46	41	12
7) More frequent and/or longer visits if possible	41	5.8 (1.8)	*2*	39	51	10
1) Cognitive-behavioral therapy (CBT)	41	5.7 (2.3)	*7*	44	37	20
3) Family-focused therapy	41	5.5 (2.2)	*2*	41	37	22
2) Compliance therapy	41	5.3 (2.3)	*2*	39	32	29
9) Social work targeting logistic problems	41	4.6 (2.4)	*0*	29	32	39
4) Interpersonal and social rhythm therapy	41	4.3 (2.2)	*0*	22	41	37
				%	%	%	%

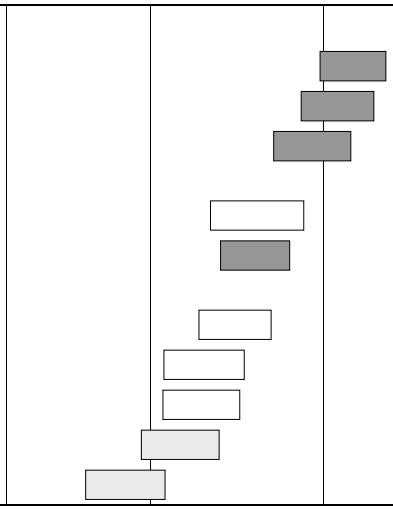
38 *continued*



	N	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Logistic problems						
9) Social work targeting logistic problems	41	8.2(1.4)	*59*	93	5	2
6) Medication monitoring/environmental supports	41	6.6(1.9)	*7*	68	22	10
3) Family-focused therapy	41	5.0(2.3)	*0*	37	37	27
10) Symptom and side effect monitoring	41	4.6(2.2)	*2*	27	39	34
8) Patient psychoeducation	41	4.1(2.3)	*0*	24	32	44
2) Compliance therapy	40	4.1(2.5)	*3*	25	28	48
7) More frequent and/or longer visits if possible	41	4.0(2.0)	*0*	12	49	39
4) Interpersonal and social rhythm therapy	40	3.5(2.3)	*0*	15	28	58
1) Cognitive-behavioral therapy (CBT)	41	3.3(2.0)	*0*	7	32	61
5) Involuntary outpatient commitment*	41	3.0(2.2)	*0*	12	20	68
Stigma						
8) Patient psychoeducation	41	6.7(2.0)	*15*	61	29	10
1) Cognitive-behavioral therapy (CBT)	41	6.4(1.8)	*2*	61	29	10
3) Family-focused therapy	41	6.2(2.1)	*7*	59	32	10
2) Compliance therapy	41	5.4(2.2)	*5*	39	34	27
4) Interpersonal and social rhythm therapy	40	4.8(2.4)	*0*	28	45	28
7) More frequent and/or longer visits if possible	41	4.7(2.0)	*2*	22	49	29
6) Medication monitoring/environmental supports	41	4.5(2.3)	*5*	20	39	41
10) Symptom and side effect monitoring	41	4.5(2.2)	*2*	24	37	39
9) Social work targeting logistic problems	40	3.6(1.9)	*0*	8	43	50
5) Involuntary outpatient commitment*	41	2.4(2.1)	*2*	10	12	78
Lack of routines						
6) Medication monitoring/environmental supports	41	7.1(1.5)	*12*	71	27	2
9) Social work targeting logistic problems	41	6.7(1.9)	*17*	59	37	5
4) Interpersonal and social rhythm therapy	40	6.2(2.9)	*23*	60	18	23
8) Patient psychoeducation	41	5.9(1.9)	*5*	39	46	15
2) Compliance therapy	41	5.8(2.1)	*5*	51	27	22
3) Family-focused therapy	41	5.3(2.1)	*0*	41	41	17
1) Cognitive-behavioral therapy (CBT)	41	5.2(2.2)	*0*	39	37	24
10) Symptom and side effect monitoring	41	5.1(2.2)	*5*	34	44	22
7) More frequent and/or longer visits if possible	41	5.1(1.8)	*0*	29	49	22
5) Involuntary outpatient commitment*	41	3.0(2.2)	*0*	15	20	66
			%	%	%	%

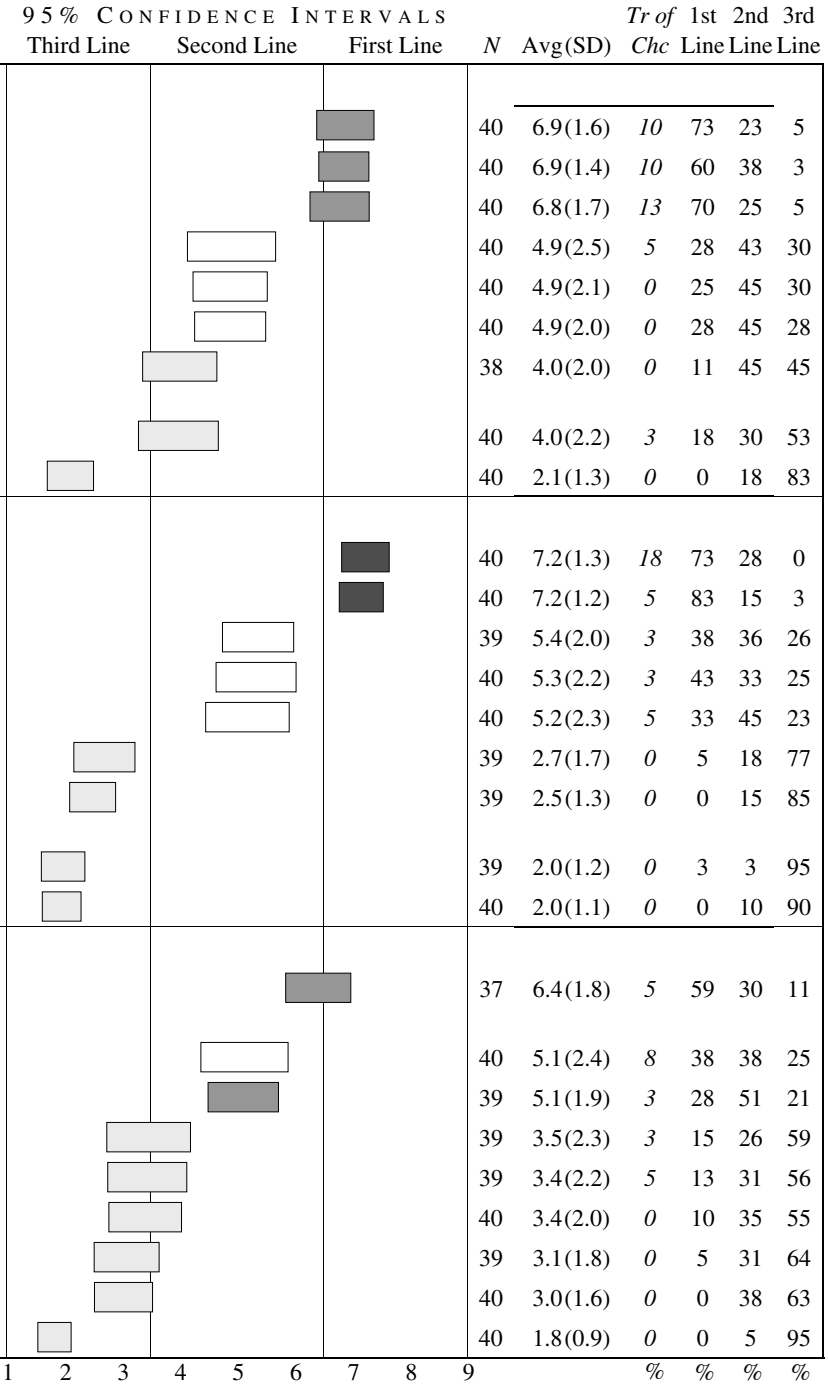
Supplementary material for Velligan DI, Weiden PJ, Sajatovic M, et al. The expert consensus guideline series: adherence problems in patients with serious and persistent mental illness. J Clin Psychiatry 2009;70 (suppl 4)

38 ***continued***



	N	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Social support problems						
3) Family-focused therapy	41	7.0 (1.9)	*17*	71	22	7
9) Social work targeting logistic problems	41	6.8 (2.1)	*22*	59	34	7
6) Medication monitoring/environmental supports	41	6.3 (2.2)	*12*	61	24	15
4) Interpersonal and social rhythm therapy	39	5.4 (2.6)	*5*	49	26	26
7) More frequent and/or longer visits if possible	40	5.3 (1.9)	*3*	35	50	15
8) Patient psychoeducation	41	5.0 (2.0)	*2*	32	39	29
10) Symptom and side effect monitoring	41	4.4 (2.3)	*2*	29	32	39
2) Compliance therapy	41	4.4 (2.2)	*2*	24	34	41
1) Cognitive-behavioral therapy (CBT)	41	4.0 (2.2)	*0*	17	34	49
5) Involuntary outpatient commitment*	41	3.1 (2.3)	*2*	15	20	66
			%	*%*	*%*	*%*

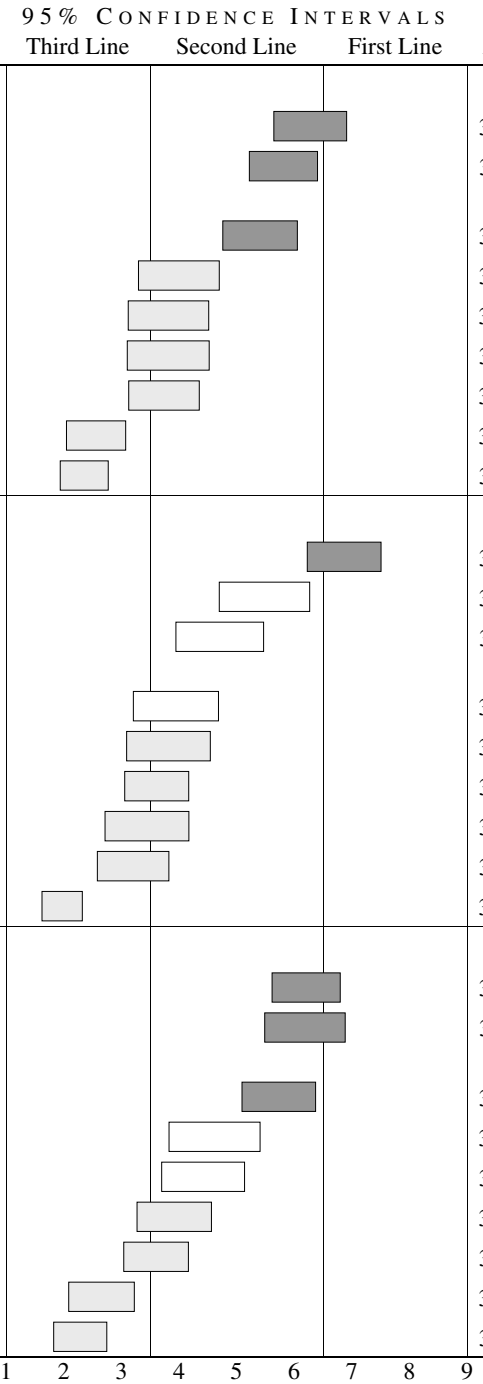
39 **Pharmacological Strategies.** Rate the appropriateness of the following **pharmacologic interventions** for a patient with adherence problems primarily due to each of the following.



	N	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Persistent symptoms						
2) Increase dose of current antipsychotic	40	6.9(1.6)	*10*	73	23	5
6) Switch to a long-acting antipsychotic	40	6.9(1.4)	*10*	60	38	3
4) Switch to a different oral antipsychotic	40	6.8(1.7)	*13*	70	25	5
7) Monitor plasma levels of medication	40	4.9(2.5)	*5*	28	43	30
5) Add a long-acting antipsychotic	40	4.9(2.1)	*0*	25	45	30
8) Simplify medication regimen	40	4.9(2.0)	*0*	28	45	28
9) No change in medication; intensify psychosocial interventions	38	4.0(2.0)	*0*	11	45	45
3) Add an additional oral antipsychotic	40	4.0(2.2)	*3*	18	30	53
1) Decrease dose of current antipsychotic	40	2.1(1.3)	*0*	0	18	83
Persistent side effects						
1) Decrease dose of current antipsychotic	40	7.2(1.3)	*18*	73	28	0
4) Switch to a different oral antipsychotic	40	7.2(1.2)	*5*	83	15	3
6) Switch to a long-acting antipsychotic	39	5.4(2.0)	*3*	38	36	26
8) Simplify medication regimen	40	5.3(2.2)	*3*	43	33	25
7) Monitor plasma levels of medication	40	5.2(2.3)	*5*	33	45	23
5) Add a long-acting antipsychotic	39	2.7(1.7)	*0*	5	18	77
9) No change in medication; intensify psychosocial interventions	39	2.5(1.3)	*0*	0	15	85
3) Add an additional oral antipsychotic	39	2.0(1.2)	*0*	3	3	95
2) Increase dose of current antipsychotic	40	2.0(1.1)	*0*	0	10	90
Poor therapeutic alliance						
9) No change in medication; intensify psychosocial interventions	37	6.4(1.8)	*5*	59	30	11
6) Switch to a long-acting antipsychotic	40	5.1(2.4)	*8*	38	38	25
8) Simplify medication regimen	39	5.1(1.9)	*3*	28	51	21
5) Add a long-acting antipsychotic	39	3.5(2.3)	*3*	15	26	59
7) Monitor plasma levels of medication	39	3.4(2.2)	*5*	13	31	56
4) Switch to a different oral antipsychotic	40	3.4(2.0)	*0*	10	35	55
1) Decrease dose of current antipsychotic	39	3.1(1.8)	*0*	5	31	64
2) Increase dose of current antipsychotic	40	3.0(1.6)	*0*	0	38	63
3) Add an additional oral antipsychotic	40	1.8(0.9)	*0*	0	5	95
			%	*%*	*%*	*%*

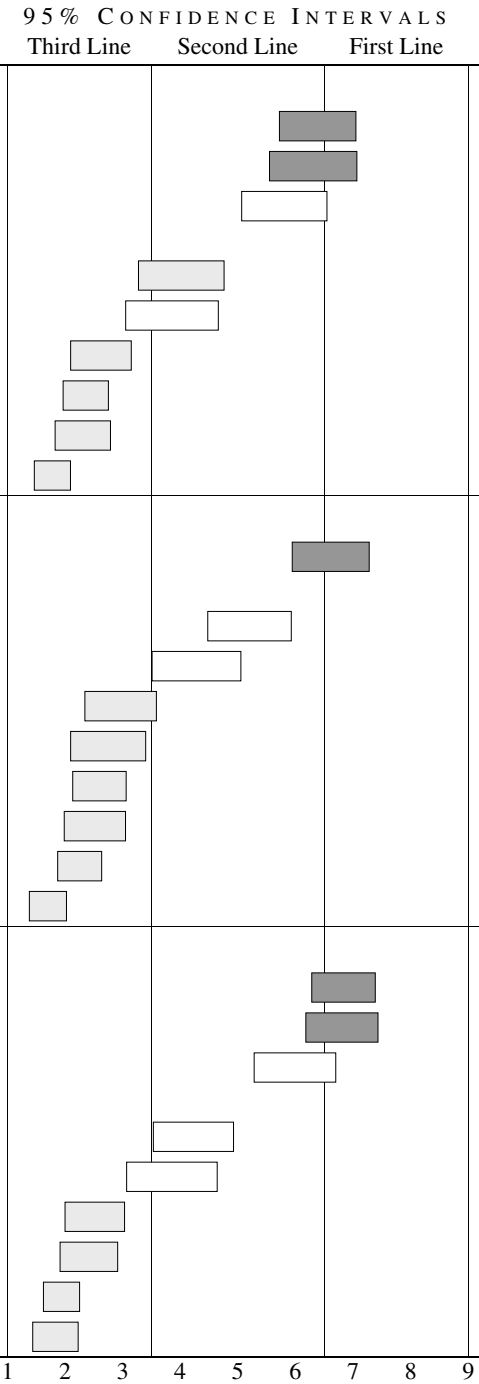
Supplementary material for Velligan DI, Weiden PJ, Sajatovic M, et al. The expert consensus guideline series: adherence problems in patients with serious and persistent mental illness. J Clin Psychiatry 2009;70 (suppl 4)

39 *continued*



	N	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Lack of insight						
6) Switch to a long-acting antipsychotic	39	6.3 (2.0)	*10*	51	41	8
9) No change in medication; intensify psychosocial interventions	38	5.8 (1.9)	*5*	39	45	16
8) Simplify medication regimen	39	5.4 (2.1)	*8*	33	49	18
2) Increase dose of current antipsychotic	39	4.0 (2.2)	*3*	13	38	49
7) Monitor plasma levels of medication	39	3.8 (2.2)	*5*	15	38	46
5) Add a long-acting antipsychotic	38	3.8 (2.2)	*3*	18	26	55
4) Switch to a different oral antipsychotic	39	3.7 (2.0)	*0*	8	41	51
3) Add an additional oral antipsychotic	39	2.6 (1.6)	*3*	5	10	85
1) Decrease dose of current antipsychotic	39	2.4 (1.3)	*0*	0	15	85
Cognitive deficits						
8) Simplify medication regimen	39	6.9 (2.0)	*18*	69	23	8
6) Switch to a long-acting antipsychotic	39	5.5 (2.5)	*10*	36	44	21
9) No change in medication; intensify psychosocial interventions	38	4.7 (2.4)	*3*	29	34	37
7) Monitor plasma levels of medication	39	3.9 (2.4)	*5*	21	33	46
4) Switch to a different oral antipsychotic	39	3.8 (2.3)	*3*	18	26	56
1) Decrease dose of current antipsychotic	39	3.6 (1.8)	*0*	3	51	46
5) Add a long-acting antipsychotic	38	3.4 (2.3)	*3*	13	24	63
2) Increase dose of current antipsychotic	39	3.2 (2.0)	*0*	8	31	62
3) Add an additional oral antipsychotic	39	2.0 (1.1)	*0*	0	8	92
Substance use						
6) Switch to a long-acting antipsychotic	38	6.2 (1.9)	*8*	53	37	11
9) No change in medication; intensify psychosocial interventions	37	6.2 (2.2)	*16*	49	38	14
8) Simplify medication regimen	38	5.7 (2.0)	*8*	39	45	16
7) Monitor plasma levels of medication	37	4.6 (2.5)	*5*	30	38	32
5) Add a long-acting antipsychotic	38	4.4 (2.3)	*3*	21	37	42
4) Switch to a different oral antipsychotic	38	3.9 (2.0)	*0*	13	45	42
2) Increase dose of current antipsychotic	38	3.6 (1.8)	*0*	3	53	45
3) Add an additional oral antipsychotic	38	2.7 (1.8)	*0*	3	24	74
1) Decrease dose of current antipsychotic	38	2.3 (1.5)	*0*	3	18	79
			%	*%*	*%*	*%*

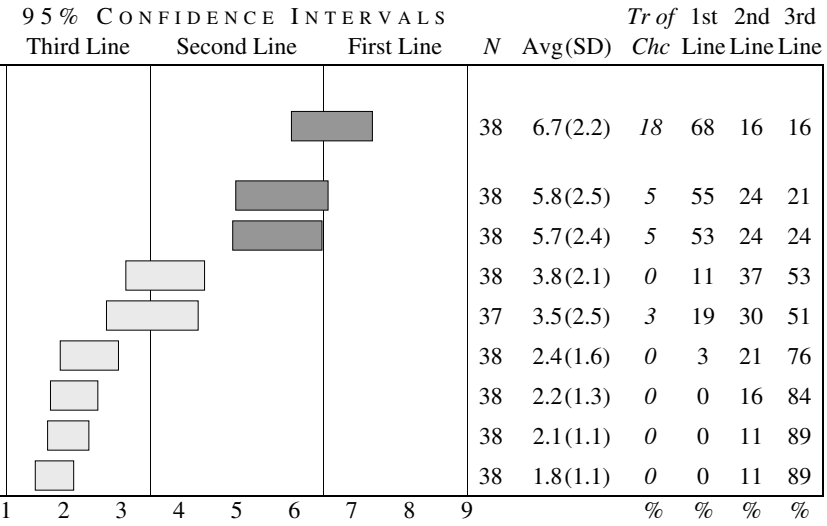
39 *continued*



	N	Avg(SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Logistic problems						
8) Simplify medication regimen	38	6.4(2.1)	*11*	58	32	11
6) Switch to a long-acting antipsychotic	38	6.3(2.4)	*13*	66	21	13
9) No change in medication; intensify psychosocial interventions	38	5.8(2.3)	*8*	47	32	21
5) Add a long-acting antipsychotic	38	4.0(2.3)	*3*	18	32	50
7) Monitor plasma levels of medication	37	3.9(2.5)	*3*	22	32	46
4) Switch to a different oral antipsychotic	38	2.6(1.7)	*0*	3	21	76
2) Increase dose of current antipsychotic	38	2.4(1.2)	*0*	0	13	87
1) Decrease dose of current antipsychotic	38	2.3(1.5)	*0*	3	11	87
3) Add an additional oral antipsychotic	38	1.8(1.0)	*0*	0	5	95
Stigma						
9) No change in medication; intensify psychosocial interventions	37	6.6(2.1)	*11*	65	19	16
8) Simplify medication regimen	38	5.2(2.3)	*3*	37	39	24
6) Switch to a long-acting antipsychotic	38	4.3(2.4)	*3*	26	34	39
5) Add a long-acting antipsychotic	38	3.0(2.0)	*0*	8	26	66
7) Monitor plasma levels of medication	37	2.8(2.0)	*0*	8	24	68
4) Switch to a different oral antipsychotic	38	2.6(1.5)	*0*	0	32	68
1) Decrease dose of current antipsychotic	38	2.5(1.7)	*0*	0	26	74
2) Increase dose of current antipsychotic	38	2.3(1.2)	*0*	0	13	87
3) Add an additional oral antipsychotic	38	1.7(1.0)	*0*	0	8	92
Lack of routines						
8) Simplify medication regimen	38	6.8(1.7)	*11*	68	26	5
6) Switch to a long-acting antipsychotic	38	6.8(2.0)	*11*	74	18	8
9) No change in medication; intensify psychosocial interventions	38	6.0(2.2)	*8*	47	34	18
5) Add a long-acting antipsychotic	38	4.2(2.2)	*0*	24	37	39
7) Monitor plasma levels of medication	37	3.9(2.4)	*3*	19	38	43
4) Switch to a different oral antipsychotic	38	2.5(1.6)	*0*	3	21	76
2) Increase dose of current antipsychotic	38	2.4(1.6)	*0*	3	16	82
1) Decrease dose of current antipsychotic	38	1.9(1.0)	*0*	0	5	95
3) Add an additional oral antipsychotic	38	1.8(1.2)	*0*	3	3	95
			%	*%*	*%*	*%*

Supplementary material for Velligan DI, Weiden PJ, Sajatovic M, et al. The expert consensus guideline series: adherence problems in patients with serious and persistent mental illness. J Clin Psychiatry 2009;70 (suppl 4)

39 ***continued***



	N	Avg (SD)	*Tr of Chc*	1st Line	2nd Line	3rd Line
Social support problems						
9) No change in medication; intensify psychosocial interventions	38	6.7 (2.2)	*18*	68	16	16
6) Switch to a long-acting antipsychotic	38	5.8 (2.5)	*5*	55	24	21
8) Simplify medication regimen	38	5.7 (2.4)	*5*	53	24	24
5) Add a long-acting antipsychotic	38	3.8 (2.1)	*0*	11	37	53
7) Monitor plasma levels of medication	37	3.5 (2.5)	*3*	19	30	51
4) Switch to a different oral antipsychotic	38	2.4 (1.6)	*0*	3	21	76
2) Increase dose of current antipsychotic	38	2.2 (1.3)	*0*	0	16	84
1) Decrease dose of current antipsychotic	38	2.1 (1.1)	*0*	0	11	89
3) Add an additional oral antipsychotic	38	1.8 (1.1)	*0*	0	11	89
			%	*%*	*%*	*%*