

POLYPHARMACY JUSTIFICATION CHECKLIST

	YES	NO
1. Before prescribing polypharmacy:		
a. Thorough evaluation of clinical presentation?	<input type="checkbox"/>	<input type="checkbox"/>
b. Thorough evaluation of diagnosis?	<input type="checkbox"/>	<input type="checkbox"/>
2. Evaluation of medication history:		
a. Efficacy of past medications documented/reviewed?	<input type="checkbox"/>	<input type="checkbox"/>
b. Reported side effects of past medications documented/reviewed?	<input type="checkbox"/>	<input type="checkbox"/>
c. Dose and duration of past monotherapy attempts documented/reviewed?	<input type="checkbox"/>	<input type="checkbox"/>
i. At least 21 days of continuous use at same dose? (Mood stabilizers and antipsychotics may require longer trials.)	<input type="checkbox"/>	<input type="checkbox"/>
ii. 2-to-3 monotherapy trials with drugs from different classes?	<input type="checkbox"/>	<input type="checkbox"/>
iii. Review of diagnosis after failure of several monotherapy trials?	<input type="checkbox"/>	<input type="checkbox"/>
3. Patient compliance:		
a. Review of patient compliance during medication trial(s) documented?	<input type="checkbox"/>	<input type="checkbox"/>
b. Patient involvement in reviewing treatment response and treatment options?	<input type="checkbox"/>	<input type="checkbox"/>
c. Review of simplicity of regimen and avoiding complicated regimen?	<input type="checkbox"/>	<input type="checkbox"/>
4. Evaluation of the current medication regimen:		
a. Rationale for each current medication reviewed?	<input type="checkbox"/>	<input type="checkbox"/>
b. Efficacy of each current medication reviewed?	<input type="checkbox"/>	<input type="checkbox"/>
c. OTC medications, herbal remedies, and illicit drugs reviewed?	<input type="checkbox"/>	<input type="checkbox"/>
d. One-time orders and prn medications reviewed? (If >3/week for 3-4 weeks, these should be considered part of a patient's scheduled medication regimen).	<input type="checkbox"/>	<input type="checkbox"/>
5. Review of medication changes:		
a. Total number of medications reduced before adding new one?	<input type="checkbox"/>	<input type="checkbox"/>
b. Only one medication changed at a time?	<input type="checkbox"/>	<input type="checkbox"/>
c. Medication changes completed? Old medication discontinued after new one at therapeutic level for sufficient period of time?	<input type="checkbox"/>	<input type="checkbox"/>
d. Cross-titrations used only with those medications for which this strategy is required?	<input type="checkbox"/>	<input type="checkbox"/>
6. Demonstrable need:		
a. Medications without clear benefit for target symptoms eliminated?	<input type="checkbox"/>	<input type="checkbox"/>
7. Combined and Augmented Pharmacotherapy:		
a. Justification for same-class polypharmacy clearly documented?	<input type="checkbox"/>	<input type="checkbox"/>
i. Specific targeting of different symptom clusters?	<input type="checkbox"/>	<input type="checkbox"/>
ii. Synergism in the drugs' mechanisms of action?	<input type="checkbox"/>	<input type="checkbox"/>
iii. Augmentation of partial treatment response or nonresponse to monotherapy?	<input type="checkbox"/>	<input type="checkbox"/>
iv. Improved risk/benefit ratio by reducing dosage and adverse effects for improved tolerability of one or both drugs?	<input type="checkbox"/>	<input type="checkbox"/>
b. Failed trials of monotherapy documented?	<input type="checkbox"/>	<input type="checkbox"/>
c. Efficacy data on strategically combined treatments reviewed?	<input type="checkbox"/>	<input type="checkbox"/>
8. Monitoring the risks of polypharmacy:		
a. Drug interactions reviewed?	<input type="checkbox"/>	<input type="checkbox"/>
b. Blood levels monitored periodically, especially with signs of toxicity or with medications likely to have drug interactions?	<input type="checkbox"/>	<input type="checkbox"/>
c. Monitoring of higher-risk combinations:		
i. More than one medication from the same class?	<input type="checkbox"/>	<input type="checkbox"/>
ii. More than two antipsychotic medications?	<input type="checkbox"/>	<input type="checkbox"/>
iii. Combinations with cumulative anticholinergic effects?	<input type="checkbox"/>	<input type="checkbox"/>
iv. Combinations with specific additive organ or system effects? (e.g., Cardiac, Renal, Hepatic, Respiratory, Gastrointestinal, Musculoskeletal)	<input type="checkbox"/>	<input type="checkbox"/>
9. Institutional mechanisms in place:		
a. Peer review	<input type="checkbox"/>	<input type="checkbox"/>
b. Automatic/forced drug interaction reviews	<input type="checkbox"/>	<input type="checkbox"/>
c. Supported access to medication information	<input type="checkbox"/>	<input type="checkbox"/>
d. Pharmacy consultation	<input type="checkbox"/>	<input type="checkbox"/>
e. Drug utilization review	<input type="checkbox"/>	<input type="checkbox"/>

Background Information

Polypharmacy has a number of definitions, including more than one drug for a single patient, more than one drug for a target symptom, and more than one drug from the same class. The most common reasons for polypharmacy are monotherapy has been ineffective, aggressive targeting of specific symptoms, treating distinct but co-morbid conditions, treating refractory symptoms, and treating side effects of a primary drug. Psychiatric pharmacotherapy is thought to occur more frequently than is supported by research data. 25-50% of patients in psychiatric treatment are prescribed more than one antipsychotic agent, and the prevalence of add-on, augmenting, or adjunctive (treating side effects of another drug) pharmacotherapy is 28-75%.

Up to 85% of physicians have been reported as prescribing more than one antipsychotic to refractory patients. This includes both the temporary use of multiple medications and medications used in cross-titrations. Up to 80% of patients get caught in the “crossover trap,” while switching from one medication to another. Usually, the level of improvement while on medications made the patient or physician unwilling to go ahead and complete the crossover. Generally speaking, research has not supported these clinician or patient perceptions that combination antipsychotic therapy is more effective than monotherapy, and many suggest that a cross-titration may be unnecessary for atypicals.

There are few studies evaluating efficacy, risk, and long-term effects of polypharmacy. Combinations of two drugs have shown efficacy in the treatment of a number of psychiatric disorders, including bipolar disorder, severe or refractory depression, schizoaffective disorder, and schizophrenia with prominent depression. Combinations of more than 2 drugs are not well supported by scientific research, beyond the combined use of mood stabilizers, antipsychotics, and anxiolytics in acute mania. Same-class polypharmacy should be rare in general psychiatry, but in our target populations, it will not be rare. We must take on the responsibility for advocating for patients when monotherapy has failed and we have evidence for enhanced efficacy with combined treatment; to do so requires careful documentation, an acknowledgement of the general need to avoid polypharmacy, and clear justification for the combined or augmented treatment.

Factors associated with polypharmacy include sicker, more disabled patients; repeated hospitalizations within one year; younger age; male; involuntary commitment or MOT; and a diagnosis of schizophrenia, bipolar disorder, or mania. Drug interactions become much more significant in medication management, and include alterations in the nature, magnitude, and duration of drug effects; absorption, distribution, metabolism, and excretion; additive adverse effects; and both increases and decreases in desired effects. Sicker patients not only get multiple medications, but also medications at higher doses, increasing the risks of drug toxicity when using multiple medications at maximum dosages. Polypharmacy poses additional risks in pharmacotherapy, including more adverse drug reactions, more severe adverse drug reactions, more drug interactions, more cumulative toxicity, more medication errors, more patient noncompliance, and more patient morbidity and mortality. The likelihood of death is directly proportional to the number of medications prescribed, even when controlled for the underlying disorder(s).

Specific polypharmacy in treatment-resistant conditions is a community standard that should be supported by assessment of the clinical presentation and by the medical literature. Combinations generally thought to be without justification include:

- Drugs from the same class to treat the same symptoms, with specific reference to typical antipsychotics; benzodiazepines, tricyclics, SSRIs, MAOIs, or other antidepressants from the same class; and stimulants.
- Use of more than two antipsychotics, typical or atypical.
- Change in dose before steady state and sufficient time for therapeutic response.
- Failure to adequately evaluate and monitor patients who are receiving polypharmacy.

Recommendations arising from reviews of poor outcomes in polypharmacy:

- Thoroughly evaluate the patient’s symptoms and medication regimen.
- Refrain from polypharmacy when possible; plan carefully and monitor response when it must be done.
- Only prescribe that for which there is a demonstrated need.
- Avoid using combinations from the same class of medication to treat the same symptoms.
- Consider drug interactions.
- Be familiar with adverse drug effects and how they are manifested in the patient.
- Carefully monitor for adverse drug effects, including cumulative anticholinergic effects.
- Obtain drug levels if applicable.
- Arrange for adequate follow-up.
- Arrange for general medical evaluation, especially if the patient appears medically ill and the deterioration is not clearly consistent with the psychiatric diagnosis.

REFERENCES

- Bowden CL, Wilcox JA. *The Bipolar Spectrum: Rational Polypharmacy*. Arlington Heights, IL: Access Medical Group, Dept. of Continuing Education. 2002.
- Devanzo PA. Combination Pharmacotherapy. In Rosenberg DR, Davanzo PA, Gerson S, *Pharmacotherapy for Child and Adolescent Psychiatric Disorders*. NY:Marcel Dekker, pp711-719.
- Evidence-Based Polypharmacy for Schizophrenia: Has It Arrived? *The Brown University Psychopharmacology Update*. 2003; 14(7):1, 4-6.
- Fayek M, Kingsbury SJ, Simpson G. Treatment-Resistant Schizophrenia: Making the Determination. *Psychiatric Times*. 2002;19(5). Available at <http://www.psychiatristimes.com/p020537.html>.
- Feng W, Owen RR, Austen M. Polypharmacy Prescribing of Antipsychotic Medications Among Thirteen Veterans Affairs Hospitals. National Meeting of Department of Veterans Affairs, Health Services Research and Development Service, Washington DC. 2001.
- Frye MA, Ketter TA, Leverich GS, et al. The Increasing Use of Polypharmacotherapy for Refractory Mood Disorders: 22 Years of Study. *Journal of Clinical Psychiatry*. 2000; 61(1):9-15.
- Goodwin, F. Combined Pharmacotherapy in Bipolar Disorder and Major Depression. APA/NPA Ninth Annual Psychopharmacology Update, February 2004. *Audio-Digest Psychiatry*. 2004;33(20).
- Harrington M, Lelliott P, Paton C. et al. Variation Between Services in Polypharmacy and Combined High Dose of Antipsychotic Drugs Prescribed for Inpatients. *Psychiatric Bulletin*. 2002;26:418-420.
- Iatrogenic Psychiatric Disorders: Section 1. Adverse Psychiatric Reactions Information Link. Available at http://www.april.org.uk/pages/iatrogenic_disease.html.
- Kramer TAM. Polypharmacy. *Medscape General Medicine*. 2000;2(3). Available at <http://www.medscape.com/viewarticle/430552>.
- Kingsbury SJ, Yi D, Simpson G. Rational and Irrational Polypharmacy. *Psychiatric Services*. 2001;52:1033-1036.
- Lelliott P, Harrington M, Konsalaki M, et al. The Influence of Patient Variables on Polypharmacy and Combined High Dose of Antipsychotic Drugs Prescribed for Inpatients. *Psychiatric Bulletin*. 2002;26:411-414.
- Masoudi FA. Polypharmacy and Comorbidity in Heart Failure: Most Patients Have Comorbidities that Need to be Addressed [Editorial]. *British Medical Journal*. 2003;376:513-514.
- Meltzer HY, Kostakoglu AE. Combining Antipsychotics: Is There Evidence for Efficacy? *Psychiatric Times*. 2000;17(9):25-34.
- National Association of State Mental Health Program Directors, Medical Directors Council and State Medicaid Directors. NASMHPD Medical Directors' Technical Report on Psychiatric Polypharmacy. Alexandria, VA. 2001.
- Nichol MB, Stimmel GL, Lange SC. Factors Predicting the Use of Multiple Psychotropic Medications. *Journal of Clinical Psychiatry*. 1995;56(2):60-66.
- Preskorn SH. Polypharmacy: When is it Rational? *Journal of Practical Psychiatry and Behavioral Health*. 1995;July:92-98.
- Procyshyn RM, Kennedy NB, Tse G, Thompson B. Antipsychotic Polypharmacy: A Survey of Discharge Prescriptions From a Tertiary Care Psychiatric Institution. *Canadian Journal of Psychiatry*. 2001;46:334-339.
- Protection and Advocacy Service, Inc., Investigation Unit. *Psychiatric Polypharmacy: A Word of Caution*. Oakland CA. 2004;June. Available at <http://www.pai-ca.org/pubs/702001.pdf>
- Rapp MS. Polypharmacy in Psychiatry: Update and Future Trends. *Canadian Journal of Psychiatry*. 1986;31:843-845.
- Rapp MS, Kaplan A. Polypharmacy Revisited. *Canadian Journal of Psychiatry*. 1981;26:569-573.
- Rosack, J. Catastrophic Medication Interactions Plague Elderly, Demand Solutions. *Psychiatric News*. 2000;October 20. Available at <http://www.psych.org/pnews/00-10-20/catastrophic.html>.
- Rosack J. Data Raise Concerns About Polypharmacy Trend. *Psychiatric News*. 2003;38(12):18-19.
- Sernyak MJ, Woods SW. Chronic Neuroleptic Use in Manic Depressive Illness. *Psychopharmacology Bulletin*. 1993;29:375-381.
- Substance Abuse and Mental Health Services Administration. *Medication Management Approaches in Psychiatry: Information for Public Mental Health Authorities (SAMHSA Contract No. 280-00-8049)*. 2002. Available at http://www.mentalhealthpractices.org/pdf_files/med/pcs.pdf.
- Tapp A, Wood AE, Secrest L, et al. Combination Antipsychotic Therapy in Clinical Practice. *Psychiatric Services*. 2003;54(1):55-59.
- Waddington JL, Youssef HA, Kinsella A. Mortality in Schizophrenia: Antipsychotic Polypharmacy and Absence of Adjunctive Anticholinergics Over the Course of a 10-year Prospective Study. *British Journal of Psychiatry*. 1998;173:325-329.
- Werder SF, Preskorn SH. Managing Polypharmacy: Walking the Fine Line Between Help and Harm. *Current Psychiatry Online*. 2003;2(2). Available at http://www.currentpsychiatry.com/2003_02/0203_polypharmacy.asp.