

Understanding Psychiatric Medications—Development of a Multi-Component Patient Education Program

Tonya Ng, Karen F. Shalansky and Tina Ustad

INTRODUCTION

Medication compliance is an important part of the success of any treatment program. Previous reports have shown that as high as 50% of psychiatric patients do not take their medications as directed.¹⁻⁴ Reasons for non-compliance include the nature of the underlying psychiatric illness, patients' denial of their condition, side effects, or fear of side effects and addiction, and lack of motivation.^{2,3,5,6} Failure to take psychiatric medications correctly can result in increased relapse and re-hospitalization rates.⁷ Studies have shown that patient education can increase patients' understanding of therapy, improve compliance and decrease the chance of re-hospitalization.^{3,4,7-9} Seltzer et al³ evaluated the impact of medication education on 52 psychiatric patients. At the five-month follow-up session, it was found that the study group tended to be more compliant than the control group. They were also less fearful of side effects and addiction. Kelly et al,⁴ Eckman et al,⁷ and Youssef et al⁸ yielded similar results after three to six months with patients enrolled in a pre-discharge education program. Robinson et al⁹ found written information with verbal re-enforcement and discussion were superior to written information alone in improving medication knowledge and compliance in 52 psychiatric patients by the end of two weeks.

Prior to this study, our pharmacy department provided patient education services to two adult psychiatric units through bi-weekly medication teaching groups and distribution of medication teaching sheets. At these sessions, patients were shown a commercially available video about neuroleptic medications, which was then followed by a group discussion. The divisions of pharmacy, nursing, and psychiatry decided that this video was inadequate due to its narrow scope and non-stimulating presentation format. The pharmacy department was, therefore, requested by the division of psychiatry to produce a new video about psychiatric medications as well as update our current medication teaching program.

PROGRAM DEVELOPMENT

A multi-faceted patient teaching program was developed for psychiatric patients at our hospital. The objectives were to: 1) produce a video to provide consistent information to psychiatric medication teaching groups; 2) update our current medication teaching sheets and translate them into Chinese and Punjabi; and 3) develop a self-medication program.

Video production. An extensive search through the medical literature, various pharmacy societies, and hospital pharmacy video libraries revealed that no acceptable videos addressing psychiatric medications or patient counselling were available. A video script was then developed by the pharmacy department in consultation with the departments of nursing and psychiatry. Several key points were addressed in the script, including a brief explanation of the cause of common psychiatric conditions, different classes of psychiatric medications, mechanisms of action, and the importance of compliance. Common side effects of psychiatric medications were also addressed and more importantly, patients were taught how to deal with these side effects. Patient concerns including the safety of consuming alcohol or taking other non-prescription medications while on psychiatric drugs, the time frame to the onset of effect of the medications, aids for remembering medication administration times, and whether psy-

Tonya Ng, BSc(Pharm), is a Clinical Pharmacist at Vancouver Hospital and Health Sciences Centre, Vancouver, BC.

Karen F. Shalansky, PharmD, FCSHP, is a Clinical Pharmacy Specialist at Vancouver Hospital and Health Sciences Centre, Vancouver, BC.

Tina Ustad, BSc(Pharm), is a Clinical Pharmacist at Vancouver Hospital and Health Sciences Centre, Vancouver, BC.

Address correspondence to: Tonya Ng, Department of Pharmacy, Vancouver Hospital and Health Sciences Centre, 855 West 12th Avenue, Vancouver, BC, V5Z 1M9. Both the video and patient teaching sheets are available from the authors at this address.

Acknowledgements: This project was sponsored in part through education grants from: Sandoz Canada Inc., Bristol-Myers Squibb Canada Inc., Hoffman-La Roche Ltd., Geigy Pharmaceuticals, Merck Frosst Canada Inc., Eli Lilly Canada Inc., The Upjohn Company of Canada, and Merrell Dow Pharmaceuticals (Canada) Inc.

chiatric medications are addictive were also incorporated into the video.

To maintain audience interest, a variety of audio and visual effects, as well as a combination of slides, still pictures, and animated computer graphics were utilized. Four actors were hired to act the parts of two patients, a community care worker, and narrator. Doctors, nurses, and pharmacists from our hospital were not used in the video as it was felt that patients might be uncomfortable or distracted from the contents of the video if familiar faces were recognized.

The script writing and editing were completed in three months. Filming occurred over a two-day period at various indoor and outdoor locations in Vancouver, and the final editing of the video took one week. The video is ten minutes and eighteen seconds in duration and cost \$6,000.00 to produce.

Medication teaching sheets. References dealing with patient medication teaching information were used to update our existing medication teaching sheets.^{10,11} The updated version was simplified with shorter sentences and easier wording. Extraneous content was reduced to improve comprehension and the text was arranged in a more visually appealing and easy to read format. To better serve the non-English speaking communities, the medication sheets were translated into Chinese and Punjabi.

Twelve, one-page, medication teaching sheets were developed in the three languages for the following drugs and classes of drugs: neuroleptics, depot neuroleptics, tricyclic antidepressants, monoamine oxidase inhibitors, anxiolytics, anticholinergics, clonazepam, fluoxetine, lithium, valproic acid, and carbamazepine. Appendix A displays the sample teaching sheet for anxiolytics. A page of helpful hints for safe use of medications, similar to that reported by Partovi et al,¹² is included on the back of each sheet.

Self-medication program. Hospitalized patients in the adult psychiatric ward were selected by psychiatrists for the self-medication program if they had a diagnosed psychiatric disorder, were English speaking, and near discharge. A maximum of two patients were allowed in the program at any one time due to staffing constraints. Medications were dispensed in vials to simulate outpatient dispensing format. The vials were kept in the nursing station but at scheduled times the patients were to ask their nurse for the medications. The nurse would then supervise the patients' self administration of their medication as well as continually interact with patients reminding them of their regimen. The patient's own medication administration record was given to them to aid in compliance.

In addition to the mechanics of the dispensing of medications, the pharmacy department was responsible for orienting each new patient to the program and provid-

ing personalized medication counselling sessions. At the first session, the purpose and format of the program were explained and background demographic information was obtained. To establish baseline knowledge, a verbal pre-test was given which consisted of a series of questions about their medications (Appendix B). The questions were drug specific and included questions about A) regimen e.g., name, dose, regimen, dosage form, colour and shape of the medication; B) indication; C) common side effects; D) what to do if a dose is missed; and E) other questions that are pertinent for the drug lithium e.g., information about drug levels. Patients were given one mark for each correct answer. Extra remarks, if any, were recorded in the section marked "other" for information purposes only. After the pre-test, each patient was counselled using the revised medication teaching sheets relevant to the drugs they were receiving. A medication administration record was also given to the patient. At the time of this study, the new video was not yet available.

The post-test was performed approximately one week after the pre-test, using the same series of questions. Further counselling was given if deemed necessary. A paired t-test comparing absolute pre- and post-counselling test scores was used. The cut-off for statistical significance was set at the 5% level. Means reported in Program Evaluation are expressed as the standard deviation.

PROGRAM EVALUATION

The counselling services provided by the pharmacy department for in-patient psychiatric patients now includes a video presentation, medication teaching sheets, and a self-medication program. The impact of the video was not formally evaluated; however, pharmacists, nurses and patients were very appreciative and positive regarding this teaching aid. The video appeared to increase the patients' understanding of their disease states and medications. It also stimulated better communication and understanding between patients and health care workers at their bi-weekly medication teaching groups. The English medication teaching sheets were incorporated into the self-medication program and were evaluated in conjunction with this program. Their translation into Punjabi and Chinese provided valued information for our large non-English speaking population, however, these patients were not assessed.

A total of twenty patients were enrolled into the self medication program between October 1991 and March 1993. Of these, four were ineligible due to unexpected hospital discharge and one patient had to withdraw as a result of the deterioration of his psychiatric condition. Demographics on the remaining fifteen patients are illustrated in Table I. The post-test was performed an average of 6.2 ± 1.9 days after the initial pharmacy intervention.

The self-medication program showed a positive impact

on medication knowledge in all patients evaluated, as indicated by the improvement and narrower range of post-test scores (pre-test score $45.5\% \pm 20.2$ versus post-test score $66.9\% \pm 10.0$, $p=0.001$). Patients improved their knowledge specifically in questions concerning neuroleptics, anticholinergics, and anxiolytics (Table II). However, due to the small sample size of patients on lithium and antidepressants, it is difficult to ascertain any significant differences in pre- and post-test scores in these areas.

With regard to the type of question asked, significant improvement was observed in knowledge regarding side effects of medications and compliance concerns (Table III). Patients may have found it easier to remember drug side effects as many of them were already experienc-

ing the common ones such as drowsiness, muscle stiffness, and restlessness. Furthermore, each time a patient requested or received a "prn" or "as needed" anticholinergic for stiffness, they were reminded that neuroleptics could cause those problems. However, the average post-test score for side effects was still only 40%, indicating that this area needs to be stressed in future counselling sessions.

There was no statistically significant improvement observed in question categories concerning regimen and indication. This was true despite extra emphasis placed by the pharmacist on drug regimen during counselling sessions. As well, nursing staff provided medication teaching to patients whenever there was a dosage change or if patients were taking their medications incorrectly. However, average baseline scores for these categories were greater than 60% and the average post-test scores were approximately 80%. Therefore, knowledge gained in these areas was considered satisfactory.

A limitation of this study was the small sample size. As well, patients enrolled in the study were selected by psychiatry and not randomized; thus, some bias might have been introduced resulting in patients having an improved performance due to their emotional stability. Furthermore, the improvement in medication knowledge represents only short-term knowledge gain. Unfortunately, it cannot be predicted whether this increase in knowledge can be translated into improvement in compliance or reduction in re-hospitalization rate in this group, although previous work indicates medication education of psychiatric patients leads to at least short term improvement in those areas.^{3,4,7-9}

In conclusion, our multi-component patient education program provided a positive impact on the psychiatry department. Education tools including a video, medication teaching sheets, and a self-medication counselling service were developed to improve patient medication knowledge and aid pharmacists in providing a more comprehensive patient education program. ☒

Table I: Patient Demographics

Number of patients	15
Mean age, years (range)	48 (24-72)
Male:Female	4:11
Diagnosis	
Schizoaffective disorder	9
Bipolar disorder	4
Borderline personality disorder	2
Education level	
Elementary school	1
High school	7
College	4
University	3

Table II: Mean Percent Score According to Medication Class

Medication Class	N	Pre-test	Post-test	p value	95% CI
Neuroleptics	14	43.5 ± 21.9	66.1 ± 12.8	0.008	-38.2,-7.0
Anticholinergics	9	38.3 ± 18.7	58.4 ± 12.8	0.004	-31.6,-8.8
Antidepressants	2	68.2 ± 6.4	68.2 ± 6.4		
Anxiolytics	9	46.9 ± 29.3	78.4 ± 28.9	0.011	-53.5,-9.5
Lithium	5	60.0 ± 16.7	62.8 ± 9.3	0.695	-21.7,16.0

N = Number of patients

Table III: Mean Percent Score According to Question Category.

Medication	N	Pre-test	Post-test	p value	95% CI
Regimen	38	60.1 ± 29.5	79.1 ± 28.0	0.08	-40.8,2.3
Indication	40	64.3 ± 33.8	76.1 ± 36.0	0.284	-34.5,10.9
Side effects	41	11.2 ± 16.3	41.7 ± 22.3	0.001	-46.4,-14.5
Compliance concerns	41	54.5 ± 33.5	91.9 ± 15.0	0.001	-56.5,-18.3
Special information	7	80.6 ± 30.6	69.4 ± 30.6	0.639	-46.1,68.3

N = Number of question types

REFERENCES

1. Kale J. Prevention and treatment of neuroleptic non compliance. *Psychiatr Ann* 1986; 16:576-9.
2. Brook H. Some psychodynamics of non compliance. *Can J Psychiatry* 1987; 32: 115-7.
3. Seltzer A, Rancher I, Garfinkel P. Effect of patient education on medication compliance. *Can J Psychiatry* 1980; 25:638-44.
4. Kelly G, Scott J. Medication compliance and health education among outpatients with chronic mental disorders. *Med Care* 1990; 28:1181-97.
5. France A, Weiden P. Promoting compliance with outpatient drug treatment. *Hosp Community Psychiatry* 1987; 38(11):1158-60.

6. Weiden P, Shaw E, Mann J. Causes of neuroleptic non-compliance. *Psychiatr Ann* 1986; 16:571-5.
7. Eckman T, Liberman R, Phipps C, Blair K. Teaching medication management skills to schizophrenic patients. *J Clin Psychiatry* 1990; 10:33-8.
8. Youssef F. Adherence to therapy in psychiatric patients: an empirical investigation. *Int J Nurs Studies* 1984; 21:51-7.
9. Robinson G, Gilbertson A, Litwack L. The effects of a psychiatric patient education to medication program on post-discharge compliance. *Psychiatr Q* 1986; 58(2):113-8
10. Gelman C, Rumack B (eds): Drugdex (R) Information System. Micromedex Inc., Denver, Colorado (Vol 73, edition expires 8/31/92)
11. The United States Pharmacopeial Convention. USPDI. Rockville: Banta, 1989.
12. Partovi N, Chan W, Reesor Nimmo C. Evaluation of a patient education program for solid organ transplant patients. *Can J Hosp Pharm* 1995;48(2):72-8.

Appendix A

Example of a Medication Teaching Sheet

ANXIOLYTICS

Name:

How Given:

Appearance:

WHAT IS IT FOR?

- Anxiolytics are used for the treatment of anxiety. When taken as prescribed, they help to calm you and improve your sleep.

HOW DO YOU TAKE THEM?

- Take this medication as directed by your physician. Do not take more or less than prescribed.
- If you are taking this medication on a regular basis, do not stop it abruptly. Your doctor may want you to reduce your dosage gradually. Sudden stoppage may cause muscle aches, chills, nausea, vomiting and dizziness.
- If you have been taking this medication regularly and you miss a dose, skip it and return to your regular dosing schedule. Do not double the dose.

SPECIAL INFORMATION:

- Avoid consuming too much caffeinated beverages, (for example, more than 4 cups of coffee or tea daily), as it may counteract the effects of anxiolytics.

- This medicine may cause drowsiness. Make sure that you know how you react to this drug before you drive, operate machinery or attempt tasks requiring alertness. Alcohol and cold and hay fever remedies will add to this effect.

- This medication can cause dizziness, especially when getting up from a sitting or lying position. Get up slowly or dangle your legs over the edge of the bed for a few minutes before rising.

SIDE EFFECTS:

Dizziness
Drowsiness
Clumsiness or unsteadiness

- These side effects do not usually require medical attention and they may go away during treatment as your body adjusts to the medication.

WHEN TO CALL:

- Contact your doctor if the above side effects continue or you are experiencing other side effects.

Appendix B
Example of a questionnaire about medication knowledge

Anxiolytics

A. About the regimen

1. What is the name, dose, dosage form of the medication that you are taking? How many times a day do you take it?

- a> _____ Name (generic or brand name) _____
b> _____ Dose _____
c> _____ Dosage form _____
d> _____ Regimen _____
e> _____ Colour/shape _____

B. Use

2. What is this medication used for?

- a> _____ To treat anxiety, to calm you and improve your sleep.
b> _____ other _____

C. Side effects

3. What are some of the common side effects seen with this medication?

- a> _____ drowsiness
b> _____ other _____

D. Compliance

4. What should you do if you forget to take a dose of your medication?

- a> _____ If the missed dose is remembered within a couple of hours, the dose should be taken. Otherwise, skip the dose and return to the regular schedule. Never double the dose.

5. Is this a medication to be taken on a regular basis or only when you feel ill?

- a> _____ regular basis/ when needed (depending on order)