

## **A Simple Phone Call: Community Pharmacist Led Intervention at a Large Community Pharmacy Chain to Promote Antidepressant Adherence**

### **Background:**

In the United States, over 300 million people are affected by depression.<sup>1</sup> While most people will occasionally experience depressive symptoms such as sadness, fatigue, and feelings of hopelessness, depression is characterized by experiencing these symptoms for at least two weeks and causes noticeable negative effects on day-to-day activities such as work, personal relationships, and social activities.<sup>1,2</sup> Depression is the leading cause of disability worldwide and is a major contributor in the overall global disease burden.<sup>3</sup> Despite its prevalence, reports show that fewer than half of the people affected with depression are receiving treatment.<sup>3</sup> Some barriers to treatment include lack of resources, lack of trained healthcare professionals, misdiagnosis, and the social stigma associated with mental health disorders.<sup>3</sup> Additionally, several studies identify lack of education as a barrier to adherence.<sup>4-6</sup> These studies highlight the opportunity that community pharmacists have to improve patient outcomes.

While depression is extremely responsive to antidepressant therapy, benefits can only be seen if the patient actually takes the medication.<sup>7</sup> Failure to adhere to antidepressant treatments can lead to dire outcomes such as avoidable disability, increased comorbidity-related mortality, increased personal and societal financial burden, poor quality of life, and suicide.<sup>8</sup> Patients who are nonadherent during the first six weeks of treatment are at an even increased risk.<sup>8</sup> A study reported that up to 68% of patients diagnosed with depression discontinue their antidepressant medication by three months.<sup>9</sup> Of those who continue to take their medication, only 33% consistently take their medication as prescribed.<sup>10</sup> Adherence to antidepressant medications can be challenging, especially in the early stages. It takes a full four to eight weeks for a patient to experience the maximum benefit of their antidepressant. This time-to-efficacy applies to the following classes of antidepressant medications; selective serotonin reuptake inhibitors (SSRIs), serotonin norepinephrine reuptake inhibitors (SNRIs), tricyclic antidepressants (TCAs) and Wellbutrin® (bupropion).<sup>15</sup> During the first two weeks of treatment, patients often report many adverse effects, such as nausea, lightheadedness, headache, tremor, and agitation.<sup>16</sup> These common yet unpleasant side effects often cause the patient to discontinue their treatment.<sup>17</sup> While the initial side effects are certainly undesirable, it is crucial that patients continue the therapy so that the true benefit of the medication can be assessed.

Research has been done to evaluate the importance of a community pharmacist in patients diagnosed with depression. However, many studies were done in foreign countries and none involved a large chain community pharmacy.<sup>18-22</sup> The PRODEFAR study was a cost-effectiveness study conducted in Spain and included patients initiating antidepressant treatment. These patients received usual care or the intervention, which was a series of education interventions focused on improving the patient's knowledge of their medication. These interventions were done face-to-face, and adherence was measured based on how many pills were left in the bottle at three and six months from baseline. This study was conducted in 13 pharmacies under different ownership.<sup>18</sup> A similar study was conducted in pharmacies within a large managed care organization in which patients were randomized to receive either three monthly phone calls from pharmacists providing education and monitoring versus usual care. Results showed that the intervention arm had a significant and positive effect on patient feedback, knowledge, perceptions of progress and patients missed fewer doses than the usual care group at six months.<sup>19</sup> Across the board, studies show that pharmacist involvement on the mental health team produces better patient outcomes. There is a call to action to integrate community pharmacists as part of the mental healthcare team in order to help patients struggling with depression live happier and healthier lives.

**Objective:**

The objective of this study was to determine if follow-up by a community pharmacist after a new antidepressant medication is picked up has an impact on a patient's medication adherence. A secondary objective was to collect subjective responses from patients about their perceptions of the service

**Methods:**

The study was conducted in 6 Utah-based Smith's Food and Drug (Kroger) pharmacies. Participating pharmacies were selected based on their patient population and pharmacist motivation to participate in a research study. Pharmacies were in the Salt Lake City metropolitan area.

Study subjects included any patient 18 years or older identified as antidepressant naive. Antidepressant naive was defined as not having the medication or a similar medication within the past year.

Medications included were selective serotonin reuptake inhibitors (SSRIs), serotonin norepinephrine reuptake inhibitors (SNRIs), tricyclic antidepressants (TCAs) and Wellbutrin® (bupropion).

The study had two arms: intervention and control groups. Six pharmacies were selected to participate, however only 4 pharmacies provided the primary investigator (PI) with data. Patients who were antidepressant naive were identified at the pharmacy based on patient interview at point-of-sale. Their information was faxed to the PI who delegated them to the control or intervention group. This was done by placing every other subject in the treatment arm and the others in the control arm. Subjects in the control group were identified using the same criteria as the treatment group. After eligibility was determined, their information was sent to the PI who assigned them to the control group. After the initial counseling they received upon medication pick-up, they received no further follow-up from a pharmacist. Subjects were identified between November 5<sup>th</sup>, 2019 and December 31<sup>st</sup>, 2019 and were followed for 90 days after identification. Thus, the study period was between November 5<sup>th</sup>, 2019 and March 25<sup>th</sup>, 2020. As incentive to increase pharmacy participation, participating pharmacists were given \$50 amazon gift cards and lunch was provided to pharmacy staff.

Identification of study subjects occurred at the pharmacy. At point of sale, pharmacists, student pharmacists, and technicians were instructed to ask patients picking up a SSRI, SNRI, TCA, or bupropion if they have ever taken this medication, or a medication like this, in the past. They also asked for the medication's indication and updated the patient's phone number. The patient's name, date of birth, and prescription number were then faxed to the PI. For subjects assigned to the control group, the PI entered interventions into the pharmacy computer system that prompted pharmacists to call these patients at days 7, 25 and 55 after the medication was picked up. The purpose of the phone call was to assess for adherence, side effects, and continuation of therapy. The phone calls also provided the patients with medication education, specifically related to unwanted side effects in the first 2 weeks of treatment and a delay of up to 8 weeks for patients to experience the full benefit of the medication. Pharmacy staff attempted to contact patients three times over a week, calling every other day. If no answer, a message was left instructing the patient to call the pharmacy back regarding their new medication. Calls were placed in the morning, before 10am, which allowed patients ample time to return the phone call.

In order to standardize the pharmacist intervention, all pharmacists at participating stores received training in the form of a live presentation delivered by the PI. This training included a power point that detailed the purpose and procedures of the study, a script, and outlined methods for documentation.

Medication adherence and continuation was determined 90 days after initial pick-up from the patient's medication profile and refill history. Medication adherence and continuation was ascertained from the patient's medication profile in the pharmacy computer system. It was assumed that if the patient had medication available to them on the follow up date, that they continued the antidepressant medication. Counts and percentages were calculated and compared between the intervention and control groups.

The study was deemed exempt by the Roseman University Institutional Review Board and was a prospective intervention trial.

**Results:**

***The study population:***

In both the treatment and control population, a large percentage of the patients enrolled in the study were between the ages of 25 and 39 (41% and 40%, respectively). In both arms of the study, there were more females than males, 70% female in the treatment arm and 60% female in the control arm. Additionally, a higher percentage of the treatment population (53% vs 27%) were enrolled in a refill program (automatic refill or Medsync).

**Table 1.1 Demographics of the Study Population**

	<u>Treatment Population</u>	<u>Control Population</u>
	<b>N (%)</b>	<b>N (%)</b>
All	17	15
Gender		
Male	5 (29)	6 (40)
Female	12 (70)	9 (60)
Age, yrs		
18-25	3 (18)	3 (20)
25-39	7 (41)	6 (40)
40-49	2 (12)	4 (27)
50-64	4 (24)	2 (13)
65+	1 (6)	0 (0)

**Table 1.2 Medications**

	<u>Treatment Population</u>	<u>Control Population</u>
	<b>N (%)</b>	<b>N (%)</b>
All	17	15
Bupropion	4 (24)	1 (7)
Selective Serotonin Reuptake Inhibitors	13 (76)	14 (93)

***Impact of Pharmacist Intervention:***

At day 90, 11 patients (65%) of the treatment population were assumed to be continuing with their antidepressant therapy compared to 6 patients (40%) of the control population. Over the course of 90 days, only 1 patient (6%) from the treatment arm changed medications compared to 2 patients (13%) from the control arm. However, 5 patients (29%) from the treatment arm experienced a dose change (increase) compared to 1 patient (7%) in the control arm.

Figure 1.1 Impact of Pharmacist Intervention on Antidepressant Medication Therapy Continuation.

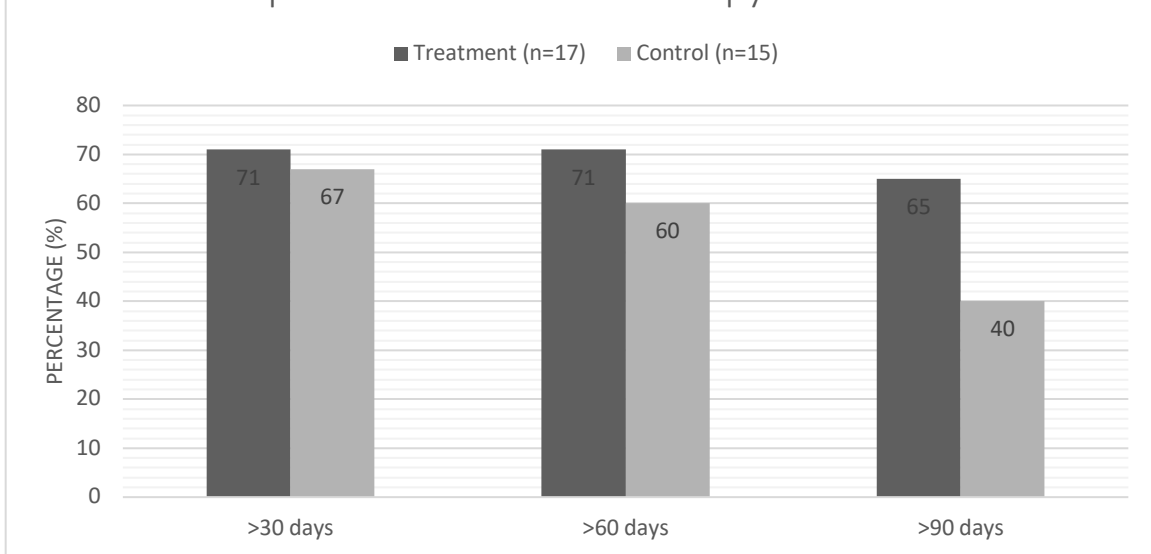


Table 1.4 Medication and Dose Changes after 90 days.

	<u>Medication Change</u>	<u>Dose Change</u>
	<b>N (%)</b>	<b>N (%)</b>
Treatment Population (n=17)	1 (6)	5 (29)
Control (n=15)	2 (13)	1 (7)

**Discussion:**

Medications from the classes SSRI, SNRI, TCA, and bupropion were in the inclusion criteria. However, patients enrolled in the study were found to only be on SSRIs and bupropion. Additionally, a higher percentage of the treatment population (53% vs 27%) were enrolled in a refill program (automatic refill or Medsync) which may be attributed to the additional contact these patients had with pharmacy staff during follow-up phone calls.

The results of this prospective trial showed that a greater percentage of patients who received additional follow-up counseling from the pharmacist continued therapy beyond 90 days compared to patients who had no additional follow-up after initial pick-up. This shows the potential value that additional personalized pharmacist counseling has on antidepressant therapy initiation and medication continuation. By checking in with patients at various points when a patient is first starting a new medication, pharmacists are able to reinforce important counseling points, answer questions, and provide patients with the tools they need to effectively manage their medications. Initiating antidepressant therapy can be discouraging due to the unwanted side effects that are experienced within the first two weeks of treatment. Having a pharmacist reach out to patients during this difficult period can help encourage patients to wait until the time-to-efficacy and can help patients evaluate if the medication is effective.

The results of this study also showed that a greater percentage of patients in the treatment arm experienced a dose change during the first 90 days of therapy. The phone call script given to pharmacists addresses dose changes on phone call #3, which is administered 55 days after treatment initiation. At 55 days, patients are approaching the 8-week mark which is how long it can take for patients to experience the maximum benefit of their medication. At this point, the pharmacist counsels the patient that if they are not feeling the benefits of the medication, an increase in dose is recommended. After building a treatment plan with the patient, the pharmacist has the ability to contact the prescriber on behalf of the patient requesting a dose increase. The data from this study supports that without additional counseling, patients may not know how to reach out to their provider when medication changes are warranted.

In general, additional follow-up allowed for pharmacists to showcase their potential and practice at the top of their license. Phone conversations not only provided medication specific counseling, it served as a medium for promotion of other pharmacy services that are available to patients such as automatic refill, medication synchronization, and coordination of care among disciplines. Current services offered at the pharmacy are not targeted towards those struggling with depression. The results of this study support previous studies that community pharmacists are positioned to be part of the mental health care team because they are the most easily accessible healthcare provider. Based on the results of this study and similar studies, integration of the community pharmacist into the mental health care team has the potential to lead to better therapy adherence and improved patient medication experience, resulting in improved patient outcomes.

There were several limitations to this study. It was challenging to get widespread pharmacist participation, resulting in limited patient numbers, and larger studies are needed to assess the significance of additional pharmacist counseling during antidepressant therapy initiation. Additionally, while pharmacists were given phone call scripts to follow, it was difficult to ensure the standardization of the intervention. Lastly, assumptions were made about medication adherence based on the patient's medication profile. Access to a shared electronic medical record would have provided more accurate information on whether the patient chose to continue therapy.

**Conclusion:**

In conclusion, this study showed that patients who received additional counseling from a pharmacist during treatment initiation experienced greater medication adherence beyond 90 days. A greater percentage of the treatment arm also experienced a change in dose compared to the control arm. This study highlights the opportunities that community pharmacists have to assist their patients as they initiate antidepressant therapy. As the most accessible health care provider, community pharmacists are poised to be a part of the mental health care team. Compensation needs to be established for additional counseling services in order to increase pharmacist motivation and participation. Future studies are needed to evaluate long term effects, different modes of pharmacist training, and/or other interventions to help integrate conversations about depression in community pharmacy practice.

## References

1. Depression (major depressive disorder). Mayo Clinic website. <https://www.mayoclinic.org/diseases-conditions/depression/symptoms-causes/syc-20356007>. Accessed August 27, 2019.
2. Depression. The National Institute of Mental Health website. <https://www.nimh.nih.gov/health/topics/depression/index.shtml>. Accessed September 3, 2019.
3. Depression. World Health Organization website. <https://www.who.int/news-room/fact-sheets/detail/depression>. Updated March 22, 2018. Accessed August 27, 2019.
4. Tamburrino, M. B., Nagel, R. W., Chahal, M. K., & Lynch, D. J. (2009). Antidepressant medication adherence: A study of primary care patients. *Primary Care Companion Journal of Clinical Psychiatry*. 2009;11(5): 205–211.
5. Bultman DC, Svarstad BL. Effects of physician communication style on client medication beliefs and adherence with antidepressant treatment. *Patient Educ Couns*. 2000;40:173–185.
6. Bull SA, Hu XH, Hunkeler EM, et al. Discontinuation of use and switching of antidepressants: influence of patient-physician communication. *JAMA*. 2002;288:1403–1409.
7. Hunot VM, Horne R, Leese MN, Churchill RC. A cohort study of adherence to antidepressants in primary care: the influence of antidepressant concerns and treatment preferences. *Primary care companion to the Journal of clinical psychiatry*. 2007;9(2):91
8. Melfi CA, Chawla AJ, Croghan TW, Hanna MP, Kennedy S, Sredl K. The effects of adherence to antidepressant treatment guidelines on relapse and recurrence of depression. *Arch Gen Psychiatry*. 1998;55(12):1128-1132.
9. Bull SA, Hu XH, Hunkeler EM, et al. Discontinuation of use and switching of antidepressants: influence of patient-physician communication. *JAMA*. 2002;288(11):1403–1409. doi:10.1001/jama.288.11.1403
10. Boudreau DM, Capoccia KL, Sullivan SD, et al. Collaborative care model to improve outcomes in major depression. *Ann Pharmacother*. 2002;36:585–591.
11. Finley PR, Crimson ML, Rush AJ. Evaluating the impact of pharmacists in mental health: a systematic review. *Pharmacotherapy*. 2003;23:1634–1644. doi: 10.1592/phco.23.15.1634.31952.
12. Crossley K. Public Perceives Pharmacists as Some of the Most Trusted Professionals. Pharmacy Times website. <https://www.pharmacytimes.com/publications/career/2019/careerswinter19/public-perceives-pharmacists-as-some-of-the-most-trusted-professionals>. Published March 18, 2019. Accessed August 27, 2019.
13. Improving Access and Use of Psychotropic Medicines. World Health Organization. [https://www.who.int/mental\\_health/policy/services/10\\_improving%20access\\_WEB\\_07.pdf?ua=1](https://www.who.int/mental_health/policy/services/10_improving%20access_WEB_07.pdf?ua=1). Published 2005. Accessed August 27, 2019.
14. Finley PR, Crimson ML, Rush AJ: Evaluating the impact of pharmacists in mental health: a systematic review. *Pharmacotherapy*. 2003, 23: 1634-1644. 10.1592/phco.23.15.1634.31952.
15. Gautam S, Jain A, Gautam M, Vahia VN, Grover S. Clinical Practice Guidelines for the management of Depression. *Indian J Psychiatry*. 2017;59(Suppl 1):S34–S50. doi:10.4103/0019-5545.196973
16. Ferguson JM. SSRI Antidepressant Medications: Adverse Effects and Tolerability. *Prim Care Companion J Clin Psychiatry*. 2001;3(1):22–27. doi:10.4088/pcc.v03n0105
17. Fortney JC, Pyne JM, Edlund MJ, et al. Reasons for antidepressant nonadherence among Veterans treated in primary care clinics. *J Clin Psychiatry*. 2011;72:827–834.

18. Rubio-Valera M, Bosmans J, Fernández A, et al. Cost-effectiveness of a community pharmacist intervention in patients with depression: a randomized controlled trial (PRODEFAR Study). *PLoS One* 2013;8:e70588 10.1371/journal.pone.0070588
19. Rickles NM, Svarstad BL, Statz-Paynter JL, Taylor LV, Kobak KA. Pharmacist telemonitoring of antidepressant use: effects on pharmacist-patient collaboration. *J Am Pharm Assoc (2003)* 2005;45(3):344–53.
20. Brook O, van Hout H, Nieuwenhuysen H, Heerdink E. Impact of coaching by community pharmacists on drug attitude of depressive primary care patients and acceptability to patients; a randomized controlled trial. *Eur Neuropsychopharmacol.* 2003;13(1):1–9. doi: 10.1016/S0924-977X(02)00074-3.
21. Chong WW, Aslani P, Chen T. Effectiveness of interventions to improve antidepressant medication adherence: a systematic review. *Int J Clin Pract.* 2011;65:954–975.
22. Al-Jumah KA, Qureshi NA. Impact of pharmacist interventions on patients' adherence to antidepressants and patient-reported outcomes: a systematic review. *Patient Prefer Adherence.* 2012;6:87–100.

## Appendix 1

### Phone Call Script

#### Phone Call #1 (day 7 after pick up)

Good morning/afternoon! This is \_\_\_\_\_, your pharmacist from Smith's pharmacy. How are you today? I am calling today because I noticed that you picked up a brand-new medication about a week ago. I wanted to check in with you and see how this therapy is going.

What unwanted side effects have you noticed? Have you noticed a change in your mood since starting the medication?

I wanted to remind you of a few counseling points we went over when you picked this medication up. The medication has quite a few side effects when a person first starts taking it. You may have noticed a headache, upset stomach, lightheadedness, shaking, and/or troubling sleeping/feeling too sleepy. These side effects tend to last 2 weeks and it can take up to a full 8 weeks for one to see the full benefit of the medication.

What questions do you have for me about your new medication?

#### Phone Call #2 (day 25 after pick up)

Good morning/afternoon! This is \_\_\_\_\_, your pharmacist from Smith's pharmacy. How are you today? I am calling again today to check in with you and see how your antidepressant therapy is going.

What unwanted side effects have you noticed? Have you noticed a change in your mood since starting the medication?

I wanted to remind you of a few counseling points we went over when you first picked this medication up. The benefit of the medication should start to kick in about 1 month after you start taking it. If you are not noticing any positive changes within the next few weeks, you may need to increase your dose. It is important to keep taking your medication as prescribed, if you stop taking it abruptly, you may experience antidepressant discontinuation syndrome. Stopping cold turkey can cause insomnia, nausea, headache, agitation, and flu-like symptoms. It is important to talk with your doctor before you stop taking your medication.

What questions do you have for me about your medication?

#### Phone Call #3 (day 55 after pick up)

Good morning/afternoon! This is \_\_\_\_\_, your pharmacist from Smith's pharmacy. How are you today? I am calling again today to check in with you and see how your antidepressant therapy is going.

What unwanted side effects are you still noticing? Have you noticed a change in your mood since starting the medication?

I wanted to check in with you and remind you of a few counseling points. By now, you should be noticing an improvement in your mood. If you do not feel like anything has changed, I recommend you talk to your doctor about increasing your dose or trying a different medication. There are many medications that can help you, it just takes time to find the right one. I wanted to remind you that it is important to keep taking your medication as prescribed, if you stop taking it abruptly, you may



experience antidepressant discontinuation syndrome. Stopping cold-turkey can cause insomnia, nausea, headache, agitation, and flu-like symptoms. It is important to talk with your doctor before you stop taking your medication.

What questions do you have for me about your medication?