

Bridging the Communication Gap for Patient Adherence

by

Kyle Lark and Tim Walker

This paper is submitted in partial fulfillment of the  
requirements for the degree of:

Doctor of Optometry

Ferris State University  
Michigan College of Optometry

February, 2018

Bridging the Communication Gap for Patient Adherence

by

Kyle Lark and Tim Walker

Has been approved

February 5, 2018

APPROVED:



---

Faculty Advisor:

ACCEPTED:



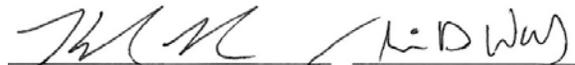
---

Faculty Course Supervisor

Ferris State University  
Doctor of Optometry Senior Paper  
Library Approval and Release

Project Title: Bridging the Communication Gap for Patient Adherence

We, Kyle Lark and Tim Walker, hereby release this Paper as described above to Ferris State University with the understanding that it will be accessible to the general public. This release is required under the provisions of the Federal Privacy Act.



\_\_\_\_\_  
Doctoral Candidates

4/25/18

\_\_\_\_\_  
Date

## ABSTRACT

**Background:** Effective patient communication is key in providing excellent care. This study provides insight as to the most appropriate form of communication to ensure patient adherence based on the confidence level of the patients understanding of their diagnosis and treatment plan. It also outlines if the preferred form of communication changes based on the complexity of his/her diagnosis and treatment plan. **Methods:** A survey was distributed to 30 patients following their primary care eye exam willing to take part in our study at the Michigan College of Optometry. The survey consisted of questions inquiring their confidence level on the diagnosis and treatment plan according to a Likert scale. At the end of the survey the patient was asked to provide their preferred form of doctor to patient communication in order to attain adherence. The choices of communication are as follows; a written letter sent home, electronic version such as email, traditional verbal communication. **Results:** A chi square analysis was used to compare two categories of patients divided into Refractive and Medical primary diagnosis. 100% of patients with a refractive diagnosis were confident in explaining their diagnosis and treatment plan. At least 85% of patients with a medial primary diagnosis were confident in explaining their diagnosis and treatment plan. 90% of the patients surveyed preferred supplemental information at the end of the exam to aid in remembering their diagnosis and treatment plan. **Conclusions:** Overall, our null hypothesis was accepted in that patients felt confident in explaining their diagnosis and treatment plan with traditional verbal communication at the conclusion of the eye exam regardless of the primary diagnosis. Despite being confident at the conclusion of the exam nearly all patients preferred supplemental information on their diagnosis and treatment plan to aid in proper adherence.

## TABLE OF CONTENTS

	Page
LIST OF TABLES.....	vi
CHAPTER	
1 INTRODUCTION.....	7
2 METHODS.....	9
3 RESULTS.....	10
4 DISCUSSION.....	14
APPENDIX	
A. PATIENT COMMUNICATION SURVEY.....	22

## LIST OF TABLES

Table		Page
1	Average Confidence Level Explaining Primary Diagnosis .....	11
2	Average Confidence Level Explaining Primary Diagnosis .....	11
3	Preferred Communication of Diagnosis and Treatment Plan.....	12
4	Preferred form of Supplemental Information.....	12

## CHAPTER 1

### INTRODUCTION TO PATIENT ADHERANCE TO TREATMENT PLANS

Patient adherence is one of the most intriguing topics of health care today. Nearly 4 billion prescriptions are written in the United States yearly, while 50 percent of those prescriptions are not filled or are used incorrectly.<sup>1</sup> This has led to large US healthcare system debt and a yearly death total of nearly 125,000 deaths. Several aspects of health care could be at fault for the daunting statistics of poor compliance, but one issue that continues to push its way to the forefront is patient communication.

The average time a doctor spends discussing medications and treatment plans is less than 49 seconds, which leaves patients confused and misinformed on their diagnosis. (1). On average 85% of information from an exam is remembered shortly after leaving the exam room and only two thirds of patients remember the basic information when starting a new medication.<sup>2</sup> Clearly there needs to be a secondary avenue for patients to retain information of their diagnosis and treatment plan. Distributing multiple resources could be beneficial for patients to take home to ensure patient adherence.<sup>3</sup>

The goal of our study is to determine if optometric patients at the Michigan College of Optometry feel confident in their diagnosis and treatment plan. Based on the complexity of the final diagnosis, whether it be a simple refractive diagnosis or medical in nature, would patients prefer a secondary form of communication summarizing the diagnosis and treatment plans of that exam visit? We believe that all doctors feel confident in their patient education, but even if the patient fully understands the exam results at the completion of the exam, we

believe additional information recapping the office visit would be beneficial to ensuring the treatment plan and promote a good doctor to patient relationship.

## CHAPTER 2

### METHODS

Participants in this study included 30 patients at the Michigan College of Optometry. Patient ages ranged from 22 to 71. Informed consent forms were provided to the participants with information on procedures, benefits and risks of participating, voluntary participation, and contact information of the researchers. Patients were given a survey at the conclusion of their exam. The survey consisted of two questions inquiring their confidence level on the diagnosis and treatment plan. Participants were asked to rate how confident they were in accurately explaining their diagnosis and treatment plan to someone else. A Likert scale was provided for the patient to rate their confidence from one, not confident at all, to five, very confident. At the end of the survey the patient was asked to provide their preferred form of doctor to patient communication in order to attain adherence to the treatment plan. The choices of communication are as follows; a written letter sent home, electronic version such as email, traditional verbal communication. Results were separated into two separate groups according to their primary diagnosis: either refractive or medical. A Mann Whitney U test for unpaired data was performed to determine if there was a statistical significance between the confidence level between the two groups.

## CHAPTER 3

### RESULTS

A Mann Whitney U test was run to compare two categories of patients divided into Refractive and Medical primary diagnosis. It was determined that there is not a statistical difference between how confident patients felt about their confidence on explaining their primary diagnosis with a p-value of .0067. The same p-value of .0067 was calculated for patients understanding and confidence of explaining their treatment plan.

100% of patients with a refractive diagnosis were confident in explaining their diagnosis and treatment plan. At least 85% of patients with a medial primary diagnosis were confident in explaining their diagnosis and treatment plan. 90% of the patients surveyed preferred supplemental information at the end of the exam to aid in remembering their diagnosis and treatment plan. Table 1 compares the average response in how confident patients are in explaining their primary diagnosis for their visit seperated into the two groups of medical and refractive diagnoses.

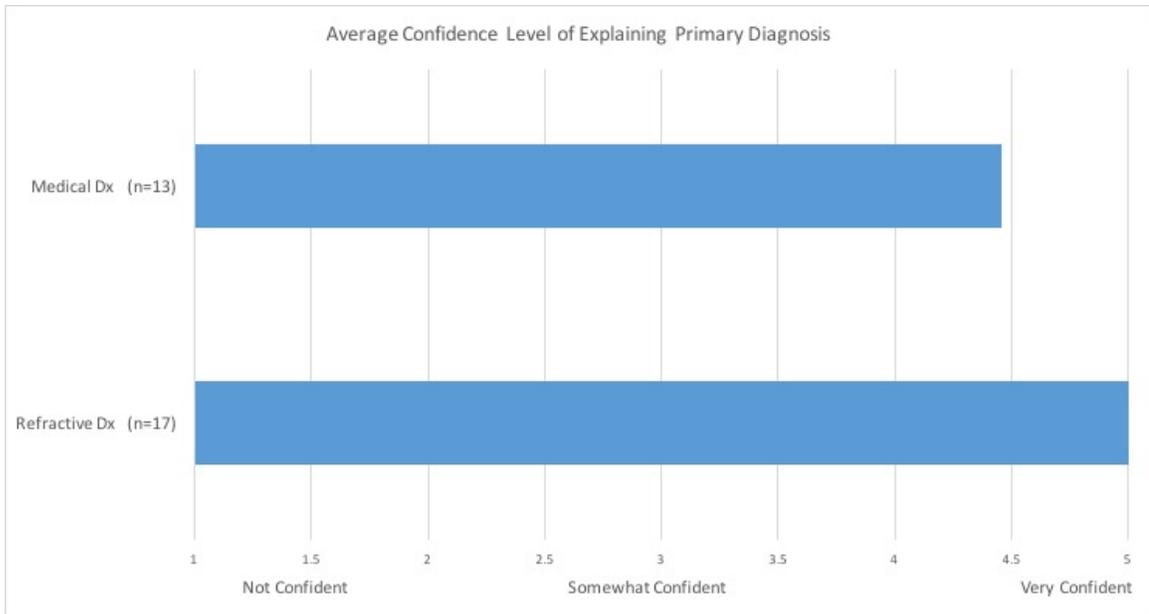


Table 1

Table 2 illustrates the average response in how confident patients are in explaining their treatment plan for their visit separated into the two groups of medical and refractive diagnoses.

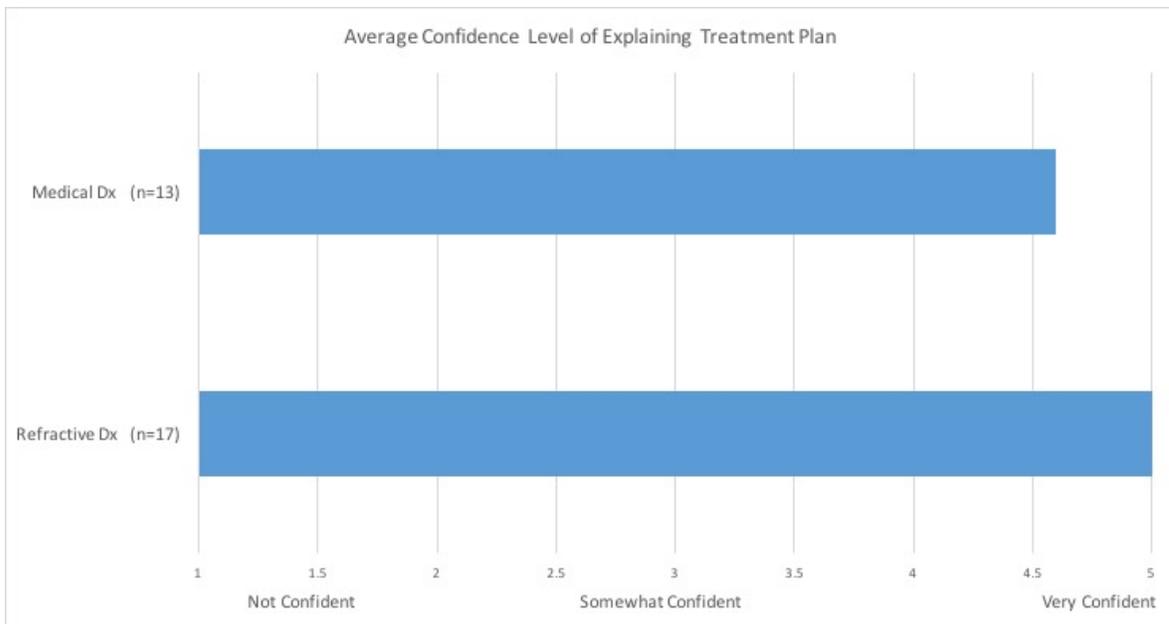


Table 2

Table 3 shows the preferred form of communication across all patients surveyed.

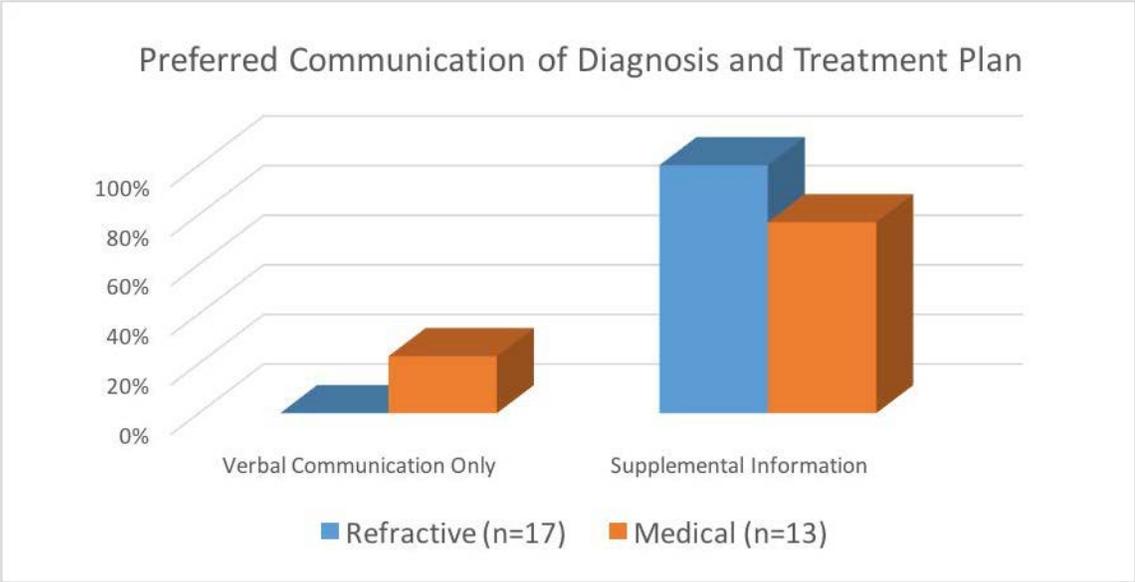


Table 3

Table 4 demonstrates a breakdown of the most preferred way of receiving the supplemental information email/electronic version versus printed material.

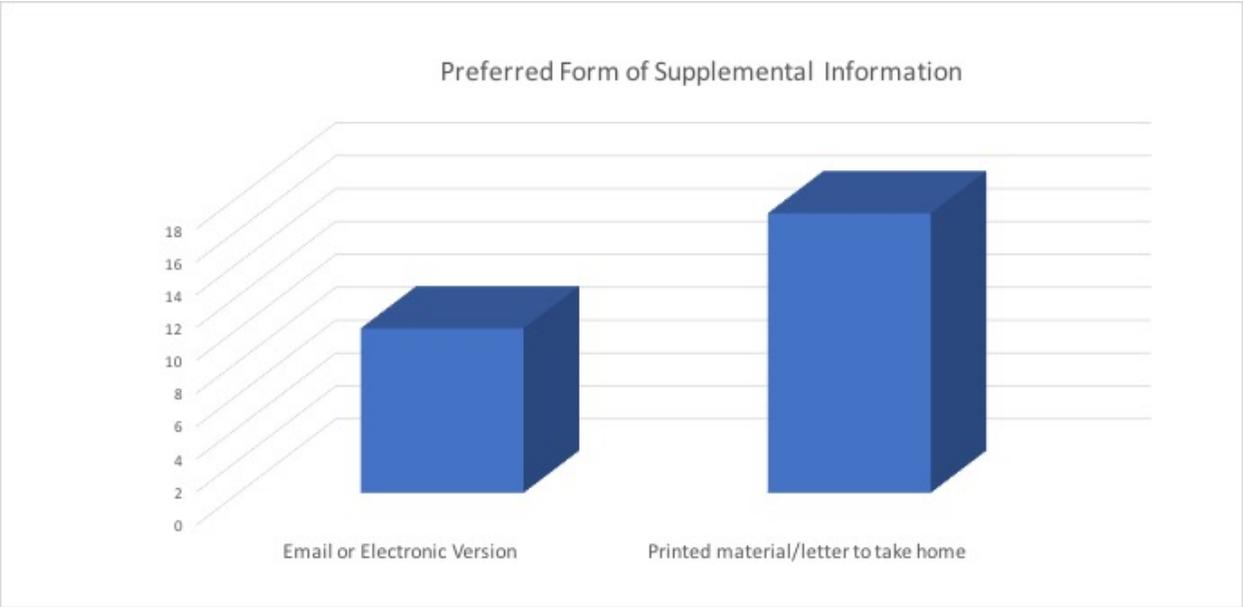


Table 4

## CHAPTER 4

### DISCUSSION

Patient education and communication are key components to ensuring patient adherence. Unfortunately, managed care providers are not currently taking initiative of ensuring patients are following treatment plans. In fact, only 19% of care providers monitor eye care adherence.<sup>5</sup> It is in the best interest of optometrists and health care providers alike to begin taking matters into their own hands to establish the best patient to doctor relationship.

Based on our findings, nearly 90 percent of the patients that participated in the study wanted additional resources to take home regardless of how confident they felt about their diagnosis and treatment plan. Separating the primary diagnosis into refractive and medical did not make a difference in how confident the patient felt in the knowledge of their diagnosis. However, a majority of patients, when offered, would like some form of supplemental information to take home in order to help aid them in remembering and adhering to treatment plans. Whether that treatment plan ranged from over the counter medication to prescription eye drops. Offering the patient additional information based on the exam results could be an easy solution to bridging the communication gap between patient and doctor relationships.

## REFERENCES

- 1 Chesanow, N. (2014, January 16). Why Are So Many Patients Noncompliant? Retrieved February 04, 2018, from [https://www.medscape.com/viewarticle/818850\\_4](https://www.medscape.com/viewarticle/818850_4)
- 2 Haskard Zolnierek K, DiMatteo M. Supplemental Material for Social Support and Patient Adherence to Medical Treatment: A Meta-Analysis. *Health Psychology*. 2004;47(8). doi:10.1037/0278-6133.23.2.207.supp.
- 3 M. Tarn D, A. Flocke S. New Prescriptions: How Well Do Patients Remember Important Information?. *Family Medicine*. 2011;43(4).
- 4 O'Dell L. Why noncompliance will ruin your perfect treatment plan. *OptometryTimes*. 2015. Available at: <http://optometrytimes.modernmedicine.com/optometrytimes/news/why-noncompliance-will-ruin-your-perfect-treatment-plan?page=full>. Accessed April 28, 2017.
- 5 Sonnenreich, P., & Zoeller, J. (2014). Survey Reveals Trends in Eye Care: Respondents Weigh In on Adherence, Vision Screenings, Patient Support Programs, and E-Prescribing. *Pharmacy and Therapeutics*, 39(11), 794–795.