

**HOW MUCH INFLUENCE DO YOU REALLY HAVE AS AN EYE DOCTOR ON
PATIENT DECISIONS AND PURCHASES?**

by

**Angela Jammer
And
LaKeisha Parker**

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ABSTRACT

Background: This research addresses how influential the recommendation of an optometrist will have on the type of contact lens solution a patient decides to use. This survey also addresses other reasons patients may have chosen a particular solution.

Methods: One hundred established contact lens wearers were surveyed on which solutions they used and why. The survey was distributed at the Michigan College of Optometry contact lens clinic. The patients surveyed were both soft and hard contact lens wearers, which have been wearing contact lenses for at least one year. It was our expectation that survey results would show patients prioritizing price more than doctor's recommendations when making the decision of which contact lens solutions to purchase. Another survey was distributed to local optometrist, both at the offices of private practitioners, and commercial practice in Big Rapids MI. These doctors were asked how often they make contact lens solution recommendations and which brands they recommend the most.

Results: Based off the data collected at the Michigan College of Optometry contact lens clinic 76.19 % of patients report following their doctor recommendation for contact lens solution while 23.81% did not. Data also shows that doctor recommendation is more important than price when choosing a contact lens solution. From our data the most commonly recommended and most commonly used soft contact lens solution is Optifree, which correlates with our data as Optifree having the largest market share of the top

soft contact lens solution brands.

Discussion: This survey will help practitioners gauge the effectiveness of their current methods of patient education. Optometrist need to be aware that their recommendations are still the most important influence on patients, and make the most appropriate recommendations accordingly. Knowledge of this information will hopefully help practitioners reform their patient education methods to increase patient compliance.

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Introduction: This research was done to establish approximately how often a patient will actually take the doctors advice when choosing a contact lens solution. The object is to give current practitioners an idea of how well the average contact lens patient listens when given a recommendation. The Research was done at the Michigan College of Optometry as well as private and commercial offices in Big Rapids MI, on a volunteer basis.

Rationale: As many professionals in the medical field will tell you patients do not always follow doctor recommendations, be it lack of financial ability, lack of trust due to poor doctor-patient relationship, or other influencing factors. Many patients will do their own research or listen to a friend or family member. As future optometrists we think it would be very helpful to know approximately how many of our patients will actually take our advice. With this knowledge a Doctor can decide how much time should be spent making recommendations. If doctors feel that their recommendations will be heeded, they may be more inclined to increase conversation time with perhaps more patient education or possibly reiterating certain issues a bit more with patients.

Methods: The attached survey was distributed to one hundred patients living in the Big Rapids area. These subjects were contact lens patients who have been wearing contact lenses for at least one year. They were also responsible for purchasing their own contact lens solutions. Participants surveyed were both hard and soft contact lens patients. The survey was distributed at the Michigan College of Optometry contact lens clinic as well as the offices of private practitioners, and commercial practices in Big Rapids, MI. Using the surveys percentages we determined how many people followed the doctor's advice

as well as what impact the doctor's advice had on their decision-making. A separate survey was also sent to the optometrists practicing in the location of our target demographic. This survey gained information on which brands of contact lens solutions each optometrist actually recommends, as well as their opinions of how often patients follow their recommendation. Local major retail stores as well as their corporate offices were contacted in an attempt to poll their sales of contact lens solution. However, due to each store being a part of a private corporation, we were not able to obtain store sales information. Each corporation stated that sales data is not released to the public. After running into issues with store sales data, the researchers were able to obtain market share information. The market shares of the top five contact lens solutions for the 2008 year were obtained from the an Alcon company representative, who currently holds the most shares in the contact lens business. This comparison of national market shares to survey data serves to validate the results of the survey.

Results:

Contact Lens Recommendation Survey Results:

Name of Solution Recommended	Percentage of Time OD's Recommended the Solution	What Patient said Dr Recommended
Clear Care	43.12%	12.94%
Optifree Express	23.13%	9.68%
Optifree Replenish	12.50%	16.12%
Boston Simplus	6.25%	6.11%
Renu MultiPlus	5.50%	9.67%
Complete	3.75%	0.00%
Boston Original	2.25%	4.53%
Boston Advanced	1.75%	2.24%
Aquify	1.13%	3.23%
Optimum Lobob	0.62%	0.00%
Store Brand	0.00%	3.23%

32.25% couldn't remember

Local optometrists believe that patients listens to their recommendation on average 49.38% of the time

Patient survey results:

- **Dr made recommendations 67.74% of the time**
- **76.19 % report following dr. recommendation 23.81 did not**

Patient Response for Choosing Solutions

Reason for Choosing Your Soln.	% of people who used this as their #1 reason
Dr Recommend	51.83
Price	12.90
Family friends recommend	9.68
Easy to use	7.55
Effective sol	6.45
Sensitivity	5.23
Available	2.23
Recalls	1.23
Other	2.90

Contact Lens Wearer surveyed had 1 year to 45 years of wear span

12.9 % RGP wearer

87.10% soft wearers

In summarizing our survey data it should be noted that we used a fairly small population size, skewed by school demographic with people coming in from other cities. Although our main focus was the Big Rapids area, some of the patients surveyed may have traveled from other cities.

- Store collaboration –unavailable.
 - After contacting local stores and corporate offices, all of the stores in the Big Rapids area were uncooperative in releasing data about contact lens solution sales. Researchers were informed that private companies do not share sales data such as most popular brand sold with the public.
- Contacting a representative from the Alcon company the following information was shared concerning market shares of the most popular contact lens solutions.

Market Shares of the top 5 contact lens solutions:

OptiFree Replenish/OptiFree Express	50% share
Renu	20% share
Clear Care	20% share
Complete	7% share
Aquify	3% share

Market Shares of the top 5 contact lens solutions and combined store brands:

OptiFree Replenish/OptiFree Express	35% share
Store Brand	30% share
Renu	15% share
Clear Care	15% share
Complete	3% share
Aquify	2% share

It appears that from market shares store brands have a large impact on contact lens solution sales, and is giving the most popular company Alcon fair competition. This fact should be taken into account in patient education.

Discussion:

Optometrist need to be aware that their recommendations are still the most important influence on patients, and make the most appropriate recommendations accordingly.

Knowledge of this information will hopefully help practitioners reform their patient education methods to increase patient compliance.

Optifree appears to be the most popular contact lens solution as of now in the local Big Rapids area. Survey participants reported that their doctors recommended Optifree products most often. Local doctor surveys showed that Optifree is the contact lens brand

they most commonly recommend to their patients. Optifree has the largest national market share of the contact lens industry post 2008 numbers, which proves to correlate well with patient and doctor survey data.

Now that we have a clear understanding that doctor recommendation is an important factor to patients, future optometrists and optometry as a profession should take into account other recommendations we should be making to our contact lens patients. It is clear from market shares that store brands are selling well. Patient education should include the explanation that formulations of store brand solutions do change, and may not be the best option as far as long term used when compared to a name brand solution. Besides which solution a patient should use, the care of lenses should be addressed. There is evidence that not rubbing soft contact lenses when cleaning is ineffective in removing loosely bound deposits ¹. A longer rinse, as recommended by the manufacturers of the “no-rub solutions” does not remove significantly more deposits than a shorter rinse with a multipurpose solution ¹. Contact lens wearers should be encouraged to rub their lenses when cleaning.

Along with lens care, lens materials should be taken into account during the prescription and recommendation process. A recent study performed showed that of most common multi-purpose solutions, AQuify was the most effective solution in reducing deposits, especially protein, from the contact lens material Balafilcon A lenses ². AQuify and Opti-Free RepleniSH solutions were most effective in protein and lipid deposits from Senofilcon A and Galyfilcon A lenses ². Use of Opti-Free Express solution resulted in

more extracted protein from Lotrafilcon B lenses than use of other solutions ². Opti-Free Express has consistently been associated with the more efficient removal of proteins from silicone hydrogels ³. Thus, within a lens polymer type, lens care solutions have varying effectiveness in reducing protein and lipid accumulation. This information should be included in patient education and the correct solution recommendation made for the material accordingly.

This survey will help practitioners gauge the effectiveness of their current methods of patient education. Along with appropriate contact lens material determination for the individual patient, the proper patient education of contact lens solutions and their proper use should become commonplace in any optometrists contact lens practice.

References:

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2. Zhao Z, Carnt NA, Aliwarga Y, Wei X, Naduvilath T, Garrett Q, Korth J, Wilcos MD. Care Regimen and Lens Material Influence on Silicon Hydrogel Contact Lens Deposition. *Optom Vis Sci.* 2009 Jan 21.
3. Emch, AJ., Nichols, JJ. Proteins Identified from Care Solution Extractions of Silicone Hydrogels. *Optom Vis Sci.* 2009 Jan 19.

Michigan College of Optometry
How much influence do you really have as a Doctor?

1) In 2007 what percentage of each contact lens solution did you recommend to your patients?

_____ Optifree RepleniSH

_____ Optifree Express

_____ Boston

_____ Simplus

_____ Original

_____ Advanced

_____ Clear Care

_____ Renu MultiPlus

_____ Aquify

_____ Store Brand (Target, Walmart, Meijer)

_____ Optimum Lobob

_____ Other _____

2) In your own opinion based on your experiences what percentage of time do you feel your patients follow your recommendations?

_____ %

Thank you for taking the time to help us with our research

Out of the total amount of contact lens solutions sold in your Big Rapids MI store in 2007, please provide the percentage of each solution sold listed below:

Note: we would like the percent of each contact lens solution sold out of the total amount of contact solutions sold. For example if you sold 20 bottles of contact lens solution and Optifree RepleniSH was 10 of those bottles then write 50% next to Optifree RepleniSH.

_____ Optifree RepleniSH

_____ Optifree Express

_____ Boston

_____ Simplus

_____ Original

_____ Advanced

_____ Clear Care

_____ Renu MultiPlus

_____ Aquify

_____ Store Brand (Target, Walmart, Meijer)

_____ Optimum Lobob

_____ Other _____

Michigan College of Optometry
Contact Lens Solution Survey

Age: _____

Gender: M__ F__

Current Zip Code: _____

Did your eye doctor make a recommendation on which contact lens solution to use?

___ Yes ___ No

If so which solution was recommended?

___ Optifree RepleniSH	___ Boston (___ Simplus ___ Advanced ___ Original)
___ Optifree Express	___ Store Brand (Target, Walmart, Meijer)
___ Clear Care	___ Optimum Lobob
___ Renu MultiPlus	___ Other _____
___ Aquify	

What influenced you to choose your solution? Please rank the following options in order of influence (One being the most important):

___ Price	___ Solutions recalls
___ Availability at store	___ Family/friends Recommendation
___ Doctor Recommendation	___ Perceived effectiveness against germs (bacteria)
___ Sensitivities/Burns upon inserting lenses	___ Ease of Care
___ Other _____	

What brand of contact lens solution do you normally use?

___ Optifree RepleniSH	___ Boston (___ Simplus ___ Advanced ___ Original)
___ Optifree Express	___ Store Brand (Target, Walmart, Meijer)
___ Clear Care	___ Optimum Lobob
___ Renu MultiPlus	___ Other _____
___ Aquify	

What other brands have you used?

___ Optifree RepleniSH	___ Boston (___ Simplus ___ Advanced ___ Original)
___ Optifree Express	___ Store Brand (Target, Walmart, Meijer)
___ Clear Care	___ Optimum Lobob
___ Renu MultiPlus	___ Other _____
___ Aquify	

Are you responsible for which type of solution is purchased? Yes ___ No ___

How long have you been wearing contact lenses? _____

Which brand do you currently wear?

___ Acuvue Oasys, Acuvue Advance, O₂ Optix, Night & Day, PureVision, Biofinity
___ Soflens 38, Acuvue 2, Frequency 55, Proclear, Biomedics 55, Biomedics XC,
___ RGP (rigid gas permeable) or hard contact lens

Is your solution compatible to you contact lens? Yes ___ No ___ Not Sure ___

___ Check here to indicate your voluntary agreement to participate in data collection by completing and returning this survey. Your privacy will be protected to the maximum extent allowable by the law. Thank you for your participation.