Pharmaceutical Sampling Among Michigan College of Optometry Alumni Practicing in Michigan

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Optometry Today's November 1998 cover asked the question, "Why Don't Optometrists Do More Drugs?(8)" Dr. Bruce Onofrey, the article's author, gave several suggestions for optometrists to more fully participate in the therapeutic management of patients. He noted that optometrists tend to "give away" free samples rather than reserve them for initial management of glaucoma, dry eye, and ocular allergies. This creates conflict between optometrists and pharmacists, and does not fully credit optometrists with using the therapeutic pharmaceutical agents that were once part of a hard fought political battle.

To ascertain the role that drug sampling plays among Michigan College of Optometry graduates practicing in Michigan, a survey was created (appendix 1)(1,5,7). The questionnaire was mailed to 180 alumni of the Michigan College of Optometry at Ferris State University who graduated between before 1998 and were known to practice in Michigan, a population size of 411. Those selected were chosen randomly, and received a hand-addressed, two-page survey with a self-addressed stamped envelope. The surveys were distributed in early December 1999, and results tallied in late January 2000. Of the 180 surveys mailed, 87 were returned (48.3%), and 84 (46.7%) were completed entirely.

The survey was designed to gather data relating to five areas of interest concerning the use of pharmaceutical drug samples. First, the average numbers of samples given per month were compared to the average numbers of prescriptions written or over-the-counter (OTC) drugs recommended. There were five options: 0, 1-3, 4-7, 8-15, or 16+ ; these are possible quantities of samples or prescriptions given per month. These choices were repeated for 12 general drug categories. The only specific drug names listed on the survey were Acular and Voltaren, which were considered under the NSAID category rather than the anti-allergy grouping.

Second, the optometrists' opinions regarding appropriate use of drug samples was to be graded on a five-point scale: strongly agree (1) to strongly disagree (5). The statements questioned whether initiating immediate treatment, judging early effectiveness of certain types of medications, addressing early adverse effects, and making drug therapies available to indigent patients are appropriate reasons to utilize pharmaceutical samples.

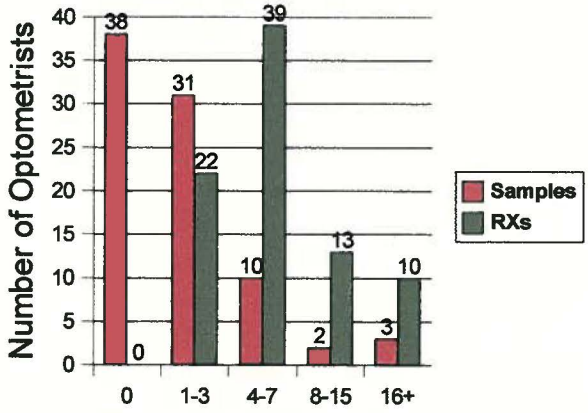
Next, demographic information was obtained to determine any possible sampling irregularities. The practitioner's length of experience, given in ranges of 1-5, 6-10, 11-15, and 16-20 years, was asked. The primary modes of employment were also sought. The choices were separated into employment and ownership subcategories, with the option of "other" to be written in for either section.

Finally, respondents were asked to answer yes or no to the question, "Does your primary office have a standard protocol regarding the distribution of pharmaceutical samples?" If yes, the participants were asked to write in their comments.

Results

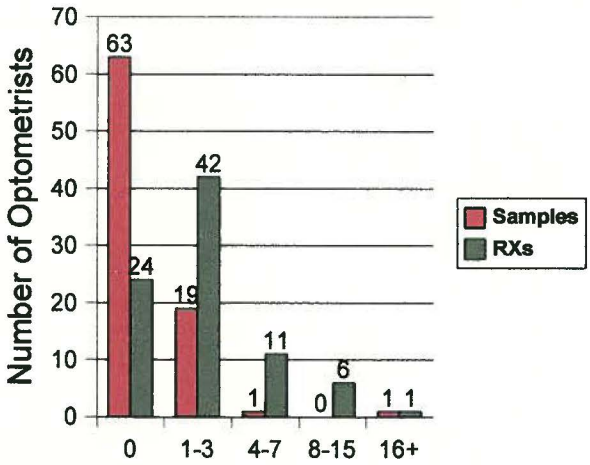
Raw Data: Average Samples Given and Average Prescriptions Written or Over-the-Counter Medications Recommended - Total for All Groups

Antibiotic Solutions



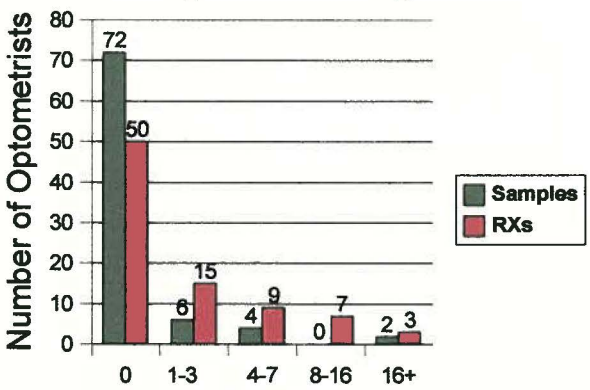
Number of Therapeutics per Month

Antibiotic Ointments



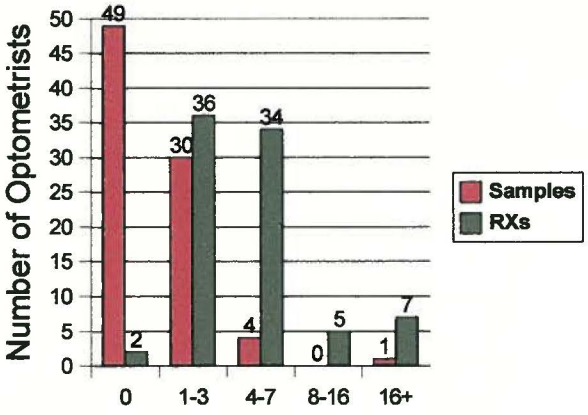
Number of Therapeutics per Month

Anti-glaucoma Agents



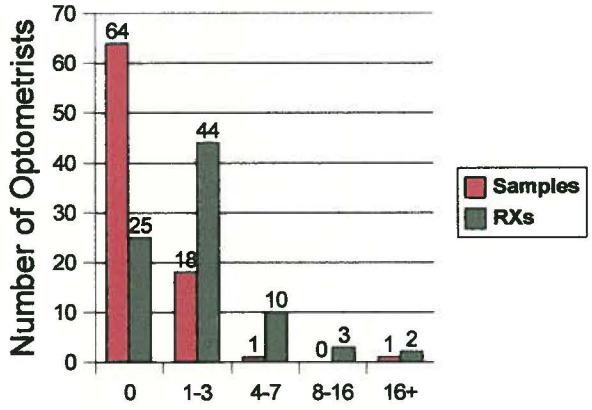
Number of Therapeutics per Month

Antibiotic/Steroid Combinations



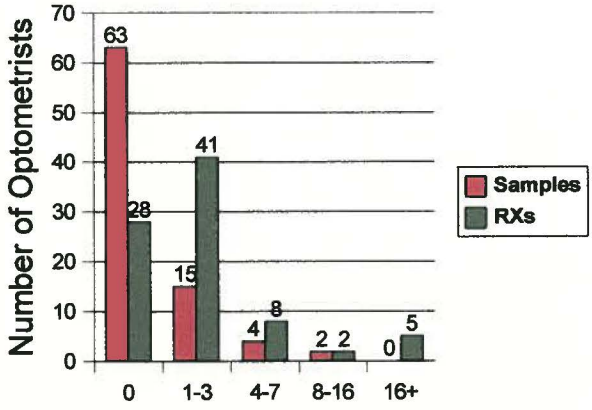
Number of Therapeutics per Month

Steroids



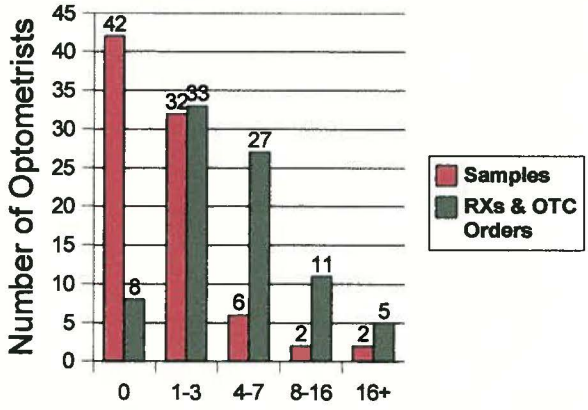
Number of Therapeutics per Month

NSAIDs



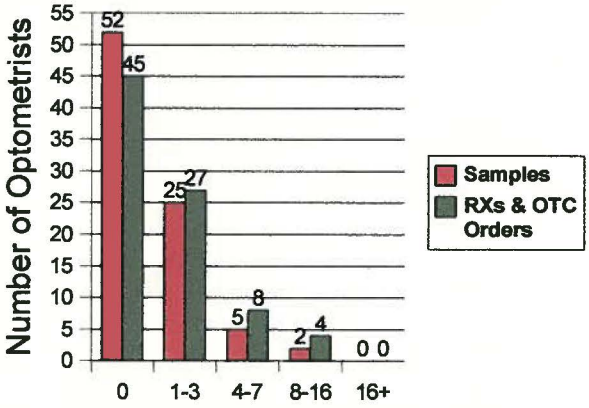
Number of Therapeutics per Month

Anti-allergy Agents



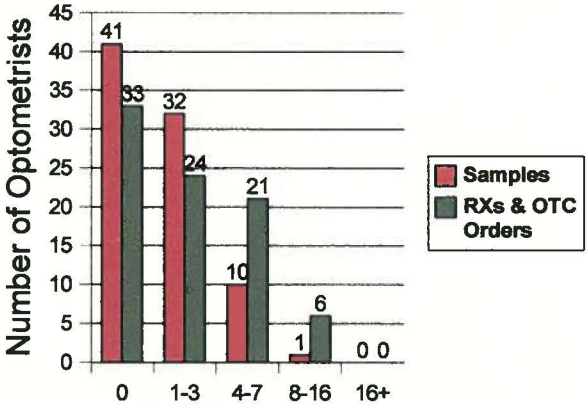
Number of Therapeutics per Month

OTC Vasoconstrictors

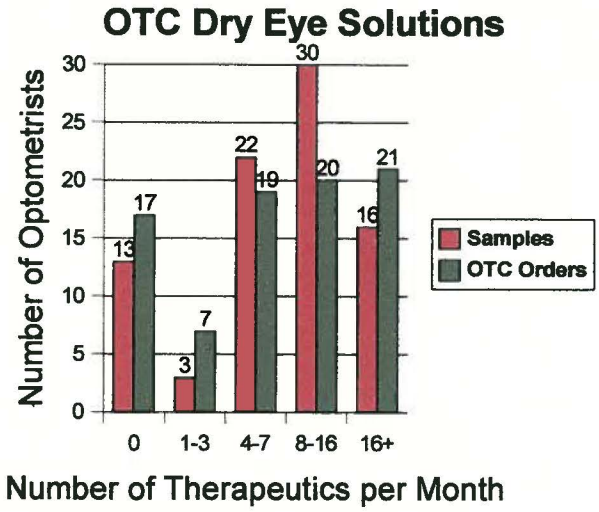


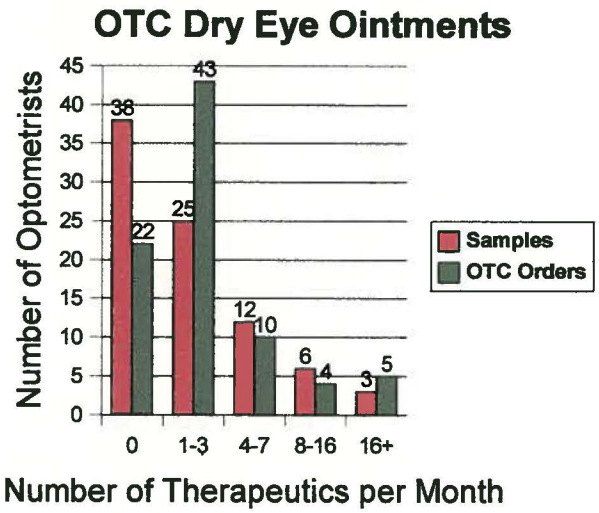
Number of Therapeutics per Month

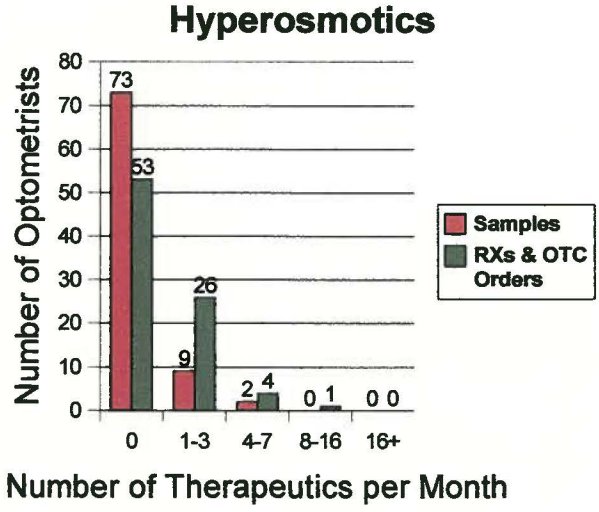
OTC Antihistamine/Decongestants



Number of Therapeutics per Month

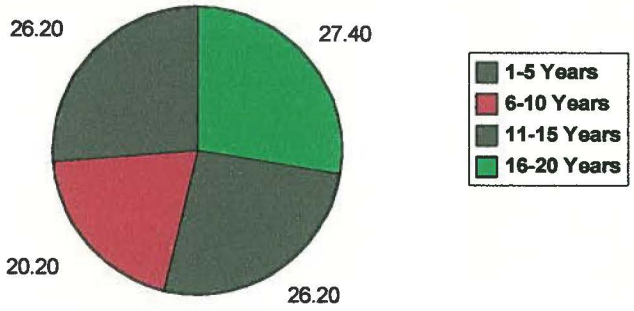

OTC Dry Eye Solutions
Number of Optometrists
30
25
20
15
10
5
0
13
17
3
7
22
19
30
20
16
21
0
1-3
4-7
8-16
16+
Samples
OTC Orders
Number of Therapeutics per Month


OTC Dry Eye Ointments
Number of Optometrists
45
40
35
30
25
20
15
10
5
0
38
22
25
43
12
10
6
4
3
5
0
1-3
4-7
8-16
16+
Samples
OTC Orders
Number of Therapeutics per Month


Hyperosmotics
Number of Optometrists
80
70
60
50
40
30
20
10
0
73
53
9
26
2
4
0
1
0
0
0
1-3
4-7
8-16
16+
Samples
RXs & OTC Orders
Number of Therapeutics per Month

Demographics:

Years of Experience



Mode of Practice

Solo Ownership	23.80%
Corporate Ownership	13.10%
Group Ownership	8.30%
Independent Contractor	7.10%
Employed by Corporate	21.40%
Employed by Optometrist	11.90%
Employed by HMO	6.00%
Employed by Ophthalmologist	3.60%
Employed by Optician	2.40%
Resident	1.20%
Employed by Hospital	1.20%

Opinions Regarding Appropriate Use of Drug Samples

Question	Strongly Agree		Neutral		Strongly Disagree
Drug samples are intended for immediate initiation of therapy.	39.3%	33.3%	17.9%	4.8%	4.8%
Anti-glaucoma drug samples are useful for judging the effectiveness of drugs before committing to a course of therapy.	40.5%	31.0%	22.6%	4.8%	1.2%

Opinions Regarding Appropriate Use of Drug Samples

Question	Strongly Agree		Neutral		Strongly Disagree
Anti-allergy drug and OTC samples are useful for judging the effectiveness of drugs before committing to a course of therapy.	28.6%	40.5%	14.3%	14.3%	2.3%
By using samples, early adverse effects may be addressed.	23.8%	31.0%	29.8%	15.5%	0
Samples should be given to offset the costs for indigent patients.	21.4%	32.1%	31.0%	10.7%	4.8%

Responses to the question, "Does your primary office have a standard protocol regarding the distribution of pharmaceutical samples?"

Yes, but no comment given	6.00%
Yes, with comment given	12.00%
No	79.80%

Comments:
1. "Samples given at doctor's discretion."
2. "Samples given to initiate immediate therapy and are given when patient does not have prescription drug coverage."
3. "The policy from a corporate standpoint is to not sample. As you can see from my responses, I do sample anyway."
4. "One time only, by doctor, documented in record."
5. "Doctors are the only ones allowed to prescribe samples to patients."
6. "Samples are only used for problems concerning the visual axis, high IOP, or indigent patients."
7. "To be dispensed by doctor only."
8. "No samples."
9. "All patients receive a prescription - samples not given."
10. "I am the only one that gives samples."
11. "It is as I understand against the law to dispense samples unless specifics of particular bottle are recorded, so I don't generally give out any."
12. "Doctor's discretion."

Additional comments:
1. "Don't receive a lot of samples on a regular basis."

Additional comments continued:

2. "Difficult to get samples from drug companies."
3. "Pharmaceutical samples are not easily obtained - reps are stingy with them unless you use a lot of their contact lense solutions."
4. "I get very few samples of pharmaceuticals and artificial tears. I get a lot of coupons for artificial tears, but the reps aren't giving us any samples for patients to try."

*The following data describes all respondents based on four categories: those who distribute no samples, those who use only OTC samples, those who sample sparingly (only antibiotics, anti-glaucoma agents, anti-allergy agents, and OTC medications), and those who sample all other combinations of medications. The term **'total'** will refer to percentage of the entire population of 84, **'category'** will include all members of the above sampling types, and **'group'** will mean all those in the total sample with the same amount of experience or mode of practice.

Profile- Optometrists Who Use No Samples

Number: n=10 (11.9% of total)

Years in practice:

- 1-5 Years: n=1 (10% of category, i.e. 10% of those who use no samples have been in practice 1-5 years. 4.5% of group, i.e. 4.5% of those in practice 1-5 years use no samples.)
- 6-10 Years: n=4 (40% of category, 23.5% of group)
- 11-15 Years: n=3 (30% of category, 13.6% of group)
- 16-20 Years: n=2 (20% of category, 8.7% of group)

Mode of practice:

- Corporate Employed: n=3 (30% of category, 16.7% of group)
- HMO Employed: n=1 (10% of category, 20% of group)
- Solo Ownership: n=4 (40% of category, 20% of group)
- Corporate Ownership: n=1 (10% of category, 9% of group)
- Independent Contractor: n=1 (10% of category, 16.6% of group)

Protocol:

- Yes: n=1 (10% of category, 5.9% of group)
- No: n=9 (90% of category, 1.5% of group)

Questions:

- "Drug samples are intended for the immediate initiation of therapy."
  - Agree: 50%
  - Disagree: 40%
  - Neutral: 10%
- "Anti-glaucoma drug samples are useful for judging the effectiveness of drugs before committing to a course of therapy."
  - Agree: 60%
  - Disagree: 10%
  - Neutral: 30%
- "Anti-allergy drug and OTC samples are useful for judging the effectiveness of drugs before committing to a course of therapy."
  - Agree: 30%
  - Disagree: 20%
  - Neutral: 50%

Profile - Optometrists Who Use No Samples continued

- "By using samples, early adverse effects may be addressed."
  Agree: 30%
  Disagree: 20%
  Neutral: 50%
- "Samples should be give to offset the costs for indigent patients."
  Agree: 60%
  Disagree: 10%
  Neutral: 30%

Raw data:

	Mean Samples/Month	Mean Rxs/Month
Antibiotic Solutions	0	4.7
Antibiotic Ointment	0	2.75
Anti-glaucoma Agents	0	2.7
Antibiotics/Steroid Combinations	0	3.2
Steroids	0	1.55
NSAIDs	0	1.6
Anti-allergy Agents	0	4.1
OTC Vasoconstrictors	0	3.7
OTC Antihistamines	0	4.4
OTC Dry Eye Solutions	0	9.4
OTC Dry Eye Ointments	0	2.75
Hyperosmotics	0	0.55

Profile- Optometrists Who Use Only OTC Samples

Number: n=19 (22.6% of total)

Years in practice:

1-5 Years: n=4 (21.1% of category, i.e. 21.1% of those who use only OTC samples have been in practice 1-5 years. 18.2% of group, i.e. 18.2% of those in practice 1-5 years use only OTC samples.)

6-10 Years: n=4 (21.1% of category, 23.5% of group)

11-15 Years: n=3 (15.8% of category, 13.6% of group)

16-20 Years: n=8 (42.1% of category, 34.7% of group)

Mode of practice:

Corporate Employed: n=5 (26.2% of category, 27.7% of group)

HMO Employed: n=1 (5.3% of category, 20% of group)

Employed by OD: n=1 (5.3% of category, 10% of group)

Employed by Optician: n=1 (5.3% of category, 50% of group)

Solo Ownership: n=5 (26.2% of category, 25% of group)

Group Ownership: n=2 (10.5% of category, 28.6% of group)

Corporate Ownership: n=1 (5.3% of category, 9% of group)

Independent Contractor: n=3 (15.8% of category, 50% of group)

Profile - Optometrists Who Use Only OTC Samples continued

Protocol:

Yes: n=3 (15.8% of category, 17.6% of group)
No: n=16 (84.2% of category, 23.9% of group)

Questions:

- "Drug samples are intended for the immediate initiation of therapy."
  Agree: 57.9%
  Disagree: 15.8%
  Neutral: 26.2%
- "Anti-glaucoma drug samples are useful for judging the effectiveness of drugs before committing to a course of therapy."
  Agree: 73.6%
  Disagree: 10.5%
  Neutral: 15.8%
- "Anti-allergy drug and OTC samples are useful for judging the effectiveness of drugs before committing to a course of therapy."
  Agree: 68.4%
  Disagree: 21.1%
  Neutral: 10.5%
- "By using samples, early adverse effects may be addressed."
  Agree: 63.2%
  Disagree: 15.8%
  Neutral: 21.1%
- "Samples should be give to offset the costs for indigent patients."
  Agree: 47.3%
  Disagree: 26.2%
  Neutral: 26.4%

Raw data:

	Mean Samples/Month	Mean Rxs/Month
Antibiotic Solutions	0	7.26
Antibiotic Ointment	0	2.63
Anti-glaucoma Agents	0	1.26
Antibiotics/Steroid Combinations	0	5.89
Steroids	0	1.92
NSAIDs	0	2.61
Anti-allergy Agents	0	5.66
OTC Vasoconstrictors	0.63	1.5
OTC Antihistamines	1.5	2.66
OTC Dry Eye Solutions	9.24	7.11
OTC Dry Eye Ointments	3.24	3.24
Hyperosmotics	0.11	1.45

Profile- Optometrists Who Sample Sparingly (Only Antibiotics, Anti-glaucoma Agents, Anti-allergy Agents and OTC Samples)

Number: n=18 (21.4% of total)
Years in practice:
- 1-5 Years: n=5 (26.3% of category, i.e. 26.3% of those who sample sparingly have been in practice 1-5 years. 22.8% of group, i.e. 22.8% of those in practice 1-5 years sample sparingly.)
- 6-10 Years: n=3 (16.6% of category, 17.6% of group)
- 11-15 Years: n=5 (26.3% of category, 22.8% of group)
- 16-20 Years: n=5 (26.3% of category, 21.7% of group)

Mode of practice:
- Corporate Employed: n=4 (22.2% of category, 22.2% of group)
- HMO Employed: n=2 (11.1% of category, 40% of group)
- Employed by OD: n=2 (11.1% of category, 20% of group)
- Employed by MD: n=1 (5.5% of category, 33.3% of group)
- Solo Ownership: n=8 (44.4% of category, 40% of group)
- Group Ownership: n=1 (5.5% of category, 14.3% of group)

Protocol:
- Yes: n=5 (27.8% of category, 29.4% of group)
- No: n=13 (72.2% of category, 19.4% of group)

Questions:
- "Drug samples are intended for the immediate initiation of therapy."
  - Agree: 83.3%
  - Disagree: 0
  - Neutral: 16.7%
- "Anti-glaucoma drug samples are useful for judging the effectiveness of drugs before committing to a course of therapy."
  - Agree: 66.7%
  - Disagree: 0
  - Neutral: 33.3%
- "Anti-allergy drug and OTC samples are useful for judging the effectiveness of drugs before committing to a course of therapy."
  - Agree: 77.8%
  - Disagree: 5.5%
  - Neutral: 16.7%
- "By using samples, early adverse effects may be addressed."
  - Agree: 55.6%
  - Disagree: 11.1%
  - Neutral: 33.3%
- "Samples should be give to offset the costs for indigent patients."
  - Agree: 61.1%
  - Disagree: 11.1%
  - Neutral: 27.8%

Raw data:

Profile - Optometrists Who Sample Sparingly continued

	Mean Samples/Month	Mean Rxs/Month
Antibiotic Solutions	1.31	6.55
Antibiotic Ointment	0	3.08
Anti-glaucoma Agents	0.31	2.92
Antibiotics/Steroid Combinations	0	10.25
Steroids	0	1.64
NSAIDs	0	2
Anti-allergy Agents	1.64	12.94
OTC Vasoconstrictors	1.19	1.08
OTC Antihistamines	2.33	8.56
OTC Dry Eye Solutions	10.06	7.94
OTC Dry Eye Ointments	2.11	3.06
Hyperosmotics	0.22	0.55

Profile- Optometrists Who Sample All Other Combinations

Number: n=37 (44% of total)

Years in practice:

- 1-5 Years: n=12 (32.4% of category, i.e. 32.4% of those who sample all other combinations have been in practice 1-5 years. 54.5% of group, i.e. 54.5% of those in practice 1-5 years sample all other combinations)
- 6-10 Years: n=7 (18.9% of category, 41.2% of group)
- 11-15 Years: n=11 (29.7% of category, 50% of group)
- 16-20 Years: n=7 (18.9% of category, 30.4% of group)

Mode of practice:

- Corporate Employed: n=6 (16.2% of category, 33.3% of group)
- HMO Employed: n=1 (2.7% of category, 20% of group)
- Employed by OD: n=7 (18.9% of category, 70% of group)
- Employed by MD: n=2 (5.4% of category, 66.7% of group)
- Employed by Optician: n=1 (2.7% of category, 50% of group)
- Employed by Hospital: n=1 (2.7% of category, 100% of group)
- Resident: n=1 (2.7% of category, 100% of group)
- Solo Ownership: n=3 (8.1% of category, 15% of group)
- Group Ownership: n=4 (10.8% of category, 57.1% of group)
- Corporate Ownership: n=9 (24.3% of category, 81.8% of group)
- Independent Contractor: n=2 (5.4% of category, 33.3% of group)

Protocol:

- Yes: n=8 (21.6% of category, 47% of group)
- No: n=29 (78.4% of category, 43.2% of group)

Questions:

Profile - Optometrists Who Sample All Other Combinations continued

- "Drug samples are intended for the immediate initiation of therapy."
  Agree: 83.7%
  Disagree: 5.4%
  Neutral: 10.8%
- "Anti-glaucoma drug samples are useful for judging the effectiveness of drugs before committing to a course of therapy."
  Agree: 78.3%
  Disagree: 5.4
  Neutral: 16.2%
- "Anti-allergy drug and OTC samples are useful for judging the effectiveness of drugs before committing to a course of therapy."
  Agree: 75.6%
  Disagree: 16.2%
  Neutral: 8.1%
- "By using samples, early adverse effects may be addressed."
  Agree: 56.7%
  Disagree: 18.9%
  Neutral: 24.3%
- "Samples should be give to offset the costs for indigent patients."
  Agree: 51.3%
  Disagree: 13.5%
  Neutral: 35.1%

Raw data:

	Mean Samples/Month	Mean Rxs/Month
Antibiotic Solutions	4.19	7.16
Antibiotic Ointment	1.5	2.61
Anti-glaucoma Agents	1.58	5.84
Antibiotics/Steroid Combinations	2.64	5.84
Steroids	1.5	3.4
NSAIDs	1.97	3.11
Anti-allergy Agents	3.84	6.2
OTC Vasoconstrictors	1.65	1.86
OTC Antihistamines	1.77	2.27
OTC Dry Eye Solutions	9.93	8.7
OTC Dry Eye Ointments	3.61	3.58
Hyperosmotics	0.62	1.15

Discussion/Conclusions

Regarding antibiotic solutions, the optometrists surveyed preferred distributing samples over writing prescriptions if only using 1-3 pharmaceuticals per month. Most O.D.s do not deal with antibiotic ointments as often, but nearly half of those who used 1-3 per month gave patients a sample rather than writing a script. Those needing more than four antibiotic solutions or ointments per month tended to write prescriptions for them. Since antibiotics are rarely used for chronic conditions, their distribution as a drug sample is a questionable decision. Certainly, they can be kept in office to initiate immediate treatment until a script can be filled. But, unless there are financial or non-compliance concerns, a written prescription seems most appropriate.

Only 34 optometrists responding were treating glaucoma, and they were almost twice as likely to write a prescription than give out a sample, regardless of the frequency they were required. This is interesting since glaucoma is a chronic condition and medications tend to be more trial and error, which are practical reasons for sampling initially rather than prescribing.

Almost all participants used antibiotic/steroid combinations, most of which averaged 1-3 per month, and the doctors were just as likely to prescribe as they were to sample. In general, a rather large amount of samples of these combination drugs were used, with 30 O.D.s giving 1-3, four using 4-7, and one distributing 16+. Only antibiotic solutions, anti-allergy agents, and OTC drugs were sampled more often. Since these drugs are typically not used long-term, these statistics do not support appropriate use of sampling.

As expected, steroids and NSAIDs were not used as often as most of the other pharmaceuticals. Over one third of respondents did not prescribe either one. Most who did utilize these medications used 1-3 per month and there were more than twice as many prescriptions as samples for these groups. Again, one wonders why there were any samples at all, except for the occasional chronic condition or uninsured patient.

Anti-allergy agents were the second most commonly used drugs behind antibiotic solutions. Many indicated a need to prescribe 4-7 per month, as an average over the previous 12 months. But, for the 1-3 per month category, numbers prescribed and sampled were identical. Since allergies are chronic, sampling does seem to be an appropriate way to judge the effectiveness of these drugs before committing to a course of therapy.

OTC vasoconstrictors and antihistamine/decongestants were not recommended nearly as often. Less than half of the optometrists prescribed vasoconstrictors, while about two thirds used antihistamine/decongestants. Regarding vasoconstrictors, most used 1-3 per month, and practitioners were almost equally as likely to give a sample and to write an OTC order. More samples were given than ordered when 1-3 antihistamine/decongestants were used per month. Since these preparations do not require a prescription and may be recommended for chronic conditions, the sampling of these medications does not appear very detrimental.

The use of dry eye solutions was surprisingly variable. Seventeen doctors reported no use of lubricants, while 21 ordered more than 16 per month. More samples were given than OTC orders for both the 4-7 and 8-16 groups. Dry eye ointment was not recommended nearly as often; most sampled or ordered 1-3 tubes per month. Again, these lubricants treat chronic conditions and do not credit optometrists with writing prescriptions. Because there are so many different brands available for patients to choose from, dry eye sufferers would most definitely benefit from sampling lubricants.

Fifty-three optometrists did not use hyperosmotics. Most practitioners agreed that they were typically only required 1-3 times per month.

Those optometrists with the most experience, at 16-20 years, were most likely to respond, while those in practice 6-10 years were the least common participants. Overall, the four experience groups were well represented.

Almost one fourth of respondents were solo practitioners, and over one fifth were employed as corporate optometrists. Approximately one half were in an ownership situation and the other half was employed.

Clearly, most optometrists agreed that samples are beneficial in providing immediate treatment of disease. Having a few in-office samples for doctor use should not significantly impact the numbers of prescriptions written and would seem beneficial for patients.

Respondents also agreed that samples of anti-glaucoma agents are useful for judging the effectiveness of drugs before committing to a course of therapy. As glaucoma is chronic and many formulations are available, sampling these medications is appropriate in most situations.

Most optometrists also believed that anti-allergy agents and OTC preparations should be sampled. Again, since these treat chronic conditions and refills will need to be prescribed or purchased over-the-counter, sampling is not very detrimental. And, since OTC medications do not require a script, they do not adversely affect the prescribing statistics.

The practitioners narrowly accepted the statement, "by using samples, early adverse effects may be addressed." This idea is particularly true for chronic conditions, such as glaucoma, in which pharmaceuticals are notorious for side effects.

The optometrists were nearly split on the question of giving samples to indigent patients. Compliance when a visually threatening disease is present certainly overrides the need to increase optometry-generated prescriptions. And, it seems ridiculous to allow 'free' samples to go unused until their expiration date when uninsured patients must pay out of pocket. Using these precious samples entirely without leaving any available for the aforementioned reasons is not the answer either. This issue is clearly debatable.

Nearly 80% of optometrists reported having no office policy regarding the distribution of drug samples. Those who did have a protocol and commented addressed a variety of issues. Many said only the doctor dispensed them, not any other office staff. Some said only indigent patients or those without prescription drug coverage received samples. One doctor indicated that samples

were used to initiate immediate treatment while another reserved them for high intraocular pressures or conditions affecting the visual axis. Only one doctor specifically mentioned that sample distribution was documented in the record. No one commented that the samples were to be labeled completely before being distributed. Some practitioners used this survey space to note their difficulties in obtaining drug samples. The results of the survey show that some doctors are receiving enough samples to supply a dozen or more patients per month. The reasons for such vast differences are beyond the scope of this project, but are interesting none the less.

The four sets of profiles based on respondents' sampling practices provided some very useful information. The first profile analyzed those doctors who used no samples, 40% of which were in practice 6-10 years. Although this group consisted of only 10 people, three were employed in corporate situations, and four were solo practitioners. These optometrists do not use samples, but most agreed with using them for initiating immediate treatment, judging effectiveness of anti-glaucoma agents and distribution to indigent patients. Most were neutral on the statement regarding anti-allergy agents and OTC drugs, and about addressing early adverse effects with samples. Comparing their prescribing habits to those in the other categories, optometrists who used no samples wrote fewer prescriptions in almost every category. This may indicate that sampling is practiced by doctors who prescribe more, and that the detriment of sampling rather than prescribing may be neutralized. Since this sample only included 10 optometrists, it would be premature and misleading to draw this conclusion.

The next profile examined optometrists who only used OTC samples, 22.6% of the entire population. This group largely consisted of the most experienced optometrists, those in practice 16-20 years. And, solo practitioners and corporate employees were the most common modes of practice. This is not surprising since these were the most common modes in general. These doctors more firmly agreed with all the statements than the doctors who did not sample at all, except for the last statement. Over one fourth disagreed with giving samples to indigent patients. The raw data describing prescribing trends showed that these practitioners compared well with the other two groups that sampled, although they had the lowest anti-glaucoma agent averages. Even though they only samples OTC drugs, these optometrists did not give out any more of these samples than the other two groups; they were actually lower for most medications.

The third profile consisted of optometrists who sampled sparingly: only antibiotic solutions, anti-glaucoma agents, anti-allergy drugs, and OTC preparations. These medications were grouped together because, with the exception of the antibiotic solutions, the conditions they treat tend to be chronic and would benefit from sampling. Without including antibiotics in this group, the sample size would have been very small. Since anti-infective solutions are used so commonly and their samples seem so readily available, they were included in this group of somewhat conservative sampling doctors. Although this group made up 21% of the entire population of respondents, no certain length of

experience was more represented. Almost one half of these optometrists who sampled sparingly were solo practitioners. A fairly large amount, over one fourth, had an office protocol regarding samples. These optometrists overwhelming agreed with all five of the statements regarding the proper use of pharmaceutical samples. Comparing the raw data of this subset to the one which sampled all other combinations of drugs showed that they were fairly conservative with the samples given. Antibiotic samples were distributed an average of just over once per month, while anti-allergy and anti-glaucoma agents were sampled even less. These doctors did give out a lot of lubricating solutions, but the other OTC samples were in line with the other. Their prescribing trends were comparable to the others; some specific drugs differed, but nothing highly irregular.

The final profile examined those optometrists who sampled all other combinations of medications, specifically at least one other medication besides antibiotic solutions, anti-glaucoma drugs, anti-allergy agents, and OTC preparations. Almost one third of this group consisted of the newest graduates, but nearly 30% were in practice 11-15 years, showing that experience is not much of a factor. This group, which included 44% of all those responding had a wide range of modes of practice represented. It is clear that solo practitioners and corporate employees were least common, compared to their relatively high representation in the other groups. Over one fifth of these practitioners had an office policy regarding samples. They clearly agreed with all of the statements about appropriate drug sampling, except the question of indigent patients, on which they were more diverse in their responses. This catchall group gave out lots of samples, particularly of antibiotic solutions and anti-allergy agents. But, they also gave more scripts than samples across all prescription drug categories. They did distribute more lubricant samples than orders to purchase them, but this would not affect the numbers of prescriptions written by optometrists anyway.

All of these statistics describe average numbers of optometrists lumped into certain categories. This does not reflect the practitioners whom, although few in number write little or no scripts compared to the samples they hand out. This practice is unacceptable; no doctor should replace prescription writing with sample distribution. The cases in which responses, when averaged, indicated an irregularity between scripts and samples were previously discussed. But, some individual doctors did this consistently, which was not evident when comparing means.

It is clear from this survey that many optometrists are using drug samples for no other reason than their availability. Several justifiable reasons for drug sampling include initiating immediate treatment, addressing early adverse effects, and judging the effectiveness of medications used for chronic conditions such as glaucoma, allergies, and dry eye. The distribution of samples to indigent patients is one that should be decided individually. Other than to possibly avoid non-compliance by an indigent or uninsured patient, the sampling of antibiotics, steroids, antibiotic/steroid combinations, and NSAIDs is questionable. Although

these medications can manifest adverse effects, they are not typically used long term and should not be sampled for that reason alone.

Mode of practice and experience do not seem to play a large role in determining sampling habits. Most optometrists agreed with the statements regarding appropriate use of drug samples, although many that agreed do not even use samples. And, except where noted, prescribing trends are not very affected by sampling habits. By far the most surprising result of the survey was that only 20% of respondents have a standard office protocol regarding the distribution of pharmaceutical samples.

One would be hard pressed to find an optometric office lacking a book of rules and policies regarding everything from lunch hours to parking. To think that an office with steroid and anti-glaucoma pharmaceutical samples could have a well intending staff member incorrectly distribute them to a patient is frightening. Samples should only be handled by a doctor. More importantly, they must be properly labeled for the patient to understand dosages, length of treatment, and expiration date, and this information must be documented in the patient's record. This is the proper use of pharmaceutical samples.

Within the medical community, drug sampling has become such an issue that legislation has been proposed to regulate it, with limitations to the practice or all out bans(6). Although this seems unnecessary for optometrists in a state such as Michigan in which only topicals are legal to prescribe, many other states allow utilization of oral medications, and subsequently those doctors obtain a wider variety and number of samples.

Some may feel that the issue of sampling in optometry is trivial; this survey itself did not show any major detriment to prescribing or find any certain group of doctors to be abusing the samples to a dangerous degree. But, if optometry is going to continue to expand its scope of practice and further the use of pharmaceuticals, the situation in the medical community must serve as a warning of future issues. Residents in one study acknowledged that having samples available did influence their prescribing habits(9). Another study found that family practice residents who did not sample medications wrote more generic prescriptions than those who sampled liberally(3). And, the consequences of accepting gifts and participating in promotions of the pharmaceutical companies have sparked a large ethical debate(11).

These are just a few of the issues spawned from drug sampling in the medical community. A point to consider is that medical students and residents are taught about sampling properly and it is a common topic of discussion(9). In optometry, finding any information is difficult. Mr. William Dansby of the Michigan Optometric Association(4) indicated that there has been no official statement by the MOA regarding what it deems proper use of pharmaceutical samples. Likewise, the American Optometric Association has not specifically addressed the issue. The only written statement which may be relevant is AOA House Resolution 1886 (modified 1995)(2):

> <u>Patient Care Decisions Involving the Prescribing and Dispensing of Ophthalmic Products:</u>

> ...The American Optometric Association opposed any prescribing and/or dispensing of ophthalmic products based on the participation by the eye care provider in a manufacturer's advertising and/or promotional program involving the prospect of personal inducements to the eye care provider from manufacturers.

When used properly, pharmaceutical samples are valuable in the initial management of chronic conditions such as glaucoma, dry eye, and ocular allergies. Many practitioners find them useful for in-office instillation, allowing immediate treatment of eye conditions. And, even those who do not distribute samples tend to agree that they are sometimes necessary to give indigent patients who would otherwise go without treatment. This survey has demonstrated that the over-use and lack of consensus on appropriateness of drug samples may contribute to the relatively low numbers of optometry generated prescriptions. More importantly, with many optometric offices not having a policy to teach staff about proper sample distribution and labeling, mistakes are bound to happen. Until education about effective drug sampling in optometry is improved and the optometric organizations develop some recommendations, the improper use of pharmaceutical samples is bound to continue.

Appendix 1

The following questionnaire is the premise of my senior research project at the Michigan College of Optometry. Please answer the following questions regarding your prescribing trends and your use of pharmaceutical samples and return the form in the enclosed envelope. *Kindly reply within two weeks to allow for proper analysis of the results.* Any questions can be directed to me at 517-663-2021. Thank you for your assistance.

Lori Mastalanski
4th Year Optometry Student

Please circle the numbers which best reflect your use of the following:

Over the last 12 months, what is the average number of drugs used PER MONTH:

	Average **Samples**[1] per month					Average **RXs**[2] per month				
Antibiotic Solutions	0	1-3	4-7	8-15	16+	0	1-3	4-7	8-15	16+
Antibiotic Ointments	0	1-3	4-7	8-15	16+	0	1-3	4-7	8-15	16+
Anti-glaucoma Agents	0	1-3	4-7	8-15	16+	0	1-3	4-7	8-15	16+
Antibiotic/Steroid Combination Suspensions	0	1-3	4-7	8-15	16+	0	1-3	4-7	8-15	16+
Steroid Suspensions And Ointments	0	1-3	4-7	8-15	16+	0	1-3	4-7	8-15	16+
NSAIDs[3]	0	1-3	4-7	8-15	16+	0	1-3	4-7	8-15	16+
Anti-allergy Agents[4]	0	1-3	4-7	8-15	16+	0	1-3	4-7	8-15	16+
OTC Vasoconstrictors	0	1-3	4-7	8-15	16+	0	1-3	4-7	8-15	16+
OTC Antihistamine/ Decongestants	0	1-3	4-7	8-15	16+	0	1-3	4-7	8-15	16+
OTC Dry Eye Solutions	0	1-3	4-7	8-15	16+	0	1-3	4-7	8-15	16+
OTC Dry Eye Ointments	0	1-3	4-7	8-15	16+	0	1-3	4-7	8-15	16+
Hyperosmotics	0	1-3	4-7	8-15	16+	0	1-3	4-7	8-15	16+

[1]Any drug or over- the- counter (OTC) preparation given to a patient free of charge.
[2]Any written order given to be filled elsewhere, whether by prescription or OTC.
[3]Includes Acular and Voltaren
[4]Non-NSAID, Non-OTC

Please circle the answer that best reflects your opinions regarding drug samples:

	Strongly Agree		Neutral		Strongly Disagree
Drug samples are intended for immediate initiation of therapy.	1	2	3	4	5
Anti-glaucoma drug samples are useful for judging the effectiveness of drugs before committing to a course of therapy.	1	2	3	4	5
Anti-allergy drug and OTC samples are useful for judging the effectiveness of drugs before committing to a course of therapy.	1	2	3	4	5
By using samples, early adverse effects may be addressed.	1	2	3	4	5
Samples should be given to offset the costs for indigent patients.	1	2	3	4	5

Please circle the most appropriate answer:

Number of years in practice: 1-5 6-10 11-15 16-20 21+

Primary mode of practice:

Employed by: Optometrist Ophthalmologist Corporate HMO
VA/Military Other_____

Ownership type: Solo Group Corporate Other_____

Does your primary office have a standard protocol regarding the distribution of pharmaceutical samples? Yes No

If Yes, please comment:

Thank you for taking the time to complete this survey. All responses will be kept strictly confidential.

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