A survey of general awareness & current practices with ophthalmic drugs and nursing women

Neena Sharin Gabrielle

Pacific University

Recommended Citation
https://commons.pacificu.edu/opt/1341
A survey of general awareness & current practices with ophthalmic drugs and nursing women

Abstract
The question is examined, "Are there risk factors associated with ophthalmic medications and breastfeeding?" And, are optometrists really aware of such risks? A survey of 306 optometrists revealed that approximately one third of optometrists were unsure that ophthalmic drugs are passed into breast milk. In a parallel fashion, this study probed the general awareness and current practices with ophthalmic drugs and nursing women to determine if proper informed consent procedures are occurring before instilling ophthalmic drugs with nursing mother patients.

Degree Type
Thesis

Degree Name
Master of Science in Vision Science

Committee Chair
Willard Bleything

Keywords
breast milk, ophthalmic drugs, optometrist, informed consent, nursing women

Subject Categories
Optometry

This thesis is available at CommonKnowledge: https://commons.pacificu.edu/opt/1341
Copyright and terms of use

If you have downloaded this document directly from the web or from CommonKnowledge, see the “Rights” section on the previous page for the terms of use.

If you have received this document through an interlibrary loan/document delivery service, the following terms of use apply:

Copyright in this work is held by the author(s). You may download or print any portion of this document for personal use only, or for any use that is allowed by fair use (Title 17, §107 U.S.C.). Except for personal or fair use, you or your borrowing library may not reproduce, remix, republish, post, transmit, or distribute this document, or any portion thereof, without the permission of the copyright owner. [Note: If this document is licensed under a Creative Commons license (see “Rights” on the previous page) which allows broader usage rights, your use is governed by the terms of that license.]

Inquiries regarding further use of these materials should be addressed to: CommonKnowledge Rights, Pacific University Library, 2043 College Way, Forest Grove, OR 97116, (503) 352-7209. Email inquiries may be directed to: copyright@pacificu.edu
A Survey of General Awareness & Current Practices with Ophthalmic Drugs and Nursing Women

By

Neena Sharin Gabrielle

A thesis submitted to the faculty of the
College of Optometry
Pacific University
Forest Grove, Oregon
for the degree of
Doctor of Optometry
May 2000

Advisor:

Williard Bleything, O.D., M.S.
A Survey of General Awareness & Current Practices with Ophthalmic Drugs and Nursing Women

Neena Gabrielle

Willard Bleything, O.D., M.S.
**Biographical Sketch**

**Neena Sharin Gabrielle**, born in Edmonton, Alberta, Canada. She completed the majority of her undergraduate work in Alberta and then completed her B.Sc. with a major in Visual Science at Pacific University. She will graduate in May 2000 as a member of the Beta Sigma Kappa International Honor Society.

She is married to a wonderful supportive husband Bruce Raymond Gabrielle who will be pursuing his Masters in Business at University of Chicago in September 2000. Neena and Bruce are proud parents of two beautiful daughters, Haley Keisha Gabrielle age 4, and Selena Kelsey Gabrielle age 7mos.

Neena looks forward to practicing in a private practice setting of full scope care including vision therapy with a touch of behavioral optometry.
A Survey of General Awareness & Current Practices with Ophthalmic Drugs and Nursing Women
Neena S. Gabrielle

Abstract
The question is examined, “Are there risk factors associated with ophthalmic medications and breastfeeding?” And, are optometrists are really aware of such risks? A survey of 306 optometrists revealed that approximately one third of optometrists were unsure that ophthalmic drugs are passed into breast milk. In a parallel fashion, this study probed the general awareness and current practices with ophthalmic drugs and nursing women to determine if proper informed consent procedures are occurring before instilling ophthalmic drugs with nursing mother patients.

Key Words
Breast milk, Ophthalmic Drugs, Optometrist, Informed Consent, Nursing Women.

INTRODUCTION:
There is very little optometric literature on systemic effects of ophthalmic drugs and nursing mothers. Some textbooks may state “caution” or “avoid”. Some ophthalmology journals relay more specific but still limited information. Consequently, the average optometrist is simply not exposed to the details of these issues in optometry school or in continuing education courses. The limited discussion of ophthalmic drugs passing into breast milk leads to the question whether optometrists believe there is any risk. And whether they believe there is a risk will in turn effect their decisions in obtaining informed consent from nursing mothers. How are optometrists handling these issues in their practices? A survey involving 306 optometrists investigated the issues of general awareness and general practices of ophthalmic drugs and the nursing mother.

There are many variables involving the excretion of drugs into breast milk such as, "milk composition, suckling pattern, pharmacologic properties of the drug, pH of the milk, its fat/water content, and relation of suckling to dosing". Samples and Meyers states that, "...with few exceptions, all drugs that are present in the maternal circulation are transferred into milk." We know that ophthalmic drugs are passed into systemic circulation of varying amounts - with variables such as the specific composition of the ophthalmic drug, whether punctal occlusion was performed, or the amount of drops used, etc.

Several sources suggest caution with ophthalmic drugs and nursing mothers. Lustgarten and Podos wrote an article in 1983 on “Topical Timolol and the Nursing Mother”. Their conclusions were that timolol should be used with caution in the case of nursing mothers. Their results prompted “...the manufacturer to revise their listing in the Physician’s Desk Reference to include an advisory to nursing mothers.” They also reference Williams and Ginther’s 1982 article on “Hazards of ophthalmic timolol” that reported a case of an 18-month-old who had several spells of apnea, “...a side effect not yet noted in adults even with use for systemic effect.” and such the second reported case of apnea in children. It is suggested that infants
should be observed carefully for signs of beta-blockade if the mother is using topical ophthalmic timolol such that it is actually concentrated in breast milk. A beta-adrenergic antagonist had produced milk levels of approximately six times the serum levels. Situations such as if the infant has impaired renal function should be best advised to considerations, for example, having the child weaned. Ultimately, Pilocarpine is recommended over beta-adrenergic antagonists or carbonic anhydrase inhibitors. Another common ophthalmic medication is sodium fluorescein. Mattern & Mayer suggest that fluorescein has a low potential for toxicity and that nursing mothers should be notified to not breast feed for 8-12 hours after topical fluorescein administration. As for a carbonic anhydrase inhibitor, again the physician is advised to suggest weaning if the infant has impaired renal or hepatic or respiratory function if the mother is taking acetazolamide. Its excretion into breast milk was found and quantified. Another ophthalmic medication commonly used in clinics is addressed by Samples and Meyer in “Use of Ophthalmic Medications in Pregnant and Nursing Women”, who note that phenylephrine may be contraindicated in nursing women due to the risk of precipitating severe hypertension. A website, another vehicle of information being used by many professionals, states that it is not recommended in breast feeding. Also suggested to probably avoid is ophthalmic corticosteroids. There is a lack of data available on topical use and the data shows that with systemic use corticosteroids can cause other adverse effects such as suppression of growth and interference of endogenous production. Although the risk of ophthalmic antiviral agents may be unlikely to be excreted in human milk it is still suggested to not prescribe the medication unless the benefits outweigh the potential risks such due to the potential for tumorigenicity found in animal studies.

Clearly there are some risk factors associated with ophthalmic medications and breast-feeding. It is less clear if practitioners are really aware of such risks. Optometrists can only weigh the benefits-to-risks, and counsel their patient on options such as pumping breastmilk or weaning if they are aware that the patient is nursing. We simply need to know if our patients are breast-feeding to simply provide proper informed consent.

The current optometrist may wonder, how likely will my patient be breast-feeding. Trends of mothers breast feeding have had their up and down swings, from the late 1930s when 77% of mothers in the USA were nursing to the downward trend in the 1970s of 28% when formula companies hit hard. This rapid decline became a concern for many and thus in the 1970s there was an increased concern to promote, support and encourage breast feeding thus increasing the number to 58% in the 1980’s. By 1983 the incidence of in-hospital breast feeding was 65-71% in the western world. Currently, there is an increased push for mothers to be breast feeding. Public health experts are promoting this and formula companies are backing off and providing a supportive role stating that “Breast is Best”. Reported in 1998, approximately 44 percent of infants in the developing world are exclusively breastfed. The US Public Health Services had set a goal for the year 2000 such that 75% of mothers being discharged at the hospital will be breast feeding. Hospitals are providing better support and having lactation consultants available for new mothers to promote breast feeding. Many other organizations such as La Leche League, World Health Assembly, National Alliance for Breast feeding Advocacy (NABA), all
promote and support breast feeding. WHO, World Health Organization, is even suggesting to breast feed till at least age two. With an increase of support and encouragement for new mothers to breast feed, there will be an increase in mothers who will be in our chair.

The current day optometrist may not be thinking of breastfeeding issues as perhaps they may feel that it is far from their realm of interest. Surprisingly, benefits of breastmilk also touch the area of optometry as well as other health professionals. There is a lot of research that is looking at the benefits of breast feeding. Some research is showing that there is a significant difference in cognitive and intellectual development between breast-fed and formula fed babies - with breast-fed babies coming significantly ahead. Optometrists should be aware of the research that is showing that infants who are fed breast milk have better visual-evoked potential acuity. This had a positive correlation with docosahexaenoic acid (DHA), an omega-3 fatty acid that is absence from infant formula. Other studies determined that omega-3 essential fatty acid (EFA) has a positive influence on visual development. At 57 weeks (4 months) the breast fed babies had significantly better visual evoked potential and forced choice preferential-looking acuity than formula fed babies. At 36 months, these breast-fed children had significantly better random dot stereo acuity and letter matching ability than formula fed babies. The benefits of breast feeding again becomes an issue involving optometry and here is an opportunity for mothers to give their infants a head start, visually.

With optometrists gaining increased TPA privileges across the country, we will be under the scrutiny of the public and other professionals. Whether or not other professionals ask their patients every time if they are nursing, we need to consider the legal and ethical consequences and ramifications for ourselves and our profession. Optometrists have made it through many milestones to have the privileges we have today - from the first law in 1971 to authorize the use of ophthalmic agents for diagnostic purposes to the present of optometrists having TPA privileges. The future holds more responsibility such as optometrists having the authority to prescribe oral medication. As the trend continues, optometrists will be scrutinized and thus need to be prudent in their method of consent and history taking before administering any medication, whether ophthalmic, topical or oral.

Ultimately, with the privilege of using ophthalmic agents, comes the responsibility for proper patient consent with patient care. Optometrists are being held to a standard of care expected of other health care professionals. Classe comments that, “Failure to adhere to the prevailing standard of care expected of optometrists under the circumstances would result in liability for damages legally caused by such conduct. This is the rule that prevails today throughout the United States for negligence claims against optometrists.” We need to continue to be prudent for our patients, ourselves, and our profession. This study was undertaken as an awareness check on these concerns.
METHODS
The sample consisted of 1500 optometrists across the United States. Names were obtained from a random sample of optometrists maintained by the Division of Continuing Education at Pacific University. A total of 306 surveys were returned and entered into File Maker Pro to obtain the results. The main goal of the survey was to determine the level of awareness of optometrists involving issues of nursing patients and ophthalmic drugs. Issues within this scope were to determine the awareness of potential risks; determine what is being asked in the office; determine the knowledge of potential excretion of drugs in breast milk; and determine the level of responsibility on doctor vs. patient. Please see sample survey in Appendix.

RESULTS
Of the 306 optometrists, 96.73% were TPA certified. The ratio of female to male optometrists was 66.66% being male and 33.33% being female. The majority of male optometrists were between the ages of 40-49YO (41.18% of male sample) and between the ages of 30-39YO (31.37% of male sample). The majority of female optometrists were between the ages of 30-39YO (68.63%). See Figure 1.

Awareness of risks associated with ophthalmic drugs and nursing vs. pregnancy showed that optometrists are more unsure of the risks when it comes to nursing. There were 24.59% who noted “I’m not sure” to the risks with nursing mothers as compared to 16.99% optometrists who noted “I’m not sure” to the risks with pregnancy. See Figure 2. When comparing the responses between female and male optometrists, females demonstrated a greater uncertainty to knowing the risks associated with nursing and pregnancy. Male optometrists showed an 80.88% response to knowing there were risks associated with pregnancy yet 73.53% of female optometrists knew the risks associated with pregnancy. See Figure 3. Again male optometrists showed a 75.49% response to knowing there were risks associated with nursing and 62.75% of female optometrists knew the risks associated with nursing. See Figure 4. A continued uncertainty is shown with 38.24% of female optometrists unsure that ophthalmic drugs pass into breast milk and a 32.84% of male optometrists with similar uncertainty. See Figure 5.

Optometrists were also asked to rate the risk of using specific ophthalmic drugs for nursing mothers. Some trends showed that a majority of optometrists rated proparacaine and polymyxin B as being probably safe. Tetracycline, Acetazolamide, Atropine and Prednisolone were noted by a majority as to avoid. The greatest uncertainty was towards the risks associated with Acetazolamine and Timolol. See Figure 6.

When asked who is responsible for establishing that the patient is nursing, the optometrists surveyed expressed that it is primarily the doctor’s responsibility - 55.44% of male optometrists and 44.00% of female optometrists. A larger discrepancy between male and female optometrists’ views showed that 33.00% female optometrists were more likely to believe that it is primarily the patient’s responsibility while 20.73% of male optometrists believed the same. See Figure 7.
Figure 1 Age of optometrists in the survey - comparing male and female optometrists

- Male (n=204):
  - 60+: 4.41%
  - 50-59: 20.59%
  - 40-49: 31.37%
  - 30-39: 68.63%
  - Under 30: 2.45%

- Female (n=102):
  - 60+: 5.88%
  - 50-59: 18.63%
  - 40-49: 41.18%
  - 30-39: 66.63%
  - Under 30: 6.88%
Figure 2  Awareness of the risks of ophthalmic drugs on NURSING women vs. PREGNANT women
Figure 3: Awareness of risk factors associated with ophthalmic drugs and PREGNANCY - comparing male and female optometrists

- I'm not sure: 22.55% (female 14.22%, male 39.42%)
- No, I know there are not: 3.92% (female 2.94%, male 2.94%)
- Yes, I know there are: 73.53% (female 80.88%, male 70.33%)

female (n=102)  
male (n=204)
Figure 4  Awareness of risk factors associated with ophthalmic drugs and NURSING - comparing male and female optometrists

I'm not sure

- Female (n=102): 34.31%
- Male (n=204): 19.61%

No, I know there are not

- Female (n=102): 62.75%
- Male (n=204): 2.94%

Yes, I know there are

- Female (n=102): 62.75%
- Male (n=204): 75.49%
Figure 5  Awareness of ophthalmic drugs passing into breastmilk - comparing male and female optometrists

- I'm not sure: 38.24% (female), 32.84% (male)
- No, I know there are not: 3.92% (female), 1.47% (male)
- Yes, I know there are: 57.84% (female), 61.27% (male)
Figure 6 How Optometrists rate risk factors of specific ophthalmic drugs for NURSING mothers.
There is a larger difference between whether the optometrist is asking their patient if they are pregnant or nursing. The survey found that 50.99% of optometrists ask their patients every time if they are pregnant vs. only 30.36% of optometrists are asking their patients if they are nursing. See Figure 8. When looking at whether optometrists are asking their patients if they are pregnant before instilling ophthalmic drugs - 21.57% female optometrists and 17.33% male optometrists are “not” asking this question before instilling ophthalmic drugs. See Figure 9. Yet when the same questions is in regards to nursing - a much bigger discrepancy is noted - 37.25% female and 35.00% male optometrists are not asking. See Figure 10.

When asked the main reasons why optometrists do not ask their patients if they are nursing, the results were the following - 35% “other reasons”, 24% “not relevant”, 21% “patient is responsible”, 10% “uncomfortable to ask”, 10% “no answer”. See Figure 11. Female optometrists’ reasons primarily consisted of 32.88% being “other” and 27.0% being “the patient is responsible” while male optometrists’ reasons primarily consisted of 37.58% being “other” and 24.16% being “not relevant”. See Figure 12.

Commonalities were found in the reasons why optometrists are not asking their patients if they are nursing - 31% said that they haven’t given it much thought, 16% said that the ophthalmic drugs they use are “safe”, 14% feel it is covered by the history form, 12% feel that they should or will add it to their form, 12% won’t ask since the patient may not be of childbearing age, 11% assume that the patient is not nursing if they don’t have a child with them, 4% feels that the patient usually tells them. See Figure 13.

The survey also probed the reasons optometrists are asking if their patient is nursing - the top three reasons were: 41% would if the patient has recently given birth; 21% if when the patient brings a young child to the office, 14% if they are going to prescribe medication. See Figure 14.

Age groups when optometrists do ask their patients if they are nursing - 61% ask patients of ages 20-35YO, 51% ask of those 36-44YO, 14% ask of those 16-19YO, 8% ask of those 46-60YO. See Figure 15.

Of those optometrists who are “not sure” if ophthalmic drugs are a risk to nursing mothers, 61.33% do not ask their female patients if they are nursing while 16% do ask every time. See Figure 16. Again of those optometrists who are “not sure” if ophthalmic drugs pass into breastmilk, 59.43% do not ask their female patients if they are nursing while 16.04% do ask every time. See Figure 17.
Figure 7  Optometrists' beliefs regarding who is responsible for establishing that the patient is
NURSING - comparing male and female optometrists

- Completely patient's responsibility
- Primarily patient's responsibility
- Primarily doctor's responsibility
- Completely doctor's responsibility

Female (n=100)
Male (n=193)
Figure 8 Occurrence of O.D.s asking if their patient is pregnant vs. nursing

- No, I don’t ask: 35.64%
- Sometimes: 33.99%
- Yes, every time: 50.99%

nursing (n=303)
pregnant (n=304)
Figure 9  Are Optometrists asking female patients if they are PREGNANT before instilling ophthalmic drugs? - comparing male and female optometrists

- No, I don't ask
  - Female: 21.57%
  - Male: 17.33%

- Sometimes
  - Female: 24.51%
  - Male: 33.17%

- Yes, every time
  - Female: 53.92%
  - Male: 49.50%

- Sample sizes: Female (n=102), Male (n=202)
Figure 10 Are Optometrists asking female patients if they are NURSING before instilling ophthalmic drugs? - comparing male and female optometrists

- No, I don't ask: 37.25% female (n=102), 35.00% male (n=200)
- Sometimes: 31.37% female (n=102), 35.00% male (n=200)
- Yes, every time: 31.37% female (n=102), 30.00% male (n=200)

[Bar chart showing the percentages for each response option, with corresponding data points for male and female optometrists]
Figure 11 Main reasons why optometrists are not always asking their patients if they are nursing

- No answer: 10%
- Uncomfortable to ask: 10%
- Not relevant: 24%
- Other: 35%
- Patient is responsible: 21%
Figure 12 Reasons why optometrists are NOT always asking their female patients if they are nursing - comparing male and female optometrists
Figure 13 The reasons optometrists are NOT always asking if their patient are NURSING (multiple responses allowed)

- Usually the patient tells me: 4%
- I should/I'll add it to the form: 12%
- If the patient doesn't have a child with them: 11%
- If the patient is not of child-bearing age: 12%
- It's covered by the history form: 14%
- I use safe drugs: 16%
- Haven't given it much thought: 31%
Figure 14  The reasons optometrists are SOMETIMES asking if their patient are NURSING (multiple responses allowed)

- If patient lists prenatal vitamins on history: 3%
- If patient is child-bearing age: 10%
- If it's not listed on the history form: 11%
- If I'm going to prescribe meds: 14%
- Patient brings a young child to office: 21%
- Patient has recently given birth: 41%
Figure 15  Age groups in which optometrists do ask their patients if they are nursing (multiple answers were accepted)
Figure 16  Of those optometrists who are "not sure" if ophthalmic drugs pass into breastmilk, are they asking their female patients if they are nursing?

- No, I don't ask: 22.22%
- Sometimes: 39.44%
- Yes, every time: 38.33%
- Yes, I know they can (n=180)
- I'm not sure (n=106)
Of those optometrists who are "not sure" if ophthalmic drugs are a risk to NURSING mothers, are they asking female patients if they are nursing?

- No, I don't ask: 61.33%
- Sometimes: 38.32%
- Yes, every time: 34.11%
- Yes, I know they can (n=214)
- I'm not sure (n=75)
DISCUSSION
The question
Should optometrists ask their patients whether they are nursing before instilling ANY
ophthalmic drugs? The answer should be based on a simple argument of standard of care.
Unfortunately, this response may be an oversimplified argument due to a web of secondary
issues.

The Issues
Several issues seem to be involved:
1. Whose responsibility is it to bring up the topic of nursing during the exam - is the onus on the
doctor or patient?
2. What assumptions are being made on the issue of consent?
3. Does the optometrist believe that there are any risks to the nursing mother and child with any
ophthalmic drugs?
4. What assumptions - on the part of the doctor or patient - are being made about the risk of
ophthalmic drugs?

The Responsibility
The question is simple, during the optometric exam, is the onus of responsibility on the doctor or
the patient to bring up the risks of ophthalmic drugs passing into breast milk? Is it the doctor’s
responsibility to flag the patient that ophthalmic drugs are absorbed systemically and do pass
into breast milk? Is it the patient’s responsibility to know that eye drops pass into their breast
milk?

The survey showed that 55.44% of male optometrists and 44.00% of female optometrists feel
that it is primarily the doctor’s responsibility to establish the patient is nursing. Thus, if it is the
optometrist’s duty to inform - then by what means will she ask? By simply verbally asking, or
via a history questionnaire, or by their pretester/assistant? No matter what method the
optometrist chooses it is their responsibility to obtain this information appropriately as they
themselves have the license to instill the ophthalmic drugs.

This study demonstrates that 33.00% female optometrists and 20.73% of male optometrists
believed that it is primarily the patient’s responsibility to establish that they are nursing. If it is
the patient’s duty to inform - then is the patient comfortable sharing their status of nursing with
their eye care practitioner? Does the patient even understand that ophthalmic drugs can be
absorbed systemically and thus absorbed in breast milk? Does the patient assume that their
doctor will ask appropriate questions if there are any concerns relating to general systemic
health?

The problem of promoting that it is the patient’s responsibility to inform their doctor is simply
too unrealistic. The survey demonstrated 38.24% of female optometrists were unsure that
ophthalmic drugs pass into breastmilk and 32.84% of male optometrists are also uncertain. If
optometrists do not universally understand that ophthalmic drugs are excreted in breast milk - how can one assume that a non medical person, thus the patient, would understand it either.

An analogy can be made in regards to topical glaucoma medication and its systemic side effects. How is a patient to know that a topical glaucoma medication could cause impotence? It may be difficult for the patient to equate an eye drop to their sexual drive. It is again the responsibility of the optometrists to provide a complete understanding of the side effects of the medications we prescribe - thus understand the systemic health condition of our patient. We simply can not expect our patients to hold the same amount of knowledge and experience as their optometrist.

2. Issue of Consent
Consent is so important before any procedure, whether checking intraocular pressures with Goldman applanation tonometry or whether checking a health history before instilling drops. No matter what, a patient is coming to seek the expertise of their eye care practitioner and thus it is the duty of the optometrist to provide that care on every level.

The study demonstrated that only 30.36% of optometrists ask their patients everytime if they are nursing. If an optometrist doesn’t even ask a women if she is nursing - then there is no complete consent before instilling drops as the optometrist doesn’t even know the situation. Thus the optometrist is unable to discuss options. There are many - punctal occlusion, delay of breast feeding or pumping within a specific period of time after instillation of drops, discussion of pros and cons, or delay or postponement of treatment. By not asking the optometrist is robbing the patient of choices and options which that patient is obliged to have. Ultimately it is the patient’s decision to participate in a procedure once they understand the risks and benefits - this is a ethical responsibility of the optometrist to present for the patient.

In addition to moral and ethical responsibility to the patient, there is the responsibility to provide the proper consent that is legally required of the optometrist. Proper consent is simply not obtained if poor history taking is occurring.

3. Assumptions
If assumptions are being made on the optometrists’ side, there will no doubt be an increase of poor communication and thus ultimately a breakdown of the quality of care that is provided. When asked in the survey of the main reasons why optometrists are not always asking their patients if they are nursing, the results were as follows: 35% “other reasons”, 24% “not relevant”, 21% “patient is responsible”, 10% “uncomfortable to ask”. Within the 35% of other reasons - the most common reason was that 31% said that they “haven’t given it much thought”. These are eye opening responses that demonstrate the need for optometrists to understand issues of breast-feeding and ophthalmic drugs. To express that they haven’t given it much thought and that it is not relevant, demonstrates the lack of knowledge that is in the profession towards issues of the nursing patient. To express that it is the patient’s responsibility and that they are uncomfortable to ask demonstrates a need for a new look of our responsibility as doctors. The optometrist’s scope today is not limited to the eyes, we are trained in
understanding systemic conditions. We need to feel comfortable to discuss our patient’s systemic conditions so that we can provide superior care.

Other assumptions were discovered in this study. The survey probed the reasons why optometrists are sometimes asking if their patient is nursing before instilling any ophthalmic drugs - the top two reasons were: 41% would if the patient has recently given birth, 21% if when the patient brings a young child to the office. With the first assumption being that the patient has recently given birth - what defines recent; one month, three months? How is the optometrist to know that a recent birth has occurred? Perhaps patients will tell their optometrist but perhaps they won’t. Other thoughts may be perhaps on how the patient looks physically, which can be very deceiving. The other assumptions that a new mother will bring in her child is also poor reasoning. A new mother may be leaving her child with the new dad, other family members or friends or their child care provider.

Another factor that is influencing the optometrist is based on the patients’ age. This may be a logical and gut reaction judgement call. Yet the results show that optometrists ask 61% patients of ages 20-35YO, 51% of 36-45YO, 14% of 16-19YO, 8% of 46-60YO. One issue is that those patients between 16-19YO may be even less likely to first tell their optometrist of their recent delivery and with only 14% of optometrists including this age group in their questioning leads to increased chance of poor informed consent.

It was eye opening to see if there were any differences or similarities between how female and male optometrists handle the issue of nursing patients. The study revealed that female optometrists were actually placing a larger responsibility on the patient for acknowledging if the patient is nursing. It showed that 33.00% female optometrists were more likely to believe that it is primarily the patient’s responsibility while 20.73% of male optometrists believed it was primarily the patient’s responsibility. Again male optometrists showed a 75.49% response to knowing there were risks associated with nursing and yet a lower response of 62.75% for female optometrists. It should be noted that male optometrists in this survey had longer lengths of careers. Perhaps this is not a gender issue but and issue of experience. Further study is required to fully understand these issues.

**Concluding Statement**

With any ophthalmic medication and with any patient, including the nursing mother, the benefit-to-risk ratio needs to be weighed. In order to effectively weigh this, there simply needs to be proper informed consent to discuss the advantages and disadvantages of initiating treatment. There needs to be proper informed consent to discuss the options available to the patient - to begin treatment, to delay treatment, to wean the infant, to pump breast milk until treatment is finished, to accept the risks. Ultimately it is the doctor’s responsibility to initiate the necessary questioning to thus provide proper patient care. The patient should not have to take the role of the practitioner in understanding the risks, the optometrist needs to know and then explain the risks.
Acknowledgment
A most sincere thank you to my husband Bruce for all his support and help. Thank you to Haley and Ashley for help with the mailouts.

Thank you to BSK for providing the grant to allow this extensive survey and thank you to my advisor Dr. Willard Bleything for his advise.
Reference


A Pacific University College of Optometry student is writing a thesis on ophthalmic drugs, and patients who are nursing or pregnant. We would appreciate your assistance in filling out this survey.

I. General Awareness
1. To your knowledge, are there possible risk factors associated with ophthalmic drugs and PREGNANCY?
   - Yes, I know there are
   - No, I know there are none
   - I'm not sure

2. To your knowledge, are there possible risk factors associated with ophthalmic drugs and NURSING?
   - Yes, I know there are
   - No, I know there are none
   - I'm not sure

3. To your knowledge, can any ophthalmic drug pass into breastmilk?
   - Yes, I know it can
   - No, I know it cannot
   - I'm not sure

4. Please rate the risk factor of the following drugs for nursing moms:

<table>
<thead>
<tr>
<th>Drug</th>
<th>Avoid</th>
<th>Use caution</th>
<th>Probably safe</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetracycline</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Timolol</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acetazolamide</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proparacaine</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atropine</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cyclopentolate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prednisolone</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfonamides</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polymyxin B</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

II. Practices
1. Do you ask your female patients if they are PREGNANT before instilling ophthalmic drugs?
   - Yes, every time
   - Sometimes
   - No, I don’t ask
   If “sometimes”, when:

2. Do you ask your female patients if they are NURSING before instilling any ophthalmic drugs?
   - Yes, every time
   - Sometimes
   - No, I don’t ask
   If “sometimes”, when:

3. If you ask any patients if they’re NURSING, of which age groups? (please check ALL that apply)
   - 10 - 15
   - 16 - 19
   - 20 - 35
   - 36 - 45
   - 46 - 60
   - over 60

4. If you are not always asking women if they are NURSING, what’s the main reason? (check ONE only)
   - I’m uncomfortable to ask
   - I don’t think it’s relevant
   - It’s their responsibility to tell me
   - Other:

5. Who is responsible for determining if the patient is nursing?
   - It’s COMPLETELY the doctor’s responsibility
   - It’s PRIMARILY the doctor’s responsibility
   - It’s PRIMARILY the patient’s responsibility
   - It’s COMPLETELY the patient’s responsibility

III. Personal Background
1. How long have you been practicing optometry?
   - 0-5 years
   - 6-10 years
   - 11-20 years
   - more than 20 years

2. What is your gender?
   - male
   - female

3. What is your approximate age?
   - under 30
   - 30 - 39 years
   - 40 - 49 years
   - 50 - 59 years
   - 60 or older

4. Do you have current TPA prescribing privileges?
   - Yes
   - No

THANK YOU. For questions about the survey, please contact Neena Gabrielle at gabrieln@pacificu.edu