SB

157

FISCAL NOTE

STATE OF ALASKA
1991 LEGISLATIVE SESSION

BILL NO. SB 157

Revision Date: _____ Department Affected: Commerce & Economic Dev.

Title: An Act relating to optometrists. BRU: Occupational Licensing

Component: Administration

Sponsor: Senator Adams

Requestor: Senate HESS COMPONENT SERIAL NO. 0 3 5 6

Expenditures/Revenues: (Thousands of Dollars)

OPERATING	FY 92	FY 93	FY 94	FY 95	FY 96	FY 97
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	0	0	0	0	0	0
CAPITAL						
REVENUE	0	0	0	0	0	0

FUNDING: (Thousands of Dollars)

GENERAL FUND						
FEDERAL FUNDS						
OTHER						
TOTAL	0	0	0	0	0	0

POSITIONS:

FULL-TIME	0	0	0	0	0	0
PART-TIME	0	0	0	0	0	0
TEMPORARY	0	0	0	0	0	0

Estimate of current year impact: None

ANALYSIS: (Attach a separate page if necessary.)
The bill amends the optometry statutes to authorize the use of pharmaceutical agents in the practice of optometry. New funds are not required to implement this bill.

Prepared By: Jennifer Strickler, Administrative Officer Phone: 465-2144

Division: Occupational Licensing Date: March 11, 1991

Approved by Commissioner: Glenn A. Olds Spec. Asst. II

Agency: Department of Commerce & Economic Development Date: 3-12-91

Distribution (by preparer): Legislative Finance, Legislative Sponsor, Requestor, OMB, & Impacted Agency(ies).

Rev 10/90

Alaska State Legislature

Al Adams
District L

WHILE IN SESSION
P.O. Box V
State Capitol
Juneau, Alaska 99811
(907) 465-3707

OUT OF SESSION
P.O. Box 333
Kotzebue, Alaska 99752
(907) 442-3245

3111 C Street
Anchorage, Alaska 99503
(907) 561-7622

Official Business

TO: Senator Arliss Sturgulewski, Chair
Senate Health, Education and Social Services Committee

FROM: Senator Al Adams AAA

RE: Senate Bill 157, :"An Act relating to optometrists"

DATE: March 11, 1991

This is to request a hearing on the aforementioned legislation.

Enclosed for your information is various background material on this issue. A fiscal note from the Department of Commerce has been requested but not yet received.

Please contact my aide Martha Stewart if you have questions or concerns.

Melissa

When we hear SB157

optometrists authorized

services notify

Dr. Peter D. Cannava

Soldotna / Kenai

262-4340

called 10/MAR91

8 AM Home 333-1912 Recorder

Jeff GONSOM
276-2080
ANCH
SB157

9103092

Post-it™ telephone message pad 7660

To
Date 3/18 Time 4:15

WHILE YOU WERE OUT

M Becky
of LIO

Phone No.

TELEPHONED		PLEASE CALL	
WAS IN TO SEE YOU	✓	WILL CALL BACK	
WANTS TO SEE YOU		URGENT	
RETURNED YOUR CALL			

Message teleconference #
9103092

Bridge #1 Jeff to call in
562-2882 Operator

Medical Park Eye Care
2211 E. Northern Lights - Suite 202
Anchorage, AK 99508

Jeffrey A. Gonnason, O.D.
Doctor of Optometry
Vision Examinations
Contact Lenses

Member
American Optometric Association

Telephone: 276-2080

Sam Kito - Lobbyist

Al Adams will draft bill - Jeff will get to me.

Consider putting in as Senate HESS
House Hess bill -

BILL: HB 222 SHORT TITLE: OPTOMETRISTS & PHARMACEUTICALS
NAME: CSHB 222(HESS) AM
TITLE: "AN ACT RELATING TO OPTOMETRISTS."

PRIME SPONSOR: HEALTH, EDUCATION & SOCIAL SERVICES
BY REQUEST

CURRENT STATUS: (S) L&C STATUS DATE: 05/04/90

03/15/89	00628	(H)	READ THE FIRST TIME - REFERRAL(S)
03/15/89	00628	(H)	HEALTH, EDUCATION & SOCIAL SERVICES
04/09/90	03208	(H)	HES RPT CS(HESS) NEW TITLE 3DP 1NR
04/09/90	03208	(H)	-ZERO FISCAL NOTE (DCED) 4/7/90
04/17/90	00000	(H)	RULES TO CALENDAR 4/18/90
04/18/90	03315	(H)	READ THE SECOND TIME
04/18/90	03315	(H)	HES CS ADOPTED UNAN CONSENT
04/18/90	03315	(H)	AMENDMENT NO 1 BY COLLINS
04/18/90	03316	(H)	AM NO 1 ADOPTED Y21 N17 X1 A1
04/18/90	03316	(H)	ADVANCED TO THIRD READING UNAN CONSENT
04/18/90	03316	(H)	READ THE THIRD TIME CSHB 222(HESS) AM
04/18/90	03316	(H)	PASSED Y29 N9 X1 A1
04/18/90	03317	(H)	NAVARRE NOTICE OF RECONSIDERATION
04/19/90	03367	(H)	RECONSIDERATION NOT TAKEN UP
04/19/90	03367	(H)	TRANSMITTED TO (S)
04/20/90	03477	(S)	READ THE FIRST TIME - REFERRAL(S)
04/20/90	03477	(S)	HES
04/25/90	03599	(S)	L&C REFERRAL ADDED
05/04/90	03917	(S)	HES REFERRAL WAIVED
05/04/90	03917	(S)	REFERRED TO LABOR & COMMERCE
05/05/90	03967	(S)	24 HOUR RULE WAIVED

35 have passed
16 are not reviewing

Modeling after Washington State Bill

ALASKA'S DOCTORS OF OPTOMETRY

Fact sheet for SB 157

A: Access:

Alaskans in communities like Sitka, Kodiak, Homer, Ketchikan and others do not have access to eye care. Most Alaskan communities have no medical specialists, and the local optometrist is the most highly trained, specialized, and instrument-equipped professional in town, with over 60 of us scattered throughout the state.

B: Better Care:

The optometrist is often the first contact for a patient suffering from an eye disorder. Needed treatment can be started immediately, which is an important aspect in treating many eye diseases.

C: Cost Containment:

Optometrists' fees are generally lower than those of medical specialists and hospitals; the cost of a 2nd visit to another doctor or clinic would be eliminated; travel time and expense would be eliminated as well as extra time away from work. These are documented cost savings from other states. Increased competition with freedom of choice among health providers also holds down costs.

D: Doctors of Optometry:

Optometrists have been prescribing drugs for their patients across the nation for the past 15 years, with 26 states currently allowing therapeutic drug treatment of eye diseases. No laws have been repealed, and 13 more states have bills pending. There have been no problems nationally, and the malpractice insurance premiums for optometry are the same in states with and without therapeutic drug laws.

E: Education:

Optometry training is on a par with medicine, dentistry and podiatry. An undergraduate college degree plus a 4 year doctorate program and often a residency in a hospital-based setting. The letter from Dr. Les Walls, a medical school professor and now an optometry school dean, best explains our education. Older optometrists who did not originally receive advanced therapeutic training would not be grandfathered. They would be required to return to school for additional training and pass rigid State Board standards and exams to be endorsed to use therapeutics.

F: Fairness:

Under the current state law, the optometrists in most communities must refer their patients needing eye medication to a nurse practitioner, health aide, or general medical doctor with far less training than optometrists have.

G: Government:

Approximately 5 agencies of the Federal Government have studied optometry and found us competent in therapeutic treatment and surgical co-management. Military and Indian Health optometrists have used therapeutic drugs for many years. Optometrists are considered "physicians" under federal Medicare law, being allowed to provide any services the state law allows. The national American Public Health Association recently passed a resolution supporting optometry therapeutics in all states.

This legislation is in the best interest of the public health.

Department of Commerce & Economic Development / POSITION PAPER

SB 157: "An Act relating to optometrists."

This bill authorizes the use of therapeutic pharmaceutical agents in the practice of optometry after a license endorsement has been earned by providing competency in the use of those drugs.

It further authorizes optometrists to remove superficial foreign bodies from the eye and its appendages. The bill states it is not intended to allow "invasive surgery." The department would prefer that the "appendages" be itemized. Also, while negative language is not usually our first choice, it might be necessary to exclude what might be considered "invasive surgery."

The department does not oppose SB 157.

Glenn A. Olds, Commissioner

Date: 4-26-91

GAO/AB/dgl9465D
042591a

FRANK H. MURKOWSKI
ALASKA

COMMITTEES:

VETERANS' AFFAIRS (RANKING MEMBER)
ENERGY AND NATURAL RESOURCES
FOREIGN RELATIONS
SELECT COMMITTEE ON INTELLIGENCE
SELECT COMMITTEE ON INDIAN AFFAIRS

United States Senate
WASHINGTON, DC 20510
(202) 224-6665

222 West 7th Street, Box 1
Anchorage, AK 99513
(907) 271-3735

101 12th Avenue, Box 7
Fairbanks, AK 99701
(907) 456-0233

P.O. Box 1647
Juneau, AK 99802
(907) 586-7400

120 Trading Bay Road, Suite 350
Kenai, AK 99611
(907) 283-5808

109 Main Street
Ketchikan, AK 99901
(907) 225-6880

April 9, 1990

Dr. Jeffrey A. Gonnason, O.D.
Medical Park Eye Care
2211 E. Northern Lights - Suite 202
Anchorage, Alaska 99508

Dear Jeff:

It was a pleasure to visit with you during your recent visit to Washington. I appreciate your taking time to stop by my office.

Lisa Moore has provided me with the written information which you left. I concur with you that optometrists should not be discriminated against in federal and state legislation. I wish you luck with the Alaska legislature on the prescription drug issue. Please let me know the outcome.

If I can be of any assistance to you, please let me know.

Sincerely,

Frank H. Murkowski

Frank H. Murkowski
United States Senator

Employee Benefits Division
Medicare Claim Administration
P. O. Box 1998
Portland, Oregon 97207-1998
Telephone No. (503) 222-6831

Form Approved
OMB No. 0938-0222

Medicare

10/14/87 F00 511 SS05

JEFFREY A GONNASON OD
2211 E.-NORTHERN LGHT
ANCHORAGE, AK 99504

CORRESPONDENCE NO. 8072648000C300G

WE RECEIVED YOUR LETTER ABOUT A RECENT MEDICARE NEWSLETTER ARTICLE PERTAINING TO OPTOMETRISTS .

THE NEWSLETTER ARTICLE WAS IN ERROR REGARDING THERAPEUTIC TREATMENT OF EYE DISEASES CR DISORCERS BY OPTOMETRISTS.

EFFECTIVE 4/1/87, A DOCTOR OF OPTOMETRY IS CONSIDERED A PHYSICIAN WITH RESPECT TO ALL SERVICES THAT THE OPTCMETRIST IS AUTHORIZED TC PERFORM UNDER STATE LAW. IF STATE LAW AUTHORIZES THERAPELTIC TREATMENT BY AN OPTOMETRIST, MEDICARE CAN CONSIDER THE CHARGE FOR PAYMENT.

SINCERELY,

SRisner
MEDICARE CLAIMS ADMINISTRATION
AETNA LIFE INSURANCE COMPANY

Medicare News

Volume 13, Issue 2 February, 1987

IN THIS ISSUE

SERVICES RELATED TO NONCOVERED SERVICES

All providers are reminded that routine services "related to" noncovered services (e.g. cosmetic surgery, noncovered organ transplants), including services related to the followup care, are not covered services under Medicare.

In addition, services provided primarily for the purpose of administering a noncovered injection, are excluded from Medicare payment. For example, if the primary treatment is noncovered dimethyl sulfoxide (DMSO) or ethylenediamine-tetra-acetic acid (EDTA chelation therapy), the associated office visits and lab tests will also be excluded from payment.

COVERAGE FOR OPTOMETRIST EXPANDED

Coverage has been expanded on services performed by optometrists on or after 4/1/87. Medicare will then allow payment for vision care services of optometrist when:

1) the optometrist is legally authorized by the state to perform the service, and

2) the service is already covered by Medi[illegible] when performed by a physician

Previously Medicare allowed payment to optometrist for services related to the treatment of Aphakic patients only.

6 February 1990

2420 Banbury Drive
Anchorage, AK 99504

Dear Legislator,

A just completed my optometric appointment with Dr. Jeffrey A. Gonnason, O.D. and was glad to hear Alaska was currently addressing the a issue of Optometrists being allowed to prescribe a variety of therapeutic agents (HB 222/Optometry Pharmaceutial).

This action is long overdue and has already been approved in many other states.

I am a Colonel in the Air Force, a board certified Family Physician and Chief of the Emergency Room, Family Practice, and Primary Care Department at Elmendorf Air Force Base Regional Hospital. I have thus had frequent professional exposure to Optometrists and thus feel I can speak quite objectively.

I feel optometrists are fully qualified to expand their prescribing service to their patients.

I would hope an objective review of this bill be undertaken and passage of the bill be the outcome.

Richard M. Stratton

RICHARD M. STRATTON, MD, Colonel, USAF, MC

SB157

We, the undersigned authorized representatives of the Legislative Committee of the Alaska Optometric Association and the Legislative Affairs Committee of the Alaska Association of Ophthalmology, assign the support of our respective organizations to the attached negotiated bill that amends the current Alaska optometry statute. By our signatures below and on the attached bill we attest that support. We will, if called upon, testify before the Alaska State Legislature in favor of the bill as written. This agreement expires at the end of the 1987 session of the 15th Alaska Legislature.

Lynn J. Coon, O.D. 3/29/87

Lynn J. Coon, O.D.

Oliver M. Korshin, M.D.

Edward E. Crouch, M.D.

Jeff Gonnason OD HB 222

written Early 1990

The old "compromise" story

→ Early 1987: We wanted to re-introduce a comprehensive Therapeutic Drug Bill. Sen. Fischer wanted the ophthalmologists + optometrists (MD's + OD's) to meet and compromise. We told him they would never compromise on any therapeutics.

→ We met anyway to discuss it w/ MD's. Rick Urion [redacted] (our lobbyist at one time past) promised a compromise bill would fly through the legislature in 2 weeks.

→ After Dr. McConkey from Fairbanks left the meeting, the OD's + MD's shook hands on a bill for diagnostic drugs and some limited therapeutic drugs for when an ophthalmologist wasn't available.

→ 2 Hours later. Dr. Korshin, MD leader, called back and broke the deal, saying we had to add "after consultation w/ an ophthalmologist". Faced with no bill at all, Dr. Coon, OD leader, agreed, but said "no more changes".

→ 3 Days later, Korshin MD said he had to remove all therapeutics from the bill, and if we held him to the deal, he would be replaced as chair by the MD's.

Jeff Gunnesen HB

→ Coon OD, took the broken deal for diagnostics only, since it was promised to fly through & be supported by both groups, and only Alaska & Maryland were left in the nation without diagnostic drugs for OD's.

→ After Senate passage, Korshin MD said they would withdraw support because they disliked an advertisement run by Falconer OD on Medicare.

→ McConkey MD and others actively fought against our bill, and it got amended once or twice, sent to sub-committee, and we had to hire a second lobbyist and struggle both years of the 15th Legislature to finally pass diagnostics as the 50th & last out of 50 states. (Maryland got a veto & over-ride it).

→ The "compromise" was to not fight the bill, not to forever restrict our profession to antiquated laws. It expired in 1987.

→ HB 222 is our "compromise" offer, asking only for minimum tools — 2 categories of eye drops.

ALASKA'S DOCTORS OF OPTOMETRY

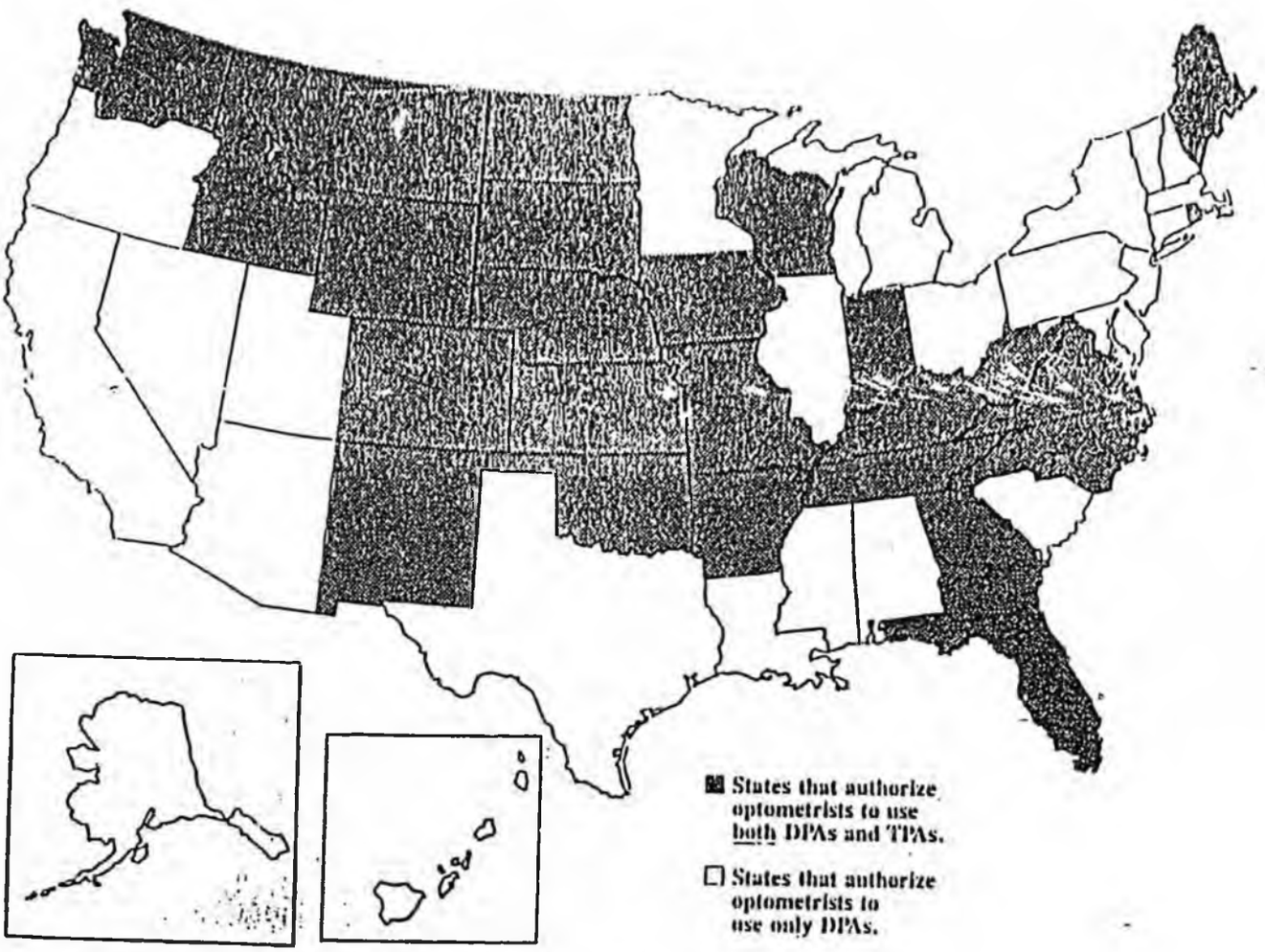
Name	File #	Address	City	ST	Zip Code	LastExam	Birthdate
Pickard, O.D., Jim		P.O. Box 777	Dillingham	AK			
Williams, O.D., Salisa		P.O. Box 1898	Hillsboro	OR	97123		
Bach, O.D., Edward E.		1440 W. 10th Ave.	Anchorage	AK	99501		
Falconer, O.D., James C.		1345 West 9th Avenue	Anchorage	AK	99501		
Falconer, O.D., Maynard C.		1345 West 9th Avenue	Anchorage	AK	99501		
Faulkner, O.D., Bill D.		400 L Street - Suite 104	Anchorage	AK	99501		
Stander, O.D., Tom		IHS-ANMC Eye Clinic	Anchorage	AK	99501		
Sternberg, O.D., Aharon		542 West 2nd Avenue	Anchorage	AK	99501		
Brinkerhoff,O.D., Dennis R.		4301 Seeley Ct.	Anchorage	AK	99502		
Albert, O.D., Dennis L.		2702 Gambell St. #102	Anchorage	AK	99503		
Bach, O.D.,Ph.D., Phil		3401 Denali Street - Suite 204	Anchorage	AK	99503		
Blower, O.D., Victoria A.		207 E. Northern Lights #101	Anchorage	AK	99503		
Coon, O.D., Larry		600 E. Northern Lights #136	Anchorage	AK	99503		
Miller, O.D., Robert W.		2606 C Street	Anchorage	AK	99503		
Roselius, O.D., Thomas		2600 Denali - Suite 603	Anchorage	AK	99503		
Freeborn, O.D., Dennis W.		6311 DeBarr Road - Suite D	Anchorage	AK	99504		
Ricker, O.D., Phil		3900 Robin Street	Anchorage	AK	99504		
Sayler, O.D., Jeffery		523 Beluga Ave. Apt. B	Anchorage	AK	99505		
Bancroft, O.D., Edward		5332 Sillary Circle	Anchorage	AK	99508		
Beckerman, O.D., Mike		3716 Bisquier Drive	Anchorage	AK	99508		
Gonnason, O.D., Jeffrey A.		2211 E. Northern Lights #202	Anchorage	AK	99508		
Samaniego,O.D., Daniel D.		332 N. Bunn St.#A	Anchorage	AK	99508		
Ripley, O.D., John F.		P.O. Box 93011	Anchorage	AK	99509		
Dobson, O.D., Steven S.		1000 E. Dimond Blvd. #101	Anchorage	AK	99515		
Kjome, O.D., Gary M.		1000 E. Dimond Blvd. #101	Anchorage	AK	99515		
McLaughlin, O.D., Tim B.		800 E.Dimond Blvd Ste 228A	Anchorage	AK	99515		
Rogers, O.D., William C.		2910 Pelican Dr.	Anchorage	AK	99515		
Thanepohn, O.D., Denise L.		130 Beaufort Circle	Anchorage	AK	99515		
Titzel, O.D., Gene E.		2909 West 100th St.	Anchorage	AK	99515		
Bigelow, O.D., Don E.		12201 Graiff St.	Anchorage	AK	99516		
Freeman, O.D., Anne M.		4820 Southpark Bluff Dr.	Anchorage	AK	99516		
Stralka, O.D., Stephen		13441 Baywind Drive	Anchorage	AK	99516		
Hagge, O.D., Hal E.		10928 Eagle River Rd. #102	Eagle River	AK	99577		
Keene, O.D., Jeffrey		16331 Heritage Place #104	Eagle River	AK	99577		
Baldwin, O.D., Gregg		P.O. Box 528, Eye Clinic	Bethel	AK	99599		
Taylor, O.D., James R.		P.O. Box 528, Eye Clinic	Bethel	AK	99599		
Mastolier, O.D., Gary		3953 Bartlett Street	Homer	AK	99603		
Walker, O.D., Boyd L.		P.O. Box 3669	Homer	AK	99603		
O'Connell, O.D., Robert D.		P.O. Box 4370	Kenai	AK	99611		
Swarner, O.D., Dennis A.		P.O. Box 4370	Kenai	AK	99611		
Myers, O.D., Jeremiah		P.O. Box 1948	Kodiak	AK	99615		
Shank, O.D., John T.		P.O. Box 827	Kodiak	AK	99615		
Demske, O.D., John		155 Smith Way - Suite #202	Soldotna	AK	99669		
Coon, O.D., Lynn		418 N. Main	Wasilla	AK	99687		
McKinley, O.D., Rich		950 E. Bogard - Suite 206	Wasilla	AK	99687		
Graves, O.D., James C.		477 Darrell Drive	Fairbanks	AK	99701		
Johnson, O.D., Curtis M.		530 Seventh Avenue	Fairbanks	AK	99701		
Lounsbury, O.D., Joe J.		124 North Turner	Fairbanks	AK	99701		
Cobbett, O.D., John		P.O. Box 55777	North Pole	AK	99705		
Lind, O.D., Virginia		830 Nordic St.	North Pole	AK	99705		
Hammond, O.D., Robert P.		P.O. Box 73164	Fairbanks	AK	99707		
LeFevre, O.D., Nancy		P.O. Box 1954	Fairbanks	AK	99707		
Nicolas, O.D., Ruth		P.O. Box 73814	Fairbanks	AK	99707		
Eastlake, O.D., John		P.O. Box 82707	Fairbanks	AK	99708		
Christiansen,O.D., Randy		725 Darrell Drive	Fairbanks	AK	99709		
Humphreys, O.D., Grant		P.O. Box 69, Eye Clinic	Barrow	AK	99723		
McGann O.D., Bill		P.O. Box 1255	Kotzebue	AK	99752		
Box, O.D., Roy A.		9309 Glacier Hwy. Suite A102	Juneau	AK	99801		
Kemp, O.D., Gilbert H.		611 W. Willoughby Avenue	Juneau	AK	99801		
Matson, O.D., Jim N.		800 Glacier Avenue	Juneau	AK	99801		
Messerschmidt, O.D., F.		8800 Glacier Hwy - Suite 105	Juneau	AK	99801		
Hagerman, O.D., Wayne T.		P.O. Box 338	Sitka	AK	99835		
Christianson, O.D., Eric D.		348 Main Street	Ketchikan	AK	99901		
Swearingen, O.D., Rick		410 Mission Street	Ketchikan	AK	99901		

Temaker Springs; currently Professor at Pacific University in Oregon

64 O.D.'s here, plus military adds more

TREATMENT STATES

Twenty five, one half, of the fifty states of our great Union allow Optometry to utilize therapeutic medications as part of their health care delivery system. The U.S. Military, Public Health Service, Indian Health Service, and Veterans Administration also permit qualified optometrists to use therapeutic medications as a broad base eye care delivery system.

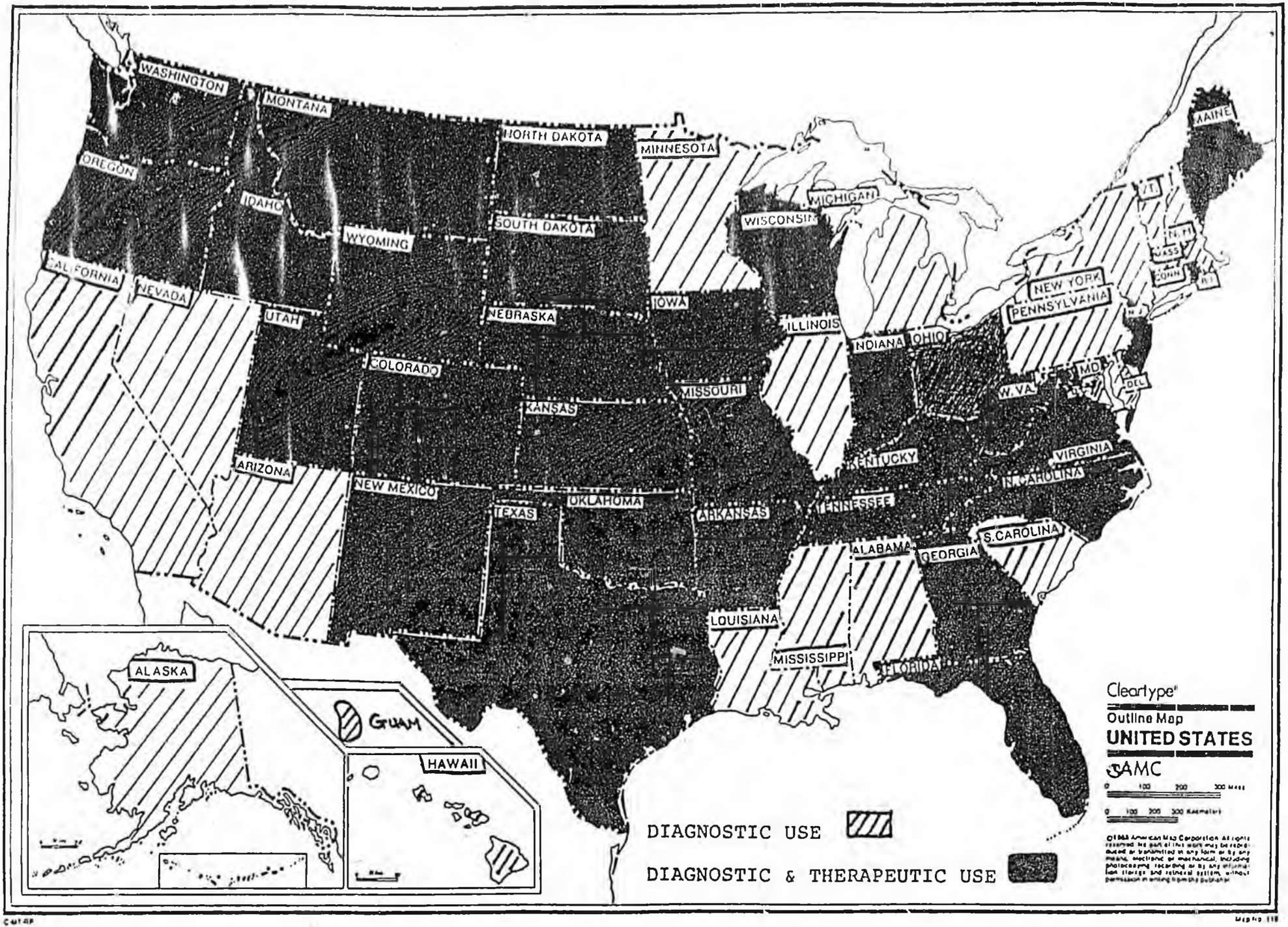


■ States that authorize optometrists to use both DPAs and TPAs.

□ States that authorize optometrists to use only DPAs.

STATUS OF PHARMACEUTICAL LEGISLATION

~~January~~ February 16, 1992



STATE	DIAGNOSTIC USE	THERAPEUTIC USE
ALABAMA	*	
ALASKA	May 25, 1988	
ARIZONA	April 25, 1980	
ARKANSAS	April 2, 1979	March 3, 1987
CALIFORNIA	July 9, 1976	
COLORADO	June 10, 1983	April 20, 1988
CONNECTICUT	April 2, 1986	
DELAWARE	July 10, 1975	
D.C.	March 25, 1986	
FLORIDA	July 10, 1986**	July 10, 1986**
GEORGIA	February 14, 1980	February 25, 1988
GUAM	December 28, 1982	
HAWAII	June 12, 1985	
IDAHO	March 23, 1981	March 31, 1987
ILLINOIS	September 15, 1984	
INDIANA	***	***
IOWA	June 8, 1979	May 31, 1985
KANSAS	April 12, 1977 (2:00 p.m.)	April 17, 1987
KENTUCKY	March 29, 1978	February 7, 1986
LOUISIANA	July 6, 1975	
MAINE	June 24, 1975	June 25, 1987
MARYLAND	January 13, 1989	
MASSACHUSETTS	December 23, 1985	
MICHIGAN	March 26, 1984	
MINNESOTA	March 8, 1982	
MISSISSIPPI	March 17, 1982	
MISSOURI	July 24, 1981	June 24, 1986
MONTANA	April 12, 1977 (10:10 a.m.)	April 23, 1987
NEBRASKA	February 13, 1979	March 26, 1986
NEVADA	May 25, 1979	
NEW HAMPSHIRE	June 6, 1985	
NEW JERSEY	*	January 16, 1992
NEW MEXICO	March 4, 1977	April 5, 1985
NEW YORK	July 15, 1983	
NORTH CAROLINA	June 3, 1977	June 3, 1977
NORTH DAKOTA	March 22, 1979	April 10, 1987
OHIO	March 15, 1984	February 15, 1992
OKLAHOMA	April 6, 1981	March 22, 1984
OREGON	May 20, 1975	August 9, 1991
PENNSYLVANIA	March 1, 1974	
RHODE ISLAND	July 16, 1971	June 26, 1985
SOUTH CAROLINA	March 21, 1984	
SOUTH DAKOTA	March 15, 1979	March 15, 1986
TENNESSEE	May 8, 1975	April 22, 1987
TEXAS	August 5, 1981	June 15, 1991
UTAH	March 21, 1979	March 20, 1991
VERMONT	April 23, 1984	
VIRGINIA	February 25, 1983	April 11, 1988
WASHINGTON	April 23, 1981	April 18, 1989
WEST VIRGINIA	March 4, 1976	March 4, 1976
WISCONSIN	April 29, 1978	August 3, 1989
WYOMING	February 17, 1977	March 2, 1987

FOOTNOTE KEY:

** = General legislation, favorable attorney general opinion.*

*** = Previous favorable attorney general opinion. Specific legislation enacted in 1986.*

**** = General legislation, favorable attorney general opinion. Legislation which would have prohibited pharmaceutical utilization defeated. Appeal from dismissal of litigation which would have prohibited pharmaceutical utilization denied by state supreme court, February 27, 1986. Clarification legislation adopted May 13, 1991.*

Pacific
CATARACT AND LASER INSTITUTE

TO: *Members of the Alaska Legislature*

FROM: *Robert O. Ford, MD*

DATE: *May 21, 1991*

Over the last ten years of working as an ophthalmologist closely with the optometric profession to provide eye care to the people of Washington, I have made some observations that I would like to share with you.

Relations between ophthalmology and optometry in general are unfortunately frequently dominated by competition and turf issues. Once I was able to get past that in my own thinking about eight years ago, I began to see things in a different light.

Individual and professional advancement is part of the American way. Optometry as a profession has grown progressively more sophisticated and capable. Unfortunately each step of the way, their efforts at self-improvement have been resisted by organized ophthalmology. The most frequent argument used has been that patients will suffer when practitioners practice beyond their training. It is true that patients will suffer if any practitioner overextends himself whether he be MD, OD, attorney, politician or anything else. The real issue of public safety lies with the morality, honesty, and faithfulness of each person using their own judgement to manage only things for which they are qualified, and to get consultation or make referrals when necessary.

My experience with optometry is that they are as a whole, above average in their commitment to providing quality care to their patients and requesting assistance or making referrals whenever a particular case is beyond their knowledge or training.

As I have observed the changes in Washington, first with an extension of optometry's freedom to use diagnostic drugs and then later with their freedom to use therapeutic drugs, I have not seen patients harmed. In fact the availability of eye care has improved, and I can recommend this course of action to the state of Alaska.

Sincerely,

Robert O. Ford

Robert O. Ford, MD
/de

2517 N.E. Kresky
Chehalis, WA 98532
206 748-8632
1 800 888-9903

2302 Union Ave
Suite B-16
Tacoma, WA 98405
206 756-9440
1 800 888-9905

8203 W. Quinault Ave
Suite 200
Kennewick, WA 99336
509 736-0826
1 800 888-9904

Kachemak Bay Medical Clinic
Professional Corporation
PAUL D. RAYMOND M.D.
4285 Hohe St., Suite 2
Homer, Alaska 99603
(907) 235-4050

May 2, 1991

Dear Legislator:

I am writing this letter in support of Senate Bill 157, which involves the use of pharmaceutical agents by optometrists. As a family practitioner in a rural area of Alaska, without the presence of ophthamologists we depend greatly on qualified optometrists for evaluation and treatment of superficial and anterior chamber eye disease. This would include administrating topical steroids, antibiotics and antiglaucoma agents to the human eye. Obviously, this would be inherent on the licensee having been endorased under AS 08.72.175.

The ability of appropriately trained optometrists to diagnose and treat anterior chamber and superficial eye disease would prove beneficial not only for rural physicians but also would serve in the patients' best interests concerning long term cost containment. In my experience the optometrists in the geographical area in which I practice appropriately refer ophthamologic patients to board certified ophthamologists when indicated.

I appreciate your support.

Sincerely,

Paul D Raymond MD

Paul D. Raymond, M. D.

PDR:nmc
cc: Boyd Walker

MEDICAL PARK FAMILY CARE, Inc.
"Prompt, Thorough, Concerned"

F. LELAND JONES, M.D.
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ROBERT K. THORNQUIST, M.D.
Diplomates American Board of Family Practice

2211 EAST NORTHERN LIGHTS BLVD., ANCHORAGE, ALASKA 99508 • (907) 279-8486 • FAX (907) 278-7255

February 12, 1992

Donald Lehmann, M.D.
Alaska State Medical Association
Legislative Committee Chair
700 Katlian Street, Suite E
Sitka, AK 99835

Dear Dr. Lehmann:

As a family practitioner, I have become familiar with the capability of Alaska licensed optometrists.

I support the updating of the Alaska optometry law to allow qualified optometrists to use therapeutic pharmaceutical agents limited to eye treatment. The expansion of clinical privileges of optometrists has been shown to increase the availability, accessibility, and cost effectiveness of eye care to the public.

In 1990 the American Public Health Association passed a resolution supporting this legislation, and 30 states currently allow optometrists to use therapeutic drugs for the benefit of their patients.

I would request that the Alaska State Medical Association Legislative Committee support this legislation.

Sincerely,

R. Taylor

Richard R. Taylor, M.D.

M. Marcell Jackson, M.D.
A PROFESSIONAL CORPORATION

February 7, 1992

Donald Lehmann, M.D.
Alaska State Medical Association
Legislative Committee Chair
700 Katlian Street, Suite E
Sitka, AK 99835

Dear Dr. Lehmann:

As a family practice physician, I have become familiar with the scope of training and capability of Alaska licensed optometrists.

I support the updating of the Alaska optometry law to allow qualified optometrists to use therapeutic pharmaceutical agents limited to eye treatment.

Nationally, the American Public Health Association has passed a resolution supporting this legislation, and 29 states currently allow optometrists to use therapeutic drugs for the benefit of their patients.

I would request that the Alaska State Medical Association Legislative Committee support this legislation.

Sincerely,

M. Marcell Jackson, M.D.

2211 EAST NORTHERN LIGHTS BOULEVARD SUITE 207 ANCHORAGE, ALASKA 99508-4184
TELEPHONE 279-2531

Tanana Valley Clinic

Family Medical Care

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April 18, 1991

Alaska State Legislature
Juneau
Alaska 99811

To the Legislators:

I am writing to you requesting support for the proposed Senate Bill 157 allowing optometrists in the State of Alaska to practice at a level consistent with their training which would include limited use of therapeutic drugs, i.e. anti-infectives and anti-inflammatory drugs. I worked for many years in the military which utilized optometrists and allowed them to use the drugs as both diagnostic and therapeutic agents. I found that the optometrists I worked with were very confident and judicious in the use of these therapeutic agents.

There are only four ophthalmologists in Fairbanks and none in the remainder of the Interior; however, there are many optometrists. Allowing optometrists to treat diseases of the eye within their spectrum of expertise would allow many more Alaskans to be adequately taken care of. Optometrists are trained for four years after completing a Bachelor of Arts degree, and in most cases this training includes 150 hours of Pharmacology. Currently all fifty states allow optometrists to use drugs in a diagnostic area, and 25 of the states also allow them to use drugs therapeutically.

Alaska, with its vast land area and remoteness of villages and cities, would certainly benefit by allowing optometrists to use their clinical expertise with the use of diagnostic and therapeutic drugs.

Sincerely,

Marvin E. Bergeson, M.D.
Pediatrics

MEB:sr

1001 Noble Street • Fairbanks, Alaska 99701
(907) 452-1611 • FAX (907) 456-8770

Fairbanks Clinic
Quality Care Since 1932

April 23, 1991

Alaska State Legislature
PO Box V
Juneau, Alaska 99811

Dear Sirs:

I am writing this letter in support of Senate Bill 157 concerning optometry prescribing privileges.

I was on active duty as a medical officer in the United States Air Force from 1981-1988. During the last five years of that time I was assigned to the USAF clinic at Eielson Air Force Base. Part of my duties there was to serve as direct supervisor for the optometrists. During that period of supervision, the Air Force changed its prescribing rules and began to allow optometrists with appropriate training to prescribe certain classes of medication. In order to obtain these prescribing privileges, the optometrist had to show documented proof of ocular therapeutics training during his original professional schooling or evidence of adequate education in ocular therapeutic since graduation from optometry school. With documentation of the appropriate training, these optometrists were then permitted to prescribe medications in classes similar to those mentioned in Senate Bill 157.

I have had the opportunity to work with several optometrists who have been credentialed under these rules and have found that they have been able to provide increased service to their patients. I have not seen any significant problems associated with optometrist-prescribing practices.

I feel that it would be a benefit to the residents of Alaska to permit optometrists to prescribe those medications noted in Senate Bill 157. I believe that appropriately trained optometrists are capable of effectively and safely treating relatively minor eye problems with medications, as specified in Senate Bill 157, and therefore am in favor of passage of this bill.

Sincerely,

Enlow R. Walker, M.D.
Family Practice

ERW/hlb

1867 Airport Way • Fairbanks, Alaska 99701
(907) 452-1761

CALLISTO
MEDICAL CLINIC
"Numquam occidens stella"

Thomas L. Conley M.D., FAAP
Physician Services

Peggy Midgett Jones
Patient Coordinator

Jean Kemmerer
Office Manager

Susan Walsh R.N.
Nursing Services

February 18, 1992

Senator Arliss Sturgulewski
Alaska State Legislature
State Capitol
Juneau, Alaska 99801-1182

Dear Senator Sturgulewski:

I am writing in general support of SB157 which would permit appropriately trained optometrists to use and prescribe ophthalmologic medications. I do think it needs some reworking in a number of areas.

As a member and for five years chairman of the Alaska State Medical Licensing Board I was involved in hammering out the compromise between optometrists and ophthalmologists that permitted use of certain topical agents under the provisions of AS 08.72.175 and AS 08.72.272. It was obvious at the time that eventually optometrists would be back asking for expansion of this authority to use all topical medications and authority to remove foreign bodies from the eye for indeed their training qualifies them to make these judgments and to perform these tasks.

Opposition from ophthalmology in 1988 to Sections 175 and 272 was spirited and can be expected to be spirited in regard to the request for the expansion of authority proposed in SB 157. It was couched in terms of protection of the public health and such surely will be the countering argument in 1992. However such arguments are clearly a smoke screen, optometrists are indeed adequately trained in these areas and the battle is rather one over turf and resultant compensation. In such a contest the state should stand neutral - as long as in this case both groups are trained adequately in the area - and let the market decide the outcome.

I would recommend however some reworking of the bill. It would seem appropriate to delete reference to oral medications for such moves outside the competence of optometry with the exception that oral anti-glaucoma medications might be administered with telephonic consultation and quickly referral. As to topical medications the authority should extend to prescription in addition to administration. This might require some changes in the pharmacy and medicine sections of Chapter 08, a task which legislative research should be able to handle.

Finally, believing as I do that licensing boards should pay their own way, I would tack a $50.00 endorsement fee onto the licensing fee of any optometrist who seeks this authority to help defray the administrative and testing costs of the endorsement.

To put the whole thing in prospective it should be pointed out that physicians assistants, who have much less formal training than optometrists, are routinely prescribing much more potent and dangerous drugs (including topical ophthalmologic drugs) than are proposed here. Medicine accepts their practice. It is therefore logically inconsistent for it to oppose the use of topical medications and the removal of ocular foreign bodies by optometrists. It will be argued that physician assistants are under supervision and so they are in theory. However the required once a quarter in-person supervision hardly makes for close scrutiny. I am not by any means attacking the physician assistant system, which I support, and which has extended medical care to many Alaskans who would otherwise lack it. It has indeed worked fairly well. In similar manner it can be expected that well trained optometrists will, granted the authority asked here, extend competent eye care to many Alaskans who would otherwise not receive such.

Sincerely,

Thomas L. Conley, M.D.

TLC:ts

HARVEY F. ZARTMAN, M.D.
3340 PROVIDENCE DRIVE - SUITE 466
ANCHORAGE, ALASKA 99508-4684

PHONE (907) 562-2423

April 8, 1991

Senator Arliss Sturgulewski
P.O. Box V
Juneau, Alaska 99811

re: Senate Bill 157

Dear Senator Sturgulewski,

In discussion with Dr. David Johnson of Ketchikan, I learned today of Senate Bill 157; re: optometrists seeking permission to use drugs - other than dilating agents - for treatment of eye disease. Apparantly, the optometrists are saying that they are the "only" doctors, other than ophthamologists, treating eye disease. As a matter of fact, most eye diseases are diagnosed and treated by family physicians, pediatricians and internists and only the complicated and unfamiliar are referred to ophthamologists. Optometrists have only a very limited amount of training, primarily in the area of refracting. They have little or no background in the physiology and biochemistry of the eye. It would be a grave step backwards for them to prescribe antibiotics, steroids, etc. in the treatment of eye disease, and thus fail to refer to ophthamologists. I would urge that you not support this bill.

Sincerely,

Harvey F. Zartman, M.D.

SB157

PENINSULA EYE & CATARACT CLINIC

PETER E. CANNAVA, M.D., A.P.C.
NORTH 161 BINKLEY
SOLDOTNA, ALASKA 99669
(907) 262-4462

March 21, 1991

Senator Sam Cotten
P.O. Box V
Capitol, Room 111
Juneau, AK 99811

Dear Sam,

I would like to correct a few of the things the Optometrists said to you at the HESS Committee on Tuesday, March 19!

Firstly, Dr. Gunneson (Optometrist) mentioned that the Homer Hospital was seeking to seek legislative support so Optometrists could use their facility to prescribe medicines to treat eye diseases. Be advised that such a statement is a prevarication according to the hospital administrator!

Secondly, the Optometrists stated that allowing them to use therapeutic drugs would be a cost saving measure! Be advised that the U.S. Department of Health and Human Services has gone on record as stating that, including Optometrists under Medicare would cost the taxpayers an additional $470,000,000 over three years!

Thirdly, you astutely asked how you all were to intelligently decide, since you are a layperson on this subject. Let me respond by asking if you, or one of your loved ones, would seek medical help from an Optometrist (by definition the least well trained of the eye providors) for an eye problem! Would you permit an Optometrist to remove a piece of steel from your eye? I surmise you would seek the best trained, not the least trained. If that be the case, why pass legislation which would place the unsuspecting public at risk!

Sincerely,

Peter E. Cannava, MD

PEC/kw

cc: Senators Paul Fischer, Lyman Hoffman, Curt Menard, Arliss Sturgulewski

April 4, 1991

To the Legislature.

This is a letter of support for the bill in Legislation which will permit Optometrist; to prescribe and dispense medication.

The clinic where I work is located in Metlakatla and the nearest Ophthalmologist is in Juneau. Patients that have an acute eye problem and need to be evaluated by an "eye specialist" are referred to the Optometrist, Dr. E. Christiansen, in Ketchikan for evaluation and a treatment plan. After Dr. Christiansen evaluates the patient, he calls the referring physician to tell them his findings and recommendations. On occasion, Dr. Christiansen has recommended that the patient be seen by an Ophthalmologist for care we send the patient to Juneau. But, not all patients have needed to be referred to the Ophthalmologist. It has saved the clinic unnecessary travel expenses for those patients Dr. Christiansen can treat.

For the above reasons, I support the bill which will permit the Optometrist to prescribe and dispense medications.

Thank you.

Barbara Fine

Barbara Fine, RN
P. O. Box 652
Metlakatla, Alaska 99926

April 8, 1991

Alaska Legislature
Juneau, AK

Dear Legislators,

We are writing this letter to inform you that we support the bill in legislation that will allow Optometrists to prescribe medications for the treatment of eye disease.

I was previously a patient of Ed Craig, O.D. who practiced in our community for many years. In fact it was he who first detected my glaucoma in 1985 and referred me to an ophthalmologist in Seattle for treatment. My health is not as good as it once was and I find it impossible to travel to Seattle for my follow-up visits. Dr. Eric Christiansen has taken over Dr. Craig's practice and has been following the status of my the glaucoma for a year. I feel comfortable with his care and follow-up. I had a bad experience with the ophthalmologists that travel to our city periodically and do not wish to see them for care. It frustrates my husband and I when we cannot get a prescription for eye drops renewed or changed during a follow-up visit at Dr. Christiansen's office. The doctor must call the ophthalmologist in Seattle and have him call my prescription to a pharmacy in Ketchikan. Dr. Christiansen has told us the ophthalmologist in Seattle is uncomfortable with this arrangement due to my inablility to travel to Seattle for follow-up. Optometrist's are available any time because they live here. If their education trains them to understand the prescription of medications for treatment of eye disease then they should be allowed to prescribe it. It would save Alaskan's with eye problems time, money, and frustration. It would also improve our ability to obtain treatment immeadiately if we need it. Please consider passing this important legislation. Thank you.

Regards,

Ruth Terwilliger

Ruth A. and Wesley B. Terwilliger
Marine View, Apt. 509
Ketchikan, AK 99901

April 5, 1991

Alaska State Legislature
P.O. Box V
Juneau, AK 99811

Dear Legislator:

I am writing in support of Senate Bill 157 (Optometry Pharmaceuticals). I am glad to hear Alaska is currently addressing the issue of optometrists being allowed to prescribe a variety of therapeutic agents.

This action is long overdue and has already been approved in 26 other states.

I am a Colonel in the Air Force, a board certified Family Physician and Chief of the Emergency Room, Family Practice, and Primary Care Department at Elmendorf Air Force Base Regional Hospital. I have thus had frequent professional exposure to optometrists and thus feel I can speak quite objectively.

I feel optometrists are fully qualified to expand their prescribing service to their patients.

I would hope an objective review of this issue be undertaken and passage of the bill be the outcome.

Sincerely,

Richard M. Stratton

Richard M. Stratton, M.D., Colonel, USAF, MC

COMMENTS OF LESLEY L. WALLS, O.D., M.D. BEFORE THE VIRGINIA STATE BOARD OF MEDICINE'S AD HOC COMMITTEE ON OPTOMETRY, DECEMBER 20, 1988 PUBLIC HEARING, REGARDING CERTIFICATION OF OPTOMETRISTS TO PRESCRIBE AND ADMINISTER OCULAR RELATED THERAPEUTIC PHARMACEUTICAL AGENTS.

I. Introduction

My name is Dr. Lesley L. Walls and I am from Oklahoma where my job is Dean of the College of Optometry in Tahlequah, Oklahoma.

I am privileged to be a graduate of both optometry school (University of California at Berkeley-1968) and Medical School (University of California at Davis-1972).

My career has been in both Academic Medicine (Northeastern Ohio Universities College of Medicine, 1975-1977; University of Oklahoma Tulsa Medical College, 1977-78 and 1981-88 and Oral Roberts University College of Medicine, 1978-79) and Optometry (Northeastern State University, 1979-81 and February 1988 - present). I served as Department Chairman for Family Practice Tulsa Medical College from 1981-1988. I am very familiar with the curricular requirements of medical and optometric programs.

II.

Let me offer some specific observations on my own experience with optometric and medical education.

Medical school traditionally prepares the student in general medical and surgical background for the post-graduate training programs. Detailed anatomy and physiology of organs such as the eye is not emphasized during medical school. As well, during surgical rotation in medical school it is uncommon to be exposed to ocular surgery. Because heart disease, cancer, and stroke are the biggest killers of the U.S. population, medical school clinical training is heavily devoted to general internal medicine, general surgery, obstetrics-gynecology and pediatrics. There are usually fourth-year electives in 4-12 week blocks where a student may increase his/her exposure to subspecialty medical and surgical areas such as: ophthalmology, ear/nose and throat, urology, pulmonary medicine, cardiology, etc. In my experience a small minority of students choose ophthalmology as a clinical rotation.

By a small personal survey in the area of Oklahoma in which I reside, most primary care physicians (general practitioners, family practice, internists, and pediatricians) state they had from one to three weeks of medical school devoted to ophthalmological care. This includes both didactic coursework and clinical experience. I do not need to remind you that these physicians treat eye diseases on an unrestricted basis.

In optometry schools there are courses in general pathology and ocular signs of systemic disease since

the optometrist is responsible to detect systemic diseases with ocular manifestations and to make appropriate referrals. The detailed ocular anatomy, ocular physiology, ocular pathology, and ocular pharmacology training in optometry school is far superior to the same ocular topics in any general medical school course in the country. This is not to slight medical education, there simply is not enough medical school curriculum time to devote to the eye because of training in vital organ systems such as the heart, lung, vascular system, etc.

III.

The possession of and use of sophisticated equipment such as binocular indirect ophthalmoscopes, slit lamps, goldman tonometers, goniolenses, Fundus photography, etc. are far superior in a modern optometric practice than in any primary care physicians office such as family practice, internists and pediatricians. Coupled with training and experience in the utilization of this type sophisticated equipment makes the optometrist better prepared to evaluate, diagnose and treat most ocular conditions when compared to the other listed primary health providers. This is not to demean or to cast these fine primary care providers in a bad light, rather, it is simply a fact that we must accept.

Because of the above there is no question that a well trained and well equipped optometrist can more than measure up to medical standards of care for primary physicians in the

area of diagnoses and management of various ocular diseases/disorders.

IV.

I will now briefly discuss my personal experience with side effects of ocular pharmacologic therapy. This section will be very brief as I have never had a patient with anything other than a very minor side effect from ocular pharmaceutical agents. I feel that the optometric curriculum in conjunction with current basic life support certification is adequate preparation to handle an emergency should it occur.

In summary I would like to point out that ophthalmologists are vitally needed. The medical profession would be in sad shape without them because of their expertise in the area of ocular trauma, cataract surgery, retinal surgery, and other ocular problems requiring advanced medical management. However, in a state such as Virginia the ophthalmologists are primarily in larger cities with a poor distribution in the rural communities.

I also strongly feel that optometrists are vitally needed. Optometrists are well distributed in rural communities and by definition serve as primary care health professionals. In my opinion, the patient, particularly in a state like Virginia, will be the beneficiary of modern optometric practice. With the use of pharmaceutical agents, for diagnostic and therapeutic purposes, serious disease detection will be facilitated thus making the referral system

into medicine more efficient. As well, this will save the patient a lot of inconvenience and time. I feel the Virginia State Board of Medicine should allow the people of the state of Virginia to benefit from modern optometry which includes the use of diagnostic and therapeutic pharmaceutical agents. I believe the key to utilizing these medications by any health care professional is proper education and training.

Lesley L. Walls, O.D., M.D.
Dean, College of Optometry
Northeastern State University
Tahlequah, OK 74464
918/456-5511

OPP
Optometric Protector Plan

Continuously
Serving Optometrists
Since 1973

November 7, 1991

TO WHOM IT MAY CONCERN:

RE: OPTOMETRIC PROTECTOR PLAN

This letter is in response to your inquiry relative to professional liability rates and therapeutic drug usage.

The Optometric Protector Plan which is endorsed by the American Optometric Association currently insures over 7,000 O. D.'s nationwide. Our professional liability experience reflects both therapeutic and non-therapeutic states and the information provided is based on this information.

Poe & Associates, in the past has reviewed on a comprehensive basis the underwriting results for three major carriers for a period of seven years, and found that there is no significant actuarial coordination between therapeutic drug usage and liability insurance rates based on the current underwriting results.

Our current carrier of record, Great American Insurance Companies, does not charge a premium differential or surcharge for therapeutic drug usage in any of the states in which they are currently providing coverage. Because claims and premiums are so closely related to incidents of harm and injury to patients, we do not have evidence at this time that there is a correlation between the use of therapeutic drugs by Optometrists and malpractice claims.

Please contact me if I can be of any further help.

Sincerely,

Kathy Szuszczewicz

Kathy Szuszczewicz
Program Coordinator

KS/sv

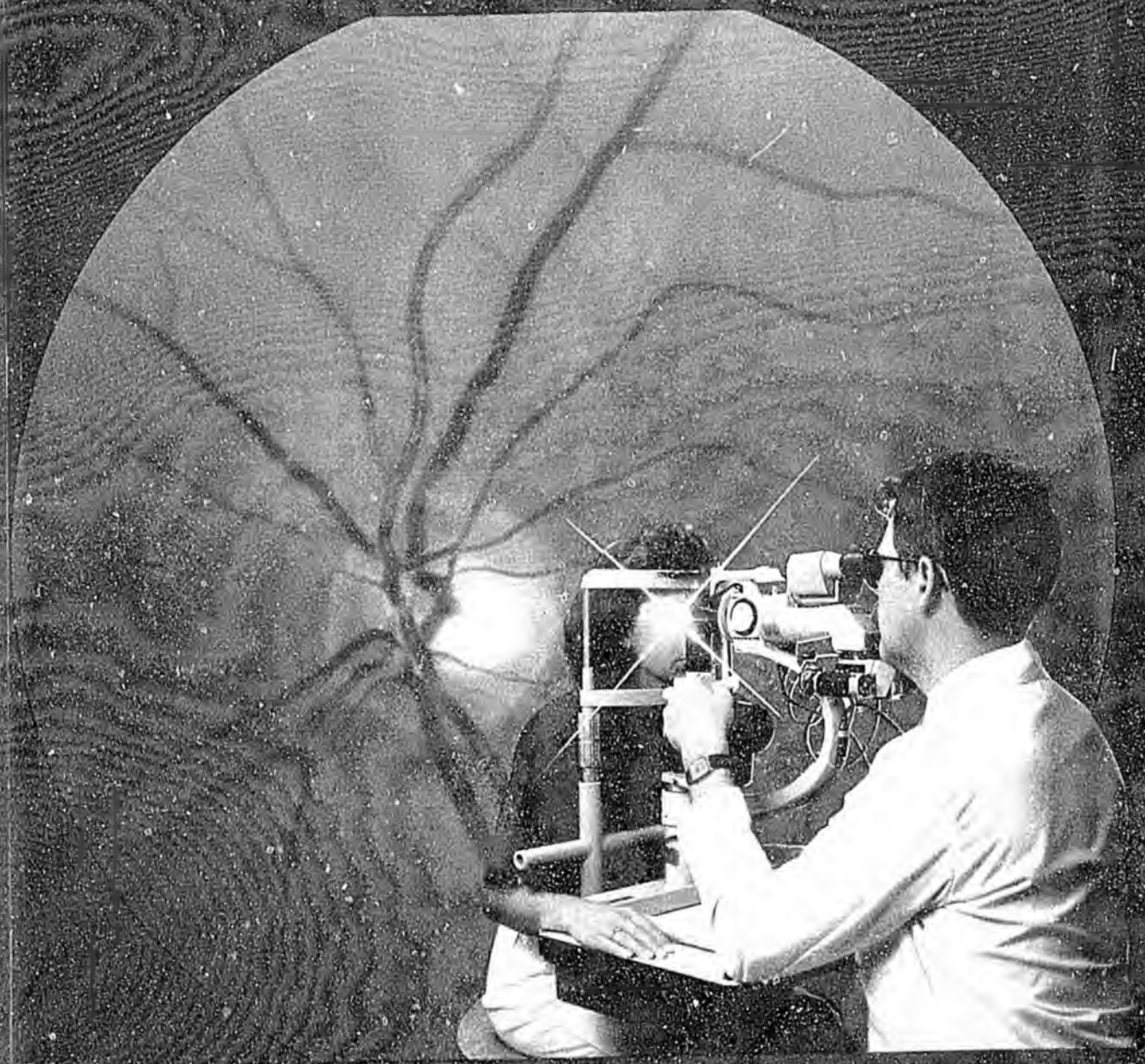
National Administrator
Poe & Associates, Inc.

P.O. Box 1348
Tampa, Florida 33601-1348
(813) 222-4100
Fax (813) 221-4109

Pennsylvania College
of Optometry

University Program

Pennsylvania College of Optometry



Shaping the Future of Vision Care

Message from the President

Thomas L. Lewis, O.D., Ph.D.

"A TRADITION OF LEADERSHIP AND EXCELLENCE best describes the Pennsylvania College of Optometry. Leading optometry into primary eye care and the accompanying expanded scope of practice and responsibilities has been a major objective of PCO for the past two decades. This institution stands ready to provide the same leadership for optometry into the next century.

"BEING A LEADER CREATES great opportunities for the college, but also an awesome responsibility to achieve excellence in its academic programs. Excellence in basic and clinical sciences at PCO has been achieved by bringing together bright and eager students with an outstanding faculty, state-of-the-art facilities and creative and diverse learning opportunities.

"YOUR INTEREST IN PCO indicates a desire to enter a dynamic institution and profession, both of which are enjoying unprecedented growth and development. If you truly have a desire to help people by improving and preserving their visual world, I encourage you to join the PCO family. The challenges will be great, the reward will be a lifetime of contribution to society."

Table of Contents

Pennsylvania College of Optometry: Shaping the Future of Vision Care

The Pennsylvania College of Optometry is shaping the future of vision care. It views the optometrist—like the physician and the dentist—as a primary health care professional, one who requires the most advanced scientific and patient care training. Its orientation is "holistic"—it insists that the eye be studied and understood in relation to overall bodily health. Its expanding research activities, clinical practice and continuing education programs assure the College continued leadership in shaping the future of vision care.

At the Pennsylvania College of Optometry, the student acquires a diverse range of skills through a rigorous education based upon solid understanding of the art and science of optometry. This professional optometric education is also a highly personalized one. Through the College's unique externship program, students can pursue individual areas of interest in their clinical training, such as pediatric and geriatric optometry, and low vision and contact lens specialities. Students work one-on-one with faculty in The Eye Institute.

Historically, the College always has been at the forefront of the profession. Founded in 1919, it granted the first legislature-approved Doctor of Optometry (O.D.) degree in the nation. It was the first independent health care school of any kind to be recognized by a regional accrediting body. The College's Eye Institute is the first major interdisciplinary optometric facility in the United States. The College was the first optometric teaching institution to initiate an external education department and was at the forefront of the movement for passage of the first state laws permitting optometrists to use diagnostic and therapeutic drugs. In addition, the College is affiliated with Hahnemann University in joint programs in education, research and patient care, providing students with a unique educational opportunity.

The College's graduates are highly visible. They comprise almost 90 percent of the practicing optometrists in Pennsylvania and nearly 20 percent nationwide. They enter into private practice, either developing a practice of their own or joining in a partnership or associate relationship. An increasing number of graduates choose group practice arrangements, combining their talents with other professionals to form a health care team.

Still others select organizational settings—industry, hospital, HMO, government agency or commissioned military service. And some alumni, with a view toward academic teaching or vision research, have opted for further advanced educational programs.

In 1983 the U.S. Department of Labor's Bureau of Statistics projected that employment opportunities for optometrists will grow faster than the average for all occupations through the year 2000. Growth is attributed to three major factors: the maturing of the large baby-boom generation who recognize the importance of vision care, the dramatic increase in the elderly population who often require more optometric care, and the improved ability to pay for optometric services, resulting from third party insurance coverage.

A career in optometry is open to all men, women and minorities who have the desire and demonstrated academic skills. Equally as important, the Doctor of Optometry candidate must be prepared to make the necessary commitment to life-long learning and responsibility for patient care.

The College

Degree Programs

The College awards four earned degrees. The Doctor of Optometry (O.D.) degree is awarded to all students who have successfully completed the professional curriculum.

Candidates for the Bachelor of Science degree must have been in residence at the College for one academic year and have accumulated a minimum of 128 semester hour credits, including at least 18 semester hour credits in the humanities, English or Social Sciences.

The Master of Science degree in Vision Rehabilitation is awarded to all students who have completed one year of full-time graduate study in vision rehabilitation. The College also offers a Master of Education as well as a Certificate Program in Education of the Visually Handicapped.

The College also confers honorary degrees of Doctor of Science and Doctor of Laws upon individuals selected for their distinguished service.

Accelerated O.D. Degree Program

An accelerated program for talented high school students with an interest in optometry has been established by the College with several undergraduate colleges and universities. The program permits the qualified student to earn the Doctor of Optometry degree in seven years instead of the usual eight. The first three years are spent at a participating undergraduate insititution, the next four at the Pennsylvania College of Optometry. The student is awarded a Bachelor's degree by the undergraduate institution upon the successful completion of the first professional year, and a Doctor of Optometry degree by the College at the conclusion of the professional degree program.

The following undergraduate colleges and universities are presently affiliated with the Pennsylvania College of Optometry in the accelerated baccalaureate/O.D. degree program:

PENNSYLVANIA—Beaver College, Delaware Valley College, Gannon University, Gettysburg College, Indiana University of Pennsylvania, University of Pittsburgh at Bradford, Villanova University, Washington and Jefferson College, Widener University, Wilkes College; MARYLAND—Salisbury State College; NEW JERSEY—Glassboro State College, Seton Hall University, Upsala College; NEW YORK—Ithaca College, LeMoyne College, St. John Fisher College, Siena College; NORTH CAROLINA—Bennett College, Johnson C. Smith University; VIRGINIA—Old Dominion University.

For more information about the program and admissions requirements, contact the Admissions Office at 215-276-6262, or toll-free outside Pennsylvania at 800-824-6262.

Accreditation

The Pennsylvania College of Optometry is accredited by the Council on Optometric Education of the American Optometric Association (a member of the Council of Post-Secondary Accreditation), the Council on Clinical Optometric Care of the American Optometric Association, The Department of Education of the Commonwealth of Pennsylvania and the Commission on Institutions of Higher Education of the Middle States Association of Colleges and Secondary Schools. It is approved for veterans' education under U.S. Code, Section 1775.

Curriculum

The four-year academic program at the Pennsylvania College of Optometry is a rigorous one. The curriculum is comprised of three overlapping stages. The first phase, which occurs during the first year and a half, provides the student with a broad background in biomedical and visual sciences, including anatomy, pathology, theoretical optics and physiological optics. Phase two, essentially one year in length, stresses professional practice sciences, such as ophthalmic optics, contact lenses, clinical diagnostic procedures, diseases of the eye and ocular pharmacology. The classroom and laboratory work of the first two stages is augmented by case conferences, videotaped presentations and participation at The Eye Institute.

The third phase takes place during the last two calendar years. Students are afforded substantial opportunity to apply their knowledge in supervised direct patient care and through rotation in specialties like pediatric optometry and neuro-eye care.

Third year students train in The Eye Institute, developing primary care diagnostic and management skills under the tutelage of faculty members. They also join faculty members in providing eye examinations to the homebound, at health fairs, in schools and day care centers.

The fourth year curriculum is entirely clinical in nature. Student clinical experiences are carefully designed to provide a broad range and depth of clinical competencies in all areas of optometric care including primary care, contact lenses, pediatrics/binocular vision, vision rehabilitation, and diagnosis and treatment of ocular disease.

Students typically spend one quarter on campus assigned to The Eye Institute for advanced training. In addition they spend two to three quarters off campus for such training in carefully selected private practice externship sites, and institutional sites including Veterans Administration, military, and community hospitals, medical/surgical referral centers, community health centers, military bases, and large specialized ophthalmic centers. These sites are located in Philadelphia, the greater Delaware Valley, and throughout the entire United States as well as overseas. Placement is predicated upon students' interests and program requirements.

The College Facilities

The Campus

The Pennsylvania College of Optometry maintains a 13-acre self-contained campus in the tree-lined, residential Oak Lane section of Philadelphia.

The campus—with its classroom buildings, state-of-the-art Eye Institute and student apartment houses—is easily accessible from the city and suburbs. It is equally convenient to other major health care colleges and institutions in the Delaware Valley.

The Academic Buildings, opened in 1970, feature nine classrooms, 11 teaching and seven research laboratories, the College library, a student lounge and advanced multi-media learning aids, including a closed-circuit TV studio.

The Albert Fitch Memorial Library—named in honor of the College's founder and first president—holds the College's collection of 15,000 volumes. The collection's major strength is in the visual sciences with additional holdings in the basic sciences, clinical sciences, public health, psychology and rehabilitation. Video and audio cassettes are available in Fitch Library, as well as more than 310 health science journals and periodicals. Computer access is provided to the information system of the National Library of Medicine.

The Eye Institute

Completed in 1978, The Eye Institute is an unrivaled setting of comprehensive eye care—the largest of its kind in the world. Located on the College's 13-acre campus, The Eye Institute is the "clinical classroom," providing both education for the student and patient care for the residents of the Delaware Valley and beyond.

The Eye Institute employs a multidisciplinary approach—with optometrists, ophthalmologists, opticians, optometric technicians, students and other health care professionals working together to provide total vision care to over 75,000 patients annually.

Its services range from primary care to special pediatric and low vision units to sophisticated procedures such as electrodiagnosis and neuro-eye consultations. Specialized services available also include vitreo-retinal, oculoplastic, corneal, pediatrics and glaucoma services. Emergency services are available on a 24 hour basis. It contains an optical dispensing service and a pharmacy.

The world-renowned William Feinbloom Vision Rehabilitation Center is housed in The Eye Institute. The Center provides optical aids and special training to maximize vision of legally blind and other low vision persons whose conditions lend themselves to rehabilitation.

Faculty and Research

The Pennsylvania College of Optometry faculty is a diverse, talented and dedicated group which prepares the student with a broad base of knowledge in the full scope of optometric practice. From this team of optometrists, physicians, biologists, physicists, anatomists, opticians and other health care professionals, students learn to understand not only the visual system, but the whole body, giving them greater confidence in diagnosing, managing and referring patients. This broad exposure to the sciences affords optometric students a varied knowledge of patient concerns and produces better practitioners.

During the last five years, over $4.9 million has been awarded to the faculty for research and special programs from such sources as the National Eye Institute, the National Institutes of Health and the National Institute for Handicapped Research.

Over 30 faculty research projects are now in progress, including lasers, visual electrophysiology, mapping eye movements in order to maximize the rehabilitation of partially sighted patients, and the interaction of ultraviolet radiation and photosensitive drugs as it affects vision.

Special Initiatives

The Irving Bennett Business and Practice Management Center

The ophthalmic industry has joined with the Pennsylvania College of Optometry in creating the Irving Bennett Business and Practice Management Center. This international center was developed to provide educational programs to optometry students, optometrists and other individuals in health care to more adequately prepare them to conduct successful practices. Business and practice management education is increasingly important to the success of every health care professional.

Corneal and Specialty Contact Lens Center

The Corneal and Specialty Contact Lens Center was developed at the Pennsylvania College of Optometry to facilitate the integration of educational programs, patient care and clinical research in the areas of corneal physiology, cornea and conjunctiva diseases, and in contact lenses. Within the center, the Corneal and Specialty Contact Lens Service provides a focus for the training of interns, residents, technicians, and other professionals in contact lens. The service also provides an ongoing opportunity for clinical faculty to develop their skills in contact lenses. This service is a focus for clinical investigations and field clinical trials in the area of contact lenses, thus providing a new environment to stimulate cooperation between optometric education and contact lens industry.

Institute for the Visually Impaired (IVI)

On April 1, 1985, the Pennsylvania College of Optometry established the Institute for the Visually Impaired (IVI), an international center dedicated to education, research, and rehabilitation of the partially-sighted.

The Institute incorporates a total rehabilitation approach to service delivery, for the complex and multi-faceted needs of partially sighted individuals. This comprehensive, patient-oriented philosophy includes physical, mental, and socioeconomic goals.

Researchers, eye care, education, and rehabilitation professionals combine their skills in a coordinated and individualized rehabilitation program to improve the patient's independent living and employment skills.

The Light and Laser Institute

The College has established the Light and Laser Institute as an extension of its existing research capabilities in the ocular effects of light exposure. The Institute sponsors programs of research, patient care and education that address a wide variety of light related issues including: Industrial protection, Solar UV effects, sunglass protection, lighting environments, computer eye fatigue, seasonal and circadian light changes, ocular aging, ocular transmittance, medical laser safety and ophthalmic laser uses and development.

The Lynch Pediatric and Binocular Vision Service/Learning Center

Established in 1978, the Mr. and Mrs. Thomas P. Lynch Center utilizes the collective experience and expertise of many professionals, along with sophisticated instrumentation to evaluate and treat a wide range of vision conditions in infants, children and adults.

The Center consists of three divisions: The Pediatric Unit, the Binocular Vision Service and the Learning Center. The Pediatric Unit provides routine comprehensive vision care, as well as preventative care and developmental guidance to infants and children through the age of seven. The Binocular Vision Service provides diagnostic and therapeutic services for individuals with eye movement, eye coordination and eye focusing problems, as well as amblyopia (lazy eye) and strabismus (eye turned in or out). The Learning Center provides a team approach where appropriate professionals work together in the diagnosis and treatment of individuals with learning problems.

Center for Multiply Impaired

In response to the growing number of individuals with multiple handicaps and the shortage of interdisciplinary diagnostic and prescriptive services for this population, the Pennsylvania College of Optometry proposes to establish a center for multiply impaired individuals.

This center will be designed to meet the varied and complex needs of children and adults who, due to multiple handicaps or communication deficits, are difficult to evaluate in standard clinical settings. The center will consist of clinical staff from the William Feinbloom Vision Rehabilitation Center and the Lynch Pediatric Service. An interdisciplinary team consisting of optometrists, social workers, orientation and mobility specialists, special educators as well as consultants from the fields of ophthalmology, neurology, genetic counseling, occupational therapy, physical therapy, psychology, and audiology will provide comprehensive evaluation and management services.

Special Program

Hahnemann University School of Medicine Affiliation

As of July 1, 1988, the Pennsylvania College of Optometry has become a partner with Hahnemann University, Philadelphia, in education, research and health care delivery.

The educational opportunities provided to students and residents include didactic instruction, increased access to patient care experiences; and increased interaction with ophthalmic and other health care professionals, via grand rounds, conferences, observation and advanced specialty training.

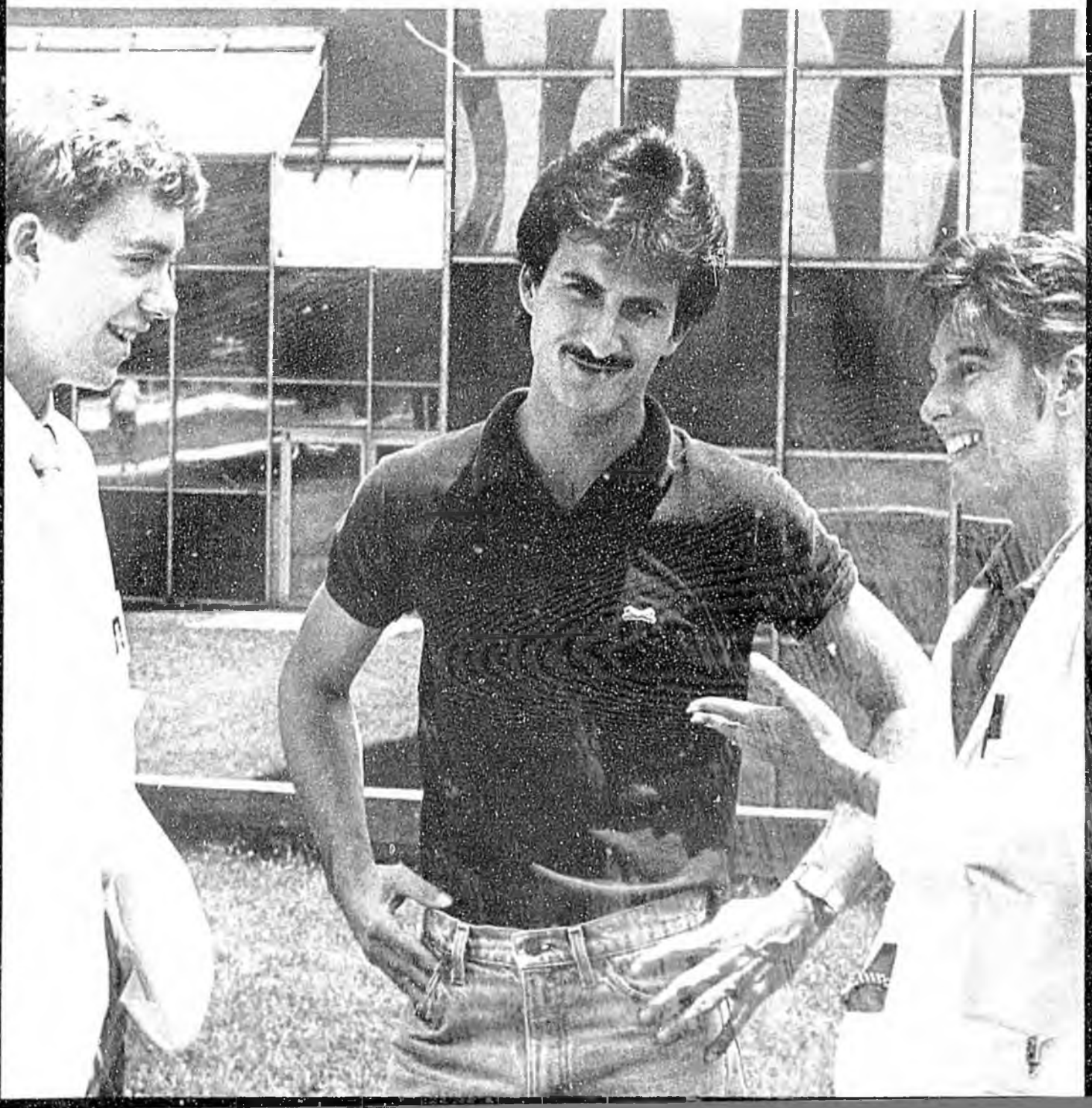
The College Mission and Goals

The Pennsylvania College of Optometry is a professional college dedicated to meeting a public need by graduating Doctors of Optometry and offering other educational programs, research programs, and patient care programs responsive to the health related needs of persons seeking ocular and visual care. It is the objective of the College to foster in students those attributes of intellectual curiosity, integrity, professionalism and caring for people. The College is committed to excellence in the pursuit of all its endeavors and to providing an environment which encourages learning and professional development through an open exchange of ideas.

All segments of the College community join together on a continuing basis to identify the aims of the institution, specifically in terms of the needs of the near future. The following goals represent the fruits of that collective process.

- To provide programs that will graduate Doctors of Optometry to fulfill an expanding role as primary health care providers in the prevention, diagnosis, treatment and management of ocular and visual disorders.
- To recruit, admit, support, retain, graduate and place students with the highest ethical and academic qualities and with appropriate representation of minority societal demographic distribution.
- To recruit, retain and continually develop faculty, administrators and staff with the highest competencies and personal qualities to assure the continued excellence of the academic programs and college operations.
- To operate a fiscally sound institution through efficient and effective management practices and marketing efforts and through asset enhancement leading to increased financial resources.
- To raise the level of competency of the practicing optometrists, and other related professionals by encouraging the pursuit of lifelong learning and providing continuing and postgraduate education.
- To provide quality vision and health care services to the public through The Eye Institute, The Institute for the Visually Impaired, and the College's associated clinical programs which are responsive to the public health needs of the community and the needs of health care providers which the College serves.
- To conduct research and other scholarly activities which add to the body of knowledge in basic and applied health sciences leading to improved health services and helping to provide new resources to the College.
- To provide residency, graduate and/or technical level programs, and public education programs which complement the basic optometric program and assist in meeting the needs of persons with ocular and visual problems.
- To enhance the practice of optometry through educational, legislative, and inter-professional efforts that maximize the potentials of the College's graduates.
- To encourage College, community, professional and public service by the faculty, administration, staff and students.

Student Life



Pennsylvania College of Optometry students are involved in a wide variety of professional and social extracurricular activities.

In the forefront of student activities is the Student Council, an umbrella organization composed of seven student representatives from each class and the Graduate Studies Department, an Alumni Association liaison and the Vice President and Dean for Student Affairs (or his representative), the last three serving in an advisory capacity. Each year, a representative to the College Board of Trustees is elected from the student body to serve as a full voting member of the Board, reporting to the Student Council.

The Council, a liaison body between student and faculty/administration, also serves on joint faculty committees dealing with admissions, educational policy, curriculum evaluation and judicial action. The Student Council is active in presenting speakers of interest and in promoting community health-oriented programs.

Social events include parties, picnics and mixers. The Student Council coordinates an intermural and intramural program of athletics including softball, basketball, volleyball and soccer. Tennis and basketball courts located on campus are popular; as are swimming facilities which are available at specified times at the Ogontz Campus of Pennsylvania State University located nearby.

The College Honor Society was created in 1948. It became the College's chapter of Beta Sigma Kappa in 1973. Invitation to membership is extended to second, third and fourth-year students possessing a record of high academic achievement.

The Gold Key Optometric Honor Society recognizes upperclass students who have demonstrated leadership through service to their class, college and profession.

Campus organizations include two coed fraternities, Omega Epsilon Phi and Omega Delta; the American Optometric Association, which offers student membership in the American Optometric Student Association; the National Optometric Association, offering student membership in the National Optometric Student Association, providing a link for minority students; and the Friends of Israel Optometric Student Organization.

From their first day on campus, students are introduced to activities at the College via their own state student optometric societies, which are designed to promote professionalism among future optometrists. The states of California, Florida, Maryland, New Jersey, New York, North Carolina, Pennsylvania, Virginia and West Virginia sponsor these student societies.

Students have the opportunity to participate in the Photo Club and to write for Inside PCO, a publication circulated throughout the College community. The graduating class each year publishes an award-winning yearbook, the IRIS, which provides a memento to classmates and faculty and a history of the class.

Each January, a team of third and fourth-year students travel to the Caribbean or Mexico for a two-week period, during which the students, supervised by faculty members, provide eye screenings and visual examinations. These members of the Student Optometric Service to Humanity (SOSH) organize and finance the trip on their own. Because of the indescribable poverty and shortage of eye doctors in that part of the world, the eye exams given by SOSH members often constitute the only health examination these patients receive in their lives.

Housing

The College maintains two furnished student apartment buildings, Powell and Wentka Halls, which are located on campus, only a three-minute walk from the classrooms, library and labs. The 111 modern apartments—efficiencies, one- and two-bedroom units—accommodate single and married students.

The amenities in the campus apartments are numerous: full furnishings, including desks and built-in bookcases, air-conditioning and individual climate control, wall-to-wall carpeting, draperies, private bathrooms and kitchens. Each apartment complex has its own ground floor laundry facilities and a lounge/recreation room for social functions. Limited parking is available between the two apartment buildings for approximately one-third of the tenants, via parking decals based upon a seniority based lottery system and payment of the $25 fee. Since parking spaces are limited, students may wish to leave vehicles at home.

Housing space is assigned on a reservation basis; an option of either a nine- or twelve-month lease is available. Reservation forms are available after the matriculation form has been received by the College. It is advantageous for a student to complete his/her application as early as possible so that a decision is made in time to reserve on-campus housing.

Additional student housing is available in private homes and apartments within easy walking distance of the campus. The Office of Student Affairs is pleased to assist with particulars.

Center for Personal and Professional Development

The Center for Personal and Professional Development was established to help individuals deal more effectively with the everyday problems of living. Its purpose is to assist in removing the psychological obstacles which hinder continued personal growth.

The Center provides short-term personal counseling, couple counseling and family counseling. The professional staff is available to counsel students who lack motivation, who seek value clarification or who may feel confused about their life's direction. Crisis intervention also is offered.

The counseling relationship is professional and confidential, and is available to all students.

Philadelphia

The Pennsylvania College of Optometry is located in the Commonwealth's largest city, Philadelphia. Over the last two decades, the city has undergone extensive redevelopment, not only in its business district, but also in residential areas. For those unacquainted with Philadelphia, the following is a wide-ranging overview.

First and foremost, Philadelphia is a city of neighborhoods, including historic, quaint Society Hill, tradition-steeped Rittenhouse Square and colorful South Street.

Philadelphia is a cultural, historical and recreational bastion. The Philadelphia Orchestra, the Franklin Institute, the Rodin Museum, the Art Museum, Independence Hall, the Liberty Bell, Betsy Ross House and Valley Forge are all within a half hour drive from the College. The city is known for its wonderful restaurants and great theater, where you can see a play try-out before its Broadway opening. Within the city limits you can experience the natural beauty of Fairmount Park, Schuylkill River regattas, running and biking paths along East River Drive and the Wissahickon. Sports fans will be attracted to the city's professional baseball, football, hockey and basketball teams, plus a host of great collegiate athletic events.

The Philadelphia area is an academic and health care mecca, with over 50 colleges and universities, five medical schools, and one osteopathic college, all with the attendant opportunities to share mutual interests with the Pennsylvania College of Optometry.

Philadelphia is a growing service-oriented industrial center. Major concerns in pharmaceuticals and health care, food service and hotels, finance, law and insurance, advertising and marketing all call Philadelphia home. A burgeoning computer industry is establishing itself here as well, along the Route 202 high-tech corridor. Many employment opportunities exist in the Philadelphia area for students' spouses.

Philadelphia is situated at the center of the Northeast—a two-hour drive from New York City or the Jersey shore, and three hours from Washington, D.C.

Admissions Criteria and Procedure

Admissions Criteria

The College actively seeks applicants from every state in the nation. Students now attending come from more than 40 states, Puerto Rico and several foreign countries. The Admissions Committee has established an admissions policy to select the applicants who are best qualified to serve the public and the profession in years to come.

In selecting students to be admitted, many factors are considered, e.g., the applicant's academic performance, motivation, extracurricular activities and interests, related and unrelated work experience, personal achievements, essays and letters of recommendation. In weighing academic performance, the applicant's grade point average, performance in prerequisite courses, number of college credits completed, degree status, and results of the Optometry Admissions Test are considered carefully.

Individuals who meet the above criteria successfully are invited to visit the College campus for interviews which offer further insight into the applicant's characteristics and motivation. The interview team consists of a faculty member and generally a student. The candidate will also meet with an admissions counselor to discuss his/her application. The visit also affords the individual an opportunity to tour the campus and meet personnel in the Financial Aid Office.

It is recommended that students with less than a 2.5 (C+) grade point average not apply without consulting the Admissions Office. The applicant must have completed a minimum of 90 semester hours or 135 quarter hours of credit at an accredited undergraduate college or university. These credits must include the following pre-optometry courses completed with a 2.0 (C) or better:

Biology, General or Zoology (with lab)—1 year
Chemistry, General (with lab)—1 year
Chemistry, Organic (with lab)—1 year
English, Composition or Literature—1 year
Mathematics (Calculus highly recommended)—1 year
Microbiology or Bacteriology (with lab)—½ year
Physics, General (with lab)—1 year
Psychology—½ year
Statistics—½ year

While Biology and Chemistry majors are the largest group of applicants, any major is accepted provided the above requirements are met. For example, a growing number of Psychology majors seeking clinical and research careers are becoming more aware of the opportunities optometry holds for them. An applicant need not have completed all prerequisites prior to filing an application, but must be able to complete all outstanding prerequisites prior to enrolling. For further information, contact the Admissions Office (215-276-6262 or toll-free outside Pennsylvania, 800-824-6262).

Admissions Procedure

Whenever possible, an application should be filed in summer or fall prior to year of admission. Applications received on or before March 31 are given priority consideration. However, applications received after March 31 will be reviewed if the class is not filled or vacancies occur.

1. Submit properly completed application (including unofficial transcripts) to the Office of Admissions, accompanied by a non-refundable check or money order in the amount of $50. Economically disadvantaged students should contact the Office of Admissions relative to an application fee waiver.
2. Submit official transcripts of college credit (or partial transcripts, if still in college).
3. Arrange to take the Optometry Admissions Test no later than the spring test date and have results forwarded to the Office of Admissions. Test application may be obtained from the Optometry Admissions Testing Program, 211 E. Chicago Avenue, Chicago, Illinois 60611.
4. Arrange to have forwarded directly to the College either a letter of recommendation from a pre-professional committee or three letters of recommendation from faculty members teaching natural science subjects. References should attest to the applicant's moral character, academic ability and fitness for professional life. Additional references from optometrists and other health professional may be provided at the applicant's discretion.

All credentials submitted in support of an applicant become a part of that applicant's record with the College and cannot be returned.

Applicants are encouraged to visit the College to discuss the admissions process and become familiar with the curriculum and facilities. To arrange such a visit, please contact the Office of Admissions.

An applicant may be notified of his or her acceptance as early as October 1. Upon receipt of acceptance, an applicant is required to pay $1000 to the College prior to the start of classes. Payable as follows:

1. Return matriculation form within 14 days of the date of the acceptance letter. A $500 deposit is due January 15; if accepted after January 15, the $500 deposit must accompany the matriculation form.
2. Due June 1—the balance of the $500 matriculation fee.

All monies received above will be applied toward first quarter fees.

International Programs: Foreign, transfer, and advanced standing programs

The College invites applications from foreign students for the full four year program, from transfer students attending foreign optometry schools, and from graduates of foreign optometry and medical schools for advanced standing in the College's optometry program. Further application and program information may be obtained by writing to the Director of Admissions.

Profile of O.D. Program Class of 1994

One hundred fifty-five students entered the College in September 1990, representing 19 states, Japan, England, New Zealand, Curacao and the Commonwealth of Puerto Rico. The class members range in age from 20 to 40 years old. Women comprise 55 percent of the class, while minority students compose 25 percent of the class.

Ninety three percent of the class are single. Academically, 64 percent of the students majored in biology/zoology as undergraduates, 20 percent in chemistry, physics and other sciences, 6 percent in psychology, 1 percent in liberal arts, and 9 percent in other areas.

The average OAT scores of accepted students was 300 or above for all sections.

Financial Information

The cost of a professional education varies, depending on many factors. In addition to tuition and fees, there are living expenses, books and equipment and incidental expenses to be considered.

A variety of financial assistance is available to optometric students, such as student loans, scholarships, grants, work opportunities and state contributions to optometric education. Students interested in acquiring additional information or making application for financial assistance are urged to contact the College Financial Aid Office (215-276-6267 or toll free outside Pennsylvania, 800-824-6262).

Tuition and Fees 1990—91

College fees are due and payable two weeks prior to the start of each quarter. First, second and fourth year fees are payable in three installments. Third year student fees are payable in four installments.

$15,000: Doctor of Optometry Program*
$164 per credit: Master of Science in Vision Rehabilitation Program*

Master of Education of the Visually Handicapped Program (part-time):
$164 per credit

*Tuition fees and other charges are subject to change.

Refunds

Matriculants who withdraw from the College prior to or on May 15, will be refunded 100 percent of their paid College fees minus a $100 administrative cost charge. Matriculants who withdraw from the College after May 15 but before the first day of class will forfeit all monies paid to the College.

Students who withdraw after the start of a quarter are responsible for payment of tuition and fees as follows:

- Within the first two (2) weeks 25%*
- Within the first four (4) weeks 50%*
- Within the first six (6) weeks 75%*
- After the first six (6) weeks 100%

*An additional $100 administrative cost charge is levied.

Books, Equipment

Required and recommended books may be purchased through the College Bookstore. In addition, it is necessary for optometric students to possess a number of instruments, which are available at the College Bookstore. First-year students can expect to pay close to $2,000 for their books and equipment.

Living Expenses

In planning for living expenses, students should consider room, board, transportation, medical, dental and personal expenses. The College provides a number of comprehensive health care program options. Fourth-year students need to consider the costs relative to two required externships, in which they may be outside of the Philadelphia area for a total of six months. Students must provide their own transportation and housing during these assignments.

Financial Assistance Sources

The College uses a variety of financial aid programs to assist eligible students in meeting their demonstrated financial need. Financial assistance is generally available in the form of scholarships, grants, state and Commonwealth support, loans, campus employment and budget plans. Because of governmental policy regarding the financing of health professional educations, most available monies are in the form of loans. The following is a listing of the various programs available. A more thorough description of these programs is contained in the Financial Aid Handbook, available by writing to the College Financial Aid Office.

State Contracts and Subsidies

Certain states, as a result of a contractual arrangement with the College, reduce the tuition fee for their residents by as much as $6,100. These states are:

Arkansas, Delaware, North Carolina, Virginia, and West Virginia. The Commonwealth of Pennsylvania provides an appropriation to the College which is divided among students with Pennsylvania domicile ($5,600 for '89-'90). Negotiations regarding development of state contracts are in progress with the state of Nebraska. Contact the Financial Aid Office for updates on 1990/91.

Domicile Policy

Domicile is the true, fixed and permanent residence and principal establishment of a student to which he or she intends to return, even though he or she may be absent from that residence temporarily. While many factors enter into the College's decision regarding domicile, the College must base this decision on the student's adjudged subjective intent. In any case, the ultimate decision shall rest with the Dean of Student Affairs.

Budget Plans

Individually tailored programs enable the student and his or her family to remit College fees on an installment basis. Brochures are available from the Financial Aid Office.

Campus Employment Opportunities

The College Employment program and Federal College Work Study (CWS) program allow students to earn money through part-time jobs to help meet their expenses. The current pay rate is $7.00/hour, and eligible students may work in a large variety of job situations.

Scholarships and Grants

The Pennsylvania College of Optometry offers students a number of grants and scholarships which provide incentive for learning and research. These are monetary gifts which do not require repayment. Among these awards are:

Madlyn and Leonard Abramson Scholarship — Established by Leonard and Madlyn Abramson, the scholarship provides $1,000 or more to students selected on the basis of academic performance and financial need. Preference is afforded students residing in states having HMO organizations operated by U.S. Health Care Systems, Inc. (currently Florida, New Jersey, Pennsylvania and Texas). Application is made via the College's Institutional Financial Aid Application.

Administrative/Professional Staff Scholarship — Established by the College's Administrative/Professional Council the scholarship is to be awarded to a worthy student on the basis of academic performance and financial need. Application is made via the College's Institutional Financial Aid Application.

Alumni Scholars Scholarship — Alumni Scholars are selected among students who possess high academic standing and demonstrated financial need. Award levels vary between $1,000 and $2,000. Application is made via the College's Institutional Financial Aid Application.

American Optometric Foundation Corning Scholarship — A scholarship awarded to the student who submits an application and essay and demonstrates academic excellence and financial need. Applications are available from the Financial Aid Office upon notification posted on the main bulletin board in the lobby of Fitch Hall.

American Optometric Foundation Optimum Optics Scholarship — An award of $1,000 to a student from New Jersey showing academic excellence and financial need. The College scholarship committee nominates one candidate from the College per year.

Association of Schools and Colleges of Optometry (ASCO) Scholarship — Scholarships of between $250 and $1,000 for students on the basis of scholastic achievement and financial need. Application is made via the College's Institutional Financial Aid Application.

Joseph F. Bacon Scholarship — An annual award to a first-year student whose undergraduate education was obtained at the University of Delaware. Awardee is selected on the basis of academic achievement and financial need. Application is made via the College's Institutional Financial Aid Application.

Board of Trustees Scholarships—These scholarships are awarded to selected first-year students from non-contract states on the Basis of high academic record and demonstrated financial need. The scholarships are valued at $4,000 per year, renewable for four years. A specific application is made via the College's Admissions Office.

Boben Scholarship — Established by the estate of Alma L. Boben, O.D. in loving memory of her father, optometrist H.J. Leuze. This award of $500 or more is awarded to worthy female students on the basis of academic standing and financial need. Application is made via the College's Institutional Financial Aid Application.

Jeffrey Cohen Memorial Scholarship — Established by friends and colleagues in memory of Jeffrey Cohen, O.D., '69, through the Federal Credit Union, the Cohen Scholarship, approximately $500, is awarded to a student on the basis of academic performance and financial need. Application is made via the College's Institutional Financial Aid Application.

George Comstock Scholarship— The Connecticut Optometric Society administers a scholarship for Connecticut residents demonstrating financial need, academic excellence and high moral character. Application is made via the College's Institutional Financial Aid Application.

William J. Condon Scholarship— Established by the estate of Mary H. Condon in memory of her optometrist husband, this scholarship is awarded on the basis of academic performance and financial need. Application is made via the College's Institutional Financial Aid Application.

William Deeter Memorial Scholarship — Established by Rodenstock USA in memory of Dr. Deeter '43, the scholarship is awarded on the basis of academic achievement and financial need. Application is made via the College's Institutional Financial Aid Application.

Sol Deglin Scholarship — Established by Edward A. Deglin, M.D., in memory of his father. Deglin scholarships of $1,000 are awarded to students on the basis of academic standing and financial need. Application is made via the College's Institutional Financial Aid Application.

Faculty Scholarship— Established by the College's Faculty Council, the scholarship is awarded to a deserving student selected on the basis of academic performance and financial need. Application is made via the College's Institutional Financial Aid Application.

Florence and Martin Hafter Scholarship -- Established by Martin Hafter, O.D., the scholarship provides $1,000 or more to worthy students selected on the basis of academic standing and financial need. Application is made via the College's Institutional Financial Aid Application.

Health Maintenance Organization of PA Foundation Scholarship — A scholarship to a first-year student in the amount of $500. A separate application will be mailed to all first year students.

Paul G. Matthews Scholarship — Established by Mr. and Mrs. George Matthews in memory of their son, Paul Matthews, O.D., '81. This annual award is presented to a first-year student on the basis of academic achievement, financial need and community service. The award level is $1,000 per year for four years. Application is made via the College's Institutional Financial Aid Application.

Dr. Leslie Mintz Foundation Scholarships — Administered by the New Jersey Optometric Association, students with New Jersey residence may apply for these annual scholarships, which range from $500 to $1,000. Students are generally notified of awards during second semester. Applications are available from the College's Financial Aid Office upon notification posted on the main bulletin board in the lobby of Fitch Hall.

National Eye Research Foundation Fellowship Award — The Foundation offers a $500 award to a student enrolled in a school or college of optometry. Awards are based upon financial need. Application information will be posted on the main bulletin board in the lobby of Fitch Hall.

Nikon Scholar Awards — An annual competition open to first-year students of optometry. Awards range from $100 honorariums to a $2,000 scholarship. Application information will be posted on the main bulletin board in the lobby of Fitch Hall.

Pennsylvania College of Optometry Scholarship — Established by a member of the Board of Trustees, the scholarship is awarded to a worthy student selected on the basis of high academic achievement and financial need. Application is made via the College's Institutional Financial Aid Application.

Petry-Lomb Scholarship — An annual award of $1,000 to a New York resident enrolled in an optometry college who exhibits financial need and scholastic achievement. Applications are available from the Financial Aid Office.

PHEAA Grants — A student who matriculates without receiving a baccalaureate degree, who has been a domiciliary of Pennsylvania for at least 12 months prior to the date of application and who demonstrates financial need in accordance with PHEAA requirements is eligible for a PHEAA grant. There are other requirements as well. For further information and application materials, contact the Financial Aid Office.

Phillips Endowed Scholarship — Established by Dr. and Mrs. Robert C. Phillips, '38, in memory of his uncle, Harry G. Phillips, O.D., Phillips Scholarships of $1,000 or more are awarded to students on the basis of academic standing and financial need. Preference is given to first-year students and Pennsylvania residents. Application is made via the College's Institutional Financial Aid Application.

Silhouette Optical Scholarship — Established by Silhouette Optical Ltd., the $500 scholarship is awarded to students on the basis of academic achievement, clinical excellence and financial need. Application is made via the College's Institutional Financial Aid Application.

State Optometric Auxiliary Scholarships — Many state auxiliary organizations offer scholarships to optometry students. Application is generally made directly to the state auxiliary and selection is generally made on the basis of state of residence and other criteria. Contact state optometric organizations directly for further information.

Dr. William G. Walton Scholarship — Established by members of the College's President's Council, the scholarships are awarded on the basis of academic performance and financial need. Award levels range from $500 to $1,000. Application is made via the College's Institutional Financial Aid Application.

E.F. Wildermuth Foundation Scholarships — Wildermuth grants are scholarships awarded to students in the first and fourth years in amounts ranging from $500 to $3,000. Preference is given to students having strong personal or professional ties to the Western Pennsylvania area. Application is made via the College's Institutional Financial Aid Application.

Dr. Melvin D. Wolfberg Scholarship — Established by President Melvin D. Wolfberg, O.D., the scholarship is awarded to a student selected on the basis of high academic achievement and financial need. Application is made via the College's Institutional Financial Aid Application.

NOTE: Additional grant and scholarship information is available at the Student Affairs reception area.

Loans

Loans are financial aid which must be repaid at or by a certain time. The majority of the loan programs charge a minimal interest rate and require repayment after the student ceases to attend college (at least half-time).

Stafford Loan — Under this loan, students can borrow $7,500 per year to a total of $54,750. Loans are granted on the basis of financial need. Interest rate is 8% annually for the first four years of repayment and 10% thereafter. Form is completed by student, the College and lender. Repayment starts six to nine months after ceasing to be a half-time student.

Supplemental Loans for Students (SLS) and/or Parents Loan to Assist Undergraduate Students (PLUS) — These loans are granted on the basis of student enrollment. Borrowers can receive up to $4,000 per year. Interest is calculated on a quarterly basis and is based roughly on prime lending rates. Interest is charged to students from the time the loan is disbursed. Form is completed by student, the College and lender. Repayment of principal begins six months after ceasing to be a half-time student.

Health Education Assistance Loan (HEAL) — Under this loan, students can borrow up to $20,000 per year. Loans are granted on the basis of financial need. Interest is calculated on a quarterly basis and is based roughly on prime lending rates. Interest is charged to students from the time the loan is disbursed. Repayment of principal starts nine to 12 months after the borrower ceases to be a full-time student.

Health Professions Student Loan (HPSL) — Granted on the basis of financial need. Interest is 5% annually. Repayment starts nine months after separation from school. Interest starts to accrue at that time.

Perkins Loan — Under this loan, students can borrow up to $18,000 for undergraduate and professional study. Loans are granted on the basis of financial need. Interest rate is 5% annually. Repayment starts six to nine months after separation from school. Interest starts to accrue at this time.

Institutional Loan — The maximum loan obtainable varies and is granted on the basis of financial need. Interest rate is 9% annually. Repayment starts nine months after separation from school. Interest starts to accrue at that time.

E. F. Wildermuth Student Loan — Awards, which are determined by the Financial Aid Office as a portion of an award package, generally range from $200 to $1,000. Loans are granted on the basis of financial need. Simple interest of 7%. Repayment begins one year after graduation or separation from school. Interest starts to accrue at this time.

The availability of loan programs is largely dependent upon federal government policy. Please consult with the Financial Aid Office for the most current information.

Academic Life

Attendance, Examinations, Grading

Students are required to be in attendance at all laboratory and clinic sessions and electives. Attendance at all classroom and lecture sessions is expected, but not recorded. Course instructors have the option to require mandatory attendance at lectures if they deem it necessary to improve student learning.

Examinations, which are administered periodically, form the basis for the student's grades. A report of the student's performance is issued at the conclusion of each quarter.

The quality of a student's work is indicated by the following grades: Excellent (A), Good (B), Acceptable (C), Passing but below desired standard (D), Failure (F). All failures in required courses must be removed by repeating the course successfully within a specified time period. Otherwise, students will not be permitted to continue in the academic program without the written approval of the Dean of Academic Affairs.

In the professional practice courses, grades of Honors (H), Pass (P), and Failure (F) are used. An Incomplete grade may be assigned only when the student's work is of passing quality but some course requirement is not completed. The student must remove the grade of Incomplete within a specified time period unless exceptional circumstances exist and the extension is approved by the Vice President & Dean for Academic Advancement.

Credit by transfer may be accepted for any course within the curriculum when it is determined that the transfer course is substantially equivalent to that offered by the College. This equivalency is determined by the course instructor and department chairperson, and approved by the Vice President & Dean for Academic Advancement. Only courses in which the student received a grade of C or above or Pass will be considered for transfer credit.

Academic Standing

Good Academic Standing – Students are in good academic standing when progressing normally in the curriculum and attaining a quarter and an overall grade point average (g.p.a.) greater than or equal to 2.0.

Academic Probation – Students are considered on academic probation when: 1) their quarter g.p.a. falls below 2.0; 2) their overall g.p.a. at the end of a quarter falls below 2.0; or 3) they receive a failing grade (F) in a clinical course.

Academic Dismissal – First year students are dismissed from the academic program when: 1) their g.p.a. at the end of the Fall quarter is below 1.0; 2) their overall g.p.a. is below 1.5 at the end of the Winter quarter; or 3) their overall g.p.a. is below 2.0 at the end of the Spring quarter.

All other students are dismissed from the academic program when: 1) their quarter g.p.a. is below 2.0 for two consecutive quarters; 2) their overall g.p.a. is below 2.0 for two consecutive quarters; or 3) they receive a failing (F) grade in a clinical course for two (2) quarters.

Overall g.p.a. is calculated using grades from all courses taken within the College and courses transferred for the purpose of fulfilling degree requirements.

In addition to the above academic reasons for dismissal, the College reserves the right to terminate the enrollment of any student, at any time, for what the College faculty and administration may believe to be good and sufficient reasons, such as, but not limited to, cheating, plagiarism or unprofessional conduct. The College assigns great importance to self-discipline, the ability to work pleasantly with others, and the ability to conduct oneself in a professional manner. Demonstration of deficiencies in any of these qualities is viewed by the College as evidence that the student is not suited to a professional career, and constitutes adequate cause for dismissal by the Dean of Student Affairs.

A Code of Conduct has been established by joint action of Student Council, faculty and administration. Copies of the code are available for perusal in the Office of Student Affairs.

Re-Enrollment—Students repeating an academic year shall pay 50 percent of the customary tuition prorated for those courses actually repeated by the student. Students not repeating an academic year but required or choosing to re-enroll in a specific course through special examination shall pay a fee of fifty ($50) dollars.

Academic Counseling

The College seeks to help students realize their full scholarly potential and successfully complete the academic program. The Office of Academic Counseling was established to help students cope with academic and personal difficulties that affect academic performance through a variety of counseling services. Students experiencing academic problems or academically-related personal problems are assisted by means of a variety of tutorial services, study-skills workshops, and educational and other counseling.

Degree Requirements

The total hours required for the Doctor of Optometry degree are determined by the curriculum in which the student enrolls initially. Successful completion of all required courses and an overall grade point average of 2.0 are necessary for graduation from the Pennsylvania College of Optometry.

Privacy of Records

The College complies fully with the Family Educational Rights and Privacy Act of 1974, which protects the privacy of students' education records, establishes the right of students to inspect and review their education records and provides guidelines for the correction of inaccurate or misleading data through informal hearings. Students also have the right to file complaints with the Family Educational Rights and Privacy Office, Department of Health and Human Services, Washington, DC 20201, concerning alleged failure by the College to comply with the Act.

Alcohol & Drug Abuse Prevention Program

The Pennsylvania College of Optometry is an institutional member of the College Consortium on Drugs and Alcohol, and has adopted a Drug Abuse Prevention Program, and a policy on service of alcoholic beverages on campus.

The use of illegal drugs is prohibited on College property. Violators, if found guilty, are subject to disciplinary action, up to and including dismissal. The College's Center for Personal and Professional Development is available for confidential counseling and referral services.

Other College Policies

The Pennsylvania College of Optometry has developed a policy regarding AIDS and other infectious diseases as well as established guidelines for students engaged in the care of AIDS patients.

In addition, information relative to the Pennsylvania College and University Security Information Act 73 (1988) is available upon request.

Commencement Awards

Pennsylvania College of Optometry fourth-year students are offered a number of awards at graduation which honor their academic and clinical achievements. Among these are:

Alumni Association Award—A plaque, a certificate and $200 is awarded to a member of the graduating class attaining the highest academic average.

CIBA Vision Corporation--Contact Lens Achievement awards of a certificate and contact lens materials valued at $1,000 to three members of the graduating class who have exhibited excellent academic achievement as well as exceptional contact lens proficiency in a clinical setting.

Clinical Excellence Citations—Presented to members of the graduation class by the faculty for excellence in visual science.

Beta Sigma Kappa Award—A medal awarded by the fraternity to a graduate among its membership who submits the most scholarly paper on an optometric subject.

John E. and Ethel M. Crozier Memorial Award—Awarded to a graduating student excelling in the study of anatomy and pathology.

Vision Service Plan Award—A plaque and $250 offered to a graduate who submits the best paper on "Third Party Vision Care."

Philadelphia County Optometric Society Award—An award of $200 awarded to a member of the graduating class attaining the highest academic average.

Dr. Donald H. Evans Award—An award of a plaque and $1,000 offered annually by the Pennsylvania Optometric Association to that Pennsylvania resident of the graduating class who has submitted a publishable research paper on "Visual Needs in Public Health."

College of Visual Development/A.M. Skeffington Memorial Award—A plaque presented to a graduate who has demonstrated outstanding proficiency in academic knowledge and clinical care in functional vision.

Arthur Shlaifer Memorial Award—An award of $500 to a graduating student who demonstrates overall excellence in clinical and didactic courses in ocular pathology.

American Optometric Foundation Awards—The American Optometric Foundation sponsors a variety of awards, based on varying criteria. They are:

J. Harold Bailey Award—A plaque for an exceptional paper on administrative science.

Irvin M. Borish Award—A plaque for an exceptional paper in the field of clinical optometric science.

Frederick W. Brock Award—A plaque for an outstanding paper in the field of vision training.

Harold Kohn Memorial Award—An award of $200 for an outstanding paper based on original investigative work, suitable for publication.

Bausch & Lomb Practice Initiation Award—An award of $1,000 to that fourth-year student who submits the best 500 word paper on establishing a practice as well as exceptional accomplishment in practice/business management.

Bausch & Lomb Excellence in Academic Achievement Award—An award of $1,000 to a graduating student who demonstrates excellence in both didactic and clinical performance in contact lens courses.

Sola/Barnes-Hind/Hydrocurve Recognition Award—An award of $500, a selection of Barnes-Hind products and an invitation to the annual Barnes-Hind Graduate Advisory Panel meeting is presented to that graduating student who, in the opinion of the faculty, has exhibited expertise in contact lenses.

Multi-Optics Varilux Award—An Award of $500 to that fourth-year student who provides the most interesting case report on Varilux patients.

Dr. H. C. Verma Memorial Award—An award of $250.00 is offered to that graduating student who has demonstrated above average community service while maintaining a high standard of academic performance during his/her four years at the College.

Vistakon, Inc. Award—A plaque and an award of $400 to that graduating student who has maintained good academic standing, excellence in clinical Contact Lens patient care and commitment to serve the needs of patients.

Fisons Corporation Award—A plaque and an award of $1500 to that fourth year student who had demonstrated clinical excellence and proficiency in allergic eye disease, contact lens and pathology.

Bernell Corporation Award—An award of certificate and supplies ($300) to a graduating student who has demonstrated clinical excellence in Vision Therapy.

The Sequence of Courses

Important Note: While the descriptions below represent the most accurate information available at the time of printing, course content and/or sequencing may change.

First Year—Fall Quarter	Lecture Hours	Lab/Clinic Hours	Quarter Hours
BS111 Human Anatomy	25	20	3.5
BS112 Biochemistry	25		2.5
BS113 Microanatomy	25	20	3.5
BS114 Human Physiology	35	12	4.0
BS115 Theoretical Optics I	40	20	5.0
Totals	150	72	18.5
First Year—Winter Quarter			
BS121 General Pathology	25		2.5
BS122 Endocrinology	15		1.5
BS123 Neurosciences	30	20	4.0
BS124 Optics of the Eye	30	10	3.5
BS125 Theoretical Optics II	50	10	5.5
Totals	140	60	17.0
First Year—Spring Quarter			
BS131 Ocular Biology I	35	20	4.5
BS132 Pharmacology & Therapeutics I	30		3.0
BS133 Ocular Microbiology & Immunology	15	20	2.5
CS131 Professional Practice I		10	.25
CS132 Clinical Diagnostic Procedures I	30	40	5.0
CS135 Introduction to Community Health	25		2.5
Totals	145	70	17.75
Year Totals	**435**	**202**	**53.25**
Second Year—Fall Quarter			
BS211 Ocular Biology II	45	20	5.5
BS212 Pharmacology & Therapeutics II	40		4.0
BS214 Ocular Motility	30	20	4.0
CS211 Professional Practice II		10	.25
CS212 Clinical Diagnostic Procedures II	20	40	4.0
CS215 Epidemiology/Clinical Decision Making	25		2.5
Totals	160	90	20.25

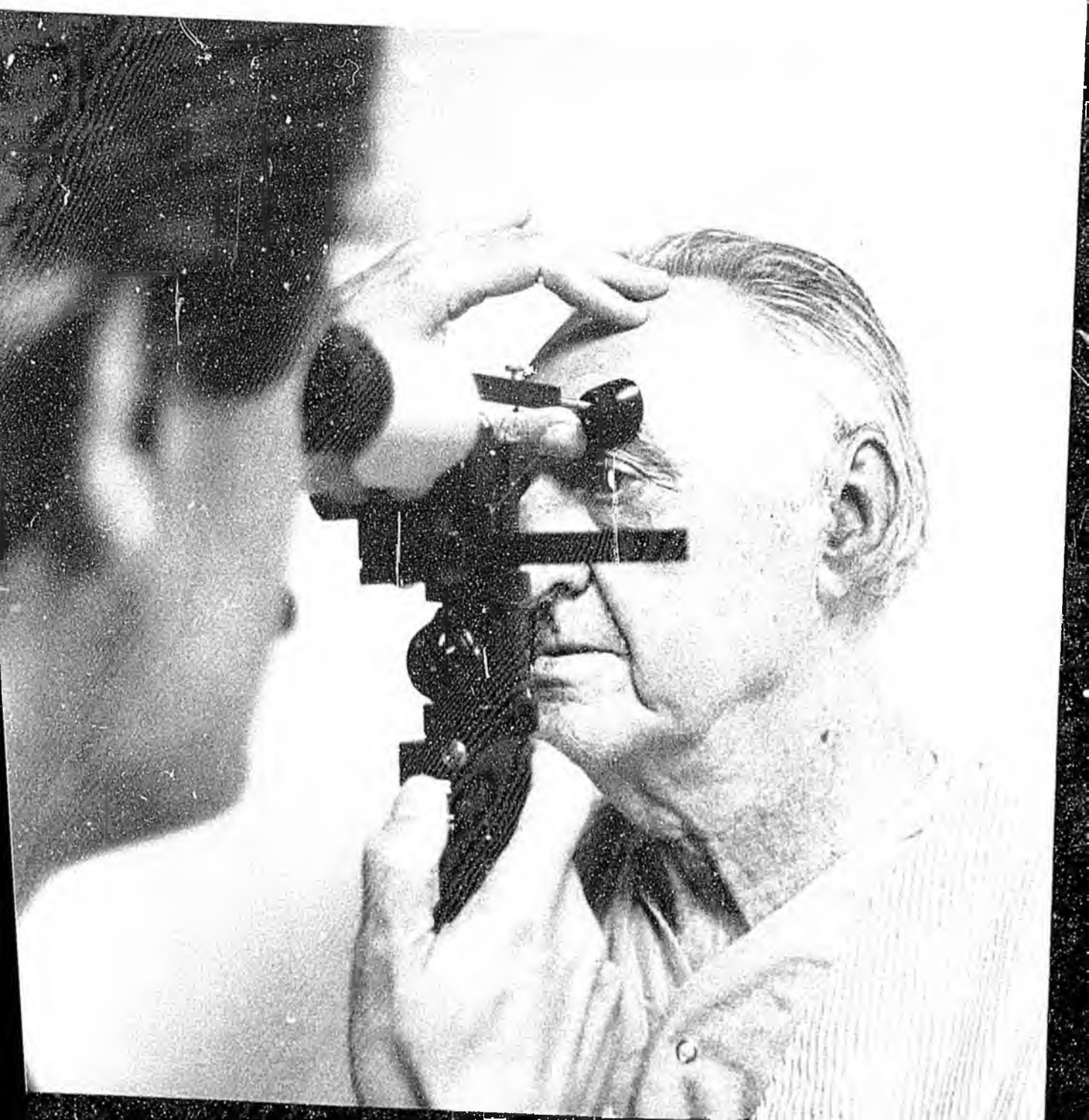
Second Year—Winter Quarter		Lecture Hours	Lab/Clinic Hours	Quarter Hours
BS221	Anterior Segment Ocular Disease	45		4.5
BS224	Psychophysics & Physiology of Monocular Vision	35	20	4.5
BS225	Ophthalmic Optics I	25	20	3.5
CS221	Professional Practice III		30	.75
CS222	Clinical Diagnostic Procedures III	15	40	3.5
CS225	Professional Communication	15	14	2.25
	Totals	135	124	19.00
Second Year—Spring Quarter				
BS231	Posterior Segment Ocular Disease	25		2.5
BS234	Normal & Abnormal Binocular Function I	25	20	3.5
BS235	Ophthalmic Optics II	30	20	4.0
CS231	Professional Practice IV		40	1.25
CS232	Clinical Diagnostic Procedures IV		20	1.0
CS233	Management of Refractive and Accommodative Disorders	25		2.5
CS234	Contact Lenses I	25	20	3.5
	Totals	130	120	18.25
	Year Totals	**425**	**334**	**57.50**
Third Year—Summer Quarter				
BS311	Glaucoma/Ocular Emergencies	25		2.5
BS312	Clinical Medicine I	25	14	3.25
BS314	Normal & Abnormal Binocular Function II	25	20	3.5
CS311	Professional Practice V		135	4.75
CS314	Contact Lenses II	20	20	3.0
	Totals	95	189	17.00
Third Year—Fall Quarter				
BS321	Medical Pathology	25		2.5
BS322	Clinical Medicine II	25	14	3.25
BS324	Normal & Abnormal Binocular Function III	25	20	3.5
CS321	Professional Practice VI		135	4.75
CS323	Geriatrics/Special Populations		20	3.0
	Totals	95	189	15.50

Third Year—Winter Quarter		Lecture Hours	Lab/Clinic Hours	Quarter Hours
BS331	Neuro-Eye Disease	25	10	3.0
CS331	Professional Practice VII		135	4.75
CS332	Pediatrics	20	20	3.0
CS333	Vision Rehabilitation	20	20	3.0
CS334	Advanced Contact Lenses	15	10	2.0
	Totals	75	165	15.75
Third Year—Spring Quarter				
CS341	Professional Practice VIII		135	4.75
CS342	Health Care Policy/Jurisprudence	25		2.5
CS343	Environmental Optometry	25		2.5
CS344	Practice Management & Development	25		2.5
CS345	Colloquium	15		1.5
CS346	External Education Professional Practice		90	3.0
	Totals	90	225	16.75
	Year Totals	**355**	**778**	**65.00**
Fourth Year—TEI Quarter				
CS411	Advanced Professional Practice—TEI		390*	13.25
	Electives	7		7.0
	Totals	7	390	20.25
Fourth Year—Externship Quarter				
CS421	Externship I		375*	12.5
	Totals		375	12.5
Fourth Year—Externship Quarter				
CS431	Externship II		375*	12.5
	Totals		375	12.5
Fourth Year—Externship Quarter (Additional)				
CS441	Externship III (Additional)			
	Year Totals*	7	1140*	45.25

*Minimum Number

Totals for Curriculum		
	Lecture Hours	1222
	Laboratory Hours	594
	Clinic Hours	1860
	Quarter Hours	221.00

Course Descriptions



Prerequisite Courses, Elective Registration

In specific instances, before a student may be enrolled in a particular course, prerequisite courses are required. These prerequisites may be satisfied by (1) successful completion of the courses; (2) approval of the course instructor; (3) transfer of credit from other institutions; (4) an exemption examination.

Individual registration is required for enrollment in any elective course. Credit will only be given when the student has been properly registered for the elective course through the Registrar in the Office of Student Affairs.

Course Changes

Courses listed in this catalog are subject to change through normal academic channels.

Department of Basic Sciences

Assistant Dean for Basic Sciences

Pierrette Dayhaw-Barker

Professors

John B. Siegfried, Joseph Toland, Gilda Crozier, Emeritus, Jacob Nevyas, Emeritus

Associate Professors

Sitaramayya Ari, Pierrette Dayhaw-Barker, Andrew Buzzelli, Alvin Byer, James P. Carroll, Louis Catania, Edward Deglin, Lawrence Gray, John W. Laney, Thomas L. Lewis, Lorraine Lombardi, Susan Oleszewski, Christopher Rinehart, Mitchell Scheiman, Stephen Whittaker, Charles Wormington

Assistant Professors

Connie Chronister, Robert Cole, Bruce Muchnick, Paul Robinson, Eileen Schnel-Klitsch

Instructors

Chaya Herzberg, JeanMarie Pagani, Joan Wing

Teaching Associate

Jon Marberger

The objective of the Department of Basic Sciences is to provide the student with the scientific concepts underlying optical, visual, and biological function and organization of the eye and systemic biological organization and interrelationships of ocular functions with those of the entire body.

Students are prepared to understand the optics of lenses and the visual system, in addition to the anatomy and physiology of the visual system and the nervous system. The basic principles in these disciplines are used as a foundation for the understanding of accommodation and convergence, eye movements, the eye as a monocular sensory system and normal and abnormal binocular functions of the visual system.

Several courses within the department discuss the clinical application of optical principles to the fitting of spectacles and contact lenses and the diagnosis and treatment of binocular disorders, strabismus and amblyopia.

Ocular structures and functions in normal and pathological states are explored in detail with the goal of creating a basis for the understanding of altered conditions.

A strong background in biomedical sciences enables the future optometrist, as a provider of primary health care, to correlate systemic and ocular abnormalities. The optometrist is thereby better prepared to assess, diagnose, treat, and/or refer ocular problems with possible systemic cause and to diagnose and refer patients with systemic problems.

BS111 Human Anatomy *3.5 Quarter Hours*

Provides an overview of major anatomical relations of the thorax and abdomen. Anatomy of the head and neck region is presented in great detail with emphasis on the eye and adnexa. Topics are accompanied by observation of prosected cadavers and detailed analysis of the skull.

BS112 Biochemistry *2.5 Quarter Hours*

Discusses structure and function of basic biochemical molecules (carbohydrates, lipids, proteins, nucleic acids). Much of the course deals with human metabolism with in-depth study of the major metabolic pathways at the cellular level.

BS113 Microanatomy *3.5 Quarter Hours*

Presents the student with knowledge of the structure of tissues and of the organ systems they comprise. It thus serves as a foundation for subsequent detailed study of the eye and of the relationships between the eye and the body as a whole.

BS114 Human Physiology *4.0 Quarter Hours*

Studies the functions of cells, tissue and organ systems and the correlation between ocular and systemic characteristics. Special emphasis is placed on body fluids and the integration between cardiovascular, pulmonary and renal functions.

BS115 Theoretical Optics I *5.0 Quarter Hours*

Introduces the student to basic terminology in optics, followed by ray-tracing through thin optical systems, e.g., reflection and refraction from plane and spherical surfaces and refraction by thin lenses, optics of refractive errors and correction of ametropias, optics of cylindrical lenses and toric surfaces and Gaussian optics of thick systems.

BS121 General Pathology *2.5 Quarter Hours*

Covers basic principles and dynamics of the pathological processes of human disease. Emphasis is placed on the molecular, biochemical and structural alterations characteristic of diseased cells, tissues and organs.

BS122 Endocrinology *1.5 Quarter Hours*

Deals with basic endocrinological principles with an overview of all endocrine tissues and organs. Special emphasis is placed on the relationship of certain hormones to ocular function and the effects of specific metabolic diseases on systemic and ocular tissues.

BS123 Neuroscience *4.0 Quarter Hours (Prerequisites: BS111 Human Anatomy, BS112 Human Physiology).*

Provides a thorough structural basis for understanding the mechanisms of the nervous system and facilitates the understanding of its clinical and functional significance. Covers the histogenesis of nervous tissue and the structural and functional characteristics of neurons, neuroglia, nerve fibers, receptors and effectors.

BS124 Optics of the Eye *3.5 Quarter Hours (Prerequisite: BS115 Theoretical Optics I).*

Discusses optical and ultrasonic techniques for measuring the various optical parameters of the eye. In addition, the quality of optical image in the eye is examined, including optical aberrations, blur circle theory and visual acuity.

BS125 Theoretical Optics II *5.5 Quarter Hours*

Discusses the principles of magnification applied to spectacle lenses; provides introduction to optics of low vision aids, optics of clinical instruments, telescopes and microscopes, theory of stops and field of view, radiometry and photometry, aberrations and physical optics.

BS131 Ocular Biology I *4.5 Quarter Hours (Prerequisites: BS111 Human Anatomy, BS112 Biochemistry, BS114 Human Physiology).*

Presents a detailed gross and microanatomical study of the eye and its adnexa, with emphasis on specific relationships of the ocular structures to function. Includes a comprehensive study of the developmental anatomy of the eye and its adnexa. Metabolic activities and physiological functions of all ocular tissues are discussed in detail with special emphasis on clinical aspects.

BS132 Pharmacology and Therapeutics I *3.0 Quarter Hours (Prerequisites: BS112 Biochemistry, BS114 Human Physiology).*

Covers in detail the basic principles and pharmacokinetics of the following categories of drugs used for diagnostic and therapeutic purposes: autonomic drugs, general anesthetics, drugs effecting the central nervous system, diuretics and antihypertensives, cardiovascular drugs and over the counter drugs. Students are expected to acquire knowledge in the classifications, uses, side-effects and toxicity of the drugs discussed.

BS133 Ocular Microbiology and Immunology *2.5 Quarter Hours (Prerequisites: BS112 Biochemistry, BS121 General Pathology).*

Presents a detailed review of those pathogens of specific importance to the etiology and treatment of ocular disease. Basic immune mechanisms, pathological ocular immune reactions and current methods of treatment are also discussed.

BS211 Ocular Biology II *5.5 Quarter Hours (Prerequisites: BS131 Ocular Biology I, BS132 Pharmacology and Therapeutics I).*

Continuation of BS131 Ocular Biology I using the same format.

BS212 Pharmacology and Therapeutics II *4.0 Quarter Hours (Prerequisite: BS132 Pharmacology and Therapeutics I).*

Provides the future practitioner with a thorough knowledge of pharmaceutical agents and their effects on the eye and the visual system. Local anesthetics, antihistamines, anti-inflammatory agents, cycloplegics, miotics, mydriatics and other agents are covered in detail. Emphasis is placed on the ocular side effects of systemic drugs. Upon completion of this course, the student has a thorough understanding of therapeutic agents used in systemic and ocular disease management.

BS214 Ocular Motility *4.0 Quarter Hours (Prerequisite: BS123 Neuroscience).*

Covers the mechanical and neurological aspects of ocular motility, including an analysis, description and classification of monocular and binocular eye positions and movements.

BS221 Anterior Segment Ocular Disease *4.5 Quarter Hours (Prerequisites: BS131 and 211 Ocular Biology I & II, BS121 General Pathology and BS133 Ocular Microbiology and Immunology).*

Presents a detailed description, e.g., the etiology, pathogenesis, differential diagnosis, treatment and management of diseases of the anterior part of the eye including the lids and adnexa, conjunctiva, cornea, uvea, sclera and lens.

BS224 Psychophysics and Physiology of Monocular Vision *4.5 Quarter Hours (Prerequisites: BS125 Theoretical Optics II, BS124 Optics of the Eye).*

Discusses the visual process in detail, from photochemical, neurological and psychophysical points of view. Functional neuroanatomy of the visual system deals with the behavior of single sensory cells from retina to visual cortex. Covers basic aspects of human visual electrophysiology. The light sense, form sense and color sense are dealt with in psychophysical terms, with emphasis on normal and abnormal color vision and their measurement and specification.

BS225 Ophthalmic Optics I *3.5 Quarter Hours (Prerequisite: BS125 Theoretical Optics II).*

Deals with applied aspects of optics as used in optometric practice. Lenses are considered as physical entities with specific form and characteristics, rather than pure mathematical concepts. Students derive a thorough knowledge of surface value, form and power of lenses, neutralization, transposition and prismatic function. In the laboratory, the student becomes proficient in prescription determination as it is applied in practice.

BS231 Posterior Segment Ocular Disease *2.5 Quarter Hours (Prerequisite: BS221 Anterior Segment Ocular Disease).*

Similar format as in Anterior Segment Ocular Disease applied to the vitreous, choroid and retina.

BS234 Normal and Abnormal Binocular Function I *3.5 Quarter Hours (Prerequisite: CS221 Professional Practice III, BS214 Ocular Motility).*

Covers the physiological optics of normal binocular function. Visual anomalies resulting from disturbances in binocular vision are discussed from theoretical and clinical approaches. The diagnosis of disabilities in oculomotility, convergence and accommodation is analyzed. Students will formulate a prognosis and treatment protocol using vision therapy and ophthalmic intervention.

BS235 Ophthalmic Optics II *4.0 Quarter Hours (Prerequisite: BS225 Ophthalmic Optics I).*

Covers lens thickness considerations, safety and legal requirements, occupational and progressive addition lenses, transmission and design, prescribing for aphakia and other high refractive errors.

BS311 Glaucoma/Ocular Emergencies *2.5 Quarter Hours (Prerequisite: BS231 Posterior Segment Ocular Disease).*

Similar format as in Anterior Segment Ocular Disease applied to various forms of glaucoma and ocular emergencies.

BS312 Clinical Medicine I *3.25 Credit Hours (Prerequisites: BS121 General Pathology, BS133 Ocular Microbiology and Immunology, and BS212 Pharmacology and Therapeutics II).*

Presents an overview of current medical diagnosis and management of systemic diseases having ocular involvement with special emphasis on interprofessional relationships and responsibilities. Topics in this course include history taking, clinical laboratory tests, emergency medicine, diseases of immunological origin, collagen disorders and cardiovascular diseases.

BS314 Normal and Abnormal Binocular Function II *3.5 Quarter Hours (Prerequisites: BS234 Normal and Abnormal Binocular Function I, CS231 Professional Practice IV).*

Discusses the development and neurophysiology of normal binocular vision. Emphasis is placed on those principles which form the basis for the clinical assessment and treatment of strabismus and amblyopia. These principles are integrated throughout the course with presentation of the clinical diagnosis and management of strabismus and different forms of amblyopia.

BS321 Medical Pathology *2.5 Quarter Hours (Prerequisites: BS121 General Pathology, BS312 Clinical Medicine I).*

Deals with disease patterns of select systems of the human body with emphasis on clinical pathologic correlation. Disease processes with ocular manifestation will be specifically addressed. Selected topics include: connective tissue and occlusive diseases, diabetes mellitus, anemia, hypertension, diseases of skin, endocrinopathies and neuropathology.

BS322 Clinical Medicine II *3.25 Quarter Hours (Prerequisite: BS312 Clinical Medicine I).*

Continuation of Clinical Medicine I for diseases of high prevalence such as cardiovascular diseases, cancer, endocrine and neurological disorders.

BS324 Normal and Abnormal Binocular Function III *3.5 Quarter Hours (Prerequisite: BS314 Normal and Abnormal Binocular Function II).*

Continuation of BS314.

BS331 Neuro-Eye Disease *3.0 Quarter Hours (Prerequisites: BS123 Neuroscience, BS231 Posterior Segment Ocular Disease).*

Presents a clinical approach to patients with disorders of the afferent and efferent visual system; emphasizes diagnostic methods and management of patients with neuro-eye disorders.

Department of Clinical Sciences

Assistant Dean for Clinical Sciences

Susan Oleszewski

Professors

Jerome A. Hirsch, Joseph Toland

Associate Professors

Sarah Appel, Sheree J. Aston, Felix M. Barker, G. Richard Bennett, Robert J. Berman, Bernard Blaustein, Richard L. Brilliant, Andrew Buzzelli, Rober W. Cummings, Edward A. Deglin, William M. Dell, Anthony DiStefano, Michael F. Gallaway, Lawrence G. Gray, Irving Gurwood, Joanne Klopfer, Jeffrey S. Nyman, Neal N. Nyman, Susan Oleszewski, Christopher Rinehart, Joseph P. Ruskiewicz, Mitchell Scheiman, Joel A. Silbert, Maryin B. Smith, Michael R. Spinell, Charles Wormington

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Teaching Associate

Francine Pearlman Storch

Director, Externship and Clerkship Programs

Bernard P. Lepri

Director of Community Eye Care, External Clinics and Residency Programs

Satya B. Verma

Staff Optometrists

Susan Marren, Gale Orlansky, Jeffrey Varner

Externship Counselors

Mitchell J. Fink, Irving Gurwood, Jerome Hirsch, Paul H. Robinson

Program Supervisor

Denise Guido

The Department of Clinical Sciences is responsible for providing students with the requisite knowledge, skills, attitudes, and values for clinical optometric practice.

Initial coursework concentrates on the theory and methods of clinical procedures for primary care optometry. Subsequent coursework provides students with the theory and clinical techniques in contact lenses, binocular dysfunction, pediatrics, and rehabilitation of the visually impaired patient. Integration of didactic and laboratory courses with patient care occurs at each stage of the sequence.

Perspectives on the critical issues in health care are also provided. Specific skills are taught regarding the economic, political, environmental, ethical, legal, sociologic, and epidemiologic principles, including practice management, that are necessary for the clinical and administrative aspects of optometry.

Integration and application of principles, concepts, and skills in basic and clinical sciences occurs in the care of an extensive diversity of patients and settings. Clinical training concentrates on providing those total competencies which are the hallmark of the primary care optometrist under the guidance of the professional staff of The Eye Institute and external preceptors. This training encompasses the full-range of optometric practice, including the diagnosis, treatment, and management of patients with visual and medical disorders of the eye and entire body.

CS131 Professional Practice I *1.25 Quarter Hour*

Observation of the delivery of care in The Eye Institute.

CS132 Clinical Diagnostic Procedures I *5.0 Quarter Hours (Prerequisites: BS125 Theoretical Optics II, BS124 Optics of the Eye).*

Discusses the theory and techniques of primary care examination procedures including history, visual acuity, objective and subjective methods of refraction, and basic ocular motility.

CS135 Introduction to Community Health
2.5 Quarter Hours

Introduces the student to today's health system, optometry's role within it, the general principles of community health and his or her future role as a primary health care practitioner and optometrist.

CS211 Professional Practice II *1.25 Quarter Hour (Prerequisites: BS131 Ocular Biology I, BS132 Pharmacology & Therapeutics I, CS132 Clinical Diagnostic Procedures I, CS131 Professional Practice I).*

Continues the preparation of the student for primary optometric care by encouraging the development of basic clinical testing skills and patient care thought processes. Students participate by providing vision screenings, pre-examinations, and selected tests and observation, as well as by their involvement in case management discussion and planning with professional staff at The Eye Institute.

CS212 Clinical Diagnostic Procedures II *4.0 Quarter Hours (Prerequisites: BS131 Ocular Biology I, BS132*

Pharmacology and Therapeutics I, CS132 Clinical Diagnostic Procedures I, CS131 Professional Practice I).
Continues the theory and methods of primary care examination procedures including binocular vision evaluation, external evaluation, evaluation of the eye for disease, use of the biomicroscope, direct and indirect ophthalmoscopy, tonometry, gonioscopy and visual field testing.

CS215 Epidemiology/Clinical Decision Making *2.5 Quarter Hours*

Presents methods of epidemiological investigation of health and disease in a population. Problem solving and decision analysis are used to illustrate the interrelationship of factors involved in human vision and eye disease.

CS221 Professional Practice III *1.75 Quarter Hour (Prerequisites: BS211 Ocular Biology II, BS212 Pharmacology and Therapeutics II, CS215 Epidemiology/Clinical Decision-making, CS212 Clinical Diagnostic Procedures II, CS211 Professional Practice II).*

Continuation of Professional Practice II. Provides an opportunity for students to develop a minimum level of competency in basic clinical examination. Interns examine their first patients in The Eye Institute under close supervision, using video taping as a mechanism for both students and faculty to assess the accomplishment of objectives. Certification of basic clinical testing skills and of beginning patient care management skills is accomplished.

CS222 Clinical Diagnostic Procedures III *3.5 Quarter Hours (Prerequisites: BS211 Ocular Biology II, BS212 Pharmacology & Therapeutics II, CS212 Clinical Diagnostic Procedures II, CS211 Professional Practice II).*

Continuation of Clinical Diagnostic Procedures II. The evaluation of the eye for disease and integration of all testing procedures into a problem-oriented approach to patient evaluation, diagnosis and management.

CS225 Professional Communication *2.25 Quarter Hours*

Deals with the development of written and oral communication between the clinician, his or her patients, staff and other professionals.

CS231 Professional Practice IV *1.0 Quarter Hour (Prerequisites: BS221 Anterior Segment Ocular Disease, CS225 Professional Communications, CS222 Clinical Diagnostic Procedures III, CS221 Professional Practice III).*

Continuation of Professional Practice III. In addition to clinical patient care, weekly Module conferences begin.

CS232 Clinical Diagnostic Procedures IV *1.0 Quarter Hour (Prerequisite: CS222 Clinical Diagnostic Procedures III)*

Continuation of laboratory portion of Clinical Diagnostic Procedures III. Emphasis will be placed on technique of evaluation of the fundus and visual field testing.

CS233 Management of Refractive and Accommodative Disorders *2.5 Quarter Hours (Prerequisites: CS222 Clinical Diagnostic Procedures III, CS221 Professional Practice III).*

Emphasizes the clinical diagnosis, treatment and management of the following conditions: accommodative and convergence anomalies, myopia, hyperopia, astigmia, presbyopia, anisometropia and aphakia. Various philosophies of data analysis are presented and related to the overall optometric management of the patient.

CS234 Contact Lenses I *3.5 Quarter Hours (Prerequisites: BS221 Anterior Segment Ocular Disease, CS222 Clinical Diagnostic Procedures III, CS221 Professional Practice III, BS225 Ophthalmic Optics I).*

Introduces the student to the theory and principles of designing, fitting, evaluating and caring for rigid and soft contact lenses. Special emphasis is placed on the effects of contact lenses on the eye and the indication and/or contraindication for specific contact lens designs or materials.

CS311 Professional Practice V *4.75 Quarter Hours (Prerequisites: BS231 Posterior Segment Ocular Disease, CS234 Contact Lenses I, CS232 Management of Refractive and Accommodative Disorders, CS231 Professional Practice IV, BS234 Normal and Abnormal Binocular Function I).*

Students assume the role of interns in the Primary Care Modules of The Eye Institute. Accuracy and efficiency in examination techniques, interviewing, data interpretation, case presentation and utilization of the problem-oriented record are stressed. Emergency eye care, contact lenses and ophthalmologic secondary and tertiary care are introduced.

CS314 Contact Lenses II *3.0 Quarter Hours (Prerequisites: CS234 Contact Lens I, CS233 Management of Refractive and Accommodative Disorders, CS231 Professional Practice IV).*

Continuation of Contact Lens I emphasizing the problem-oriented approach toward managing contact lens patients. Fitting techniques for toric soft lenses and extended wear hydrogels will be explored, including diagnosis and management of potential physiological complications. Advanced rigid lens design, including computer-assisted modeling will be introduced, for high myopia, hyperopia and aphakia as well as treatment regimens for contact lens induced corneal distortion.

CS321 Professional Practice VI *4.75 Quarter Hours (Prerequisites: BS311 Glaucoma/Ocular Emergencies, BS312 Clinical Medicine I, CS314 Contact Lenses II, CS311 Professional Practice V, BS314 Normal and Abnormal Binocular Function II)*

Continuation of Professional Practice V. Increasing emphasis is placed on problem solving and patient management skills while continuing the development of more advanced examination techniques.

CS323 Geriatrics/Special Populations *1.5 Quarter Hours.*

Presents the epidemiological, physical, physiological, psychological and ocular changes that occur in the aging patient. Special examination and management considerations and an interdisciplinary approach to geriatric optometric care are discussed. Similar consideration is given to special populations such as physically and mentally impaired patients.

CS331 Professional Practice VII *4.75 Quarter Hours (Prerequisites: BS322 Clinical Medicine II, CS321 Professional Practice VI, BS324 Normal and Abnormal Binocular Function III).*

Continuation of Professional Practice VI.

CS332 Pediatric Optometry *3.0 Quarter Hours (Prerequisites: CS321 Professional Practice VI, BS324 Normal and Abnormal Binocular Function III).*

Discusses the epidemiology, psychology, growth and development, methods of examination, and the treatment and management of vision problems related to infants and children. The role of the optometrist in detection, prevention and approaches to treatment of children with developmental and learning related disorders is stressed.

CS333 Vision Rehabilitation *3.0 Quarter Hours. (Prerequisites: CS311 Professional Practice V, BS125 Theoretical Optics II).*

Discusses the diagnosis, management and rehabilitation of the visually impaired patient including the epidemiology, symptoms, signs and course of low vision problems. Methods of testing and optical principles of low vision aids are presented in a context emphasizing a multidisciplinary approach to rehabilitation of the partially sighted.

CS334 Advanced Contact Lenses *2.0 Quarter Hours (Prerequisites: CS314 Contact Lenses II, CS331 Professional Practice VII).*

Presents specialty contact lens care, including lens design and management for residual astigmatism, presbyopia, extended wear with gas-permeable lenses, keratoconus, and therapeutic bandage lenses. Contact lens complications and management of contact lens complications, new developments in contact lenses and contact lens related practice-management are also addressed.

CS341 Professional Practice VIII *4.75 Quarter Hours (Prerequisites: BS331 Neuro-Eye Disease, CS332 Pediatric Optometry, CS331 Professional Practice VII).*

Continuation of Professional Practice VII.

CS342 Health Care Policy/Jurisprudence *2.5 Quarter Hours (Prerequisites: CS135 Introduction to Community Health, CS215 Epidemiology/Clinical Decision Making).*

Covers governmental relationships, health care organizations and delivery systems, legal development and optometric jurisprudence, methods of quality assurance, legislative processes and manpower studies.

CS343 Environmental Optometry *2.5 Quarter Hours (Prerequisites: BS214 Ocular Motility, CS222 Clinical Diagnostic Procedures III).*

Concentrates on the study, management and control of natural and human factors in the environment that can affect the health safety and visual status of patients.

CS344 Practice Management and Development *2.5 Quarter Hours*

Provides an overview and orientation for practice options in solo, partnership, multidisciplinary and institutional settings. The student is taught the development, management and economics of optometric practice.

CS345 Colloquium *1.5 Quarter Hours (Prerequisite: CS331 Professional Practice VII).*

Introduces case presentations, special clinical topics, and reviews recent developments in basic and clinical sciences.

CS346 External Professional Practice *1.0 Quarter Hour (1 day a week, 48 hours) (Prerequisite: satisfactory completion of all first and second year courses or approval of Assistant Dean).*

Provides the student with experience in handling patients under unique circumstances, e.g., screenings, nursing homes, homebound, etc., under close supervision of a faculty member. This program, administered through the Community Eye Care Service, stresses the importance of the service aspect of optometry to these patients.

CS411 Advanced Professional Practice *13.25 Quarter Hours (Prerequisite: CS341 Professional Practice VIII).*

The senior quarter in The Eye Institute affords the student the opportunity to gain intensive clinical experience by assignment to and the Primary Care Modules, the Lynch Pediatric Unit or the William Feinbloom Vision Rehabilitation Center.

External Clinical Programs

The Office of External Clinical Programs, within the Department of Clinical Sciences, has been designed to give students a variety of off-campus "real world" patient care experiences and provide them with the quantity and quality of experience needed to develop a highly competent health care practitioner. The department encompasses five major divisions: the Clerkship Program, the Community Eye Care Program, the External Clinic Program, Externship Program and External Residency Program.

Clerkship Program (Elective)

This program affords an opportunity for students in their first years of professional school training to spend time in a variety of optometric practice settings. It permits them to observe firsthand different patient handling protocols, office formats, practice, etc., and to put to use much of the basic classroom and laboratory material to which they have been exposed.

Externship Program

During the fourth professional year, students spend a quarter of the year in an institutional setting and a second quarter in a private practice setting, providing patient care under the supervision of highly qualified preceptors. Students are also required to extern at a site with emphasis in contact lenses and at a site with emphasis in the management of ocular disease. Externships offer the student the opportunity to refine patient care abilities, while making an easy transition from the role of a student to the role of a practitioner. Because of the variety of choices available, many of which are outside the Philadelphia area, students should plan on spending time off campus during their fourth year. Externship sites emphasize interdisciplinary large group and specialty care. Externship assignments are tailored to complement the clinical experiences of the student.

CS421 Externship I *12.5 Quarter Hours (13 weeks, 40 hours* of patient care per week in a private practice) (Prerequisites: CS341 Professional Practice VIII and approval of assistant dean).*

Provides students with patient care experiences in over 139 private practice externship locations in the United States.

CS431 Externship II *12.5 Quarter Hours (13 weeks, 40 hours* of patient care per week in an institutional externship) (Prerequisites: CS341 Professional Practice VIII and approval of assistant dean).*

Provides students with patient care experiences in over 79 institutional locations in the United States.

CS441 Externship III (additional) *12.5 Quarter Hours (13 weeks, 40 hours* of patient care per week) (Prerequisites: Acceptable scholastic performance in CS421-431 Externship I and II and approval of assistant dean).*

* (In some instances, externs are required to work more than 40 hours/week if the office to which they are assigned has patient care more than 40 hours/week).

External Residency Program

The College has residency programs approved by the Council on Optometric Education at six Veterans Administration (VA) facilities, an air force base, and an ambulatory eye care center. The purpose of the residencies is to give the graduate optometrist from an accredited school or college of optometry one year of advanced training that further complements the training and education at the professional college. (For more information, see section entitled Post-Graduate Opportunities.)

Electives

The intent of the electives program is to increase the flexibility and personalization of the academic curriculum. Two major types of elective courses are offered.

The first are general exploration courses which allow the student to investigate an area of interest which is not covered in the core curriculum, and in which the student has relatively little knowledge or expertise. These types of electives present information not required by every student in order to practice optometry, but which are potentially interesting to a selected group of students.

The second are advanced electives which probe deeper into more specialized areas of optometry. The advanced electives require the knowledge base of the core curriculum and permit the student to advance in an area of interest beyond that required by all students.

In addition, students who are interested in research may pursue this interest for elective credit.

The electives list that follows is a representative sample of electives and is neither all inclusive nor certain to be offered at any given time. The electives program is in a constant state of development, and additions and deletions occur as the needs and interests of the students and faculty vary from year to year.

All students are required to accumulate a minimum of seven quarter hours of elective credit for graduation. Students are encouraged to take as many electives as possible prior to the fourth year.

Research electives and clerkships may be taken for elective credit during any of the four years; most of the other electives are restricted to the third and fourth years. Credit for optional clinical activities will not be credited toward the seven quarter hour requirement.

Elective Course Descriptions

Basic Ophthalmic Surgical Procedures

This course introduces the theories, instrumentation, techniques and follow-up management of the ophthalmic surgical patient. Topics include scrub, daeryocystorhinostomy, anterior chamber paracentesis, cataract and glaucoma surgery, suture removal, vitreous and retinal surgery and the use of lasers. Course format involves slide presentations as well as video tapes of selected procedures.

Diagnosis and Management of Vision Problems in Infants, Toddlers and Preschool Children:

This course will present the current research and clinical information on the development of vision problems in very young children. Emphasis will be on the development of a clinical model and case analysis.

Interventional Cornea and External Disease:

Common diseases and conditions affecting the cornea, adnexa and the anterior segment will be discussed. Diagnosis and management including therapeutics and surgery will be described. A systemic approach will be emphasized.

Lasers in Eye Care:

This course covers the basic physics of the various laser types available for use in ophthalmic practice. Reviews uses of various lasers in practice of eye care as well as future uses.

Broaden Your Contact Lens Fitting Techniques

How to develop a proper philosophy and clinical approach for both hard and soft contacts to obtain an optimum fit. Lens performance and diagnostic techniques will build and expand the student's present knowledge. Learn how to handle problem fits and increase your percentage of success. Extensive slides and handouts are used to reinforce understanding.

Clinical Applications of Contrast Sensitivity Testing

This course covers the rationale for contrast sensitivity testing from its inception to present day clinical applications. Spatial and temporal processing characteristics of the visual system are studied as they apply to contrast sensitivity and visual acuity. Various forms of contrast sensitivity testing are discussed. Hands-on experience both in testing and evaluating results with regard to following eye disease, amblyopia, visual therapy and contact lens practice are given. Course emphasis is on clinical applications and patient management.

Compilation of Current Designs and Latest Techniques in Prescribing Contact Lenses

This course gives a historical overview of contact lenses. Additional topics include gas permeable lens options, contact lens solutions, extended wear lenses, and bifocal and toric lenses. Emphasis is placed on management of extended wear patients, marginally dry eye patients, and patients with irregular corneas. The use of computers in a contact lens practice is included.

Computers and Their Use in an Optometric Practice

This course familiarizes students with basic computer terminology. Business and professional uses of computers and how to implement them into an optometric office are discussed. The course also covers the pros and cons of many existing optometric software packages.

Effective Communication Skills for Optometric Diagnostic Evaluation of Hearing Impaired

A deaf or hard of hearing individual relies on vision for communication. This course provides four three-hour sessions: two and a half sessions of Basic Sign Language and one and a half sessions of sign language for diagnostic evaluation. The last session involves working in the lab doing simulated eye exams in sign language. This course will help the student organize diagnostic questions and increase clarity of language used. All of the skills learned will assist in evaluating young children, the elderly and others who have difficulty comprehending or responding to traditional communication styles.

Electrodiagnosis

This is a practical course to provide clinical application of electrophysiological principles and techniques acquired in Physiological Optics III. Requirements include readings and observation of patient testing in The Eye Institute. One oral examination will be given at the end of the course.

Fabrication and Use of Prosthetic Eyes

This course introduces and familiarizes the student with the anatomical and physiological facts essential to an understanding of an artificial plastic eye and the prosthetic eye wearer. This course also covers the state-of-the-art and, most importantly, optometric involvement in the clinical examination. It includes the care of the anophthalmic socket and hands-on experience in examining, removing, and inserting the prosthesis, following a question and answer session with the patient.

Learning Disability: Optometric and Educational Correlates

Visual information processing and its role in the physiological basis of learning is highlighted. Learning theory and academic failure resulting from pre-, peri-, and post-natal trauma are emphasized. Special primary care optometric management topics, including the nutritional needs of the patient in visual therapy and the neurohormonal response to stress, are investigated.

Learning Disabilities—A Psychologist's Approach

This course explores the nature and theories on causes, diagnosis, and treatment of various learning disabilities. Normal vs. deviant child development in the areas of cognition, perception, language, and motor skills are stressed. The role of the optometrist in treating learning disabled students is emphasized throughout.

Ocular Manifestations of Sexually Transmitted Diseases

In this course, the age-old sexual diseases of syphilis, gonorrhea, and pediculosis are reviewed in detail. Special attention is paid to the more contemporary diseases of herpes, chlamydia and AIDS. The primary intensive concentration is on diagnosis and management of systemic and ocular conditions. Additionally, the epidemiology, appropriate history taking skills, clinical approach, and proper asepsis technique are discussed.

Optometry—The Behavioral Model

The objective of the course is to teach the art and science of the Behavioral Optometric Model by reviewing the history of its origin, comparing it with other models and demonstrating its use in practice. By the conclusion of this course, the student should be able to understand the background and application of the Behavioral Optometric Model.

Perception, Cognition and Learning

This course trains students in theory and techniques necessary to administer and evaluate perceptuo-cognitive skills and learning strategies employed by persons of all ages. In addition to problem detection, the student is presented with alternative strategies and programs to eliminate areas of learning deficits. Experimental methods and research findings in selected areas of perception, cognition, learning, development and motivation, including both classroom and real-life instruction, are covered.

Practical Aspects of Practice Management

This course assists the new practitioner in making important business decisions, including mode of practice, practice location and promotion techniques. Business negotiations and marketing strategies for optometric practices are discussed. The course also covers office design, specialization, equipment and computerization.

Pre-Operative & Post-Operative Care of the Cataract Patient with an Implant

This course presents the indications and contraindications for intraocular implants, patient selection, patient orientation and subsequent care for both short- and long-term aphakic patients.

Research Topics in Biomedical Sciences

Those students who desire to become involved with elective research may contact Dr. Pierrette Dayhaw-Barker.

Sports Vision

This course encompasses the entire topic of Sports Vision, illustrating how many daily optometric concepts are continuously utilized by various athletes as they perform their demanding tasks. Screening, evaluating and training procedures are discussed as well as the specialized use of contact lenses as they relate to many different types of athletic endeavors. Ocular injuries and ocular safety are also covered.

Graduate Studies in Vision Impairment

Chairperson:

Susan M. Kershman

Associate Professors:

Susan M. Kershman, Audrey J. Smith, Gale Watson

Assistant Professors:

Anna L. Bradfield, Laura Edwards, Rita Livingston, Eileen Schnael-Klirsch, John Ray

Adjunct Faculty:

Marcy Graboyes, Kent Higgins, Frank Irzyk, Adrienne Koller, Jeanne Leiper, Susan Millaway, Mark Steciw, Susan Parthasarthy, Debby O. Holzapfel, Bette Homer, Amy Johnson, Lisa Porch, Maureen A. Duffy, Sr. Judith A. Moeller

The Department of Graduate Studies in Vision Impairment prepares a variety of professionals to work with the visually impaired population. Interdisciplinary students can engage in a number of different programs to meet their goals. Presently, the department includes the Master of Science and Certificate Programs in Vision Rehabilitation, the Masters and Certificate Programs in Education of the Visually Handicapped and a variety of short-term, individualized Continuing Education programs in low vision rehabilitation., The department encompases a rich mixture of classroom, laboratory, clinical, research and field-based learning, geared toward meeting professional preparation needs in the field of vision impairment.

Master of Science Degree and Certificate Programs in Vision Rehabilitation

In 1983, the nation's first Master of Science Degree Program in Vision Rehabilitation was implemented by the College. This program was made possible by a grant from the Glenmede Trust. Graduates of this program represent an interdisciplinary mix of O.D.'s, orientation and mobility specialists, special educators, rehabilitation teachers, administrators, etc. The Master's Program builds upon the educational and clinical reputation of The Eye Institute's William Feinbloom Vision Rehabilitation Center and focuses its emphasis on preparing professionals from a variety of disciplines to work in a team approach with low vision individuals. In this competency-based, one-year program, students are actively engaged in problem-solving experiences directly related to real life practices. Students from varied disciplines work together in classes and field experiences. Discipline-specific education and supervision are provided during the laboratory portions of coursework, field practice and internships. The certificate in Vision Rehabilitation Program provides a competency-based six-month immersion in the multidisciplinary approach to low vision rehabilitation.

For further information on this program, contact Susan M. Kershman. Coordinator, Ph.D., at 215-276-6291.

Course Sequence

Course Number	Course Title	Quarter Hours
First Quarter		
G930	Optical Principles & Low Vision Devices	3.50
G-910	Normal & Abnormal Visual Functioning	3.25
G-960	Clinical Evaluations & Interventions for the Low Vision Individual	4.00
G-980	The Interdisciplinary Services to persons with Low Vision	2.00
G-950	Research I	3.25
	Total:	16.00
Second Quarter		
G-968	Developing & Financing Comprehensive Low Vision Services	3.00
G-961	Visual Evaluations & Interventions in the Home, School, and Workplace	4.00
G-963	Psychosocial Implications of Visual Impairment	3.25
G-962	Human Development & Learning: A Visual Perspective	2.75
G-951	Research II	3.25
	Total:	16.25
Third Quarter		
G-970	Managing Comprehensive Low Vision Services	2.00
G-941	The Elderly: Service Needs & the Aging Process	1.50
G-992	Practicum: Supervised Field Placement	3.50
G-952	Research III: Data Collection	1.50
	or	
G-954	Research V: Statistical Interpretation & Integration	3.00
	Total 10.00	or 8.50

Fourth Quarter		
G-993	Practicum: Internship	5.00
G-953	*Research IV: Research Paper	1.50
	Total	5.00 or (6.50)
	Overall Total	47.25

*Required for all students who elect G-952.

Rehabilitation Optometry Program

The Pennsylvania College of Optometry offers a combined degree option which allows students in the Doctor of Optometry Program to concurrently enroll in the Master of Science Degree Program in Vision Rehabilitation. Students apply and enter the M.S. Degree Program after successful completion of their first year in the optometric curriculum. Courses in the M.S. Degree Program are taken on a part-time basis over a three-year period with both degrees received at graduation. This program allows students the knowledge and skills to maximize the functioning of the visually impaired and work in conjunction with state rehabilitation agencies. It is presently the only program of its kind in the nation.

Interested students should contact John S. Ray, O.D., M.S., Program Coordinator, for further information.

Programs in Education of the Visually Handicapped

The Programs in Education of the Visually Handicapped at the Pennsylvania College of Optometry were developed in response to a serious shortage of teachers in this specialty area. These part-time programs were designed to prepare teachers of the blind and visually handicapped to work with infants, toddlers, children and youth.

The competency-based programs lead to Pennsylvania Department of Education (PDE) certification (Instructional I, Teacher of the Visually Impaired) and enable individuals to work with those whose vision ranges from low vision to total blindness. Individualized programs of studies vary, based on evaluation of the applicant's transcripts, previous experience and certification(s) in education, interview and competency testing. Students may elect to complete the Certificate Program in Education of the Visually Handicapped, the Master of Education (M.Ed.) degree, or both. For additional information on course requirements and admissions, contact Susan M. Kershman, Ph.D., Program Coordinator, at 215-276-6291.

Course Sequence

The following represents the Pennsylvania College of Optometry course requirements. Additional courses will be required, based on the student's background on entering the program.

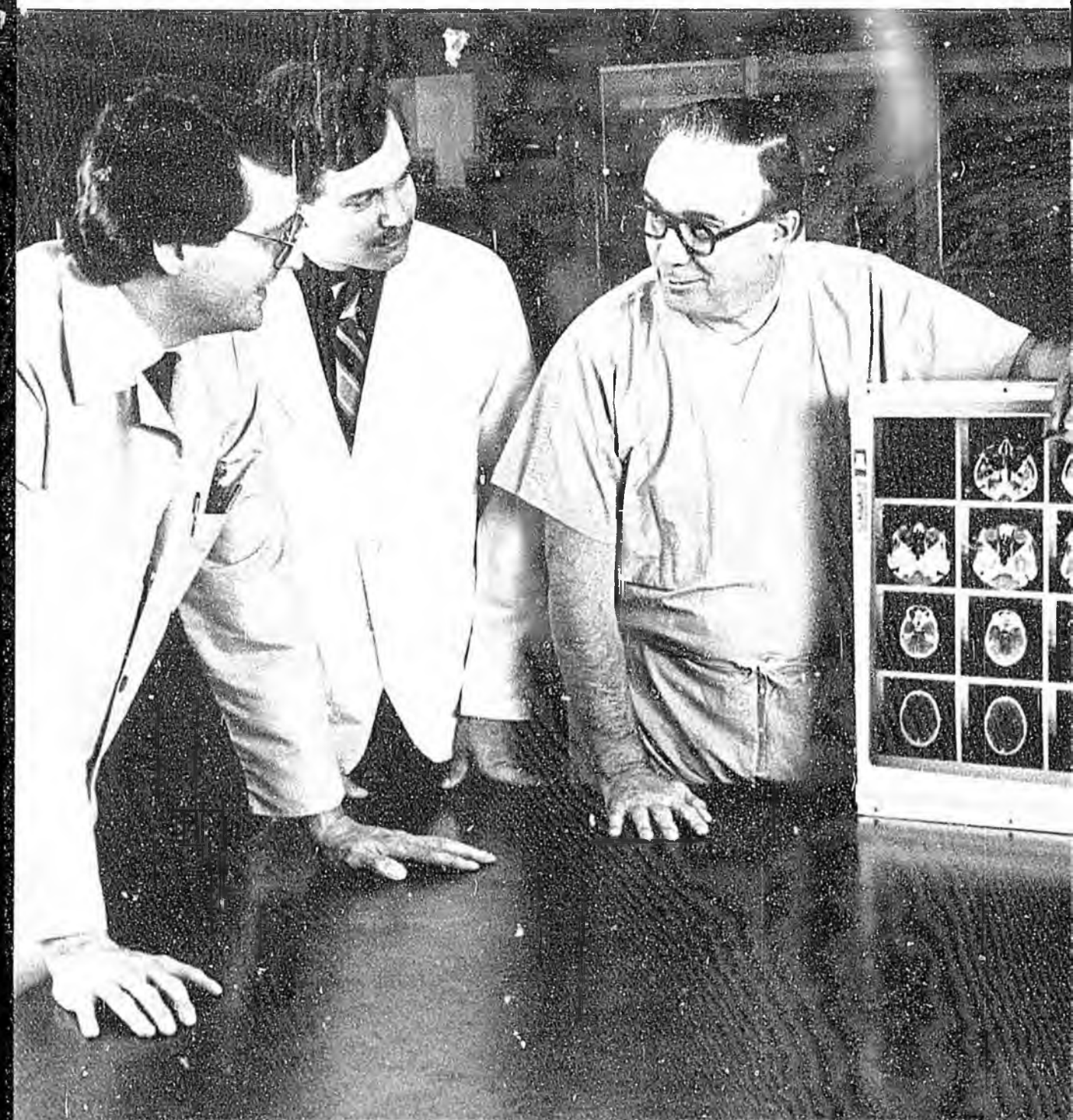
Course	Title	Credits
First Quarter		
C-911	Educational Implications of Visual Dysfunction	3.25
C-960	Educational Assessment of the Blind & Visually Handicapped	3.75
C-990	Practicum 1: Roles & Responsibilities of Personnel Working with Visually Handicapped	2.50
Second Quarter		
C-961	Educational Interventions for the Visually Handicapped & Multihandicapped	3.75
C-965	Braille & Communication for the Blind & Visually Handicapped	3.75
C-991	Practicum 2: Roles, Resources and Requirements in the Education of Persons with Visual Impairment	1.75
Third Quarter		
C-966	Technology & Instruction for the Visually Handicapped	2.75
C-967	Orientation & Mobility for Teachers	3.50
C-992	Practicum 3: Supervised Fieldwork in Education of the Visually Handicapped (one placement)	4.50
Fourth Quarter		
C-992	Practicum 3: Supervised Fieldwork in Education of the Visually Handicapped (one placement)	4.50

Additional course requirements for the M.Ed. degree include C-950 Research 1, C-951 Research 2 and the student's choice between a Master's thesis, a Master's project or comprehensive exams.

Continuing Education and International Programs

A variety of continuing education courses are offered to professionals from education, rehabilitation, optometry, and other human service fields. Fliers describing current courses, dates and fees are available. Instructors have national and international reputations and represent a variety of disciplines. Courses vary in length from one day to six weeks. Both on campus and off campus sites may be used.

Post-Graduate Opportunities



Alumni Association

The College Alumni Association is an active group of 4,300 graduates practicing in all areas of the U.S. and many foreign countries. All graduates automatically become members of the Alumni Association; there is no membership fee required.

The Alumni are represented by three members on the College Board of Trustees. The high point of the year for alumni activities is the annual reunion held each spring at the College. This meeting includes a continuing education program, exhibits, a business meeting and the annual banquet.

The Alumni Association funds a Scholars Program for financially needy and academically deserving students. During the most recent academic year, 15 students received Alumni Scholarships.

Licensing

Optometry school graduates must pass a written and clinical board examination prior to being licensed to practice their profession in any state, the District of Columbia, or the Commonwealth of Puerto Rico. Most states accept portions of the written examination of the National Board of Examiners in Optometry in lieu of their own written examinations.

The written portion of the National Board examination is given in three parts and administered each spring and late summer at all colleges of optometry. Part I, involving the basic sciences, may be taken in the spring of the second professional year; and Part II, covering clinical sciences, in the spring of the third year; and Part III, involving patient care, during the fourth year.

Center for Continuing Education

Rapid advances in modern technology make it imperative that today's optometrist keep abreast of the latest developments in the profession.

In 1973, the Pennsylvania College of Optometry established the Center for Continuing and Post Graduate Education, dedicated to offering optometric practitioners the opportunity to learn the newest techniques, the most advanced instrumentation and current developments in the eye care field. Continuing education programs are offered in cooperation with other schools of optometry and state optometric associations throughout the U.S. In most states, continuing education credits are required for optometrists to retain their licensure. For more information, call 215-276-6258.

Residency Program

Post graduate residencies at The Eye Institute offer Doctors of Optometry advanced training in primary care, pediatric optometry/vision therapy, vision rehabilitation, contact lenses, and other specialties.

Residency training emphasizes development of strong knowledge and skill in the area chosen, as well as a well-rounded experience in other specialty services provided at The Eye Institute and at external locations.

All residents participate in emergency eye care, various specialty services, residents practice, Grand Rounds presentations, case conferences, labs and independent study.

External hospital-based optometric residencies are offered at VA hospitals located in: Fort Howard, Md.; Wilkes Barre, Pa.; Lebanon, Pa.; Lyons, N.J.; and Vancouver, Wash. (geriatric). Other external residencies are offered at Wilford Hall Medical Center at Lackland Air Force Base, Texas, and at the Neumann Eye Institute in Deland, Fla.

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Faculty (1990-91)

Sarah Appel, Associate Professor, B.S., O.D., Pennsylvania College of Optometry
Sitaramayya Ari, Associate Professor, B.S., Andra University; M.S., Ph.D., Lucknow University
Sheree J. Aston, Assistant Professor, B.S., O.D., Pennsylvania College of Optometry
Felix M. Barker, II, Associate Professor of Optometry, B.A., B.S., O.D., Indiana University; M.S., University of Houston
Edwin Barkdoll, Research Assistant Professor of Biochemistry, B.A., University of Rochester; Ph.D., University of Pennsylvania
Marvin G. Baum, Adjunct Instructor, B.S., O.D., Massachusetts College of Optometry
Michael Beckerman, Adjunct Instructor, O.D., Southern College of Optometry
Monica Beliveau, Adjunct Instructor, M.Ed., Boston College , Ed.D., Columbia University
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L. Kennedy Bumgarner, Adjunct Instructor, B.A., Lenoir Rhyne College; B.S., Appalachian State University; B.S., O.D., Pennsylvania College of Optometry

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1990-92 Academic Calendar

Fall Quarter 1990

September 4	First day of instruction
September 20-21	Holiday recess
November 21	End of Fall Quarter
November 22-23	Holiday recess

Winter 1990-91

November 26	First day of instruction
December 24-January 1, 1991	Holiday recess
January 2	Instruction resumes
January 21	Holiday recess
February 19	End of Winter Quarter

Spring 1991

February 25	First day of instruction
March 29-April 1	Holiday recess
April 9-11	NBEO
May 24	End of Spring Quarter
May 25	Commencement

Summer Quarter 1991 *(Third & Fourth Year Students Only)*

June 3	First day of instruction
July 4	Holiday recess
August 13-15	NBEO
August 23	End of Summer Quarter

Fall 1991

September 3	First day of instruction
September 9	Holiday recess
September 17-18	Holiday recess
November 27	End of Fall Quarter
November 28-29	Holiday recess

Winter 1991-92

December 2	First day of instruction
December 23-January 1, 1992	Holiday recess
January 2	Instruction resumes
January 21	Holiday recess
February 27	End of Winter Quarter

Spring 1992

March 2	First day of instruction
April 14-16	NBEO
April 17-20	Holiday recess
May 22	End of Spring Quarter (First & Fourth Year Students)
May 23	Commencement Exercises
May 25	Holiday recess
May 28	End of Spring Quarter (Second & Third Year Students)

Directions to the Pennsylvania College of Optometry

The Philadelphia College of Optometry and its Eye Institute are located in the Oak Lane section of Philadelphia, bordering suburban Montgomery County. For out-of-town visitors, the campus is easily accessible from train and bus stations, the airport and major highways. In-city public transportation includes Southeastern Pennsylvania Transportation Authority (SEPTA) subway, bus, or commuter train lines; taxicab; and limousine and express bus service from the airport. Local transportation costs indicated are approximated one-way charges and are subject to change. For more information on SEPTA fares and schedules, call 580-7800.

From Train *(Amtrak's 30th Street Station)*

1) SEPTA Warminster Commuter Train to Fern Rock Station ($3). Walk 3 blocks West on Godfrey Avenue to College entrance.
2) Taxicab direct to the College ($20–$25).

From Bus *(Greyhound & Trailways Station, 10th & Filbert Sts.)*

1) Walk across street (eastward toward JC Penney's) to Market East Station. Board SEPTA Warminster Commuter Train to Fern Rock Station ($3.75). Walk 3 blocks West on Godfrey Avenue to College entrance.
2) Taxicab direct to the College ($16–$18).

From Airport *(Philadelphia International)*

1) Taxicab direct to the College ($25–$30).
2) Airport High Speed Line [($4.75 one way (pre-paid)] which leaves the airport every 30 minutes from 6:10 a.m. to 12:10 a.m. to Market East Station (11th & Market Streets). Board SEPTA Warminster Commuter Train ($3.25) to Fern Rock Station. Walk 3 blocks West to the College.
3) Automobile: Refer to directions below for the auto route from the South, via I-95.

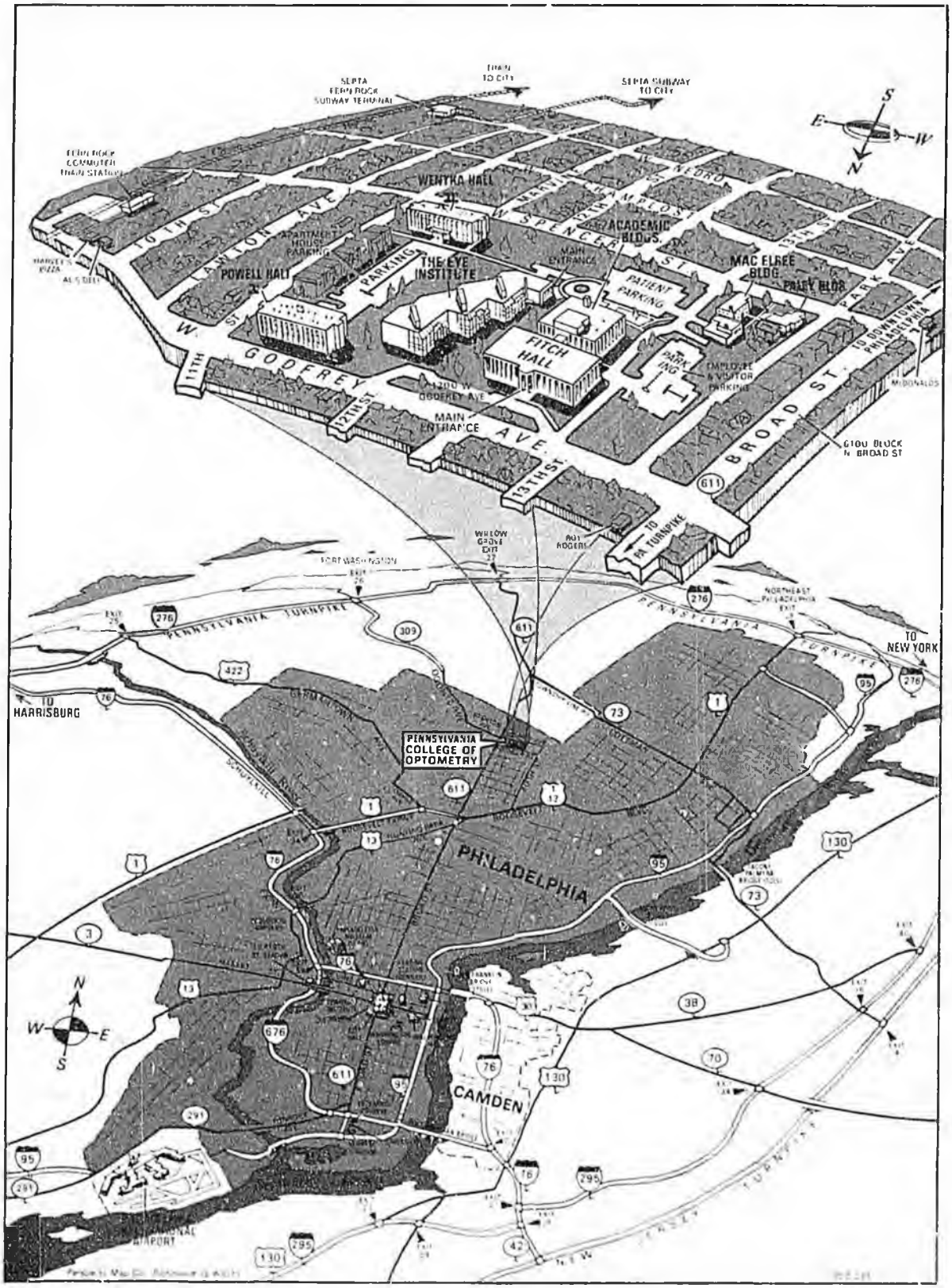
By Automobile

From the North, East and West — via Pennsylvania Turnpike

Take turnpike to Exit 26 (Fort Washington — Route 309). Follow Route 309 South crossing Cheltenham Avenue. (309 becomes Ogontz Avenue here). Proceed South on Ogontz Avenue to Stenton Avenue, turn left. (Stenton Avenue becomes Godfrey Avenue at Broad Street.) Proceed 1½ blocks East on Godfrey Avenue to College entrance.

From the South — via I-95

Follow I-95 North to the George C. Platt Memorial Bridge (just beyond Airport). Follow signs 1 mile to I-76 West, the Schuylkill Expressway. Follow the Schuylkill Expressway to the Roosevelt Expressway (Route 1 North). Take the Broad Street exit off the Expressway. Turn left on Broad Street and continue for 15 blocks to Godfrey Avenue and turn right. Proceed 1½ blocks East to College entrance.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FERN ROCK COMMUTER TRAIN STATION
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POWELL HALL
THE EYE INSTITUTE
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TO NEW YORK
TO HARRISBURG
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The Pennsylvania College of Optometry, by choice, declares and reaffirms its policy of complying with federal and state legislation and does not in any way discriminate in educational programs, employment, or in services to the public on the basis of race, color, creed or religion, sex, national origin, age or physical or mental handicap. In addition, the College complies with federal regulations issued under Title IX of the Educational Amendments of 1972, and Section 504 of the Rehabilitation Act of 1973, as amended.

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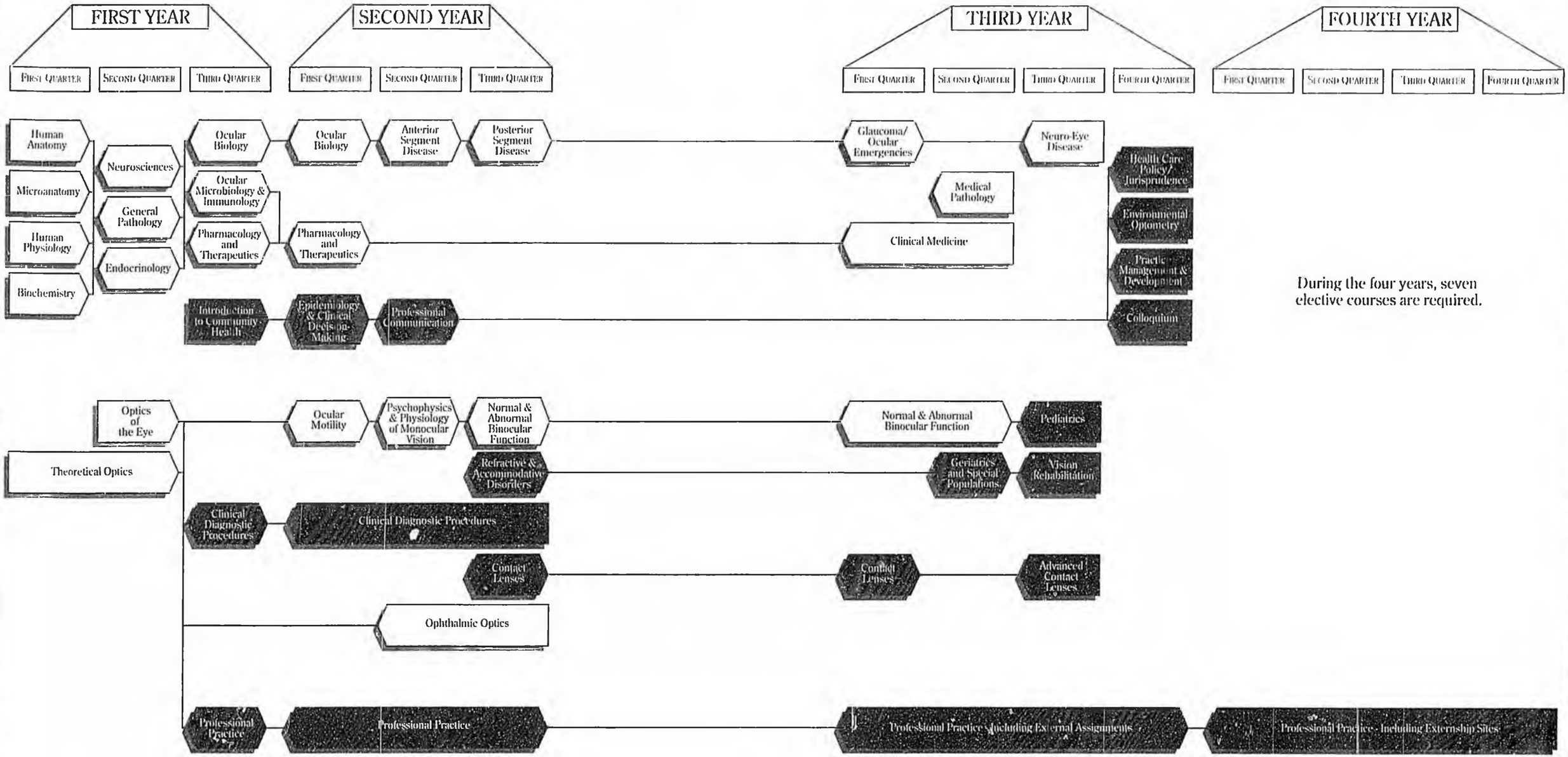

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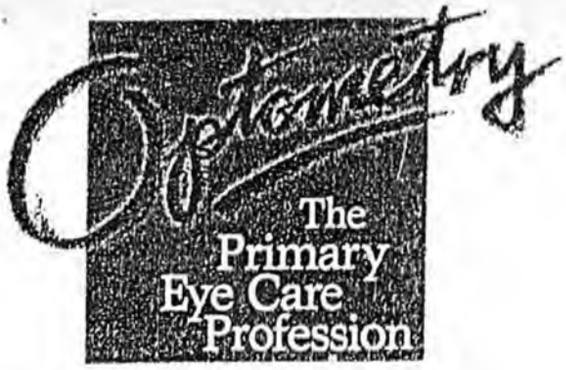


OPTOMETRY: THE PROFESSION

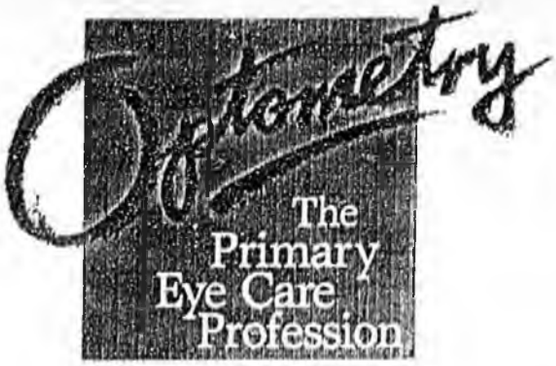
Optometry is an independent primary health care profession.

It encompasses the prevention and remediation of disorders of the eye/vision system through the examination, diagnosis, treatment and/or management of visual efficiency and eye health. The recognition and diagnosis of related systemic manifestations are designed to preserve and enhance the quality of life and environment.

Doctors of Optometry are primary health care providers who diagnose, manage and treat conditions and diseases of the human eye and visual system as regulated by state law.

These health care professionals are specifically educated, clinically trained and state licensed to examine the eyes for the presence or absence of vision problems, eye diseases or ocular manifestations of systemic diseases such as diabetes, hypertension, hyperthyroidism, etc. The primary vision care needs of consumers have shaped the scope of optometric practice as it is today.

American Optometric Association



EDUCATION OF THE DOCTOR OF OPTOMETRY

To establish perspective, there is value in comparing the general characteristics of the education of selected health professionals: optometry, medicine, podiatry, nursing and pharmacy.

Perhaps the most current review is reported by Robert F. Rushmer, M.D.[1] noted author and Director, Center for Advanced Studies in Biomedical Sciences, School of Medicine, University of Washington. He observed that each has state board requirements; all but pharmacy have national boards. All these educational institutions require accreditation at regular intervals. The admission requirements for medicine are less specific or demanding than in some other categories.

Each of these educational processes involves some years of basic sciences, preclinical education and clinical experience. Rushmer concludes, "In general, the basic educational experience of these five professions are remarkably similar and cannot account for consistent under utilization of 'non-medical' health professionals."

Addressing the concern for the provision of primary care, Dr. Rushmer makes the observation that the numbers of general practitioners and family physicians are grossly inadequate to afford the luxury of initial contact with physicians as the standard procedure; this is compounded in remote areas and central cities.

He points to the need for utilization of other health professions. Dr. Rushmer states, "Pharmacists undoubtedly have a sounder education in the details of dosage and distinctions among pharmaceutical agents than do physicians. Similarly, optometrists have a more extensive exposure to the basic principles of physiological optics than do physicians."

"From earliest times, the training of physicians has been based in large measure on apprenticeship, and vestiges of this orientation are clearly visible today in the clinics and the wards of teaching hospitals." "The residents, training to be specialists, usually serve as surrogate faculty for both interns and medical students." In contrast the training of optometrists can be described as a combined didactic, laboratory and clinical curriculum, the design of which has many parallels to dentistry.

By being exempt from the provisions of the statutes governing the practice of optometry, physicians in general are legally entitled to test eyes and prescribe glasses. Ophthalmologists complete a three year apprenticeship-style residency program concerning diseases of the eye; ophthalmology being a subspecialty of surgery. Beyond that of general medicine no licensing is required to practice ophthalmology.

In comparing the specialties Dr. Rushmer states, "...the upgraded curricula of optometry schools generally provide more extensive basic knowledge, training and experience in correcting refractive errors that most ophthalmologists receive. Training and clinic experience in detection of eye pathology now renders recent graduates of optometry school capable of filling an extremely important role in this specialized area of health care. The persistent opposition of the medical profession has retarded but only partially impeded optometrists from providing ever expanding service in the care of the eye."

1. Rushmer, R.F.: National Priorities for Health: New York, Wiley. 1980.

American Optometric Association

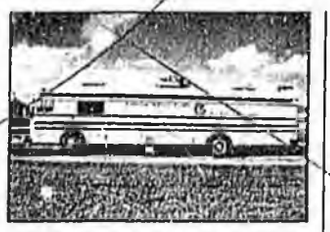
NEWS REVIEW

CATARACT SURGEONS HIT THE ROAD

Some Florida cataract surgeons are hitting the road to search for prospective patients.

Several large cataract surgery centers have purchased specially-outfitted screening vehicles, which make the rounds of the retirement communities, mobile home parks and shopping malls.

Inside the vans, technicians—and sometimes optometrists—perform free cataract and glaucoma screenings. When they find problems, they refer patients first



Eye Center of Florida's 40-foot screening vehicle.

to their own eye doctors for complete eye exams. If the patient doesn't have an eye doctor, they refer to area O.D.s friendly to the van's owner. And they offer the surgeon's services as well.

The idea is to find cataract patients, and reap the $1,549 to $1,821 per eye Medicare pays for surgery in Florida.

"It's a gimmick designed to find patients for surgery. The more cataracts, the better," says Fort Myers O.D. Donnie Dance.

Those who manage the vans admit to ulterior motives. "It's a marketing thing," says Richard A. Nixon, director of professional services for the Ft. Myers-based Eye Center of Florida. He is responsible for the comings and goings of a specially-equipped 40-foot vehicle that cruises throughout six counties, five to six

(Continued on p. 9)

IN THE NEWS: U.S. VISION SETTLES SUIT

U.S. Vision has settled out of court with Indianapolis O.D. Christopher OBeime, who sued the optical chain last September for "wrongfully" terminating an unwritten lease he had with the company and for refusing to return his patient records. Details of the settlement were not released.

□

Carl Zeiss, Inc. has denied an accusation by some newspapers and TV stations that it is among a group of German firms that sold military equipment to Iraq and supported the production of chemical weapons. Zeiss did sell medical equipment and surveying instruments to Iraq during the 1980s, a company spokesman said.

□

Blindness in rural areas nearly doubles the national rate, according to a study by researchers at Johns Hopkins. The researchers found that half the cases of blindness and impaired vision in their study could have been prevented with proper treatment. ■

DRUGS BECOME A GREATER PART OF PRACTICE

Using drugs to diagnose and treat eye diseases could soon be the norm rather than the exception in optometric practice. O.D.s are more likely to use diagnostic and therapeutic drugs today than they were in 1989, and they're handling nearly twice as many treatment-based office visits.

So says our latest National Panel, Doctors of Optometry, survey. Forty-four percent of our 500 panelists responded.

More O.D.s today are licensed to use diagnostic and therapeutic drugs than in 1989. Today, nine in 10 panelists may use DPAs; three in 10 may use TPAs. With these privileges, one California O.D. proclaims, "Patients no longer have an excuse to see an ophthalmologist for primary eye care."

It appears that O.D.s with licensure are more likely than two years ago to use drugs in daily practice. In 1989, only 6 percent of our

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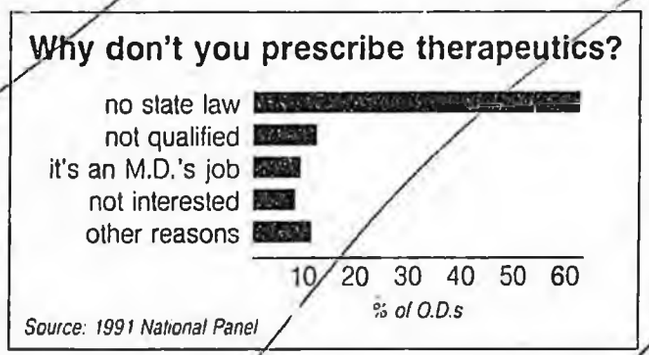

REVIEW OF OPTOMETRY (USPS 087-350) is published the 15th of each month for $36 per year ($49 per year in Canada, $57 in all other countries) by Chilton Company, Chilton Way, Radnor, PA 19089. Chilton Company is a division of American Broadcasting Companies, Inc., New York, NY. Second Class Postage Paid at Wayne, Pa., and other mailing offices. POSTMASTER—Send address changes to Review of Optometry, P.O. Box 2080, Radnor, PA 19089-9926.

An Analysis of Pharmacology Training in Schools of Optometry, Medicine and Dentistry

1985

Marti Waigandt, B.S.
Alex Waigandt, Ph.D.

Introduction

In recent years, a great deal of controversy has existed over the issue of drug licensure for optometrists. Members of the medical community have come out on both sides of the issue, some stating that optometrists are neither qualified to use nor require pharmaceuticals in practice and others stating that pharmaceuticals are both necessary and important in optometric practice.[1,2,3]

The role of the optometrist has changed markedly from the mid-19th century entrepreneur who merely corrected refractive errors to the highly skilled professional licensed to examine, diagnose and treat conditions of the visual system.[4,5] In addition to correcting refractive errors, the optometrist can often recognize early stages of pathological conditions such as diabetes, hypertension, arteriosclerosis, cataracts and glaucoma.[6] Since many of these conditions are asymptomatic at the onset, it is of vital importance that optometrists serve as portals of entry and make referral to the appropriate health care provider.[7] Optometrists refer 5.6 percent of their patients each week.[8] Improved and more complete ocular and visual care would undoubtedly be accomplished with the use of pharmaceutical agents. This would result in increased benefits and service to the patient. With the use of these agents, the training and skills of the optometrist would be maximized.

Not only has the role of the optometrist expanded, but so has the public need for his services. In the United States, approximately two out of every five persons require eye care, most of which is provided by optometrists.[9] Approximately 19,300 optometrists currently provide eye and vision service to 69 percent of the counties in the United States. About 9,500 active ophthalmologists provide service in only 33 percent of the counties in the U.S. and they are concentrated primarily in metropolitan areas.[10] Therefore, where a large proportion of the population has no access to an ophthalmologist they may have access to an optometrist.[11] It is important that every adjunct to diagnosis, including pharmaceutical agents, be made available to the optometrist in order to serve the public.

With regard to the diagnostic agents utilized by optometrists, the risks of adverse drug reactions are minimal. The safety and efficacy of these drugs has been established and substantiated in the professional literature.[12,13,14] One study showed that, for an 85 year period, "possibly ten deaths were reported associated with the topical application of these drugs, but only when misused."[15] Additionally, use of diagnostic pharmaceutical agents by optometrists in England, the United States Armed Services and in over thirty states in which use of these drugs is allowed has not resulted in any incidence harmful to the welfare of the public.[16]

The public need for optometrists to use drugs has been stated and the safety of these drugs has been demonstrated. Therefore, the question is: Are optometrists qualified to use pharmaceuticals? It is the intent of this study to analyze optometrists in terms of academic qualifications as compared to clinicians currently licensed to use pharmaceuticals.

Methods

Fourteen states contain colleges of optometry: Alabama, California, Illinois, Indiana, Massachusetts, Michigan, Missouri, New York, Ohio, Oklahoma, Oregon, Pennsylvania, Tennessee and Texas. These states were designated as study states and collectively contain 111 colleges of medicine, dentistry and optometry. Of these school types, 37 colleges of medicine, 31 colleges of dentistry and 15 colleges of optometry were selected for participation in the study. The department chairperson or director of pharmacology in each school was identified as the study respondent.

Data were generated from the subjects' responses to an instrument whose purpose was to query the amount of hours devoted to the study of pharmacology. The investigation, being descriptive in nature[17] viewed hours spent in each of 13 major pharmacology study categories and total class hours in the study of pharmacology as separate dependent variables. These categories included: (1) basic principles in pharmacology, (2) drug effects on the nervous

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system, (3) psychopharmacology, (4) central nervous system stimulants and depressants, (5) anesthetics, (6) cardiovascular agents, (7) ocular pharmacology, (8) respiratory and gastrointestinal tract agents, (9) endocrine pharmacology, (10) chemotherapy, (11) poisons and antidotes, (12) drug interactions and (13) prescription writing. A 14th variable involved the total hours each school type spends on the study of pharmacology. This instrument was designed through a review of the literature[18] and with the consultation of experts in the field; and, indicative of a pharmacology education sequence for health practitioners.

Results from the instrument were analyzed using the statistical package for the social sciences (SPSS) and calculated on an AS 9000 computer system at a major university. Treatment of the data was performed implementing: (1) descriptive tables utilized to analyze the demographic data, (2) means, standard deviations and analysis of variance (ANOVA) to analyze the major pharmacology study categories and (3) comparative analyses on the major pharmacology study categories whose F-ratio indicated significant differences. The .01 level was selected for statistical significance.

Results

Of the 83 schools surveyed, 41 schools responded (49.4 percent response rate overall). (Note: Several schools responded after the study deadline of May 1, 1984, but those data are not reflected in these results.) Eight were schools of optometry (53.3 percent response rate), 19 were schools of medicine (51.3 percent response rate) and 14 were schools of dentistry (45.2 percent response rate). Table 1 presents the states surveyed and the schools whose responses are reflected in the research data. With only one exception (Massachusetts), every state is represented by at least one school type and five states are represented by all school types studied.

TABLE 1
States surveyed and schools reflected in the research data

State	School Type	Number of Schools Responding
Alabama	Optometry	1
	Medical	2
	Dental	1
California	Optometry	2
	Medical	3
	Dental	1
Illinois	Optometry	1
	Medical	2
	Dental	1
Indiana	Optometry	1
	Medical	1
	Dental	0
Massachusetts	Optometry	0
	Medical	0
	Dental	0
Michigan	Optometry	0
	Medical	1
	Dental	1
Missouri	Optometry	1
	Medical	0
	Dental	0
New York	Optometry	0
	Medical	2
	Dental	1
Ohio	Optometry	1
	Medical	2
	Dental	2
Oklahoma	Optometry	0
	Medical	1
	Dental	1
Oregon	Optometry	0
	Medical	0
	Dental	1
Pennsylvania	Optometry	0
	Medical	2
	Dental	3
Tennessee	Optometry	0
	Medical	2
	Dental	0
Texas	Optometry	1
	Medical	1
	Dental	2
TOTAL		41

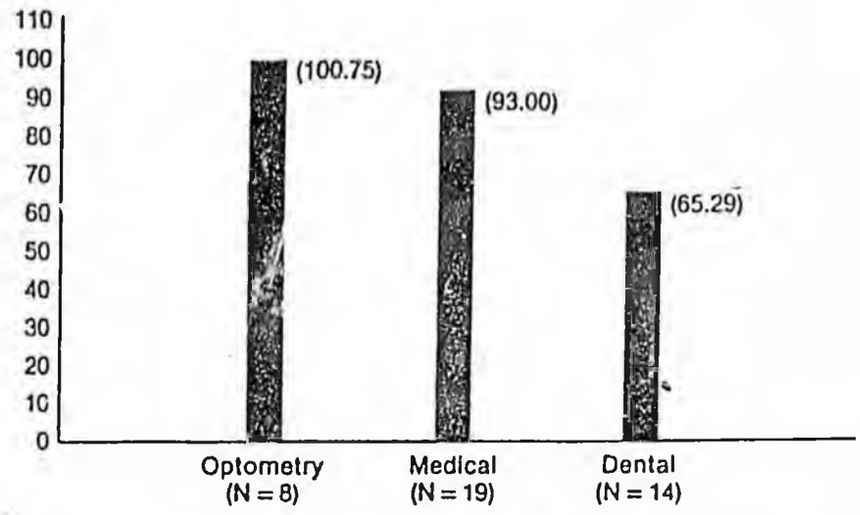
The results of the pharmacology study questionnaire in terms of mean responses and statistical comparisons between the study groups in each of the 14 categories are presented in Tables 2, 3 and Figure 1. Table 2 presents means, standard deviations and analysis of variance of classroom hours spent on major pharmacological study categories for the school types. Table 3 shows the comparisons between school type for major pharmacology study category whose F-ratio indicates significant differences. Figure 1 illustrates the total class hours in pharmacology training for schools of optometry, medicine and dentistry.

Basic Principles in Pharmacology

The range of hours in category 1 of the instrument is 15. Four schools spend only three hours and two spend 18 hours on this category. The overall mean for the entire sample is 8.71 hours. An F-ratio of 5.48 shows that there are significant differences among the three school types in hours spent in this study category.

Schools of optometry are not significantly different than either schools of medicine ($t = 2.51$, $df = 16.2$, $p = .02$) or schools of dentistry ($t = 0.04$, $df = 14.3$, $p = .97$). Medical schools do, however, spend more hours on this category than schools of dentistry ($t = 3.01$, $df = 30.8$, $p = .005$).

FIGURE 1
Total Class Hours in Pharmacology Training for Schools of Optometry, Medicine and Dentistry



Drug Effects on the Nervous System

The second category for comparison within the pharmacology study instrument involves class hours spent studying drug effects on the nervous system. The range of hours was found to be 23 with two schools spending only five hours and one school spending 28 hours on this category.

The mean is 13.24 overall and an F-ratio of 8.61 showed that there are significant differences among the three school types on this category of the instrument. Comparatively, optometrists and dentists do not differ on this category ($t = 0.99$, $df = 13.1$, $p = .922$), whereas medical schools devote more hours than either optometry ($t = 2.97$, $df = 14.8$, $p = .009$) or dental schools ($t = 3.83$, $df = 30.9$, $p = .001$).

Psychopharmacology

The range for hours spent teaching psychopharmacology is 10. The grand mean for this category is 4.75 with the three school types averaging between four and six class hours. According to the calculations, there are no significant differences ($F = 1.74$, $p = .189$/n.s.) among optometry schools ($\bar{X} = 4.37$, $SD = 3.25$), schools of medicine ($\bar{X} = 5.47$, $SD = 2.24$) and schools of dentistry ($\bar{X} = 4.00$, $SD = 1.80$).

Central Nervous System Depressants and Stimulants

The fourth category within the questionnaire involves classroom hours spent on the CNS depressants and stimulants. No significant differences are present among schools of optometry, medicine and dentistry for hours spent in this content area ($F = 1.02$, $p = .368$/n.s.). The three school types average between seven and ten class hours on the CNS depressants and stimulants.

Anesthetics

The hourly range on the instrument category identified as anesthetics is 10. The overall mean for the entire sample is 4.63. Although schools of optometry and medicine are not significantly different in this category ($t = 1.56$, $df = 21.0$, $p = .133$), an F-ratio of 6.91 indicates that significant differences do exist among the three groups. The comparisons between schools on hours spent teaching anesthetics show that schools of optometry require significantly less hours than schools of dentistry ($t = 3.80$, $df = 18.9$, $p = .001$).

Cardiovascular Agents

Category six within the pharmacology study questionnaire deals with cardiovascular agents. An F-ratio of 14.31 shows that significant differences exist among the school types on this category. According to the analysis, optometry schools and schools of dentistry do not differ on this category ($t = 1.24$, $df = 19.8$, $p = .229$). The mean hours for schools of medicine ($\bar{X} = 12.26$) fall above the grand mean of 9.49 and indicate that medical schools spend more time on cardiovascular agents than dental schools and schools of optometry (Med vs Den, $t = 3.74$, $df = 23.8$, $p = .001$; Med vs Opt, $t = 6.41$, $df = 20.7$, $p = .000$).

Ocular Pharmacology

The seventh category within the instrument asks for classroom hours spent on ocular pharmacology. The overall mean hours spent by the sample schools is 7.12. According to the data, schools of optometry average ($\bar{X} = 34.00$) more than the grand mean whereas medical and dental schools spend less time than the overall average ($\bar{X} = 0.63$ and 0.57 respectively). All three groups had relatively large standard deviations that indicate extensive variability.

The results of the analysis of variance (ANOVA) show that there are statistically significant differences among the groups on this category of the pharmacology study questionnaire. The comparative analyses show that optometry schools spend more hours than schools of medicine ($t = 8.97$, $df = 7.0$, $p = .000$) and schools of dentistry ($t = 8.94$, $df = 7.0$, $p = .000$) teaching ocular pharmacology to their students.

TABLE 2
Means, Standard Deviations and Analysis of Variance of Class Lecture Hours Spent on Major Pharmacological Study Categories by Optometry, Medical and Dental Schools

Category	Optometry N = 8 $\bar{X}$ (SD)	Medical N = 10 $\bar{X}$ (SD)	Dental N = 14 $\bar{X}$ (SD)	Grand Mean (SD)	F-ratio	F
Basic Principles in Pharmacology	7.12 (3.04)	10.58 (3.75)	7.07 (2.95)	8.71 (3.36)	5.48	*
Drug Effects on Nervous System	10.75 (4.23)	16.26 (4.76)	10.57 (3.71)	13.24 (4.33)	8.61	**
Psycho-pharmacology	4.37 (3.25)	5.47 (2.24)	4.00 (1.80)	4.75 (2.37)	1.74	n.s.
CNS Stimulants and Depressants	7.75 (3.72)	9.89 (4.21)	8.57 (3.20)	9.02 (3.84)	1.02	n.s.
Anesthetics	3.12 (1.13)	4.05 (1.93)	6.29 (2.73)	4.63 (2.13)	6.91	*
Cardiovascular Agents	6.12 (1.88)	12.26 (2.99)	7.64 (3.83)	9.49 (3.15)	14.31	***
Ocular Pharmacology	34.00 (10.57)	0.63 (0.89)	0.57 (0.65)	7.12 (4.59)	170.14	***
Respiratory and GI Tract Agents	2.00 (1.77)	3.26 (1.66)	2.29 (2.02)	2.68 (1.85)	1.88	n.s.
Endocrine Pharmacology	5.50 (2.83)	7.11 (3.40)	4.14 (2.51)	5.78 (3.23)	3.93	n.s.
Chemotherapy	8.37 (4.75)	14.05 (5.50)	8.64 (4.24)	11.10 (4.96)	6.28	*
Poisons and Antidotes	1.00 (1.07)	3.31 (2.56)	1.35 (1.22)	2.19 (1.96)	5.90	*
Drug Interactions	1.50 (0.93)	1.47 (0.70)	1.71 (0.99)	1.56 (0.84)	0.35	n.s.
Prescription Writing	1.12 (0.64)	1.11 (0.87)	1.64 (1.15)	1.29 (0.95)	1.46	n.s.
Total Hours in Pharmacology	100.75 (14.24)	93.00 (15.47)	65.29 (19.40)	85.05 (16.71)	15.46	***

*p <.01 **p < .001 ***p < .0001

Respiratory and Gastrointestinal Tract Agents

An analysis of variance (ANOVA) conducted on responses to category eight of the instrument indicate that optometry, medical and dental schools are not significantly different (F = 1.88, p = .166/n.s.) in terms of hours spent teaching respiratory and GI tract agents. The overall mean, in terms of hours, is 2.68 and the schools devote an average of two to four hours on this category.

Endocrine Pharmacology

The ninth category within the pharmacology study questionnaire deals with hours spent teaching endocrine pharmacology. An F-ratio of 3.93 (p = .028/n.s.) indicates that no significant differences exist among the school types in terms of hours devoted to this category. All three school types are close to the grand mean of 5.78 class hours.

Chemotherapy

The range of hours the school types spend teaching chemotherapy is 30. Over 40 percent of the schools studied

TABLE 3
Comparisons Between School Type for Significant Differences ($p < .01$) on Major Pharmacology Study Category

		t-ratio	df	t Probability
Basic Principles in Pharmacology	Optometry and Medical	2.51	16.2	.023
	Optometry and Dental	0.04	14.3	.969
	Medical and Dental	3.01	30.8	.005*
Drug Effects on the Nervous System	Optometry and Medical	2.97	14.8	.009*
	Optometry and Dental	0.10	13.1	.922
	Medical and Dental	3.86	30.9	.001*
Anesthetics	Optometry and Medical	1.56	21.9	.133
	Optometry and Dental	3.80	18.9	.001*
	Medical and Dental	2.62	22.2	.016
Cardiovascular Agents	Optometry and Medical	6.41	20.7	.000*
	Optometry and Dental	1.24	19.8	.229
	Medical and Dental	3.74	23.8	.001*
Ocular Agents	Optometry and Medical	8.97	7.0	.000*
	Optometry and Dental	8.94	7.0	.000*
	Medical and Dental	0.22	31.0	.820
Chemotherapy	Optometry and Medical	2.70	15.3	.020
	Optometry and Dental	0.13	15.3	.890
	Medical and Dental	3.19	30.9	.003*
Poisons and Antidotes	Optometry and Medical	3.31	25.0	.003*
	Optometry and Dental	0.77	16.4	.480
	Medical and Dental	2.92	27.2	.007*
Total Lecture Hours in Pharmacology	Optometry and Medical	1.26	14.3	.230
	Optometry and Dental	4.90	18.5	.000*
	Medical and Dental	4.41	24.2	.000*

*$p < .01$

spend 10 hours or less on this category while only five percent spend more than 20 hours. The grand mean for this category is 11.10 hours. The ANOVA indicates that significant differences ($F = 6.28$) exist among the school type in terms of hours spent teaching chemotherapy.

Optometry schools are not significantly different than medical schools ($t = 2.70$, $df = 15.3$, $p = .02$) or schools of dentistry ($t = 0.13$, $df = 15.3$, $p = .89$). Dental and medical schools are significantly different ($t = 3.19$, $df = 30.9$, $p = .003$), however, with medical schools spending more time on chemotherapy than dental schools.

Poisons and Antidotes

Category eleven within the pharmacology study questionnaire asks for the number of hours the school types spend on poisons and antidotes. An F-ratio of 5.90 indicates that there are significant differences among the school types on this category. A comparative analysis between school type shows that medical schools spend more time than schools of optometry and dentistry (Med vs Opt, $t = 3.31$, $df = 25.0$, $p = .003$; Med vs Den, $t = 2.92$, $df = 27.2$, $p = .007$) but that optometry and dental schools do not differ on hours spent teaching poisons and antidotes ($t = .88$, $df = 16.4$, $p = .48$).

Drug Interactions

The overall mean within school types for this category of the instrument is 1.56 hours. All three school types average approximately one and a half hours teaching drug interactions. An analysis of variance ($F = 0.35$, $p = .71$/n.s.) conducted on this category indicates that schools of optometry, dentistry and medicine are not significantly different in terms of hours spent on category twelve.

Prescription Writing

The thirteenth category within the pharmacology study questionnaire involves responses relating to hours spent on prescription writing. No significant differences are found among the school types ($F = 1.46$, $p = .24$/n.s.) with all three school types devoting approximately one hour on this category.

Total Hours in Pharmacology

The last category for comparison within the pharmacology study questionnaire deals with the total classroom hours the school types spend studying pharmacology. The range of hours is 88. Of the schools surveyed, one school

spends only 39 hours teaching pharmacology whereas another spends 127. The overall average within the school types is 85.05 hours. Figure 1 shows a graphic comparison for total class hours in pharmacology training for schools of optometry ($\bar{X} = 100.75$), medicine ($\bar{X} = 93.00$) and dentistry ($\bar{X} = 65.29$).

An analysis of variance indicates that significant differences exist among the groups for total hours spent teaching pharmacology. Comparisons between schools show that no significant differences exist between optometry and medical schools ($t = 1.26$, $df = 14.3$, $p = .23$). This is consistent with what Hegeman found when she compared the pharmacology content for optometry and medical students at Indiana University, Bloomington.[19] Both schools of optometry and medicine devote more total class hours than schools of dentistry to the study of pharmacology (Opt vs Den, $t = 4.90$, $df = 18.5$, $p = .000$; Med vs Den, $t = 4.41$, $df = 24.2$, $p = .000$).

Conclusions

The safety of the pharmaceuticals in question and the need for optometrists to use such agents has been established. In the opinion of some members of the medical community, optometrists are not properly educated in the area of pharmacology, thus unqualified to utilize pharmaceuticals. However, there is no justification for this belief on the basis of the data presented. Some ophthalmologists are presumptuous enough to believe that they are the only persons qualified to conduct comprehensive eye examinations.[20] This may be due to their lack of knowledge regarding academic training for optometrists.

Based upon the results of this study, optometrists receive sufficient training in the area of pharmacology. In no category were optometrists significantly lower than both medicine and dentistry. This indicates that optometry offers at least as much training in any study area as one of the other two health professions.

The significant differences present among the groups can be attributed to the professional requirements. Ocular pharmacology is emphasized for optometry while dentistry spends more time studying anesthetics and medicine, concentrates on cardiovascular agents, drug effects on the nervous system and poisons and antidotes. Therefore, all optometrists should be permitted to utilize ocular pharmaceutical agents in order to provide the maximum benefit and service to the public. □

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15. Transcript of the testimony by Dr. James F. Koetting "Urging support of HB 104 permitting optometrists to use topically applied pharmaceutical agents in the examination of the eye and the evaluation of vision" before the Subcommittee on Health, Committee on Pension, Social Welfare and Public Health, Mississippi House of Representatives, January 26, 1981.
16. Transcript of the testimony by Dr. James F. Koetting "Urging support of HB 104 permitting optometrists to use topically applied pharmaceutical agents in the examination of the eye and the evaluation of vision" before the Subcommittee on Health, Committee on Pension, Social Welfare and Public Health, Mississippi House of Representatives, January 26, 1981.
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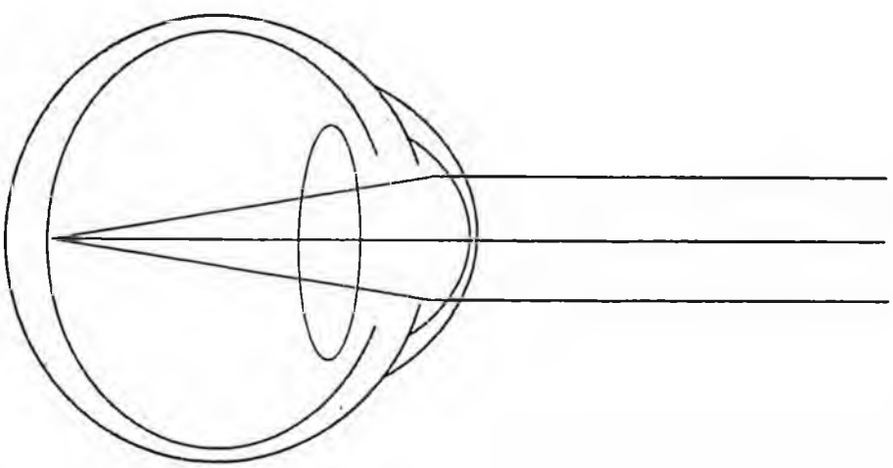
18. Goth A: *Medical Pharmacology*, ed 10. St. Louis, Mosby, 1981, pp lx-xl.
19. Hegeman S: Comparison of pharmacology courses for optometry and medical students. J Optom Educ, 1983; 9(1): 22-23.
20. Antony ML: "Letter to the Louisiana Ophthalmology Association" in Ophthalmic Physicians Education Network, 1976, pp 29-30.

The institutional affiliation of Dr. Rogers Reading was incorrectly identified on page 23 of the Summer 1984 (Volume 10, Number 1) issue of JOE. Dr. Reading is a long-time and respected faculty member at Indiana University School of Optometry. JOE regrets the error.

FOCUS ON THE FACTS



O.D.

A LEGISLATORS' GUIDE TO OPTOMETRIC LEGISLATION IN TEXAS

Texas Optometric Association
Texas Association of Optometrists

CONTENTS

I. PURPOSE OF THIS LEGISLATION

The purpose of this legislation is to update the statutory definition of the practice of optometry in Texas. Unlike general medicine, optometrists practice under a restricted license and must amplify legislation as optometric education and eye care technology expand. Passage of this legislation would allow qualified Texas optometrists to treat the conditions they diagnose in a manner consistent with their education and training. *As a result, the citizens of Texas will have greater access to high quality, cost-effective eye care.*

II. CLARIFICATION OF TOPICAL PHARMACEUTICAL AGENTS UTILIZED IN EYE CARE

Diagnostic pharmaceutical agents (DPA's) are medications used by the optometrist in examining the eye and diagnosing vision disorders and eye disease.

Therapeutic pharmaceutical agents (TPA's) are medications used to treat an ocular disease that the optometrist has already diagnosed.

III. THE OPTOMETRIC PROFESSION

OPTOMETRISTS : Doctors of optometry diagnose, manage, and, where permitted by state law, treat conditions and diseases of the human eye and visual system. A doctor of optometry completes four years of undergraduate education and four additional years of post-graduate optometric training. Optometry is one of the largest independent health care provider groups in the United States.

OPHTHALMOLOGISTS: Doctors of medicine who specialize in surgical and advanced medical care of the human eye. Due to the low prevalence of eye disease requiring surgical care, most ophthalmologists spend the majority of their time dealing with routine eye care needs, the same care provided by the optometrist.

GENERAL MEDICAL PRACTITIONER: A medical doctor who may or may not specialize in a particular health care area. General practitioners are permitted to treat diseases of the eye.

OPTICIAN: A person trained to fabricate and dispense corrective lenses from the prescription of a doctor of optometry or medicine.

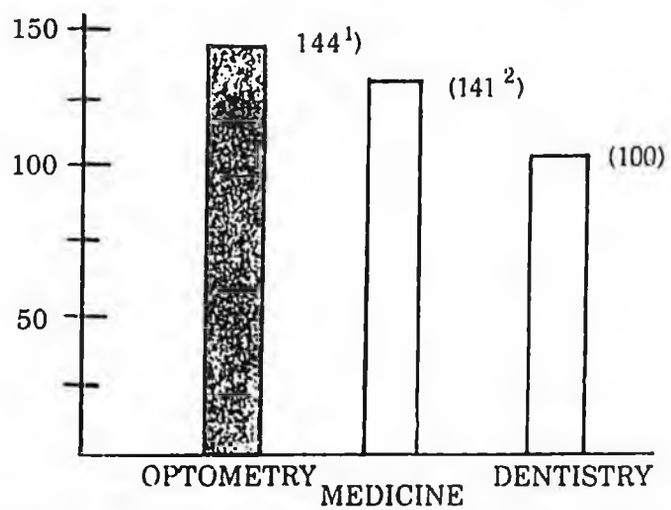
IV. TEXAS OPTOMETRY'S EXPERIENCE WITH PHARMACEUTICAL AGENTS

Texas optometrists have safely and effectively utilized diagnostic pharmaceutical agents for many years. As a result, Texans have received better primary eye care. Proper diagnosis is the most difficult aspect of treatment Optometrists are already legally required to diagnose eye disease - ***establishing a treatment plan is the next logical step.***

In 25 states, where optometrists routinely use drugs to diagnose and treat eye disease, problems have virtually been non-existent. Texas optometrists do not have this earned and justified privilege. The University of Houston College of Optometry trains doctors for eight other states that allow optometrists to prescribe and administer therapeutic medications, including our neighboring states of New Mexico, Oklahoma, and Arkansas. This training is equal to or greater than that of other health care practitioners (Graph I). Many highly qualified optometrists trained at the University of Houston College of Optometry leave their home state of Texas to practice where they can care for patients to the full extent of their training. These state education funds would be better spent if these doctors could practice their healing arts in their own native state.

Graph I

OPTOMETRIC EDUCATION IN PHARMACOLOGY SURPASSES OTHER HEALTH CARE PROFESSIONS



TOTAL CLASS HOURS IN PHARMACOLOGY TRAINING

[1] Catalogue listing University of Houston College of Optometry

[2] Average of catalogue listings of Baylor College of Medicine, UT Medical School at Houston, and Texas A&M Medical School.

V. WHY THIS LEGISLATION IS GOOD PUBLIC POLICY

This legislation is needed for one main reason - ***it will be beneficial to the citizens of Texas.*** Allowing highly trained and certified optometrists to treat ocular disease will increase patient's access to care, be cost-effective, and be more consistent with optometric education.

BETTER ACCESS TO EYE CARE

According to the American Public Health Association, more than one third of all U.S. residents have eye problems, yet only half of those needing treatment receive it. Optometrists are the largest group of eye care providers in Texas as well as the nation. According to the Texas Medical Association and the Texas Optometry Board, optometrists outnumber ophthalmologists two to one in Texas (1658 optometrists vs. 886 ophthalmologists). Unlike ophthalmology, doctors of optometry are widely distributed across the vast state of Texas (Graph II). In many communities, optometrists are the only doctor specifically educated and trained as eye care specialists. ***The American Public Health Association has recognized the need for better access to quality eye care and supports legislation that updates optometry to a <u>therapeutic</u> profession.***

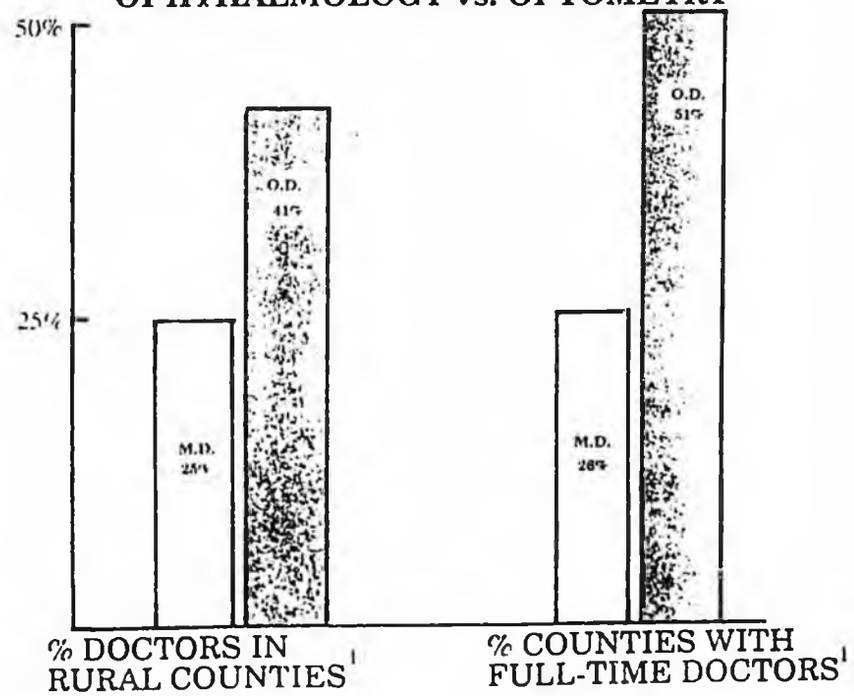
The rural health care crises is forcing medical doctors to leave rural Texas and hospitals to close. Under current law, many patients must travel long distances to costly specialty clinics. Allowing optometrists who already practice in rural areas to treat eye disease would fill these eye care gaps. Optometrists also routinely provide evening and weekend appointments, a practice rarely provided by ophthalmologists.

The optometrist is usually the first contact for a patient suffering from an eye disorder. In most cases, needed treatment will begin more promptly, an important aspect in the treatment of many eye diseases. Early diagnosis and treatment allows the optometrist to eliminate patient suffering and, in many cases, prevent serious complications from ocular and systemic disease.

Graph II

RURAL vs. URBAN EYECARE COVERAGE IN TEXAS

OPHTHALMOLOGY vs. OPTOMETRY



1 Source: state licensure records

COST-EFFECTIVE CARE

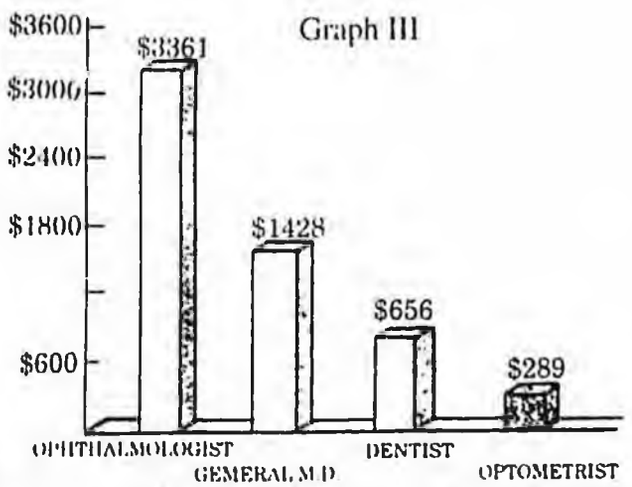
It is cost-effective to allow optometrists to practice at their highest level of competence. Allowing optometrists to treat what they have already diagnosed will save the public money by eliminating unnecessary visits to and long waits at another doctor. Extra travel time and time away from work will also be reduced.

Doctors of optometry in 25 other states, in military service, the U.S. Public Health Service and in VA Hospitals have utilized diagnostic ***and*** therapeutic medications for many years. A legislative analysis on reducing health care costs in North Carolina cited the optometric use of diagnostic and therapeutic drugs as one of the greatest means of addressing spiraling health care costs. Due to the higher cost of training, equipment, and liability insurance, ophthalmology services are often more expensive than optometric services, even though their specialized training is not warranted for the condition under treatment. According the Journal of American Medical Association, April 1985, "The cost of primary care increases when it is provided by specialists, without necessarily improving its quality...".

An unbiased reflection of quality, cost-effective care is malpractice insurance rates. Optometric professional liability insurance is among the lowest of any profession (Graph III). The insurance marketplace, which usually overreacts to the slightest risk, is so comfortable with the safety of optometric treatment of patients that therapeutic laws do not even make a blip on the premium scale. There is no better evidence of the safety of permitting optometrists to treat to the full level of their training than this marketplace response of the insurance industry. Poe and Associates, which is the biggest insurer of optometrists, has found no reason to and does not charge different rates in states that allow optometrists to use therapeutic drugs. (Graph IV).

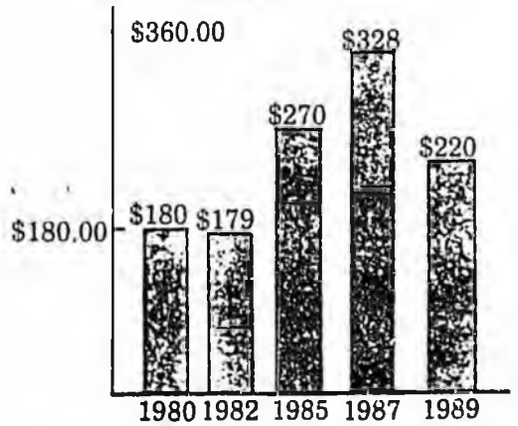
Many Texas optometrists accept Medicaid and Medicare assignment. This greatly reduces the out of pocket expenses for senior citizens and with passage of this legislation, would decrease the monetary burdens placed on these programs by unnecessary referrals to surgical specialists (ophthalmologists).

Graph III



AVERAGE MALPRACTICE PREMIUMS

Graph IV



OPTOMETRIC MALPRACTICE PREMIUMS IN NORTH CAROLINA

SOURCE. CRUMPTON INSURANCE AGENCY

OPTOMETRIC TRAINING

"My 16 years of joint clinical teaching experience confirms the fact that ophthalmological training programs concentrate more on advanced medical and surgical cases while clinical optometric programs provide equal teaching experience in eye disorders and disease at the primary care level."

Joseph C. Toland, O.D., M.D.
Optometrist, Ophthalmologist, and Professor
Jefferson County Medical College
Pennsylvania College of Optometry

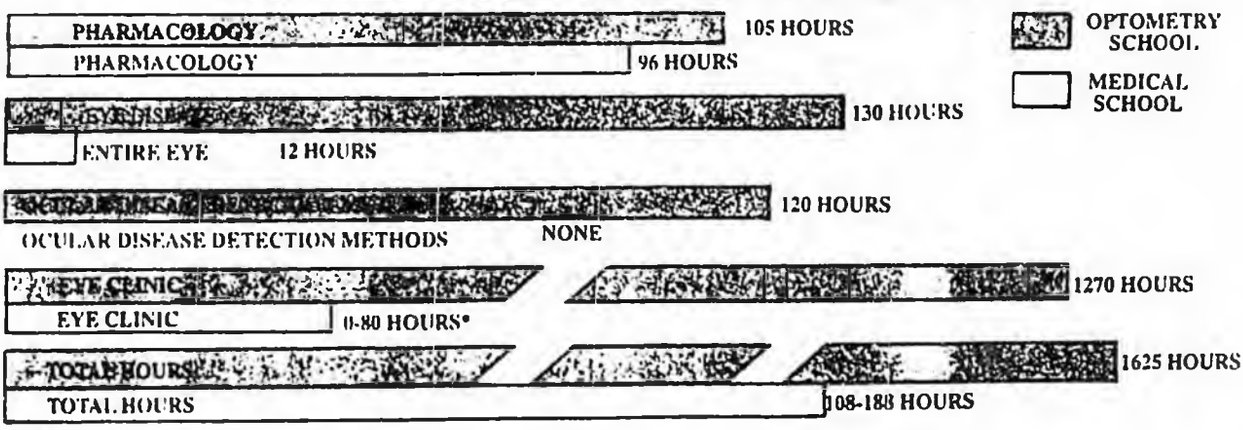
Source: Update Care Minnesota Optometric Association

Health care practitioners, including optometrists, are responsible for providing their patients with the highest level of care consistent with their education and training. Optometric education has expanded well beyond the limitations of current Texas law. State and national funding utilized in the training of health care practitioners are better served when those doctors are allowed to care for patients to the full extent of their training. Legislation allowing optometrists to treat eye disease would be consistent with their training and education.

Other medical and non-medical health care practitioners (physicians, dentists, podiatrists) routinely prescribe topical, oral, and injectable therapeutic medications. The curriculum in optometry school closely resembles that of medical, dental, and podiatry schools, including courses in anatomy, physiology, biochemistry, microbiology, pathology, and pharmacology. None of these other practitioners, including general medicine, have the extensive training and education specific to eye disease and ocular pharmacology (Graph V). Archives of Ophthalmology , October 1990, reports that *less than "50% of the medical students in the United States have exposure to a curriculum that teaches ophthalmic fundamentals that will provide them with the knowledge and skills necessary for a good medical practice".* Yet of all these practitioners, only optometry is restricted by law in the use of pharmaceutical agents.

Graph V

AVERAGE CLASSROOM HOURS DEVOTED TO DETECTION AND MANAGEMENT OF EYE DISEASE OPTOMETRY SCHOOL vs. MEDICAL SCHOOL



*optional, only 15% choose it

Source: Analysis of Pharmacology Training in Schools of Optometry, Medicine and Dentistry Journal of Optometric Education, Vol. 10, No. 3, Winter 1985.

THIS LEGISLATION HAS SUFFICIENT SAFEGUARDS

There has been significant change in optometric legislation over the past fifty years. This legislation will include comprehensive safeguards to assure the publics safety.

- *No "grandfathering" of currently licensed optometrists will be allowed.* Optometrists wishing to utilize therapeutic agents will have to be certified by the Texas State Board of Optomery.

- *Practitioner competency will be assured.* Strict educational requirements will be established by the Texas State Board of Optometry. Optometrists are the only doctors in Texas required by their own law to stay abreast with their field through annual continuing education requirements.

VI. IS THERE A CONTROVERSY?

"With both their incomes and egos in jeopardy, it's not surprising at all that ophthalmologists or any other similarly situated group would react the way they are. What we're seeing is economic guerilla warfare...it's a straight pocket-book issue. Ophthalmology's attempts to limit optometry's scope of practice are, not surprisingly, cloaked in the garb of public health and welfare. But they're nothing of the sort. ***Ophthalmology is trying to protect its source of revenue."***

Douglas J. Colton, J.D.
Anti-trust Attorney, Washington, D.C.
Source: Update Care Minnesota Optometric Association

Generally speaking, there is no controversy. Certain segments of the medical profession will voice opposition to this legislation. A recent publication of the American Academy of Ophthalmology contains the following observation - "according to a study commissioned by the federal government in 1982, the number of ophthalmologists already exceeds the need for them and continues to increase". Because the ophthalmological population exceeds the need for advanced specialty and surgical eye care, most ophthalmologists spend the majority of their time providing routine or primary eye care services, the same services provided by optometrists. Ophthalmology itself is divided on the issue of optometric use of therapeutic medications with many surgeons being in favor of this legislation. The basic economic reality is that a segment of ophthalmology opposes this legislation because it effects them economically. In Rhode Island, Florida, and West Virginia state courts, ophthalmology went on record that this was in fact an economic issue for them.

All doctors have a primary responsibility - their professional training and ethics mandate they provide the highest quality care possible. This legislation does not alter this professional responsibility. In reality, ***if this legislation fails to be enacted there is only one group of individuals that lose - the citizens of this state.***

American Public Health Association

1015 Fifteenth Street, NW
Washington, DC 20005
202/789-5600

January 10, 1991

Hal V. Marsell
Chairman, Utah State Optometry Board
Utah State Legislature
190 South Fort Lane, #1
Layton, UT 84041

Dear Chairman Marsell:

I am very pleased to write in support of the legislation soon to be introduced which would update your state's laws concerning optometric care.

As you may know, at its 118th Annual Meeting, the American Public Health Association (APHA), which represents a combined national and affiliate membership of over 52,000 public health professionals and community health leaders, adopted a resolution entitled "Access to Treatment for Eye Care by Optometrists." A copy is enclosed for your immediate reference.

This resolution acknowledges that the expansion of clinical privileges of optometrists has increased the availability, accessibility, and cost effectiveness of eye care to the American public. The resolution recommends that States update their optometric practice acts to allow for optometric use of those diagnostic and therapeutic pharmaceuticals which have been determined by the State Board of Examiners in Optometry as being within the scope of competency of pharmaceutically certified optometrists. We further recommend that dispensing of such pharmaceuticals be regulated by state pharmacy laws.

Currently, ~~25~~ 30 states allow optometrists to use therapeutic drugs for the benefit of their patients. APHA urges your support for legislation which encompasses the principles endorsed in the APHA resolution, and would result in better access to comprehensive eye care of the American citizens.

I am confident that the citizens of Utah will be well served and will benefit greatly if comparable legislation is adopted by your state. As an MD, a Dean of a School of Public Health, and President-elect of APHA, I strongly endorse its passage.

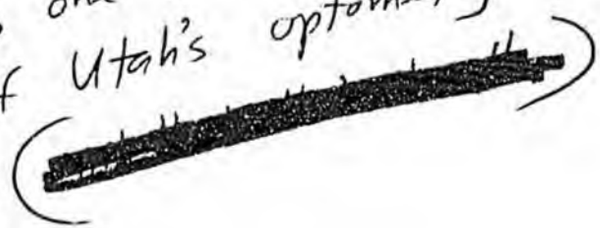
Sincerely,

Joyce C. Lashof, MD
President-elect, APHA and
Dean, School of Public Health
University of California at Berkeley

JCL:mam/APHA

enclosure

Jeff Keller, O.D. is one of the leaders of Utah's optometry bill



LEGISLATURE 1991

Panel OKs Bill Allowing Optometrists to Prescribe Drugs

A bill allowing optometrists to prescribe a limited range of drugs received the Senate Business, Labor and Economic Development Committee's endorsement Wednesday.

The committee voted 9-5 to send House Bill 168 to the full House for consideration. The bill is sponsored by nearly two dozen legislators, including several on the committee.

The lengthy debate before the committee pitted optometrists against ophthalmologists.

Optometrists contend the extension of powers would allow them to provide better and less expensive care to patients, particularly those in rural areas, and that they have received enough training to prescribe certain drugs for the treatment of common diseases and minor injuries.

Optometrists also maintain ophthalmologists want to defeat the bill to limit economic competition.

Ophthalmologists said money has nothing to do with their opposition and that their primary interest is protecting public health. They insist that optometrists have not received sufficient training to justify the right to prescribe medicine, increasing the potential for errors.

NEW JERSEY STATE
CHAMBER OF COMMERCE
ONE STATE STREET SQUARE
50 WEST STATE STREET - SUITE 1110
TRENTON, NEW JERSEY 08608

M E M O R A N D U M

TO: Members of the New Jersey General Assembly

FROM: James C. Morford, Vice President
Governmental Relations

DATE: January 10, 1991

SUBJECT: ASSEMBLY BOARD LIST - JANUARY 10, 1991

The New Jersey State Chamber of Commerce respectfully asks that you favorably consider our position on the following bill on the Assembly Board List for Thursday, January 10, 1991:

SUPPORT A-743

To permit doctors of optomery with advanced certification to prescribe and provide medications for the treatment of eye ailments and diseases. By bringing New Jersey up to similar standards in place in 25 other states, the State Chamber believes cost savings can be realized for our already overburdened health care system.

Thank you.

JCM/lvw

AARP

Bringing lifetimes of experience and leadership to serve all generations.

NEW JERSEY STATE LEGISLATIVE COMMITTEE

CHAIRMAN
Mr. DeWitt Reinecke
17 Primrose Trail
Morristown, NJ 07960
(201) 766-2406

VICE CHAIRMAN
Mr. David Brown
16 Woodbridge Avenue
Metuchen, NJ 08840
(201) 549-0001

SECRETARY
Mrs Carol Kenny
352 E. Virginia Ave.
Manasquan, NJ 08736
(201) 223 8342

December 6, 1990

Dr. Larry C. Wallis
Legislative Chairman
New Jersey Optometrist Association
88 Lakedale Drive
Trenton, NJ 08648

Dear Dr. Wallis:

The members of the New Jersey State Legislative Committee (NJSLC) of the American Association of Retired Persons (AARP) have reviewed the provisions of Assembly Bill A-743. The bill would allow optometrists to prescribe and utilize eye medications, limited to eye drops or ointments. The NJSLC also conferred with your association and the Academy of Ophthalmology and Otolaryngology before making a decision.

I am happy to report that the committee strongly supports Bill A-743. Its passage would be in the best interests of our members and would benefit all New Jersyians. The facts weigh heavily in favor of expanding the responsibility of optometrists to include the use of therapeutic pharmaceuticals. Some of these compelling facts are:

a) It will be less costly, especially for seniors and the disabled, to be treated by an Optometrist for Optometrists are more readily accessible than Ophthalmologists.

b) Optometrists receive excellent training including training in Pharmacology.

c) The need for a second visit to an Ophthalmologist for treatment would be eliminated.

d) Optometrists have been using therapeutic eye drops and ointments in 21 states and the District of Columbia without any significant or prevailing problems.

In the interests of good eye health and easier access to such, AARP supports A-743.

Sincerely,

DeWitt C. Reinecke

DeWitt C. Reinecke
Chairman, New Jersey State Legislative Committee

DCR/rg

cc: Honorable Joseph I. Roberts, Jr.
655 Creek Road
Bellmawr, NJ 08031

V2532

Southern California College of Optometry
2575 Yorba Linda Boulevard • Fullerton • California 92631-1699 • (714) 449-7450

Richard L. Hopping, O.D.
President

December 5, 1989

Ms. Virginia Corwin
Executive Director
North Dakota Optometric Association
418 E. Broadway, C-13
Bismarck, ND 58501

Dear Ms. Corwin:

The Dean of Academic Affairs, the Director of Clinics and I have studied the request of Mr. James Ganje, Counsel for information on behalf of the North Dakota Legislative Council. It is our belief that graduates of this institution have consistently been fully qualified for the State Board examinations in all 50 states. Specifically our graduates are prepared to meet the requirements in those states where legislation is in effect permitting licenced optometrists the use of pharmacological agents for treating and managing anterior segment ocular conditions.

All accredited schools and colleges of optometry must and do give serious study to changing curricular needs to ensure that their graduates fully meet the demands of the various state, regional, and professional accrediting agencies. The Southern California College of Optometry gives close and continued study to the changing laws and the evolving scope of optometric practice and when necessary makes curriculum changes in order that our graduates are fully qualified and prepared to take and pass any national or state board licensing examination.

In response to each of the questions raised by Mr. Ganje:

1. Appendix A fully describes our curricular requirements which relate to the treatment of ocular disease. The curriculum at SCCO is comprehensive and numerous courses related to this critical area are integrated throughout the four year professional program. Our students receive comprehensive education in Anatomy and Physiology, Ocular Anatomy, Clinical Medicine, Pharmacology, Primary Care Optometry, Ocular Diagnostic and Therapeutic Pharmacology, Optometric Clinical Services together with course work and clinical experiences in clinical ocular pharmacology, and ocular disease diagnosis, treatment and management.

   Our curriculum currently provides students with a total of 50 quarter credit units or 550 class contact hours of education in courses related to the treatment of ocular diseases. In addition to this, a series of fourth year seminars and grand rounds emphasizing treatment and management of ocular diseases has been implemented.

2. A total of 1330 patient contact hours are devoted to the diagnosis and treatment of ocular disease. The specific courses and hours are:

COURSE(S)	HOURS
493, 494	16
595	74
596, 597, 598	249
691	239
692, 693, 694	721
691 Enhancement, Screening Convalescent Home	31
	1330

3. Each student is scheduled to examine a minimum number of patients in the Primary Care/Ocular Disease Service during their Third Professional Year. The College also has a requirement that each student must have a minimum number of Primary Care exams at the Optometric Center of Fullerton Clinic in order to graduate. During their four years at the College, each student will have participated in provision of professional services to a minimum of 1100 patients. A high percentage of these patients present signs or symptoms of ocular disease or ocular manifestations of systemic disease; each student then has the responsibility to participate in the diagnosis, treatment and management of these disease conditions.

4. All Students are required to successfully complete a prescribed curriculum in didactics and clinical training to prepare them for the entry level requirements of optometric practice. The required training regimens in the use of therapeutic drugs are provided in courses throughout the four year curriculum which includes prerequisite knowledge in the basic biomedical sciences followed by clinical courses in ocular disease diagnosis, management & treatment which are integrated within the clinical program. Specifically these courses are described on pp. 4-8 of Appendix A and include:

#301	Anatomy & Physiology I	#596	Optometric Clinical Serv. VI
#406	Clinical Medicine II	#597	Optometric Clinical Serv. VII
#455	Primary Care Optometry V	#598	Optometric Clinical Serv. VIII
#493	Optometric Clinical Serv. III	#610	Ocular Disease Diag. Mgmt.
#494	Optometric Clinical Serv. IV	#690	Optometric Clin. Serv. IX
#515	Ocular Dis. Diag. & Mgmt. I	#691	Outreach Clinical Serv. I
#517	Adv. Ocular Disesase Proced.	#692	Outreach Clinical Serv. II
#518	Ocular Dis. Diag. & Mgmt. II	#693	Outreach Clinical Serv. III
#595	Optometric Clinical Serv. V		

5. The Southern California College of Optometry provides fourth year Professional students an extensive series of off-campus clinical experiences in the College's Outreach Program. At the present time, the Outreach Program offers education at 59 clinical sites in 17 states. Included in the Outreach Program are College operated community optometric centers; Veteran's Administration hospitals and outpatient clinics; Public Health Service and Indian Health Service medical centers and clinics; Army, Navy, Air Force and Marine medical centers, HMO's, specialty clinics emphasizing such areas as contact lens fitting and research, low vision care at a Center for the Partially Sighted and the Low Vision Clinic at a State Bureau of Service to the Blind.

   Of the 59 Outreach clinical education sites, 37 currently offer students direct hands-on experience in the treatment of ocular disease. In addition, students are afforded the opportunity to participate in co-managed treatment of ocular disease at 5 other clinical sites. The Southern California College of Optometry offers students an outstanding clinical experience in the use of therapeutic agents in the treatment of ocular disease at 42 different clinical sites. All students will have had actual experience in the treatment of ocular disease at between 1 and 4 of these 42 clinical sites by the time they graduate.

The College also has three different nationally and regionally accredited residency programs which offer experience in the treatment of ocular disease. These residencies are in the areas of Rehabilitative Optometry, Hospital-Based/Geriatrics Optometry, and Secondary Ophthalmic Care.

Sincerely,

Richard Hopping

Richard L. Hopping, O.D.
President

cc: Dr. Daniel J. Long, President
Dr. Harvey Bonner
Dr. Berman, Dean of Academic Affairs
Dr. Applebaum, Director of Clinics

RLH:mt
(59)

Lesley L. Walls, O.D., M.D.
Post Office Box 78
Glenpool, Oklahoma 74033

January 2, 1991

Representative Joedy George
Mississippi House of Representatives
P.O. Box 1018
Jackson, Mississippi 39205

Dear Representative George:

I am writing you in support of the Mississippi State Optometric Association in their attempt to update a law and broaden the scope of practice of optometry. I know this topic is an emotional one, however, I feel that careful review of other states' experience with such an expanded law, etc. will substantiate the fact that with proper education and training it is safe. As well, in the present day of astronomical health care costs I feel it is cost effective to allow optometrists to practice to the limit of their education and training. I also feel that such a law will demonstrate better and more appropriate referrals to physicians from optometrists.

Mississippi is a mostly rural state where in a large number of communities the optometrist may often be the best trained and best equipped health care provider to treat common eye diseases.

Let me offer some specific observations of my own on optometric and medical education since I happen to be both an optometrist and a medical practitioner.

Medical school traditionally prepares the student in general medical and surgical background for post-graduate training programs. Detailed anatomy and physiology of organs such as the eye is <u>not</u> emphasized during medical school. As well, during surgical rotation in medical school it is uncommon to be exposed to ocular surgery. Because heart disease, cancer, and stroke are the biggest killers of the U.S. population, medical school clinical training is heavily devoted to general internal medicine, general surgery, obstetrics/gynecology, and pediatrics. There are usually fourth year electives in 4-12 week blocks whereby a student may increase his/her exposure to subspecialty medical and surgical areas such as: ophthalmology, ear/nose/ and throat, urology, pulmonary medicine, cardiology, etc. In my experience a small minority of students choose ophthalmology as a clinical rotation.

By a small personal survey in the area of Oklahoma in which I reside, most primary care physicians (general practitioners, family physicians, internists, and pediatricians) state that they had from one to three weeks of medical school devoted to

ophthalmological care. This includes both didactic coursework and clinical experience. I do not need to remind you that these practitioners treat eye diseases on an unrestricted basis regardless of the small amount of specific ocular training.

On the other hand, optometry school is mostly devoted to ocular training. There are courses in general pathology and ocular signs of systemic disease because the optometrist is responsible to detect systemic diseases with ocular manifestations and to make appropriate referrals. The detailed ocular anatomy, ocular physiology, ocular pathology, and ocular pharmacology training in optometry school is far superior to the same ocular topics in any general medical school course in the country. This is not to slight medical education, there simply is not enough medical school curriculum time to devote to the eye because of training in vital organ systems such as the heart, lung, vascular system, etc.

Secondly, I will discuss my personal experience with side effects of ocular pharmacologic therapeutic agents. This section will be very brief as I have never had a patient with anything other than a very minor side effect from ocular pharmaceutical agents. I have seen a few mild allergic reactions and none of these serious and certainly none of the patients had any evidence of systemic reactions such as elevated blood pressure, rapid heart rate, heart arrhythmias, etc. None ever required hospitalization and certainly there were no deaths. I have seen very few significant side effects and all which occurred were very minor in nature.

In summary, I would like to point out that ophthalmologists are vitally needed. The medical profession would be in sad shape without them because of their expertise in the area of ocular trauma, cataract surgery, retinal surgery, serious ocular infections, ocular tumors, etc. However, in a state like Mississippi the ophthalmologists are primarily in larger cities with a poor distribution in the rural areas.

I also strongly feel that optometrists are vitally needed. Optometrist are well distributed into rural communities and by definition serve as primary care health professionals. In my opinion, the patient, particularly in a state like Mississippi, will be the beneficiary of modern optometric practice. With the use of pharmaceutical agents, for diagnostic and therapeutic purposes, serious disease detection will be facilitated thus making the referral system into medicine more efficient. As well, this will save the patient a lot of inconvenience and time. I feel optometrists should be allowed to practice modern optometry which includes both diagnostic and therapeutic pharmaceutical agents.

Sincerely,

Lesley L. Walls, O.D., M.D.

JOSEPH C. TOLAND, M.D.
PROFESSIONAL CORPORATION

5927 N. FIFTH STREET
PHILADELPHIA, PA 19120

(215) 548-2323

1270 MILL ROAD
MEADOWBROOK, PA 19046

November 5, 1990

The Honorable Joseph J. Roberts, Jr.
655 Creek Rd.
Bellmawr, NJ 08031

Dear Assemblyman Roberts:

I am a board certified ophthalmologist and also an optometrist who has been involved in education for over 20 years. Since 1970, I have been on the faculty of the Pennsylvania College of Optometry, where I currently am a tenured professor.

During this time, I have taught extensively both in the classroom and clinics to optometry students and practicing optometrists. Each week I work with optometry students, directly supervising the delivery of care to patients, which I have also actively participated in the training of ophthalmological residents. Therefore, I am in an unique position to compare the training of both professions.

Without a doubt, optometrists are prepared through their knowledge, skills and clinical experience to diagnosis all eye diseases and to treat diseases of the eye consistent with the limitation of the legislation being considered in New Jersey. Claims by ophthalmology to the contrary are inaccurate and usually made by individuals with no first hand experience in the education of optometrists.

Respectfully,

Joseph C. Toland, M.D.

JC - D. Grim ✓

North Dakota 1987

Optometric Education

The growth of the optometric profession is in no small measure due to the remarkable expansion of optometric education during the past thirty years. Because optometry is a relatively young profession, it has been able to benefit from the tremendous expansion in technology during recent years. Many people are not aware of the truly significant changes that have recently taken place in the profession and its educational base.

Fifteen schools and colleges of optometry in the United States now provide an educational experience that is equivalent in length and scope to that which is provided by schools of medicine and dentistry. All medical, dental and optometry programs are four years in length and require the same level of professional training. In fact, a comparison of the current catalogs of the University of North Dakota School of Medicine (UND) and Southern California College of Optometry (SCCO) demonstrates that the admission requirements of SCCO are actually more stringent than those of the UND.

Admission Requirements (Quarter Units)

	UND	SCCO
Calculus	Not required	3-4
Biology or zoology	8	8
Microbiology	Not required	4
Physics	8	12
General chemistry	8	12
Organic chemistry	8	4
Psychology	3	8
English	6	8
College Algebra	3	Not required
Total hours required	**90**	**90**

During the first two years of both professional programs, students receive extensive training in basic health sciences, such as pharmacology, anatomy, physiology, neurosciences, and pathology. The second two years are more clinically oriented; the medical student is trained in all aspects of medical care while the optometry student concentrates on the eye and visual system. The result is that the optometry graduate completes his training with much more extensive and in-depth training in the eye and in the diagnosis and treatment of its abnormalities than does the medical school graduate.

After graduation from the four-year professional programs, both the optometrist and the physician are examined and licensed by appropriate agencies of the state. This license allows the physician to practice all aspects of medicine and surgery, including the diagnosis and treatment of eye diseases and the performance of eye surgery. Although most physicians undergo additional training in one of the medical or surgical specialties, no further testing or licensure is required in order for them to practice as a specialist. Therefore, even though some physicians have undergone several years of additional training to become pediatricians, *any* physician is permitted to treat diseases of children, and even though some physicians have undergone several years of additional training to become obstetricians, *any* physician is permitted to deliver babies. Similarly, even though some physicians undergo several years of additional training to become ophthalmologists, *any* physician may treat diseases of the eye.

For legal and licensure purposes, it is assumed that the training received in the four years of medical school qualifies the graduate to practice all aspects of medicine with reasonable competency. **This assumption appears to work very well** since there appears to be little pressure for changes to the Medical Practice Act which would require that only specialists be allowed to treat various types of conditions.

This same assumption might well be applied to other health professions as well. If it can be demonstrated that the training a health professional receives in a given area is equivalent to or superior to that received by a physician, there seems to be no logical reason why he should not be allowed to do what the physician does in that area of health care. Since only about 4.5 percent of all physicians are ophthalmologists, it makes good sense to permit the doctor of optometry to provide primary eye care whenever possible.

Benefits of Use of DPAs Continue

Since the use of diagnostic pharmaceutical agents (DPAs) by optometrists was authorized by the 1979 North Dakota legislature, the benefit to the public of this action has continued to be demonstrated. More than 90 percent of North Dakota optometrists have been certified, and most use DPAs routinely in their diagnosis and treatment of vision problems. Contrary to the dire predictions of those who opposed the 1979 legislation, no adverse effects have been reported. In fact, the Optometry Board has not received any formal complaints or reports of problems associated with the use of DPAs by optometrists. Professional liability premiums, perhaps the best indicator of whether or not problems are occurring, have not been affected. The action of the 1979 legislature has proven to have been prudent and in the best interests of the people of North Dakota.

The North Dakota experience is the same as that in the other forty-eight states that currently permit optometrists to use DPAs. In none of these states has significant evidence been brought forth to suggest that any adverse effects are occurring. It is also worthy of special note that in the twelve states which permit optometrists to use therapeutic as well as diagnostic agents, no reports have been made of any problems associated with their use. In fact, it has been well

25 now 199

documented that the therapeutic agents are even less likely to cause complications than are the diagnostic agents. This underscores the fact that the optometrist of today is capable of using both diagnostic and therapeutic pharmaceuticals safely and effectively in his or her practice.

Because of the much broader geographic distribution of optometrists and the fact that fees charged by them are generally less than those charged by ophthalmologists, major savings to the public are realized when optometrists are permitted to practice at their highest level of training. The necessity of referring persons with relatively minor eye injuries or infections to a surgical eye specialist or a hospital emergency room always results in a charge for the second examination and frequently results in the loss of several additional hours from the patient's work and/or the travel of many additional miles.

Optometry *IS* Primary Eye Care

Analysts of the health-care delivery system have divided it into three broad categories which they have labeled primary care, secondary care, and tertiary care.

Primary care is that level of care delivered by "first contact" providers. These are the doctors first contacted by a person in need of health care, and they are able to diagnose and treat the great majority of persons they see. It has been estimated that from 85 to 95 percent of all health care can be classified as primary care. In general, primary-care providers do relatively little of their work in hospitals. The American Medical Association considers family and general practitioners, pediatricians, internists, and obstetrician/gynecologists to be primary medical care providers. Other primary-care providers include general dentists, optometrists and podiatrists.

Secondary-care providers are generally those who have received additional specialized training beyond that which is required of primary-care providers. Persons with unusual or complicated problems or those who require more than very minor surgery are generally referred to a secondary-care provider by a primary-care provider. Most surgeons are classified as secondary-care providers, and secondary care involves more use of hospitals and specialized facilities than does primary care. Among the medical specialties, orthopedic surgeons, ophthalmologists, anesthesiologists, and cardiologists are examples of secondary-care providers. Non-medical secondary-care providers would include dental specialists, such as orthodontists and periodontists, and optometrists who limit their practice to contact lenses.

Tertiary-care providers are those who specialize in the diagnosis and treatment of rare conditions. Their practice is almost always hospital based and requires additional training beyond the secondary level and use of sophisticated techniques and instruments. Examples of tertiary-care providers would be open-heart surgeons, brain surgeons, ophthalmologists who repair retinal detachments, and organ transplant specialists.

Because of the additional training and skills required to practice at the secondary and tertiary levels, the care provided is usually more expensive than that provided at primary level. Even in cases where the fees charged are the same, when the costs to society of education and training are considered, the cost of secondary and tertiary care is higher. Since the vast majority of all care can be provided at the primary level, it makes good sense from an economic standpoint to have as much care as possible provided at that level, and in most cases, it is. For example, even though a cardiologist may have more training in the management of high blood pressure, family practitioners are perfectly capable of managing uncomplicated cases. And even though an orthopedic surgeon may have more training in the anatomy and function of the joints, a pediatrician is perfectly capable of treating a child's simple sprained ankle.

Similarly, optometrists, although they do not have the same training as do ophthalmologists, are perfectly capable of managing uncomplicated eye conditions. Their education and training in the diagnosis and treatment of eye problems is much more extensive than that of most physicians, and **their past record of conscientious, conservative care is evidence of their ability to recognize and refer to other providers those conditions that require care at the secondary or tertiary level.**

Health Care Not Necessarily Medical Care

Although the terms *health care* and *medical care* are often used interchangably, they do not really mean the same thing.

Health care is a broad term that refers to the entire area of maintenance of physical well-being. *Medical care* is much more limited in that it refers to health care which is provided by medical doctors.

Although the various areas of health care seem to be fairly well defined, many areas overlap. For example, the Medical Practice Act, since it was the first to be enacted, is all-encompassing and permits the physician to practice all aspects of health care regardless of whether or not he or she has any training in that area. Thus, any physician may legally fill teeth or prescribe eyeglasses. On the other hand, certain procedures which would usually be considered the exclusive domain of physicians are done by some other health-care providers. Dentists are permitted to use general anesthetics and prescribe oral antibiotics and potent pain-

killers. Podiatrists are also permitted to prescribe antibiotics and pain killers and are allowed to perform surgery. Nurse practitioners are also permitted to diagnose illness and prescribe drugs with only limited supervision and review by a physician who may be many miles away and who never sees the patient.

For many years the fact has been recognized that formal medical education is not required to provide high-quality health care. Those who currently argue that such education is necessary are ignoring the obvious examples to the contrary and appear to be motivated more by the desire to protect their own prestige and economic position than by a true desire to protect the public.

North Dakota a Leader in Education Requirements

Only eight of the fifty states require more hours of continuing education for optometric license renewal than does North Dakota. All optometrists are required to attend a minimum of thirty six hours every three years of approved continuing education courses. Compliance with this requirement has enabled North Dakota optometrists to not only maintain a high level of competence in the use of diagnostic pharmaceutical agents but has also enabled them to expand their knowledge of the use of pharmaceutical agents for other purposes.

Updating the Scope of Optometry Practice Acts Continues Nationwide

With the passage of legislation earlier this year, the number of states which permit optometrists to use diagnostic pharmaceutical agents has risen to forty-eight. In July 1986 a bill was passed in Missouri which permits optometrists to use, administer and prescribe therapeutic pharmaceutical agents. Missouri thereby became the twelfth state to have passed such legislation in recognition of the expanded capabilities of optometrists in the diagnosis and treatment of eye disease. In the central United States - Kentucky, Nebraska, Iowa, South Dakota and Oklahoma have passed similar bills.

Optometry Residency Programs on Increase

Recent issues of optometric publications have contained more than thirty announcements for residency programs in various areas of optometric practice. These programs, most of which are one year in length, provide the graduate optometrist with additional training in specialized areas of optometric practice. Among the most common types of training offered are Rehabilitative Optometry, Hospital Based Optometry, and Pediatric Optometry.

It is significant to note the majority of these programs are offered by Veterans Administration Medical Centers in all parts of the United States, and all include stipends for financial support of the resident. The greatly increased involvement of the Veterans Administration in the training of optometrists in recent years is strong evidence of their recognition of the role of the optometrist in providing high-quality, comprehensive health care to the nation's veterans. The VA has found that by making optometrists the primary eye-care providers in their medical centers, they can render higher quality care at lower cost to the taxpayer.

The availability of residency programs such as these are also an indication of the continued rapid growth in the scope and depth of optometric education.

North Dakota Optometric Association

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Harvey Bonner, O.D.
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President

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December 17, 1990

Dr. Kerry Beebe, President
Minnesota Optometric Association
1821 University Avenue
St. Paul, MN 55104

Dear Kerry:

As president of the American Optometric Association, I have been asked to respond to questions concerning optometric legislation that has been proposed in Minnesota. As a practitioner in your neighboring state of Iowa, I have observed the benefits that the people of Iowa have experienced as a result of authorization for optometrists to provide a full scope of care to their patients. Wisconsin has also recently passed such legislation. The similarities between Wisconsin, Iowa and Minnesota lead me to believe that the citizens of Minnesota would benefit from similar legislation.

In response to your questions: All states authorize optometrists to use pharmaceutical agents for diagnostic purposes. Twenty-five states authorize optometrists to use pharmaceuticals for the treatment of eye diseases. The scope of practice for optometrists has never been "scaled back" in any state that has authorized the use of pharmaceutical agents for diagnostic or treatment purposes. In fact, several states, including your neighboring state of Iowa, have significantly "amplified" existing treatment laws to further increase the services an optometrist is authorized to provide.

It is my hope that your legislature will recognize the benefits of proposed optometric legislation so that Minnesotans can experience the benefits currently enjoyed by the citizens of your surrounding states of Iowa, North Dakota, South Dakota and Wisconsin.

If you have further questions, please do not hesitate to contact me. I will see that the resources of the American Optometric Association are mobilized to assist you in serving the people of the great state of Minnesota.

Sincerely,

John A. Gazaway, O.D.

pm/5303g

In the health care field, insurance liability rates are an accurate indication of potential and existing problems in the delivery of medical care.

To date, in the twenty-five states in which TPA use is authorized, there has been no increase in the malpractice rates as a result of optometrists' use of therapeutic pharmaceutical agents.

The following are professional liability rates as given by two different insurance agencies known to insure doctors of optometry in the United States. These rates are based on a liability $1,000,000 limit occurance coverage as of December 1, 1990. All of the states listed below, with the exception of Minnesota, have enacted therapeutic pharmaceutical agent (TPA) legislation.

ALLIED GROUP INSURANCE

State	Sole Proprietor	Each Partner	Each Employee
Iowa	$169	$203	$212
North Dakota	190	228	238
South Dakota	169	203	212
Nebraska	159	191	200
Minnesota	169	203	212

Upon reviewing the above data, Allied Group Insurance concluded, *"...there is no significant actuarial coordination between therapeutical drug usage and raised rates based on current underwriting results. Allied currently does not charge a premium differential or surcharge for therapeutic drug usage in any of the states in which they are currently providing coverage."** Mike Pollard, Underwriting Manager

POE & ASSOCIATES INSURANCE

State	Individual	Package
Iowa	$299.00	$275.00
North Dakota	299.00	275.00
South Dakota	299.00	275.00
Nebraska	299.00	275.00
Wisconsin	299.00	275.00
Minnesota	299.00	275.00

"Poe & Associates, in the past has reviewed on a comprehensive basis the underwriting results for three major carriers for a period of seven years, and found that there is no significant actuarial coordination between therapeutic drug usage and liability insurance rates based on the current underwriting results.

*Because claims and premiums are so closely related to incidents of harm and injury to patients, we do not have evidence at this time that there is a correlation between the use of therapeutic drug by optometrists and malpractice claims."** Kathy Szuszcewicz, Program Coordinator

**Emphasis added.*

UPDATE

On October 3, 1990, the American Public Health Association (APHA), which represents a combined national affiliate membership of over 52,000 public health professionals and community health leaders, passed the following resolution, entitled "Access to Treatment for Eye Care."

Noting that more than one-third of all Americans have a disease or physiologic abnormality in one or both eyes;[1] and

Recognizing that only about one-half of the total population in the United States needing treatment for eye disease is receiving it;[1,2] and

Noting that eye disease and blindness cost the nation an estimated sixteen billion dollars a year,[3] and

Realizing that eye health problems and vision care demands will increase significantly in the future as the U.S. population ages;[4] and

Observing that optometric services are available in approximately 6,400 communities in the United States and that doctors of optometry are the only primary eye care providers in nearly 4,000 communities, and that nationwide optometrists outnumber ophthalmologists nearly two to one;[5,6] • and

Noting that 60 percent of primary diagnostic eye examinations in the United States[7] are provided by the 25,000 active optometrists;[8] and

Realizing that many people who need medical eye care are already being treated by optometrists in many states;[9] and

Noting that optometric reimbursement rates are typically lower than those of other providers of comprehensive eye care;[10] and

Realizing that many people who want to receive medical eye care are now being treated by optometrists;[10] and

Recognizing that it is prudent public policy to utilize appropriately trained and licensed health professionals at their highest level of skill and training as determined by state licensing laws;[11] and

Noting that Medicare reimburses diagnostic and therapeutic eye care services delivered by optometrists as authorized by state practice acts, [13] and

Noting that 25 states have passed laws and regulations that allow optometrists to use therapeutic pharmaceutical agents [7] after completing appropriate training and testing requirements, and

Observing that the Department of Veterans Affairs, the U.S. Armed Forces, and the United States Public Health Service have regulations or credentialing statements that allow optometrists to utilize therapeutic pharmaceutical agents to the benefit of their patients, and noting that this expansion of clinical privileges of optometrists has increased the availability, accessibility and cost-effectiveness of eye care to the American public through lower fees for services[10] and by a reduction in double visits and hospital emergency room visits; therefore

1. Recommend that legislators update their state optometric practice acts to allow for optometric use of those diagnostic and therapeutic pharmaceuticals which have been determined by the State Board of Examiners in Optometry as being within the scope of competency of pharmaceutically certified optometrists; and

2. Recommend that dispensing of such pharmaceuticals be regulated by state pharmacy laws.

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12. Public Law 99-509, Section 9335, 1986.

Footnote

• Aron, F: Unpublished data. The number of cities with ophthalmologists and optometrists in each state was based on hand counts from references 5 and 6, respectively. St. Louis, MO: Am Optom Assoc.

FIFTH EDITION, REVISED

The Gourman Report

A RATING OF

Graduate and Professional

PROGRAMS IN AMERICAN & INTERNATIONAL UNIVERSITIES

Accounting Aerospace Engineering Bioengineering/ Biomedical Engineering Biology Business Administration (MBA-Doctoral) Ceramic Sciences/Engineering Chemical Engineering Chemistry Civil Engineering Classics Com puter Science Drama/Theatre Dentistry Economics Electrical Engineering English Entomology Environmental Engineering Finance Forestry French Geography Geology/Geoscience Geophysics German History Industrial Engineering Journalism Law Library Science Linguistics Management/Organizational Behavior Market ing Material Science Mathematics Mechanical Engineer ing Medicine Metallurgical Engineering Music Nuclear Engineering Nursing Operations Research Optometry Petroleum Engineering Pharmacy Philosophy Physics Political Science Psychology Public Administration Public Health Russian Social Welfare/Social Work Sociology Spanish Statistics Teacher Education Veterinary Medicine Zoology

Dr. Jack Gourman

NATIONAL EDUCATION STANDARDS

MORE THAN 1,000 SCHOOLS RATED

The GOURMAN REPORT

A Rating of Graduate and Professional Programs in American and International Universities

FIFTH EDITION
Revised

Dr. Jack Gourman

National Education Standards

Introduction to the fifth edition

THE GOURMAN REPORT is the only qualitative guide to American and International institutions of higher education which assigns a precise, numerical score in assessing the strengths and shortcomings of each school and program. This methodology vastly simplifies the reader's task in examining the effectiveness of a given educational program, or comparing one program against another; and yet the Gourman rating takes into account a wide variety of empirical data, as detailed below.

This text is intended for use by:

- Individuals wishing to make an informed choice about higher education.
- Educators and administrators desirous of an independent evaluation of their program
- Prospective employers who want to avoid retraining of inadequately prepared graduates from ineffective institutions.
- Schools wishing to improve graduate and professional programs.
- Foundations involved in fund-giving to colleges and universities.
- Licensing authorities in need of objective educational assessments.
- Individuals interested in identifying, and eliminating, fraudulent and inferior institutions.
- Citizens concerned about the quality of today's higher education.

If each institution did its utmost to insure a superior educational experience, and then frankly informed the public of any unavoidable compromises caused by funding, geography or educational focus, then there might be no need for a book such as this one. However, the facts remain that:

- Institutional policy often dictates decisions about faculty, curriculum and physical plant for reasons which have little to do with education.
- Faculty members and administrators are intimidated, by internal and external political pressures from making critical comments about their own institutions.
- Public relations efforts by institutions tend to exaggerate strong areas, and ignore weak ones.
- Frankly fraudulent institutions exist as profit centers, rather than as promulgators of quality education.
- Accreditation appears to be mainly a finding that an institution is not conspicuously defective in physical and staff resources.

We must remember that the quality of graduate and professional education affects the future not only of individuals, but of the nation and its economy. If the following pages can make a contribution, no matter how minor, toward raising awareness of the need for better educational standards, then the purpose of THE GOURMAN REPORT is well served.

Method of Evaluation

In an age of disinformation, the user of this text should keep in mind that THE GOURMAN REPORT is not a "popularity contest", or an "opinion poll", but an objective evaluation which synthesizes complex data into a deceptively convenient numerical rating.

Obviously, much of the material used in compiling THE GOURMAN REPORT is internal – drawn from educators and administrators at the schools themselves. These individuals are permitted to evaluate *only* their own programs – as they know them from daily interface with the educational experience – and not the programs of other institutions. Unsolicited appraisals are occasionally considered (and weighed accordingly), but the bulk of our contributions are requested from persons chosen for their academic qualifications, their published works, and their interests in improving the quality of higher education. It attests to the dedication of these individuals (and also to the serious problems in higher education today) that over 90% of our requests for contributions are met with a positive response.

In addition, THE GOURMAN REPORT draws on many external resources which are a matter of record – e.g., funding for public universities as authorized by legislative bodies, required filings by schools to meet standards of nondiscrimination, and material provided by the institutions (and independently verified) about faculty makeup and experience, fields of study offered, and physical plant. Such resources, while public, are not always accessible to the individual researcher; and someone wishing to utilize this data for comparing a number of institutions and programs would face a daunting task.

Finally, THE GOURMAN REPORT is fortunate to have among its contributors a number of individuals, associations and agencies whose business it is to make correct projections of the success graduates from given institutions and disciplines will enjoy in the "real world". While the methods employed by these resources are proprietary, their findings have consistently been validated by experience, and they are an important part of our research.

To critics who might question the feasibility of an evaluation which draws from such diverse resources, we offer the comparison to the grading of a college essay examination. What may appear to be a subjective process is in fact a patient sifting of empirical data by analysts who understand both the "subject matter" (the fields of study under examination), and the "students" (the colleges and universities themselves). The fact that there are virtually no "tie" scores indicates the accuracy and effectiveness of this methodology, as does the consistent affirmation of the ratings in THE GOURMAN REPORT from readers in a position to independently evaluate the attributes of specific educational programs.

Criteria

The following criteria are taken into consideration in the evaluation of each educational program and institution. It should be noted that, because different disciplines vary in their educational methodology, the significance given each criterion will vary from the rating of one discipline to the next; however, our evaluation is consistent for all schools listed within each field of study.

1. Auspices, control and organization of the institution;
2. Total educational programs offered and degrees conferred (with additional attention to "subfields" available to students within a particular discipline);
3. Age (experience level) of the institution and of the individual discipline or program and division;
4. Faculty, including qualifications, experience, intellectual interests, attainments, and professional productivity (including research);
5. Students, including quality of scholastic work and records of graduates both in graduate study and in practice;
6. Basis of and requirements for admission of students (overall and by individual discipline);

7. Number of students enrolled (overall and for each discipline);
8. Curriculum and curricular content of the program or discipline and division;
9. Standards and quality of instruction (including teaching loads);
10. Quality of administration, including attitudes and policy toward teaching, research and scholarly production in each discipline, and administration research;
11. Quality and availability of non-departmental areas such as counseling and career placement services;
12. Quality of physical plant devoted to graduate, law, medicine and other professional levels;
13. Finances, including budgets, investments, expenditures and sources of income for both public and private institutions;
14. Library, including number of volumes, appropriateness of materials to individual disciplines, and accessibility of materials.

A guide to using THE GOURMAN REPORT

Because the actual ratings within this text are presented without extraneous commentary, the following observations should be helpful in guiding both the first-time reader and the experienced user of THE GOURMAN REPORT.

PART I contains ratings of leading institutions (those with scores between 4.0 and 5.0, in rank order) in 65 individual disciplines, from Aerospace Engineering to Zoology. Scores for institutions not scoring 4.0 or above in these disciplines may be found in PART XIV.

PART II includes ratings of leading international law schools (those with scores between 4.0 and 5.0, in rank order); U.S. law schools from "distinguished" (4.0 to 5.0) to "adequate" (2.3 to 2.9), with the additional listings for less-qualified, but still acceptable, institutions included in consideration of the competitive admissions environment facing today's prospective law student; a ranking of Canadian law schools; and a cross-tabulation of leading institutions in the U.S. and abroad.

PART III rates leading Canadian, U.S. and International medical schools and Canadian and U.S. dental (those with scores between 4.0 and 5.0, in rank order), with additional ratings for U.S. schools down to "acceptable plus" (3.0 to 3.5) included for the student seeking admission to a qualified program in today's competitive environment.

Also in Part III, the reader will find a rating of leading graduate programs (4.0-5.0) in veterinary medicine; and a cross-tabulation of leading medical schools in the U.S. and abroad.

PART IV includes leading graduate programs in nursing (3.6 to 5.0) and optometry (4.0 to 5.0); leading Canadian pharmacy schools (4.0 to 5.0); leading U.S. pharmacy schools (3.6 to 5.0); and leading graduate programs in public health (scores between 4.0 and 5.0, in rank order).

PART V lists the U.S. institutions whose research libraries are distinguished by a rating between 4.0 and 5.0.

PART VI is a rating of 139 graduate schools of engineering on the Approved List of THE GOURMAN REPORT. Schools not listed here may be found under the appropriate engineering headings in Part I.

PART VII is a rating of MBA/management schools on the Approved List of THE GOURMAN REPORT. Out of 500 institutions surveyed, only 100 schools meet the standards which were applied.

PART VIII lists doctoral schools in business and management on the Approved List of THE GOURMAN REPORT. The two principal degree designations offered by these programs are the Ph.D. (Doctor of Philosophy) and the DBA (Doctor of Business Administration). Those schools cited met basic standards of curriculum, faculty qualifications, administration, admissions and facilities.

PART IX is a rating of selective doctoral programs in business and management for 88 institutions on the Approved List of THE GOURMAN REPORT. Accounting (found in Part I of previous editions) is evaluated alongside finance, management/organizational behavior and marketing programs for each of the qualifying schools.

PART X provides a rating of leading International universities, by administration, curriculum, faculty, libraries and overall quality.

PART XI is an alphabetical listing of departments of teacher education not on the Approved List of THE GOURMAN REPORT. Teaching degrees bestowed by these schools may not be comparable to degrees in fields where faculty members are required to create new knowledge, preserve existing knowledge, or transmit knowledge to others.

PART XII includes departments of graduate education not on the Approved List of THE GOURMAN REPORT because they do not meet the standard of graduate training with regard to administration, curriculum, faculty or library resources. These institutions offer advanced degrees in such fields as philosophy and history of education, learning and instruction, comparative and international education, higher education, educational administration, and curriculum. Such degrees should not be taken as equivalent to master's or doctorate degrees in disciplines such as engineering, geoscience, chemistry, romance languages, mathematics, physics, English, history, political science, etc.

PART XIII lists the top fifty graduate schools in the United States, in rank order. These institutions have distinguished themselves by their commitment to a leadership position in quality education; it is only appropriate that their achievement be recognized in a separate section.

PART XIV rates all accredited graduate schools in the United States, listed alphabetically. This section is intended primarily for use by readers who desire information about a particular institution. By no means should a school's listing be taken as an endorsement or an indication of quality, as ratings vary from "very strong" (4.51 to 4.99) to "unacceptable" (below 2.01).

PART XV – APPENDIXES contains tables of the number and types of programs evaluated for this fifth edition, as well as listings of the schools included for 13 selected professional fields.

A RATING OF GRADUATE PROGRAMS IN OPTOMETRY
Leading Institutions

Sixteen institutions with scores in the 4.0-5.0 range, in rank order

INSTITUTION	Rank	Score
UNIVERSITY OF CALIFORNIA, BERKELEY School of Optometry	1	4.94
THE OHIO STATE UNIVERSITY College of Optometry	2	4.92
INDIANA UNIVERSITY School of Optometry	3	4.91
UNIVERSITY OF ALABAMA AT BIRMINGHAM School of Optometry	4	4.88
UNIVERSITY OF HOUSTON College of Optometry	5	4.83
SOUTHERN CALIFORNIA COLLEGE College of Optometry	6	4.82
SUNY STATE College of Optometry	7	4.74
ILLINOIS COLLEGE College of Optometry	8	4.73
PENNSYLVANIA College of Optometry	9	4.70
NEW ENGLAND College of Optometry	10	4.65
FERRIS STATE College of Optometry	11	4.61
PACIFIC UNIVERSITY College of Optometry	12	4.55
UNIVERSITY OF MISSOURI – ST. LOUIS School of Optometry	13	4.52
SOUTHERN COLLEGE College of Optometry	14	4.38
NORTHEASTERN STATE UNIVERSITY College of Optometry	15	4.17
INTER AMERICAN UNIVERSITY OF PUERTO RICO School of Optometry	16	4.08

A RATING OF MEDICAL SCHOOLS

U.S.A. MEDICAL SCHOOLS
Distinguished

Nineteen institutions with scores in the 4.6-5.0 range, in rank order

INSTITUTION	Rank	Score
HARVARD MEDICAL SCHOOL (Boston)	1	4.94
JOHNS HOPKINS UNIVERSITY School of Medicine (Baltimore)	2	4.9[illegible]
UNIVERSITY OF PENNSYLVANIA School of Medicine (Philadelphia)	3	4.92
UNIVERSITY OF CALIFORNIA School of Medicine (San Francisco)	4	4.91
YALE UNIVERSITY School of Medicine (New Haven)	5	4.90
UNIVERSITY OF CHICAGO Pritzker School of Medicine (Chicago)	6	4.88
COLUMBIA UNIVERSITY College of Physicians & Surgeons (New York)	7	4.87
STANFORD UNIVERSITY School of Medicine (Palo Alto)	8	4.85
CORNELL UNIVERSITY School of Medicine (New York)	9	4.82
UNIVERSITY OF MICHIGAN Medical School (Ann Arbor)	10	4.79
UNIVERSITY OF CALIFORNIA School of Medicine (Los Angeles)	11	4.78
DUKE UNIVERSITY School of Medicine (Durham)	12	4.73
NEW YORK UNIVERSITY School of Medicine (New York)	13	4.70
NORTHWESTERN UNIVERSITY Medical School (Chicago)	14	4.68
UNIVERSITY OF MINNESOTA Medical School (Minneapolis)	15	4.67
TULANE UNIVERSITY Medical School (New Orleans)	16	4.65
UNIVERSITY OF ROCHESTER School of Medicine & Dentistry (Rochester)	17	4.63
WASHINGTON UNIVERSITY School of Medicine (St. Louis)	18	4.61
VANDERBILT UNIVERSITY School of Medicine (Nashville)	19	4.57

U.S.A. MEDICAL SCHOOLS (Continued)
Strong

Thirty-two institutions with scores in the 4.0-4.5 range, in rank order

INSTITUTION	Rank	Score
UNIVERSITY OF CALIFORNIA School of Medicine (San Diego)	20	4.50
UNIVERSITY OF VIRGINIA School of Medicine (Charlottesville)	21	4.49
UNIVERSITY OF NORTH CAROLINA School of Medicine (Chapel Hill)	22	4.48
TUFTS UNIVERSITY School of Medicine (Boston)	23	4.47
UNIVERSITY OF CALIFORNIA School of Medicine (Davis)	24	4.46
BOSTON UNIVERSITY School of Medicine (Boston)	25	4.45
INDIANA UNIVERSITY School of Medicine (Indianapolis)	26	4.44
UNIVERSITY OF WISCONSIN Medical School (Madison)	27	4.43
UNIVERSITY OF ILLINOIS College of Medicine (Chicago)	28	4.42
UNIVERSITY OF IOWA College of Medicine (Iowa City)	29	4.41
UNIVERSITY OF WASHINGTON School of Medicine (Seattle)	30	4.40
GEORGETOWN UNIVERSITY School of Medicine (Washington D.C.)	31	4.39
OHIO STATE UNIVERSITY College of Medicine (Columbus)	32	4.38
STATE UNIVERSITY OF NEW YORK AT BUFFALO School of Medicine	33	4.37
GEORGE WASHINGTON UNIVERSITY School of Medicine (Washington D.C.)	34	4.36
TEMPLE UNIVERSITY School of Medicine (Philadelphia)	35	4.35

U.S.A. MEDICAL SCHOOLS (Continued)
Strong

Thirty-two institutions with scores in the 4.0-4.5 range, in rank order

INSTITUTION	Rank	Score
BAYLOR COLLEGE OF MEDICINE (Houston)	36	4.34
BOWMAN GRAY SCHOOL OF MEDICINE (Winston-Salem)	37	4.33
EMORY UNIVERSITY School of Medicine (Atlanta)	38	4.32
UNIVERSITY OF KANSAS School of Medicine (Kansas City)	39	4.31
LOMA LINDA UNIVERSITY School of Medicine (Loma Linda)	40	4.30
LOYOLA UNIVERSITY OF CHICAGO Stritch School of Medicine	41	4.28
UNIVERSITY OF LOUISVILLE School of Medicine (Louisville)	42	4.27
UNIVERSITY OF CALIFORNIA College of Medicine (Irvine)	43	4.26
SAINT LOUIS UNIVERSITY School of Medicine (St. Louis)	44	4.25
DARTMOUTH MEDICAL SCHOOL (Hanover)	45	4.23
UNIVERSITY OF SOUTHERN CALIFORNIA School of Medicine (Los Angeles)	46	4.21
UNIVERSITY OF MISSOURI School of Medicine (Columbia)	47	4.18
WAYNE STATE UNIVERSITY School of Medicine (Detroit)	48	4.17
ALBERT EINSTEIN College of Medicine of Yeshiva University (New York)	49	4.16
STATE UNIVERSITY OF NEW YORK AT STONY BROOK School of Medicine	50	4.15
BROWN UNIVERSITY PROGRAM IN MEDICINE (Providence)	51	4.13

U.S.A. MEDICAL SCHOOLS (Continued)
Good

Twenty-eight institutions with scores in the 3.6-3.9 range, in rank order

INSTITUTION	Rank	Score
CASE WESTERN RESERVE UNIVERSITY School of Medicine (Cleveland)	52	3.89
UNIVERSITY OF COLORADO School of Medicine (Denver)	53	3.88
UNIVERSITY OF CONNECTICUT School of Medicine (Farmington)	54	3.87
UNIVERSITY OF PITTSBURGH School of Medicine (Pittsburgh)	55	3.85
CREIGHTON UNIVERSITY School of Medicine (Omaha)	56	3.84
MOUNT SINAI School of Medicine of the City University of New York	57	3.83
UNIVERSITY OF MARYLAND School of Medicine (Baltimore)	58	3.82
HEALTH SCIENCES UNIVERSITY School of Medicine (Portland)	59	3.81
ALBANY MEDICAL COLLEGE of Union University (Albany)	60	3.80
UNIVERSITY OF UTAH College of Medicine (Salt Lake City)	61	3.79
UNIVERSITY OF FLORIDA College of Medicine (Gainesville)	62	3.78
LOUISIANA STATE UNIVERSITY School of Medicine (New Orleans)	63	3.77
UNIVERSITY OF MIAMI School of Medicine (Miami, Florida)	64	3.76
MICHIGAN STATE UNIVERSITY College of Human Medicine (East Lansing)	65	3.75
UNIVERSITY OF TEXAS Southwestern Medical School (Dallas)	66	3.74
UNIVERSITY OF MISSOURI School of Medicine (Kansas City)	67	3.73
UNIVERSITY OF TEXAS MEDICAL BRANCH (Galveston)	68	3.72
UNIVERSITY OF TEXAS MEDICAL SCHOOL (San Antonio)	69	3.71
PENNSYLVANIA STATE UNIVERSITY College of Medicine, The Milton S. Hershey Medical Ctr. (Hershey)	70	3.70
STATE UNIVERSITY OF NEW YORK College of Medicine (Brooklyn)	71	3.69
UNIVERSITY OF CINCINNATI College of Medicine (Cincinnati)	72	3.68
STATE UNIVERSITY OF NEW YORK College of Medicine (Syracuse)	73	3.67
UNIVERSITY OF TENNESSEE College of Medicine (Memphis)	74	3.66
UNIVERSITY OF OKLAHOMA School of Medicine (Oklahoma City)	75	3.65
UNIVERSITY OF NEBRASKA College of Medicine (Omaha)	76	3.64
UNIVERSITY OF KENTUCKY College of Medicine (Lexington)	77	3.63
UNIVERSITY OF VERMONT College of Medicine (Burlington)	78	3.62
LOUISIANA STATE UNIVERSITY School of Medicine (Shreveport)	79	3.61

U.S.A. MEDICAL SCHOOLS (Continued)
Acceptable Plus

Forty-seven institutions with scores in the 3.0-3.5 range, in rank order

INSTITUTION	Rank	Score
NEW YORK MEDICAL COLLEGE (New York)	80	3.51
JEFFERSON MEDICAL COLLEGE of Thomas Jefferson University (Philadelphia)	81	3.50
UNIVERSITY OF ALABAMA School of Medicine (Birmingham)	82	3.49
WEST VIRGINIA UNIVERSITY School of Medicine (Morgantown)	83	3.48
UNIVERSITY OF TEXAS MEDICAL SCHOOL (Houston)	84	3.47
UNIVERSITY OF ARKANSAS School of Medicine (Little Rock)	85	3.46
HAHNEMANN UNIVERSITY SCHOOL OF MEDICINE (Philadelphia)	86	3.45
UMDNJ-NEW JERSEY MEDICAL SCHOOL (Newark)	87	3.44
UNIVERSITY OF MISSISSIPPI School of Medicine (Jackson)	88	3.43
UNIVERSITY OF NEW MEXICO School of Medicine (Albuquerque)	89	3.42
MEDICAL UNIVERSITY OF SOUTH CAROLINA College of Medicine (Charleston)	90	3.41
UNIVERSITY OF ARIZONA College of Medicine (Tucson)	91	3.40
MEDICAL COLLEGE OF PENNSYLVANIA (Philadelphia)	92	3.39
MeHARRY MEDICAL COLLEGE School of Medicine (Nashville)	93	3.38
RUSH MEDICAL COLLEGE (Chicago)	94	3.37
MAYO MEDICAL SCHOOL (Rochester)	95	3.36
MEDICAL COLLEGE OF VIRGINIA (Richmond)	96	3.35
MEDICAL COLLEGE OF GEORGIA (Augusta)	97	3.34
MEDICAL COLLEGE OF OHIO (Toledo)	98	3.33
CHICAGO MEDICAL SCHOOL University of Health Sciences (Chicago)	99	3.32
HOWARD UNIVERSITY College of Medicine (Washington, D.C.)	100	3.31
UNIVERSITY OF SOUTH FLORIDA College of Medicine (Tampa)	101	3.30
SOUTHERN ILLINOIS UNIVERSITY School of Medicine (Springfield)	102	3.29

U.S.A. MEDICAL SCHOOLS (Continued)
Acceptable Plus

Forty-seven institutions with scores in the 3.0-3.5 range, in rank order

INSTITUTION	Rank	Score
TEXAS TECH UNIVERSITY School of Medicine (Lubbock)	103	3.28
UMDNJ-RUTGERS MEDICAL SCHOOL (Piscataway)	104	3.27
UNIVERSITY OF HAWAII School of Medicine (Honolulu)	105	3.26
UNIVERSITY OF MASSACHUSETTS Medical School (Worcester)	106	3.25
MEDICAL COLLEGE OF WISCONSIN (Milwaukee)	107	3.24
UNIVERSITY OF PUERTO RICO School of Medicine (San Juan)	108	3.23
UNIVERSITY OF SOUTH CAROLINA School of Medicine (Columbia)	109	3.22
UNIVERSITY OF NEVADA School of Medical Science (Reno)	110	3.21
UNIFORMED SERVICES UNIVERSITY OF THE HEALTH SCIENCES School of Medicine (Bethesda)	111	3.19
UNIVERSITY OF NORTH DAKOTA School of Medicine (Grand Forks)	112	3.18
UNIVERSITY OF SOUTH DAKOTA School of Medicine (Vermillion)	113	3.17
NORTHEASTERN OHIO UNIVERSITIES College of Medicine (Rootstown)	114	3.16
EAST CAROLINA UNIVERSITY School of Medicine (Greenville)	115	3.15
MARSHALL UNIVERSITY School of Medicine (Huntington)	116	3.14
EASTERN VIRGINIA MEDICAL SCHOOL (Norfolk)	117	3.13
EAST TENNESSEE STATE UNIVERSITY College of Medicine (Johnson City)	118	3.12
UNIVERSITY OF SOUTH ALABAMA College of Medicine (Mobile)	119	3.11
TEXAS A&M UNIVERSITY College of Medicine (College Station)	120	3.10
WRIGHT STATE UNIVERSITY School of Medicine (Dayton)	121	3.09
MOREHOUSE SCHOOL OF MEDICINE (Atlanta)	122	3.07
ORAL ROBERTS School of Medicine (Tulsa)	123	3.05
MERCER UNIVERSITY School of Medicine (Macon)	124	3.04
PONCE SCHOOL OF MEDICINE (Ponce)	125	3.03
UNIVERSIDAD CENTRAL DEL CARIBE School of Medicine (Cayey)	126	3.02

Eye Health Care in Delaware Should be More Accessible, Comprehensive, and Economical

Half of the states in America provide better eye care for their citizens; Delaware currently prohibits it. The Delaware Optometric Association supports legislation which will secure needed eye care benefits for the people of Delaware, with no added expenditure of public funds. The proposed legislation will allow qualified doctors of optometry to use and prescribe certain ocular therapeutic pharmaceutical agents (TPAs) to treat diseases and disorders of the human eye, eyelid and related structures. <u>They will not be treating systemic disease.</u>

Passage of this Bill will permit qualified Delaware doctors of optometry to care for patients in a manner consistent with their current education and training.

Primary Eye Health Care

A doctor of optometry (O.D.) is a primary health care provider specifically educated and licensed to examine, diagnose, and treat conditions of the human visual system.

Optometry is the largest eye care profession and the third largest independent health care profession in America. Like dentists and family physicians, doctors of optometry are primary care providers who are generally the first professionals to examine, diagnose and treat patients who enter the health care system. Those who require secondary or tertiary care are referred to the appropriate specialists.

There are many good reasons to allow doctors of optometry to use therapeutic medications for the treatment of common eye disease. Competency is just one of them.

Delaware Optometric Association

NOW

1/2

of the country benefits

Better Eyecare Should Not Be Against the Law!

Doctors of Optometry are Permitted to Use and Administer Therapeutic Medications in Delaware

The Delaware TPA Bill: Overcoming Objections with Facts.

As the law currently stands, ophthalmologists are the only eye care specialists allowed to use and prescribe therapeutic drugs. It is important to remember however, that ophthalmologists are surgical specialists and are not necessarily the best primary eye providers. Doctors of optometry provide primary eye care exclusively.

Under the proposed bill, doctors of optometry will be able to prescribe topical and oral anti-infective agents, antihistamines, anti-glaucoma agents, anti-inflammatory agents, analgesic agents and over the counter agents, along with oral non-steroidal anti-inflammatory agents. All of these medications will be used for the treatment of common eye disease. Patients will be referred to proper specialists when necessary.

The most common objections to a Delaware TPA bill are based on inaccurate perceptions:

Objection: Doctors of optometry are trying to "practice medicine" without a medical degree.
FACT: Some say that drugs should only be administered by graduates of medical school. This argument overlooks the fact that dentists, osteopaths and podiatrists do not attend medical school; yet they are permitted under Delaware law to administer certain drugs, and this practice is widely accepted by the public and other medical professionals. These health care professionals, like doctors of optometry, receive as much or more pharmacological training as is required in medical school.

It is also important to note that doctors of optometry have far more education and knowledge regarding the eye, and have more sophisticated equipment for detailed examination of the eye, than the average non-ophthalmologist physician. These non-ophthalmologist physicians do in fact now treat eye disease.

Objection: Doctors of optometry do not have the education to prescribe therapeutic drugs.

FACT: Actually, doctors of optometry have 7 - 10 years of higher education, including the four year doctoral program in optometry. The optometric doctoral program is equivalent to dentistry and podiatry in the area of pharmacology.

Optometric schools and colleges are accredited by the same national and regional accreditation associations which certify all health care professional schools.

All Delaware optometrists are required to pass a written national and practical state certification exam to demonstrate expertise in the profession before being licensed to practice. They are also required to complete 12 hours of qualified continuing education every two years as a prerequisite fot license renewal.

Objection: Therapeutic pharmaceutical agents can have systemic effects on other parts of the human body.

FACT: True. However, doctors of optometry, along with medical doctors, dentists, osteopaths, podiatrists and pharmacists are aware of these effects and will prescribe in a responsible manner. Information on systemic effects is taught to all health care professionals, not just to medical doctors.

An optometrist, like any other doctor, would seek emergency care if a patient exhibited a serious adverse reaction to any drug.

Objection: Allowing doctors of optometry to treat eye disease will increase the cost of eye care in Delaware.

FACT: This statment is unsubstantiated. Evidence from 25 other states allowing doctors of optometry to treat eye disease shows that the cost of eye care is actually reduced. Optometrists' fees are generally lower than those charged by surgical specialists and hospitals for the same procedures. Even malpractice rates, the most impartial and accurate measure of effectiveness, have not increased in states allowing optometrists to prescribe medications.

The patient will, in many cases, avoid the cost of a visit to a second doctor or to a hospital. The patient will also save travel time and time away from work or home.

Better eye care should not be against

New Jersey Optometric Association

88 Lakedale Drive / Trenton, New Jersey 08648 / 609 • 695 • 3456

Q. Why should optometry be allowed to independently treat glaucoma?

A. By virtue of optometric education and geographic distribution, optometrists are prepared and available to prevent unnecessary visual impairment by diagnosis as well as treating glaucoma. Today's optometrist is clinically qualified and has state of the art instrumentation to diagnose glaucoma --- the same instruments, concepts and diagnostic techniques used by physicians.Glaucoma is a sight-threatening disease, but it manifests itself in different degrees of severity. Even ophthalmologists will refer out to specialists a serious glaucoma case.

Q. Isn't the treatment of glaucoma a lot more complex than diagnosis?

A. Once the diagnosis has been established, the pressure inside the eye must be reduced. The use of drops is nearly always indicated; occasionally, oral anti-glaucoma medicine is prescribed, with surgery as an option. When this is necessary the appropriate referral will be made. Treatment of glaucoma is aimed at making sure there is not further damage from the elevated pressure inside the eye. The same processes involved in the diagnosis of glaucoma is also used in managing glaucoma.

Q. Is it dangerous to have optometrists providing post-operative care for cataracts or other eye problems?

A. No. Optometry has been providing post-operative care for years. Insurance carriers, including Medicare, reimburse optometrists for the care provided.

Q. Were studies released by the federal government raising concerns about post-operative care by optometrists?

A. Again, this issue is irrelevant to the current optometric practice act or the proposed legislation. A study was released by the Federal Office of Technological Assessment (OTA) that speculated about "potential risks". However, no scientific conclusion has been drawn from the study, and hypothetical potential concerns in comanagement situations have not been raised by OTA. Where legal issues have been raised in the past by ophthalmic surgeons, post-operative care of cataract surgery patients has been held to fall within the definition of the practice of optometry. Finally, the Code of Ethics of the American Medical Association finds post-operative care by optometrists to be perfectly acceptable and ethical.

Q. Aren't ophthalmologists easily available to any citizen of New Jersey?

A. Although widely distributed through the state, ophthalmologists are not readily available on Wednesdays, weekends, and evenings, especially in the inner cities. Optometrists are forced to refer their patients to a general medical practitioner with minimum training in the eye compared to that of the optometrist, or to the emergency room at a local hospital, where the patient's treatment will be further delayed and the costs greatly increased.

We hope these comments will lead to a better understanding on optometry's position on A-743. If you have any questions on this important legislation, please give me a call at (609) 695-3456.

Dr. Larry Wallis
Legislative Chairman
New Jersey Optometric Association

Q. Won't malpractice claims and malpractice insurance rates increase because of medications used by optometrists?

A. No. In fact, rates have gone down. States have authorized medications for disease treatment by optometrists since 1976 with no trend toward increased claims or rates. Some rates for optometry dropped 40% in 1988. There is no actuarial difference between states with or without treatment legislation, including those states authorizing glaucoma treatment. Optometry malpractice rates are far below the rates for other professions including medicine. The claims-made rate with St. Paul Fire & Marine is $750 compared to $12,500 for a non-surgical ophthalmologist.

Q. Wouldn't it be best for the public to keep non-medical professionals limited?

A. These public safety arguments propagated by medicine should be recognized for what they are - the use of licensure laws as a monopolistic tool to protect the economic interest of one profession against another. Dentists and podiatrists are "non-medical" professionals, with treatment and surgical privileges.

Q. Won't giving optometry the use of medications for treatment purposes create problems, with the potential to cause blindness or even death from some medications?

A. Medical claims of lethal effects from optometric use of diagnostic and treatment medications (...people dying in the streets) have proven to be false claims. Optometry has an exceptional record when fairly compared with medicine, dentistry and podiatry - those professions with the legal right to use treatment medications. Optometry in various states has made wide use of treatment medications since 1976 with a very good record. Medicine made the same claim in every state that sought the use of diagnostic pharmaceutical agents. Fifty (50) states now use them without any harm to the public. In fact, many diagnostic drugs also have a therapeutic use.

Q. Isn't optometry attempting these legislative changes just because optometrists are now reimbursed under major medical and by Medicare?

A. Reimbursement by insurance companies and third party payors for services provided by optometrists when those services would be covered if provided by a physician has not been an issue since the passage of anti-discrimination statutes over 20 years ago. Coverage of optometric services is a matter of equity for New Jersey citizens and is also cost effective. Consumers, business and government will benefit as competition increases, costs stabilize and earlier identification of more serious disease problems permits early initiation of treatment.

Q. What about allegations of optometric mismanagement?

A. Optometry is not perfect, but neither is medicine. Many of these allegations have grown from statements made by the North Carolina Society of Ophthalmology. These totally unsubstantiated allegations were first made by ophthalmology in 1984. The North Carolina State Board of Examiners in Optometry acted immediately to gain information about these cases. To date, no documents have even been produced to substantiate the allegations. In fact, the parties making these allegations have consistently refused to produce any evidence supporting the allegations. On May 6, 1987 the North Carolina Board made the following findings: "No documents or evidence exists which would substantiate the claim of the society that there were 203 cases of optometric mismanagement. In addition, there exists no appreciable evidence of neglect, mismanagement or incompetence on the part of any licensee of this board which justifies any further inquiry or investigation based upon claims or contentions of the [ophthalmology] society, its officers, attorneys, public relations staff or other agents."

Q. What public protection exists?

A. There is a virtual "fail-safe" mechanism in optometry to protect the patient. It is the universal characteristic of "professional conservatism". Professional conservatism, actually good independent professional judgement, would dictate consultation with an appropriate practitioner whenever the patient's needs are beyond the scope of training or licensure of the optometrist. Protecting the patient's welfare is the hallmark of any health care provider, including optometry.

Q. Will optometrists try to treat every case of disease that walks in the door?

A. Absolutely not, but we think we should be the ones to decide what to treat and what not to treat. Optometry is an independent health profession and must be allowed the flexibility to make consultation and treatment decisions -- the law should not require optometry or optometric patients to be constantly running to physicians for unnecessary consultations. Consultations and comanagement with secondary and tertiary practitioners is and will continue to be an important part of providing care to our patients, but broad consultation should not be mandated.

Q. Isn't optometric education in pharmacology and the treatment of disease superficial? Shouldn't a "medical education" be required?

A. Optometric pharmacological education is the equivalent to, or greater that received in most medical schools during the first four years of a general medical education. In fact, in the institutions where both optometry and medical schools exist together as part of a major university (ie, Ohio State University or the University of Alabama at Birmingham), the basic educational and clinical experiences are taught by the same staff and clinical instructors.

Neither podiatrists nor dentists have "medical educations" as defined by MD's, yet both professions have long had the authority to prescribe, with pharmacological education in their own area of specialization equivalent to that received by optometrists in optometry's area of specialization.

Q. Do optometrists have the "hands-on" clinical expertise to treat eye disease?

A. Yes. The graduating optometrist participates in supervised diagnosis, management, and direct case study through clinical experiences in a variety of settings, including public health hospitals, Indian health facilities, military hospitals, veterans hospitals and inner city clinics. This clinical experience includes the diagnosis of eye disease as well as the presence of systemic diseases which require referral to other practitioners. As in other professions, the biomedical and clinical sciences are taught in the classroom, applied in the clinics and refined through internships, externships and residencies.

Practicing optometrists diagnose disease daily in their offices. As a result, practicing optometrists have years of clinical experience in differential diagnosis and follow up care.

Q. Optometrists do not have access to laboratories to do special testing, do they?

A. Optometrists have access to the same laboratories as do physicians. More and more, optometrists are being named to hospital staffs, which allows even greater access for special laboratory tests. For general physical evaluations, consultation is made with family physicians.

Q. Some medical doctors, who are also optometrists, assert that only physicians take four years of undergraduate college. These OD/MDs also assert that medical school covers more and is more intellectually demanding -- is that true?

A. No. Optometrists also typically take four years of undergraduate work, graduate near the top of their classes and then attend four years of intellectually demanding optometric education. The schools and colleges of optometry are accredited by the United States Department of Education and the Council on Postsecondary Accreditation, as are medical schools.

Also, these OD/MDs would have graduated from optometry school nearly a decade ago. Optometric education, just like medical education, has changed in the last decade. If anything, optometric education has changed even more dramatically. Practicing optometrists must also obtain fifty (50) hours of continuing education every two (2) years to update and maintain their professional licensure in New Jersey, the highest statutory requirement for continuing education in the country.

Q. What is glaucoma?

A. Glaucoma is not simply one disease nor is there a universally accepted definition. However, the general consensus is that glaucoma exists when the pressure inside the eye is higher than that person's eye can tolerate. Glaucoma is evidenced by nerve changes and losses in areas of side vision.

Responses to Major Arguments Opposing Therapeutics In Optometry

AREA	OPPOSING ARGUMENT	RESPONSE TO		
		HONEST FEELING	PROFESSIONAL EGO	ECONOMIC INTEREST
NEED	Added access is unnecessary in eye care	Increased access will reduce - delayed care - excess travel		Increased access will produce increased - patient choice - competition - cost controls
NEED	Better quality care is not needed in primary eye care	MDs and ophthalmologist provide satisfactory primary eye care but ODs are specially prepared for primary eye care	General MDs are inadequately trained and ophthalmologists (surgeons) are over trained for primary eye care	Surgeons should not provide primary eye care because - rate of surgery increases - more expense
NEED	Costs are under control in eye care	Fees in eye care and surgical rates are escalating uncontrollably	Surgeons demand higher fees for non-surgical skills than ODs	Increased access and competition effectively controls cost escalation
EDUCATION	ODs lack basic biomedical background	Prerequisite undergrad. require and biomedical courses in optometry school same as medicine/dentistry	Biomedical courses taught by same MDs/PhDs that teach medical students	
EDUCATION	OD pharmacology education inadequate	OD pharmacology education equals or exceed medical/ dental schools	Basic content similar with emphasis on ocular pharmacology	
EDUCATION	ODs have no systemic disease education	Extensive courses in systemic pathology, clinical medicine and emergency medicine	ODs systemic education concentrates on systemic diagnosis and eye relationships	Treatment of systemic disease not taught in optometry school
EDUCATION	ODs have insufficient eye disease training	ODs have more eye disease curriculum than any other health professional	Ophthalmologists have more advanced medical/surgical curriculum	Surgical knowledge not critical or appropriately reimbursable by primary care patients
EDUCATION	ODs have insufficient clinical training (live patient) experiences	ODs have more eye care experiences in training than any health professional other than surgeons	Ophthalmologists see double the patients ODs see with more than half being non primary, surgical care	ODs see as much primary care in training as ophthalmologists
EDUCATION	ODs can't deal with medical emergencies	OD training in emergency medical care equals or exceeds other health prof. using therapeutics (i.e. dentists, podiatrists)	Ophthalmologists rely (as would ODs) on emergency physicians, ambulance, etc. in rare cases of drug reaction	

ED	Only medical education is adeq. for use of therapeutics	Other health professions (dentistry, podiatry, osteop.) have dramatically expanded programs over past 10-20 yrs.	Medicine has no mystical, genetic or professional exclusive rights to therapeutic education	The medical license (as any health professional license) is to protect the public not the prof.
EDUCATION	Older ODs can't come up to grade in therapeutics	"If we can see further, it's by standing on the shoulders of giants." (Sir I. Newton)	Older practitioner in all professions (including optometry) support growth in spirit if not participation	Whoever chooses to use therapeutics must qualify. Many older ODs in therapeutic states are the first.
EDUCATION	ODs should "educate before they legislate"	Optometry does appropriately educate for any legislation they request. History has proven such for 70 years of safe, effective growth.	The classic "Catch 22!" ophthalmology won't help us educate as they feel necessary. Thus optometry would never grow.	Optometry has subverted the "Catch 22" by using progressive medical professionals and ophtnal. for many years of training (i.e. hospitals, clinics, multidisciplinary education and practices, etc.)
SAFETY	Delayed referrals will produce increased risks	For years ODs have been required by law to recognize, diagnose and refer appropriately	No change in statutory requirements for proper referral means traditional appropriate OD referral patterns will continue	The primary therapeutic care that ODs can effectively manage need not be referred at added expense to patients.
SAFETY	Optometric malpractice will increase	The traditionally low optometric malpractice exper. has not increased in existing therapeutic states	Unsubstantiated reports to state board or ophthalmologic "witch hunts" for optometric malpractice are unfair but growing	To paraphrase; "Let that health practitioner without misfortune or misdeed cast the first stone. Comparatively (ODs to ophthalmologists) the issue should cease.
SAFETY	Patients will be more confused about different kinds of eye practitioners	No doubt some confusion will persist. But a single primary care (family) eye doctor would help create a single resource for first/primary care.	Ophthalmologists should be understood by public as medical/surgical specialists in eye care not as "everything to everybody"	Too many eye surgeons and not enough eye surgery does not help patients understand the value of primary preventive eye care.
SAFETY	The risk/benefit ratio of therapeutics in optometry is not worth the changes	The factual results of the risk to benefit ratio in every state or health delivery system using therapeutics in optometry has disproven virtually all hypothetical opposing arguments		- Added access - Better care - Cost control - Appropriate OD education - Patient safety and satisfaction - Competition - Factual results have proven most beneficial to the public

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EDITORIAL

LYMAN C. NORDEN, O.D, EDITOR

"Why don't they go to medical school?"

In legislative hearings around the country we often hear the following rhetorical question posed by ophthalmology: "If the optometrists want to practice medicine, why don't they go to medical school?" Obviously, they're not looking for an answer; they're simply trying to win an argument on the basis of a well-accepted fact. Most optometrists don't go to medical school

There's no need for optometrists to go to medical school. If such a need existed, optometry would have died off long ago. On the contrary, optometry has grown, remarkably. In a relatively short period of time, optometry has established itself as the most cost-effective provider of primary eye care in the health care market place. This is why the military services use far more optometrists than ophthalmologists. This is why HMOs hire far more optometrists than ophthalmologists. Such organizations know the needs of their patients and the limits of their budgets. They know that what they need is optometrists, not optometrists with medical degrees.

This cost-saving principle applies equally to the private practice sector of health care. Someone has to pay for the additional tuition and loss of income incurred in medical training. In our system that someone is the patient and the taxpayer. Most of us fill both roles.

Can our society really afford more medical doctors? An editorial in the *American Journal of Ophthalmology* recently described an actual surplus of medical doctors in some European countries, and predicted a similar surplus (including ophthalmologists) in the United States by the year 2001.[1] There is no reason to expect enough additional need for eye surgery in the future to support all of the ophthalmologists now, and soon to be, in training. The American Academy of Ophthalmology has decided to meet this coming challenge by promoting an organized drive into primary vision care. In its publication, "Comprehensive Ophthal-Ophthalmology: Moving Toward the Future"[2] the American Academy of Ophthalmology cites ". . .a competitive disadvantage for ophthalmology within the primary eye care market. . ." and a need to start ". . .garnering a larger share of the primary eye care market." This is then taken as justification for trying to establish the ophthalmologist as ". . .the only professional qualified to provide all types of eye care, medical, surgical, and optical."

In fact, ophthalmology is already well on its way in this evolutionary process. The U.S. Department of Health and Human Services tells us that the second most common ophthalmology office visit is for refractive and accommodative disorders.[3] So, if we're going to waste people's time with rhetorical questions, let's try this one: "If the ophthalmologists want to practice optometry, why don't they go to optometry school?" They certainly don't learn optometry in medical school, and they learn precious little of it in residency training.

Of course this response won't stop ophthalmology from asking its question, "Why don't the optometrists go to medical school?" But is there a logical answer? Is there an answer that could have meaning to our legislators and their constituents? I think there is, and I can say it in two words: "fiscal responsibility."

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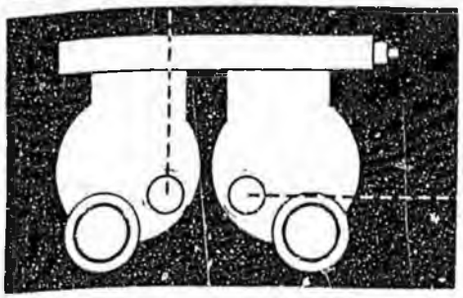


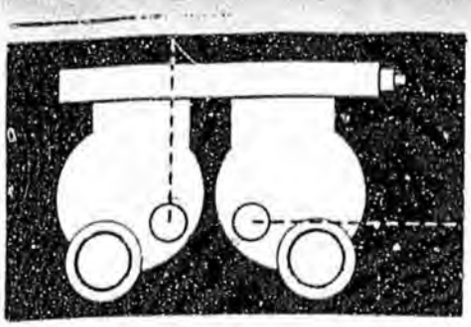
PROS AND CONS

"OPTOMETRISTS DO NOT HAVE EDUCATION OR CLINICAL EXPERIENCE IN DIAGNOSING EYE DISEASE."

The professional training of the optometry student is similar to that of the medical, dental and podiatric student. The optometric curriculum includes training in human anatomy, neuroanatomy, ocular anatomy, human physiology, biochemistry, microbiology, pharmacology — both general and ocular — general and ocular pathology, diagnosis and treatment of ocular disease, ocular motility, physiological and geometric optics, with internship/ externship programs.

The proposed legislation will require optometrists to be certified by the Michigan Board of Optometry as educationally qualified to use and prescribe medications for therapeutic purposes.

It is important to note that in Michigan, other health-care professionals, such as dentists and podiatrists, have fewer hours of professional training in pharmacology, yet have an unrestricted use of therapeutic medication to care for their patients.



PROS AND CONS

"DISEASE TREATMENT TIME WILL BE DELAYED."

In fact, the truth is exactly the opposite. By having to refer a patient to a second health-care professional, an optometrist is forced to delay the needed treatment.

Presently, in Michigan, optometrists are required to refer patients who may be suffering from common, localized eye diseases to another health-care professional. For the majority of patients, this means that their eye doctor, the optometrist, must stop providing care (which prolongs the patient's discomfort and may worsen the eye condition) and refer that patient to another health-care professional for treatment.

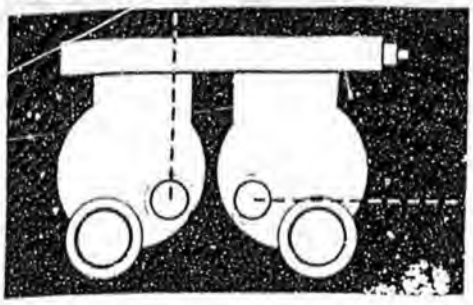
This legislation will authorize doctors of optometry to fully utilize their diagnostic and therapeutic skills to minimize the number of their patients who must be referred for costly specialty care when a common eye ailment is diagnosed.

"ALLOWING OPTOMETRISTS TO TREAT EYE DISEASE WILL INCREASE THE COST OF EYE CARE."

This statement is totally unsubstantiated. All evidence suggests that allowing optometrists to treat patients with drugs will save Michigan citizens money.

Allowing doctors of optometry to treat the conditions they now diagnose will save the public money because:

1) Optometrists' fees are generally lower than those charged by physicians and hospitals for the same procedure;
2) the cost of a visit to a second doctor or hospital will be eliminated;
3) extra travel time will be eliminated; and
4) extra time away from work will be eliminated.



PROS AND CONS

"NEW OPTOMETRISTS MAY BE WELL TRAINED, BUT MANY OF THOSE IN PRACTICE IN MICHIGAN GRADUATED FROM FAR LESS SOPHISTICATED PROGRAMS WITH VIRTUALLY NO EDUCATION IN TPAs."

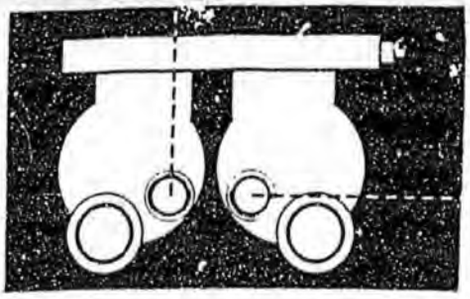
The proposed legislation includes comprehensive safeguards to assure competency:

- Currently licensed doctors of optometry would not be able to use or prescribe TPAs unless they successfully complete a postgraduate course approved by the Michigan Board of Optometric Examiners. **There is no "grandfathering."**
- Continuing education required for license renewal must include courses in treatment of ocular disease.
- Any health-care professional who uses or prescribes medication without proper certification is subject to disciplinary procedures, including license revocation and possible criminal penalties.

"IS THERE A DIFFERENCE BETWEEN A PRIMARY EYE-CARE EXAMINATION GIVEN BY AN OPTOMETRIST OR AN OPHTHALMOLOGIST?"

Yes, the optometrist generally provides a more thorough primary-care eye examination than the ophthalmologist. This is because the optometrist is more extensively educated and trained in providing primary care and is, therefore, better able to recognize when additional tests are needed.

Although both professionals utilize a basic group of tests to evaluate vision and eye health and both use identical service codes when filing Medicare and Medicaid claims, optometrists routinely provide more tests in their primary-care eye examination than do ophthalmologists. For example, the *Audits and Surveys* report found that 38 percent of optometrists include a visual field test (one test used in diagnosing eye disease) in their routine primary-care eye examination, while only 7 percent of ophthalmologists do.



PROS AND CONS

"OPTOMETRISTS ARE TRYING TO PRACTICE MEDICINE."

Some argue that drugs should be administered only by graduates of medical schools. This argument overlooks the fact that drugs are already administered in Michigan by dentists, podiatrists and, in some instances, nurses. None of these health practitioners have attended medical schools. Instead, they have attended their own professional schools where they received pharmacological training as part of the curriculum. It should also be pointed out that optometrists have far more education and knowledge about the eye and more sophisticated equipment than the average non-ophthalmologist physician, who is permitted to use pharmaceutical agents in both the diagnosis and treatment of eye diseases.

"THERE ARE ENOUGH OPHTHALMOLOGISTS TO SERVE MICHIGAN."

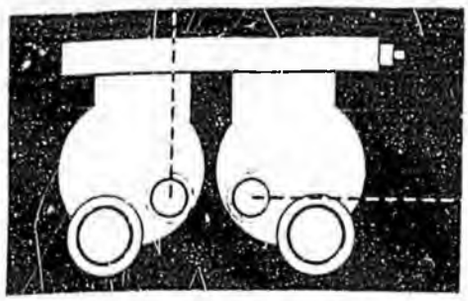
Ophthalmologists have full-time practices in less than half of Michigan's counties (41), whereas doctors of optometry have full-time practices in 73 counties. Rural Michigan residents should not be required to wait weeks or months for an appointment with an ophthalmologist. Even in urban areas, scheduling appointments with a second practitioner causes delays in treatment and additional costs.

"THERAPEUTIC PHARMACEUTICAL AGENTS CAN HAVE SYSTEMIC EFFECTS ON OTHER PARTS OF THE BODY."

This is a true statement; and optometrists, along with physicians, dentists, podiatrists and pharmacists, are aware of these effects and will prescribe in a responsible manner. Information on systemic effects is taught to all health-care professionals, not just to physicians.

"MALPRACTICE INSURANCE RATES WILL GO UP."

This statement ignores the facts. In the 25 states that have authorized TPA use, there has been no trend which indicates an increase in malpractice rates related to this issue.



PROS AND CONS

ECONOMICS: Optometrists' fees are generally lower than those of physicians and hospitals for the same procedures. It is cost-effective to allow optometrists to practice at their highest level of competence. Patient cost-savings of 35% and more have resulted when optometrists are allowed to use and prescribe therapeutic pharmaceutical agents (TPAs).

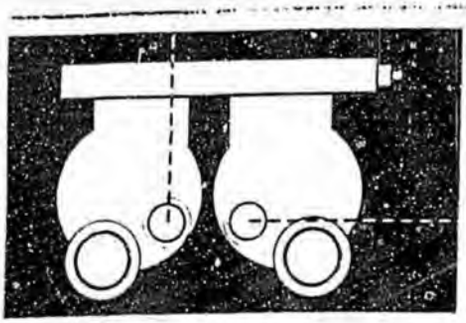
Allowing optometrists to treat the conditions they now diagnose will save the public money by eliminating the cost of a visit to another doctor and the cost of a duplicate vision examination. Extra travel time and time away from work will also be reduced.

In June 1989, *Audits and Surveys*, a New York City research firm, released a report called "The Cost and Availability of Routine Eye Care: A Comparison of Optometrists and Ophthalmologists." The report compares costs and availability of eye care in general and under the Medicare program. It presents overwhelming evidence supporting the cost-effectiveness of optometric care. The report finds that ophthalmologists' fees for routine eye examinations are an average of $20 higher than those of optometrists.

EQUITY: Current optometric training provides the doctor of optometry with the skills and expertise to include the use of medications to treat common eye diseases.

Michigan students get the same training in optometric college as students from states allowing optometrists to treat eye diseases, but they are not permitted to use their knowledge in Michigan.

It has been conclusively demonstrated in other states that the use of pharmaceutical drugs by qualified optometrists to treat common eye diseases is safe and cost-effective.



PROS AND CONS

ACCESSIBILITY: By allowing doctors of optometry to prescribe medications for common eye diseases, access to this care for all the residents of Michigan is increased.

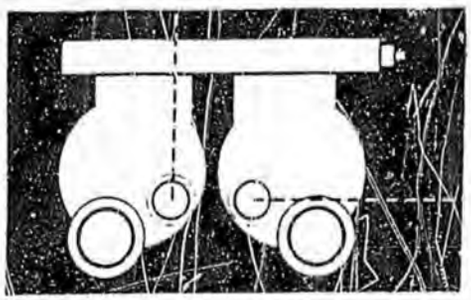
The optometrists of Michigan are well distributed geographically throughout the state, have office hours that include evenings and Saturdays, are more readily available and charge more reasonable fees.

In many Michigan communities, the doctor of optometry is the only health professional who is specifically trained and licensed to detect and diagnose eye disease and monitor a program of treatment.

A 1989 study shows that there were no practicing ophthalmologists in over half of Michigan's counties, yet there was at least one optometrist in 73 of the 83 counties.

QUALITY: All Michigan optometrists, after graduating from an accredited school or college of optometry, must further demonstrate competency by successfully passing both national and/or state boards of examination prior to being licensed to practice.

A recent study comparing the number of hours of pharmacology at colleges of optometry, medicine and dentistry indicated that optometrists receive an equivalent or greater number of hours of pharmacology. Both dentistry and medicine are presently permitted to use and prescribe therapeutic pharmaceutical agents. The study shows optometry has **significantly more ocular pharmacology** than medical schools provide.



Michigan optometrists should be allowed to provide the full benefit of their training and experience as eye-care professionals.

"It is not necessary to refer every patient with an eye disease to an ophthalmologist for treatment. In general, sties; bacterial conjunctivitis; superficial trauma to the lids, cornea, and conjunctiva; and superficial foreign bodies can be treated just as effectively by the internist or general physician as by an ophthalmologist."

Daniel Vaughn, M.D.
Taylor Ashbury, M.D.
General Ophthalmology
7th edition, page 317

"Optometrists are more capable of diagnosing eye disease than general practitioners... Optometrists are more adequately educated in the basics of pharmacology and the rational use of drugs as professionals."

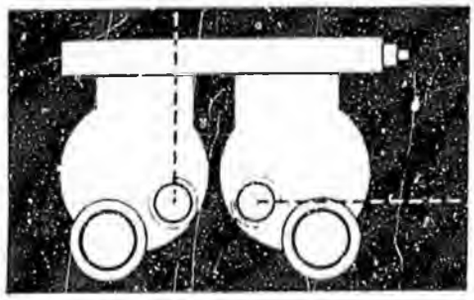
Joseph C. Toland, M.D.
Professor of Ophthalmology
Jefferson Medical College
Philadelphia, PA

"Our concern is that *optometrists have more training in diseases of the eye than general physicians*, and it is hard to defeat politically a request by the former group to diagnose and prescribe ophthalmic drugs."

Thomas A. Bruce, M.D.
Dean, College of Medicine
University of Arkansas

"You don't need ten years of training, four years of medical school and six years of residency to deal with common visual problems... The fact of the matter is the learning of the skills necessary to do routine eye care can be done terribly easy within the 4 - 5 years curriculum and is done remarkably well by the optometrist."

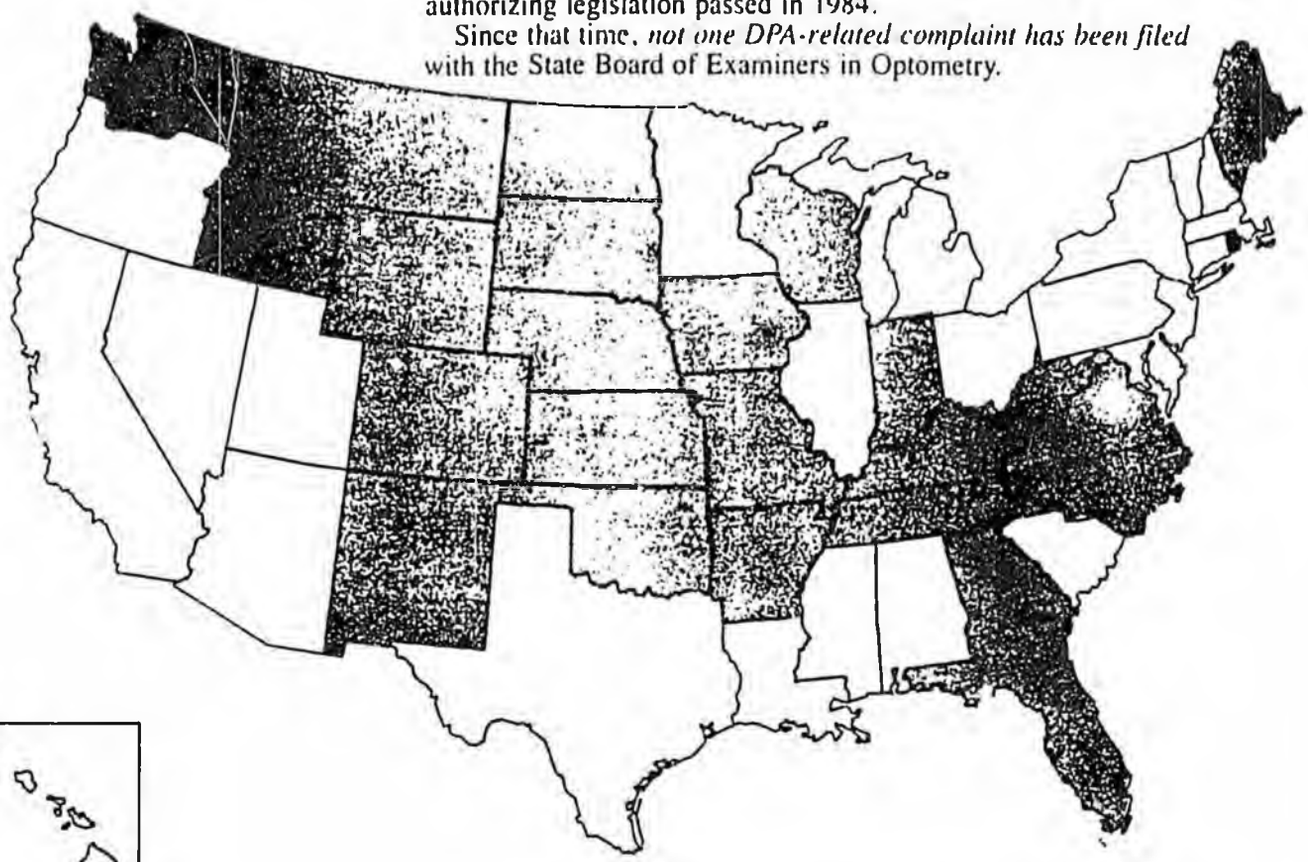
Harold Gardner, M.D.
Former Director
University Health Center
Wayne State University

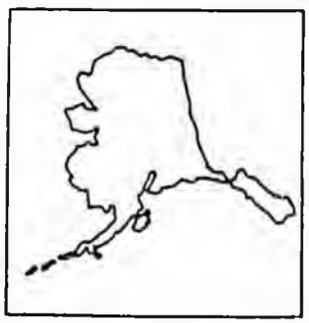


PAST EXPERIENCE

Nationally, optometrists have used diagnostic pharmaceutical agents (DPAs) in their practices in complete safety since 1971. In Michigan, optometrists have safely used drugs for diagnostic purposes since authorizing legislation passed in 1984.

Since that time, *not one DPA-related complaint has been filed* with the State Board of Examiners in Optometry.





■ States that authorize optometrists to use both DPAs and TPAs.

□ States that authorize optometrists to use only DPAs

The safety of optometrists using drugs for treatment of eye disease is well documented in the *25 states where such usage is already legal*. These states are Arkansas, Colorado, Florida, Georgia, Idaho, Indiana, Iowa, Kansas, Kentucky, Maine, Missouri, Montana, Nebraska, New Mexico, North Carolina, North Dakota, Oklahoma, Rhode Island, South Dakota, Tennessee, Virginia, West Virginia, Washington, Wisconsin and Wyoming.

Many of the doctors of optometry in those 25 states have received their training in therapeutic use of pharmaceuticals at Ferris State University in Big Rapids. That is the same school where a large number of Michigan optometrists received their doctor of optometry degrees.

Michigan optometrists practicing in military facilities and within the Veterans' Administration routinely use and prescribe eye medications.

In all instances of optometric drug use, doctors of optometry have established an exemplary record of *safety* and *effectiveness*. Firm evidence of that record is that neither malpractice claims nor insurance rates have increased as a result of optometric use of drugs.

In West Virginia and North Carolina, the states with the longest experience of treatment with medication by doctors of optometry, observers report earlier, quality treatment for patients, better working relationships between physicians and optometrists, and substantial cost savings to the public.

YOU WILL HEAR

You have heard or will hear a number of reasons why the use of therapeutic drugs by optometrists is dangerous. Let me consider some of these.

You will hear that optometrists are not properly trained to use pharmaceuticals for therapy. This is simply not true. The course of study in this area is the same as that of medicine and more extensive than that of dentistry. Not only are the hours of pharmacology the same for medicine and optometry, but it should be noted that the medical student must study all the organs equally, whereas, the optometry student can specialize in the eye once general pharmacology is completed. The drug interactions and systemic effects of the drugs administered for ocular conditions are studied in great detail. Students see numerous patients with pathology which requires pharmaceutical therapy. These students are supervised by ophthalmologists. So when other ophthalmologist's say our students do not receive appropriate clinical instruction they are providing misinformation; by reacting emotionally and irrationally.

You will hear that a profession which is non-medical not be allowed to use drugs. Yet dentistry and podiatry are non-medical and use therapeutic drugs, and surgery in the course of their professional practice and no harm has come to the public. The real issue here is whether or not optometrists are well trained healthcare professionals.

You will hear that these therapeutic pharmaceutical agents can have systemic effects, effects on other parts of the body, and that there can be interactions with other drugs a patient may be taking. These are true statements and optometrists along with physicians, dentists, podiatrists and pharmacists study these areas and reasonably incorporate it into their practice. The information necessary for responsible use of these agents is in the public domain and accessible to all health professionals, not just to physicians. It was the result of scientific investigations and is not exclusively "medical".

You will hear that there will be public safety problems if optometrists are allowed to use these agents. Very unlikely situations and cases will be put forth, coupled with the assumption of absolutely no professional judgement on the part of the optometrists. These "straw men" prove nothing. Yet, two states, West Virginia and North Carolina, have had this law for over 10 years and there have been no substantiated problems as a result. The reason I use the word substantiated is that there have been claims of problems but none that have been corroborated, and some have found to be fraudulent. 24 states have this law and the safety of the public is just fine. Better access, better quality care and cost containment have been the result.

In conclusion, optometry schools are educating and training optometry students well in the areas of diagnosis of eye pathology and in the responsible use of pharmacological agents. These students will graduate with the appropriate professional judgement to provide high quality eye care to their patients.

Contributed by Thomas F. Dorrity, Jr., O.D.

Summer, 1989

MINN.

OPTOMETRIC THERAPUETIC DRUG LEGISLATION

COMMON QUESTIONS AND ANSWERS

WHAT IS THE PURPOSE OF THIS LEGISLATION ?

This legislation would give qualified optometrists the right to prescribe topical medication and four specific types of oral medication to treat common eye health problems of the front part of the eye.

WOULD ALL OPTOMETRISTS AUTOMATICALLY BE ALLOWED TO USE THESE DRUGS?

Only those optometrists that have demonstrated adequate education and have shown competency by passing national board exams in treatment and management of ocular disease would be allowed these privileges.

HOW WILL THE OLDER OPTOMETRIST BE HANDLED AFTER PASSAGE OF THIS LEGISLATION?

Again, only those optometrist completing all mandated requirements for certification will be allowed to use drugs to treat eye disease. No one, however, will be forced to become certified. If an older optometrist does not wish to become certified to use therapeutic drugs, he/she will simply continue to practice in the way that current law allows them. There will be no grandfathering!

WHAT IS THE RATIONALE FOR ALLOWING OPTOMETRISTS TO TREAT EYE DISEASE?

Optometrists have been responsible for accurately diagnosing eye disease for years. Since the most difficult part of treating an eye disease is accurately diagnosing the condition,treatment by optometrists is a logical extension of their scope of practice.

WHAT IS THE EDUCATION OF AN OPTOMETRIST TODAY?

The average student entering optometry school today has a bachelor of science degree and the same required courses as a student entering medical or dental school. The actual optometry program is an additional four years of intensive training specifically on the eye. General and ocular pharmacology are stressed along with in depth training in differential diagnosis of eye disease and treatment and management of those diseases At least two years of this training are spent examining patients in a variety of clinic and hospital settings.

WHAT ARE THE BENEFITS TO THE CITIZENS OF MINNESOTA?

By allowing optometrists this expanded scope of practice, citizens of the state will be given: 1. Better access to eye care

2. More efficient delivery of eye care

3. Cost containment in eye care expenses

HOW MANY OTHER STATES OFFER OPTOMETRISTS THESE THERAPEUTIC DRUG PRIVELEDGES?

At this time, 23 states have passed legislation allowing optometrists the use of therapeutic drugs. Some states have had these laws in effect for thirteen years. Minnesota is one of the last states in the Midwest to enact this expansion of optometric practice.

WHAT HAS THE EXPERIENCE BEEN IN STATES WHERE OPTOMETRISTS PRESCIBE THERAPEUTIC DRUGS?

After many years and millions of patient encounters the optometric use of therapeutic drugs has had an overwhelming positive history. The patients in these states are enjoying the increased access and more efficient delivery of primary eyecare while at the same time reducing expenses. No adverse affects have been experienced.

WHAT ADVERSE EFFECTS COULD HAPPEN WITH THE USE OF THESE THERAPEUTIC DRUGS AND HOW WILL THE OPTOMETRIST DEAL WITH THEM?

The therapeutic drugs we are speaking of have a very,very low incidence of adverse effects. The most common reactions being nothing more than a simple rash. The diagnostic drugs that optometrists were given the priveledge to use in 1982 actually have a higher potential for adverse effects and in the 7 years they have been used, no significant adversed reactions have been reported. In the rare event , however, that there would be a serious adverse response to a drug, the optometrist is trained in emergency medical procedures such as CPR and would get the patient to an emergency medical facility just as any other health care provider would do in a similar situation.

WHAT WILL HAPPEN TO MALPRACTICE RATES FOR OPTOMETRISTS WHEN THEY START PRESCIBING MEDICATION?

Optometry has enjoyed such a good malpractice history that it has seen only a 20% increase in malpractice rates over the past five years while the medical profession has seen an increase of 500% during that same period. In fact, this year optometric malpractice rates in all states, including those where optometrists prescribe therapeutic drugs, are actually decreasing by almost 40%.

HOW ARE OPTOMETRISTS AND OPHTHALMOLOGISTS DISTRIBUTED GEOGRAPHICALLY IN MINNESOTA?

Optometrists are well distributed throughout Minnesota with offices in 99% of all counties while ophthalmologists are primarily located in the metropolitan areas and have full time offices in only 25% of the counties.

In fact outside the Twin cities and Rochester there are only 55 ophthalmologists in 28 towns to serve over 2,000,000 residents. In that same outstate area there are 292 optometrists in 118 communities.

WHY MUST OPTOMETRISTS GO TO THE LEGISLATURE IN ORDER TO GIVE PATIENTS FULL BENEFIT OF THEIR TRAINING?

Unfortunately optometry has no choice. Medicine has a practice act that allows them the ability to treat patients to the full extent that their training prepares them. As their training advances their patient's care advances. Optometry's practice act,however, requires a legislative change in our practice act every time we want to pass improved education and technology to our patients. Stop and think about how many coronary by-passes would have been done today if MDs were required to legislate first.

WHO OPPOSES THIS LEGISLATION ?

Organized ophthalmology formally opposes this legislation in Minnesota. In our neighbor state to the south,however,the Iowa academy of ophthalmology actually endorsed the same optometric legislation in 1984.

WHAT DOES THE OPPOSITION SAY?

The Minnesota academy of ophthalmology claims that optometrists are inadequately trained to treat eye disease with medication. They further believe that harm will come to residents of Minnesota if optometrists are allowed this therapeutic privilege.

WHO SHOULD YOU BELIEVE?

The dispute between ophthalmology and optometry is not new....

In the 1960's ophthalmology opposed optometric testing for glaucoma. They claimed optometry was inadequately trained and that harm would come to the citizens of Minnesota if optometry was allowed this privilege. Optometry won the fight and has prudently and safely tested for glaucoma to the benefit of Minnesota citizens since. Ophthalmology's claims proved unjustified

In the 1970's ophthalmology opposed optometric use of drugs for diagnostic purposes. They claimed optometry was inadequately trained and that harm or even death would occur to the citizens of Minnesota if optometry was allowed this privilege. Optometry again won the fight and has prudently and safely utilized diagnostic drugs to the benefit of Minnesota citizens since.

In the 1980's ophthalmology is opposing optometric use of drugs for therapeutic purposes. They are using the very same arguments they have used unsuccessfully for years. Their claims have proved false in every preceding case. Who do you think you should believe this time?

AMERICAN PUBLIC HEALTH ASSOCIATION
1015 Fifteenth Street, N.W., Washington, D.C. 20005 • (202) 789-5600

MYRON ALLUKIAN, JR. DDS, MPH, President

Honorable Edward L. Burke
Honorable John C. McNeil
Chairmen, Joint Committee on Health Care
State House
Boston, MA. 02133

October 3, 1990

Dear Senator Burke and Representative McNeil:

Today, the American Public Health Association (APHA), which represents a combined national and affiliate membership of over 52,000 public health professionals and community health leaders, passed a resolution entitled "Access to Treatment for Eye Care." (See attached.)

This resolution acknowledges that the expansion of clinical privileges of optometrists has increased the availability, accessibility, and cost-effectiveness of eye care to the American public. The resolution recommends that legislators update state optometric practice acts to allow duly qualified and licensed optometrists to expand their scope of practice to include the use of therapeutic pharmaceutical agents in the treatment of certain eye conditions.

Currently, 25 states allow optometrists to use therapeutic drugs for the benefit of their patients. In the Commonwealth of Massachusetts, Senate Bill 612, An Act Relative to Cost-Effectiveness and Accessibility of Certain Human Services, addresses the public health principles endorsed in the APHA resolution, and would result in better access to comprehensive eye care for the citizens of Massachusetts.

I strongly urge you to give favorable consideration to Senate Bill 612. If I can be of any further assistance, please let me know.

Sincerely,

Myron Allukian

Myron Allukian, Jr., D.D.S., M.P.H.
President

My work address is:

Community Dental Programs
Boston Department of Health and Hospitals
1010 Massachusetts Avenue
Boston, MA. 02118
(617) 534-4717

ACCESS TO TREATMENT FOR EYE CARE BY OPTOMETRISTS

The American Public Health Association,

Noting that more than one-third of all Americans have a disease or physiologic abnormality in one or both eyes;[1] and

Recognizing that only about one-half of the total population in the United States needing treatment for eye disease is receiving it;[1,2] and

Noting that eye disease and blindness cost the nation an estimated sixteen billion dollars a year,[3] and

Realizing that eye health problems and vision care demands will increase significantly in the future as the U.S. population ages;[4] and

Observing that optometric services are available in approximately 6,400 communities in the United States and that doctors of optometry are the only primary eye care providers in nearly 4,000 communities, and that nationwide optometrists outnumber ophthalmologists nearly two to one;[5,6] and

Noting that 60 percent of primary diagnostic eye examinations in the United States[7] are provided by the 25,000 active optometrists;[8] and

Realizing that many people who need medical eye care are already being treated by optometrists in many states;[9] and

Noting that optometric reimbursement rates are typically lower than those of other providers of comprehensive eye care;[10] and

Realizing that many people who want to receive medical eye care are now being treated by optometrists;[10] and

Recognizing that it is prudent public policy to utilize appropriately trained and licensed health professionals at their highest level of skill and training as determined by state licensing laws;[11] and

Noting that Medicare reimburses diagnostic and therapeutic eye care services delivered by optometrists as authorized by state practice acts,[13] and

Noting that 25 states have passed laws and regulations that allow optometrists to use therapeutic pharmaceutical agents[7] after completing appropriate training and testing requirements, and

Observing that the Department of Veterans Affairs, the U.S. Armed Forces, and the United States Public Health Service have regulations or credentialing statements that allow optometrists to utilize therapeutic

pharmaceutical agents to the benefit of their patients, and noting that this expansion of clinical privileges of optometrists has increased the availability, accessibility and cost-effectiveness of eye care to the American public through lower fees for services[10] and by a reduction in double visits and hospital emergency room visits; therefore

1. Recommend that legislators update their state optometric practice acts to allow for optometric use of those diagnostic and therapeutic pharmaceuticals which have been determined by the State Board of Examiners in Optometry as being within the scope of competency of pharmaceutically certified optometrists; and

2. Recommend that dispensing of such pharmaceuticals be regulated by state pharmacy laws.

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Footnote

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NEWS REVIEW

APHA BACKS TPA LAWS FOR OD'S

The American Public Health Association has become the first national health care organization to support optometrists' right to prescribe therapeutic drugs.

At their annual meeting in October, APHA members approved a resolution recommending that the 25 states that do not currently have TPA laws adopt them.

"This expansion of the clinical privileges of optometrists has increased the availabilty, accesibility and cost-effectiveness of eye care to the American public through lower fees and by a reduction in double visits and hospital emergency room visits," the resolution states. In support of the APHA's stand, the resolution also states that:

- Eye health problems and vision care demands will increase significantly in the future as the U.S. population ages,
- Optometrists are the only primary eye care providers in nearly 4,000 communities nationwide,
- Optometrists outnumber ophthalmologists by nearly two to one,
- 60 percent of primary diagnostic eye exams in the US are provided by the 25,000 active optometrists,
- Optometric reimbursement rates are typically lower than those of other providers of comprehensive eye care and Medicare reimburses diagnostic and therapeutic eye care services by optometrists, and
- The Dept. of Veterans Affairs, the Armed Forces and the Public Health Service all have regulations or credentialing statements that allow optometrists to use therapeutic drugs.

APHA has sent copies of the resolution to pharmacy boards, medical boards, governors and optometry boards in the states that have not approved TPA laws.

"This is a big deal," says Richard Schuck, O.D., chairman of the American Optometric Association's Legislative Committee. "I don't know that we'll see any

(Continued on p. 10)

(over)

OPTOMETRIC DRUG LEGISLATION

The 1991 map of therapeutic drug laws in the United States is almost a duplicate of the 1990 version.

No new states joined the list of those in which optometrists can treat eye diseases, but as 1991 begins, optometrists in six states are trying.

Therapeutics bills are in some stage of the legislative process in New Jersey, New York, Ohio, Pennsylvania, Michigan and Massachusettes.

Richard Schuck, O.D., chairman of the American Optometric Association, expects TPA bills to be introduced in at least a half-dozen more states during 1991. Schuck says the first vote on a bill in 1991 could come in New Jersey. ■

IN THE NEWS: MEDICARE CUTS

Medicare rule changes resulting from the budget reconciliation that took effect Jan. 1, 1991 stipulate that patients who receive intraocular lens implants are now entitled to one pair of glasses per surgery. In the past, such patients received one pair per year.

□

The clinical skills exam developed by the National Board of Examiners in Optometry will be administered for eight boards in July.

Utah, Montana, Oregon and Idaho will join Pennsylvania, Delaware, Missouri and Connecticut in accepting the clinical skills exam in lieu of a state-administered practical exam.

□

Cromolyn sodium cannot be sold by Professional Compounding Centers of America, Inc. to retail pharmacies for compounding into drug products, according to a preliminary injunction issued by the U.S. District Court in Texas.

Fisons Corp. is the only holder of FDA registrations for the substance. ■

REVIEW OF OPTOMETRY (USPS 087-350) is published the 15th of each month for $36 per year ($49 per year in Canada, $57 in all other countries) by Chilton Company, Chilton Way, Radnor, PA 19089. Chilton Company is a division of American Broadcasting Companies, Inc., New York, NY. Second Class Postage Paid at Wayne, Pa., and other mailing offices. POSTMASTER—Send address changes to Review of Optometry, P.O. Box 2080, Radnor, PA 19089-9926.

Tacoma, WA
(Pierce Co.)
Tacoma News Tribune
(Cir. D. 108,436)
(Cir. S. 120.490)

APR 19 1989

Allen's P. C. B Est. 1888

Governor signs bill allowing optometrists to apply drugs

W-21

The Associated Press

OLYMPIA — Gov. Booth Gardner signed into law Tuesday one of the most controversial bills of this legislative session, one that pitted optometrists against the medical profession.

The governor's health adviser, Bob Crittenden, a physician, said he had told his boss that he had contacted all 23 states that have similar laws on the books and found there had been no problems.

The measure, Senate Bill 5193, will allow optometrists to treat eye problems with drugs. Currently they can use drugs only for diagnostic purposes.

During debate on the bill, Rep. Art Sprenkle (D-Snohomish), a physician, said that provision was "like letting the fox design the hen house."

The governor also signed into law a bill boosting the penalty for disturbing an Indian grave or cairn to an maximum of five years in jail and a $10,000 fine. The measure, SB 5807, sponsored by Sen. Kent Pullen (R-Kent), takes effect July 1.

The penalty was sought by Washington tribes, whose leaders said grave robbing and vandalism are on the rise.

Gardner vetoed a bill that would have permitted manufacturers, importers and wholesalers of alcoholic beverages to wine and dine retailers and their employees.

The bill would have repealed sections of the state's "Tied House" law that prohibits any connection between distillers and distributors of alcoholic beverages and retail establishments.

Several other bills were sent to the governor Tuesday for his signature. Those included:

■ A proposal that would have the state hold developmentally disabled offenders in special facilities and more carefully monitor their furloughs.

The measure drew impetus from the state's inability to deal with a developmentally disabled sex offender named Gary Lee Minnix. The man, described by authorities as having the intelligence of a 5-year-old, has been held since 1984 in Western State Hospital for a series of rapes in Seattle's Beacon Hill neighborhood. During a Christmas furlough, he raped a Steilacoom woman, authorities say.

■ A proposal to let voters decide next fall whether to constitutionally guarantee rights for crime victims, under a measure approved by the Senate on Tuesday.

Among other things, the amendment would provide that the victim has as much right as the defendant to be informed of trial and all other court proceedings.

■ A measure aimed at protecting elderly, developmentally disabled, and mentally ill adults from sexual and economic predators.

The House-amended Senate measure, sponsored by Sen. Linda Smith (R-Hazel Dell), would expand a system now in place permitting businesses and government agencies to learn criminal backgrounds of people hired to work with children.

■ A proposal to allow judges the freedom to give lighter sentences to victims of abuse who injure or kill their long-time tormenters, under a bill sent to the governor on Tuesday.

The Senate measure, amended by the House before winning unanimous Senate approval, was inspired by the case of Delia Alaniz, a Sedro-Woolley woman who hired a man to kill her husband after she and her children suffered what was said to be 17 years of severe abuse.

OPTOMETRISTS

Gov. Booth Gardner has signed into law one of the most controversial bills of the legislative session, one that pitted optometrists against the medical profession.

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The measure, SB5193, will allow optometrists to treat eye problems with drugs. Currently they can use drugs only for diagnostic purposes.

Under the bill signed by the governor Tuesday, the Optometry Board will determine what drugs optometrists can use.

North Dakota 1987

Optometric Education

The growth of the optometric profession is in no small measure due to the remarkable expansion of optometric education during the past thirty years. Because optometry is a relatively young profession, it has been able to benefit from the tremendous expansion in technology during recent years. Many people are not aware of the truly significant changes that have recently taken place in the profession and its educational base.

Fifteen schools and colleges of optometry in the United States now provide an educational experience that is equivalent in length and scope to that which is provided by schools of medicine and dentistry. All medical, dental and optometry programs are four years in length and require the same level of professional training. In fact, a comparison of the current catalogs of the University of North Dakota School of Medicine (UND) and Southern California College of Optometry (SCCO) demonstrates that the admission requirements of SCCO are actually more stringent than those of the UND.

Admission Requirements (Quarter Units)

	UND	SCCO
Calculus	Not required	3-4
Biology or zoology	8	8
Microbiology	Not required	4
Physics	8	12
General chemistry	8	12
Organic chemistry	8	4
Psychology	3	8
English	6	8
College Algebra	3	Not required
Total hours required	**90**	**90**

During the first two years of both professional programs, students receive extensive training in basic health sciences, such as pharmacology, anatomy, physiology, neurosciences, and pathology. The second two years are more clinically oriented; the medical student is trained in all aspects of medical care while the optometry student concentrates on the eye and visual system. The result is that the optometry graduate completes his training with much more extensive and in-depth training in the eye and in the diagnosis and treatment of its abnormalities than does the medical school graduate.

After graduation from the four-year professional programs, both the optometrist and the physician are examined and licensed by appropriate agencies of the state. This license allows the physician to practice all aspects of medicine and surgery, including the diagnosis and treatment of eye diseases and the performance of eye surgery. Although most physicians undergo additional training in one of the medical or surgical specialties, no further testing or licensure is required in order for them to practice as a specialist. Therefore, even though some physicians have undergone several years of additional training to become pediatricians, *any* physician is permitted to treat diseases of children, and even though some physicians have undergone several years of additional training to become obstetricians, *any* physician is permitted to deliver babies. Similarly, even though some physicians undergo several years of additional training to become ophthalmologists, *any* physician may treat diseases of the eye

For legal and licensure purposes, it is assumed that the training received in the four years of medical school qualifies the graduate to practice all aspects of medicine with reasonable competency. **This assumption appears to work very well** since there appears to be little pressure for changes to the Medical Practice Act which would require that only specialists be allowed to treat various types of conditions.

This same assumption might well be applied to other health professions as well. If it can be demonstrated that the training a health professional receives in a given area is equivalent to or superior to that received by a physician, there seems to be no logical reason why he should not be allowed to do what the physician does in that area of health care. Since only about 4.5 percent of all physicians are ophthalmologists, it makes good sense to permit the doctor of optometry to provide primary eye care whenever possible.

Benefits of Use of DPAs Continue

Since the use of diagnostic pharmaceutical agents (DPAs) by optometrists was authorized by the 1979 North Dakota legislature, the benefit to the public of this action has continued to be demonstrated. More than 90 percent of North Dakota optometrists have been certified, and most use DPAs routinely in their diagnosis and treatment of vision problems. Contrary to the dire predictions of those who opposed the 1979 legislation, no adverse effects have been reported. In fact, the Optometry Board has not received any formal complaints or reports of problems associated with the use of DPAs by optometrists. Professional liability premiums, perhaps the best indicator of whether or not problems are occurring, have not been affected. The action of the 1979 legislature has proven to have been prudent and in the best interests of the people of North Dakota.

The North Dakota experience is the same as that in the other forty-eight states that currently permit optometrists to use DPAs. In none of these states has significant evidence been brought forth to suggest that any adverse effects are occurring. It is also worthy of special note that in the twelve states which permit optometrists to use therapeutic as well as diagnostic agents, no reports have been made of any problems associated with their use. In fact, it has been well

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documented that the therapeutic agents are even less likely to cause complications than are the diagnostic agents. This underscores the fact that the optometrist of today is capable of using both diagnostic and therapeutic pharmaceuticals safely and effectively in his or her practice.

Because of the much broader geographic distribution of optometrists and the fact that fees charged by them are generally less than those charged by ophthalmologists, major savings to the public are realized when optometrists are permitted to practice at their highest level of training. The necessity of referring persons with relatively minor eye injuries or infections to a surgical eye specialist or a hospital emergency room always results in a charge for the second examination and frequently results in the loss of several additional hours from the patient's work and/or the travel of many additional miles.

Optometry *IS* Primary Eye Care

Analysts of the health-care delivery system have divided it into three broad categories which they have labeled primary care, secondary care, and tertiary care.

Primary care is that level of care delivered by "first contact" providers. These are the doctors first contacted by a person in need of health care, and they are able to diagnose and treat the great majority of persons they see. It has been estimated that from 85 to 95 percent of all health care can be classified as primary care. In general, primary-care providers do relatively little of their work in hospitals. The American Medical Association considers family and general practitioners, pediatricians, internists, and obstetrician/gynecologists to be primary medical care providers. Other primary-care providers include general dentists, optometrists and podiatrists.

Secondary-care providers are generally those who have received additional specialized training beyond that which is required of primary-care providers. Persons with unusual or complicated problems or those who require more than very minor surgery are generally referred to a secondary-care provider by a primary-care provider. Most surgeons are classified as secondary-care providers, and secondary care involves more use of hospitals and specialized facilities than does primary care. Among the medical specialties, orthopedic surgeons, ophthalmologists, anesthesiologists, and cardiologists are examples of secondary-care providers. Non-medical secondary-care providers would include dental specialists, such as orthodontists and periodontists, and optometrists who limit their practice to contact lenses.

Tertiary-care providers are those who specialize in the diagnosis and treatment of rare conditions. Their practice is almost always hospital based and requires additional training beyond the secondary level and use of sophisticated techniques and instruments. Examples of tertiary-care providers would be open-heart surgeons, brain surgeons, ophthalmologists who repair retinal detachments, and organ transplant specialists.

Because of the additional training and skills required to practice at the secondary and tertiary levels, the care provided is usually more expensive than that provided at primary level. Even in cases where the fees charged are the same, when the costs to society of education and training are considered, the cost of secondary and tertiary care is higher. Since the vast majority of all care can be provided at the primary level, it makes good sense from an economic standpoint to have as much care as possible provided at that level, and in most cases, it is. For example, even though a cardiologist may have more training in the management of high blood pressure, family practitioners are perfectly capable of managing uncomplicated cases. And even though an orthopedic surgeon may have more training in the anatomy and function of the joints, a pediatrician is perfectly capable of treating a child's simple sprained ankle.

Similarly, optometrists, although they do not have the same training as do ophthalmologists, are perfectly capable of managing uncomplicated eye conditions. Their education and training in the diagnosis and treatment of eye problems is much more extensive than that of most physicians, and **their past record of conscientious, conservative care is evidence of their ability to recognize and refer to other providers those conditions that require care at the secondary or tertiary level.**

Health Care Not Necessarily Medical Care

Although the terms *health care* and *medical care* are often used interchangably, they do not really mean the same thing.

Health care is a broad term that refers to the entire area of maintenance of physical well-being. *Medical care* is much more limited in that it refers to health care which is provided by medical doctors.

Although the various areas of health care seem to be fairly well defined, many areas overlap. For example, the Medical Practice Act, since it was the first to be enacted, is all-encompassing and permits the physician to practice all aspects of health care regardless of whether or not he or she has any training in that area. Thus, any physician may legally fill teeth or prescribe eyeglasses. On the other hand, certain procedures which would usually be considered the exclusive domain of physicians are done by some other health-care providers. Dentists are permitted to use general anesthetics and prescribe oral antibiotics and potent pain-

killers. Podiatrists are also permitted to prescribe antibiotics and pain killers and are allowed to perform surgery. Nurse practitioners are also permitted to diagnose illness and prescribe drugs with only limited supervision and review by a physician who may be many miles away and who never sees the patient.

For many years the fact has been recognized that formal medical education is not required to provide high-quality health care. Those who currently argue that such education is necessary are ignoring the obvious examples to the contrary and appear to be motivated more by the desire to protect their own prestige and economic position than by a true desire to protect the public.

North Dakota a Leader in Education Requirements

Only eight of the fifty states require more hours of continuing education for optometric license renewal than does North Dakota. All optometrists are required to attend a minimum of thirty six hours every three years of approved continuing education courses. Compliance with this requirement has enabled North Dakota optometrists to not only maintain a high level of competence in the use of diagnostic pharmaceutical agents but has also enabled them to expand their knowledge of the use of pharmaceutical agents for other purposes.

Updating the Scope of Optometry Practice Acts Continues Nationwide

With the passage of legislation earlier this year, the number of states which permit optometrists to use diagnostic pharmaceutical agents has risen to forty-eight. In July 1986 a bill was passed in Missouri which permits optometrists to use, administer and prescribe therapeutic pharmaceutical agents. Missouri thereby became the twelfth state to have passed such legislation in recognition of the expanded capabilities of optometrists in the diagnosis and treatment of eye disease. In the central United States - Kentucky, Nebraska, Iowa, South Dakota and Oklahoma have passed similar bills.

Optometry Residency Programs on Increase

Recent issues of optometric publications have contained more than thirty announcements for residency programs in various areas of optometric practice. These programs, most of which are one year in length, provide the graduate optometrist with additional training in specialized areas of optometric practice. Among the most common types of training offered are Rehabilitative Optometry, Hospital Based Optometry, and Pediatric Optometry.

It is significant to note the majority of these programs are offered by Veterans Administration Medical Centers in all parts of the United States, and all include stipends for financial support of the resident. The greatly increased involvement of the Veterans Administration in the training of optometrists in recent years is strong evidence of their recognition of the role of the optometrist in providing high-quality, comprehensive health care to the nation's veterans. The VA has found that by making optometrists the primary eye-care providers in their medical centers, they can render higher quality care at lower cost to the taxpayer.

The availability of residency programs such as these are also an indication of the continued rapid growth in the scope and depth of optometric education.

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