ALASKA LEGISLATURE COMMITTEE FILES 1983 - 1984 8672
2705 SLC HB 225 (FILE 2)

Econ. I teaches that a drop in price should be the result of an increase in supply, unless production costs have themselves dropped. At the heart of the evolution of economic regulation of health care, though, is the virtually unique fact that a drop in the effective price for a desired service has been artificially created without an equivalent increase in supply or decrease in production costs. When that happened, demand surged. Supply should, by economic theory, eventually grow to meet the demand--except that in health care, supply is itself limited by licensure or other forms of regulation. As a consequence, there have inevitably been major economic dislocations.

The last few minutes of elementary economics have been unfairly abstract and probably confusing. However, I hope that they are more than the musings of an amateur economist. They are quite possibly the predicate for some propositions about health care that I'd like you to consider for a few minutes. These are ideas for consideration, not proven facts, but I think you will recognize at least some of them from your own experience:

Proposition 1. Adequate health care is coming to be viewed as a right of all members of society, regardless of their personal economic means. We all frequently hear it said that all Americans are entitled to decent housing, food on their table, clothes on their back--and now also health care to preserve good health.

Proposition 2. The creation of an "entitlement" to health care is reflected in political action which creates programs or incentives to provide health care to virtually everyone--whether through almost universal health insurance for those who are employed, or direct government payment for health services provided to the unemployed, elderly, or otherwise disadvantaged.

Proposition 3. Over 80% of all expenses in the medical arts, and increasing percentages of costs in allied disciplines such as dentistry and optometry, are paid by someone other than the patient. In effect, the costs of health care to the patient are decreased because the patient pays only a part of the bill. According to economic axiom number 2, the decrease in price should stimulate demand. My proposition is that precisely this does occur--the desire to obtain, to consume, health care services is steadily increasing, not because of population increases or because new "needs" are being created, but because more and more people are enabled by these programs and policies to obtain the health care they want but could not otherwise afford.

Proposition 4. The increase in health care demand is not being accompanied by an equivalent increase in its supply. Both licensure and other forms of government regulation serve in fact to prevent supply from increasing to meet the growing demand. The consequence is predicted by economic axiom number 1: increased demand, without concomitant increased supply, inevitably leads to higher prices. In health care, the higher prices are borne by third party

payors--insurers, employers or government--rather than directly by patients. The payors face the inevitable operation of economic axiom number 1: they must pay more and more to provide the increased quantities demanded by the public of scarce health services.

Proposition 5. Finally, the third-party payors, whether private or governmental, are in fact only conduits in the economic chain. They do not have resources of their own. Instead, they take their funds from ultimate consumers, from individuals, in the form of insurance premiums or in the form of taxes, and pass them on to health care providers. To a significant extent, the major sources of these funds are working and healthy citizens. The major consumers of these funds are often the unemployed and the elderly, who are unable to pay into the funding system any considerable portion of what they take out of it.

If you accept the foregoing propositions you should recognize what I believe to be the current state of health care finance in this country: an economic and political crisis of substantial and growing magnitude. Let me summarize the economics contained in the propositions I suggested. They amount to a possibly unique situation: Both of the economic "axioms" I started with are working at the same time. Axiom 1 assumes that something limits the growth in supply of a scarce resource that is in demand, thereby raising its price. The "something" here at work limiting supply consists of two dominant factors: (1) licensure prevents people who would otherwise like to set up shop as surgeons, dentists, chiropractors, or other health practitioners from doing so, because they don't want to invest the time and

money, and maybe don't have the abilities, to meet licensing requirements. Thus, physicians and other health practitioners face less competition than a perfectly free market would create. Therefore, the scarcity of their services is preserved, so the price level for them is kept high.

The second limitation on supply is relatively new, and at first glance contradicts traditional notions of supply and demand. That limitation is created by government and assumes, for reasons I'll get to in a moment, that part of the health care problem is too much supply rather than too little. From that assumption comes HSA's, certificates of need, and restraints on increasing health care <u>facilities</u>, if not the number of practitioners themselves.

That's axiom 1: supply is restrained. Therefore, prices should go to high levels. There is no doubt that in fact health care costs fit this theoretical model.

Axiom 2 concerns another relationship between price and demand. They should move inversely, but as noted, in health care they don't. While scarcity is creating high prices, at the same time the separation of the <u>burden</u> of paying for health care from the <u>decision</u> to obtain it means that demand remains high despite high prices being charged.

An economic beast is thereby created. High costs of health care prompt <u>more</u> programs to shift the burden of paying for it to some third party. This shifting of the burden in turn helps stimulate new demand for already limited resources. The tiger chases its tail, and our health care

financing system spirals out of control. There is a growing recognition that something is seriously wrong, but little notion of what to do about it. In a moment, this will lead us to mandatory referral as a consequence of the economic warfare this situation is creating.

As an aside, you may be interested to know that virtually every industrialized western nation appears to suffer from similar problems. According to the British magazine The Economist, the 10% of gross national product Americans spend on health care is roughly equivalent to the proportion of national wealth spent in Great Britain, West Germany, Sweden, and elsewhere. In each instance, health care has come to be viewed as an entitlement, the prerogative of an affluent society. In these nations as in ours the cost of health care is shifted from the consumers of it to a broader base, usually tax revenues. And in each case, demand for this "necessity" appear insatiable, the apparently inevitable accompaniment of higher living standards (Japan aside). In fact, health care financing falls victim to its own success. New techniques are developed that alleviate previously unsolvable medical problems--and the new cure becomes a part of the entitlement to health care. Consider kidney dialysis, which in a decade has grown from a miraculous new process to prolong life, funded on a virtually experimental basis, to a federal program costing more than a billion dollars this year and still expanding. As the availability of health care enables people to survive when they previously would have died, it quite literally amplifies the need for even more health care. Unions that have won for their members health insurance now ask for dental and optometric coverage as well. Chiropractors and psychologists demand, and receive, rights under law to receive government or insuror payments on the same basis as their medical

counterparts. All of these developments increase the demand for health care but do nothing to increase either the supply of it or the dollars available to buy it. So prices rise, and there is no choice but to devote more and more of our national wealth to health care, until someone comes up with a solution.

It is at this point that we finally get to the notion of competition in health care, and some of its odd manifestations which includes mandatory referral. Perhaps the strangest manifestation of this competition is the decision by government that to reduce health care costs you must reduce health care resources. That is what an HSA does when it refuses to permit construction of a new hospital wing or purchase of a CAT-scanner.

Actually, this reduction of supply in order to reduce prices does have some historical logic even if not very strong economic logic. It springs from the observation that health care shares some of the traits of public utilities, such as power generating facilities. The basic common trait is a perception that the service being supplied is a necessity. Another common trait is the assumption that usual competitive forces won't work to hold prices down. For an electric utility, there is no sense in having two competing generating plants, with parallel power lines, trying to serve the same community. Economies of scale dictate that only one plant serve a given area. The plant has a monopoly so there is a demand for regulation to avoid gouging. But, equally importantly, the utility has to have capacity to meet peak demand, which may occur only a few hours a day or a few months a year. Often a lot of that capacity will be idle, but in order to pay for it and keep it available the utility has been permitted to charge for the excess capacity even when it isn't in use.

It has been suggested that health care is now a necessity, like power plants. And also like power plants, health care facilities and providers have discovered that excess capacity, when it exists, can be paid for without lowering prices to create new demand. In fact, the simple means of paying for excess supply in health care has been to raise prices, not lower them. It has been observed that when too many hospital beds are empty, or too many physicians are looking after the same number of patients, they may raise their prices to the point that revenues are increased to an acceptable level. Because insurers and government programs in effect promise to provide the "necessity" of health care; usually at a level tied to prevailing costs in the area, these third-party payors have to pay the higher costs and simply raise their premiums, or raise tax rates. Just as with excess generating capacity, the cost of the excess capacity ends up being spread to society as a whole instead of leading to lower prices. Empty hospital beds end up being paid for by whoever is paying for the occupied beds, and a city with too many surgeons may be a city in which surgeons have excellent incomes and also play a lot of golf.

There are a lot of analytic problems with the "public utility" view of health care, but it has contributed to a regulatory system in which health care providers are told not to provide so much health care. Without trying to analyze this system that turns supply and demand assumptions on their head, suffice it to say that health care costs are still escalating at least as fast, and possibly faster, than the general rate of inflation, while the public demand for health care remains insatiable.

What's left? How do the people who pay the health care bills keep their systems from going bankrupt? Political reality prevents them from the most direct solutions: they cannot significantly reduce their commitment to provide health care for their constituents, and they have not had any success in dictating the prices that providers can charge.

What is left is what I'll call "alternative source competition." By this I mean competition by one group of health care providers who are encouraged to offer services comparable to those of another group, but at a lower price. The government, and insurers, encourage experiments with health maintenance organizations as alternatives to fee-for-service providers. For example, nursing care facilities and outpatient hospitals or clinics spring up as alternatives to traditional full service hospitals. Optometrists take optical fittings, and optical product sales, away from ophthalmologists--and in turn mass-merchandising chains try to take that same business from individual optometrists. Clinical psychologists offer to listen to patients at a lower cost than the same time spent with psychiatrists. It is even suggested that nurse-practitioners can perform a number of functions traditionally considered the sole province of physicians.

Supporting the creation of these alternatives are regulations and policies from third party payors, who hope that somehow these innovations will slow the price spiral.

At the same time, the majority of healthy, employed, taxpaying citizens who fund our health care system become aware that they are paying for more than their <u>own</u> costs, and without necessarily being selfish or heartless

they begin to send out political signals that they will not indefinitely pay for higher costs for others. The hands on the financial taps begin to twitch, and a general recognition grows that the system simply cannot continue indefinitely without change.

Thus we see now, for the first time, competition for health care dollars. The reaction to that competition is not price cutting, because established providers in one field are generally neither inclined nor perhaps able to reduce their own fees to meet those of other practitioner groups.

Instead, this competition takes place in legislatures and regulatory agencies. It is competition for control over patients, for restrictions and limits on the <u>right</u> to provide certain kinds of services, and therefore to obtain the revenues from them.

Placed in this context, mandatory referral is a gut-level economic issue, although it is inevitably presented in the garb of protection of public health and welfare. Mandatory referral is what one professional group tries to foist on another to protect sources of revenue. If the overall resources flowing to an economic marketplace--the available purchasing dollars--keep increasing rapidly then there won't be much need for competitive devices like mandatory referral. Health care has been just such a prosperous field for the last 15 years. Vast numbers of federal, state, and private dollars have been pumped into the system, assuring high and rising incomes for almost everyone involved. This great prosperity, though, has made the area highly visible, and highly subject to attack, and to forced change.

As I said a few minutes ago, health care as such is now virtually an entitlement, so we are most unlikely to see wholesale abandonment of programs or complete government withdrawal of funding. Nor is government takeover of the system in order to dictate its cost--on the British or Soviet models--politically feasible.

What is politically feasible is halting the growth in expenditures and, in efforts greatly supported by private sector payors, attempts to purchase more health care for each dollar spent. What had been experiments and theoretical notions on cost containment during the Great Society and its aftermath are, in these days of new austerity, becoming national economic policy.

If you are a government or private payor, or just an individual trying to stretch a limited budget, what do you do? You look for the less expensive alternative.

For the sake of convenience I'm going to use the optometrist-ophthalmologist confrontation as a model. Optometrists compete directly with ophthalmologists for a large common segment of their business. I am going to postulate that of the two groups, optometrists may be cheaper, at least in large part because competition within that profession from chains has brough product prices down. Ophthalmologists, as physicians, apparently are usually quite busy and should make a lot of money from treatment of people covered by insurance or under government programs. However, determining the need for corrective lenses, and selling those lenses and their frames, is generally not covered by government or private insurance. That being so, I

believe it is commonly assumed, and is probably true, that if all you think you need is a pair of glasses, you--the common consumer--will look for a good price, probably from an opt[illegible]

In this environment, [illegible]ory referral laws are a way of competing without cutting prices.

I have read a fair amount of material on mandatory referral in the optometric-ophthalmologic field, representing both sides of the question of whether optometrists should <u>have</u> to send some of their patients to ophthalmologists in the event of observing a list of specified symptoms. It is my distinct impression that a battle that is being fought under the banner of public health and welfare is nothing of the sort. It is, as I said in the beginning, economic warfare.

The material supporting the "need" for mandatory referral in this field speaks loudly of the risk of blindness, even death, if mandatory referral laws are not passed. My question is "where is the evidence of this risk? Where is the need?" I get the impression that ophthalmologists have been lobbying state by state, and before government agencies and interest groups, under the slogan" "Save the 101." The "101" are 101 cases supposedly noted over a three year period in which serious pathology developed from a failure to refer patients to medical doctors. Elsewhere, the literature indicates that these "101" cases really only include 84 patients who first saw an optometrist.

Whether 84 or 101, I have to ask "out of how many?" Out of 1,000? Out of 100,000? Out of 1,000,000? I would be willing to bet that the sample size runs into the millions over a three year period; that is the number of people who visited optometrists and either did not need referral to ophthalmologists or were properly referred. 100 cases out of 1,000,000 is one in 10,000. In fact, if 101 cases are all that can be found, then the error rate--the magnitude of this risk--is much less than 1 in 10,000.

Is this risk worth enormously increasing the cost of eye care? If mandatory referral law does not lead to more referrals from one profession to another, then the law obviously is not needed, because the referrals must already be taking place. If the laws cause a lot of new referrals in order to reduce a "risk" that is already less than 1 in 10,000, then someone will be paying the cost of a lot of unnecessary services. I suspect that insurers and the government would end up footing a lot of the bill for the "medical" examinations mandatory referral would generate. And, not at all coincidentally, I very strongly suspect that the referred patient who turned out not to have a pathological condition after all would end up purchasing his or her glasses from someone affiliated with the ophthalmologist instead of someone affiliated with the referring optometrist.

There is even more evidence that mandatory referral in this field is prompted by economics, not by health and safety concerns. As you all probably know too well, there is a pretty accurate marketplace mechanism available to measure the incidence of health services failures. Malpractice claims do not prove that malpractice is occurring--but that the absence of such claims is much more significant. In the current legal environment, in a

litigation-prone society, you can be quite sure that if any significant number of mistakes were being made by optometrists in failing to spot pathologies and to refer them to physicians, then optometrists would be hit with the same plague of malpractice claims that too many other professionals face. Yet, if the information I've seen is correct, optometrists pay as little as $200 per year in malpractice insurance premiums, while ophthalmologists pay fifteen times that amount, or more. Expressed otherwise, optometrists pay a fraction of one percent of their gross income for coverage, while ophthalmologists pay proportionally much more.

The point of interest here is not the evils of our tort law system. It is the business acumen of insurance companies. If optometrists working without the guidance of mandatory referral laws were in fact a significant menace to the vision or health of their patients, then you can be sure that the risk would be reflected in insurance costs.

I suggest to you that the data supports a pocketbook concern much more than it reflects a health concern. The ophthalmologic lobby has apparently been strong: it had a resolution passed by the Disabled American Veterans to the effect that physicians, not optometrists, should provide primary examinations in V.A. hospitals. That is not surprising: the Vets have no economic incentive to seek the least expensive adequate level of care, since they do not pay the bills. It therefore does not necessarily mean very much.

Mandatory referral inevitably will add to the cost of professional services, by requiring two layers of treatment in instances where one would often be quite enough.

Medical practitioners are not the first to discover this profitable fact. In many states, it was long the rule that title examinations in real estate transactions had to be performed by lawyers. In fact, title work does not require the skills of a lawyer--and lawyers rarely do the work. They hire non-lawyers to do the work, under the "supervision" of the lawyer. The lawyer would sign the papers and collect a healthy fee, because in effect the work of title searches required "mandatory referral" to lawyers from the people who actually did the job.

A government lawyer in Washington, Lew Goldfarb, found this rather offensive, especially since he literally could not get a price that varied from any lawyer quoting title work on the house he was buying in Virginia. Mr. Goldfarb discovered that the "rule" creating this situation in Virginia was invented by the state bar association. It was carried out by the simple expedient of the bar association declaring that anyone who provided title work without passing it through a lawyer was engaged in unauthorized practice of law. Incidentally, title work in Virginia evidently cost more than identical services in California, without similar restrictions.

Mr. Goldfarb sued, the case went to the Supreme Court, and Mr. Goldfarb won. Thus, it could be said that the issue of mandatory referral has already been decided by the highest court in the land. Except that it hasn't.

Mr Goldfarb's case was brought on anti-trust grounds, but the only people available to sue were the State Bar of Virginia. What the Supreme Court really decided in Goldfarb v. State Bar was that the State Bar Association could be sued for antitrust violations, that it did not have some special immunity from antitrust law. The Court was not deciding whether in fact the State Bar was acting "illegally." The rules on title searches in Virginia may have changed, but without there being any definitive ruling on whether or not mandatory referral in legal matters was acceptable.

Another case has come out of Virginia that also involves mandatory referral. Under Virginia Law, both psychiatrists and psychologists were authorized to do similar things in the way of therapy. The psychiatrists, though, were able to get a provision written into the State Blue Cross contract that allowed psychologists' fees to be billed to Blue Cross only if they were billed through a psychiatrist. That is, it was not required that the psychiatrist ever see the patient, but the psychologists would be denied effective access to the large potential client base covered by Blue Cross unless at least the paperwork went through a cooperative psychiatrist. Inevitably, at the least some kind of handling or administrative fee would have to be added on, and it's entirely possible that somewhere along the way the patients as well as the papers ended up in the psychiatrist's office.

Not surprisingly, the psychologists did not like the arrangement. Also not surprisingly, they brough a lawsuit. I won't bore you with the technical details, but suffice it to say there is an antitrust theory for virtually every occasion. The courts were a bit mystified at finding that although psychologists were legally allowed to treat patients, they were

barred by contract from billing a major payor directly. They threw out the provision, and this attempt at a rather clever form of mandatory referral went with it.

These two Virginia cases offer an important lesson for mandatory referral situations. That lesson is emphatically not that mandatory referral rules are illegal. As it turns out, the failure of the lawyers in the Goldfarb case, and of the psychiatrists, was that they used the wrong mechanism to achieve their mandatory referral goals. They tried to accomplish them through private means--through the non-governmental State Bar, and non-governmental Blue Cross. Keep in mind that Blue Cross is state-chartered, but is not itself an arm of government. Most state bar associations are like medical associations and licensure boards: they are often empowered by the state legislature to license and to regulate their profession, but are not themselves "government." However, such state associations have an inevitable conflict of interest in enforcing any regulation that benefits its members at the expense of another profession. It is precisely that potential for abuse of professional self-interest that has caused, and will cause, courts to reject mandatory referral rules that are issued by a private enterprise or by the profession that stands to benefit from them. Even if in fact the rules are motivated by public rather than private benefit, in analyzing them the courts may start with a presumption of economic self interest, and that may be hard to overcome.

Mandatory referral laws will probably be legally enforceable if they are embodied in state or federal legislation or regulation. At the state level, anything short of precise statement by the legislature may not work.

At the federal level, as in dealing with the Veteran's Administration or the Health Care Finance Administration, a regulation will probably be enough--but will be very hard to get. At the state level, the legislature may just be deciding how someone else's money--insurance company money or federal money or private citizens' money--is to be spent. The federal agencies, though, will be deciding how to spend tax dollars, and will not look favorably on suggestions that are likely to require spending more of them.

The last point is, with the new administration, the most important one and the one I'd like to conclude with. Most of this talk has been about health care economics and competition. Mandatory referral laws are fundamentally ways of avoiding competition, by having government dictate choices that otherwise would be made by health care consumers. Rather than trust themselves to the vicissitudes of competition, provider groups that are politically strong may try to use that muscle to protect their finances through mandatory referral laws. I think that now, groups trying to do so are going to be swimming upstream in the current political environment.

You are all no doubt aware that the new administration is determined to make major budget cuts, including in health care financing. Spread out over the entire health care area, these cuts will not threaten any particular professional incomes very much.

What you may not know is that the administration, in the person of David Stockman, head of the Office of Management and Budget, is directly interested in the entire system of health care financing and wishes to change it.

Stated most simply, Mr. Stockman and his powerful friends believe that the dilemma of our health care financing system, the unwieldy beast I was describing, is the result of a lack of competition between providers, caused by separating consumption decisions from payment responsibility.

Mr. Stockman wants to restructure the entire system for financing, to make the decision to consume health services cost the consumer at least enough to make some shopping and choosing worthwhile. That will be a long and difficult political program to fashion, and it may never become law. In the meantime, though, I would not care to approach Mr. Stockman, or the large number of officials in Washington who listen to his economic views, with a proposal that will probably add to health care costs, unless I have very strong evidence of the need for my proposal. And maybe not even then.

Thus, what I see happening is a tightening of health care finance revenues, meaning fewer dollars to spread between the various provider groups. This, in turn, will stimulate competition between the groups to capture those scarcer dollars. Since health care providers are traditionally pretty bad at simple price competition, the competition will often take the form of one provider group trying to attract vulnerable segments of some other group's market.

Neurosurgeons are not going to lose patients to barbers, but denturists will fight for the right to offer services previously the sole province of dentists, and dental hygienists will probably seek independence from dentists too. The nurses and technicians who now work in a physician's office will suggest that since they are already conducting a lot of the

physician's business they could do the same work at lower cost to the payor, and higher profit to themselves, if they were not required to work for a physician.

Wherever experience and economics suggest that a new, cheaper, health service niche can be carved out, someone will try to do it. Inevitably, the existing practitioners will fight tooth and nail to keep what they have, to stamp out what they call "unauthorized" practice and a threat to patient health.

As regulators, you will all be faced with complaints that will have their origin in this economic struggle. The traditional distinctions on scope of practice will be tested, stretched, and blurred beyond recognition. You will be asked, in the name of public welfare, to regulate for private benefit--and the issues put before you are going to be damned hard ones.

As an antitrust lawyer, I strongly suggest you do everything you can to avoid taking sides in these struggles. It is not at all clear that even your best-intentional decisions will be immune from legal attack by whomever has his economic ox gored.

If you cannot avoid facing mandatory referral issues, if they come to you in some way that simply demands action by a state health regulatory board, then be careful. Before you sanction or require a mandatory referral scheme, or before you define some new and less expensive delivery system as "unauthorized practice," ask some hard questions. What is the real evidence of public need for mandatory referral, or for prohibition of the competitive

alternative? Who stands to gain and who to lose from what is being suggested, and are they being honest in letting you know that? Ultimately, considering both economics and health, where does the true public interest lie? At the risk of sounding like the advocate of another kind of mandatory referral, maybe you should call in a lawyer who is not affiliated with either side, to subject both sides or all sides to impartial scrutiny. If you must get involved in these fights, then make sure there is a complete record of your deliberations showing that you have put aside the economic concerns of your own profession, and have made every effort to separate out the self-serving bombast from the merits of the issue.

If you can maintain this objectivity, you will do more than help protect yourselves from losing lawsuits. You will in fact serve the public welfare by letting necessary and inevitable evolution in health care delivery take place. To do otherwise will aggravate and frustrate an already troubled health care system - to the detriment of your public image as well as of the general welfare. If you can face these issues fairly and objectively, then you will be doing that which all professionals claim they do: serving society first, and accepting the personal rewards of that service only to the extent that society recognizes it has in fact been fairly served.

ENGROSSED HOUSE BILL NO. 83

State of Washington
47th Legislature
1981 Regular Session

by Representatives Lewis, Williams, King (J), Wang, Pruitt, Leonard, Erickson, Smith, Hankins and McGinnis

Read first time January 17, 1981, and referred to Committee on HUMAN SERVICES.

AN ACT Relating to the practice of optometry; amending section 1, chapter 69, Laws of 1975 1st ex. sess. and RCW 18.53.005; amending section 1, chapter 144, Laws of 1919 as amended by section 2, chapter 69, Laws of 1975 1st ex. sess. and RCW 18.53.010; amending section 7, chapter 144, Laws of 1919 as last amended by section 47, chapter 158, Laws of 1979 and RCW 18.53.140; and creating a new section.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF WASHINGTON:

Section 1. Section 1, chapter 69, Laws of 1975 1st ex. sess. and RCW 18.53.005 are each amended to read as follows:

The legislature finds and declares that the practice of optometry is a learned profession and affects the health, welfare and safety of the people of this state, and should be regulated in the public interest and limited to qualified persons licensed and authorized to practice under the provisions of ((this-1975-amendatory-act)) chapters 18.53 and 18.54 RCW.

Sec. 2. Section 1, chapter 144, Laws of 1919 as amended by section 2, chapter 69, Laws of 1975 1st ex. sess. and RCW 18.53.010 are each amended to read as follows:

(1) The practice of optometry is defined as the examination of the human eye, the examination and ascertaining any defects of the human vision system and the analysis of the process of vision. The practice of optometry may include, but not necessarily be limited to, the following:

(((1))) (a) The employment of any objective or subjective means or method including the use of pharmaceutical agents topically applied to the eye for diagnostic purposes by

those licensed under this chapter and who meet the requirements of subsection (2) of this section, and the use of any diagnostic instruments or devices for the examination or analysis of the human vision system, the measurement of the powers or range of human vision, or the determination of the refractive powers of the human eye or its functions in general; and

(((2))) (b) The prescription and fitting of lenses, prisms, therapeutic or refractive contact lenses and the adaption or adjustment of frames and lenses used in connection therewith; and

(((3))) (c) The prescription and provision of visual therapy, therapeutic aids and other optical devices; and

(((4))) (d) The ascertainment of the perceptive, neural, muscular or pathological condition of the visual system; and

(((5))) (e) The adaptation of prosthetic eyes.

(2) Those persons using pharmaceutical agents for diagnostic purposes in the practice of optometry shall have a minimum of sixty hours of didactic and clinical instruction in general and ocular pharmacology as applied to optometry, and certification from an institution of higher learning, accredited by a regional or professional accrediting organization and recognized or approved by the accrediting commission for senior colleges and universities of the western association of schools and colleges to qualify for certification by the optometry board of Washington to use pharmaceutical agents for diagnostic purposes. Such course or courses shall be the fiscal responsibility of the participating and attending optometrist.

Sec. 3. Section 7, chapter 144, Laws of 1919 as last amended by section 47, chapter 158, Laws of 1979 and RCW 18.53.140 are each amended to read as follows:

It shall be unlawful for any person:

(1) To sell or barter, or offer to sell or barter any license issued by the director; or

(2) To purchase or procure by barter any license with the intent to use the same as evidence of the holder's

qualification to practice optometry; or

(3) To alter with fraudulent intent in any material regard such license; or

(4) To use or attempt to use any such license which has been purchased, fraudulently issued, counterfeited or materially altered as a valid license; or

(5) To practice optometry under a false or assumed name, or as a representative or agent of any person, firm or corporation with which the licensee has no connection: PROVIDED, Nothing in this chapter nor in the optometry law shall make it unlawful for any lawfully licensed optometrist or association of lawfully licensed optometrists to practice optometry under the name of any lawfully licensed optometrist who may transfer by inheritance or otherwise the right to use such name; or

(6) To wilfully make any false statements in material regard in an application for an examination before the director, or for a license; or

(7) To practice optometry in this state either for himself or any other individual, corporation, partnership, group, public or private entity, or any member of the licensed healing arts without having at the time of so doing a valid license issued by the director of licensing; or

(8) To in any manner barter or give away as premiums either on his own account or as agent or representative for any other purpose, firm or corporation, any eyeglasses, spectacles, lenses or frames; or

(9) To use drugs in the examination of eyes <u>except diagnostic agents, topically applied, known generally as cycloplegics, mydriatics, topical anesthetics, dyes such as florescein, and for emergency use only, miotics, which legend drugs a certified optometrist is authorized to purchase, possess and administer</u>; or

(10) To use advertising whether printed, radio, display, or of any other nature, which is misleading or inaccurate in any material particular, nor shall any such person in any way

misrepresent any goods or services (including but without limitation, its use, trademark, grade, quality, size, origin, substance, character, nature, finish, material, content, or preparation) or credit terms, values, policies, services, or the nature or form of the business conducted; or

(11) To advertise the "free examination of eyes," "free consultation," "consultation without obligation," "free advice," or any words or phrases of similar import which convey the impression to the public that eyes are examined free or of a character tending to deceive or mislead the public, or in the nature of "bait advertising;" or

(12) To use an advertisement of a frame or mounting which is not truthful in describing the frame or mounting and all its component parts. Or advertise a frame or mounting at a price, unless it shall be depicted in the advertisement without lenses inserted, and in addition the advertisement must contain a statement immediately following, or adjacent to the advertised price, that the price is for frame or mounting only, and does not include lenses, eye examination and professional services, which statement shall appear in type as large as that used for the price, or advertise lenses or complete glasses, viz.: frame or mounting with lenses included, at a price either alone or in conjunction with professional services; or

(13) To use advertising, whether printed, radio, display, or of any other nature, which inaccurately lays claim to a policy or continuing practice of generally underselling competitors; or

(14) To use advertising, whether printed, radio, display or of any other nature which refers inaccurately in any material particular to any competitors or their goods, prices, values, credit terms, policies or services; or

(15) To use advertising whether printed, radio, display, or of any other nature, which states any definite amount of money as "down payment" and any definite amount of money as a subsequent payment, be it daily, weekly, monthly, or at the end of any period of time; or

(16) To violate any provision of this chapter or any rules and regulations promulgated thereunder.

NEW SECTION. Sec. 4. If any provision of this amendatory act or its application to any person or circumstance is held invalid, the remainder of the act or the application of the provision to other persons or circumstances is not affected.

Response to concerns - ALASKA OPTOMETRIC ASSOCIATION

1. Section 7:
   This section does not limit or deny an optometrists capabilities of treatment. It only mandates that the optometrist make a referral; it does not mandate the patient to accept the referral.
   The Alaska ophthalmology community has not initiated any legislation over the past years to establish a mandatory referral system.

2. Section 2:
   An ophthalmologist (licensed physician) would definitely be an asset to the Board, and would offer a great deal of guidance. Being a specialist in the area of the eyes, an ophthalmologist would be knowledgeable in treatment of side effects and conditions which may be caused from use of administering drugs.
   Dental Board members are physicians. They graduate with a degree of "DMD" (Doctor of Dental Medicine) or "DDS" (Doctor of Dental Surgery). Physicians do occupy positions in other health care areas (i.e. State Physical Therapy Board)..

3. Section 12:
   The definition of "optometry" and "practicing optometry" under present law prohibits the use of drugs. If anesthetics are presently being "widely used drugs", optometrists currently using anesthetics are in violation of the present Alaska statutes.

4. Section 9:
   There is no protection to the public if it is 'assumed' that optometry licensees are educated and capable of using drugs. A licensee who has obtained the training and is confident in using diagnostic drugs should have no fear of taking an exam administered by the board.
   Examinations administered by the Board of Examiners in Optometry does not test in the use of drugs.

Response by
Harry Traeger
re: letter for 5/14/84

NOTE:
The following indicates the number of hours of training received in pharmacology courses as identified from documents contained in the licensing files. The first three listed are members on the present Board of Examiners in Optometry. The remainder are those who signed the letter from the AOA.

1. JOHN DEMSKE, O.D.:

CE/SCHOOL	COURSE	NO. HOURS	DATE(S)
CE	Pharmacology & Ocular Disease	10 hours	6/7-8/79

2. ROBERT O'CONNELL, O.D.:

CE	Pharmacology & Ocular Disease	9 hours	6/7-8/79
CE	Drugs that cause contact lens-intolerance	1 hour	12/4-5/78
SCHOOL	Optometric Pharmacology	2 sem. hrs.	1/76-77

3. MAYNARD C. FALCONER, O.D.:

CE	Pharmacology & Ocular Disease	10 hours	6/7-8/79
CE	Ocular Pharmacology	50 hours	10-12/1972
CE	Pharmacology	6 hours	6/8-9/72
CE	Drugs	?	6/27-7/4/71

4. PHILLIP W. BACH, O.D.:

CE	Pharmacology	6 hours	11/8/79
CE	Diagnostic/Pharmaceutical Agents & - Contact Lens Solution	4 hours	11/8/80

5. JEFFREY ALLEN GONNASON, O.D.:

CE	Ocular Pharmacology	6 hours	11/8/79
CE	Pharmacology & Ocular Disease	10 hours	6/7-8/79
CE	Diagnostic Pharmaceutical legislation	6 hours	6/6-7/79
SCHOOL	Opt. Pharmacology	2 sem. hrs.	1975-76

6. STEVEN SCOTT DOBSON, O.D.:

SCHOOL	Pharmacology	2 hours	1977
SCHOOL	Pharmacology	2 hours	1978
SCHOOL	Ocular Pharmacology	.5 hours	1978

7. GENE TITZEL, O.D.:

SCHOOL	Applied Path. of the Eye & Pharm.	1 sem. hr.	1957-58

PLEASE NOTE: THE FOLLOWING PAGES WERE TREATED AS A UNIT IN THE ORIGINAL DOCUMENT

UPDATING THE ALASKA OPTOMETRY LAW

HB 225/SB 189

SUMMARY

HB 225/SB 189 will allow doctors of optometry (O.D.) to use their training to treat primary conditions of the eye, such as conjunctivitis ("pink eye"), allergic lid inflammations, minor foreign bodies and contact lens overwear reactions.

Alaska's present optometry law does not include treatment in the definition of an optometrist and prohibits optometrists from using drugs. Thus optometrists must refer these common conditions to other practitioners, usually ophthalmologists, at increased expense and delay of relief to the patient.

This legislation will lower costs to patients, insurance companies and Medicaid by three means:

1. Elimination of double billings for office visits

2. Lower fees for diagnostic and treatment procedures, since optometrists tend to have lower fee schedules than surgical specialists (ophthalmologists).

3. Reduced travel and lost time

Optometrists can provide a higher level of primary eye care than general physicians due to their specialized instruments and more intensive training and experience.

The legislation is in line with a national trend toward deregulation of health care, allowing health care resources to be allocated more efficiently, and maximizing the availability and cost effectiveness of services at all levels.

The legislation is opposed by Alaska's 16 ophthalmologists and by some medical organizations with which they are affiliated.

Three appendices provide supporting information and additional comments.

ALASKA OPTOMETRIC ASSOCIATION

SHARADKUMAR DICKSHEET, M.D.
144-40 38th AVENUE, A-3
FLUSHING, NEW YORK 11354

March 21st 1984

To Whomsoever It May Concern,

I, the undersigned, is a fully licensed physician in the State of Alaska and I was engaged in active medical practice in the specialty of Ophthalmology in Fairbanks during the years 1969 through 1978. During my practice I had felt a great need for eye specialists such as Ophthalmologists and Optometrists, throughtout the State of Alaska, especially in the remote and secluded areas. During my practice i always worked in close association with the Optometrists in my area and throughout the State for the simple reason that I believed that next to Ophthalmologists they possessed competent and uptodate krowledge in the eyecare. An optometrist is basically a very highly educated andintelligent 'Health-care Person', having gone to the college for 8 years to achieve his goal as an Optometrist. More than 90% of the eyecare in the general population consists of refraction and dispensing eyeglasses and an optometrist is highly competent in this skill because this is what he has learnt during his training at great length.

I, personally support the idea of letting the Optometrists use the diagnostic and limitted therapeutic topical medications to which there is very little reaction. Many of these drugs are freely available over the counter in different forms and drug companies have been making lots of false claims to which many gullible patients succumb to. They do not want to go to Ophthalmologists because either they are too busy or one has to shell lot money out of their pocket for a simple office visit. By training the Optometrists in the use of these limitted topical medications properly it will be much more convenient and cheaper to the patient population without any predictable harm to their health. I have never seen anyone, either die or go blind from the use of a few drops in the eye. On the contrary it will enable the Optometrists to do better evaluation of the patient's health by studying their eyegrounds , or to do a better

refraction ona child who is not very cooperative or to evaluate the ocular pressure for glaucoma which in return is going to benefit the general population If Optometrists can put contact lenses in the patients' eyes which are huge foreign bodies and not harm the population why cant they place a few medications for diagnostic and therapeutic purposes? Optometrists have contributed a great deal to the eyecare of the patients by developing Contact lenses and various types of bifocal glasses.

This will also lower the cost of total eyecare by introducing new competition in the eyecare and whenever there is competition the general population always benefits from it.

I, therefore, support the Alaska Optometry Law allowing the Optometrists to use topical therapeutic and diagnostic drugs with proper training and documentation of such conditions, especially those related to wearing of contact lenses.

These are my personal ideas and are not influenced by anyone. When Ophthalmologists can allow their RNs and office personnel to use these medications , I dont see any objection to their use by such an intelligent and well educated professionals as Optometrists.

I remain,

Sincerely Yours,

S. K. Dicksheet M.D.

Sharadkumar Dicksheet,M.D.

APPENDIX A

Views of Payors

1. Letter from Nebraska Department of Social Services supporting a similar therapeutics bill recently signed into law in Nebraska.

2. Recommendations of a coalition of health care payors in Kentucky, including recommendation 4(f) for optometric primary care legislation in that state. This report was issued in the fall of 1982. Since then, therapeutics legislation has been introduced in Kentucky, has passed the House and is awaiting action in the Senate.

Optometrists are allowed to use drugs for therapeutic purposes in Florida, North Carolina, West Virginia, Nebraska and Oklahoma. In 36 additional states, optometrists may use drugs for diagnostic but not therapeutic purposes.

Seven states (Alaska, Oregon, Tennessee, Kentucky, New Jersey, Rhode Island, Alabama) are currently seeking primary care therapeutics legislation. A number of other states are planning or preparing such legislation.

STATE OF NEBRASKA

ROBERT KERREY • GOVERNOR • GINA C. DUNNING • DIRECTOR

January 3, 1984

Senator Don Wesely
District #26
Room 808, State Capitol
Lincoln, NE 68509

Dear Senator Wesely:

Thank you for soliciting the Department's comments on the draft copy of LB 561.

Listed in numeric order as listed in your December 20, 1983 letter, the Department's comments are as follows:

1. The Department anticipates a decrease in expenditures for these services for the following reasons.

   A. The clients will not have to go from an optometrist to an ophthalmologist for this minor treatment. Therefore, the Department would have to pay for one office visit instead of two office visits.

   B. Medicaid's allowable fees for optometry office visits are generally less than allowable fees paid to ophthalmology.

2. This legislation could have a very positive effect on the availability of service for the clients as there are few ophthalmologists in outstate Nebraska. Example: In Valentine, Nebraska, the closest ophthalmologist is located in North Platte, Nebraska.

3. The cost of any pharmaceutical agent applied to the patient's eyes would be covered in the payment of the office visit. The Department would cover the actual cost of any allowable pharmaceutical dispensed by an optometrist for a full prescription in cities in rural Nebraska that have no pharmacies.

4. The administrative cost of this bill would be minimal, estimated at less than $500.00.

5. Other benefits to the clients would be less time spent away from jobs and less travel for disabled clients. The client's freedom of choice would also remain unrestricted.

I hope you find this information beneficial. Please contact me if anything additional may be needed.

Sincerely,

Gina C. Dunning

Gina C. Dunning, Director
Nebraska Department of Social Services

LP:j5/59,60

GOVERNOR'S COALITION OF PAYORS
TO ADDRESS HEALTH CARE COSTS

Subgroup or State Regulatory Reform

RECOMMENDATIONS

Recommendation 1: Improving the Current Health Planning and Regulation System

The Coalition believes that to the maximum extent feasible, market forces — rather than government-imposed regulation — should be used to control the rapid rise in health care costs. However, restructuring the health care market to redirect the incentives of providers and consumers will take some time to accomplish. Until that restructuring is completed, it would be premature to wholly dismantle the current state health regulatory and planning structure. For the interim period, therefore, it is appropriate to take actions to streamline and improve the current regulatory process.

Currently, the Statewide Health Coordinating Council and the Kentucky Health Facilities and Health Services Certificate of Need and Licensure Board have consumer and provider representation, but neither of these groups can be expected to have the same point of view as payors. The addition of payors to these bodies should help focus concern about the cost implications of proposed changes in the health system.

Therefore, to achieve more payor input into health planning and regulation, the Coalition recommends:

a. The Governor is requested to restructure the Statewide Health Coordinating Council.

   1. There should be two additional positions to represent payors*. More consideration should be given to including payors in the remaining positions as well, so long as the total number of payors does not exceed 10.

   2. There should continue to be a majority of consumers.**

b. The General Assembly is requested to restructure the Kentucky Health Facilities and Health Services Certificate of Need and Licensure Board.

   1. There should be three additional positions to represent payors.

   2. There should be a combined majority of consumers and/or payors.

c. The Governor's Coalition of Payors to Address Health Care Costs in collaboration with the Legislative Research Commission should undertake a more thorough investigation of how the health planning and regulation system could be made more effective, particularly the certificate of need component.

---

* A payor is defined as a private employer of significant size which is not in the business of health care delivery.

** A consumer is defined as anyone who is not a payor or provider of health care.

Though the subgroup on State Regulatory Reform is aware of the empirical evidence attesting to the ineffectiveness of Certificate of Need programs, in the absence of competitive forces in the marketplace of health care, it is unwilling to recommend dismantling of Kentucky's program. There is some evidence that suggests Kentucky's certificate of need program might be more effective; for example, if the Certificate of Need and Licensure Board held strictly to the State Health Plan, it would have approved $108 million less in hospital capital investment during the year ending May, 1982. Before abolishing the system, a more comprehensive look at major and/or minor changes that could improve the system should be undertaken.

Recommendation 2: Hospital Regulation

Although the Coalition is generally skeptical of the use of government price controls as a means of controlling hospital costs, it does not rule out the possibility that regulation can be used to further competition. Therefore, the Coalition recommends that:

The Governor's Coalition of Payors to Address Health Care Costs should continue its study of forces that promote competition in the health care delivery system.

The Coalition is particularly interested in actions that state government could take to foster competitive forces in the marketplace. A more thorough investigation of these alternative strategies should take place before additional regulatory actions are taken as well as a study of how existing regulatory mechanisms can be phased-out.

Recommendation 3: Altering Physician Supply in Kentucky

The Coalition is concerned that scarce medical resources may be lost whenever medical students educated in Kentucky find they must do their residencies in other states due to a lack of graduate medical education positions in Kentucky. The Coalition also found a tendency for physicians to underutilize auxiliary manpower that could allow them to offer more care at a lower cost to patients. In addition, as the medical system moves in the direction of increased competition, the Coalition is concerned about the ability of the University teaching hospitals to compete effectively due to the higher costs of care in teaching facilities. Finally, the Coalition finds that the problem of maldistribution of physicians in Kentucky is not as severe as some have supposed, so that care should be taken to effectively target efforts to get primary care manpower into medically underserved areas. Therefore, the Coalition recommends that:

a. There be a balance between the number of first-year graduate medical education positions available in Kentucky and the number of medical school graduates in Kentucky. Either medical school enrollments should be cut back or residency positions increased to achieve this goal.

b. A portion of the medical school curriculum should be devoted to training physicians about the benefits of using auxiliary health manpower in their practices.

c. Teaching costs should be clearly separated from patient care costs at any hospital with a teaching component. Such teaching costs should not be subsidized by patients receiving care at such facilities.

d. For planning purposes, the Division for Community Health Resources Development should develop its own designation of physician shortage areas in Kentucky rather than rely on Federal criteria and data.

The Coalition believes that these recommendations can help ensure an appropriate supply of well-trained physicians located in the right places in the years ahead.

Recommendation 4: Nonphysician Health Care Providers

The Coalition believes that the use of nonphysician health manpower offers an important potential opportunity for consumers and payors to obtain lower cost care without sacrificing quality. The Coalition strongly supports the 1982 legislation which allows Advanced Registered Nurse Practitioners to practice to the full extent of their training in accordance with protocols established by their respective national professional organizations. However, consumers and payors do not always reap the benefits of lower costs when such manpower are prevented from billing independently for their services rather than through a physician. In addition, there are other types of nonphysician manpower who should be accorded the opportunity to practice to the full extent of their training or to bill independently. Therefore, the Coalition recommends that:

a. The Kentucky General Assembly develop and pass a Physician's Assistant Practice Act that recognizes and allows physician assistants to practice to the full extent of their training in collaboration with physicians.

b. The Medical Licensure Board should not approve any regulations regarding physician collaboration with legally-recognized nonphysician health care providers that would inhibit any individual physician's freedom to determine the appropriate extent of collaboration with such manpower or the number of individuals with whom to collaborate.

c. The Kentucky Medical Assistance Program should permit direct billings for all nonphysician health care providers who deliver covered services.

d. All insurance carriers and Blue Cross/Blue Shield of Kentucky should make provisions to allow for direct billings for all nonphysician health care providers who deliver covered services.

e. Primary care centers, rural health clinics, health maintenance organizations, birthing centers, and other alternative delivery systems are encouraged to make use of such nonphysician health manpower whenever this will improve the cost-effectiveness of delivered care.

f. The Kentucky General Assembly should make the following changes in the Medical Practice Act: to allow optometrists to deliver primary eye care to the full extent of their training and to prescribe drugs needed for such care to the full extent of their training.

The Coalition believes that these changes will help further the goal of promoting competition and giving consumers a wider array of affordable health care choices.

Recommendation 5: Medical Malpractice Insurance Reform

Medical malpractice costs are an area in which modest savings are possible. There is a need to replace the 1976 Kentucky statute dealing with medical malpractice since many important provisions were declared subsequently to be unconstitutional. To achieve this goal, the Coalition recommends that:

The Coalition should assign a committee which includes members of the Governor's Coalition, the Legislative Research Commission, the Kentucky Medical Association and the Kentucky Hospital Association. This committee should develop legislative recommendations for the Interim Joint Committee on Health and Welfare by July 1, 1983.

The Coalition believes such legislation would be of benefit both to consumers of care and providers.

Recommendation 6: Subgroup on State Regulatory Reform

The Governor's Coalition should continue beyond November 1, 1982 in some fashion. One of its on-going functions should be to analyze and make recommendations about reforms needed in the current health planning and regulatory process. The Coalition should provide on-going advice and assistance to the Governor and to the Legislature on these matters. Specific priorities for review during the next year should include:

a. State regulation of health insurance;

b. Legislation to facilitate death with dignity;

c. Taxation and health policy.

APPENDIX B

Background and Training

1. Article from Summer 1983 issue of the Journal of Optometric Education, showing similarity of training in pharmacology between optometry and medical students at Indiana University.

2. Letter from Dean Thomas L. Lewis, of Pennsylvania College of Optometry, describing training in primary care at that institution.

3. Course brochure describing postgraduate 120 hour course in therapeutics given by Pennsylvania College of Optometry and Pacific University College of Optometry in 1982, taken by 60% of Alaska's practicing O.D.s

4. Curricula of Southern College of Optometry (Memphis) and University of Oregon School of Dentistry, with certain courses starred to show similarity of basic medical science training. Dentists have unrestricted drug prescribing privileges, including systemic drugs and controlled substances. The dental board requires additional training for the use of general anesthetics.

5. Article from February 1981 issue of the Journal of Medical Education showing that medical students receive only a median 15 hours of training in diagnosis and treatment of eye conditions.

Opponents of the legislation state that optometrists do not have the physician's training to deal with adverse drug reactions or to equate ocular signs and symptoms with systemic conditions with which they may be associated.

Neither assertion is correct. While optometrists and dentists are not trained as extensively in systemic conditions as physicians, they are better trained than general physicians to relate the organ system pathology of their respective fields to systemic pathology. It is common sense that schools are not going to send their graduates into practice unprepared to deal with the consequences of their actions.

Comparison of Pharmacology Courses for Optometry and Medical Students, Indiana University, Bloomington

Sally Hegeman, Ph.D.

An argument is made by various medical organizations that optometrists are not adequately trained to use drugs for diagnostic or therapeutic purposes. Because many of these arguments arise from a lack of information about the pharmacology training for the optometrists, the following comparison and evaluation of the course of study taken by Indiana University optometry students, with that taken by medical students in the Medical Sciences Program, Bloomington, was undertaken. The Medical Sciences Program, which is part of the Indiana University School of Medicine, provides preclinical training to 30 students in each of the first two years. Because of the emphasis on academic medicine, a number of these students are pursuing an M.S. or Ph.D. degree in one of the basic medical sciences. The pharmacology program at Indiana University School of Optometry has been in existence with minor revisions since 1977.

Sally Hegeman, Ph.D., is assistant professor of optometry and adjunct assistant professor of pharmacology, Indiana University School of Optometry and Indiana University Medical Sciences Program, Bloomington.

General Information

The medical pharmacology course, which is taken by 30 second year medical students, meets four hours per week for two semesters, or 30 weeks. Three or four examinations are given in each semester along with a comprehensive final examination at the end of each semester. The exams are multiple choice and short essay. Seventy third year optometry students take five lecture hours per week of general systemic pharmacology the first semester and three hours per week the second semester. The examinations have the same format as those for medical students; however, they do not have a comprehensive final examination. Often the same examination is given to both the optometry and the medical students. When this is done, overall performance is the same; i.e., median and means for both groups are within 1 to 2 points of each other.

The textbooks for both the medical and the optometry classes vary from year to year. For the 1982-83 academic year both used C.R. Craig and R.E. Stitzel's *Modern Pharmacology* (Boston: Little, Brown & Co., 1982) as the basic text. In the past five years A. Goodman, L.S. Goodman, and A. Gilman's *The Pharmacological Basis of Therapeutics*, 5th or 6th ed. (New York: Macmillan, 1975 or 1980) has been the most frequently adopted text in the medical program. That same textbook and A. Goth's *Medical Pharmacology*, 9th and 10th ed. (St. Louis: C.V. Mosby, 1978 and 1981) have been used in alternate years in the optometry course. In addition, W.H. Havener's *Ocular Pharmacology* (St. Louis: C.V. Mosby, 1978) is a required text for optometry students.

Faculty

The medical pharmacology course is taught by five pharmacology faculty members from the Indiana University School of Medicine Medical Sciences Program. Each member is responsible for six weeks of lectures. The optometry course is taught by four or five faculty members, three of whom teach in the Medical Sciences Program pharmacology course. These three faculty members are responsible for the majority of training in general pharmacology for the optometry students. Ocular pharmacology is taught by an optometrist-pharmacologist who is a faculty member of both the Indiana University School of Optometry and the Medical

Sciences Program. The fifth instructor teaches medical and pharmacy students at another university.

Content

The content of the two courses as taught in the 1981-82 academic year is summarized in the accompanying table.

As can be seen from Table 1, 58 hours (footnotes b and c) of optometry instruction are the same as for medical students (Indiana University, Bloomington, or other medical schools), and 25 hours (footnote a) are very similar. Thirty-seven hours are devoted to ocular pharmacology for optometry students only.

Conclusion

Approximately two-thirds of the pharmacology training of optometry and medical students is the same. The one-third difference between the groups is determined by their respective professional requirements. Optometry students have more intensive training than medical students in autonomic agents, local anesthetics, ocular basic principles, and bacterial, fungal, and viral chemotherapy, especially as they apply to the eye. Medical students have more intensive training in toxicology and in cardiovascular and central nervous system pharmacology than optometry students. In addition, the medical students study gastrointestinal pharmacology, cancer chemotherapy, and treatment of worms and protozoal infections which are not included in the optometry curriculum. Thus, the optometry student receives special training in ocular pharmacology and the medical student obtains the necessary breadth and depth to meet his career needs. □

TABLE 1
Content of Medical and Optometry Pharmacology Courses

Subject	Lecture Hours	
	Medicine	Optometry
Basic Principles—Systemic	12	12[a]
Basic Principles—Ocular		5
Autonomic Agents—Systemic	14	14[b]
Autonomic Agents—Ocular		10
Cardiovascular Agents	10	4[c]
Renal Agents—Systemic	4	3[a]
—Use in Ocular Disease		1
Chemotherapy (bacterial, viral, fungal)—Systemic	12	12[b]
—Ocular Chemotherapy		9
Chemotherapy (cancer, protozoan, worms, etc.)	10	0
Toxicology—Systemic	8	2[c]
—Ocular		2
Steroids, Anti-Inflammatory—Systemic	5	4[b]
—Ocular		2
Non-steroidal Anti-Inflammatory	4	4[a]
Local Anesthetics—Systemic	2	2[a]
—Ocular (topical) Anesthetics		2
Narcotic Analgesics	4	4[a]
CNS	20	10[b]
Endocrine	10	10[b]
GI	3	0
Drug Interactions	2	2[b]
Vitamins	0	3
Ocular Manifestations of Systemic Drug Administration	0	3
Total Lecture Hours	120	120

[a]Lecturer different for the two courses, but lecturer taught material to medical students within last five years.

[b]Same lecturer and lectures for medicine and optometry.

[c]Teaches same block of material to medical students at another university.

PENNSYLVANIA COLLEGE OF OPTOMETRY 1919

1200 West Godfrey Avenue
Philadelphia, Pa. 19141
215 424 5900

Office of Academic Affairs

Pennsylvania College of Optometry

March 3, 1981

The Eye Institute
1201 West Spencer Street
Philadelphia, Pa. 19141
215 276 6000

Phillip W. Bach, O.D., Ph.D.
Suite 204
Denali Professional Center
3401 Denali Street
Anchorage, Alaska 99503

Dear Doctor Bach:

In response to your request I have formulated a list of pharmaceutical agents which may be helpful in preparing your legislation. The current graduating class from the Pennsylvania College of Optometry has developed competency in utilizing pharmaceutical agents in the various catagories and classifications listed below.

Currently the students at the College develop a theoretical knowledge of these pharmaceutical agents through various didactic courses, and expertise in the clinical utilization of these drugs through a variety of clinical experiences. These clinical experiences occur in various settings such as The Eye Institute of the Pennsylvania College of Optometry, Veterans Administration Medical Centers, Health Maintenance Organizations, Armed Forces Hospitals, and private practice settings.

A major emphasis of the curriculum at the College is the differential diagnosis of ocular diseases and systemic diseases with ocular complications. We feel the critical step in the management of ocular and visual disorders is the specific differential diagnosis. The application of pharmaceutical agents is simply one of the competencies necessary in the continuum of the diagnosis and management of ocular diseases.

Listed below are the major classifications and catagories of pharmaceutical agents commonly utilized in the patient care setting of the College. Examples are given of different drugs in each catagory. This is not to be interpreted that other drugs within these catagories are not utilized when specifically needed, based on the professional judgements of the clinician.

I. Topical Anesthetics
   Example: Proparacaine
   Benoxinate

II. Mydriatics
   A. Sympathomimetics
      Example: Phenylephrine
   B. Parasympatholytics
      Example: Atropine group

III. Cycloplegics
   A. Parasympatholytics
      Examples: Atropine group
      Cyclopentolate

IV. Miotics
   A. Examples: Pilocarpine
      Anticholinesterases

V. Antimicrobials
   A. Antibioltics
      Examples: Tetracycline
      Erythromycin
      Gentamicin
      Chloramphenicol
      Bacitracin
      Cephalosporins
   B. Antibacterial
      Example: Sulfonamides
   C. Antiviral
      Example: Idoxuridine
   D. Antifungal
      Example: Natamycin

VI. Anti-inflammatory
   Example: Corticosteroids

VII. Anti-glaucomma
   A. Sympathomimetics
      Example: Epinephrine
   B. Sympatholytic
      Example: Timolol Maleate
   C. Parasympathomimetics
      Examples: Pilocarpine
      Anticholinesterases
   D. Carbonic Anhydrase Inhibitors
      Example: Acetazolamide

VIII. Antihistamines
Examples: Diphenhydramine
Antazoline

IX. Miscellaneous Legend Drugs
Example: Hyperosmotic Agents

X. Over-the-counter Drugs
Example: Dyes
Ocular Lubricants
Decongestants

I hope this list is of some help to you in constructing your new legislation. The Pennsylvania College of Optometry stands prepared to assist you educationally in meeting the visual care needs of the people of Alaska.

Sincerely,

Thomas L. Lewis

Thomas L. Lewis, O.D., Ph.D.
Dean of Academic Affairs

TLL:dmf

FACULTY

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Thomas L. Lewis, O.D., Ph.D.
Doctorate in Anatomy, Jefferson Medical College; Dean of Academic Affairs and Associate Professor, Pennsylvania College of Optometry

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Graduate of Harvard Medical School; Board Certified in Internal Medicine; Assistant Professor of Medicine, University of Rochester School of Medicine, Rochester, New York

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Doctorate in Pharmacology, University of Chicago; Professor of Pharmacology, Jefferson Medical College, Philadelphia

Ronald R. Reed, M.D.
Board Certified from Wills Eye Hospital; Adjunct Assistant Clinical Professor, University of Rochester, School of Medicine Strang Memorial Hospital, Department of Ophthalmology

Diane Yolton, Ph.D.
Assistant Professor of Anatomy and Pathology, Pacific University College of Optometry.

Clinical Faculty will include experienced clinicians including optometrists and ophthalmologists from various universities and V.A. medical centers in the United States.

Sponsored by Alaska Optometric Association

in cooperation with....

PACIFIC UNIVERSITY COLLEGE OF OPTOMETRY,
PENNSYLVANIA COLLEGE OF OPTOMETRY, and
UNIVERSITY OF ALASKA ANCHORAGE

Pathophysiology & Pharmacology
D. Yolton, Ph.D. - J. Bartlett, O.D. - R. Manthei, Ph.D.
March 27-28-29 April 24-25-26 UAA

Applied Pharmacology & Systemic Disease
P. Gerbino, Pharm.D. - M. Lipkin, M.D.
May 1-2 UAA

CPR & Emergency Care
American Red Cross Instructors
May 3 UAA

Anterior Segment Disease: cornea, uvea, lids conjunctiva, lacrimal system
L. Catania, O.D. - L. Casser, O.D.
May 22-23-24 UAA

Glaucoma
T. Lewis, O.D., Ph.D. - R. Reed, M.D. - clinical staff
June 11-12-13 UAA and selected clinical facilities

Anterior Segment: Clinical Procedures
T. Buckner, M.D. - L. Catania, O.D. - clinical staff
September 10-11-12 Selected Clinical Facilities

Final Examination
October 16 University of Alaska Campuses

Announcing

DIAGNOSIS, MANAGEMENT, AND TREATMENT OF OCULAR DISEASE

.... an in-depth postgraduate course including 120 hours of instruction with emphasis on diagnosis, treatment, and ocular therapeutics; and, recognition of ocular manifestations of systemic disease....

FACULTY

Jimmy Bartlett, O.D.
Associate Professor, Director of Continuing Education University of Alabama in Birmingham School of Optometry/ The Medical Center

Theodore Buckner, M.D.
Board Certified Ophthalmologist, Wills Eye Hospital, Philadelphia, Attending Surgeon, Shore Memorial Hospital, Somers Point, New Jersey

Linda C. Casser, O.D.
Assistant Professor, Pennsylvania College of Optometry, Chief, Primary Care Module No. 4, The Eye Institute, Pennsylvania College of Optometry, Philadelphia

Louis J. Catania, O.D.
Director, Center for Continuing and Post-Graduate Education Pennsylvania College of Optometry, Philadelphia; Past Director, Primary Care Optometry Residency Program of the Joseph C. Wilson Health Care Center Medical Group, Rochester, New York

Philip Gerbino, Pharm.D.
Associate Professor of Clinical Pharmacy, Philadelphia College of Pharmacy and Science; Former Director of Drug Information Center of Cornell University

Thomas L. Lewis, O.D., Ph.D.
Doctorate in Anatomy, Jefferson Medical College; Dean of Academic Affairs and Associate Professor, Pennsylvania College of Optometry

Mack Lipkin, Jr., M.D., F.A.C.P.
Graduate of Harvard Medical School; Board Certified in Internal Medicine; Assistant Professor of Medicine, University of Rochester School of Medicine, Rochester, New York

Roland W. Manthei, Ph.D.
Doctorate in Pharmacology, University of Chicago; Professor of Pharmacology, Jefferson Medical College, Philadelphia

Ronald R. Reed, M.D.
Board Certified from Wills Eye Hospital; Adjunct Assistant Clinical Professor, University of Rochester, School of Medicine Strang Memorial Hospital, Department of Ophthalmology

Diane Yolton, Ph.D.
Assistant Professor of Anatomy and Pathology, Pacific University College of Optometry.

Clinical Faculty will include experienced clinicians including optometrists and ophthalmologists from various universities and V.A. medical centers in the United States.

Sponsored by Alaska Optometric Association

in cooperation with....

PACIFIC UNIVERSITY COLLEGE OF OPTOMETRY,
PENNSYLVANIA COLLEGE OF OPTOMETRY, and
UNIVERSITY OF ALASKA ANCHORAGE

Pathophysiology & Pharmacology
D. Yolton, Ph.D. - J. Bartlett, O.D. - R. Manthei, Ph.D.
March 27-28-29 April 24-25-26 UAA

Applied Pharmacology & Systemic Disease
P. Gerbino, Pharm.D. - M. Lipkin, M.D.
May 1-2 UAA

CPR & Emergency Care
American Red Cross Instructors
May 3 UAA

Anterior Segment Disease: cornea, uvea, lids conjunctiva, lacrimal system
L. Catania, O.D. - L. Casser, O.D.
May 22-23-24 UAA

Glaucoma
T. Lewis, O.D., Ph.D. - R. Reed, M.D. - clinical staff
June 11-12-13 UAA and selected clinical facilities

Anterior Segment: Clinical Procedures
T. Buckner, M.D. - L. Catania, O.D. - clinical staff
September 10-11-12 Selected Clinical Facilities

Final Examination
October 16 University of Alaska Campuses

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offered by *Pacific University*
Diane P. Yolton, Ph.D.
Jimmy Bartlett, O.D.
Roland Manthei, Ph.D.
March 27-28-29 UAA
April 24-25-26 UAA

PATHOPHYSIOLOGY AND PHARMACOLOGY: principles of pharmacology, clinical application of ocular pharmacology and ocular toxicology. Pathophysiology of ocular allergy, infection and inflammation. Pharmacologic considerations in ocular steriod therapy, and in glaucoma therapy.

offered by *Pennsylvania College*
Philip Gerbino, Pharm.D.
Mack Lipken, Jr., M.D.
May 1-2 UAA

APPLIED PHARMACOLOGY: administration of drugs, Rx writing, patient management.
SYSTEMIC DISEASE: systemic disease related to ocular disease. Allergies-immunology; cardiovascular-cerebrovascular; endocrine; hematological; infectious and inflammatory; metabolic-chromosomal; musculoskeletal; mucocutaneous-dermatological; neurological nutritional-gastrointestinal

offered by *Pennsylvania College*
Louis Catania, O.D.
Linda Casser, O.D.
May 22-23-24 UAA

ANTERIOR SEGMENT DISEASE: corneal dystrophies, degenerations, infections, inflammations, irritations, injuries. Differential diagnosis, systemic considerations, treatment/management of anterior uveitis. Eyelid/adnexa disorders. Disorders of the lacrimal system, conjunctiva, sclera, and episclera.

offered by *Pacific University*
Tom Lewis, O.D., Ph.D.
Ronald Reed, M.D.
....and clinical staff
June 11-12-13 UAA and clinics

GLAUCOMA: anatomy-pathophysiology review. Epidemiology-risk factors. Examination, differential diagnosis, clinical classification. Medical management, surgical considerations. Concepts and controversies in glaucoma care. Methods of examination and clinical procedures.

offered by *Pennsylvania College*
Theodore Buckner, M.D.
....and clinical staff
September 10-11-12 clinics

ANTERIOR SEGMENT DISEASE CLINIC: examination protocols, techniques in dilitation and irrigation, gland expressing, epilation, cyst drainage, scrapings, cultures, cytology. Foreign body removal. Management of lacerations and corneal abrasions. Techniques for diagnosing systemic disease; exophthalmometry, ophthalmodynamometry. Clinical procedures

REGISTRATION FORM

Advance registration of $100 is required and due by February 24, 1982. Please complete the form below and return with payment to: Alaska Optometric Association, 3401 Denali Street, Suite 204, Anchorage, Alaska 99503

Tuition: $1,550

Payments and Due Dates	
$100	February 24, 1982
400	March 17, 1982
400	April 17, 1982
400	May 17, 1982
250	September 1, 1982

NAME _____

ADDRESS _____

City _____ State/Zip _____

I will need the following required textbooks:

_____ Goodman and Gilman, The Pharmacological Basis of Therapeutics $45.00

_____ Fraunfelder & Roy, Current Ocular Therapy $43.00

_____ Deborah Pavon-Langston, Manual of Ocular Diagnosis & Therapy $15.00

offered by *Pacific University*
Diane P. Yolton, Ph.D.
Jimmy Bartlett, O.D.
Roland Manthei, Ph.D.
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_____ Fraunfelder & Roy, Current Ocular Therapy $43.00

_____ Deborah Pavon-Langston, Manual of Ocular Diagnosis & Therapy $15.00

SOUTHERN COLLEGE
OF OPTOMETRY
1245 MADISON AVENUE
MEMPHIS, TENNESSEE 38104

Total basic science clock hours = 930

CURRICULUM

FIRST PROFESSIONAL YEAR FALL QUARTER			HOURS CREDIT	* Clock Hours
Biomedical	110	Human Anatomy & Physiology I: Structure & Function - 1 (5 HRS. LEC., 2 HRS. LAB)	6	70
Biomedical	111	Optics Applied To The Eye I (4 HRS. LEC., 2 HRS. LAB)	5	
Optometry	110	Introduction to Optometry (3 HRS. LEC., 3 HRS. LAB)	4	
Optometry	111	Preventive and Community Optometry Epidemiology & Research Methodology (4 HRS. LEC.)	4	
Clinic	110	Clinic Orientation (2 HRS. LAB.)	1 *	
			Total 20	
WINTER QUARTER				
Biomedical	120	Human Anatomy & Physiology II: Structure & Function - 2 (5 HRS. LEC., 2 HRS. LAB)	6	70
Biomedical	121	Optics Applied To The Eye II (3 HRS. LEC., 2 HRS. LAB)	4	
Biomedical	122	Visual Perception: Psycho-Physiological Optics (4 HRS. LEC., 2 HRS. LAB)	5	
Optometry	120	Ophthalmic Diagnostic Principles I (3 HRS. LEC., 3 HRS. LAB)	4	
Optometry	121	Preventive & Community Optometry: Jurisprudence (2 HRS. LEC.)	2	
Clinic	110	Clinic Orientation (2 HRS. LAB)	*	
			Total 21	
SPRING QUARTER				
Biomedical	130	Human Anatomy & Physiology III: Structure & Function - 3 (5 HRS. LEC., 2 HRS. LAB)	6	70
Biomedical	131	Optics Applied To The Eye III (3 HRS. LEC., 2 HRS. LAB)	4	
Biomedical	133	Vegetative Physiology: Ocular Biochemistry (4 HRS. LEC., 2 HRS. LAB)	3	40
Optometry	130	Ophthalmic Diagnostic Principles II (4 HRS. LEC., 3 HRS. LAB)	5	
Optometry	131	History of Optometry (1 HR. LEC.)	1	
Clinic	110	Clinic Orientation (2 HRS. LAB)	*	
			Total 19	

*Note: One quarter hour credit is awarded upon completion of this course in the Spring Quarter.

* Clock hours = lecture and lab hrs per week × 10 week quarter

SECOND PROFESSIONAL YEAR

			HOURS CREDIT	Clock Hours
FALL QUARTER				
Biomedical	210	Principles of Medicine I: General Pathology (5 HRS. LEC.)	5	50
Biomedical	211	Physiological Optics: Eye As An Optical System (3 HRS. LEC., 2 HRS. LAB)	4	
Biomedical	212	Neuroanatomy and Neurophysiology (3 HRS. LEC., 2 HRS. LAB)	4	50
Biomedical	213	Principles of Pharmacology & Therapeutics I (2 HRS. LEC.)	2	20
Optometry	210	Advanced Optometry I (3 HRS. Lec., 2 HRS. LAB)	4	
Clinic	210	Clinical Procedures (2 HRS. LAB)	1	
			Total 20	
WINTER QUARTER				
Biomedical	220	Principles of Medicine II: Ophthalmic Pathology I (5 HRS. LEC., 2 HRS. LAB)	6	70
Biomedical	221	Physiological Optics II: Monocular Sensory (3 HRS. LEC., 2 HRS. LAB)	4	50
Biomedical	223	Principles of Pharmacology & Therapeutics II (4 HRS. LEC.)	4	40
Optometry	220	Advanced Optometry II (3 HRS. LEC., 2 HRS. LAB)	4	
Optometry	222	Ophthalmic Optics I (2 HRS. LEC.)	2	
Clinic	210	Clinical Procedures (2 HRS. LAB)	1	
			Total 20	
SPRING QUARTER				
Biomedical	230	Principles of Medicine III: Ophthalmic Pathology II (5 HRS. LEC., 2 HRS. LAB)	6	70
Biomedical	231	Physiological Optics III: Monocular Sensory & Binocular Vision (2 HRS. LEC., 2 HRS. LAB)	3	40
Biomedical	233	Principles of Pharmacology & Therapeutics III (4 HRS. LEC.)	4	40
Optometry	230	Advanced Optometry III (4 HRS. LEC., 2 HRS. LAB)	5	
Optometry	232	Ophthalmic Optics II (1 HR. LEC., 2 HRS. LAB)	2	
Clinic	210	Clinical Procedures (2 HRS. LAB)	1	
			Total 20	

Note: One quarter hour credit is awarded upon completion of this course in the Spring Quarter.

THIRD PROFESSIONAL YEAR

			HOURS CREDIT	Clock Hours
FALL QUARTER				
Biomedical	310	Principles of Medicine IV: Pediatrics and Pediatric Optometry (2 HRS. LEC., 2 HRS. LAB)	3	40
Biomedical	311	Principles of Medicine V: Neurology (2 HRS. LEC.)	2	20
Biomedical	312	Principles of Medicine VI: Neuro-ophthalmic Disorders (3 HRS. LEC., 2 HRS. LAB)	4	50
Biomedical	313	Principles of Pharmacology & Therapeutics IV (2 HRS. LEC.)	2	20
Optometry	310	Contact Lens Practice: I (3 HRS. LEC., 2 HRS. LAB)	4	
Optometry	311	Orthoptics & Vision Therapy I (3 HRS. LEC., 2 HRS. LAB)	4	
Clinic	310	Clinical Practice I (1 HR. LEC., 8 HRS. LAB)	3	
			Total 22	
WINTER QUARTER				
Biomedical	320	Principles of Medicine VII: Gerontology & Geriatrics (3 HRS. LEC.)	3	
Biomedical	322	Principles of Medicine VIII: Dermatology (2 HRS. LEC.)	2	20
Biomedical	323	Principles of Pharmacology & Therapeutics V (3 HRS. LEC., 2 HRS. LAB)	4	50
Optometry	320	Contact Lens Practice II (3 HRS. LEC., 2 HRS. LAB)	4	
Optometry	321	Orthoptics & Vision Therapy II (3 HRS. LEC., 2 HRS. LAB)	4	
Clinic	320	Clinical Practice II (1 HR. LEC., 8 HRS. LAB)	3	
			Total 20	
SPRING QUARTER				
Biomedical	333	Principles of Pharmacology & Therapeutics VI (3 HRS. LEC., 2 HRS. LAB)	4	50
Optometry	331	Preventive & Community Optometry: Environmental Vision (3 HRS. LEC.)	3	
Optometry	332	Preventive & Community Optometry: Public Health (2 HRS. LEC.)	2	
Optometry	333	Limited Vision (Partial Sight) (3 HRS. LEC., 2 HRS. LAB)	4	
Optometry	334	Preventive & Community Optometry: Economics and Practice Management (3 HRS. LEC.)	3	
Clinic	330	Clinical Practice III (1 HR. LEC., 12 HRS. LAB)	4	
Clinic	331	Contact Lens Clinic (4 HRS. LAB)	1	
Clinic	332	Orthoptics and Vision Therapy Clinic (4 HRS. LAB)	1	
			Total 22	

FOURTH PROFESSIONAL YEAR

A twelve-week externship is required during the fourth year. Externship information appears under COURSE DESCRIPTIONS (Clinic Department) in this catalog.

SUMMER QUARTER

			HOURS CREDIT
Optometry	400	Optometry Seminar	2
Optometry	401	Clinical Case Analysis I (2 HRS. LEC.)	2
Clinic	400	Clinical Practice IV (1 HR. LEC., 20 HRS. LAB)	6
Clinic	401	Contact Lens Clinic (4 HRS. LAB)	1
Clinic	402	Orthoptics and Vision Therapy Clinic (4 HRS. LAB)	1
		OR	Total 12
Clinic	405	Externship	12

FALL QUARTER

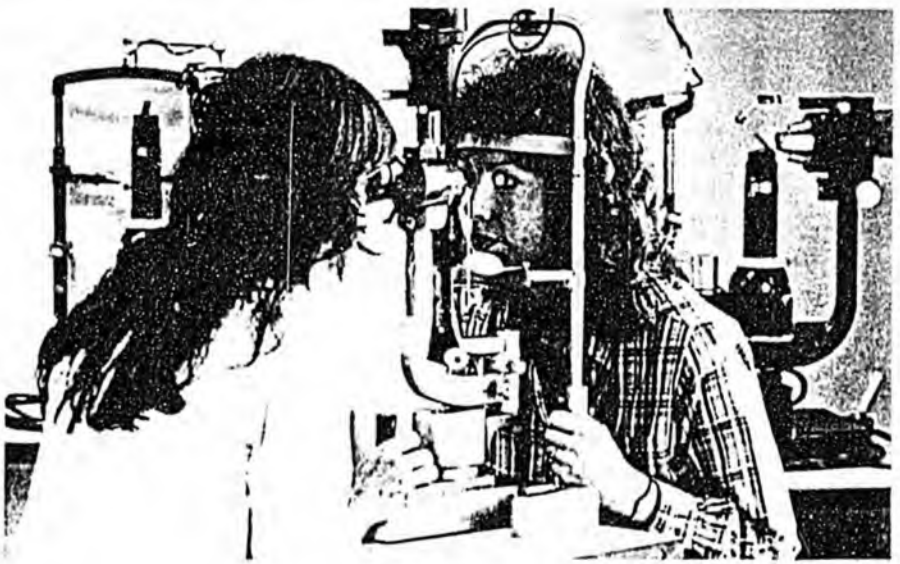
Optometry	410	Optometry Seminar (2 HRS. LEC.)	2
Optometry	411	Clinical Case Analysis II (3 HRS. LEC.)	3
Clinic	410	General Clinic Practice V (1 HR. LEC., 16 HRS. LAB)	5
Clinic	411	Contact Lens Clinic (4 HRS. LAB)	1
Clinic	412	Orthoptics and Vision Therapy Clinic (4 HRS. LAB)	1
		OR	Total 12
Clinic	415	Externship	12

WINTER QUARTER

Optometry	420	Optometry Seminar (2 HRS. LEC.)	2
Optometry	421	Clinical Case Analysis III (2 HRS. LEC.)	2
Clinic	420	General Clinic Practice VI (1 HR. LEC., 20 HRS. LAB)	6
Clinic	421	Contact Lens Clinic (4 HRS. LAB)	
Clinic	422	Orthoptics and Vision Therapy Clinic (4 HRS. LAB)	1
		OR	Total 12
Clinic	425	Externship	12

SPRING QUARTER

Optometry	430	Optometry Seminar (2 HRS. LEC.)	2
Optometry	431	Clinical Case Analysis IV (3 HRS. LEC.)	3
Clinic	430	General Clinic Practice VII (1 HR. LEC., 24 HRS. LAB)	7
		OR	Total 12
Clinic	435	Externship	12



Oregon Health Sciences Center - School of Dentistry

Curriculum Leading to the Degree Doctor of Dental Medicine (DMD) 1978-9

Total basic science clock hours = 938

(Typed from microfiche)

			Clock Hours Lec	Conf	Lab	Clinic	Total	Credit Hours
FIRST YEAR								
Fall Interval								
An	411-2	General Histology	16		32		48	–
An	411-2	Gross Anatomy	29		40		60	–
BCh	411	Biochemistry	40				40	4.0
BeS	411	Omnibus	17				17	1.7
CJT	411	Prevention of Dental Diseases	12		17		29	2.1
DA	411-12	Dental Anatomy Lect	12				12	–
DA	411-12	Dental Anatomy Lab			24		24	–
DM	410-20	Dental Materials	4		9		13	–
FP	411	Fixed Prosthodontics Technic			36		36	1.2
Mb	411	Microbiology	12		12		24	1.7
OD	411	Oral Examination Technic	14		9		23	1.7
Phy	411	Physiology	31	4	5		40	3.5
Winter Interval								
An	411-2	General Histology	3		6		9	3.8
An	411-2	Gross Anatomy	8		16		24	5.6
An	412	Head and Neck Anatomy	22		32		54	3.8
BCh	412-3	Biochemistry	31				31	–
DA	411-2	Dental Anatomy Lect	4				4	1.6
DA	411-2	Dental Anatomy Lab			8		8	1.6
DM	410-20	Dental Materials	4		9		13	–
FP	412	Fixed Prosthodontic Technic			63		63	2.1
Per	412	Periodontics Technic	5		21		26	1.5
Phy	412	Physiology	34	4	4		42	3.8
Spring Interval								
An	413	Neuroanatomy	12		24		36	2.4
An	413	Oral Histology	12		24		36	2.4
BCh	412-3	Biochemistry	17				17	4.8
CJT	413	Biology of Inflammation	16				16	1.
DM	410-20	Dental Materials	3		9		12	–
FP	413	Fixed Prosthodontics Technic			36		36	1.2
Op	413	Operative Technic Lecture	22				22	2.2
Op	413	Operative Technic Lab			66		66	2.2
Per	613	Periodontics Clinic				15	15	0.5
Phy	413	Physiology	35	4	3		42	3.8
		First Year Total						62.8
SECOND YEAR								
Fall Interval								
BeS	421	Personal Adjustment		10			10	1.0
DM	410-20	Dental Materials	3				3	–
FP	421	Fixed Prosthodontics Technic			72		72	2.4
Mb	421	Immunology	25				25	2.5
Op	421	Operative Technic Lecture	11				11	1.1
Op	421	Operative Technic Lab			66		66	2.
Per	421	Periodontology	12				12	1.
Per	620	Periodontics Clinic				33	33	–

			Clock Hours Lec	Conf	Lab	Clinic	Total	Credit Hours
PH	421-2	Dentistry & The Health Care System	11				11	-
Phc	421-2	Pharmacodynamics	53			15	68	-
Pth	421-2	Disease Processes	14	31			45	-
RP	421	Removable Prostho-dontics Technic	11			33	44	2.2
Winter Interval								
HeS	422	History of Dentistry	10				10	1.0
CJT	422	Caries	21			7	28	2.5
DM	410-20	Dental Materials	3				3	-
FP	422	Fixed Prosthodontics Technic				33	33	1.1
Mb	422	Pathogenic & Oral Microbiology	26			11	37	2.9
Med	422	Medical Emergency Procedures	8			4	12	1.0
OD	420-30	Oral Diagnisis & Treatment	6				6	-
Op	422	Operative Technic	11				11	1.1
Op	422	Operative Technic Laboratory				33	33	1.1
OS	422-3	Control of Pain & Anxiety	20			6	26	2.6
OS	422	Introduction to Oral Surgery	11				11	1.1
Pedo	422	Child Development	22				22	2.2
Per	620	Periodontics Clinic				15	15	-
PH	421-2	Dentistry & the Health Care System	11				11	2.2
Phc	421-2	Pharmacodynamics	7				7	6.5
Pth	421-2	Disease Processes	4				4	3.5
Pth	422	Inflammatory Disease	18				18	1.8
Ro	422	Oral Radiology	11				11	1.1
RP	422	Removable Prostho-dontics Technic	8			24	32	1.6

			Clock Hours Lec	Conf	Lab	Clinic	Total	Credit Hours
Spring Interval								
DM	410-20	Dental Materials	5				5	3.1
Endo	423	Endodontology	11			24	35	2.2
FP	423	Fixed Prosthodon-tics Technic				69	69	2.3
Nu	423	Nutrition	14				14	-
Op	623	Operatives Clinic				33	33	0
Ord	423	Orthodontics	9				9	0.9
Ord	423	Orthodontics Technic				27	27	0.9
OS	423	Oral Surgery				12	12	0.6
Pedo	423	Child Development	11				11	1.1
Pedo	423	Pedodontic Technic				44	44	1.1
Per	620	Periodontics Clinic				15	15	2.1
Pth	423	Pathology of Systems	34	24			58	4.6
Ro	423	Oral Radiology Laboratory				15	15	0.5
RP	423	Removable Prostho-dontics Technic			4	33	37	1.5
						Second Year Total		68.2
THIRD YEAR								
Fall Interval								
CJT	431	Oral Pathology - Oral Radiology	20	10			30	3.0
DM	431-2	Dental Materials	22				22	-
Endo	431-2	Endodontology	6				6	-
Endo	630-40	Endodontology Clinic				11	11	-
FP	431-2	Principles of Fixed Prosthodontics	6				6	-
FP	631	Fixed Prosthodon-tics Clinic				33	33	1.1
OD	420-30	Oral Diagnosis & Treatment	7				7	1.3

			Clock Hours Lec	Conf	Lab	Clinic	Total	Credit Hours
Op	631	Operatives Clinic				66	66	2.2
rd	431	Facial Growth	12				12	1.2
OS	431	Oral Surgery	12				12	1.2
edo	631	Pedodontics Clinic				33	33	1.1
er	431	Periodontology Lecture	12				12	1.2
er	631	Periodontology Clinic				33	33	1.1
Ro	630	Oral Radiology Clinic				10	10	-
RP	431	Removable Prosthodontics Technic	9		27		36	1.8
RP	631	Removable Prosthodontics Clinic				66	66	2.2

Winter Interval

DM	431-2	Dental Materials	13				13	3.5
ndo	431-2	Endodontology	6				6	1.2
ndo	630-40	Endodontology Clinic				11	11	-
FP	431-2	Principles of Fixed Prosthodontics	6				6	1.2
FP	632	Fixed Prosthodontics Clinic				30	30	1.0
D	432-3	Clinical Conference		2			2	-
p	632	Operatives Clinic				60	60	2.0
rd	432	Orthodontics	11				11	1.1
OS	432	Oral Surgery	11				11	1.1
edo	632	Pedodontics Clinic				30	30	1.0
er	632	Periodontology Clinic				30	30	1.0
th	432	Pathology	22		22		44	3.3
Ro	630	Oral Radiology Clinic				10	10	-
RP	432-3	Principles of Removable Prosthodontics	11				11	-

			Clock Hours Lec	Conf	Lab	Clinic	Total	Credit Hours
RP	632	Removable Prosthodontics Clinic				60	60	2.0

Spring Interval

Endo	630-40	Endodontology Clinic				11	11	-
FP	633	Fixed Prosthodontics Clinic				33	33	1.1
Med	433	Principles of Medicine	12				12	1.2
OD	432-3	Clinical Conference		22			22	2.2
OD	630	Oral Diagnosis Clinic				33	33	1.
Op	433	Principles of Clinical Operatives	12				12	1.2
Op	633	Operative Clinic				66	66	2.2
OS	433	Oral Surgery and Hospital Dentistry	12				12	1.2
OS	630	Oral Surgery Clinic				22	22	1.2
Pedo	633	Pedodontics Clinic				33	33	1.1
Per	633	Periodontology Clinic				33	33	1.1
PP	433	Dental Jurisprudence	12				12	1.2
Pth	433	Comprehensive Exam	12	22			34	2.2
Ro	630	Oral Radiology Clinic				10	10	1.0
RP	432-3	Principles of Removable Prosthodontics	12				12	2.3
RP	633	Removable Prosthodontics Clinic				66	66	2.2
		Third Year Total						58.2

FOURTH Year

Fall Interval

DM	441	Dental Materials	12				12	1.2

			Clock Hours Lec	Conf	Lab	Clinic	Total	Credit Hours
ndo	630-40	Endodontology Clinic				12	12	-
FP	641	Fixed Prosthodontics Clinic				77	77	2.2
led •	441	Principles of Medicine	12				12	1.2
:ed •	440	Hospital Clinic				6	6	-
OD	441	Oral Diagnosis & Treatment Planning	11				11	1.1
Op	641	Operatives Clinic				154	154	4.4
edo	441	Pedodontics Conference		15			15	0.6
edo	641	Pedodontics Clinic				44	44	1.1
er	641	Periodontology Clinic				5	5	0.2
PP	441	Professional Viewpoints	22				22	2.2
Ro	640	Oral Radiology				7	7	-
RP	641	Removable Prosthodontics Clinic				66	66	2.2

Winter Interval

ndo	630-40	Endodontology Clinic				10	10	1.9
FP	442	Principles of Fixed Prosthodontics	11				11	1.1
FP	642	Fixed Prosthodontics Clinic				66	66	2.0
led •	442	Principles of Medicine	11				11	1.1
led •	440	Hospital Clinic				6	6	-
Op	642	Operatives Clinic				143	143	4.0
Pedo	642	Pedodontics Clinic				30	30	1.0
Per	642	Periodontology Clinic				5	5	0.2
DP	442	Dental Psychology	11				11	1.1
Ro	640	Oral Radiology				7	7	-
RP	442	Principles of Removable Prosthodontics	11				11	1.1
RP	642	Removable Prosthodontics				60	60	2.0

Spring Interval

FP	643	Fixed Prosthodontics Clinic				99	99	3.3
Med •	440	Hospital Clinic				6	6	0.9
OD	640	Oral Diagnosis Clinic				66	66	2.0
Op	643	Operatives Clinic				154	154	4.4
Ord	443	Orthodontics Conference	11				11	1.1
OS	640	Oral Surgery Clinic				32	32	1.0
Pedo	643	Pedodontics Clinic				33	33	1.1
Per	643	Periodontology Clinic				16	16	0.3
PH	440	Community Dentistry				30	30	1.0
PH	443	Gerodontology	11				11	1.1
Ro	Oral Radiology Clinic					7	7	1.1
RP	643	Removable Prosthodontics Clinic				66	66	2.2
		Fourth Year Total						52.4

notion and has emphasized to trainees that the hospital does not endorse them as being competent to engage in family practice. However, since state laws permit an M.D. licensee to do any type of practice he wishes, it is the feeling of the director that the public would be better served by potential family practitioners having some rather than no additional training. Since there are a number of physicians seeking some training to change their specialty, consideration should be given to longer hospital training periods or a return to specially designed preceptorships to accommodate them.

With respect to those family doctors in retraining, the program would be improved by a more specific set of goals and more careful monitoring of achievements than has as yet been accomplished. The author is aware of two other programs offering similar training. At Creighton University School of Medicine rural family doctors are trained in a specific area, for example, cardiology techniques such as Swan-Ganz catheter insertion. At the Medical College of Pennsylvania inactive physicians or physicians in administrative positions are being trained in primary care.

Conclusions

A pilot mini-residency in family practice has been in operation at Santa Monica Hospital Medical Center since 1979. Many of the applicants were practicing in other specialties and seeking to make a change to family practice. It is unrealistic to expect that the available two- to six-week period can accomplish this objective, and there is a need for a different kind of program to accommodate such circumstances. Training goals for family doctor residency refresher training must be more specific and evaluations more formal than is now the case in the Santa Monica experience.

Ophthalmology Teaching in Medical Schools

Robert E. Kalina, M.D., Henry J. L. Van Dyk, M.D., and George W. Weinstein, M.D.

The Association of University Professors of Ophthalmology (AUPO) was founded in 1965 and is made up of the chairmen of all departments or divisions of ophthalmology in U.S. medical schools (1). A major interest of the body, individually and collectively, is medical student education.

Some members of the AUPO believe that recent medical school graduates are less well prepared in ophthalmology than those of the more distant past. Also reduced familiarity with ophthalmology by physicians in future generations has been cited as a potential problem in the legislative and legal arenas (2).

The results of two AUPO surveys of ophthalmology teaching are reported here.

Survey Techniques

Questionnaires were mailed in 1974 and again in 1979 to the members of the AUPO. Each member was asked to complete the form or to forward it to the individual in his unit most responsible for medical student education. Confidentiality was optional and was elected by some.

The survey document used in 1979 duplicated the questions of 1974 and in addition

This survey was supported in part by a grant to the University of Washington from Research to Prevent Blindness, Inc.

Dr. Kalina is professor and chairman, Department of Ophthalmology, University of Washington School of Medicine, Seattle. Dr. Van Dyk is professor, Department of Ophthalmology, Louisiana State University School of Medicine, New Orleans. Dr. Weinstein is professor and chairman, Department of Ophthalmology, West Virginia University School of Medicine, Morgantown.

inquired about the usage and usefulness of the *Ophthalmology Study Guide for Students and Practitioners of Medicine*, a joint publication of the AUPO and the American Academy of Ophthalmology and Otolaryngology (AAOO) which first appeared in 1976 and now is in its third edition (3). This guide is based upon seven objective areas thought to represent essential knowledge requirements for all physicians. These objectives were developed as a result of a survey of 1,600 respondents representing medicine at undergraduate and graduate levels of general and specialty orientation (4, 5).

Results

Responses were received from 74 of 102 member schools in 1974 (73 percent) and from 81 of 110 schools in 1979 (74 percent) (Figure 1). There was a decline in mean required curriculum hours from 25 in 1974 to 22 in 1979, while the median declined from 18 to 15. Hours actually assigned to the department or division of ophthalmology decreased proportionately from a mean of 22 in 1974 to 20 in 1979. Assigned hours were used most frequently for lectures or demonstrations.

All responding institutions offered medical student electives in ophthalmology in 1979, but only a minority of students chose them (mean 25 percent, median 15 percent). Use of audiovisual self-instruction units rose from 66 percent in 1974 to 82 percent in 1979.

The study guide, not available in 1974, had been adopted as a syllabus by 58 percent of institutions in 1979, while 28 percent used another syllabus, usually prepared locally. In most cases the study guide was purchased by the student and used for self-instruction and as a supplement to lectures. The microfiche illustrations, newly added in the third edition (1978), had been found useful by students in 67 percent of schools using the study guide.

Discussion

The surveys reported here were prompted in part by suspicion among the AUPO members that curriculum time devoted to ophthalmology had suffered during the widespread curriculum revisions which have taken place in U.S. medical schools during recent years.

Although data are not available from the preceding era, the results of the study reported here indicate that currently assigned time for

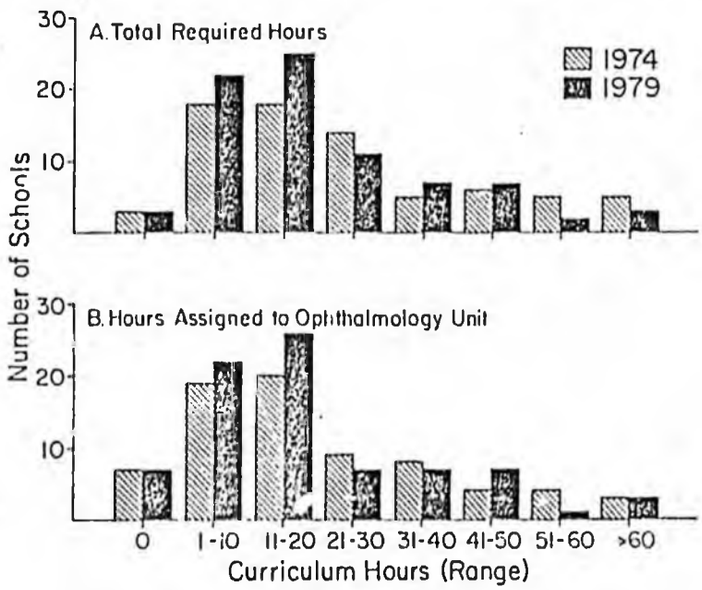


FIGURE 1
Minimum requirements for ophthalmology in U.S. medical schools.

teaching ophthalmology is limited and gradually declining. One logical extension might be a declining ability for appropriate diagnosis, management, or referral of patients with eye disorders, who form a significant segment of those seeking primary care.

The results of these surveys may not include ophthalmology teaching done in the primary care clinical setting. It seems likely that such on-site instruction would be effective and appear relevant to students in that the patient-problem-teacher loop is shortest there; but the authors believe that such teaching events are rare, often unscheduled, and likely to be the first to suffer from time constraints.

Knowledge that curriculum time was limited and that competition for it was keen was one of the prime motivating factors for the development of the AAOO/AUPO study guide. Standardization of objectives to be achieved was presumed then as now to be a laudatory goal. However, the availability of clearly defined objectives has coincided with apparent reduced national curricular emphasis upon ophthalmology.

Not only is the curricular time available to ophthalmology small, but also surprisingly few students (25 percent) choose ophthalmology electives. The reasons for limited elective participation may range from the influence of counselors to lack of available electives. Whatever the cause, the effect must be negative upon student appreciation for what the specialty offers. In view of the excess of candidates for the limited number of ophthalmology residency positions, a main concern is that students who will practice other specialties, especially primary care, learn proper diagnosis and treatment of some ophthalmic disorders so that they may avoid inappropriate referral to medical or nonmedical practitioners.

References

1. COGAN, D. G. A[illegible] of University Professors of Ophth[illegible] *Arch. Ophthalmol.*, 74:740, 1965.
2. WINOGRAD, L[illegible] appening in Medical School? *Ophth[illegible]* March-April, 1978.
3. *Ophthalmology Si[illegible] Guide* (Third Edition). San Francisco: American Academy of Ophthalmology, 1978.
4. SPIVEY, B. E. A Technique To Determine Curriculum Content for Medical Students. *J. Med. Educ.*, 46:269-274, 1971.
5. SPIVEY, B. E. Ophthalmology for Medical Students: Content and Comment. *Arch. Ophthalmol.*, 84:368-375, 1970.

APPENDIX C

Results in Alaska and Elsewhere

1. Letter from Marilyn Chohaney, M.D., describing positive effects of therapeutics practiced by optometrists in the Yukon-Kuskokwim Health Corporation.

2. Report by the West Virginia Board of Examiners in Optometry to the West Virginia Legislature citing benefits to the public from optometric therapeusis in West Virginia.

WEST VIRGINIA BOARD OF OPTOMETRY

JOHN E. CASTO, O.D.
SECRETARY-TREASURER
WEST VIRGINIA BOARD OF OPTOMETRY
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February 3, 1983

The Honorable Warren R. McGraw
President, Senate of West Virginia
State Capitol Building
Charleston, West Virginia 25305

The Honorable Clyde M. See, Jr.
Speaker, West Virginia House of Delegates
State Capitol Building
Charleston, West Virginia 25305

RE: Report on Enrolled H.B. 1005 of 1976

Dear President McGraw and Speaker See:

The purpose of this letter is to report to each of you and your respective bodies on the Enrolled H.B. 1005 enacted on February 20, 1976 by the Sixty-Second Session of the West Virginia legislature. As you may recall, this law updated the statutory definition of "optometry" to include, among other things, the limited use of drugs prescribable for the human eye for both diagnosis and treatment, under carefully prescribed certification authority delegated to the West Virginia Board of Optometry. This Board has endeavored continuously and faithfully to both certify and monitor the use of drugs by optometrists practicing under the regulation of this Board.

Recent information compiled from the one hundred eighty-three (183) West virginia registered optometrists now certified by this Board for drug usage is as follows:

1. A total of seventy-four (74) different drugs prescribable for the human eye have been employed by these West Virginia certified optometrists since the law was enacted.

2. Over one hundred thousand (100,000) individual patients have been seen by these optometrists and conditions such as infectious or allergic conjunctivitis, corneal abrasions, and blepharitis (granulated eye lids) have been treated by those certified in the compilation. This does not include the use of topical anesthetics used routinely by most of these optometrists in performing tonometry (glaucoma test). It is estimated that some one and one quarter million (1,250,000) patients have been administered a topical anesthetic for this testing procedure.

WEST VIRGINIA BOARD OF OPTOMETRY

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3. *The distance those patients, who otherwise would have had to travel to geographical locations other than those of the treating optometrists for treatment by appropriate medical specialties to whom they formerly were referred, would have been required to travel is nearly one million eight hundred thousand miles* (1,800,000).

4. *Fifty-three* (53) *different pathological conditions have been diagnosed and treated by these West Virginia certified optometrists.*

These 183 *West Virginia optometrists who have been certified in every county of the state are now, faithfully and well, providing updated eye health care benefits to the people of West Virginia.*

It should be additionally noted that there has been no report to this Board of any unusual adverse drug reaction to patients where drugs were administered.

Please be advised that this Board is quite aware of the full responsibility placed upon it by the legislature in the enactment of this law. This data was compiled in a continuing effort to support the trust which has been reposed in it. Each of you are encouraged to call upon this Board for any additional information which may be helpful.

Sincerely yours,

John E. Casto, O.D.
Secretary-Treasurer
West Virginia Board of Optometry

PLEASE NOTE: THE PRECEDING PAGES WERE TREATED AS A UNIT IN THE ORIGINAL DOCUMENT.

PLEASE NOTE: THE FOLLOWING PAGES WERE TREATED AS A UNIT IN THE ORIGINAL DOCUMENT

SENATE BILL NO. 189

"An Act relating to the practice of optometry and authorizing the use of prescription drugs by optometrists."

This Bill would permit the use of legend drugs by certain optometrists and would delete from the definition of optometry the restriction against the use of drugs. Legend drugs as defined in Section 5 of the Bill "means drugs whose containers must bear a label prohibiting dispensing without a prescription". The Bill also specifically permits optometrists to engage in the "diagnosis and treatment, including the use of drugs, of inflammations, infections and injuries of the eyes and eyelids".

A majority of states now allow optometrists to use diagnostic topical drugs, either through specific enabling legislation or through the lack of specific prohibitions. Few, if any, permit the use of therapeutic drugs. This Bill, as now written, would apparently permit the use of any drug, whether topical or systemic, in the diagnosis and treatment by an optometrist of inflammations, infections and injuries of the eyes and eyelids. Arguably, the proposed legislation may be construed to permit the practice of opthalmologic surgery by optometrists since surgery is not specifically prohibited.

Even the use of diagnostic topical drugs by optometrists, i.e., drugs which cause the pupil to open or to close down or which paralyze the muscles which control the shape of the lens, has been controversial. Those in favor of the use of drugs by optometrists argue that optometric services are more widely distributed than ophthalmologic services and that the optometrist serves as an entry point for primary eye care. The use of diagnostic drugs is said to expand the ability of the optometrist to recognize eye abnormalities and to increase medical referral for diagnosis and treatment. The optometric group also states that the use of diagnostic drugs rarely causes adverse effects.

Those opposing such legislation argue that the use of drugs would not materially improve the capacity of optometrists to recognize abnormalities. Optometrists are not expected to diagnose diseases of the eye and, if a departure from normal is noted, the patient is expected to be referred to a physician for diagnosis. The concern on the part of the medical community is that the optometrists would be making diagnostic judgements which the physicians do not believe them qualified to make. Moreover, the medical community notes that adverse reactions, while admittedly rare for certain of the diagnostic drugs, can have extremely serious consequences when they do occur. A higher rate of predisposition to a certain type of glaucoma in Alaska Natives is cited. Use of mydriatic drugs could possibly precipitate an attack. The potential use of therapeutic drugs can be expected to raise even greater concern.

Limitations are placed on the use of certain diagnostic drugs by legislation in some states. In Oregon, for example, the Board of Optometry is empowered to designate the diagnostic pharmaceutical agents for topical use, but provides that the designation shall be with the advice and guidance of the Board of Medical Examiners.

Some states define the type of training in pharmacology which would be required before an optometrist would be permitted to use even diagnostic drugs. SB 189 contains no such provisions.

The Department of Health and Social Services does not support HB 225 in its present form because of the overly broad definition of the types of drugs which would be authorized, vagueness with regard to the limits of optometric practice and lack of provisions with regard to the educational qualifications required for use of drugs. If the Legislature chooses to authorize use of certain drugs by optometrists, the Department suggests that definitions and restrictions similar to those in use in other states may be advisable and that the professional opinion of the medical and optometric communities should be sought to insure the health and safety of the general public.

Recommended by: E. S. Rabeau

E. S. Rabeau M.D., Director
Division of Public Health

Date: March 23, 1983

Approved by: Robert London Smith

Robert London Smith, Ph.D.
Commissioner
Dept. of Health & Social Services

Date: 3/30/83

FISCAL NOTE | Revision Date , 1983 |

I. REQUEST

Bill/Resolution No.: SB No. 189

Title: "Relating to the practice of optometry.

Sponsor: HESS (Josephson)

Requestor:

II. FISCAL DETAIL

Agency Affected: Health & Social Services

Program Category Affected: Health

BRU, Program of Subprogram(s) Affected:

EXPENDITURES/REVENUES: (Thousands of Dollars)

	FY 83	FY 84	FY 85	FY 86	FY 87	FY 88
OPERATING		0	0	0	0	0
100 PERSONAL SERVICES						
200 TRAVEL						
300 CONTRACTUAL						
400 COMMODITIES						
500 EQUIPMENT						
600 LANDS & STRUCTURES						
700 GRANTS, CLAIMS, ETC.						
TOTAL OPERATING		0	0	0	0	0
CAPITAL						
REVENUE						

FUNDING: (Thousands of Dollars)

GENERAL FUND		0	0	0	0	0
FEDERAL FUNDS						
OTHER (Specify Source)						
		0	0	0	0	0

POSITIONS:

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

III. SOURCE OF FUNDS TO OFFSET FISCAL IMPACT OF BILL:

IV. ANALYSIS: Attach a separate page for any Analysis

Prepared By: Dean F. Tirador, M.D. Phone: 465-2113

Division: Public Health Date: 3/23/83

Approved by Commissioner: Robert Gordon Smith Date: 3/30/83

Department: Health and Social Services

Distribution:

Original to Legislative Finance

Copy to Office of Management and Budget (for Legislature introduced bills)

Copy to Department (for Governor introduced bills)

Copy to Sponsor

Copy to Requestor (if different from Sponsor)

3/8/83

To M.D. from J.J SB 79

In reviewing House Bill #75 and Senate Bill #79, Section 2, Subsection 08.72.305 - Use of Drugs for Diagnosis, included in the list of drugs proposed to be used is a class of drugs called miotics. This group of drugs is only therapeutic and has no diagnostic use. They are used for treating chronic glaucoma and acute angle closure glaucoma. What is a therapeutic drug doing in a "diagnostic" bill? Mr. George Hall's and Mr. Sternberg's (both Anchorage optometrists) response to this question at the March 1, 1978 meeting of the Legislative Coalition of Health Care Professionals in Anchorage and at the 1978 hearings on a similar bill introduced and defeated last year respectively was: "To take care of angle closure." "To use this as a first aid measure." This is treatment.

Treating angle closure glaucome is very difficult and requires more than just putting a miotic eye drop in the eye. Treatment of this condition requires surgery in all cases. To break the angle closure attack before surgery, hospitalization, Diamox and intravenous Manitol is necessary in many cases. If angle closure glaucoma goes untreated, blindness results. All cycloplegics and mydriatics (dilating drops) can cause angle closure glaucoma.

It has been suggested to you by the optometrists that the incidence of angle closure glaucoma is only 1 in 18,400 cases. What they do not tell you is that a unique situation exists with the native Alaskan. The incidence of angle closure is 1 in 1,900 cases and even higher if dilating drops are used. This problem usually takes several hours to develop, long after the optometrist would have left the village. If we were to allow the optometrists to use dilating drops, this would result in many more unnecessary surgical emergencies and possible blindness. In view of this well known fact, ophthalmologists are hesitant to use mydriatics and cycloplegics in the Alaska native, especially in the bush areas.

Miotics are a therapeutic class of drugs and are listed incorrectly in the proposed bills as diagnostic drugs. Either the optometrists do not have a thorough understanding of the eye medications, or they are asking the legislators to allow them to treat glaucoma and other eye conditions. The proposed bill lists only broad general categories of the desired eye medications, no specific drug names and concentrations. The classes of drugs include such potent substances as Cocaine, Atropine, Scopolamine, Phenylephrine and Phospholine Iodide. All these drugs when applied to the eye are readily absorbed into the bloodstream and are capable of producing a wide range of total effects.

Cocaine, a topical anesthetic and mydriatic (dilater of the pupil) is a Class II narcotic controlled substance which is subject to wide spread abuse by addicts and requires a controlled substance registration certificate to dispense or use.

Optometrists are not medical doctors and cannot get a federal narcotics certificate. These drug bills are inconsistent with federal regulation on this point.

Atropine and Scopolamine are cycloplegic agents which paralyze the eye's focusing power and in sufficient doses produce irritability, hallucinations and even coma. Phenylephrin (a mydriatic) has the ability to raise the blood pressure markedly and to alter the rhythm of the heart and has been implicated in deaths in older people through strokes and in children through cardiac arrhythmias. Phospoline Iodide, a miotic which constricts the pupil, is used in the treatment of glaucoma (elevated pressure in the eye) and in certain cases of crossed eyes. The active ingredients are related to the active substance in certain insecticides and nerve gas. This medication has been shown to produce retinal detachments and cataracts.

The above are only a few examples demonstrating what potential dangers exist in the various classes of drugs listed in the proposed bills. By allowing wide spread use of these drugs by nonmedical persons, the overall risk to the general public of potentially serious side effects or untoward reactions are markedly increased.

I. EYE HEALTH CARE PROVIDERS OF THE CONSUMING PUBLIC

The American Optometric Association defines an optometrist as:

"...a health care professional who is specifically educated, highly trained and state licensed to examine, diagnose, and treat conditions of the vision system. Optometrists are highly skilled individuals who examine the eyes and related structures to determine the presence of vision problems, eye diseases and other abnormalities. They gather information on the vision system during the optometric examinations, diagnose any conditions discovered and prescribe optometric treatment such as contact lenses or vision therapy that may be required to provide the patient with clear effecient vision."[1]

Although this definition is broad, the Alaska legistlators have specifically narrowed the definition down considerably. According to the Alaska State Statutes, Title 8, Business and Professions Section 08.72.300, the Statutes define optometry as:

1. "Optometry" is the employment of means or methods, <u>other than the use of drugs</u>, for the diagnosis of an optical deficiency or deformity, visual or muscular anomaly of the human eye, or the prescription or application of lenses, prisms or ocular exercises for the correction or relief of the human eye:

2. "practicing optometry" means the diagnosis, <u>by means or methods other than the use of drugs</u>, of an optical deficiency or deformity, visual or muscular anomaly of the human eye, or the prescription of lenses, prisms or ocular exercises for the correction or relief of the human eye, or the holding of oneself out as being able to do so.

The optometrists will or have suggested to you that they are legally bound to diagnose eye diseases and that they are in a dilemma in that they cannot diagnose eye diseases without the use of drugs. They are only in a dilemma if the broader sense of the definition is used as set forth recently by the American Optometric Association. However, the Alaska State Legislators have ingeniously removed that dilemma for the optometrists by limiting them to the diagnosis of visual anomalies, muscular anomalies, optical deficiency or deformities and <u>not</u> eye diseases.

Furthermore, this construed dilemma is removed by a landmark decision by Judge James M. Fitzgerald, United States District Judge for Alaska in the Timothy Steele case in Fairbanks, Alaska. This is the case where an optometrist in Fairbanks used a dilating drop and noted an abnormality and did not refer the child to a medical doctor. The following is a direct and full quote of the Judge's conclusion:

> "I conclude that competent optometric practice required that Timothy's parents be notified and that the child be referred. The failure to inform and refer was not a 'judgment call' but a violation of the governing principles of professional standards.
>
> Optometrists are trained to recognize symptoms of many diseases which may be discovered by eye examination. They are not permitted under recognized optometric standards to undertake a definite diagnosis but recognize this as the responsibility of a medical doctor. Obviously, it is foreseeable that failure to refer to a qualified medical practitioner, when required to do so, will result in delay of diagnosis and the institution of treatment; so it proved to be in Timothy's case. At the time the referral was finally made to an ophthalmologist, it was too late. Time had run out, and the only thing that could be done was to remove the eye.
>
> I conclude that the plaintiff is entitled to recover in this action from the United States for the loss of Timothy's right eye.
>
> DATED at Anchorage, Alaska, this 20th day of October, 1978."
>
> ss: James M. Fitzgerald
> United States District Judge

If these bills passed, the statutory law would be inconsistent with common law or court decisions. Let us examine the optometrist's construed dilemma a bit closer. In an article "How the General Practitioner Can Determine the Need for Ophthalmologic Referral", it has been shown that the initial clues to eye disease are determined by history, visual acuity and external examination by handheld flashlight. Only .1% of eye disease is initially determined by using dilating drops. See Table A.

In sum, to both the conscientious physician and the conscientious optometrist the need for referral of a patient to an ophthalmologist is usually obvious through the application of history, visual acuity, and external examination by hand-held flashlight, and does not require sophisticated instruments.

Most importantly, do not dilate the pupil. Routine tonometry according to established standards and viewing the fundus oculi through the undilated pupil are the additional needed methods. The use of mydriatic drugs to dilate the pupil risks precipitating acute narrow angle glaucoma by a 9:1 ratio over uncovering any hidden disease process. Thus it is obvdious that there is no dilemma at all. This dilemma was construed by the optometrist for legilative purposes.

By now you have heard from the optometrists that there is another law suit filed against an Anchorage optometrist. They also state that if they could dilate the pupil to look in that the law suit would not have been filed. Well, the optometrist dilated Timothy Steele's pupil and still a law suit was filed and was won by Timothy Steele. The falacy of this statement by the optometrists is clear in light of Judge Fitzgeralds decision and the article on what people need ophthalmologic referral.

The ophthalmologist is a medical doctor who has completed a 3-5 year residency program after one year internship preceeded by 4 years of college and 4 years of medical school. He is trained in the diagnosis and treatment of ocular dysfunction and disease and in the use of all techniques or treatment including drugs, surgery, laser photocoagulation, radiation, etc. Because he has been trained as a general physician first, his perspective of the eye is broader than the optometrist. He views the eye and its diseases within the context of the whole body physiology and pathology. Further, refraction to the ophthalmologist is viewed as only one necessary step in a differential diagnosis of the patient's complaint. Table 1 demonstrates the overall education and numbers of optometrists and ophthalmologists. From Table 1 it is evident that the ophthalmologists have much more training in pharmacology and pathology than the optometrists. Still the optometrists continue to compare their curriculum hours to dental school hours. They continue to say that if the dentists can use medications, why can't we. This is like comparing apples to oranges. They are not asking to use the drugs dentists use or to diagnose oral pathology. They are asking to do what the ophthalmologist does.

Therefore, it is more appropriate to compare ophthalmologists curriculum hours to optometric curriculum hours. (Please read Ref.#43, which explains this point in detail for the State of Alaska.) It is immediately obvious that the ophthalmologist has many more hours of classroom or book learning and many more years of clinical experience. The optometrists indicate that they can also take courses, but where do they get the years of clinical experience of putting drugs into the eyes of patients under close supervision of the clinical medical professors who are medical doctors. Optometrists simply do not get this type of training. Book learning is one thing, but clinical experience is most important.

Table 2[4] gives a comparison of consumer services offered by ophthalmologists and optometrists. It is quite apparent that there is considerable overlap. This is most apparent with respect to refractions. The optometrist obviously can do some of the things the ophthalmologist can do; the ophthalmologist can do all of the things the optometrist can do, has the education to better interpret the data acquired, and provide medical/surgical treatment. The ophthalmologist is trained to provide complete eye care and to evaluate ocular dysfunction in the context of total body physiology and pathology. The ophthalmologist is a complete eye care provider. Although the overlap of professional services is greatest for refractions, this is a source of considerable consumer spending in both professions.

ECONOMICS (AND PRACTICE)?

Table 3[5] shows the substantial number of public dollars which are expended for eye care. A total of approximately $4,135 million dollars were spent in 1975 for vision care services.[6] The national consumer spending for ophthalmic surgery is not listed. This would make the total ophthalmologic dollar spent on eye care far greater than the optometric dollar. If optometrists are allowed to expand the scope of their practice through the use of diagnostic drugs, the price of the basic eye examination would undoubtedly rise. Proposed national health care legislation can be expected to impact heavily upon these figures. For example, if the Kennedy-Mills National Health Insurance proposal were to include coverage of sight correction services, total spending for these services would rise by 21% or $860 million dollars per year. It is obvious that there will be considerable effort by optometrists to ensure their fullest possible participation in this program. The economic stakes are very high.[7] This makes it very clear why optometry has put on an aggressive nationally organized push to legislate themselves into a better position to compete for this consumer dollar. Even though

the optometrists in the State of Alaska suggest that this is not a "money bill"-- it is. It is merely the first step toward the national optometric goal to attempt to become primary eye care providers.

This image change is being sold to the public by a sophisticated national advertising compaign. This multi-million dollar campaign is funded by the national optometric organization through dues and special assessments. They are trying to sell themselves as "your family doctor of optometry...the one to see and keep seeing". Calling themselves family doctors in the opinion of the ophthalmologists is misleading since they are <u>not</u> medical doctors as are the family practitioner or family doctor. These adds are occurring on national T.V., radio and magazine; such as, The Ladies Home Journal, Better Homes and Gardens, etc. Adds that show stethoscopes hanging around the neck of the optometrist is also misleading, as the general public associates the medical doctor with the stethoscope. One article in the Anchorage Times even referred to a group of optometrists as physicians and the word ophthalmologist was used. (See supporting documents)

We should expect that in the future the Alaskan optometrists will follow the attempt of other state optometric associations to next try for the priviledge to use these same diagnostic drugs as therapeutic agents. An attempt was made in West Virginia to legislate the privilage of eye surgery, but this was defeated.

The optometrists have claimed at their bill hearings in the lower 48 that they see 70% of the eye consumers and therefore are the point of first entry into the eye care system. Looking first at the source of this claim and national statistics, the fallacy of this claim is demonstrated. They have erroneously assumed that the average number of eye consumers seen by each practitioner is the same. Thus the source of the fallacy: that since they compose 70% of the national work force they see 70% of the eye consumers.

Table 1 indicated the total number of practitioners in each group.[8] The median number of patients seen per week by optometrists was 43.2; the median seen by ophthalmologists was 102.9. The ophthalmolcgist sees more than twice as many patients as the optometrist while he comprises only 30% of the work force. It is therefore, clear that the ophthalmologists care for half the patients, while the optometrists, comprising 70% of the national work force, care for the other half. The statistics in Alaska show that there is a total of 40 optometrists[10] and 25 ophthalmologists[10]. Thus the ophthalmologists make up 39% of the state work force

people in all sections of the state and in many small communities through the itinerant program.

In the states where optometric drug laws are in effect, optometrists who which to use drugs much take short slide and lecture courses on pharmacology. This has or will create two classes of optometrists, which can only lead to additional consumer confusion about a profession already shrouded in confusion. In addition, the use of drugs by optometrists could falsely lead patients to believe diagnostic expertise is available from optometrists.

It is misleading to the consumer and legislature to imply that any drug is purely diagnostic. Each of the classes of drugs asked for by optometry have therapeutic uses. Will the optometrists resist the temptation to use these drugs to treat conditions beyond their knowledge and skill?

It has been said by the optometrists that they would like to use dilating eye drops also in the their bush clinics when they see Alaska natives. A unique situation exists within the native population of Alaska. The incidence of angle closure glaucoma is 1 in 1,800, not 1 in 20,000 as in caucasions. To allow the optometrist to use these dilating eye drops would result in many more cases of acute angle closure glaucoma, for which they are not trained to treat, and which requires quick and effective treatment to prevent blindness. Sometimes angle closure glaucoma requires administration of intravenous Diamox, Manitol or urea. This would result in further expenditure of health care dollars.

III. LEGISLATIVE DUTY FOR THE EYE CARE CONSUMER:

As practitioners of an occupation which deals with the integrity of eyesight, optometrists have been recognized by the Washington Legislators as members of a "learned profession".[12] Professionals who deliver health care may be regulated by the state via its

and the optometrists 61%. Applying the same national ratio of eye consumers seen by optometrists and ophthalmologists, it is evident that the ophthalmologists see 56% of the eye care consumer, but makes up 39% of the state work force. The accuracy of the ratio of two to one was checked in the city of Anchorage by comparing the humber of eye consumers seen by the most active ophthalmologist in town - 40-50 eye consumers, as compared to the most active optometrists in town - 20-25 eye consumers seen in one day. The average ophthalmologist in Anchorage sees 30 people per day. The average optometrist sees 15 people per day. These figures would seem to indicate that although ophthalmologists are a smaller group than optometrists, the public will seek out their services given a free market choice.[11] On this point, the eye consumer in the state of Alaska has ready access to the ophthalmologic eye care providers. Some of the states in the lower 48 are mainly rural and ophthalmologists are congregated in the metropolitan areas and the optometrists are distributed over the rural areas. However, much of Alaska is "bush country", so that the ophthalmologists and optometrists are both congregated in Anchorage, Fairbanks, Kenai Peninsula and the southeast. There are only two areas (Kodiak and Bethel) that have a full time optometrist and no full time ophthalmologist, Table-Map 3,6. However, there are other medical doctors in these communities with "medical know how" and there are airports for evacuation in the case of eye emergencies. Furthermore, Kodiak and Bethel are visited on a regular basis by itinerant ophthalmologists. In fact, most areas in Alaska are served by itinerant ophthalmologists both by Alaska Native Service and by private practicing ophthalmologists, Table-Map[6]. In the 14 other states where a similar bill was passed, these states were mainly rural with a maldistribution of ophthalmologists. In these states, this was the main reason for passing the legislation. Therefore, this argument for passing House Bill 74 or Senate Bill 75 does no apply to the State of Alaska, because the distribution of ophthalmologists is essentially identical to that of the optometrists. Thus, the health services of ophthalmologists are readily available to

police powers to oversee those activities which are involved with health, education and welfare.[13] The healing arts particularly have been the subject of regulatory legislation which specifies strict requirements for the practive of such professions.[14] The intent of such restrictive legislation is avowadly the protection of the public against injuries it may suffer from the conduct of such business or calling.[15] The state may reasonably impose any condition precedent to the grant of its consent to practive a healing art, which has a real and rational relation to that objective.[16]

The usual means taken by the state in applying these conditions as quality standards has been by imposing licensing requirements and by carefully defining the particular professions involved.[17] Constitutional challenges to this power of the state have been universally defeated when that power has been reasonably exercised.[18]

Licensing requirements usually specify minimum standards of professional competence for the profession covered and frequently the definition of the profession gives broad areas of practice which will be considered appropriate for the practitioner seeking licensure. Additional restrictions upon the practice can be found in state statutes which define unprofessional or unethical conduct.[19]

The above state powers are broad and greatly influence the scope and freedom of practice by the health care provider. Although the right to follow a profession is recognized as a valuable property right which is constitutionally protected,[20] such a right is not absolute; there is no natural or vested right to practive within the healing professions. Any such right is a conditional use.[21]

The justification for such regulations lies in a perceived right and duty of the legislature to protect the citizens of the state from incompetants and fraudulent health practitioners.[22] The Washington Constitution specifically vests exclusive authority in the legislature to:

"...regulate the practice of medicine and surgery and the sale of drugs and medicines."[23]

From this, courts have construed legislative authority to regulate, by means of separate statutory licensing requirements, all of the various professions and occupations engaged in health care delivery. This includes many professions which are not obviously included in "...the practive of medicine..."[24] Further, the state has the power to define what constitutes the practive of any profession and may then confine practitioners of various health disciplines to the particular system of practive in which they have been educated.[25]

This is a logical stance for the legislature to take. If the legislature has an avowed interest in protecting the public,[26] it must make some attempt at defining the scope of appropriate practice which each class may safely employ and to license those within each class to practice upon the public only those skills for which they have demonstrated competent training. That includes courses, testing and most important of all, clinical experience under supervision. This is the legislative intent in enacting licensing statutes.[27] This reasoning is followed with consistency in cases involving almost every viewpoint and aspect of health care.[28]

Great latitutde is given by the courts to the legislature in defining its public health goals. However, the goal is universally stated to be the protection of public health. Health legislation is not passed to promote the personal ends of individuals or to enhance the status or prestige of any given class of practitioners.[29] Although the legislature may enact such regulatory legislation as it may consider necessary, there must be a rational basis upon which the legislative determination rests.[30] This cannot be interpreted as meaning anything less than that such legislation must appear to be rationally directed toward the achievement of the stated legislative goal and to be reasonably rational in the means which it seeks to achieve that goal.

is made with 'whole body' disease/function. The eye is studied in isolation as an optical instrument. To use an analogy, an operating room nurse could teach an optometrist about eye surgery, just as a pharmacologist Ph.D. can teach an optometrist about pharmacology. However, no one would want an optometrist to perform surgery with an education based only on lectures and theoretical familiarity with the subject. The prescribing and using of drugs, just like the performance of surgery, must be founded on a broad-based curriculum involving many hours of supervised clinical experience using drugs. To allow any health care provider to practice with only limited classroom experience and testing violates the legislative duty to protect the public from risk of incompetency from lack of clinical experience.[43]

As a second step, the legislature can require continuing education for those practitioners who have already completed broad formal training upon which additional, up-dated information may be rationally correlated. This type of post-graduate instruction always preseumes in-depth background knowledge. It is used to present newly altered clinical concepts or additional practical experience (e.g., using operating microscopes, intraocular lens implants, vitrectomies, etc) for those practitioners with clinical experience sufficient to allow them to understand the usefulness or pitfalls, to see the advantages or clear disadvantages, to comprehend the clinical reliability or dangers of the material which the course is presenting. Crash courses which involve totally new material, presented to practitioners without that clinical judgement or experience necessary to actually grasp the real impact of the data presented, let alone the nuances, can be expected to create clinicians who will test their newly acquired knowlege in the public sphere. The hazards of such an appraoch are obvious. Again, such an approach does not satisfy the legislative duty to reduce public risk.

I must conclude that for the state to allow graduates of optometric schools, who are unarguably well-trained in the limited sphere of practice which optometry has exercised to date, to extend their

a) Goal - As noted above, the frequently given objective for regulation of health care providers is the protection of the public from incompetent practitioners.[31]

This goal is stated to exist even if it deprives a citizen of a right he otherwise might enjoy in the pursuit of his profession.[32]

This reasoning leads to the conclusion that the legislature has the duty to ensure that its acts and statutes do not tend to increase public exposure to health risk.[33] The stated legislative goal is increased public protection, not increased public risk. Nowhere does case law state that public protection will be qualified - i.e., that the legislature may increase the risk "a little bit", but not "a lot". No such slippery subjective terms appear. The intent is protection. The language is explicit.

b) Means - The means by which the legislature attempts to arrive at its stated goal must be reasonable and rational.[34] The means which have been used by all states to regulate the professions have been noted above. The states have attempted to ensure the competency of each practitioner and then limit each to the area of practice embraced within the training which that practitioner has received.[35] If this means anything, it must mean that before the provider is allowed to administer to an uninformed public, (45% of the public does not know the difference between an ophthalmologist and an optometrist)[48] he must provide evidence of training sufficient to ensure the public from health care which is inadequate. Such inadequacy can range from innocuously improper diagnoses which are nonetheless economically costly, to disabling or fatal mistakes in clinical judgement - either diagnostic or the end result of therapeutics.

Insofar as it can ever be sure of the quality of professional performance, the state has two related ways to oversee clinical performance.

The state may require evidence of formal professional training which has as its foundation and primary goal, a strong commitment to an understanding and clinical application of those methods, techniques and material to which the public will be exposed and which will place it at risk. Such training must satisfactorily convince the legislature that which it certifies the practitioner, the legislative duty to prevent risk of public harm has been met.

Using the data presented in the first portion of this testimony, it is apparent that optometric training as it now exists in the State of Alaska is not directed toward a broad understanding of human pathology/physiology/pharmacology with supervized clinical experience.[43] Training is limited to a superficial, most theoretical, presentation of data concerning ocular dysfunction with inadequate clinical supervised experience. Not only do the data show that the instruction given the optometric student is very limited, but little or no integration of visual disease/function