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Bonnie M. Gauer
Pacific University

Todd S. Erickson
Pacific University

Robert L. Ulland
Pacific University

Recommended Citation

Gauer, Bonnie M.; Erickson, Todd S.; and Ulland, Robert L., "Access, provision, and cost of routine eye care: A comparison of Oregon optometrists and ophthalmologists" (1993). *College of Optometry*. 978.
<https://commons.pacificu.edu/opt/978>

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Access, provision, and cost of routine eye care: A comparison of Oregon optometrists and ophthalmologists

Abstract

A study was conducted among optometrists and ophthalmologists that practice in Oregon to measure the differences in several characteristics associated with the provision of routine eye exams, specifically: (1) fees, (2) availability of visual field testing, (3) appointment availability, (4) acceptance of Medicare, and (5) acceptance of Medicaid. A sample of the populations' offices were phoned, a short interview completed, and demographics assessed. Significant differences were found in routine exam fees and availability, provision and fees for visual field testing, and Medicare and/or Medicaid acceptance. Access to optometric care is greater as measured by number of providers, appointment availability and cost. Therefore, optometrists are more accessible and cost effective than other vision care providers.

Degree Type

Thesis

Degree Name

Master of Science in Vision Science

Committee Chair

Willard B. Bleything

Keywords

optometry, ophthalmology, primary care, accessibility, Medicare, Medicaid, fees

Subject Categories

Optometry

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ACCESS, PROVISION, AND COST OF ROUTINE EYE CARE:
A COMPARISON OF OREGON
OPTOMETRISTS AND OPHTHALMOLOGISTS

By

BONNIE M. GAUER, M.S.
TODD S. ERICKSON, B.S.
ROBERT L. ULLAND, B.S.

A thesis submitted to the faculty of the
College of Optometry
Pacific University
Forest Grove, Oregon
for the degree of
Doctor of Optometry
May, 1993

Advisor:
Willard B. Bleything, O.D., M.S.

Bonnie M. Gauer

Bonnie M. Gauer

Todd Erickson

Todd S. Erickson

R. L. Ulland

Robert L. Ulland

Willard B. Bleything

Advisor:
Willard B. Bleything, O.D., M.S.

Todd Erickson

Class of 1993, Pacific University College of Optometry

PROFESSIONAL OBJECTIVES:

- ◇ Upon graduation I am planning to practice optometry in Montana or Oregon.

EDUCATION

- ◇ 1989 - 1993 O.D., Pacific University College of Optometry, Forest Grove, OR
- ◇ 1983 B.S., Computer Science, University of Montana, Missoula, MT.

Bonnie M. Gauer

Class of 1993, Pacific University College of Optometry

PROFESSIONAL OBJECTIVES:

- ◇ Upon graduation, I am interested in applying to a residency program, remaining active within APHA, AOA, and OOA, and strive to practice in the state of Oregon. My long range goals would include the authorship of a Health Promotion in Optometry text and optometric articles, involvement on the national level with vision care policies, and teaching at an optometric institution or presenting continuing education lectures.

EDUCATION

- ◇ 1989 - 1993 O.D., Pacific University College of Optometry, Forest Grove, OR.
- ◇ 1990 M.S., Public Health/Health Education, University of Oregon, Eugene, Oregon.
- ◇ 1984 B.S., School/Community Health Education, University of Oregon, Eugene, Oregon.

HONORS

- ◇ Who's Who Among Students in American Universities and Colleges, 1992 edition.
- ◇ Merit Award, American Optometric Student Association, 1992.
- ◇ Eta Sigma Gamma, Health Education Honor Fraternity, 1989.

Robert Ulland

Class of 1993, Pacific University College of Optometry

PROFESSIONAL OBJECTIVES:

- ◇ Upon graduation I am planning to work for a commercial optometric corporation in Oregon or Texas.

EDUCATION

- ◇ 1989 - 1993 O.D., Pacific University College of Optometry, Forest Grove, OR
- ◇ 1988 B.S., Visual Science, Pacific University, Forest Grove, OR

ABSTRACT

A study was conducted among optometrists and ophthalmologists that practice in Oregon to measure the differences in several characteristics associated with the provision of routine eye exams, specifically: (1) fees, (2) availability of visual field testing, (3) appointment availability, (4) acceptance of Medicare, and (5) acceptance of Medicaid. A sample of the populations' offices were phoned, a short interview completed, and demographics assessed. Significant differences were found in routine exam fees and availability, provision and fees for visual field testing, and Medicare and/or Medicaid acceptance. Access to optometric care is greater as measured by number of providers, appointment availability and cost. Therefore, optometrists are more accessible and cost effective than other vision care providers.

KEY WORDS: optometry, ophthalmology, primary care, accessibility, Medicare, Medicaid, fees.

ACKNOWLEDGEMENT

Appreciation is expressed to the State College of Optometry, State University of New York for making available the format and data from original study.

INTRODUCTION

In a keynote address of the 118th Annual Meeting of the American Public Health Association, William H. McBeath, M.D., M.P.H. stated that the top priority for the 21st century for the APHA and as a nation, must be the pursuit of health equity. . . . all human beings must be assured equal access to health opportunity.¹ The broad national goals espoused by *Healthy People 2000*², *Promoting Health, Preventing Disease: Objectives for the Nation*³, and *A National Health Program for All of Us*⁴, include the reduction of health care disparities among Americans, moving toward a national health care reform. The three key issues of quality, access, and cost must be carefully and comprehensively examined. There is need for a system that will respond constructively to the pressures building with regard to these three issues. Effectiveness would be enhanced if the organizations and persons delivering health care demonstrate the incentive to develop the system themselves.⁵

More primary care practitioners are needed to provide services for patients in their initial contact with the health care system. In 1990, the primary care health manpower shortages areas (HMSA's)⁶ listed each of the seven health manpower types (primary medical care ,dental, psychiatric, vision care, podiatric, pharmacy and veterinary manpower) and the needs were staggering. In Oregon, twenty-five areas were listed as priority #1 indicating the highest calculated degree of shortage in terms of population-to-practitioner ratios. Of those twenty-five areas, eighteen may be further classified as rural or outside of a standard metro statistical area.

Expansion of primary care will improve access to care, promote the enhancement of health and prevention of illness, and improve the efficiency and effectiveness as to delivery of care. Although some improvements have

been made in health status by improved access to health care, large segments of the Nation's population still face formidable barriers to adequate care. These include the 32 million estimated uninsured people and the millions of disadvantaged Americans living in inner cities and in rural areas^{7,8}. Two important health system trends creating pressures for rural health care delivery are: an inadequate supply of health personnel in rural areas and restricted reimbursement by public and private payers, resulting in conflict between cost containment and access goals.^{6,9,10}

Health personnel from all disciplines are a key to the alleviation of access problems; related solutions may include more emphasis on primary care and the provision of services through a multidisciplinary approach¹¹⁻¹⁴. As pressure increases to contain health care expenditures, there is a corresponding emphasis on payment for cost effective and efficacious treatment procedures delivered by well trained health personnel^{15,16}. This all points up the fact that as primary vision care practitioners, optometrists will have an increasingly important role in America's evolving health care system.¹⁷⁻²¹

In light of the newly coined phrase, "access to health care", health care practitioners and, of course, the consumer, have shown increasing concern over health care costs, availability of care, services provided, and insurance coverage, including Medicare/Medicaid acceptance.²²⁻²⁷ Vision care is of particular interest in that ocular health problems and demand for vision care will increase significantly in the future as the U.S. population ages²⁸. The nation has experienced rapid growth in the elderly population, the largest per capita users of health care services.⁷ Approximately 11 percent of the population in the United States in 1986 was 65 years of age and older, and they represented 14 percent of the rural population¹⁰. More than 71 percent of the frail elderly population resides in the community while the remaining 29 percent is in a

nursing home.²⁴ This growth of the elderly will continue well into the 21st century, slowing between 1990 and 2010, and then mushrooming between 2010 and 2030 as the post World War II population reaches age 65. By the year 2020, the population of 65 years and older is expected to rise to 18 percent.⁷

Over one-third of Americans have a disease or physiological abnormality in one or both eyes²⁹. Only about half of those needing treatment for eye disease are receiving it.^{30,31} Eye disease and blindness cost the nation an estimated \$16 billion a year.³¹ In an effort to address issues about access to quality vision care for all Americans, the 1990 resolution, "Access to Treatment for Eye Care by Optometrists", was introduced by the Vision Care Section of the American Public Health Association (APHA). The resolution noted that optometric services are available in about 6,400 communities with optometrists providing the only eye care in about 4,000 of those communities.^{32,33} Optometrists outnumber ophthalmologists nearly two to one, with sixty percent of primary diagnostic eye examinations being provided by optometrists.³⁴ Not only is geographic access an important consideration so is access due to cost. Optometric reimbursement rates are typically lower than those of other eyecare providers.³⁵

In view of national interest with the access to quality vision care, these critical issues about eye care costs, availability of care, services provided, and Medicare or Medicaid acceptance should be examined within a local region, i.e., the state of Oregon. Thereby, a comparison of the several characteristics associated with the provision of routine eye exams and a demographic profile of providers may be established, comparing Oregon to the rest of the nation.

The primary purpose of this study was to compare the cost of routine eye exams; the availability and cost of a visual fields exam; the acceptance of

Medicare and Medicaid; and appointment availability between optometrists and ophthalmologists in the state of Oregon. A secondary purpose was to examine demographic factors (i.e. rural, urban, mode of practice, etc.) in terms of cost and availability of routine eye care with optometrists and ophthalmologists in the state of Oregon. A third objective was to compare the findings to the 1989 national study³⁵ conducted by State University of New York College of Optometry (SUNY) in terms of the same factors.

METHODOLOGY

Population

The population was comprised of 334 optometrists^a and 200 ophthalmologists practicing in the state of Oregon who were listed by the Oregon State Board of Optometry, *The Blue Book of Optometrists*, Oregon State Board of Medical Examiners, and *The Red Book of Ophthalmologists*, respectively.

Both groups of doctors were subdivided into "rural" and "urban" classifications, whereas "urban" meant the doctor's practice location was in a more heavily populated area or city, defined as the Portland-Metro, Salem, Eugene-Springfield, and Medford; and as "rural", denoted other practice locations in Oregon, excluding the five practice locales of the "urban" classification.

Instrumentation

The survey instrument employed for this study was the SUNY 1989 standard survey³⁵ used for the comparison of a national sampling of

- a. Oregon State Board of Optometry in 1989-90 listed 465 licensed optometrists. The sample of optometrists (n=334) does not include those optometrists in academia, retired, or total number employed by HMO's and corporations. It does represent all practice locations however and is therefore felt to be an accurate base.

optometrists and ophthalmologists on the cost and availability of routine eye examinations. The reliability, validity, and item clarity of the survey were established by an independent New York research firm, Audits and Surveys, for the Center for Vision Care Policy, SUNY.

The survey consisted of seven questions and categorical responses relating to services provided, such as: a routine eye examination, fees, availability, visual field testing, and Medicare or Medicaid acceptance.

Data Collection

The populations of optometrists and ophthalmologists in Oregon were surveyed by telephone during the months of August, September, and October, 1990. All calls were made on weekdays between 8:00 a.m. and 5:00 p.m. When necessary, up to three callbacks were made to reach a doctors' office.

Interviewers were briefed and trained using a standard format of questions so that all responses would pertain to the same type of potential patient, and the interviewer would be able to answer any question posed to them naturally. The survey was presented as an anonymous, hypothetical, scenario format; the interviewer was calling for an appointment for his/her mother who has no problem with her eyes but likes to have them checked every year, and has Medicare. Questions about the doctor's routine eye exam cost, cost and availability of visual fields, acceptance of Medicare and/or Medicaid, and appointment availability were incorporated into the survey. In almost all cases, interviewers spoke with the receptionist or other person in the office who normally schedules appointments. No actual appointment was made during the interview.

Data Analysis

To determine the cost and availability of a routine eye exam and a visual field test, appointment availability for a routine eye exam, the percentage of doctors accepting Medicare and/or Medicaid Assignment, by optometrists and ophthalmologists in the state of Oregon; frequency counts, percentages, minimum, maximum, mode, and median were calculated for the populations surveyed.

A demographic profile for optometrists and ophthalmologists in the state of Oregon, in terms of type of practice and geographic location, the cost and availability of routine eye care, was established using a frequency count, a percentage analysis was then conducted.

Finally, a comparative analysis of the summary of findings was conducted to assess significant differences in terms of the cost and availability of routine eye care with Oregon eye care practitioners versus a national sampling study of eye care practitioners.

RESULTS

Summary of Findings

The data suggest there are several key differences between optometrists and ophthalmologists on costs of routine eye exams and provision and costs of visual field tests. The findings also suggest that optometrists and ophthalmologists have different routine eye exam costs and availability patterns relative to their geographic distribution and type of practice. In both groups of doctors, the majority accept Medicare assignment, whereas optometrists are more likely to accept Medicaid assignment.

Geographic Distribution of Optometrists and Ophthalmologists

The population of optometrists (n=334) and ophthalmologists (n=200) in the state of Oregon were surveyed. Both groups of doctors were divided into "rural"

and "urban" classifications as described earlier. "Urban" optometrists accounted for 53 percent of their provider group; urban ophthalmologists accounted for 72 percent of their provider group. As to a total number of Oregon eye care practitioners, urban optometrists represented 35 percent and urban ophthalmologists represented 28 percent. The balance, in each case, were described as rural. Refer to table 1 below.

Geographic Distribution		
	Group Population	Oregon Eye Care Practitioner
Optometrists	n=334	63%
Urban	53%	33%
Rural	47%	30%
Ophthalmologists	n=200	37%
Urban	72%	27%
Rural	28%	10%

Table 1

Optometrists and ophthalmologists generally follow the distribution pattern of the population in Oregon as a whole except for some notable differences. Optometrists appear to be more equally distributed than ophthalmologists. Three-quarters of the ophthalmologists practice in an "urban" area, while only a quarter practice in a "rural" area. Whereas slightly over half of the optometrists practice in an "urban" area and slightly less than half practice in a "rural" area.

Notably, "urban" optometrists may be classified into three distinct practice types: Corporation (26 percent), Partnership (35 percent), and Sole Proprietorship (39 percent). A large majority of "urban" and "rural"

ophthalmologists may be classified under group (partnership) practices. The "rural" optometrist, to a large extent, may be considered a sole practitioner, to a lesser extent, within a partnership practice, and the corporate practice in rural areas was almost nonexistent.

Cost of Routine Eye Exams

The study data suggest that optometrists charge less than ophthalmologists for routine eye exams. A routine eye examination by an optometrist, on the average (rural and urban), costs \$ 50.33, whereas an ophthalmologist's average cost (rural and urban) is \$ 68.08, a \$ 17.75 increase beyond the average cost of a routine eye exam performed by an optometrist.

The study's findings as shown in table 2 below, indicated a routine eye examination by an "urban" optometrist within different practice modes vary slightly in cost, but were again substantially lower than an ophthalmologist, such that a corporation practice, a sole proprietorship and a partnership practice average cost are \$45.89, \$50.30, and \$54.23, respectively.

Routine Eye Exam Average Cost (Urban Optometrist) Different Mode of Practice	
Corporation Practice	\$ 45.89
Sole Proprietorship	\$ 50.30
Partnership Practice	\$ 54.23

Table 2

Both type of doctors stated that they charge the same fee next year for another annual eye exam. However, twelve optometrists (3.5 percent) were noted as those who would charge a different fee, and this fee would be lower than the initial exam.

Availability and Cost of a Visual Field Test

Optometrists are more likely than ophthalmologists to include a visual field test as part of a routine eye exam, 56 percent and 2 percent respectively.

About three in ten (34 percent) optometrists and nine in ten (94 percent) ophthalmologists charge extra for a visual fields test. The average cost of a visual fields test for an optometrist and ophthalmologist is \$30.64 and \$74.94, respectively. Among those who charge extra, ophthalmologists, on the average, charge more for a visual fields test.

Acceptance of Medicare and Medicaid

Optometrists and ophthalmologists accept Medicare assignment for a routine eye exam in similar proportions, 83 percent and 70 percent respectively. About 70 percent of optometrists and 11 percent of ophthalmologists accept a Medicaid patient for a routine exam.

Appointment Availability

Optometrists appear to be more readily available to a potential patient than an ophthalmologist. A potential patient must generally wait about ten days to get a routine eye exam appointment from an ophthalmologist, while the corresponding wait for an optometrist is about five days and 75 percent of urban optometrists offer appointments within an average of 3.8 days.

Optometrists offer weekend or evening hours for routine eye exams whereas, ophthalmologists do not. Over 60 percent of optometrists (urban and rural) are available on weekends or evenings for routine eye exams and the average wait for an appointment with an optometrist at these times is 7 days for urban optometrists and 11 days for rural optometrists.

The study data also suggests that appointment availability by an "urban" optometrist within different practice modes differs slightly with respect to the first available appointment (weekday or weekend). A corporation practice, a

partnership practice, and a sole proprietorship offer an appointment within 1.7 days, 4.2 days, and 4.8 days, respectively.

CONCLUSIONS

Geographic Distribution Comparison of Oregon Study vs. National Study

The geographic distribution of optometrists and ophthalmologists from both studies generally follow the distribution pattern of the U.S. population as a whole. In both studies, optometrists and ophthalmologists are more likely to be found in the largest metropolitan areas, especially ophthalmologists. In rural areas, there are proportionately more optometrists than ophthalmologists.

Cost of Routine Eye Exams Comparison of Oregon Study vs. National Study

Both studies indicate that the cost of a routine eye exam, on a whole, by an optometrist is less than an ophthalmologist, as shown in table 3.

Routine Eye Exam Average Cost		
	Oregon	U.S.A.
Optometrist	\$50	\$41
Ophthalmologists	\$68	\$61

Table 3

Both studies indicate that optometrists and ophthalmologists would charge the same fee next year for another annual routine eye exam. And, among those who would charge something different, the fee would be lower.

Availability/Cost of a Visual Field Test

Comparison of Oregon Study vs. National Study

Optometrists are more likely than ophthalmologists to include a visual field test as part of a routine eye exam, as indicated by both studies. Refer to table 4 below. Nationally, about eight in ten ophthalmologists (Oregon: nine in ten) and about four in ten optometrists (Oregon: three in ten) charge extra for a visual fields test. Optometrists, in both studies, charge below \$40 for a visual field, specifically, Oregon: \$31 and Nation: \$38; while ophthalmologists in Oregon charge, on the average, \$75 for a visual fields test, and ophthalmologists nation wide charge \$62. Among those who charge extra, ophthalmologists on the average charge more for a visual field test.

Visual Field Test Average Cost		
	Oregon	U.S.A.
Optometrist	\$31	\$38
Ophthalmologists	\$75	\$62

Table 4

Acceptance of Medicare and Medicaid

Comparison of Oregon Study vs. National Study

Optometrists and ophthalmologists accept Medicare assignment for a routine eye exam in similar proportions, but nationally, the proportions are lower. See figure 1 below. Oregon optometrists and ophthalmologists accept Medicare assignment for a routine eye exam, 83 percent and 70 percent respectively, and nationally, 50 percent and 50 percent respectively. A notable difference in the acceptance of Medicaid between the Oregon study and the

national study was indicated. Nationally, 50 percent of ophthalmologists and 11 percent of Oregon ophthalmologists accept a Medicaid patient; optometrists in the state of Oregon accept Medicaid to a greater extent, and nationally, the same proportion as ophthalmologists, 70 percent and 50 percent, respectively.

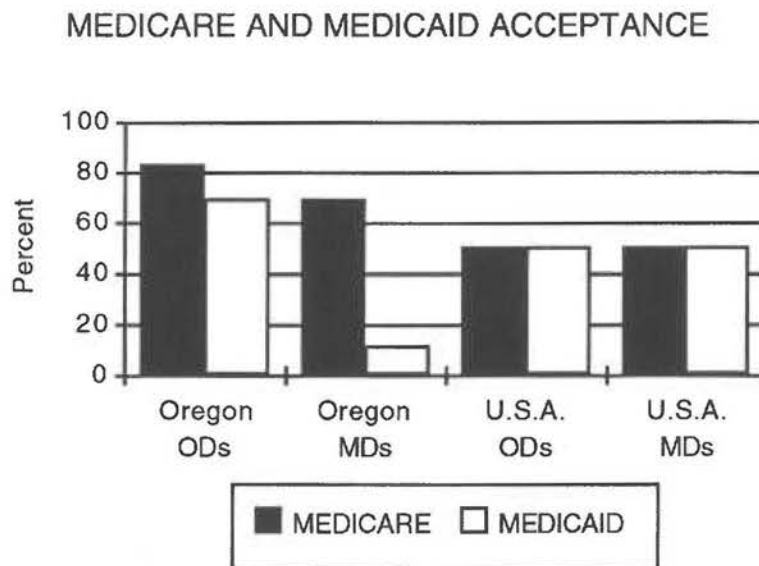


Figure 1

Appointment Availability Comparison of Oregon Study vs. National Study

Both studies indicate that optometrists appear to be more readily available to a potential patient than an ophthalmologist, as shown in figure 2. Oregon eye care practitioners, however, appear to be more available than the national sampling of eye care practitioners. A potential patient must generally wait for about ten days in Oregon, and about 21 days nationally to get a routine eye exam appointment from an ophthalmologist, while the corresponding wait for an optometrist is about five days in Oregon, and about seven days nationally.

WEEKDAY APPOINTMENT AVAILABILITY AVERAGE

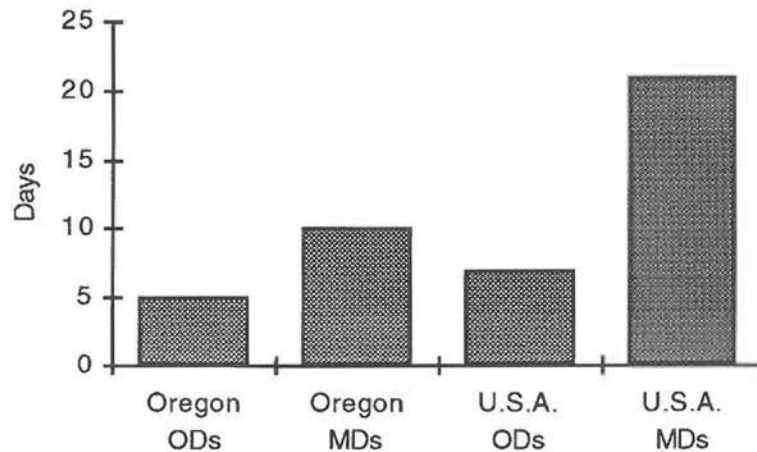


Figure 2

Optometrists are also much more likely to be available on weekends or evenings for routine eye exam appointments. Oregon optometrists offer weekend or evening hours for routine eye exams, whereas Oregon ophthalmologists do not. Over 60 percent of Oregon optometrists (urban and rural) are available on weekends or evenings for routine eye exams and the average wait for an appointment with an optometrist at these times is seven days for urban optometrists and eleven days for rural optometrists.

Nationally, 75 percent of the optometrists sampled offer appointment hours on weekends or evenings and the average wait for an appointment is 12 days. Refer to figure 3 below. About 25 percent of ophthalmologists, nationally, are available on weekends or evenings for routine eye exams and the average wait for an appointment at these times is 23 days. Again, Oregon ophthalmologists do not offer optional hours such as weekends or evenings for routine eye exams.

WEEKEND OR EVENING APPOINTMENT AVAILABILITY

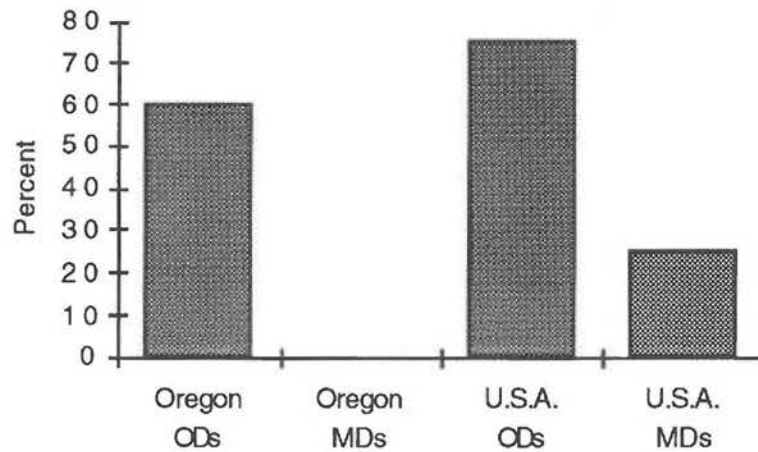


Figure 3

This study shows that optometry is in a better position to meet the public's need of increased access to primary eye care than their medical counterparts. Optometrists are more widely distributed in rural areas where the need is greatest and they are less costly. This is shown in this study and in the national study cited.

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