

**A REPORT ON THE FEASIBILITY OF ESTABLISHING
A REGIONAL SCHOOL OF OPTOMETRY
IN THE COMMONWEALTH OF VIRGINIA**

**A SPECIAL REPORT TO
THE GOVERNOR
AND
THE GENERAL ASSEMBLY OF VIRGINIA**



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REPORT PREPARED BY

Larrie J. Dean, Coordinator for Health Professions and Occupations

A special report prepared in response to Senate Bill No. 269 which directed the State Council of Higher Education for Virginia to assess the feasibility of establishing a regional college of optometry in the Commonwealth of Virginia.

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FOREWORD

In 1970 the General Assembly of Virginia delegated the State Council of Higher Education for Virginia as ". . . the planning and coordinating agency for all post-secondary educational programs for all health professions and occupations." (Code of Virginia, §23-9. 10:1a.)

In 1974 the General Assembly approved Senate Joint Resolution No. 1, which directed the Council of Higher Education to consider and report on the need for the establishment of a school of optometry in the Commonwealth. That report concluded that a school of optometry, designed solely to meet the optometric manpower needs of Virginia, should not be established at that time. The report further recommended that planning for a regional, multi-state school of optometry should be initiated to include a consideration of the optometric manpower needs of Maryland, North Carolina, West Virginia, and the District of Columbia, as well as those of the Commonwealth of Virginia.

In 1976 the General Assembly approved Senate Bill No. 269. It directed the Council of Higher Education to assess and report on the feasibility of establishing a regional school of optometry in Virginia. The present report is the Council's response to the 1976 General Assembly directive.

The Council of Higher Education would like to take this opportunity to thank members of the Virginia State Board of Examiners in Optometry and the members of the Executive Committee of the Virginia Optometric Association for their assistance in the development of this report. The individuals and organizations listed in Appendix A also assisted in the research which assessed the feasibility of creating a regional school in Virginia.

In addition the Council wishes to thank Miss Joan H. Shepherd and Mrs. Denise C. Vollmer for their clerical and typing assistance.

Daniel E. Marvin, Jr.
Director

INTRODUCTION

In order to meet the health care needs of the citizens of the Commonwealth of Virginia, it is necessary to ensure that adequate educational opportunities for training the needed health care personnel are available.

At present the student pursuing an education in many health care areas can obtain his education from an institution within the Commonwealth. One health care area for which students must currently seek an education outside of the state is optometry. In recent years the General Assembly has provided funds specifically identified for supporting contractual arrangements with existing schools and colleges in other states. The number of such opportunities was expanded in response to a recommendation contained in A Report on the Feasibility of Establishing a School of Optometry in the Commonwealth of Virginia. Another recommendation of the same report was that a study be undertaken to examine the feasibility of establishing a regional school of optometry.

With the foregoing in mind, the 1976 Session of the General Assembly directed that a study be undertaken to evaluate the feasibility of establishing a regional school of optometry in Virginia.

The purpose of this document, then, is to report on the feasibility of establishing a regional school of optometry in the Commonwealth of Virginia.

BACKGROUND FOR THE STUDY

In order to understand the context in which this study is being undertaken, it is necessary to describe briefly the role of the Council of Higher Education in health sciences education, to identify the legislative mandate, and present salient points from research previously completed.

Council of Higher Education's Role in Health Sciences Education

The Council of Higher Education has the responsibility of ensuring that quality public higher education is available to the citizens of the Commonwealth. The 1970 Session of the General Assembly specifically delegated to the Council responsibility as ". . . the planning and coordinating agency for all post-secondary educational programs for all health professions and occupations." (Code of Virginia, §23-9. 10:1a.) Additionally, the General Assembly directed the Council to undertake such studies as were necessary to ensure that needed educational programs for professionals would be available to provide an adequate supply of health manpower within the Commonwealth. In discharging this responsibility, the Council has employed a staff to undertake a series of health manpower studies.

1976 Legislation

Prompted by the recommendations contained in the Southern Regional Educational Board (S.R.E.B.) study A Proposed Regional Plan for the Expansion of Optometric Education in the South, and the recommendation of the Virginia study A Report on the Feasibility of Establishing a School of Optometry in the Commonwealth of Virginia, Senate Bill No. 269 introduced in the 1976 Session of the

General Assembly, was advanced by the Virginia Optometric Association with the support of Senator Paul Manns. This legislation was presented on February 4, 1976, approved by the Senate on February 17, amended and approved by the House of Delegates on March 9, and reapproved by the Senate on March 12, 1976.

Senate Bill No. 269 stated that:

Whereas, the 1974 Session of the General Assembly directed the State Council of Higher Education for Virginia to consider and report on the need for the establishment of a school of optometry in the Commonwealth; and

Whereas, the Council undertook that study with the guidance and advice of a highly competent committee of health and education professionals and reported the recommendations resulting from its study to the General Assembly in Senate Document No. 3 (1976 Session); and

Whereas, the study showed that Virginia would need an additional twenty-nine optometrists per year in order to reach, by 1990, the 1975 national average of optometrists to population; and

Whereas, the study identified two locations in Virginia as suitable for the establishment of a school of optometry—the Richmond metropolitan area and the Norfolk metropolitan area; and

Whereas, the Administration and Board of Visitors of Old Dominion University have expressed an interest in and commitment to the establishment of such a school; and

Whereas, the Council's study documented the fact that although the number of optometrists in Virginia must be increased, neither the number of new optometrists needed nor the number of Virginians applying to optometry school would appear to justify the establishment of a school for Virginia alone; now, therefore,

Be it enacted by the General Assembly of Virginia:

1. §1. The State Council of Higher Education shall assess the feasibility of establishing a regional college of optometry in Virginia. Such assessment shall include an analysis of (a) the optometric needs of at least Maryland and West Virginia and other surrounding states as appropriate; (b) the willingness of other states to participate in and to support financially a regional school; (c) the availability of federal funds for construction and operation of such a school; and (d) a cost estimate for constructing and operating such a school. The assessment shall include a timetable for the establishment of such a school. If such assessment indicates that the establishment of a school of optometry is feasible and desirable, the Council shall solicit program proposals for such a school from State institutions of higher education. The Council shall report its assessment to the Governor and the General Assembly not later than January one, nineteen hundred seventy-seven.
2. That for the purposes of this act, there is hereby appropriated twenty-five thousand dollars from special and general funds combined.

Thus, the Council of Higher Education was given the responsibility for undertaking a study to determine the feasibility of establishing a regional school or college of optometry.

Previous Research

Optometry Manpower Study

In May 1974 Council staff published the first in a series of reports on selected categories of health manpower. This report, Health Manpower Study: Optometric Manpower, was prepared by Council staff with the assistance of an Optometric Manpower Study Committee which consisted of representatives of the Virginia State Board of Examiners in Optometry, Virginia Optometric Association, and Dr. Henry B. Peters, Dean of the College of Optometry, University of Alabama in Birmingham.

Objectives. The major emphasis of the Health Manpower Study: Optometric Manpower was on optometrists, although ancillary personnel, their utilization and training, were briefly examined. The principle objectives were to determine the availability and characteristics of optometrists in Virginia, the extent to which optometrists and other vision care personnel were required to meet current demands for service, and the approach or approaches to be utilized to ensure the availability of the manpower required to provide visual care services.

Conclusions and Recommendations. Considering all factors, including attrition resulting from age, the number of Virginians enrolled in schools of optometry, and immigration of optometrists from other states, it was projected that the supply of optometrists in 1980 would decline from the then current (1972) 290 to 275. Taking into consideration the same factors, the supply of optometrists in 1990 was predicted to be 253.

Using an optometrists-to-population ratio of 1:14,600, it was projected that Virginia would have a deficit of ninety-five optometrists in 1980 and 177 optometrists in 1990, and thus, would experience both a deficit and an absolute decline in the number of practicing optometrists through 1990.

The report presented a series of eight operational alternatives which the Commonwealth could utilize to educate and train manpower necessary to meet the vision care needs of Virginians. These alternatives included various combinations of programs training ophthalmologists, optometrists, and para-optometricians. The report recommended that "the study of (the feasibility of establishing) a school of optometry in Virginia focus on the eight operational alternatives and develop empirical evidence that would permit an objective evaluation of these alternatives."¹

A Proposed Regional Plan for the Expansion of Optometric Education in the South

This report was prepared for the Southern Regional Education Board in late 1974 by a panel of consultants consisting of Dr. Wesley N. Dorn, Executive Director of the Maryland Council of Higher Education; Dr. Thomas W. Mou, Provost for Health Sciences of the State University of New York; and Dr. Henry B. Peters, Dean of the School of Optometry for the University of Alabama in Birmingham.

Objectives. The objective of this study was to examine the need for optometric manpower in the fourteen states included in the region served by the Southern Regional Education Board and to develop a regional plan for the expansion of optometric education to meet the identified demands for optometric manpower.

Conclusions and Recommendations. Authors of this report concluded that there was a shortage of optometrists in each of the fourteen states in the S.R.E.B. region, and that a minimum of two additional schools would be required to meet needs foreseen in the immediate future. It was further recommended that these schools be established in academic health centers of universities and be developed as regional resources through an extension of contracts-for-services program presently in operation in the S.R.E.B. states.

Specifically, it was recommended that a new school of optometry should be developed as soon as possible with a capacity for sixty entering students in each

of the following areas: (a) Maryland, Virginia, and West Virginia, and (b) North Carolina, South Carolina, and Georgia.

Study of the Feasibility of Establishing a School of Optometry in the Commonwealth of Virginia

The Council of Higher Education had the recommendations of the two previous studies to review as staff developed a research activity to respond to the intent of Senate Joint Resolution No. 1 as passed by the 1974 Session of the General Assembly.

Objectives. The Council of Higher Education was directed to consider the need for the establishment of a school of optometry in the Commonwealth of Virginia and report upon the following:

- (1) The existing and projected future needs for optometric services in the Commonwealth and the possible means of meeting such needs;
- (2) Whether such needs reasonably justify the establishment of a school of optometry in the Commonwealth, and if so,
- (3) The most practical and feasible method of establishing such a school and location for its establishment, and the approximate cost involved in its establishment and operation.
- (4) Consideration of visual health care educational programs other than optometry and their existing and future needs in the Commonwealth.

Conclusions and Recommendations. The Council concluded that neither the number of additional optometrists needed nor the number of Virginians seeking admissions to existing schools of optometry was sufficient to warrant the establishment of a school or college of optometry in Virginia at that time. Thus, it was recommended that a school of optometry designed solely to meet the optometric needs of Virginians should not be established.

Information collected in 1975 indicated that places for additional students could be contracted for with existing schools and colleges of optometry. The study, therefore, recommended that Virginia should increase the number of student places contracted for with existing schools and colleges of optometry.

In recognition of the findings and recommendations of the Southern Regional Education Board on optometric needs, the authors of the report A Proposed Regional Plan for the Expansion of Optometric Education in the South recommended that planning should be initiated for a regional school of optometry.

Study of the Need in the State of Maryland for Additional Optometric Manpower

In 1974 the Maryland General Assembly enacted a resolution (Senate Joint Resolution No. 67) which called for the Maryland Council for Higher Education to explore means of increasing optometric manpower in the state.

Objectives. Recognizing that a draft of the report prepared for the Southern Regional Education Board had identified a shortage of optometrists in Maryland and recommended that Maryland participate in the regional school of optometry, Maryland's General Assembly called for the Maryland Council for Higher Education to examine ways of solving the optometric manpower shortage in the State of Maryland.

Conclusions and Recommendations. Those conducting the Maryland study concluded that if a school was established solely to serve the State of Maryland, an overproduction of professionals could very well be created within a generation or two given the likely enrollment of such an institution and the level of demand for optometric personnel. Therefore, the Committee recommended that a school of optometry for Maryland alone should not be considered. However, in recognition of an identified need for additional optometrists, the study did call for appropriate agencies to examine the feasibility of establishing a regional school of optometry in cooperation with Virginia, West Virginia, and the District of Columbia.

REGIONAL SCHOOL STUDY DESIGN

In determining the approach to this study, Council staff reviewed the legislation with the Council's Advisory Committee on Education for Health Professions and Occupations.²

Additional guidance was obtained from the Association of Schools and Colleges of Optometry, the Virginia State Board of Examiners in Optometry, and the Virginia Optometric Association.

Advisory Groups

As research on the current study progressed, the Council's staff met with the full Executive Committee of the Virginia Optometric Association and with all members of the Virginia State Board of Examiners in Optometry. Representatives were selected from each of these groups to meet in person and by telephone with Council staff to provide continued guidance and information. This report has been submitted to the members of the Council of Higher Education's Advisory Committee on Education for Health Professions and Occupations for their review and comment on the report and its recommendations. This latter Committee also participated in review of the original design of the activities associated with this study.

Operating Procedures

The major activities associated with the study were: (1) meetings and correspondence with higher education agencies in Maryland and West Virginia, (2) a review of recently completed relevant studies, (3) acquisition of current statistical information from Maryland and West Virginia to parallel that presented in Virginia's

study A Report on the Feasibility of Establishing a School of Optometry in the Commonwealth of Virginia, (4) obtaining current information on enrollment and costs for optometric education in the United States, (5) a visit with representatives of the Pennsylvania College of Optometry, (6) collection of current information on the number and ages of optometrists currently active in each planning district in Virginia, (7) meetings with leaders from the optometric and educational communities in Virginia to discuss the information obtained in the other components of this research activity, and (8) an examination of relevant federal legislation.

MANPOWER DISTRIBUTION AND RATIOS

The legislation which authorized this study indicated that Virginia would need an additional twenty-nine optometrists per year in order to reach, by 1990, the 1975 national ratio of optometrist-to-population. This statistic was arrived by the consultants who prepared the Southern Regional Education Board's A Proposed Regional Plan for the Expansion of Optometric Education in the South. In arriving at this figure, the authors of that report did not consider the extent to which vision care requirements were met by other groups of health manpower. Additionally, this requirement assumed a continued pattern of population growth similar to that which had taken place in the years immediately preceding 1975.

Suggested Optometrist-to-Population Ratios

Among the variety of ratios that can be used for determining the need for any category of health manpower is the ratio of the individual personnel-to-population ratio as presented in the Council of Higher Education's 1974 Health Manpower Study: Optometric Manpower report.

Current National Ratios

The ratio of active optometrist-to-population for the nation as a whole is approximately 9.1 optometrists per 100,000 persons. This means about one optometrist exists for every 11,000 citizens. The American Optometric Association suggests an optimal ratio is one optometrist for every 7,000 persons.³ As with most other suggested ratios, no documented evidence exists to support this ratio. Table I provides a series of optometrist-to-population ratios. Since the group

TABLE 1
OPTOMETRIST/POPULATION RATIOS

	OPTOMETRY
Health Insurance Plan of New York ¹	1:18,800
Kaiser-Permanente (Portland) ¹	1:18,130
Kaiser-Permanente (Oakland) ¹	1:18,000
Kaiser-Permanente (Los Angeles) ¹	1:18,750
Puget Sound Health Cooperative ¹	1:13,600
Group Health of D.C. ¹	1:12,000
American Optometric Association ²	1: 7,000
United Kingdom ³	<u>1:10,500</u>
AVERAGE	1:14,600

SOURCES: National Commission on Accrediting, *A Summary Report, National Study of Optometric Education* (Washington, D.C., 1973), p. 26.

American Optometric Association, *Concept Development for an Information Retrieval System for Optometry and Related Manpower* (Washington, D.C., unpublished and undated mimeo), p. 45.

The Canadian Association of Optometrists, *Vision Care Needs and Optometric Manpower Requirements in Western Canada* (Ottawa, Canada, November 1973), p. 15.

health plans have developed their manpower requirements on the basis of the membership demands, these ratios would seem to provide a different level of health care than that provided to the general public. The British model, based on more than twenty-five years of experience with national health insurance, also reflects a ratio which differs significantly from both the group plans and the ratio suggested by the American Optometric Association. The previous school feasibility study completed by the Council of Higher Education staff and advisory groups accepted the premise that an appropriate target ratio for the Commonwealth of Virginia would be the 1975 national average of 9.1 optometrists per 100,000.

National Distribution of Optometrists

In 1973 there were an estimated 21,607 licensed optometrists in the United States. Of these, 19,265 (eighty-nine percent) were active and 2,432 (eleven percent) were inactive. Retired optometrists accounted for roughly one-half of the inactive optometrists, 1,217 or 5.6 percent of the total number of licensed optometrists. There were 9.2 active optometrists per 100,000 resident population for the United States as a whole. This ratio varied considerably among the states and regions, ranging from 5.1 per 100,000 in Alabama to 14.0 per 100,000 in Illinois. Although the number of optometrists increased during the years preceding 1973, the ratios of optometrist-to-population in general declined throughout the country.

The overall age distribution of active optometrists was skewed toward the older age groups, with forty-eight percent of those active in 1973 over fifty years of age. The median age for all licensed optometrists was 50.3 years; for active optometrists it was 49.4 years; for retired optometrists it was 71.4 years. Age was somewhat related to geographic location with active optometrists in the West generally younger than those in other regions of the country. Younger optometrists, those under forty, seemed to be particularly concentrated in California and Florida.⁴

Distribution in Virginia, Maryland, and West Virginia

In order for the responsible agencies and governmental agencies in Maryland, West Virginia, and Virginia to determine the feasibility of establishing a regional school of optometry, it is important to have the most current information on numbers and distribution of optometrists in each of these states and to compare this information with available historical data to determine current trends.

Current Distribution in Virginia

During most of the past twenty years, the ratio of practicing optometrists per 100,000 population in Virginia has remained relatively constant. From Table 2 we find that during the period between 1950 and 1974, the number of practicing optometrists per 100,000 varied from 5.48 in 1950 to 6.3 in 1960. The 1976 statistics show 6.9 practicing optometrists per 100,000. The statistics used to determine this last ratio were acquired from information jointly obtained by the Virginia State Department of Health and the Virginia State Board of Examiners in Optometry. The change is likely a reflection of the improved data gathering and evaluation made possible by the minimum data set activity of the Bureau of Vital Records and Health Statistics, which is located in the Virginia State Department of Health. The 1976 population per practicing optometrist of 14,564 indicates that Virginia is no longer a critical shortage as defined by the federal government.⁵ In all probability a recheck of the raw data from which the 1974 and earlier statistics were obtained would indicate the presence of more practitioners than previously reported.

Planning Districts. In Table 3 statistics from the State Department of Health and the State Board of Examiners in Optometry are used to provide the 1976 distribution of optometrists by planning district. Based upon the July 1975 population, Table 3 provides the ratio of persons per optometrist and the number of optometrists required for each planning district to meet at least the 1975 national ratio of optometrist-to-population. Because of the mobility of today's population, the indicators of shortage by planning district may be misleading.

TABLE 2
MARYLAND RATIOS

Year	Population (000)	Practicing Optometrists	Population/Practicing Optometrists	Practicing Optometrist/100,000 Population
1950	2,343	139	16,856	5.93
1960	3,101	178	17,421	5.74
1970	3,922	188	20,862	4.79
1972	4,056	198	20,485	4.88

VIRGINIA RATIOS

1950	3,319	182	18,236	4.58
1960	3,967	250	15,868	6.30
1970	4,648	271	17,151	5.83
1972	4,764	268	17,776	5.63
1974	4,811	290	16,590	5.90
1976	4,966	341	14,564	6.90

WEST VIRGINIA RATIOS

1950	2,006	137	14,642	6.83
1960	1,860	163	11,411	8.76
1970	1,744	147	11,864	8.43
1972	1,781	136	13,096	7.64
1974	1,763	145	12,159	8.22
1976	1,744	151	11,551	8.66

SOURCES: American Optometric Association, Optometric Manpower Profile for the State of Maryland (St. Louis, Missouri: American Optometric Association, 1974).

American Optometric Association, Optometric Manpower Profile for the State of Virginia (St. Louis, Missouri: American Optometric Association, 1974).

American Optometric Association, Optometric Manpower Profile for the State of West Virginia (St. Louis, Missouri: American Optometric Association, 1974).

Virginia State Department of Health, Optometrists Population, Ratio of Persons Per Optometrist and Optometrists Need for 1:15,000 Ratio by Planning District (Virginia: Department of Health, 1972).

TABLE 3

OPTOMETRISTS, POPULATION, RATIO OF PERSONS PER OPTOMETRIST
AND OPTOMETRISTS NEEDED BY PLANNING DISTRICT

Planning District	Number of Optometrists	Population July 1973 (Estimated)	Ratio of Persons per Optometrist	Optometrists Required for 1:11,000 Ratio
District 1	2	94,100	47,050	9
District 2	4	122,200	30,550	11
District 3	15	166,600	11,107	15
District 4	6	128,700	21,450	12
District 5	19	241,200	12,695	22
District 6	16	198,200	12,388	18
District 7	5	120,000	24,000	11
District 8	65	998,600	15,363	91
District 9	4	80,100	20,025	7
District 10	2	130,500	65,250	12
District 11	10	179,200	17,920	16
District 12	12	229,000	19,083	21
District 13	7	81,400	11,629	7
District 14	5	81,100	16,220	7
District 15	58	581,600	10,028	53
District 16	3	95,900	31,967	9
District 17		38,800	38,800	4
District 18	2	53,500	26,750	5
District 19	12	156,300	13,025	14
District 20	65	807,700	12,426	73
District 21	25	334,900	13,396	30
District 22	3	46,600	15,533	4
STATE TOTAL	341	4,966,200		451

SOURCE: Virginia State Department of Health, Bureau of Vital Records and Health Statistics, (October 1976).

Current Distribution in Maryland and West Virginia. Table 2 presents the historical profile of ratios of optometrist-to-population for Virginia, Maryland, and West Virginia. The Virginia trend has already been discussed. During the twenty-two years represented by statistics presented in the first part of this table, it is clear that Maryland has experienced a steady decline from 5.93 optometrists per 100,000 population in 1950 to 4.88 optometrists per 100,000 in 1972. Parallel statistics for West Virginia from the same table reflect a generally stable optometrist-to-population ratio, a pattern similar to Virginia's. The 1974 and 1976 ratios of optometrist-to-population for Maryland are not available.

Age Distribution. By advancing the age distribution presented in Table 4 to 1976, it can be demonstrated that 62.6 percent and 31.9 percent of the practicing optometrists in Virginia are 43 to 62 and 53 to 62 years of age, respectively. For the five state region, these percentages would be 61.6 percent and 32.6.

Consideration must be given to the orderly replacement of those optometrists who will be leaving because of retirement, death, etc.

TABLE 4
1973 AGE DISTRIBUTION OF PRACTICING OPTOMETRISTS

Age	Deleware	Kentucky	Maryland	Virginia	West Virginia	Composite
< 30	5.3	8.9	11.0	10.1	3.7	7.8
30-39	31.6	12.4	18.1	18.7	14.1	19.0
40-49	23.7	29.8	30.5	30.7	30.4	29.0
50-59	31.6	34.2	29.5	31.9	35.6	32.6
60-69	7.9	9.3	7.1	6.1	12.6	8.6
70 +		5.3	3.8	2.5	3.7	3.8

SOURCE: U.S. Department of Health, Education, and Welfare, Bureau of Health Manpower, Health Resources Administration, Optometric Manpower Resources 1973 (Washington, D.C.: U. S. Government Printing Office, 1976).

VISION CARE EDUCATION

Earlier documents⁶ prepared by the Council of Higher Education on vision care education examined the major vision care manpower categories of optometrists, ophthalmologists, optometric technicians, and ophthalmologic assistants. This document will be restricted to an examination of the education of the optometrist and optometric technician.

Programs for Optometrists

Prior to 1900 the predecessors of the present day optometrist received their education primarily through an apprenticeship. Although the New England College of Optometry (formerly the Massachusetts College of Optometry) traces its history to the Klein School School of Optics, founded in 1894, optometric education was not located in what we consider today colleges and universities until 1910. In that year a course in optometry was instituted at Columbia University located in New York City.

By 1940 the duration of the optometric student's training had been extended to four years, and in the 1960's was extended to the point where each of the existing colleges and schools of optometry required graduates to have a total of six years of post-secondary education. Although two years of education at an accredited college or university remains the minimum standard for entry, approximately sixty percent of all students entering colleges of optometry have completed four years of college.

"A Doctor of Optometry (O.D.) is a health care professional who is specifically educated and licensed in each state to examine, diagnose, and treat conditions of the human vision system.

As primary entry points into the health care field, optometrists examine 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 examination, diagnose any conditions discovered, and prescribe optometric treatment such as lenses, contact lenses, or vision therapy that may be required to provide the patient with clear and efficient vision.

Through advanced technology and rigorous clinical training, optometrists may detect diabetes, hypertension, arteriosclerosis, and other diseases of the body as well as primary ocular conditions such as glaucoma and cataract, that require referral to other health care practitioners for treatment.¹⁷

Current Education

Today the four-year professional program of all thirteen schools and colleges of optometry (Table 5) is preceded by a minimum of two years of education in an accredited institution.

Existing Schools. Of the present thirteen schools and colleges of optometry in the United States, seven are state-supported institutions, while six are private (Table 6). The most recently established college, the Ferris State College of Optometry, is not yet accredited.

Accreditation. Colleges of Optometry receive accreditation through evaluation by the Council on Optometric Education of the American Optometric Association. Each of the accredited programs undergoes extensive internal study at five-year intervals. The study includes a site visitation by a committee of the Council on Optometric Education. The Council on Optometric Education has developed standards which include both quantitative and qualitative criteria.

Enrollment. As shown in Table 6, the total enrollment in these institutions ranges from forty-five at Ferris State College of Optometry in Big Rapids, Michigan, to 590 at the Southern College of Optometry in Memphis, Tennessee. The first year enrollment ranges from twenty-four at Ferris State to 150 students each at Southern College and Illinois College of Optometry located in Chicago. Ferris

TABLE 5
PRESENT SCHOOLS OF OPTOMETRY IN THE UNITED STATES

Name	Location	Founded
University of Alabama School of Optometry	Birmingham, Alabama	1969
Los Angeles College of Optometry	Los Angeles, California	1904
University of California School of Optometry	Berkeley, California	1923
Ferris State College of Optometry	Big Rapids, Michigan	1974*
Illinois College of Optometry	Chicago, Illinois	1955**
Indiana University Division of Optometry	Bloomington, Indiana	1951
New England College of Optometry	Boston, Massachusetts	1894***
State University of New York College of Optometry	New York, New York	1971
Ohio State University College of Optometry	Columbus, Ohio	1914
Pacific University College of Optometry	Forest Grove, Oregon	1921****
Pennsylvania College of Optometry	Philadelphia, Pennsylvania	1919
Southern College of Optometry	Memphis, Tennessee	1932
University of Houston College of Optometry	Houston, Texas	1952

NOTES: *Not yet accredited.

**Formed by merger of Northern Illinois College of Optometry (founded 1872) and Chicago College of Optometry (formerly Monroe College of Optometry, founded 1937).

***Was Klein School of Optics until 1909, then the Massachusetts College of Optometry until 1975

****Originally the Northern Pacific College of Optometry. Affiliated with Pacific University in 1945.

SOURCE: American Optometric Association and Association of Schools and Colleges of Optometry, Information for Applicants to Schools and Colleges of Optometry, Fall 1977 (U.S.A.: American Optometric Association, 1976).

TABLE 6

ENROLLMENT: SCHOOLS OF OPTOMETRY, 1975-76

State - Supported College	Number Enrolled	Independent College	Number Enrolled
University of Alabama School of Optometry	107	Los Angeles College of Optometry	351
University of California School of Optometry	246	Illinois College of Optometry	570
Ferris State College of Optometry	45	New England College of Optometry	298
Indiana University Division of Optometry	279	Pacific University College of Optometry	301
State University of New York College of Optometry	106	Pennsylvania College of Optometry	555
Ohio State University College of Optometry	219	Southern College of Optometry	590
University of Houston College of Optometry	266		
	State - Supported	1,268	
	Independent	2,665	
	GRAND TOTAL	3,933	

SOURCE: Letter from Dr. Louis A. Ebersold, Executive Director, Association of Schools and Colleges of Optometry (Washington, D.C., October 22, 1976).

State College, the State University of New York College of Optometry, and the School of Optometry at the University of Alabama in Birmingham are relatively new institutions, having admitted their initial classes respectively in 1975, 1971, and 1969. Additionally, we observe that the enrollment of state-supported institutions is well below the average of private schools and colleges of optometry. The higher enrollment in the private institutions results from the fact that these schools must operate without the benefit of state monies, and thus, must depend substantially on income generated by student tuition and fees. Table 6 shows the comparatively smaller enrollments in state-supported institutions educating optometric manpower.

Costs. Table 7 presents the instructional expenditures per student for the academic year 1974-75. With their greater than average student enrollment, the 1976 expenditure per student in private institutions was approximately \$3,000 less than that reported for state-supported institutions.

In recent years the Institute of Medicine of the National Academy of Sciences, the Association of Schools and Colleges of Optometry, and the American Optometric Association undertook analyses of the cost of optometric education. The American Optometric Association and the Association of Schools and Colleges of Optometry study was conducted by Fore Consultants, an independent research firm, who derived what they called a "constructed cost" for optometric education. The "constructed cost" study examined the component costs of curriculum, faculty, support staff, equipment, and facilities required. Based upon an examination of these items, the Fore Consultants determined the "constructed cost" of optometric education to be \$15,487 per student per year consisting of the following:

TABLE 7

INSTRUCTIONAL EXPENDITURES PER STUDENT, 1974-75

School Number	Number of Students	Students Per FTE Faculty	Expenditure Per Student
State - Supported			
1	266	8.9	\$4,878
2	218	7.1	9,710
3	231	8.2	8,572
4	264	6.0	<u>6,269</u>
MEAN	245	7.6	\$7,357
Independent			
1	532	11.9	\$3,745
2	285	7.9	5,013
3	533	8.5	4,840
4	307	7.3	4,460
5	566	10.2	3,818
6	294	14.5	<u>4,436</u>
MEAN	420	10.1	\$4,385

SOURCE: Interview with Dr. Louis A. Ebersold, Executive Director, Association of Schools and Colleges of Optometry (Washington, D.C. November 29, 1976).

		<u>Percent of Total</u>
1. Faculty and Staff		
A. Direct instructional	\$ 5,163	33.34
B. Instructional support	1,963	12.68
C. Non-instructional support	2,896	18.70
Sub-total	\$15,487	
2. General, Administrative, and Student Services	1,320	8.52
3. Educational Facility, Equipment, and Supplies	4,145	26.76
TOTAL	\$15,487	100.00

Applicants. In optometry, as with other health professions, there has been an increasing number of applicants competing for places in entering classes. The 1976 ratio of applicants to enrollees for schools and colleges of optometry was approximately three to one. Although there is an increasing tendency for places in entering classes to be reserved for applicants who are residents in those states have state-supported schools of optometry, the addition of new schools would cause a release, or potential release, of places in existing schools. For example, Georgia, South Carolina, and North Carolina have agreed in principle to the establishment of a school of optometry in South Carolina. The states of Georgia, South Carolina, and North Carolina currently contract for thirty places in existing schools and colleges of optometry. In theory, once their school is established, those places currently contracted for will be available for others. Additionally, West Virginia is considering the reduction of the number of places it currently contracts.

Graduates. The graduates from schools of optometry between the years of 1941-42 and 1975-76 are presented in Table 8. Following the peak during the post-World War II years of 1948-50, the total graduates of schools of optometry

TABLE 8

GRADUATES OF OPTOMETRY SCHOOLS IN THE UNITED STATES

Academic Year	Graduates	Academic Year	Graduates
1941-42	418	1959-60	375
1942-43	336	1960-61	319
1943-44	326	1961-62	334
1944-45	157	1962-63	350
1945-46	216	1963-64	384
1946-47	528	1964-65	377
1947-48	1,452	1965-66	413
1948-49	1,934	1966-67	481
1949-50	1,572	1967-68	477
1950-51	961	1968-69	439
1951-52	636	1969-70	445
1952-53	684	1970-71	530
1953-54	674	1971-72	687
1954-55	473	1972-73	716
1955-56	333	1973-74	797
1956-57	355	1974-75	808
1957-58	349	1975-76	895
1958-59	323		

SOURCES: Michigan Office of Health and Medical Affairs, *Vision and Eye Care Services in Michigan* (Lansing, Michigan: Office of Health and Medical Affairs, April 1974).

Letter from Dr. Louis A. Ebersold, Executive Director, Association of Schools and Colleges of Optometry (Washington, D.C., October 22, 1976).

remained relatively constant (between 300 and 400 annually) from the years 1955 to 1965. With the introduction of incentives provided by federal funding, the number of graduates has increased continually since 1969. With 1,073 freshman entering schools and colleges of optometry in 1976 and a projected attrition rate of five percent, we can anticipate that there will be approximately 1,025 graduates from schools and colleges of optometry in 1980.

Current Education for Marylanders, Virginians, and West Virginians

Currently, students from Maryland, Virginia, and West Virginia compete with the National Applicant Pool for positions in one of the thirteen schools of optometry, all of which are located outside of the region under consideration in this report.

Applicants. Of the thirty-seven Virginians who completed the Optometric College Admission Test during the 1975-76 academic year, sixteen or approximately forty-three percent were successful in gaining enrollment in a school or college of optometry. For Maryland, the comparable figures were forty-nine applicants with eighteen students being enrolled or an approximate success rate of thirty-seven percent. Thirty-five West Virginians completed the Optometry College Admission Test, and with the results being one of the determinants, thirteen or thirty-seven percent were enrolled in the class of 1980. Thus, citizens of the states of Maryland, Virginia, and West Virginia compete favorably with the National Applicant Pool where approximately one of every three applicants is enrolled. The sixteen successful Virginians were enrolled in six of the existing schools (the University of Alabama School of Optometry - two; Indiana University Division of Optometry - one; New England College of Optometry - two; Pennsylvania College of Optometry - seven; Southern College of Optometry - three; and the Los Angeles College of Optometry - one).

Enrollment. During the 1975-76 academic year, a total of fifty-three Virginians was enrolled in eight of the existing thirteen schools (Illinois College

of Optometry - four; Indiana University Division of Optometry - three; New England College of Optometry - five; Pennsylvania College of Optometry - twenty-one; Pacific University College of Optometry - two; Southern California College of Optometry - one; Southern College of Optometry - twelve; and the University of Alabama School of Optometry - five) (Table 9). During the same period of time, seventy-nine students from Maryland were enrolled in eight schools, while the corresponding figure for West Virginia were thirty-six and five.

1. Contract. Through a mechanism established by the Southern Regional Education Board, states without schools of optometry contract for student places in one of the three optometry schools located in the Southeast. A contract, in this instance, refers to an agreement whereby a state without a school of optometry agrees to pay a school of optometry a set fee for a student place which the school agrees to reserve for residents of the contracting state. All applicants to the school of optometry from the contracting state compete for the contract-supported positions, and the successful applicants must meet the educational standards of the institution. Confirmation of the student's state of residence is provided by the higher education coordinating agency in the contracting state.

The State of Virginia currently contracts for ten student places in each entering class with three being at the Southern College of Optometry, two at the University of Alabama School of Optometry, and five at the Pennsylvania College of Optometry. The educational opportunities for residents of Virginia through contracted places were first made available to those applying for the entering class of 1974. Under current agreements, the Southern College of Optometry and the University of Alabama School of Optometry receive \$3,250 per student per year, while the Pennsylvania College of Optometry receives \$4,000 per student per year. During the 1976-77 academic year, Maryland and West Virginia respectively contracted for twenty-five and ten places in entering classes of existing schools and colleges of optometry.

TABLE 9
VIRGINIA RESIDENTS IN OPTOMETRY SCHOOLS IN 1976
BY YEAR OF SCHEDULED GRADUATION

Year of Graduation	Projected Graduates
1976	9
1977	11
1978	17
1979	16
TOTAL	53

SOURCES: Interview with Mr. Harry Doyle, Assistant to the President, Pennsylvania College of Optometry (Philadelphia, Pennsylvania, August 30, 1976).

Letter from Mr. John G. Classe', Summer Intern, Association of Schools and College of Optometry (Washington, D.C., August 19, 1976).

2. Non-Contract. Since only ten residents of Virginia received their entering places through state-supported contracts, the remaining six who enrolled in the fall of 1976 gained their opportunities in their respective institutions by competing in the National Applicant Pool.

Costs. Students from Virginia at the University of Alabama School of Optometry pay the in-state tuitions and fees as indicated in Table 10, while those enrolled at the Southern College of Optometry in Memphis, Tennessee, benefit by paying that institution's contract tuition rate (tuition per contract student is \$2,850; per non-contract student - \$6,100).

Graduates. Combining the information presented in Table 9 with the fact that the attrition rate at schools training health professionals is generally less than ten percent, we can predict that an average of twelve Virginians will graduate from schools of optometry each year between 1976 and 1979. Additionally, out-of-state residents are attracted to employment opportunities within the Commonwealth. The Virginia State Board of Examiners in Optometry indicates that thirty-three individuals passed the 1976 license examinations. Of these, approximately twelve individuals are expected to establish practices in Virginia.

Future Education

At present optometry schools are in various stages of planning in Florida, Minnesota, Missouri, and South Carolina. If the legislatures approve funding of institutions in those states, it can be reasoned from the guidelines of the Association of Schools and Colleges of Optometry that opportunities will exist for placement of approximately 240 additional optometry students annually. The potential schools of optometry in Florida and the school which is under consideration for Georgia, South Carolina, and North Carolina have the greatest potential for impact upon residents of the Commonwealth of Virginia interested

TABLE 10
TUITION AND FEES FOR 1976-77

Independent		State-Supported	In-State	Out-of-State
Los Angeles College of Optometry	\$ 3,350	University of Alabama School of Optometry	\$ 971	\$ 1,871
Illinois College of Optometry	3,168	University of California School of Optometry	637	2,542
New England College of Optometry	3,330	Ferris State College of Optometry	2,520	
Pacific University College of Optometry	3,200	Indiana University Division of Optometry	984	2,191
Pennsylvania College of Optometry	3,719	State University of New York College of Optometry	2,025	3,025
Southern College of Optometry	6,100	Ohio State University College of Optometry	1,050	2,400
		University of Houston College of Optometry	182	1,620
MEAN	\$3,811	MEAN	\$1,195	\$2,274
RANGE	\$3,168 - 6,100	RANGE	\$182 - 2,520	\$1,620 - 3,025

SOURCE: American Optometric Association and Association of Schools and Colleges of Optometry, Information for Applicants to Schools and Colleges of Optometry, Fall 1977 (U.S.A.: American Optometric Association, 1976).

in optometric education. As previously indicated in this report, the latter set of three states currently contracts for thirty places in entering classes in existing schools and colleges of optometry.

Existing Schools. Of the thirteen schools of optometry, only the University of Alabama, Ferris State College, the University of Houston, and the State University of New York College are anticipated to increase their enrollment. Taking into consideration the likely enrollment of the thirteen existing schools of optometry and the four in various states of planning, it can be anticipated that approximately 1,100 to 1,150 places will be available annually in colleges of optometry by 1980.

Developing or Planned Schools. At the instigation of the American Optometric Association, the Association of Schools and Colleges of Optometry, the Southern Regional Education Board, and optometric professional organizations in many states, discussions have led to planning efforts which may result in the establishment of new schools or colleges. The Association of Schools and Colleges of Optometry has developed "a national plan for new academic facilities for optometric education". The proposal calls for the establishment of nine new schools which, according to proponents of the plan, will be designed to serve major needs, including better geographic distribution of manpower.

1. North Carolina - South Carolina - Georgia. With the staff of the Southern Regional Education Board serving as the catalyst, representatives of the higher education communities in Georgia, North Carolina, and South Carolina have, during the past year, developed a policy statement on the formulation of a cooperative approach to expand optometric education to meet the needs of students for Georgia, South Carolina, and North Carolina through the creation of a tri-state regional school of optometry. In undertaking this development, each state recognized that no single state could afford to establish a school of the quality desired.

In response to a manpower need documented by a December 1974 Southern Regional Education Board sponsored consultant's report, a plan to develop a regional school of optometry to serve Georgia, North Carolina, and South Carolina has been created. The major elements of that plan include a decision to develop a school in which each of the cooperating states would have a guaranteed number of spaces; share in the capital cost of construction, purchase of equipment, annual operating expenses; and provide advice and assistance to the school through a tri-state regional advisory board. At this point in time, the plan has been endorsed by individuals from each of the three states, and the Medical University of South Carolina at Charleston has been identified as the potential site for the tri-state school.

2. Others. Activity on a new program in the State of Florida is in abeyance, although a new school was authorized by legislation enacted in 1974. The same is true of a proposed school for the State of Missouri. It should be recognized that when a state commits itself to the establishment of a school of optometry, it requires the cooperation of all levels of government. It is impossible to predict with certainty the progress of recently authorized schools in other states.

Future Education for Marylanders, Virginians, and West Virginians

In keeping with a trend which is occurring in many state-supported professional schools, it can be anticipated that a substantial proportion of student places in state-supported schools of optometry will be reserved for residents from the state within which the institution is located.

Opportunities for Enrollment. Opportunities for students from the states not having state-supported institutions can only be ensured to the extent that student places are secured for qualified applicants through a contract procedure. Previous research undertaken by the Council of Higher Education indicated that most independent schools and colleges of optometry have indicated to the

American Optometric Foundation their willingness to expand contract activities. There is increasing evidence that these institutions, in order to ensure financial stability, are looking toward the day when all entering places in their institutions are contracted for by one or more states.

Although many institutions are willing to contract directly with interested state agencies, the American Optometric Foundation and the Southern Regional Education Board both operate contract mechanisms through which states can ensure a specific number of their residents the opportunity to participate in a program of education leading to a Doctor of Optometry.

Based upon verbal communication between the staff of the Council of Higher Education and the Deans and Presidents of several existing schools of optometry, it can be assumed that additional contract places can be obtained. The likelihood of the continued existence of such opportunities would increase if one or more of the proposed or developing schools of optometry were to become operational. For example, the thirty contracted places currently utilized by Georgia, South Carolina, and North Carolina would become available for residents from other states if a tri-state school were developed in South Carolina.

State Cost. For the immediate future, we can anticipate a continuance of the \$3,250 Southern Regional Education Board contract fee for places in existing schools and colleges of optometry in the fourteen-state S.R.E.B. region. Discussions with representatives from the Pennsylvania College of Optometry lead the Council's staff to believe that the current level of \$4,000 per student per year support requested by the Pennsylvania College of Optometry with either (1) be reduced, (2) additional service will be provided for Virginians who are students or graduates of the Pennsylvania College of Optometry, or (3) students who are residents of Virginia occupying contract places will have their tuition and fees reduced.

Student Cost. Virginians enrolling in institutions where the Commonwealth has secured contract spaces can anticipate paying current in-state tuition and

fees, or in the case of the independent institutions, the contract student's fee (anticipated to be the actual student's portion of the operating budget of the institution less the capitation fee paid by the sponsoring state).

Programs for Optometric Auxiliaries

Optometric assistants and technicians work under the direct supervision of optometrists, performing routine vision care tasks that do not require professional judgement. Duties of the para-optometric may include teaching patients how to wear and care for contact lenses, taking case histories, and recording the optometrist's findings during vision examinations. Many aspects of practice management are also performed by the para-optometric. Until recently, assistants learned their duties through on-the-job training, but increased demand for these individuals and expanded duties have prompted the establishment of formal programs. The assistant program is usually a one-year course of study. To become an optometric technician, a person must receive an associate degree from a para-optometric program.

The idea of using optometric auxiliaries to augment optometric manpower, and thereby decreasing the need for more optometrists, is an attractive one. However, optometrists are slow to incorporate them into their practice, and the availability of this manpower resource is limited by the number of existing educational programs. Thus, auxiliaries will have little influence on the delivery system for many years. If Virginia were to create a school of optometry, an affiliated program educating auxiliaries should be developed.

Current Programs. Table 11 indicates that six of the nation's thirteen schools of optometry provide education for para-optometric personnel. The supply of optometric services can be increased either by increasing the number of optometrists or by increasing the number of optometric auxiliary personnel. Table 11, which lists all identified programs training such auxiliaries, indicates that such formally trained personnel are gaining increased acceptance in both solo and group practices (only eleven such programs existed two years ago).

TABLE 11

PARA-OPTOMETRIC PERSONNEL EDUCATIONAL PROGRAMS

Optometric Assistant	Associate Degree
Brewster Adule Technical School	Columbus Technical Institute
Community College of Denver	Ferris State College
Granite Falls Area Vocational Technical Institute	Fisher Junior College/MCO
Itasca Community College	Greenville Technical College
North Iowa Area Community College	Harcum Junior College
Lakeshore Technical Institute	Howard Community College
Mid-Plains Vocational Technical School	Indiana University
	Merritt College
	Miami-Dade Junior College
	Owens Technical College
	St. Petersburg Junior College
	Southern California College of Optometry
	Southern College of Optometry
	Spokane Community College
	Triton College
	University of Alabama
Optometric Assistant and Associate Degree	Military
Houston Community College	Community College of the Air Force
Plano Child Development Center	Sheppard Air Force Base
San Diego City College	
State University of New York	

SOURCE: American Optometric Association, (October 1976).

Continuing Education for Optometrists

In most health related fields, rapid advances are being made in technology and treatment. As a result of these and other factors, there is increased pressure from consumers, professionals, and legislators alike for mandatory continuing education for licensed health professionals. With the support of optometric leadership in the Commonwealth of Virginia, the 1976 Session of the General Assembly passed Senate Bill No. 2, which called for mandatory continuing education for all optometrists during each licensure period. Optometry is currently the only health care profession in Virginia for which continuing education credit is a prerequisite for relicensure. In order to respond to the intent of that legislation and to ensure the continued competence of practicing optometrists, ways must be found to ensure the availability of appropriate continuing education offerings.

DEVELOPMENT OF A REGIONAL OPTOMETRY SCHOOL

The establishment of a truly regional school of optometry requires the willingness of a series of states to provide proportional support for the construction and equipment of the school and provisions for the sharing of operating expenses of the institution over an extended period of time. The report, which examined the feasibility of establishing a school of optometry solely for the Commonwealth of Virginia, recommended that considerations of a regional school of optometry include the states of Maryland, North Carolina, Virginia, and West Virginia. As it is reported elsewhere in this document, North Carolina has joined South Carolina and Georgia in planning a school to serve those states. Therefore, this examination of the feasibility of establishing a regional school of optometry focuses on optometric manpower in the states of Maryland, Virginia, and West Virginia and the willingness of those three states to support a school or college of optometry. Additionally, optometrists in Delaware and Kentucky have indicated some interest in participating in any planning which might occur.

Location Requirements

In September 1974 the Board of Directors of the Association of Schools and Colleges of Optometry adopted a statement on new schools and colleges of optometry which set forth a series of location factors. Of major importance is that the school be located in an urban area where the out-patient and satellite clinics of the college can draw upon a large population of patients for training the students. The statement recommends that schools be located in communities of at least 200,000 population.

The authors of the statement generally feel the most advantageous location for a new school or college of optometry is in an academic health center.

Within the three-state region being considered in this report, the locations which meet the above criteria are Johns Hopkins University (Baltimore), University of Maryland (Baltimore), Virginia Commonwealth University (Richmond), and Old Dominion University/Eastern Virginia Medical School (Norfolk).

Construction Costs

The development of a new school or college of optometry includes the planning and construction costs of specialized laboratories, clinics, classrooms, and offices, as well as research and support space. All of these facilities must be adequately equipped. All individuals who have discussed the potential of establishing a regional school to serve Maryland, West Virginia, and Virginia agree that should a facility be developed it should be of the highest quality.

Operating Budget

The authors of the Southern Regional Education Board report estimate the cost of operating an optometry program to be approximately \$8,000 per student per year based on 1974 dollars. In making this estimate, it was assumed that the school would be located in an academic health center where the school would have access to basic health science programs and that the newly established institution would have reached its target enrollment. Per-student cost prior to the year in which the school reaches its target enrollment would exceed the \$8,000 estimate. Locating the school in an area where basic health science programs are unavailable would also increase the per-student cost. Combining the per-student cost estimate with the Association of Schools and Colleges of Optometry's suggested sixty students per class enrollment, the approximate operating budget in 1974 dollars would be \$1,920,000 per year. The table below provides the projected operating budget for the University of Alabama School of Optometry in Birmingham. This table illustrates a per-student cost in excess of that presented in the Southern Regional Education Board 1974 report on optometric education.

PROJECTED BUDGET FOR ALABAMA SCHOOL⁸

Year	Projected Budget	Total Students	Cost/Student
1975-76	\$1,681,943	140	\$12,013
1976-77	1,812,000	160	11,325
1977-78	2,046,500	180	11,369
1978-79	2,166,500	200	10,832

Of the 1975-76 per-student costs of \$12,013, student tuition and fees provided twelve percent, federal grants and contracts twenty-seven percent, and clinic income thirteen percent. Thus state support amounted to forty-eight percent of the \$1,681,943 budget.

Funding

On October 12, 1976, the President signed the Health Professions Assistance Act of 1976. There is a series of components of that legislation through which funds will be provided to support optometric education. This Act contains authorizations for special improvement, start-up funds, and planning and construction costs for regional schools. Authorizations are also included for guaranteed loans and capitation grants for schools of optometry. A per-student amount of \$765 is authorized by this legislation for each of the fiscal years 1978, 1979, and 1980 for capitation grants for schools of optometry. Of the construction funds authorized by this legislation, fifty percent of the \$40,000,000 is earmarked for primary care. The remaining \$20,000,000 will be divided among medicine, osteopathy, dentistry, veterinary medicine, optometry, podiatry, and public health. These are authorization levels for 1978, 1979, and 1980.

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Senate Bill No. 269, passed by the 1976 Session of the General Assembly, directed the Council of Higher Education to assess the feasibility of establishing a regional college of optometry. In addition to a host of other considerations, the Council was to include a timetable for the establishment of a school of optometry should all other factors point to such an action.

The Council has carefully reexamined and updated information which it developed in earlier studies, its staff has corresponded and met with higher education officials in Maryland, North Carolina, and West Virginia, along with members of the staff of the Southern Regional Education Board, and it has carefully taken into consideration the current economic state of the Commonwealth of Virginia and the backlog of capital outlay requests, several of which are for health related programs, currently pending before the General Assembly.

Based upon this analysis, the Council of Higher Education recognizes that it is not financially feasible to construct a college of optometry within the Commonwealth at this time. It further reaffirms the findings of its earlier studies indicating that there is a need for additional practicing optometrists in Virginia. To this end, the Council recommends that additional contract spaces for Virginia students be obtained on an interim basis in existing colleges of optometry and that negotiations with institutions providing contract spaces be initiated to secure the necessary continuing education services on an organized and regular basis from such contractor schools.

This report is not intended as the final word on optometry education in the Commonwealth. Dramatic changes in the health care system, national health insurance, or other factors could significantly alter the ability of Virginia citizens to obtain adequate eye care. In addition, federal programs, including those that

provide funds for the construction of regional colleges of optometry, may be more adequately funded in the future.

Therefore, it is recommended that the Council continue to monitor developments in optometric education. Additionally, the Council should continue to examine developments in surrounding states; federal legislation, including the availability of federal funds to plan, develop, and operate regional colleges of optometry; the availability of private funds for planning, development, or construction; and keep the Governor and the General Assembly informed about these developments.

FOOTNOTES

¹John M. Leyes and Nancy C. Kilby, *Health Manpower Report: Optometry Manpower*, (Virginia: State Council of Higher Education for Virginia, 1974).

²This advisory group was established by legislation passed by the General Assembly in 1970 and members of it are appointed by the Governor.

³Clifton H. Birchard and Theodore F. Elliott, "A Re-Evaluation of the Ratio of Optometrists to Population in the United States in the Light of Socio-Economic Trends in Health Care", *American Journal of Optometry* (January, February, and March 1967).

⁴U.S. Department of Health, Education, and Welfare, *Optometric Manpower Resources 1973*, p. 9.

⁵In 1968 the federal government identified a critical shortage area as being those where there are more than 15,000 persons per practicing optometrist (or fewer than 6.7 optometrists per 100,000).

⁶Larrie J. Dean and Brenda H. Edwards, *A Report on the Feasibility of Establishing a School of Optometry in the Commonwealth of Virginia*, (Virginia: State Council of Higher Education for Virginia, 1975); and John M. Leyes and Nancy C. Kilby, *Health Manpower Report: Optometry Manpower*, (Virginia: State Council of Higher Education for Virginia, 1974).

⁷Committee of Presidents of the Health Professions Educational Associations of the Association for Academic Health Centers, *Synopsis of Education for the Health Professions*, (Washington, D.C.), p. 26.

⁸Letter from Henry B. Peters, O.D., Dean of the School of Optometry at the University of Alabama in Birmingham, November 12, 1976.

APPENDIX A

LIST OF CONTACTS PROVIDING ASSISTANCE

Dr. Lee H. Albright
Executive Secretary
Virginia State Board of Examiners in
Optometry
4617 Stuart Avenue
Richmond, Virginia 23221

Mr. J. William Doswell
Executive Director
Virginia Optometric Association
419 1/2 North Boulevard
Richmond, Virginia 23220

Mr. Harry Doyle
Assistant to the President
Pennsylvania College of Optometry
1200 West Godfrey Street
Philadelphia, Pennsylvania 19141

Dr. Louis A. Ebersold
Director
Association of Schools and Colleges of
Optometry
1730 M Street, N.W., Suite 411
Washington, D.C. 20036

Dr. Henry B. Peters
Dean
School of Optometry/The Medical Center
University of Alabama in Birmingham
1919 Seventh Avenue, South
Birmingham, Alabama 35233

Mr. Ellis S. Smith, Jr.
Director
American Optometric Association
7000 Chippewa Street
St. Louis, Missouri 63119

Virginia State Department of Health
Bureau of Vital Records and Health
Statistics
James Madison Building
109 Governor Street
Richmond, Virginia 23219

