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Profile: The University of Benin

Clinical Competency

Clinical Education

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"Clinical Competency— Some Important Questions"

In this issue of the *Journal of Optometric Education* you will find articles from two colleges of optometry at opposite ends of the country, both determined to improve the clinical education and competency of their students. Clinical competency in optometry is a skill that is carefully nurtured at the college level and tested at the time of the licensing examination. If found adequate, there is never any reassessment or reevaluation of that individual's continuing clinical competency for the lifetime of the health care professional, unless there is a dispute, legal action or a formal complaint. The assumption is that as long as there are no problems, an optometrist is clinically competent, although most of the consumer complaints originate not from a lack of clinical competency, but from a lack of thoroughness in examination, record-keeping and communication.

I would like to share some thoughts and questions with my peers which I hope will provoke some problem solving. These thoughts come from my experience as a former state board member, and educator, an optometrist and a consumer. The first item to agree on is a definition of clinical competency. In my opinion, clinical competency is the performance, evaluation and interpretation of those appropriate optometric tests that resolve the patient's eye-vision problems resulting in clear, sharp, functional vision and good ocular eye health.

There are two or three problems remaining with our educational, licensing and relicensing system as it exists today. Can one or two eye examinations at the time of a state licensing examination predict that candidate's clinical competency in the future or would it be better for the state boards to accept the optometric schools' and colleges' evaluation of clinical competency for licensure and then monitor those licensees periodically to be certain that they maintain minimum or entering clinical competency? Does minimum mean the lowest common denominator of care or does the public have a right to expect the high level of competency at which most of our practitioners practice, from everyone? Easy questions, but tough answers!

Optometric students at almost all the schools and colleges now spend a considerable part of their senior year honing their clinical skills in externships in various types of practice settings and clinic situations. Are the schools and colleges able to properly monitor those clinical experiences to their satisfaction so that they meet their educational criteria? I have known of some cases where students were not allowed to see patients, but just worked as ancillary personnel. In other situations, there were too many externs so that there were not enough exam rooms, much less cases, to go around. In other cases students selected an extern site just to have a good time,

swim and surf and spent little time accumulating clinical expertise. These are in the minority but the question can be asked whether those few students accumulate enough experience to be considered clinically competent. Absolutely not. Does that mean we should abandon our externship and residency programs? Absolutely not. It does mean, however, that the schools and colleges of optometry have a responsibility to the profession, to the public, and to the students to monitor their sites, their programs and their adjunct instructors much more closely than they do now.

There are two more psychological hurdles looming in the future for all health care professionals. I can't tell you when or how they will occur, but in my opinion they are inevitable and almost guaranteed to occur. The first challenge will be a certification examination that will entitle optometrists to be reimbursed by third party payors for specialty procedures, evaluation and treatment considered to be of a more difficult clinical competency than can be expected from the general practitioner. The second will be a relicensure examination probably every five to ten years to assure that the health care professional's clinical competency has kept up with the latest technology, newest skills and increased responsibility. This relicensure examination will have to be composed of practical, clinical tests that assure the safety and the well-being of our patients' eyes and vision, not of long forgotten technical or didactic knowledge unused by the health care professional since graduation. As optometry assumes more responsibility in the eye-care field, we are extremely vulnerable to changes in relicensure procedures on that last point.

I have raised more questions than answers, but clinical competency is what health care is all about. Health care professionals get very defensive when the public seems to question any portion of their training, education or clinical competency, but the more open the process, the higher the quality of care that will be rendered and the higher the confidence level of the public. They have a right to expect it, and we have an obligation to provide it.



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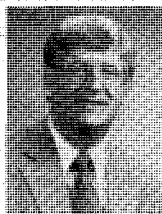
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Scholarship for \$1,000 Awarded

The North Central States Optometric Council and the American Optometric Foundation (AOF) have selected one senior optometry student to receive the 1986 Gary Gross, O.D., Scholarship. Based on his essay on the subject of "Professionalism and Ethical Practice in Optometry," Paul A. Balliet of Southern California College of Optometry in Fullerton, California, was selected from nominations made by the schools and colleges of optometry. Mr. Balliet received a \$1,000 scholarship and an award plaque at the meeting of the North Central States Optometric Council.



Dr. Sylvio L.
Dupuis

Dupuis Elected to NHC Board

Sylvio L. Dupuis, O.D., president of the New England College of Optometry, was elected recently to the Board of Directors of the National Health Council (NHC). Dr. Dupuis will serve for a three year term. Elected an NHC vice-president was G. Burt Holmes, O.D.

New Trustees Elected at PCO

The Pennsylvania College of Optometry (PCO) announced the election of the following members to its Board of Trustees.

A. Michael Iatesta, O.D., a 1952 PCO graduate, has been elected chairman; J. Donald Kratz, O.D., a 1937 PCO graduate, has been elected first vice chairman; Donald Gleklen, senior vice president of corporate development & administration at Mediq Incorporated, has been elected second vice chairman; Stanley Jacke, retired executive vice president of SmithKline Beckman Corporation, has been elected secretary; and Edward Hueber, retired president & general manager of Kelley and Hueber, Inc., a manufacturer and marketer of spectacle and contact lens cases, has been elected treasurer.

In addition, Ben Sillman, O.D., immediate past president of the PCO Alumni Association and a 1948 graduate, was elected to a two-year term on the Board. Robert Morrison, O.D., a 1948 PCO graduate, was re-elected to a three-year term on the Board as the alumni association representative.

Also, Michael A. Friedberg, O.D., a 1942 PCO graduate, and Robert C. Wilburn, Ph.D., president of the Carnegie Institute and Carnegie Library of Pittsburgh, PA, were newly elected to the Board, as was Gerald A. Kempner, O.D., of Clearfield, PA, who will serve as the Pennsylvania Optometric Association representative on the PCO Board.

SCCO Student Research Symposium Held

The research paper, "Current Status of Quality Control for Toric Hydrophilic Contact Lenses," received first place honors at the Seventh Annual Student Research Symposium of the Southern California College of Optometry (SCCO). The paper was authored by senior students Matthew A. Gahn and John J. Tracy. Faculty Advisor was Dale M. Koers, O.D., M.S.

Second place winners were Susan M. Brunnett and Mitchell T. Munson for their paper entitled, "Fresnel Versus Conventional Prisms: Their Effects on the AFPP Horopter." Faculty Advisor for this paper was David G. Kirschen, O.D., Ph.D.

"A Comparison of the Arden Grating Plates, Vistech Contrast Sensitivity System, and a Standard Monitor/Computer System for Determining Contrast Sensitivity" captured third place honors for Tina Shinmori and Julie R. Thornton. Faculty Advisor for this paper was Dr. David Kirschen.

"Research is an integral part of the educational fabric of our institution," said SCCO President Richard L. Hopping, O.D., D.O.S. "Indeed, the variety and caliber of papers presented at the Research Symposium reflect the diversity of the field of optometry and the enthusiasm our students demonstrate in their quest for knowledge."

Optometric research is undertaken by fourth-year students at SCCO in partial fulfillment of graduation requirements. Monetary awards were given to the three papers judged as best at the event:

First Place, \$500; Second Place, \$300; and Third Place, \$200.

Getting Involved in High Blood Pressure Month

The theme for this year's National High Blood Pressure Month in May is "Treat Yourself to Life." AOA's National High Blood Pressure Planning Guides, along with information kits provided by the National High Blood Pressure Education Program, are being sent to state optometric leaders for use in organizing group activities and encouraging patient education. Those interested in participating should contact their state optometric association for additional information.

Since its inception in May, 1974, National High Blood Pressure Month has been instrumental in creating public awareness about this disease. Organizations like the American Optometric Association have combined their efforts in promoting the importance of high blood pressure control. As a result, stroke mortality has dropped by more than 50 percent and heart attacks are down by 30 percent.



Dr. Alden N.
Haffner

Dr. Haffner Receives Presidential Award

Dr. Alden N. Haffner, State University of New York's vice chancellor for research, graduate studies and professional programs, has received a 1985 Presidential Recognition Award acknowledging his role in structuring and reorganizing the Community Planning Council in New York City.

Dr. Haffner was chosen from 300 nominees to receive the award, given annually by President Ronald Reagan to Americans whose activities and endeavors "are an outstanding example of private initiative and creative solutions to community problems."

The Community Family Planning Council is the largest network of family planning agencies in New York City and

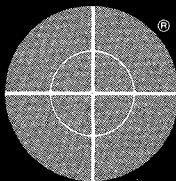
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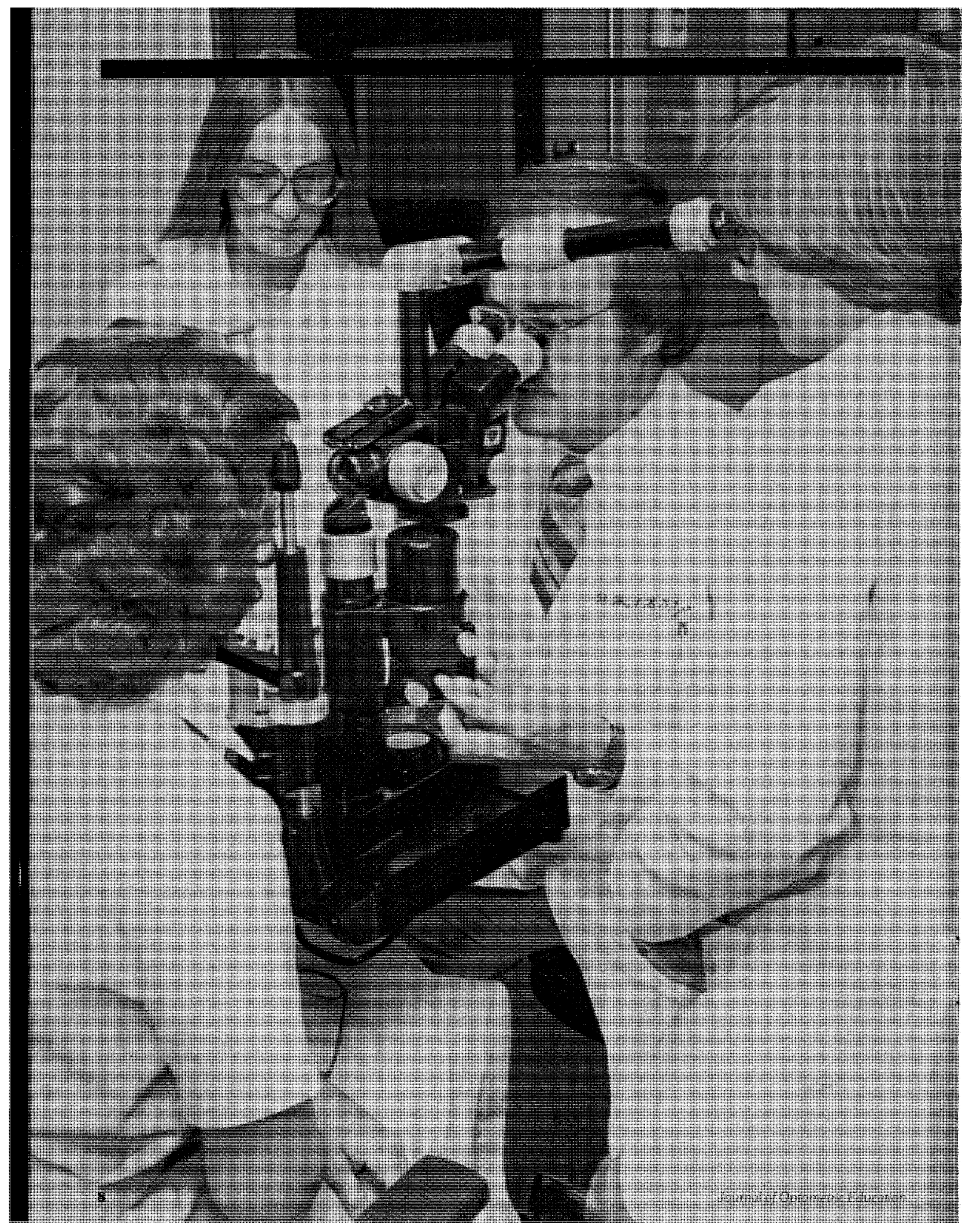
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Preparing Optometry Students for Clinical Competency *An Overview*

Morris S. Berman, O.D., M.S.

Introduction

Optometry colleges can strive for excellence by continuously evaluating and improving their educational programs. These improvements in teaching and advances in research will accelerate the rate of change for the profession. There are some basic issues in this educational process that merit special attention. The preparation of students for clinical competency is one issue. This complex matter involves decision making prior to the acceptance of students into a professional program and restructuring aspects of clinical teaching programs to evaluate performance, provide feedback to clinicians and assure that patients receive quality care. These challenges are shared by other health professions. Methods to enhance the selection and training of clinicians must be adapted by optometric colleges to meet their individual needs.

Admissions

The process by which applicants are admitted to programs preparing students for different health professions is being viewed with an increased sensitivity to its legal and social implications. Admissions committees are rethinking their task in order to justify the criteria used for standards and processes of admission into colleges. This is particularly important in health professions where admissions committees are asked to select students who will be equipped to handle the academic rigors of a profes-

sional program, as well as be suited for clinical practice.

The admission process for applicants to optometry programs generally includes an evaluation of undergraduate transcripts, Optometry College Admission Test (OCAT) scores, reference letters and personal interviews. The pre-optometry grades and the OCAT scores measure general academic ability and scientific knowledge. The extent to which the test results are used in deciding whether or not an applicant will be admitted to a college of optometry varies little from one school to another.

Widespread admission trends and practices in the health professions in the United States have been summarized as follows¹: a) The selection in all health professions continues to depend on prior academic achievement and test scores measuring academic aptitudes or achievement. This practice is of long standing in dentistry, medicine, pharmacy and optometry. It appears that the best single predictor of first year academic scores, in all professional programs, continues to be the entry grade point average based on pre-professional grades. b) The wisdom of relying exclusively on pre-professional grades to validate selection continues to be questioned. Studies in the health sciences including optometry have indicated that pre-clinical grades are unrelated to clinical grades or to professional performance.^{1,2} If clinical competence is defined as the application of knowledge and interpersonal effectiveness with patients, then personality and attitude measures of applicants may be a useful technique for predicting clinical performance.¹

One of the most important tasks for future researchers will be to develop multiple criterion measures, ranging from clinical application of knowledge to specific clinical skills. Measures of interpersonal skills should be developed within the framework of student interviews in health care fields. Without the development of sound clinical criterion measures, selection of students for clinical roles will remain largely speculative. If optometric institutions are to develop criterion measures to be used as predictors of clinical performance, it will be necessary to define desired student outcomes. The curriculum must then be examined to determine whether the qualities sought in the student clinician are being encouraged and reinforced in the teaching program.

Clinical Preparation

Certain factors should be considered by institutions seeking to better prepare students for their clinical participation:

- When gaining skills relevant to the practice of optometry, students should be allowed sufficient time for learning, practice and feedback from instructors.

- The optometric relevance of techniques must be explained and students should understand the processes of scientific inquiry including observation and measurement, interpretation of data, identification of problems and the ability to solve problems. Scientific knowledge must be applied to methods of optometric practice. In the laboratory, the work must be related to body and health functions. Students must also be provided with case studies for practical application of knowledge of

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didactic information and laboratory techniques.

- The faculty should serve as role models and mentors for students. Teaching techniques necessary in a clinical setting include the use of a standard format for data collection including history taking and the examination records, e.g. problem-oriented records, and the use of a problem-solving approach for patient management.

- In optometry, as with medicine, passive education (rote memorization and fact recall) should be superseded by independent learning and critical thinking. Students must learn to become problem-solvers and should be prepared for a lifetime of learning experiences.³

There are many newer techniques available to better prepare students for clinical responsibilities. The use of audio-visual aids, video recordings, computer assisted learning and clinical simulations have expanded the techniques used by instructors to teach in the laboratory, clinic, library and workstation.⁴

Another recent teaching innovation is a paper and pencil task referred to as a patient management problem (PMP).⁵ PMP's are designed to measure problem solving skills based on a standard patient data base. This technique can measure clinical performance while serving as an additional learning opportunity for students.⁶ PMP's tend to have low correlations with multiple choice tests which may indicate that they measure a different type of cognitive or learning skill than multiple choice techniques.

Recently schools in several professions including optometry have developed courses to improve communication and interpersonal skills of students.⁷ The purpose of these courses is to develop the clinician's self awareness when interacting with patients who present different problems.⁸ A course of this nature should include appropriate interviewing techniques, and communication with different types of patients in a variety of situations.

Good interviewing skills can make a significant difference in the ability of the practitioner to obtain useful information on the nature of the patient's complaint.⁹ Szasz and Hollander have described three models of the doctor/patient relationship.¹⁰ The first model, termed "active/passive," originated in medical emergency centers. In this model, control and responsibility are

maintained by the health care professional. The second model is "guidance/cooperation," which is typical of a relationship where the circumstances are less acute than in an emergency center. This model typically occurs in an optometric practice along with the third model of "mutual participation." In the third model, management of chronic illness occurs with the patient carrying out a treatment regimen without frequent consultation with the health care provider. In this case, responsibility shifts away from the health care provider towards the patient. It is important for optometry students to have an understanding of these different modes of interaction, so that they are better able to relate to and communicate with patients.

The attitude of the health care professional is important to each patient. Many urban patients are critical of their health care practitioner's behavior, particularly the lack of human warmth and failure to demonstrate real concern.¹¹ The relationship between the doctor and patient plays an important part in the delivery of health care. Patients who participate in a mature and understanding relationship with their practitioner are generally more cooperative and take greater responsibility for their own care. Patients will tend to gravitate toward practitioners who not only have the clinical skills, but more importantly, show care and concern for their patients.

Most patients accept the role of student doctors and understand that the training in health care fields is performed under the supervision of licensed, experienced health care professionals. Youth and inexperience are not as much a barrier in establishing relationships as many students think. Older patients may respond favorably to a young doctor and may take pleasure in the clinician's performance as they may see the student being similar to their own child. In another situation, an adolescent patient may communicate better with a young clinician than with an older doctor.

Clinical Performance

The evaluation of student clinical performance is one of the more complex areas of the educational process in the health professions. The clinical instructor must consider the purpose of the evaluation, the goals and objectives of the program and the instructional sequence. In using these guidelines, an in-

structor can design an effective and efficient evaluation which will provide data for decision making. The utilization of an evaluation program will be based on the quality of the instruments used to collect the data and the ability of faculty to use this information to enhance the performance of students.

One method of evaluating clinical competence is the "Critical Incident Technique" used to determine essential competencies.¹² Many health care professions have adopted this technique which relies on the profession providing specific examples of behaviors that are particularly effective or ineffective in a given situation. This technique does not necessarily assure, however, that an adequate or representative sample of incidents is included.

A second model of evaluating clinical competence is the professional performance situation model (PPSM) which is based on the premise that appropriate behavior varies for each situation.¹³ To determine a full range of competencies, it is necessary to develop a full range of professional situations. This approach is similar to that described earlier by Gross⁵ and has been used to define entry level competencies for several allied health professions.

A recent trend in clinical evaluation is the use of behavioral objectives. This methodology seems to work best when students are involved in developing the objectives. Current literature also indicates that clinical instructors need greater expertise and training in observation skills to improve the reliability of their evaluations.¹⁴ Clearer criteria and training of the faculty observers/evaluators need to be undertaken in order to increase reliability.

Students can be evaluated in a number of ways including direct observation video recording and discussion of records. The problem oriented record (POR) provides an objective method for verifying the student's ability to identify and solve the patient's problems. This system was devised by Weed and is accomplished by defining the data base, completing a problem list, numbering the type of treatment plans and numbering the progress.¹⁵

The validity and reliability of these criterion measures continue to be questioned by researchers, faculty and students. The difficulty of evaluating clinical competence was addressed by Woolliscroft.¹⁶ The report showed that it required considerable faculty time and training to develop inter-rater reliability

while raising questions as to the validity of clinical evaluation exercises.

A clinical model of effective assessment should:

- state objectives
- screen problems
- clarify problems
- assess specific behaviors
- provide assistance and support
- determine seriousness of problem
- inspect performance
- describe administrative actions

Once the stating of effective objectives has been completed, and the screening for potential behavior problems is in operation, nothing more needs to be done until a behavior or performance problem arises. Providing feedback to students is most useful at the earliest opportunity after a given performance. The feedback should be descriptive rather than judgemental. Guba and Lincoln¹⁷ have stated that multiple data sources are a key to judging a student's performance. Because of differences that are inherent among faculty members, evaluations from a single faculty member should not be relied upon.

Clinical Teaching

A vital component in the process of preparing clinicians is the instructor. Yet clinical teaching is one of the most neglected of all areas of teaching. Clinical faculty are key persons because they are directly responsible for many aspects of the health education process.¹⁸ Attributes of effective teaching include enthusiasm, dynamism and energy. Negative characteristics include arrogance, dislike of teaching, lack of self confidence, dogmatism and disorganization. Meleca¹⁹ reported that skills needed for clinical teaching can be improved when it is recognized that these skills may differ from those needed in the classroom or laboratory and may have to vary considerably from one clinical teaching environment to another.

For effective teaching and learning to occur, the cooperation and endorsement of both the students and the clinical faculty is necessary. In order to maintain and improve the skills of all clinical teachers, it has become imperative in health education teaching environments for the faculty to participate in educational development programs. These programs should allow the faculty to meet the needs of students, their own personal needs and those of the clinical environment in which they

work. Effective development programs, whether seminars, educational workshops or self instructional materials, should include competency evaluations.⁸

Successful clinical teachers should be able to teach applied problem solving, integrate clinical results with basic sciences, closely supervise students during the patient interview and examination, present effective feedback on performance and be role models particularly in the area of interpersonal relationships.¹⁸ Certain characteristics of a clinical instructor's style enhance teaching interaction and will have a positive influence on what and how the student learns. Therefore, the instructor should be sensitive to the relationship with the student in a clinical teaching environment. The instructor must observe the student frequently and should not have

**"Attributes of
effective teaching
include
enthusiasm,
dynamism and
energy."**

to rely heavily on patient records to evaluate the student's performance.

Summary

As the scope of optometry continues to expand, educational institutions must continue to strive for excellence in their programs. The clinical preparation of students must be strengthened so that graduates will have the training to practice full-scope optometry.

The admissions process needs to be reviewed as the standard academic indicators used to select students do not successfully predict clinical performance. The health education literature suggests that personality and attitude measures show the most promise for this purpose.

Clinical training of students must be expanded to include meaningful presentation of coursework in interpersonal and patient communication skills. The educational process should emphasize

the development of problem solving abilities and critical thinking in addition to the recall of factual knowledge. Faculty members should be role models for clinicians and therefore must be effective teachers.

The training of clinicians must include evaluation tools to stimulate learning as well as to assure quality of care rendered to patients. Various newer techniques should be considered for incorporation in a clinical training program to determine whether or not students meet essential competencies. □

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Sustaining Members support ASCO initiatives on behalf of the optometric education community. Sustaining members are listed on the inside front cover of each issue. Membership is open to manufacturers and distributors of ophthalmic equipment and supplies, and pharmaceutical companies.

Multi-Optics Announces Say Oui, See Paris Winner

SAY OUI, SEE PARIS, a promotional program sponsored by Varilux through May 31, 1986, offers an opportunity to practitioners to attract new business and a chance to win a week in Paris for two.

Dr. David T. Hicks, O.D., St. Charels, IL, was the lucky March winner. The sweepstakes ticket randomly selected was given to Dr. Hicks by Stanley Washington, local Varilux consultant. "The SAY OUI, SEE PARIS program is designed to help the eye care practitioners increase their business by offering unique products and services," said Washington. "The program provides point of sale displays designed to create consumer awareness of Varilux and encourage demonstrations. We give 5 sweepstakes chances to eye care practitioners for simply displaying these materials and Dr. Hicks is a lucky winner." SAY OUI, SEE PARIS sweepstakes chances also are given with each finished Varilux Rx from Varilux distributors and are included with the purchase of the exclusive Multifocal Demonstration Set (MDS).

Contact your Varilux distributor or Varilux directly for further information. MULTI-OPTICS CORPORATION, 363-E Vintage Park Dr. Foster City, CA 94404, (800) 227-6779 or (800) 632-2773 in Calif.

Bausch & Lomb Introduces the Crescent Bifocal Lens

Bausch & Lomb has announced the introduction of a crescent segment bifocal soft contact lens for myopic and hyperopic presbyopes in three add powers.

Called the BAUSCH & LOMB® (hefilcon B) Crescent Bifocal Lens, this alternating vision design, combined with the SOFLENS® (polymacon) Bifocal Contact Lens, (P.A.1) Lens Series for simultaneous vision, offers practitioners two approaches to fitting more presbyopes successfully.

The Crescent Bifocal is available in 13.5mm diameter lenses in plus powers from plano to +6.00D and 14.0mm diameter lenses in powers from -0.25D to -6.00D. Two base curves, 8.6mm and 8.9mm, and three add powers of +1.50,

+2.00 and +2.50 are available to correct the vast majority of presbyopic patients. □

Humphrey Unveils New, Faster Auto Refractor

Humphrey Instruments has announced the availability of the Model 530 Humphrey Automatic Refractor. Jackie Ferreira, Humphrey Automatic Refractor Product Manager, said "the Model 530 is the complete subjective and objective refractor. This new instrument is the fastest Humphrey Automatic Refractor ever made."

According to Ferreira, the Model 530 incorporates new internal charts that include the unique PAM cylinder test, subjective cross cylinder test and duochrome test for sphere power. "Like all Humphrey refractors," continued Ferreira, "the Model 530 features automatic alignment and automatic tracking of the patient's eye. No other auto refractor can provide the consistent, error-free operation that the Humphrey design assures."

For more information on the Humphrey Instruments Model 530 Automatic Refractor, write Humphrey Instruments, Inc., 3081 Teagarden St., San Leandro, CA 94577. □

Earhart Named President, Allergan Optical Division

Donald M. Earhart has been appointed president of the Allergan Optical Division of the Allergan Eye and Skin Care Group of SmithKline Beckman Corporation. Under a new organizational structure, Allergan Pharmaceuticals, Inc. will be managed as specialty eye care divisions along product lines.

Earhart joins Allergan from Bausch & Lomb where he most recently served as president of Bausch & Lomb's Professional Products Division. During his seven years with Bausch & Lomb, he was adept at both building new businesses from scratch and extracting maximum performance from mature ones.

Allergan Optical will focus on the contact lens marketplace. Earhart's primary task will be to bring Allergan into the contact lens business.

Earhart is also a board member of the

Contact Lens Institute of Washington, D.C. He holds a bachelor's degree in Industrial Engineering from Ohio State University and a master of business administration from Roosevelt University. □

Vision-Ease Announces Personnel Changes

Timothy Smith has been named product manager at Vision-Ease, manufacturer of lens products. Smith will be responsible for the marketing and promotion of Herculens high index, light weight, impact resistant polycarbonate lenses. Prior to joining Vision-Ease in St. Cloud, MN, Smith was a process engineer for Vision-Ease in Ft. Lauderdale, FL. He has also been a product division manager at Walman Optical Company.

Vision-Ease also announced that Jerome Q. Weisz has been named vice president of materials and distribution. Weisz is responsible for overseeing factory shipping, customer service, and plant loading and distribution at three Vision-Ease plants and 18 distribution centers throughout the U.S. and Canada.

Vision-Ease is one of the largest lens manufacturers in the world. It has manufacturing facilities in St. Cloud and Minneapolis, MN and Fort Lauderdale, FL. □

AO Appoints New Managers

Valerie A.L. Manso has been named manager of training and education by the Ophthalmic Business of American Optical Corporation. In this capacity, Ms. Manso is responsible for developing and offering to distributors and dispensers training and educational programs related to the AO lens and frame product lines.

In a move to strengthen its marketing effort, American Optical promoted James R. Bunnelle to national sales manager.

In addition, Michael B. Hershman and James A. Misco have been appointed key account managers for the company. Mr. Hershman is responsible for AO ophthalmic product distribution in the western region of the country. Mr. Misco has been appointed key account manager for the north central territory. □

Chicago's Insight into Eyesight

If you are an optometry student, the experience of attending an AOSA Congress is priceless and the feeling of camaraderie with students from other optometric institutions may never be experienced once your optometric education is over.

Attending a convention is more than just taking a trip, or having fun with a group of peers. It involves interaction with students from diverse geographical locations who are questing for the same professional goals and visions for optometry. Many friends are made and new knowledge is gained, but most gratifying is the feeling of belonging to a dynamic profession.

As I look back at the many conventions that I have had the opportunity to attend, I see a growth of interest from students, practitioners, educators and other health care professionals. This year's AOSA Congress is an excellent example of the rapid growth taking place in the local and national student association.

The 16th annual American Optometric Student Association Congress was held January 8-11, 1986 at the Chicago Marriott Hotel, and was hosted by the Illinois College of Optometry. Coordination of this fine Congress was the responsibility of Congress Chairperson Linda Weil. Linda and her committee worked for two and one half years to bring this Congress to life.

The annual event capped the year of many firsts for AOSA and congress hosting. The Congress was the end of a long and arduous year for the first all female executive council, and the beginning of the first all male executive council. Other firsts for AOSA were the representation of all the schools and colleges of optometry to the Board of Trustees Meeting and the largest attendance at an AOSA convention.

This large group of students, practitioners and guests were fortunate to see and hear many of the top speakers in optometric education today. Speakers included Louis Catania, O.D., Olee Olsen, O.D., Siret Jaanus, Ph.D.,

Jerome Sherman, O.D., and Craig Farnsworth, O.D. Topics discussed ranged from "Anterior Segment Disease," "Practice Building Aspects of Computers," "Sports Vision," to "Therapeutic Drugs in Clinical Practice." In addition, the exhibition hall was filled with many of the top ophthalmic companies in optometry.

Social functions for the Congress included trips to King's Manor (a medieval setting with comedy and dining), Second City (a comedy take-off resembling Saturday Night Live), a Gangster Party (sponsored by the AOA), and Illinois College of Optometry (tour of the newest and oldest optometric institution).

The agenda for the banquet included an elegant dinner followed by a presentation by the immediate past president of the AOA, Dr. Albert Bucar; awards; introduction of the newly elected executive council of AOSA; and a few surprise presentations. Awards given at the AOSA Congress recognize those individuals who have risen to the top of the student association with respect to their dedication and willingness to serve optometry. Michelle Lesko-Staarmann (OSU), Linda Ching (SUNY), and Jari Frazier (NSU) received this year's Awards of Merit, presented to those individuals who have served AOSA in a special capacity. A special gift was presented to Carol Freihaut, Executive Director of AOSA, for her continued dedication to the student association and to the optometric profession.

The Ray Meyer Award signifies the highest honor given to an individual who has given to AOSA in such a way that the student's dedication, hard work and drive will be remembered for many years to come. This award is given at the discretion of the AOSA Board of Trustees, and is not presented every year. This year the board selected an individual who has worked very hard for the students in voicing their views on expanding the role of AOSA to optometry and in giving everything that could be asked. The Ray Meyer Award was presented to Beth Kneib (SCCO), president of AOSA.

The presentations and awards were closed with the local congress commit-

tee presenting Linda Weil with a beautifully framed poster of the Chicago Congress. Students, administrators, practitioners and guests reflected on the week of learning and sharing before rushing to resume school schedules.

In addition to regular business sessions, the AOSA board elected a new Executive Council. Elected president was Eric Hebert, a student at the New England College of Optometry. Other council officers are Robert Hayes, University of Alabama in Birmingham, vice-president; Bill Orren, Pennsylvania College of Optometry, treasurer; and Joseph Schkolnick, SUNY State College of Optometry, secretary. The new council assumed office March 1.

Now that the congress experience is over for the Chicago crew, the work begins for the Philadelphia committee (1987) and for the newly selected Berkeley committee (1988). Thanks to a fine job done by Linda and the local congress committee many individuals can better appreciate the exciting and growing profession that they have selected. It is due to an experience like Chicago that students and the profession can broaden their knowledge and their INSIGHT INTO EYESIGHT.

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Mark Nakano, a student at Pacific University College of Optometry, is the AOSA liaison to ASCO.

The Application of Management by Objectives to Clinical Education

Nancy Carlson, O.D., Depew M. Chauncey, O.D., Ph.D.,
James P. Comerford, O.D., Ph.D., Celia Hinrichs, O.D.,
Lester Janoff, M.Ed., O.D., Janet Lemoine, O.D.,
Henry Woodcome, O.D., and Mark Zorn, O.D., Ph.D.

Preface

The goal of an optometry program is simple: to develop "good" clinicians. Achievement of this goal, however, is complex. What are "good" clinicians, and how are they developed? The New England College of Optometry (NEW-ENCO) recently attempted to confront these questions in the course of restructuring its fourth year program into an entirely clinical form.

This task was assigned by the dean of academic affairs to the curriculum area coordinators, a committee composed of eight faculty members, two assistant deans and the director of clinical services. The eight faculty members were elected by the full faculty to represent the four curricular areas under which the school is organized: refraction and sight, binocularity and visual performance, ocular health and disease, and patient care management. Each area is represented by two faculty members, one whose teaching responsibilities are primarily clinical and one whose teaching responsibilities are primarily didactic.

The authors are all on the faculty of the New England College of Optometry. Nancy Carlson, O.D., assistant professor, teaches basic theory and methods. Depew M. Chauncey, O.D., Ph.D., is assistant professor and assistant dean of academic affairs. James P. Comerford, O.D., Ph.D. is an associate professor of physiological optics. Celia Hinrichs, O.D., is a specialist in the area of strabismus. Lester Janoff, M.Ed., O.D., is professor of optometry and director of clinical programs. Janet Lemoine, O.D., is associate professor and assistant dean of academic affairs. Henry Woodcome, O.D. is an assistant professor. Mark Zorn, O.D., Ph.D., is associate professor of biology.

The task was twofold: first, develop a strategy to enumerate the characteristics peculiar to a "good" clinician, and choose from among these characteristics those which could be developed. Secondly, describe a process which would marshall the diverse constituencies of the College (faculty, didactic and clinical; administrators; and students), and focus their energies on providing what students need to become "good" clinicians.

A "good" clinician is defined in response to the local conditions defining optometric care in New England. Ninety percent of the entering class originates from New England, New York and New Jersey and 80% of the graduates practice in these areas. Delivery of care in these areas is pluralistic in terms of both system and patient. Graduating clinicians should understand the importance of who the patient is, how the patient lives, and how he or she seeks and attains eye care at about the same level as they understand anomalies of the visual system. None of this can be learned from texts; all students require exposure to many patients in varied delivery settings. Although it is essential that clinicians everywhere understand these concepts, it is possible, in those areas of the country where delivery of care is less pluralistic and populations are more homogenous, to narrow somewhat the exposure given to students.

While this paper describes a locally oriented system, it has broader implications. First, there are other optometry schools located in areas consisting of, as Boston does, a mosaic of circumscribed homogenous ethnic neighborhoods.

This patchwork reasonably describes the situation in New York City, Philadelphia and Chicago. The people in these neighborhoods are proudly different, with all facets of their lives being profoundly tied to and influenced by their varying heritages and traditions. Any health delivery system treating all groups the same is unmindful of the multi-cultural patchwork which is urban America.

The desire that NEWENCO students be exposed to vision anomalies of differing types (refractive, binocular, pathologic, low vision, etc.) and to different types of people and delivery systems has a long and distinguished history in health care education. Patient mix is maintained in medical schools by rotating students through all services, and in dental schools by requiring all students to perform a full set of pre-established procedures.

Health care systems have traditionally pandered to local concerns in large urban areas. The Neighborhood Health Care Systems, delivering care in Boston and New York, were founded on this principle. Medical education emphasized it and still does. The exposure to patients of different ethnicities is best described for medicine by W.C. Williams,¹ R. Coles,² and the members of the Project Panel on General Professional Education of the Physician and College Preparation for Medicine and members of the Project Staff,³ and R. Hingston.⁴ The desirability of pluralistic delivery in health care has been adequately defended by I. Illich,⁵ and P. Drucker.⁶ For optometry, the issue has been delineated by L. Clausen.⁷

This paper further describes not only our particular "good" clinicians but the process developed to ensure their maturation. A local optometry school must provide adequate books, facilities, faculty, coursework, patient populations and delivery systems.

To understand refraction, a student must see myopes, hyperopes, aphakes, patients with binocular problems, etc. To understand patients' mores a student must see first hand how different patients present and comply with treatment. As one patient with a primary complaint of headache eloquently expressed it, "How can you get at my pain if you don't know where I'm at?"

To understand how type of delivery influences access, patient compliance, disease prevention, etc., a student must be exposed to differing types of delivery. The current myth that localized general practice is the best and most ethical way to deliver care can be explored only after adequate exposure. How much private care is experienced in underprivileged areas? What alternatives exist? Can exposure to other delivery formats influence career choice? Other opportunities should be afforded within the professional curriculum. Students should experience the pleasures and hardships of practice opportunities first hand. The process developed at NEWENCO describes how to locally define what a school wants; how to decide what a school must provide to students so that they have the opportunity to develop in the manner prescribed; and how to monitor the system and adjust it so as to increase the proportion of students approximating the ideal.

The following sections describe how NEWENCO moved from opinions through consensus to develop goals and objectives which contain measurable mechanisms to monitor progress. The paper stops short of describing how the objectives were turned into work plans with assigned responsibilities and delivery deadlines.

Since submitting this paper, an article with a very similar perspective appeared in *Health Care Management Review*,⁸ further substantiating the breadth of this approach.

Introduction

The process was begun by gathering opinions on the characteristics of a "good" clinician. Materials consisted of documents from the Association of Schools and Colleges of Optometry (ASCO), representing a national perspective; NEWENCO documents (the school charter, clinical goals and objec-

tives, etc.), representing a local historical perspective; and many long and arduous discussions, individually and in groups, with members of the faculty, the administration and the student body of NEWENCO, representing current thought at the College. From these opinions came our understanding of the particulars which constitute the "good" clinician. Importantly, these characteristics represent a considerable consensus. All elements of the College contributed toward their development, helping to ensure that implementation would proceed smoothly and without opposition.

The opinions collected indicated that a clinician should develop along three axes: knowledge of anomalies of the visual system including refractive errors, binocular dysfunctions, and tissue pathologies; knowledge of the influence of people and culture on disease presentation, diagnosis, treatment, course, and outcome; and knowledge of systems capable of effectively delivering optometric services. (The consensus reached at NEWENCO in achieving this balanced humanistic approach using both classroom and clinic is believed to be unique.) Too often the psychological, social and management delivery aspects of optometry are left where they were learned—in the classroom.

Once the particular characteristics were agreed on, the committee attempted to determine what the students needed to develop these skills. To understand normality and anomaly students needed to examine an adequate number of patients presenting a rich variety of both simple and complex conditions. Ideally the complexity should increase as the students' capabilities grow. To understand people and culture and their influence on abnormality, the students need patients from various cultures and socio-economic conditions. To understand how to deliver care, the students need exposure to a variety of health care delivery systems. Each elusive characteristic was in this way translated to a need-oriented goal.

These goals, however, remained qualitative and unmeasurable. These quantitative standards—the optimal average numbers and ranges, established as primary objectives within each goal—were established to anchor the program, set up an evaluative feedback mechanism allowing a comparison of the idealized design with the existing clinic situation and make timely modifications as dictated by the constraints imposed by reality. The system will be examined at timely intervals to determine if the design is working. If the design is

not working, the standards will be modified (if they seem naive, unrealistic, or poorly conceived) or the plan will be changed in order to move closer to the quantitative standards.

The last step is extremely important. An ongoing comparison between the design and the reality of the plan dramatically increases the probability of bringing this system to fruition. This process should allow us to fit the clinical education to our particular "good" clinician ever more precisely (Figure 1).

Overview

At NEWENCO the change-over to these new curricular goals began with a redesign of the curriculum in the fourth professional year. This design would necessitate numerous changes in all other years: curricular elements would have to be moved; the approximately fifteen didactic credits formerly taught in the fourth year would have to be relocated within the first three years; the public health and practice management areas of the curriculum would have to be redesigned to support this program; new faculty would have to be hired and older faculty retrained; new clinical facilities, and an increased number of affiliated clinics responsive to central control by NEWENCO would have to be developed; and the clinical program is years one and two would have to be revamped. These projects are ongoing. This paper describes the first step of the new design, "The Fourth Clinical Year."

A completely clinical fourth year has as a primary goal the exposure of the students to a variety of practice settings and an increased volume of patients with a greater diversity of problems from a broader expanse of environments. To provide the optimum in clinical education these opportunities must not only be available to the fourth year student, but the second and third year curriculum must prepare the student to take full advantage of the exposure that will be provided in the fourth year. The success of a clinical fourth year places a grave responsibility upon the earlier training, both clinical and didactic, to prepare the student both theoretically and methodologically.

The program is focused so as to provide students with:

- optimal exposure to patients (*Goal I—Patient load*)
- optimal exposure to diverse problems (*Goal II—Patient mix*)
- optimal exposure to range of social background (*Goal III—Social awareness*)
- optimal exposure to a range of

delivery modes (*Goal IV-Practice Mode and Management*)

- optimal opportunity to develop and mature (*Goal V-Expected student behavior*)

The patient care experiences that will provide the diversity desired consist of specialized as well as general optometric services. The student should primarily provide general care, but have the opportunity to test specialized practice if he or she so desires. The settings in which this care is delivered can also vary from the office of a solo practitioner to a large multidisciplinary health center. There should be an adequate mix that allows the student to select, as a fourth year clinical rotation, a private practice or a practice which is part of a multidisciplinary setting. Settings in underserved communities and poverty areas are desirable. Even foreign settings are of value.

The same variety of practices as described for general optometric care services is applicable to specialized experiences. Specialties available should be in Pediatric Care, Geriatric Care, Vision Training, Contact Lenses, Low Vision, and Industrial or Environmental Vision. These opportunities should vary as well from the solo practice to the large multidisciplinary health center.

For each of these goals, optimal average numbers must be defined, and a plan instituted to encourage the College toward their provision to the student.

- O.A.E. = optimal average number of encounters
- O.A.M. = optimal average patient mix
- O.R.B. = optimal range of backgrounds
- O.A.S. = optimal average number of settings

These, then, are program objectives (which direct program growth) within each goal. Educational objectives (which direct the maturation of student behavior) are then defined in tandem with program objectives to ensure that students benefit maximally from the proposed increases in the various patient care parameters. Program and educational objectives are inextricably intertwined. While each leads to a separate task, both must be interwoven if the goal is to be firmly knit. Within each goal, program and educational objectives are suitably delineated. Goal V (expected student behavior) combines the educational objectives developed in Goals I-IV and collects some of the educational instruments in current use at the college which might help in the achievement of these objectives.

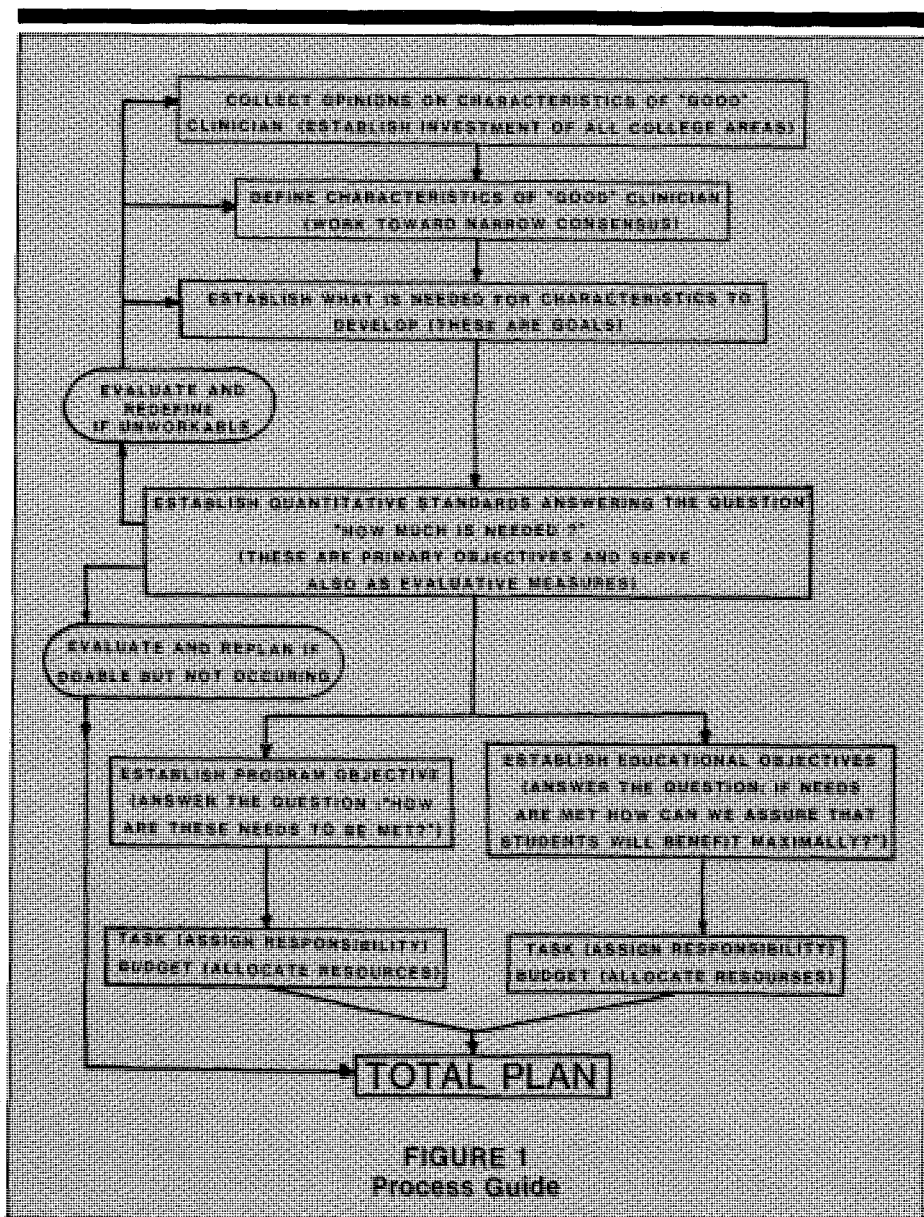
It is immediately obvious that providing the student with the opportunities described entails a widespread clinical system. Providing only one centrally located clinical site to which patients of all ethnicities come for treatment distorts the delivery system, and does not guarantee equal access. Having one centrally located system with multiple modules mimicking the modes of care available in the local community is feasible, but is certainly not preferable to a "real" world experience.

This widespread clinical system creates, however, a problem of control. How is NEWENCO to ensure that its instructors are providing the type of educational experience which the school desires? NEWENCO is currently engaged in studying possible solutions to this problem using methodology similar to the process described here. In order to meet the goals set forth in this paper, NEWENCO must hire faculty who are experts at patient care and who are fine teachers, sensitive to the needs of college, profession, patient, and student. Planning to attract, keep, and develop such individuals is the subject of future reports.

Goals, Rationale, and Objectives

The following section presents concrete examples of the goals, rationale, and objectives developed at NEWENCO. While it is felt that the specifics are well chosen and illuminating, the process is more generally applicable.

The goals are chosen in such a way that they remain general but are translatable into measurable objectives. These goals are broad enough to subsume all parameters necessary to educate students clinically.



The objectives focus on the general goals, always providing the data needed for feedback control. In addition, the objectives separate clearly the tasks needed to accomplish the goal. These objectives can be focused by translating them onto monthly planning charts called Gantt charts. (In the Gantt charts, each objective is broken down into specific assignable tasks; each task is assigned and the completed work is due at a specific time. An example is given in Figure 2.) Each objective was delineated to make the assignment of responsibilities and the commitments of time clearly divisible among the various college personnel. The actual tasking sheets have been omitted as being too personal to NEWENCO.

Goal 1—Increased Patient Load: To increase the number of patient encounters in the fourth year.

Rationale:

NEWENCO accepts the Association of Schools and Colleges of Optometry's (ASCO) guide for Curriculum Planning and Implementation which defines the primary care optometrist as "a health care practitioner who participates as a member of the primary health care team in providing for comprehensive health care, health maintenance and health education and [as] a primary vision care provider with the responsibility to prevent, detect, diagnose, treat, and/or manage visual and ocular problems, to enhance visual performance, and to provide vision and ocular health education and a continuing program of vision and ocular care."⁹

As the role of the optometrist has changed over the last few decades, there have been increasing demands for the graduating optometrist to be proficient in a wider array of diagnostic techniques and treatment modalities. Clinical programs must prepare students to deal with all patient problems within the scope of the primary practice of optometry—to be proficient in the delivery of routine care, competent in the provision of care for common specialty problems, and capable of making appropriate referrals to specialists for less common and more difficult problems. The student should be provided with the patient load which optimizes both learning and patient care. Students should function at their highest level of skill; they should assume as much increased responsibility during this year as their improving capabilities dictate. Ob-

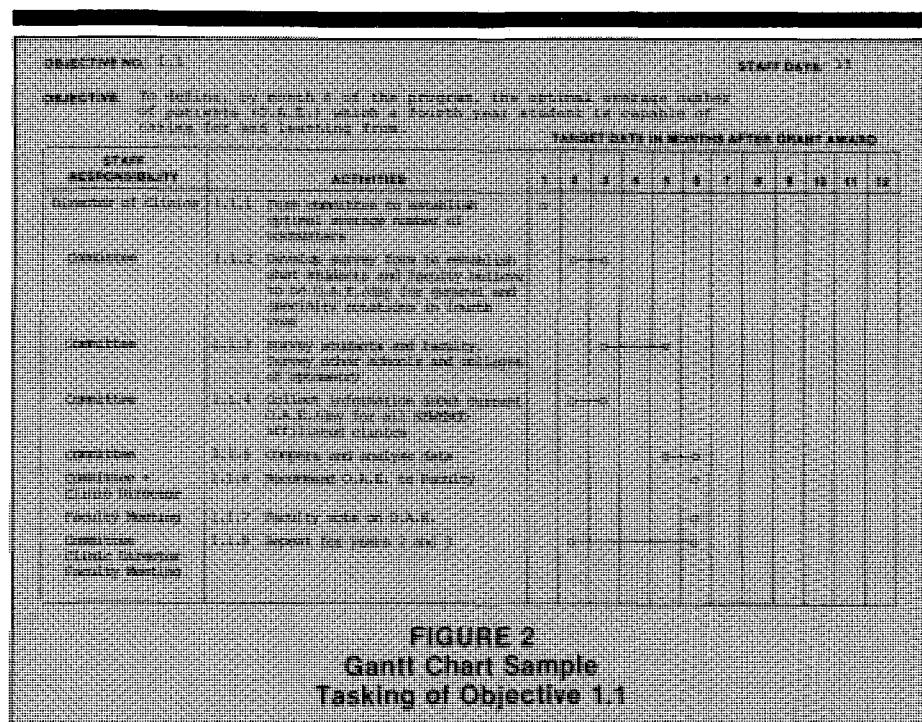


FIGURE 2
Gantt Chart Sample
Tasking of Objective 1.1

jectives were set which were intended to push the clinical system toward the provision of an optimal average number of encounters (O.A.E.)/student and to enable students to accept the burden of increased responsibility for patient care. O.A.E. should be defined for other years as well. O.A.E. is an educational objective, and it should be based solely on what the student is able to accomplish.

Objectives:

Program Objectives

1.1 To define, by month six of the program, the optimal average number of patients (O.A.E.) which a fourth year student is capable of caring for and learning from.

1.2 To provide, by year five of the program, a patient load within 10% of the pre-determined O.A.E. (By year one, the patient load objectives should be set 50% above current levels.) Realistic time frames must be delineated. The actual time noted here is specific to NEWENCO.

Educational Objectives

1.3 To encourage the student to accept broad responsibilities in the diagnosis, management and treatment of general optometric problems.

1.4 To encourage the student to accept the burden of care; to worry about patients; to provide adequate encouragement and follow-up treatments, and to use fully the social, family and neighborhood networks available for the care of the patient.

Goal 2—The Patient Mix: To vary the mix of patients seen by average students so that they encounter cases that are more specialized, varied and complex.

Rationale:

Optometrists must be able to deal with more than the general patient. Increasingly they are called on to manage the visual problems of specialized populations—children, the elderly, the low vision patient, the contact lens patient, the patient in need of vision training and the patient with multiple complex problems of the visual system. To ensure continued growth of skills in this area, NEWENCO must provide its students not only with adequate didactic material, but with adequate clinical opportunities as well. The fourth clinical year should seek to define the optimal average patient mix (O.A.M.), along with the parameters of specialty, variety and complexity, and seek to balance clinical affiliations so as to ensure that this mix is provided.

Objectives:

Program Objectives

2.1 To develop by the sixth month of the program a measurable definition of O.A.M., and by use of this definition to assess clinical needs at NEWENCO. O.A.M. should be defined for other years as well. O.A.M. is an educational objective, and it should be based solely on what the student is able to accomplish.

2.2 To develop and initiate by the end of the first program year a plan to satisfy the defined clinical needs by year five.

Educational Objectives

2.3 To increase the students' level of skill in providing specialized referral sources for complex optometric, ophthalmological or general health problems.

Goal 3—Social Awareness: To increase the students' exposure to patients of different ethnic, racial and social backgrounds.

Rationale:

Successful resolution of optometric problems often hinges on correct understanding and management of the social, racial, and ethnic characteristics of the patient. Understanding the effect of these factors on case presentation, on possible treatment modalities, and on patient compliance requires practical experience with a large variety of people.

Objectives:

Program Objectives

3.1 To define, by program month six, the optimal range of different backgrounds (O.R.B.) to which a student should be exposed.

3.2 To assess, in program year one, our clinical needs vis-a-vis the provision of defined adequate exposure, and to initiate a plan to satisfy these needs by the end of year five.

Educational Objectives

3.3 To increase our students' exposure to populations of varied socioeconomic, racial, and ethnic backgrounds, and to develop their ability to enlist appropriate support services (professional and non-professional) as an aide to patient management.

Goal 4: Practice Mode and Management: To expose students to clinical care, practice management aspects and career opportunities available in different practice modes—neighborhood health clinics, hospital based optometrists, H.M.O.'s, interdisciplinary groups, and private practices.

Rationale:

Optometrists practice in a variety of

settings. Although by far the greatest number practice as solo practitioners or as part of a small optometric group, there are increasing opportunities for optometrists to practice in an interdisciplinary setting, as a member of an H.M.O. or in a hospital based or neighborhood health center based clinic. These modes frequently vary as to the intention of care provided, the scope of care provided, the opportunity for involvement with others and the management and opportunity for financial reward. As students are educated to provide care, they should understand the economic and other issues involved in the provision of care. Exposure to these issues demands clinical as well as didactic experience.

Objectives:

Program Objectives

4.1 To define, by program month six, the optimum average number of settings (O.A.S.) to which a student should be exposed.

4.2 To develop a plan, by program year one, to assure that this mix occurs by program year five.

4.3 To plan and initiate by program year one, a practice management practicum as part of this program. The student shall be taught how a clinical site is managed. To whom is care provided? How is the provision of care financed? How does this practice fit into the overall provision of health care in the United States? How has this practice grown? What is its future?

Educational Objectives

4.4 To plan ways, by program year one, to develop a student's identity and confidence as a provider and member of the health care team.

Goal 5—Expected Student Behavior: To develop students' behavior so that they become conscientious and careful providers of care to all social groups.

Rationale:

The provision of rich and varied clinical experiences to students should allow them to become proficient providers of primary care; proficient in the delivery of routine care; competent in the provision of care for common specialized problems; capable of making appropriate referrals to specialists for less common and more difficult problems; experienced in team-interactive aspects of health care provision; understanding of the individual peculiarities of different

social groups; and cognizant of the practical aspects of managing a practice. Toward this outcome the following expected student behaviors are proposed. The educational objectives of our previously stated goals (I-IV) are restated below. Methods in current use at NEW-ENCO which might lead to their attainment are included for each goal.

Objectives:

Educational Objectives

5.1 To encourage the student to accept broad responsibilities in the diagnosis, management and treatment of general optometric problems (see 1.3).

5.1.1 For each patient the student will take a complete case history, identifying the patient's chief complaint and outlining the appropriate historical data base.

5.1.2 Based on the patient's chief complaint, the student will select the appropriate tests, beyond the defined data base when necessary, for the differential diagnosis.

5.1.3 For each initial examination the student will write a problem list and a plan list.

5.2 To encourage the student to accept the burden of care, i.e., to worry about his/her patients; to provide adequate encouragement and follow-up treatments, and to use fully the social, family, and neighborhood networks available for the care of the patient (see 1.3).

5.2.1 The student will treat each patient as an individual and will provide treatment, education and follow-up care with due respect for the social milieu in which the patient lives.

5.3 To increase the students' level of skill in providing specialized care and to develop their ability to select specialized referral sources for complex optometric, ophthalmological or general health problems (see 2.3).

5.3.1 The student will make referrals to appropriate sources (medical, professional or non-professional) where indicated.

5.3.2 The student will keep a record of the patient's problems and special features on the "NEWENCO patient encounter form."

5.4 To increase our students' exposure to populations of varied socioeconomic, racial and ethnic backgrounds, and to develop their ability to enlist appropriate support services (professional and non-professional) as an aide to patient management (see 3.3).

5.4.1 The student shall assume the burden of care, making each patient comfortable and providing the most appropriate care.

5.5 To plan ways, by program year one, to develop a student's identity and confidence as a provider and a member of the health care team (see 4.4).

5.5.1 The student shall be taught how a rotation is managed. To whom is care provided? How is the provision of care financed? How does this practice fit into the overall provision of health care in the United States? How has this practice grown? What is its future?

Conclusion

Recognizing that students would benefit from increased clinical exposure, NEWENCO recently redesigned its curriculum so that the fourth year of the program became entirely clinical. To facilitate this change a particular "good" clinician was defined. Goals were formulated outlining what a clinic must provide to its students in order to maximize the opportunities for clinical maturity to develop. The delineation of threads necessary to weave this clinical fabric (the goals), the focusing of these

elements toward specific task assignments and budgets (the objectives), and the development of quantifiable measures (optimal average numbers) which allow programs to be monitored and tears to be mended, are of general applicability to planning a clinic serving both patient and student needs. The specifics of the plan (the choice of parameters) can change the style, but planning can only strengthen the fabric.

When instituted the program will be evaluated yearly. It is evident that for the program defined here to be successful, it must be supported by changes in the didactic curriculum. NEWENCO is now reexamining didactic curriculum elements in Public Health, Management, and Psychology with an eye toward aligning them so as to provide maximum support for the fourth clinical year. □

Acknowledgments

We wish to express thanks to Barbara Walkowiak for expert secretarial assistance,

to Eileen Roche for designing the figures, and to Dr. Larry Clausen for his generous support of this effort.

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(continued from page 6)

the largest such agency in New York State, serving a principally minority population. Council services are provided free of charge to all who qualify under federal and state guidelines and to those under 21 years of age.

Dr. Haffner served as the first president of State University College of Optometry in Manhattan before joining SUNY's Central Administration in Albany in 1978. "I have always believed that the public administration of health services is one of the most important aspects of community health," the State University vice chancellor said.

SUNY Announces New VP for Student Affairs

Joseph Curran, Jr. has been appointed vice president for student affairs at the State University of New York's College of Optometry. Prior to joining the College, Curran was Director of Enrollment Management at Fairleigh Dickinson University in Madison, New Jersey where he served as the liaison between the chief operating Officer and five administrative units. He also developed a team model and trained faculty, staff and student volunteers for academic advising. During his tenure,

the Freshman enrollment was increased by 13 percent and Fall to Spring attrition was reduced by 50 percent.

AOF Announces Orient Tour '86

The American Optometric Foundation has announced an 18-day trip to Tokyo, Nagoya, Kyoto, Singapore,

Bangkok, Hong Kong and Canton. The price is under \$3000 and includes all air and ground transportation, tours, first class accommodations, lunches and dinners, and seminars and technical visits. For a brochure, write AOF Orient 86, 684 Whitehead Road, Trenton, New Jersey 08648.

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Based upon current tax laws it is the opinion of AOF's certified public accounting firm that this tour will be deductible for optometrists as an educational expense. AOF suggests that tour participants consult with their own tax advisor for the best way to handle this on tax returns.





The University of Benin Optometry Program

I.K.O.K. Kragha, M.Sc., Ph.D.

History

The University of Benin, Benin-City, Nigeria, West Africa, was established in November 1970 as the Mid-west Institute of Technology with an initial admission of 108 science students. On July 1, 1971, the Institute of Technology was accorded formal recognition as a full-fledged university by the Nigerian Universities Commission. This recognition had been accorded earlier by the Inter-Universities Commission of the United Kingdom. In order to eliminate the confusion caused by the choice of name the Institute of Technology was renamed the University of Benin in April 1972.

The University began with the faculties of science, engineering, medicine and pharmacy. In the 1984/85 session, it included the schools of postgraduate studies, dentistry and medicine, the faculties of agriculture, arts, creative arts, education, engineering, law, pharmacy, science and social sciences and the institutes of computer science, education and public administration and extension services. The total student population for the 1985/86 session is about 10,000.

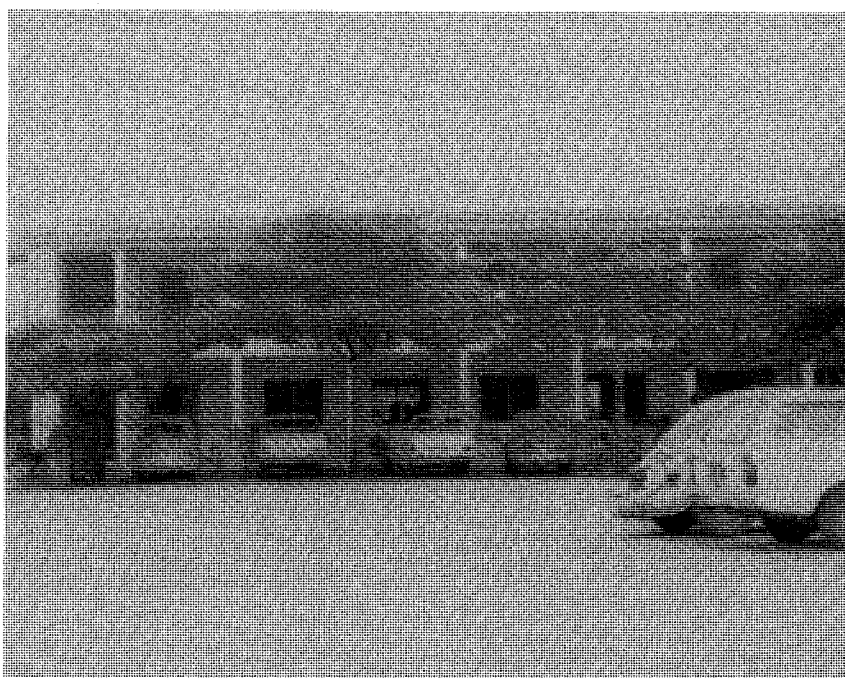
In the 1973/74 academic session, an optometry program began in the department of physics headed by Professor R.W.H. Wright. In November 1972, six out of the thirteen faculty of science students who attended an interview for admission into the newly established program were admitted. On January 7, 1974, the first lectures in the optometry program were given by Mr. A.O. Wickliffe in the then Iyaro campus of the university (presently the college of education, Benin-City). The optometric program started in the second term of the 1973/74 academic year. As a result of the late start of the program and shortage of staff, about 90% of the scheduled courses were completed at the end of the 1973/74 academic year. At this time the optometry curriculum was modeled after the syllabus recommended by the International Optometric and Optical League (IOOL).

At the beginning of the 1974/75 academic year, the present head of the optometry program, Professor P.O. Ogbuehi, returned from the Massachu-

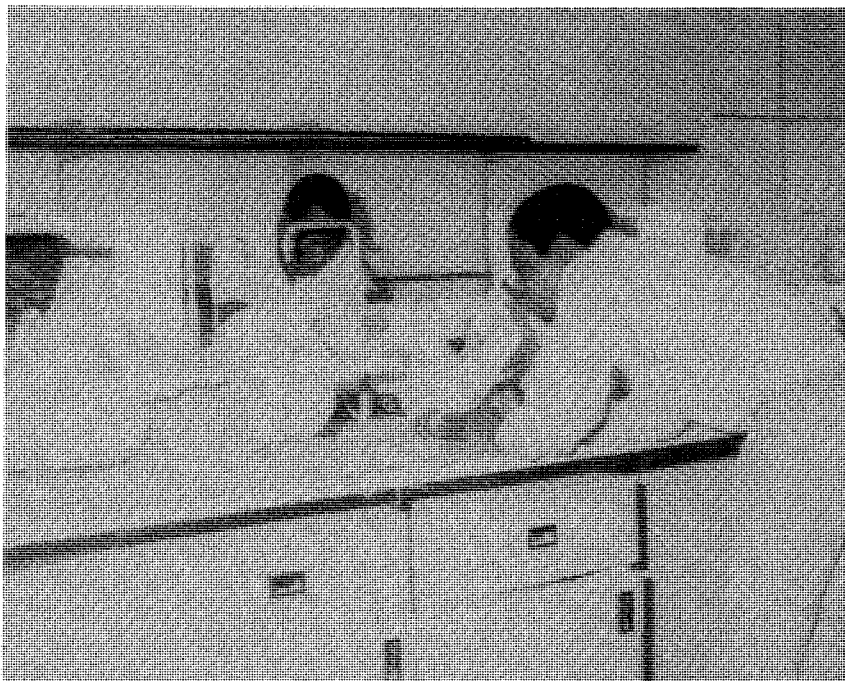
setts College of Optometry [now NEWENCO] in Boston following the successful completion of the accelerated O.D. program. Previously Dr. Ogbuehi had been an associate professor of physics at the University of Benin. Upon his return from Boston, Professor Ogbuehi revised the existing curriculum and modeled it in accordance with the syllabus used in North American

schools/colleges of optometry. This revision created minor problems for the first set of optometry students, some of which lasted until the students graduated in 1976. This curriculum was followed until 1983/84 when a modified syllabus was adopted.

The department of physics was renamed the department of physics and optometry during the 1978/79 aca-



The first lectures in the University of Benin optometry program were held in the upper floor of this block at the then Iyaro campus of the university (presently the college of education, Benin-City).



Some final year students in the ophthalmic lens laboratory.

I.K.O.K. Kragha obtained his M.Sc. in Ophthalmic Optics from the University of Manchester Institute of Science and Technology, Manchester, England in 1981 and received his Ph.D. in physiological optics from the School of Optometry, Indiana University in November 1985. Dr. Kragha is currently an assistant professor with the department of optometry, University of Benin.

demic year and in 1980/81, the optometry program became a separate department. In 1982/83 approval was given in principle for the establishment of a faculty of optometry. However, due to lack of resources, it has not been possible to convert the department to a faculty of optometry.

The B.Sc. degree in optometry is a 4-year program made up of one year of pre-optometry and three years of professional study. In the 1984/85 session, there were 38 students enrolled in the first year (100-level), 42 in the second year (200-level), 61 in the third year (300-level) and 47 in the fourth year (400-level).

Facilities

The department of optometry shares offices and lecture halls with the department of physics at the permanent site of the university, along the Benin-Lagos expressway, Ugbowo, on the outskirts of the city. The faculty of science moved from its temporary site at Iyaro, Benin-City, to its permanent site in 1979.

The main optometry clinic at Ugbowo is housed in several rooms. One room is used for reception. Four rooms (with eight examination units) are well equipped for patient consultation while one room has accessory equipment such as lensometers, radiuscope, etc. There is also a contact lens modification and ocular prosthesis laboratory, a dispensing room and an ophthalmic lens laboratory.

On November 24, 1983, an external clinic opened in the heart of the city along Airport Road. This facility has seven consultation rooms, a reception area and a dispensing room.

External Examiners and Visiting Lecturers

External examiners participate in all university programs in Nigeria. They are appointed for a fixed period of time, usually three years for undergraduate programs. External examiners approve all final year examinations before they are given and also read the graded scripts to ensure fairness and a standard of performance that is internationally acceptable. In addition, they make useful suggestions as to how the programs can be improved.

The external examiners who have participated in the University of Benin optometry program are:

(1) Professor R.J. Fletcher, Department of Optometry and Visual Science,

TABLE 1
Comparative statistics of the proportion of courses in visual and clinical sciences obtained from the curriculum outlines of the listed institutions

| Optometry program/location | Date | Proportion of courses (%) in | |
|--|------|------------------------------|-------------------|
| | | Visual sciences | Clinical sciences |
| University of Benin, Benin-City, Nigeria | 1984 | 39 | 61 |
| Indiana University, Bloomington, USA | 1983 | 27 | 73 |
| University of Houston, Houston, USA | 1982 | 41 | 59 |
| The Pennsylvania College of Optometry, Philadelphia, USA | 1984 | 28 | 72 |
| The City University, London, England | 1982 | 51 | 49 |
| University of Montreal, Montreal, Canada | 1975 | 36 | 64 |
| University of Waterloo, Waterloo, Canada | 1974 | 46 | 54 |
| University of Waterloo, Waterloo, Canada* | 1982 | 41 | 59 |

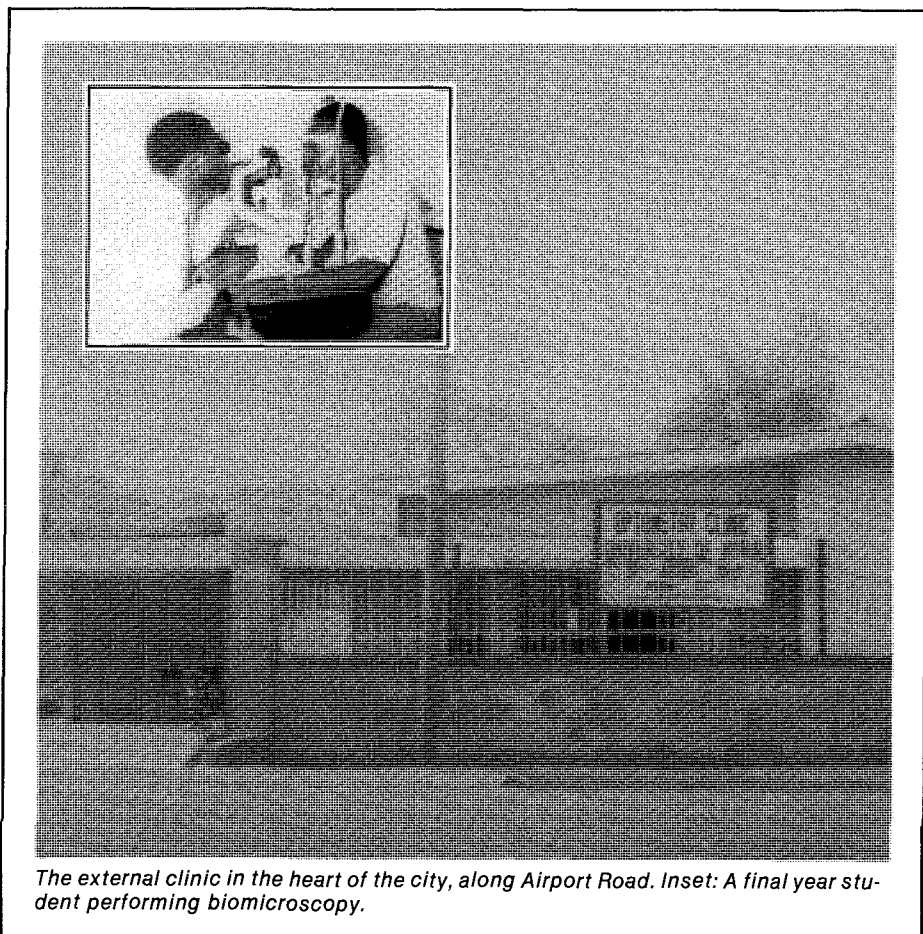
*from Dr. J.M. Wensveen, class of 1983.

The City University, London, England—1976 and 1977.

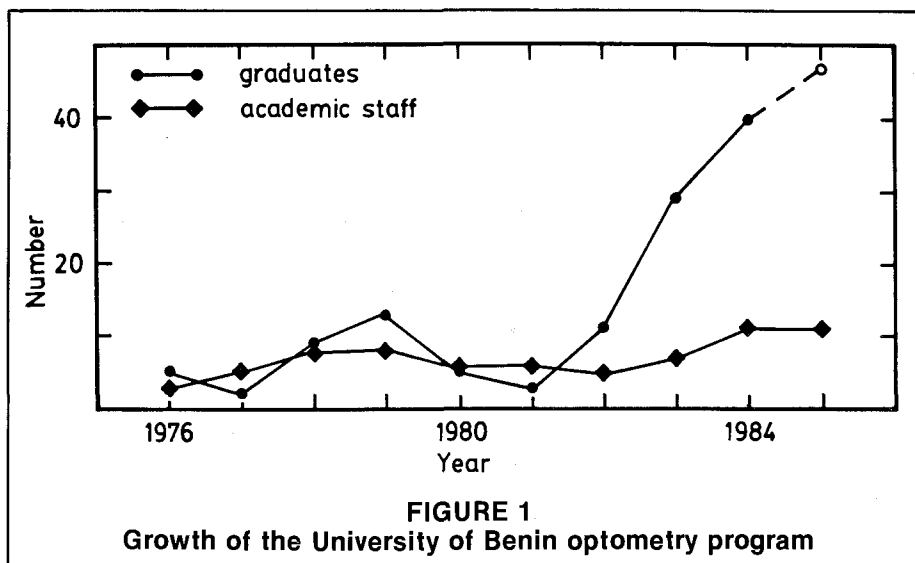
(2) Professor E.J. Fisher, School of Optometry, University of Waterloo, Waterloo, Ontario, Canada—1978.

(3) Professor W.R. Baldwin, College of Optometry, University of Houston, Houston, Texas, U.S.A.—1979, 1980 and 1981.

(4) Professor G.M. Dunn, Depart-



The external clinic in the heart of the city, along Airport Road. Inset: A final year student performing biomicroscopy.



ment of Optometry and Visual Science, The City University, London, England—1982, 1983 and 1984.

(5) Professor L.D. Pickwell, University of Bradford, Bradford, England—1985, 1986 and 1987.

Professor E.J. Fisher, a visiting professor to the optometry program for about three months each in 1976, 1977, 1979, 1980, 1981 and 1984, has also helped to recruit for the program fresh graduates of the School of Optometry, University of Waterloo, Waterloo, Ontario, Canada who, over the years, have contributed greatly to the development of the program.

Progress

Other departments in the faculties of science and pharmacy and the school of medicine teach several courses of the optometry program. Biochemistry, biostatistics, human anatomy, human physiology, pharmacology and all first year courses are offered by other departments.

At the start of the optometry program in the 1973/74 academic year, there was only one academic staff person not affiliated with the departments referred to above. In the 1985/86 session, there are 11 such academic staff (7 Nigerians, 2 from the Philippines, 1 each from Canada and U.S.A.) with an additional 5 Nigerians on training in Europe and North America. It should be noted that before the 1982/83 session, foreigners constituted a majority of the academic staff. In 1976, the first set of 5 students graduated from the program. In 1984, this number rose to 41. These impressive growth rates (Fig. 1) attest to the significant progress the optometry pro-

gram has made over the years. However, there is still room for improvement. For instance, the program is still greatly dependent on lectures with little laboratory work and library facilities are limited. The reasons for this are shortage of teaching and technical personnel, lack of equipment, finance and space.

Comparison to Other Optometry Programs

Table 1 shows comparative statistics on the proportion of courses offered in visual and clinical sciences. The table was derived from the curriculum outlines of the listed optometry programs and the choice of institutions was based on the availability of these curriculum outlines. As a result of the differences in course nomenclature and description and dates of publication, the figures in Table 1 are approximate.

The programs at Benin-City, Houston and Montreal devote about 40% of their courses to visual sciences and approximately 60% to clinical sciences. The London and Waterloo programs devote about 50% of their courses to visual sciences and the other 50% to clinical sciences. In Bloomington and Philadelphia, only about 30% of the courses are in visual sciences while approximately 70% are in clinical sciences. The differences between the proportion of courses devoted to the two broad groups of courses could be explained by the differences in the educational background of the persons who drew up the syllabus of the respective programs. The similarities in the proportion of courses devoted to visual sciences and clinical sciences are more

difficult to account for. It is possible that the majority of programs are tending towards establishing, on the whole, a universally standard optometry curriculum.

Looking Forward

The University of Benin optometry program is the first of its kind in Black Africa. Ahmadu Bello University, Zaria, in northern Nigeria attempted to start an optometry program in the late 1970's but was unsuccessful, probably due to a lack of resources. In 1981/82, Imo State University, Etti, in eastern Nigeria established an optometry program but since the 1983/84 session their students are being trained at the University of Benin optometry program. The University of Benin administration therefore recognizes the importance of the optometry program to the country and it is likely that the program will receive stable funding in years to come.

Prior to 1976 when the first students graduated from the optometry program, there were about 31 optometrists in all of Nigeria. In 1984, the estimated number of optometrists in Nigeria was 200; 117 (58.5%) of these are graduates of the University of Benin optometry program. The graduates have made an enormous contribution to the development of optometry in Nigeria and will continue to do so in years to come especially as the optometry profession struggles for governmental recognition by way of legislation. □

Acknowledgements

My sincere thanks to Professor P.O. Ogbuehi and Drs. F.E. Kio, M.T. Ukwade, J.M. Wensveen and Mr. R.D. Wilson, Department of Optometry, University of Benin, Benin-City for providing some of the valuable information used in this profile.

Correction

The correct title for the examination developed and administered in April 1985 by the International Association of Boards of Examiners in Optometry is the "Treatment and Management of Ocular Disease." The title was incorrect in the editorial in the Winter 1986 issue.

FACE-TO-FACE:

SYLVIO L. DUPUIS, O.D.

An Interview with JOE Editor John W. Potter

Sylvio L. Dupuis, O.D., was recently inaugurated as president of The New England College of Optometry. Dr. Dupuis most recently served as commissioner of health and welfare for the state of New Hampshire. Prior to that post, he had been president of the Catholic Medical Center in Manchester, New Hampshire. Earlier, he was mayor of Manchester. In an interview with JOE editor John W. Potter, Dr. Dupuis talks about his experience in the political, managerial and professional areas and explores his ideas on optometric education and the future of the profession.

JOE: Dr. Dupuis, how does an optometrist become a mayor?

Dupuis: A lot of my interest in politics came from being a trustee of the American Optometric Association. I ran for trustee in Philadelphia and was elected. Being a trustee gave me a chance to look at what was going on administratively in the Association, and learn about management, budget, long range planning, and organizational structure. When I ran for mayor, people said I was a pretty bright guy, but what did I know about capital budgets, etc. However, it was the experience of being involved with the American Optometric Association as a trustee that gave me the background and confidence to run for political office.

JOE: It must have been quite a decision to leave optometry to run for political office.

Dupuis: Well, it was, but I moved into the political world gradually. First, I became involved in community service to help build my practice. Then, I became an AOA trustee. As a trustee, I was traveling a great deal, and I had a family. I felt that the mayor's job would be rewarding, and that essentially it would be a Manchester, New Hampshire job. Naturally, there would be travel to the National Mayor's Association, the National Council of Cities, and a few other meetings in Washington, but it wouldn't be the same kind of travel as that required of an AOA trustee.

JOE: How did you get from the office of mayor to hospital administration?

Dupuis: Throughout my first term as mayor, I remained interested in the hospital system and in health care in general. I had been on the board of Notre Dame Hospital, and I chaired its board in the late 1960's and early 70's.

I had one term as mayor, and then was re-elected. During my second term in office, the bishop in our city was urging consolidation of our two Catholic hospitals, one of 150 beds and the other of 114 beds. The power groups were called together to consolidate the Catholic hospitals, and they founded the Catholic Medical Center. I was coming to the end of my second term as mayor, and was asked to serve on the board, as well as on its executive committee; meanwhile, a national search was begun for a new chief executive officer. I interviewed with the national search firm, and as I was leaving the interview I recall saying something very casual about how the job would be an exciting challenge for someone. I almost wished I wasn't mayor, so that I could pursue the position. The consulting firm from Washington, DC met the following week, and they announced that they had found their candidate if only they could get him to resign as mayor!

JOE: How did you go from merging hospitals to managing New Hampshire health care?

Dupuis: The Governor called one day to ask me if I would like to become

commissioner of health and human services, and I told him that I wasn't sure if the job was for me. I thought about the offer, and decided to take the job, following more extensive discussions with him and the commissioner whose term had ended.

While I was with Catholic Medical Center I had an opportunity to look at the state health care agenda. I had some doubts concerning (1) how the certificate of need process was operating, (2) medical liability, (3) care of the indigent in the new age of competition, and (4) long term care of the elderly. While I was commissioner, I chaired a Governor's task force on medical liability, and that report, with specific recommendations, came in during the last session of the legislature.

During the next legislature, task forces on long term care for the elderly and care of the indigent were formed. These task forces were targeted to develop a legislative program. Our certificate of need law was totally revised to fit a more competitive mode, so that the state now says to the provider community that we think there should be 50 psychiatric beds in this city or this area and we are going to put out a request for a proposal on that basis. The state takes the position now that we will pay for services to the indigent, and we work through Medicare for long term care for the elderly. Now we are not just payers; we are providers. As purchasers of care, we want to make sure that we

are getting a good value for our money. It was really a different kind of approach, and that model law is being examined by almost every state in the country.

JOE: *How did you go from commissioner to president of the New England College of Optometry?*

Dupuis: I felt that when the next legislative session ended, that I could stay on for a longer time, but that I had really accomplished my basic agenda, as well as the agenda the Governor had asked me to pursue. When the office of president of the New England College of Optometry became vacant because of Dr. Dow Smith's retirement, contact was made with me, and I met with the search committee. They were interested in my coming to the College, and an offer was made. I discussed the offer with the Governor, and he was supportive. I resigned my position as commissioner of health and human services in New Hampshire, and came to the College.

JOE: *In jest, I must say that you do resign a lot.*

Dupuis: (laughter) Well, in some respects, yes. You see in these types of management positions, there really is no beginning or end. You can go on forever and there will always be a fresh agenda with fresh things to do. However, often you set some specific goals that you want to accomplish. I did that in city government. When I came to the mayor's office, we had a dreadful bus system. However, when I left, we had 26 new buses. And it really wasn't all that difficult. You set specific goals and you work toward them. I have never left a job saying, "Well, I wish I could stay because I have all these other things I want to accomplish." I recognize that someone else coming along can handle the challenges of the position, and they will have their own agenda with their own goals and priorities.

Coming to the College has provided me the opportunity to get back into the profession that I love. I think that, realistically, when I thought about becoming a practitioner again I had a lot of concerns about my skills. I felt that I would have to go back to bury myself in academia and clinical kinds of things for about six months to regain the skills essential to practice optometry in the 1980's.

JOE: *Speaking of optometry in the 1980's, Massachusetts will be getting its diagnostic drug bill this year.*

Dupuis: Yes, and I am proud to say that the College and the Massachusetts Society of Optometrists worked together on this legislation. We provided testimony and written documentation, and have been supportive both formally and informally.

My sense of it is that in future legislative areas the schools and colleges of optometry, with their resources in research and staff, will need to take a leadership role in deciding what the profession is going to be and what its destiny is.

JOE: *That is an interesting comment. There are many people in education who feel that these issues are not their responsibility. They feel that those burdens fall upon the individual state associations, the American Optometric Association, and others.*

Dupuis: I suppose it depends on whether you call it a burden, an opportunity, or a challenge. I don't mean to say that education should move the profession beyond where it wants to be. Once a course has been charted by the American Optometric Association and the state societies, then we have an obligation to support those activities.

JOE: *Are you looking at co-management centers?*

Dupuis: Yes, we are. However, the co-management centers need to be an educational experience. Potentially, these centers can become a major learning opportunity. A student gets the opportunity to see some incredibly uncommon eye problems, but that may not be the reality of office practice in optometry. The students need to be exposed to practical educational experiences, not the rare and exotic. Our students need exposure to co-management centers at a level that creates mutual respect between optometry and ophthalmology. The interface between the two professions can be very challenging. Often, the professional interface is dismissed as a turf issue, but I don't believe that is the issue. I think that it is the issue of the patient receiving the best and most cost-effective care available. At one point, cost was not a factor, but now it is an issue in all of health care.

JOE: *It always seems to me that when I hear of turf issues between optometry and ophthalmology, I think first of economic conflict.*

Dupuis: Well, economics is certain-

"Our students need exposure to co-management centers at a level that creates mutual respect between optometry and ophthalmology. The interface between the two professions can be very challenging."



ly an issue. However, there is also the issue of competency and professional prestige. As an example: "Those guys don't have the competency; they can't use eyedrops. A real doctor can use eyedrops." I do think that diagnostic and therapeutic drug legislation changes what we do to some degree, and in some cases radically, but the laws also change the perception of what we do.

JOE: I understand that there is some mandatory referral language in the Massachusetts diagnostic drug bill. What are your feelings about that issue?

Dupuis: Yes, but it leaves the decisions to manage, consult, or refer up to the optometrist. That is, if you evaluate a condition that causes a certain vision problem, and there is no medical consultation, then you must document why the vision loss has occurred.

My sense of this goes back to the 1960's when I was on the AOA Board of Trustees. We talked about some simple but important issues, like freedom of choice for both the patients and the providers. It was our feeling that optometry was a primary care profession, and that optometry must remain an independent point of entry into the health care system. We must safeguard that position. As an example, dentistry needs to take the same position. When the health care system thinks of dental care, they

should think of dentistry as the primary entry point. This is true for podiatry, and other health professions, also.

JOE: During the period of time that you have been away from active practice, we now are talking about therapeutic drug legislation. What are your feelings on that issue?

Dupuis: Well, I think the profession has to grow and mature. I don't know where it is stated that the definition for an optometrist is this or that, and nothing else. What we need to look at is what the skills and training are for those practitioners, and then have those qualifications necessary to practice a particular level of care. I think that always has to be balanced against where optometry started as a profession. We have to maintain a balance between our role in vision therapy, developmental vision, subnormal vision, and many other areas. We have to remember that there is a lot of opportunity for our profession in areas where we have been the dominant clinical and academic force.

JOE: What are your feelings about optometry's commitment in research?

Dupuis: We certainly need to be involved in research in all aspects of the profession. As educational institutions we should promote research. We need also to be involved in product oriented as well as pure research. We also need

to be more active in the field of scientific writing and publication.

JOE: What academic areas will you be placing emphasis upon?

Dupuis: I think that we have three very specific functions in optometric education. One of them is in the academic area. My sense of that area is that it goes a lot further than developing good academic skills. We need to think of education also in terms of preparation for life, or preparation for citizenship and leadership. We need human resource skills and human relations skills to be able to market what we do so that the patient will accept it, understand it, and tell others about the benefits they receive from us. We want our students to not only be able to demonstrate the technical aspects of optometric skills, but also to prepare for professional life. Students also need to develop the ability to balance human resources and interpersonal relationships against their professional life.

The second area of importance is in research. We need to not only look at traditional areas of research, but we need to evaluate new technologies and strategies to meet the expectations of our patients and the American public. We need to provide our faculty sabbaticals, when appropriate, so that they can investigate new areas of research. We need to get involved in our own interest areas, but we need to affiliate with other groups to do basic kinds of research. I think being in Boston with MIT, Harvard, Boston University, and other institutions is a real advantage to our college and our students.

The third area is clinical patient care management. As the profession changes, we have to get our student clinicians involved in an understanding of the skills necessary for patient care management. They need to develop skills to look at the visual system as part of the whole person.

JOE: I understand that for a time there were conflicts between the community of optometrists and the college's externship programs. Is that a problem for you as the new president?

Dupuis: Well, I don't think that it was a problem as such, but an issue to do with communication. My predecessor, Dow Smith, did a nice job of dealing with that issue by setting up a committee to examine the issue. The committee is composed of board members from the College, and practitioners from Massachusetts. It is designed to have the optometric community know and

"We need human resource skills and human relations skills to be able to market what we do so that the patient will accept it, understand it, and tell others about the benefits they receive from us."



understand what we intend to do, and have them participate in that process. We need to develop a strong clinical program of sufficient size to allow our students the patient contact required for them to develop their clinical and human relations skills. The Massachusetts Society of Optometrists has been splendid in those terms. The president of the College is invited to the executive committee meetings of the Society, participates in their meetings, and makes reports. The president of the Massachusetts Society of Optometrists is invited to our board meetings, and allowed full input into board deliberations.

We need to know that sometimes there will be areas of disagreement, but we are trying to minimize those. We are not out to capture the marketplace. We want our students to be out in a variety of settings and we are looking more and more at our preceptorship type programs. I don't intend for our relations with the community of optometrists to be a problem. I have said many times that I plan a "no surprises" administration. I want them to know what we are doing, and I want to know their concerns. With good communication, I think that we can both benefit. The optometric community is, after all, our fundamental base of support.

JOE: *What about your physical plant. Do you envision relocating in the future?*

Dupuis: We are looking very seriously at that issue. We are looking at the equity we have in these buildings, and whether they will serve 21st century optometry. Is this the appropriate site for those purposes? We have had a major expansion of our student population since moving to our current site but I do not anticipate that we will go beyond 350 to 400 students.

My concern is that we not focus totally on physical facilities. If we have management, clinical, or organizational problems, they won't go away with a different physical plant. I want to make sure the focus on physical facilities is appropriate. We are looking at various sites, but we are basically a Boston-based school. Boston is the hub of New England and its health care system.

Currently, we are looking at questions like the location of clinical and academic facilities at the same site. What is our present property worth? We have had our own property appraised so that we have some sense of its value. What will serve our academic needs best? We need to talk to the academic community



"I think this is an exciting time to be back in optometry. We have an incredible future in optometry in primary care, especially with all of the changes in the health care system."

to see what their needs are in terms of classrooms, etc. What attracts students to the New England College of Optometry? Is it the back bay area of Boston, student housing, or parking that is most important? We are establishing our priorities, and I feel comfortable with that process. Once we set our priorities, then I believe that at the appropriate time we will move to new facilities.

JOE: *What would you perceive to be your greatest challenge as the new president of the New England College of Optometry?*

Dupuis: I think it is patience. I need to recognize and understand that I have a lot to learn and that there are some incredible resources here at the College and in the profession to call upon. Also, it is being privileged to have an institution that is small enough to touch and feel, and to be able to meet with my own staff and faculty and students on almost a one-on-one basis to discuss things. The smallness presents some real advantages.

JOE: *What is the best part about your becoming president of the New England College of Optometry?*

Dupuis: Just being back in the profession again. It is most interesting to see what has happened in optometry since 1975. You know, it is often valuable to be away from the profession for a while. Then when you return you

really have an opportunity to see the growth of optometry. When I go to an AOA meeting now and hear the level of discussion among trustees and in the House of Delegates, versus that level in 1971, I see that we were just talking about things that are now taken for granted. So, I think it is really exciting to be back in optometry and to be a part of its future!

Actually, I never left. I stayed active in AOA affairs, either as a member or chair of a national committee. I will be active again as the chair of the new Inter-Association of Professional Affairs Committee in the new AOA structure.

I think this is an exciting time to be back in optometry. We have an incredible future in optometry in primary care, especially with all of the changes in the health care system. I feel as if we are moving toward a primary care system that in the 1960's and 70's got bundled into a monolithic system that was hospital based and tightly controlled. I see it growing into what is now becoming an "unbundled" system of care back to primary care and ambulatory health care centers. That is optometry's home, in the primary care centers as an independent, primary care discipline. I think that excitement is going to be very significant in moving optometry effectively into the mainstream of not just the eye and vision care system, but into the general health care system. □

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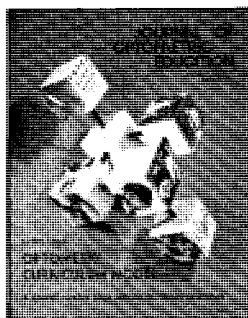
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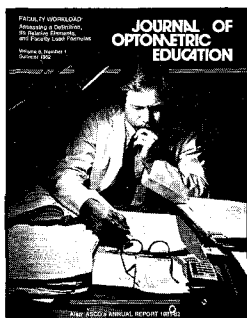
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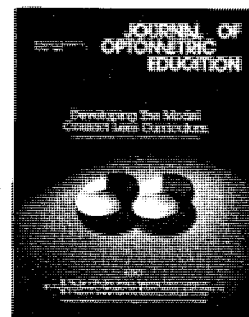
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Vision and Aging: General and Clinical Perspectives, Alfred A. Rosenbloom, O.D., M.A. and Meredith Morgan (eds.), Professional Press Books, New York, NY, 1986, 416 pp, hard-cover, \$60.00.

There has been an emerging body of knowledge that deals exclusively with aging and the particular problems associated with growing older (geriatrics/gerontology). Unfortunately, until recently there has been a relative dearth of material available for the optometrist concerning problems of the elderly. *Vision and Aging: General and Clinical Perspectives* is a multiple authored text that was written to address this need.

The text has contributions by 26 individuals with diverse backgrounds and gives the reader a comprehensive point of view of geriatric care and issues. Their expertise in such areas as optometry, ophthalmology, medicine, sociology, gerontology and psychology provides the reader with insights not only into the ocular and visual problems of the elderly, but it also addresses their psychosocial, economic and emotional needs as well. Consequently, not only does this book provide the reader with solid information concerning the aging eye, but it serves as a good overview to the problems of aging in general.

The book basically deals with three major areas of geriatrics. The first part is concerned with the general issues of aging. The opening chapters address the demographics and epidemiology of aging, the theories of aging, biological changes in aging, sensory losses of the elderly, socioeconomic aspects of aging and nutrition in aging. Chapter 2 is extremely interesting and deals with the values of aging in the United States and delineates the evolution of the negative and positive stereotypes of aging that many people have.

The second major area is concerned with the visual and ocular problems and conditions of the elderly. Chapters on the ocular implications of systemic disease, changes in the visual function of the aging eye, oculomotor signs of pathology, and ocular pharmacologic aspects in aging are well written and clearly stated. The chapter concerning the ocular diseases of the elderly is eloquently written and gives excellent descriptions of the ocular health evaluation. This chapter has one major flaw however. There are no provisions for

photographs of any of the entities described, which would have enhanced the text.

The third major area of the book is concerned with the examination, special techniques needed, management and care of the elderly patient. The chapters on low vision and the visually impaired are well written and comprehensive. Both offer helpful hints and tips on determining appropriate low vision aids. The chapter on special testing was clearly written and easy to understand as was the chapter on aphakia. Contact lenses and the elderly patient is a quite comprehensive and informative chapter and the chapter on fitting and dispensing spectacles for the aged patient is extremely useful and practical. There is a chapter devoted to the functional rehabilitation of the elderly patient that addresses aphakia rehabilitation—namely aniseikonia and anisometropia as well as visual field loss rehabilitation. Two chapters in particular are noteworthy in that they deal with vision care in the institution and home settings. These chapters address the how to, what's needed, and necessary modifications in order to examine patients out of the office. Extremely useful information is given explaining how one can become involved with providing eye care in the nursing home setting.

The lack of a primary care viewpoint is one major deficiency of the book. Reference is made by several authors regarding referral of patients for problems which are within the scope of today's informed optometrist. Many of the authors seem to be of a different philosophy or they reside in countries where legally it is not possible for optometrists to manage ocular problems other than visual. The whole concept of primary care optometry is totally ignored.

The text also fails to emphasize how optometry interacts with other disciplines. The optometrist as a team member on the interdisciplinary approach to geriatric care is glossed over and not given its due.

It is no longer a secret that the United States is now experiencing an aging of the general population. By the year 2030 nearly 25% of the population will be 60 years or older. With this increase in the number of elderly people, health care professionals will be examining more and more aged people. Optome-

try will be responsible for meeting many of the eye care needs of this population. The eye care practitioner must be aware of and know how to manage the visual and ocular conditions and problems specific to older age groups. This much needed book is a first to fill a void in optometry and is highly recommended to the clinician who is interested in the care of the elderly.

Guest Reviewer:

Gerald G. Melore, O.D., M.P.H.
Chief, Optometry Services
VA Medical Center
Vancouver, WA 98661

Virus Disease of the Eye, D.L. Easty, M.D., F.R.C.S. and 4 contributors. Year Book Medical Publishers, Inc., Chicago, IL, 1985, 350 pp., illus., hard-bound, \$59.95.

Virus Disease of the Eye is a collaborative effort by experts in virology and ophthalmology from England to cover recent advances in a field that interfaces both the ophthalmic community and microbiology. The first two chapters describe fundamental aspects of virology and immunology that are concise and easy to read but that may be of greater interest to the educator or researcher than to the student or practitioner. Chapter three provides an excellent description of the eye and its inflammatory responses which details the immunologic reaction of the cornea and conjunctiva to external disease to result in specific clinical presentations.

True to the text's stated emphasis, the next five chapters deal with herpes simplex viral infection, its virology, clinical aspects and management. Many diagrams and photographs serve to illustrate the varied clinical presentations of primary and recurrent herpes simplex infection. Discussion of available treatment modalities and medications is very detailed and extensive.

The remaining five chapters encompass other viral ocular diseases, including varicella, herpes zoster, the adenoviruses, fetal and neonatal infection, and acute hemorrhagic conjunctivitis. This last condition is likely to be encountered with increasing frequency in this country. In light of recent heightened public and health care professional awareness, a future edition of this text might well include a like discussion of the AIDS virus.

This text does a very good job of cov-

ering the complex area of ocular viral disease comprehensively, thoroughly and with readability. Thus, it is a very good resource for the educator and researcher as well as for the practitioner who desires an in-depth reference on this topic.

Guest Reviewer:
Linda Casser, O.D.
Assistant Professor
Indiana University
School of Optometry

Color Atlas of Ocular Tumors, Michael A. Bedford, Yearbook Medical Publishers, Inc., 35 East Wacker Drive, Chicago, IL, 1979, hard-bound, 72pp., illus., \$53.00.

This color atlas consists of 72 pages in which there are 221 color photographs of the eye and/or adnexa, two color histology photographs and one black and white skull x-ray. The text is divided into the following tissue categories of tumors: skin tumors, conjunctival tumors, uveal tumors (iris, ciliary body and choroid) and retinal tumors. All but a few of the photographs are of excellent quality. The format of the book is well designed and the text is prepared in such a way as to make it easy to read. Most of the text is presented as captions to the photographs which makes for brief and concise reading. I liked the presentation of multiple skin lesions in the differential diagnosis of basal cell carcinomas (figures 3-10).

Although the book is brief and concise, it could have been more informative with additional explanations about the different types of tumors. Therefore, I felt that the book was too pictorial in nature. As I have learned in the past, arrows always help the non-expert identify areas of interest in ocular photographs. The use of arrows in this book, especially in fundus photographs, would have greatly enhanced its effect on the reader. In a few locations in the book there are too many examples of a particular lesion such as retinoblastomas, the treatment sequence of a retinoblastoma (figures 187-192), ciliary body tumors into the pupil (figures 85-92) and many examples of radiation induced cataracts. Multiple photographs of a particular lesion are helpful but they should be distinctly different in some manner and not closely repetitive in appearance. I felt that other ocular tumors could have been discussed with a trimming of multiple photographs about a single lesion.

A minor irregularity in the book consisted of figure 174 which seemed rotated clockwise. Unfortunately, the

retinal tear in figure 106 and the retinal detachments in figures 201 and 202 are difficult to discern. Other helpful information in the captions would be the pointing out of retinal striae superior to the malignant melanoma in figure 97 and what looks like a posterior synechia in figure 217.

Finally, the book briefly covers the treatment of each of the lesions along with photographic documentation of such treatment. The book is a handy reference for many of the ocular tumors that may be encountered in an optometric practice. The price is very reasonable for an atlas containing 223 color plates. I would recommend the book to all of my optometric colleagues.

Guest Reviewer:
William L. Jones, O.D.
Veterans Administration
Medical Center
Albuquerque, New Mexico

Viral Diseases of the Eye, Richard W. Darrell, ed., Lea and Febiger, Philadelphia, 1985, 341 pp., \$46.50.

Written by clinicians as well as researchers, *Viral Diseases of the Eye* provides an excellent resource for current information in this rapidly growing area of eye care.

The book consists of twenty-seven well organized chapters covering eight of the fourteen virus families that are capable of affecting the eye. The Herpesviridae, including simplex, varicella-zoster, Epstein-Barr and cytomegalovirus are thoroughly covered in the first eleven chapters. Of particular interest is the discussion of cytomegalovirus. With the increase in immunosuppressant therapy and the incidence of acquired immune deficiency syndrome (AIDS), this previously rare congenital syndrome has become an important cause of disease in both adults and children. The remaining chapters are devoted to seven additional virus families, as well as a discussion of immunological mechanisms and the role of viruses in ocular tumors. Over 120 photographs, charts and tables supplement the text. Most of the photographs are black and white, with many being of a highly technical nature. Unfortunately, the clinically relevant pictures are of disappointing quality.

Viral Diseases of the Eye is significant for the practicing optometrist as well as the educator, providing a complete description of presentation, differential diagnosis and treatment of viral disease. A portion of the text is devoted to theory and current research as well. This book is not recommended for use

as an introductory text book, since the authors assume a working knowledge of viral eye disease. However, it is highly recommended for the advanced student or practitioner who wishes to broaden his knowledge of this important topic.

Guest Reviewer:
Stephanie S. Messner, O.D.
Illinois College of Optometry

The Pharmacological Basis of Therapeutics, Alfred G. Gilman, Louis S. Goodman, Theodore W. Rall, Ferid Murad (eds.), 7th edition, Macmillan Publishing Company, New York, 1985, 1839 pp., illus., hard-bound, \$65.00.

This classic of pharmacology texts continues to provide the serious inquirer with the basic mechanisms as well as clinical applications of systemic drugs.

Although no major organizational changes have taken place since the 6th edition, some authors have left, two new editors and several new contributors have joined the ranks. The basic qualities of the text remain intact. Those of us loyal to it are grateful for this.

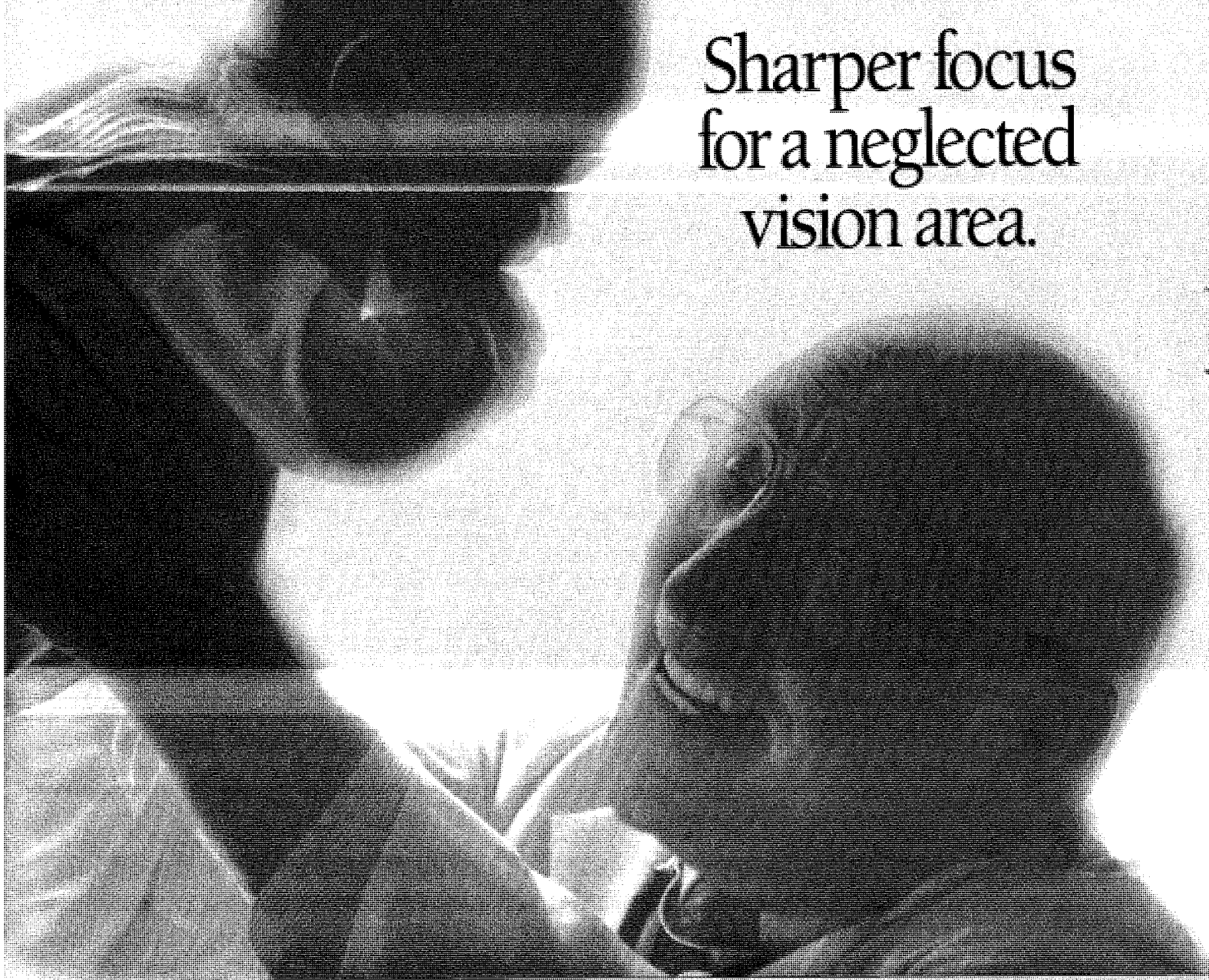
Section I, an overview of general principles of pharmacology, has, with the exception of Alfred Gilman, Jr., six new authors. This has resulted in some reorganization and expansion of topics, all for the better.

Palmer and Wiener continue to present a thorough and lucid rendition of autonomic pharmacology in Section II. Douglas has again done an elegant job with the autocoids. The same can be said of Flower, Mocanda and Vane's overview of the nonsteroidal anti-inflammatory agents. Other areas of interest, namely the central nervous system, cardiovascular, and hormonal drugs continue to be presented in a highly informative and clinically relevant manner.

This text remains authoritative and very readable, with no equal of its kind. The clinical applications of pharmacological agents are amply illustrated throughout the various sections of the text. This to the credit of the editors and contributors, who realize that pharmacology is both a basic and clinical science.

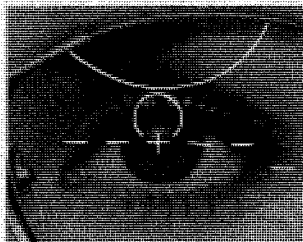
Goodman and Gilman may be too vigorous a text for the beginner. It is, however, the ideal standard reference for those interested in the science and art that is pharmacology.

Guest Reviewer:
Siret D. Jaanus, Ph.D.
Southern California
College of Optometry



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