Proposal For a Model Optometric Geriatrics Curriculum

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INTRODUCTION

Demographers estimate that in the United States alone there are 30 million persons 65 years of age and older. By the year 2000 this number is expected to increase to 36 million.[1] No longer can this segment of the population be regarded as passively resting outside of society's mainstream. This group is politically as well as socially active. Currently the elderly account for the consumption of 33% of the nation's total health care, 25% of medications and 40% of acute hospital admissions.[2] Of this population 92% require visual correction and all of them will require appropriate vision care.[3]

The shifting age of the population and the increasing reliance on the medical community mandates that health care providers become more aware of the needs of the elderly. In fact, in 1981 a White House Conference in Aging recommended that all personnel involved in health service delivery be required to have some gerontological training.[3]

Indeed it must be recongized that the elderly have distinct problems and needs that all health care providers must acknowledge. Providers should be aware that in many cases the elderly present with multifactorial health problems that may further be compounded by psychological and social problems. In terms of vision care, Skuza [4] reported that "in many cases geriatric patients labeled as senile, reclusive, bothersome or irritable actually have vision problems which affect their behavior. Once the problems are corrected with proper vision care, the patient's behavior often changes re-

markably for the better." Collectively persons over 65 report that vision impairments are the third highest chronic condition as revealed by the National Center for Health Statistics.[5] Vision problems and the high incidence of injuries among the elderly are also strongly related. The U.S. Department of Health, Education and Welfare survey[6] revealed that 85 % of injuries sustained by persons 65 and older are caused by falls and of these, 25% are due to uncorrected visual problems. Many of these elderly individuals live in nursing homes and yet, less than 18% of nursing homes have regular ophthalmic care. Addressing the visual needs of the elderly by optometrists perhaps became even more to the forefront with the passage of the Budget Reconciliation Act of 1986 (HR5300) which provides optometric coverage under Medicare.

However, despite overwhelming demographic information and the government's acknowledgment of the increasing health care demands of the elderly, the area of geriatric training still remains one of the least emphasized disciplines in optometry as well as many medical schools. Geriatrics is often incorporated with other areas of study such as low vision and pathology without a great deal of distinction. Without such distinction, the area of geriatrics may not be regarded as an important entity by student clinicians nor may they be guided to consider geriatrics as a part of their career track in a manner they may view pediatrics or contact lenses. The Committee on Leadership for Academic Geriatric Medicine[2] cites the

fact that "persuading academic leaders to recognize geriatrics as a valid area of expertise, to support its research, and to encourage the training of good people is one of the main stumbling blocks in meeting manpower needs." It is not important to recognize geriatrics as a specialty but it is imperative to implement courses that specifically address geriatric care in existing curriculums. In The Journal of Optometric Education[7], Dr. John Potter editorialized "Because there is a positive correlation between knowledge and attitudes optometric faculty should consider early in the professional school curriculums definite educational strategies to impart knowledge about the aging process and about the health care and social problems of the elderly."

The blueprint for the development of these courses can be derived from the models established by other health care disciplines which have gradually incorporated geriatrics into the didactic and clinical training of their students. These models include three important factors[8]:

1. Modification of established clinical techniques.
2. Development of multi- or interdisciplinary care strategies.
3. Incorporating the new body of knowledge in geriatrics into clinical management strategies.

The topics that need to be addressed should fall into the following categories:

1. Normal and abnormal biological, social and psychological changes that are part of the aging process

2. Effective communication techniques to establish a good doctor-patient relationship

3. Understanding the current health care laws and the workings of social agencies that assist the elderly in order to effectively manage the problems of the older patient.

With respect to these factors, this author will lay out an outline for the development of a geriatrics optometry curriculum that would allow for uniform instruction at the schools of optometry.

THE CURRENT STATE OF GERIATRIC OPTOMETRY

There are three noteworthy studies by Verma (1982)[9], Rosenbloom (1985)[10] and Aston et al. (1988)[1] that have explored by survey the current state of geriatric education in optometry schools. The findings and the changing face of geriatric education over a six year period is presented in the following sections.

The information obtained is presented with regards to the survey question and the number of schools that responded out of all of the schools queried at that time.

I. Formal and/or Separate Optometric Gerontology Coursework

A. Verma: 9/11 (combined with other course material)
1/11 (separate course)

B. Rosenbloom: 3/15 (combined with other courses)
10/15 (separate course)

C. Aston et.al: 1/16 (required course with low vision)
8/16 (required separate course)
2/16 (elective separate course)

In the 1982 survey geriatric instruction was often incorporated with other areas of study such as low vision, primary care optometry and rehabilitative optometry. Of the schools that participated at that time only two respondents strongly agreed that a separate course in geriatric optometry was needed. By the 1988 study the number of schools that offered separate course had increased. However, the courses varied in structure ranging from 4 to 2 hours per week, 10 to 12 weeks in duration and none had structured laboratory sessions.

II. In what year in the curriculum is the course offered

A. Verma: Unspecified

B. Rosenbloom: 5/15 3rd yr. 3/15 4th year

C. Aston et al: Unspecified

Placement of a course in the geriatric curriculum structure may be more important than the placement of most other courses. In the Rosenbloom study, the majority of respondents felt that the best method of providing geriatric instruction was with a single course in the third professional year. However, early classroom and clinical exposure to caring for the elderly may make a positive impression on the student's attitude to-

ward caring for the geriatric patient.

A study by the University of California[10] revealed that in the four years of the medical school program, the attitude of the students toward the elderly worsened. This shift in attitude was attributed to the heightened awareness and fear of one's own mortality. The suppression of this fear leads to an unconscious adversion toward the elderly patient. A more probable explanation is offered by Beck, Ettinger and Jakobsen[11] who cite four reasons which may explain clinicians' reluctance to work with the elderly patient:

1. Cultural biases toward the elderly
2. Lack of knowledge and experience in treating the elderly
3. Lack of experience in treating patients outside the private office setting
4. Lack of financial incentive

What the cited reasons indicate is a lack of understanding not only of the patient but of the skill necessary to care for them. This knowledge base must be interworven throughout the four year curriculum and cannot be totally effective in a single semester's course of lecture. Early instruction geared toward psychological and biological aging, the clinical aspects of caring for their distinct visual problems, and the most effective means of working with social agencies the deal with the elderly.

The incorporation of geriatrics into the existing core curriculum will benefit the student clinician by making them

aware that treating the elderly patient is not the downside of the practice but an integral part of it that they are prepared to handle.

III. Geriatric Clinical Programs - On Campus

A. Verma: 10/11 Students receive clinical exposure to geriatric patients

B. Rosenbloom: 3/15 Special Provisions for elderly patients
   1. UH: Geriatric/Adult Care Module for patients over 40
   2. SCO: Geriatric clinic for patients over 65
   3. UAB: Low Vision/Geriatric clinic

C. Aston et al.: 3/16 Required Geriatrics specialty clinic

IV. Geriatric Clinical Programs - Off Campus

A. Verma: Unspecified

B. Rosenbloom: Unspecified

C. Aston et al.: 3/16 Elective off-campus rotation
12/16 Required off-campus rotation

The rotation sites varied from school to school. Most of the activities and rotations included nursing homes, VA hospitals, general hospitals and community health clinics. As with the geriatric course offerings, the majority of the clinical rotations are offered during the 4th year.

V. Research

A. Verma: Unspecified

B. Rosenbloom: 4/15 one or more projects
2/15 submission of grant applications
1/15 plans to build research program

Besides offering valuable information, research in and of itself can offer credibility and a strong foundation to a developing area of study. A report by the Committee on Leadership for Academic Geriatric Medicine drew parallels in the development of pediatrics, oncology and clinical pharmacology[2]. As research in these ares became more prevalent and information reached not only those in the health care fields but also, to some extent, the public courses in these areas started to gain wider acceptance at the professional schools. In each case, the establishment of these areas as a well-defined field of study was slow but with early emphasis on reasearch these topics were gradually brought to the forefront of academia and clinical training. Thus, if research in geriatric optometry is encouraged, history would dictate, given adequate financial backing, that is acceptance into current curriculum structures would have a heightened chance of succeeding.

VI. Faculty Training

A. Verma: Unspecified

B. Rosenbloom: Unspecified

C. Aston et al.: 6/16 had primary contact faculty with some degree of training in the area of geriatrics and of these 1/6 had a faculty member with a formal degree in geriatrics

The development of geriatrics as a distinct area of study will lead to a larger pool of clinicians trained in gerontology and of these, newly trained clinicians may choose to become academic gerontologists thereby strengthening geriatric

programs.

Presently private practitioners and faculty members may enhance their skills through continuing education programs. Several schools offer Continuing Education programs geared toward the treatment of the elderly. [12]

The HHS is composed of 20 university based centers. These centers are set up to help health profession faculty from all areas of the health care field to further develop their schools' geriatric programs through a six day course. The centers at UAB and PCO have trained more than 40 optometry faculty members from around the country. In 1988, PCO received a federal grant to provide continuing geriatric education to optometrists and long term care personnel in the state of Pennsylvania.[3]

The American Optometric Association also offers C.E. courses for its members. In 1988, in conjunction with the ASCO Optometric Gerontology Curriculum DEvelopment Committee, designed a draft manual, Optometric Gerontology: A Manual for Educators, to be used in comprehensive optometric gerontology courses and model clinical modules.[12]

C.E. courses in gerontology are extremely beneficial since many practitioners who have graduated prior to 1985 may have had very little formal training in geriatrics. However, these courses are far and few between.

Further skills can be obtained through residency programs. These are usually VA Hospital based residencies. The goals of these programs are:[13]

1. To optimize the eye and vision examination of patients with complications related to aging
2. To perform an interdisciplinary geriatric assessment screening
3. To learn how to identify, gain access to, and participate in the various local networks of geriatric health care and social support

The information obtained and skills developed through these mediums help in traiing faculty members and in the development of future geriatrics curriculum by serving as a pool of information from which to draw.

WORKING MODELS

The Bureau of Health Professions of the Health Resources and Services Administration in the 1979-90 Fiscal Year offered curriculum development grants to 152 professional schools. Of these two were offered to optometry schools for the purpose of enhancing geriatric education and training. These schools were the Southern California College of Optometry and the Penssylvania College of Optometry.[3] However, there are several other schools that have designed geriatric curriculums. This section will explore the structure of these working models.[14]

Pennsylvania College of Optometry
Director: Satya Verma, O.D.
Structure:

2nd year: (second semester) two hour lecture

3rd year:
1. Rotation through the Community Eye Care Services Program
2. Elective course "Optometrist and the Elderly" (also offered in 4th year) which explores normal and abnormal biological, social, psychological and visual changes in the elderly.
3. Rotation through the Eye Institute (also in the 4th year). The patient load is 20% patients 65 years old and older.

University of Alabama at Birmingham School of Optometry
Director: Gary Mancil, O.D.
Structure:

3rd year: Lecture series in Geriatrics
The goal of this series is to help students re-evaluate their perceptions of the elderly, explore age-related visual problems and explore the over-all care of the elderly patient via lectures from other health care professionals.

4th year: Required rotation through
1. Low Vision/Geriatric Clinic
2. Screening Rotation
3. Community Health SErvices Clinic Rotation (HMO setting)
4. Birmingham VA MEdical Center Rotation

* the duration of these rotations was not specified

University of Houston
Director: Randall Jose, O.D.
Structure:

Three unit lecture series combined with a clinical rotation in the Geriatric Module

3rd year: Rehabilitative Optometry I: Basic information regarding geriatric eye care

4th year: Rehabilitative Optometry II: Development of examination techniques

Rehabilitative Optometry III: Basic information regarding the aging process

These curriculum models have combined didactic and clinical programs that are primarily geared toward geontology. However, even in these models the presentation and structure of the curriculum isn't uniform. The fact that at most six schools have a separate geriatrics curriculum leaves a great many other student clinicians with a great loss. A basic framework is needed that can be incorporated at all of the optometry schools.

GERONTOLOGY CURRICULUM: SUGGESTIONS FOR A MODEL COURSE

The Rosenbloom survey revealed eleven topics which faculty members consider important for adequate coverage of geriatric optometry.[10] These topics are:

1. Demographics of the aging population
2. Role transitions in later life
3. Biology and psychology of aging
4. Health problems of the elderly
5. Normal age related vision changes
6. Common systemic and ocular diseases among the elderly
7. Drug utilization in a geriatric practice
8. Modification in examination techniques and procedures
9. Aphakic refraction and correction
10. Prescribing for and management of the elderly patient
11. The aging network

In addition to academic knowledge and clinical skills a geriatrics curriculum should manifest in each clinician a positive attitude toward patients that may invariably make up a large portion of their patient pool. How this can be achieved is best described by Reichel[3].

The information offered in the courses and clinical rotations should generate:

1. Compassion and humanity
2. Understanding of the importance of the continuity of care
3. The need for bolstering families and home life
4. Communication skills and building a good doctor-patient relationship
5. Intelligent treatment or management skills

The purpose of the following section is to present a model curriculum outline that will allow for the development of a uniform organized curriculum that incorporates those topics and idealogies that are deemed important in all areas of health care.

COURSE DESIGN

I. Introduction to Gerontology: Impressions of and social attitudes toward the elderly

   A. Demographics
   B. Misconceptions attributed to aging
   C. Role of the elderly in the community
   D. Simulation Modules:
      These modules can be used to reinforce information received in lecture. The objectives of the modules are to increase awareness of the students to the realistic psychological and physical problems of the elderly as well as provide a means whereby stduetsn can better understand how the patient and health care provider can best communicate. Current simulation programs are:[15, 16]
      1. The Aging Game by Hoffman and Reif (currently being used at Duke University Medical School)
      2. The Road of Life by Menks
      3. Geratrix by Hoffman, Brand, Beatty and Hamill

II. Psychosocial Aspects

   A. Life-style

B. Economic resources and security
C. Family structure and support network

III. Psychological Aspects of Aging

A. Cognitive functioning
B. Depression
C. Coping with the aging process and life transitions

IV. Physical Changes [17]

A. Biological aspect of aging
B. Theories of aging
1. Organ Theory
2. Physiological Theories
a. Free Radical
b. Cross Linkage
c. Waste Production Accumulation
C. Physiological changes: differentiating between normal and abnormal changes
1. Cellular morphology
2. Musculoskeletal
3. Hematology
4. Nervous system
5. Gastrointestinal function
6. Renal function
7. Sensory perception

V. Age-related Visual Changes [8,18,19]

A. Anatomical and physiological changes of ocular structures
B. Psychophysical changes
1. Contrast sensitivity function
2. Refractive changes
3. Visual field changes
4. Color vision changes
5. Ocular motility
C. Low vision with regards to the elderly patient

VI. Pharmacological Considerations: [20]

A. Pharmacokinetics
B. Increased utilization of drugs
C. Ocular disease and drug reactions
D. Commonly used systemic and ocular prescription agents
E. Patient compliance
1. Patient understanding of instructions

2. Patient ability to use medications in the prescribed manner

F. Side effects of systemic and ocular agents

VII. Examination of the geriatric patient [21-25]

A. Modification of examination techniques and procedures
B. Development of effective communication skills
C. Problem solving and management skills
D. Effective patient education
E. Effective networking techniques
   1. Working of Medicare and Medicaide
   2. Public policy
F. Assessment of patient's cognitive ability
   1. Mental Status Questionnaire (MSQ)
G. Assessment of day to day needs of the patient
   1. Activities of daily living (ADLs)
   2. Instrumental activities of daily living (IADLs)

Several of these topics can be interwoven into the existing courses in the optometric curriculum. However, courses that specifically are directed toward the geriatric patient must be established to address the uniques changes that accompany aging and which are affected by specific environmental and social situations. It simply is not possible to extrapolate from information presented in pediatric courses or from that of general courses aimed at the management of patients age 20 to 45.

Gerontology courses introduced early in the curriculum and reinforced by a continuing series of courses may be the best approach. An introductory course in the first year; a basic information course with regards to biological and physiological changes and clinical exposure in the second year; pharmacology and examination techniques in the third year; and clinical rotations in Geriatric-specific settings

during the fourth year. Care that is so multidimensional should not be compartmentalized into a one semester or quarter course or in a single two hour lecture embedded in another primary course.

Topics can further be enhance by guest lecturers from other health care related fields such as general family medicine, dentistry, cardiology, neurology and psychology. The purpose of these lectures would be to provide a multi-sided picture of Gerontology. To be able to provide the best possible care for the patient, a multidiciplinary approach should be employed. The type of presentation would also show ho all areas of health care are moving in the same direction in terms of emphasis on Gerontology and serves to highlight the great need for optometric services in this area.

CONCLUSION

A 1987 study, "Personnel for Health Needs of the Elderly Through the Year 2020"[24], summerized the basic requirements for the development of geriatric curriculums. These requirements are:

1. Priority must be given to expanding the number of faculty members and other leaders who are adequately prepared to plan and guide education and training programs in aging and geriatrics

2. All health and human services personnel should receive training in the special conditions and needs of older persons.

3. Training programs should involve the entire spectrum of caregivers

4. All educational programs should focus on home and community based care

5. Training programs must be flexible because of the specific nature and scope of future personnel requirements cannot be determined many years in advance

The shift toward including more topics which address the needs of the elderly in optometric programs will be a gradual one. However, if administrators could accept a basic framework for a geriatrics curriculm that adhered to these five requirements it would be beneficial to the scope of optometry in the future.

The purpose of this paper was to design such a framework based upon current research and the structures of existing working models in both optometry and medical schools.

There is a very real need for structured training in geriatric optometry given the increase in the number of elderly individuals in our society. Our learning institutions must take the necessary steps to provide such training.

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1 of

TI: A geriatric optometry residency.
AU: Norden-LC
SO: J-Am-Optom-Assoc. 1988 Apr; 59(4 Pt 1): 320-2
LA: ENGLISH
AN: 88285555

3 of

TI: Training programs in geriatric optometry.
AU: Verma-SB
SO: J-Am-Optom-Assoc. 1988 Apr; 59(4 Pt 1): 312-5
LA: ENGLISH
AN: 88285553

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TI: Implications of biological aging to the optometric patient.
AU: Rumsey-KE
SO: J-Am-Optom-Assoc. 1988 Apr; 59(4 Pt 1): 295-300
LA: ENGLISH
AN: 88285550

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TI: Common systemic diseases in geriatric patients.
AU: Rumsey-KE
SO: Am-J-Optom-Physiol-Opt. 1988 Apr; 65(4): 308-15
LA: ENGLISH
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AU: Bartlett-JD
SO: J-Am-Optom-Assoc. 1986 Dec; 57(12): 875-6
LA: ENGLISH
AN: 87084452

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1 of 1

TI: Pharmacological considerations in older adults.
AU: Rumsey-KE
AD: College of Optometry, University of Houston, TX 77204-6502.
SO: J-Am-Optom-Assoc. 1989 Jul; 60(7): 520-30
PY: 1989
LA: ENGLISH
CP: UNITED-STATES
AB: The older adult population--those age 65 years and over--continues to increase in numbers and will comprise a large segment of optometric practices in the future. As the prevalence of ocular and systemic disease escalates with age, older adults will utilize more pharmaceutical agents than their younger counterparts. The increase in chronic systemic disease, ocular disease, and polymedicine which accompanies aging contributes to the higher incidence of adverse reactions present in this age group. The optometrist who is knowledgeable in the adverse reactions associated with the common ocular and systemic drugs utilized by geriatric patients will provide both better optometric care and systemic health care screening to his or her patients. This paper discusses the factors contributing to

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adverse reactions in the elderly and some of the common ocular and systemic medications and their associated side effects which are utilized by the older population.
MESH: Aged-; Drug-Incompatibility; Drug-Synergism; Drug-Utilization; Human-; Ophthalmic-Solutions; Review-; Review,-Tutorial
MESH: *Drug-Therapy-adverse-effects; *Eye-Diseases-drug-therapy
ISSN: 0003-0244
AN: 89341228
UD: 8911

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Press CTRL F2 to select terms from record for searching
End of display. F9-Previous Record; F2-Find; F6-Print; Esc,D-Download.

SilverPlatter 1.6 MEDLINE (R) 1/90 - 1/91. Esc=Commands F1=He

1 of 1

TI: Geriatric educational programs.
AU: Aston-SJ
AD: Pennsylvania College of Optometry, Philadelphia.
SO: Optom-Vis-Sci. 1990 May; 67(5): 329-30
PY: 1990
LA: ENGLISH
CP: UNITED-STATES
AB: Information on the geriatric patient is needed in the curricula of all health professional programs. During the 1988 Academy Meeting a Symposium on the Graying of America: Optometric Considerations, was held. The following paper will: (1) summarize a recent survey of geriatric education in the United States schools and colleges of optometry, (2) describe two continuing education projects on gerontology conducted for practicing optometrists, and (3) discuss two recently completed projects involving the training of optometric faculty.
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MESH: *Education,-Medical,-Continuing; *Geriatrics-education;

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separate pages: (No) Yes searches: (No) Yes
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programs in geriatric optometry are not uniform among the educational institutions. This paper discusses the importance of such programs, and offers strong recommendations for their future.
AN: 88285553

SilverPlatter 1.6 MEDLINE (R) 1988

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TI: A geriatric optometry residency.
AU: Norden-LC
SO: J-Am-Optom-Assoc. 1988 Apr; 59(4 Pt 1): 320-2
LA: ENGLISH
AB: Increasing demands for vision care for the elderly will result in increasing needs for specialty skills in optometry. Examples of such skills include management of degenerative eye disease, rehabilitation of impaired visual functions, assessment of psychosocial dysfunction, and interdisciplinary health team participation. This article shows how a geriatric optometry residency differs from the general optometric curriculum, and from other types of residencies, in preparing the optometrist to meet the special needs of the geriatric population.
AN: 88285555

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TI: Training programs in geriatric optometry.
AU: Verma-SB
SO: J-Am-Optom-Assoc. 1988 Apr; 59(4 Pt 1): 312-5
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SO: Gerontol-Geriatr-Educ. 1988; 8(3-4): 201-15
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AN: 89196936

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AU: Fishman-P; Ramirez-de-Arellano-AB; Waslien-CI
SO: Gerontol-Geriatr-Educ. 1988; 8(3-4): 193-9
LA: ENGLISH
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TI: Future need for geriatricians verified.
AU: Rubin-FH
SO: Pa-Med. 1988 Dec; 91(12): 34-6
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TI: Need for geriatric education urgent in Florida.
AU: Caranasos-GJ; Hilker-MA; Pfeiffer-E; Henderson-JN
SO: J-Fla-Med-Assoc. 1988 Nov; 75(11): 726-8
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LA: ENGLISH
AN: 89017715

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TI: Using an interdisciplinary team for geriatric education in a nursing home.
AU: Thompson-RF; Rhyne-RL; Stratton-MA; Franklin-RH
SO: J-Med-Educ. 1988 Oct; 63(10): 796-8
LA: ENGLISH
AN: 89011847

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TI: Geriatric curricula needed [letter]
AU: Cavalieri-TA
SO: J-Am-Osteopath-Assoc. 1988 May; 88(5): 582
LA: ENGLISH
AN: 88330482

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TI: Rating geriatric training programs [letter]
AU: Luchi-RJ
SO: J-Am-Geriatr-Soc. 1988 Aug; 36(8): 757
LA: ENGLISH
AN: 88299463

LOOK Yes

TI: Academic geriatrics for the year 2000 [letter]
SO: N-Engl-J-Med. 1988 Jan 28; 318(4): 257-8
LA: ENGLISH
AN: 88094609

LOOK

Journal AOA 1978-87
Geriatric optometric care:
44: 733
53: 21, 31, 37, 117, 23, 491
56: 123, 318, 474, 806, 926/51920

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TI: Biology and physiology of development of aging.
AU: Weg-RB
SO: Gerontol-Geriatr-Educ. 1989; 9(4): 9-16
LA: ENGLISH
AN: 90060871

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* TI: Experiential learning in gerontology: methods for applying concepts and theories to practice.
AU: Wilber-KH; Shoecraft-C
SO: Gerontol-Geriatr-Educ. 1989; 9(4): 47-58
LA: ENGLISH
AN: 90060867

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TI: Public policy and aging in the gerontology curriculum: suggestions for a model course.
AU: Coberly-S
SO: Gerontol-Geriatr-Educ. 1989; 9(4): 37-45
LA: ENGLISH
AN: 90060866

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* TI: The backbone of academic gerontology: introduction.
AU: Weg-RB
SO: Gerontol-Geriatr-Educ. 1989; 9(4): 1-7
LA: ENGLISH
AN: 90060863

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TI: A second opinion on geriatric training programs [letter]
AU: Toffol-GJ; Schultz-DR; Root-KE; Weintraub-JR
SO: J-Am-Osteopath-Assoc. 1990 Mar; 90(3): 203-4
LA: ENGLISH
AN: 90202428

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TI: Integrating residency training in geriatrics into existing outpatient curricula [see comments]
AU: Lavizzo-Mourey-R; Beck-LH; Diserens-D; Day-S; Johnson-J; Forciea-MA; Sims-RV
SO: J-Gen-Intern-Med. 1990 Mar-Apr; 5(2): 126-31
LA: ENGLISH
AN: 90188570

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TI: Program changes students' views about working with the elderly [letter]
AU: Kortmann-B
SO: Am-J-Occup-Ther. 1989 Dec; 43(12): 853
LA: ENGLISH
AN: 90144972

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TI: Experiential learning in gerontology: methods for applying concepts and theories to practice.
AU: Wilber-KH; Shoecraft-C
SO: Gerontol-Geriatr-Educ. 1989; 9(4): 47-58
LA: ENGLISH
AN: 90060867

18 of 21

OK * TI: Public policy and aging in the gerontology curriculum: suggestions for a model course.
AU: Coberly-S
SO: Gerontol-Geriatr-Educ. 1989; 9(4): 37-45
LA: ENGLISH
AN: 90060866

20 of 21

TI: Diagnosing the current state of geriatric medicine [letter]
AU: Cavalieri-T
SO: J-Am-Osteopath-Assoc. 1989 Oct; 89(10): 1241
LA: ENGLISH
AN: 90036244

SilverPlatter 1.6 MEDLINE (R) 1989

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Medicid * TI: The 'aging game'. An approach to education in geriatrics.
OK AU: McVey-LJ; Davis-DE; Cohen-HJ
F SO: JAMA. 1989 Sep 15; 262(11): 1507-9
LA: ENGLISH
AN: 8836276

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* TI: The geriatric imperative. A major challenge to health professionals.
AU: Glajchen-D
SO: S-Afr-Med-J. 1989 Aug 19; 76(4): 160-3
LA: ENGLISH
AN: 89347070

12 of 12

TI: Whither geriatrics faculty development? [editorial]
AU: Hazzard-WR
SO: J-Am-Geriatr-Soc. 1989 Mar; 37(3): 277-8
LA: ENGLISH
AN: 89140145