EDUCATIONAL PROGRAMS AND CURRICULUM

Vetrosky D. "Advanced achievement recognition for PAs." ***J Am Acad Physician Assist.*** 6(4): 241-242, Apr 1993.

In an editorial, Mr. Vetrosky argues for the establishment of an advanced achievement recognition (AAR) program to formally recognize both personal achievement in the PA profession and the continued expansion of the PA profession through a meaningful process of lifelong learning. The Education Council of the AAPA is working towards finishing the structure of the AAR award program by July 1994.

Fasser CE. "Historical perspectives of PA education." Physician Asst. Program, Baylor College Med., Div. Allied Health Sci., Dept. Community Med., One Baylor Plaza-633E, Houston, TX 77030. ***J Am Acad Physician Assist.*** 5(9): 663-70, Oct 1992.

Journal abstract: One approach to meeting the increased demands for medical care involves the delegation of physician activities to suitable assistants. Notable examples of this process are the Russian feldsher, the Chinese barefoot doctor, and the American PA. The formal preparation of PAs in the United States began during the 1960s, with the first PAs being former medical corpsmen. PA program faculty helped develop educational criteria for accreditation, innovative teaching strategies, and standards for student evaluation. A recent review of PA education reconfirmed the primary focus of student training. The future of the PA curriculum will be influenced by changing medical technology and the growing emphasis of reducing at-risk behaviors.

Blessing JD, Shelton SR, Rivera RA. "Report on PA educators and clinical practice." Bolivar Peninsula Health Clinic, PO Box 2110, Crystal Beach, TX 77650. ***J Am Acad Physician Assist.*** 5(8): 576-81, Sep 1992.

Journal abstract: Recent reports on PA faculty have raised questions about the status and importance of their clinical activity to PA education. The purposes of this study were to assess the amount and type of clinical activity of PA faculty; the institutional policy and beliefs about clinical activity; and the disposition of revenue generated by clinical practice. Of 145 respondents, 79.9% practiced clinically and most did so for less than 12 hours per week, in a primary care specialty. Most respondents believed that clinical practice was a valuable component to the educator role, and 50% of the respondents believed 5 to 8 hours should be spent in this professional activity.

Bruhn JG. "Problem-based learning: an approach toward reforming allied health education." University of Texas, El Paso 79968-0501. ***J Allied Health.*** 21(3):161-73, Summer 1992.

Journal abstract: Problem-based learning (PBL) is presented as a useful way to educate allied health practitioners for the future. The essential characteristics of problem-based learning include: curricular organization around problems rather than disciplines; an integrated curriculum rather than one separated into clinical and theoretical components; and an inherent emphasis on cognitive skills as well as on knowledge. Long-term advocates of PBL stress that it is the only known method for preparing future professionals to be able to adapt to change, learning how to reason critically, enabling a holistic approach to health, and attaining integrated, cumulative learning.

Stumpf SH, Bass K. "Cross cultural communication to help physician assistants provide unbiased health care." University of Southern California School of Medicine, Department of Family Medicine, Los Angeles, CA 90033. ***Public Health Rep.*** 107(1):113-5, Jan-Feb 1992.

Journal abstract: Teaching cross cultural communication typically involves instruction in differences between groups. As part of this course in cross cultural communication, six specific underserved population groups are introduced to students as a cultural experience. Additionally, instruction is provided to sensitize students to their personal biases and prejudices through videotaped mock interviews. The combination of instruction and experience forms a paradigm for teaching cross cultural communication in a way that has personal and immediate impact on faculty members and students. The model, "Differences + Discomforts = Discoveries," inhibits factionalizing and promotes depth of knowledge about underserved groups as well as personal awareness of prejudicial feelings. As a result, students learn techniques to provide unbiased health care to these, and other, populations.

Ballweg R. "PA programs continue to emphasize primary care... 'Commitment: primary care to the underserved vs. the paycheck'." ***J Am Acad Physician Assist.*** 4(8): 675, Nov-Dec 1991.

Response to letter by Bill Riesterer, October 1991 from Ms. Ballweg, program director of MEDEX Northwest. Ms. Ballweg cites the need for increasing the supply of PAs by expanding current PA educational programs and supporting the development of new programs. Increased federal funding or new sources of funding are necessary; she enlists the aid of individual PAs and state chapters in lobbying for support. Ms. Ballweg lists several strategies for emphasizing primary care, not specialization, in training programs. Among these are primary care lecturers, clinical training in medically underserved settings, and participation in federal training grants which give funding preference to programs that place students in a medically underserved clinic for at least four to six weeks.

Schechter D. "Counting CME toward a degree." ***J Am Acad Physician Assist.*** 4(8): 676, Nov-Dec 1991.

In a letter to the editor, Mr. Schechter suggests granting pass/fail academic credit for accredited continuing medical education, allowing PAs to earn their degrees through the course of recertification.

Stanhope WD. "Postgraduate training: who needs it?" ***Physician Assist.*** 15(11): 14,16, Nov 1991.

Mr. Stanhope contends that the basic PA primary care education as developed 25 years ago is no longer adequate. He enumerates the short- and long-term benefits of postgraduate training. PA postgraduate programs provide structured, discipline-specific lectures at the beginning of the program and a myriad of conferences and grand rounds with required attendance. Most importantly, he states that a postgraduate internship confers a sense of sophistication and confidence, an edge in the marketplace and a critical edge in providing optimal patient care under all circumstances. He recommends that postgraduate programs expand to include primary care disciplines and be coupled with a mechanism for earning an advanced degree.

Pitetti KH, Blessing JD, Elizondo E. "Effects of training on the preventive health habits of PAs." ***J Am Acad Physician Assist.*** 4(5): 437-42, Jul-Aug 1991.

Journal abstract: Health promotion and disease prevention (HP-DP) profiles of students entering the first year of PA training were developed, and the effects of 9 months' training on these profiles were evaluated. Seat belt use, smoking and drinking habits, exercise participation, weight and body fat compositions, and cardiovascular fitness were measured for 23 students at the start and end of the initial 9 months of PA training. Initial HP-DP profiles of the 23 students were better than those of the general U.S. population in all areas except cardiovascular fitness, with mean maximal oxygen consumption being average. After 9 months of training, seat belt use had increased, and alcohol and tobacco use had decreased. No improvements were seen in weight and body fat composition, exercise participation, or cardiovascular fitness. The results suggest that PA faculty should promote physical activity and evaluate their students' HP-DP profiles and counsel changes in life-style when necessary.

Rahr RR, Schmalz GM, Blessing JD, Allen RM. "Learning styles and environmental preferences of PAs." ***J Am Acad Physician Assist.*** 4(4): 351-5, Jun 1991.

Journal abstract: Junior and senior PA students participated in a study to determine the learning styles and learning environments they preferred. According to George's methodology, these students were primarily concrete-sequential learners, that is, they preferred hands-on, step-by-step learning experiences. Their favorite courses were biology, physical education, and music. They preferred independent study/laboratory, lecture, and note-taking as their means of study. The most popular study conditions included quiet, isolated, informal settings. Favorite times of day to study were evening, late evening, and mid-morning. Grade point average did not correlate with learning styles. Learning styles did not differ significantly between the junior and senior classes or between better and worse students.

Schmalz GM et al. "The use of pre-admission data to predict levels of success in selected allied health students." ***Occupational Therapy J Res.*** 10(6): 367-76, Nov-Dec 1990.

Journal abstract: A study of 82 occupational therapy, 84 physicians' assistant, and 117 physical therapy students found that scores on the Otis Quick-Scoring Mental Abilities Tests, admissions essays, number of credits earned at a previous institution, and cumulative grade point average were significant predictors of students' academic success.

Jarski RW, Kulig KK, Olson RE. "The clinical teaching of PAs." ***J Am Acad Physician Assist.*** 3(7): 525-8, Oct 1990.

Journal abstract: To identify the teaching behaviors perceived as the most effective and least effective by PA clinical students and clinical teachers, a questionnaire was completed by 107 clinical students and 32 clinical teachers. Teaching behaviors pertaining to answering questions clearly, taking time for discussion, and providing opportunities for practicing kills were rated most helpful. The most hindering behaviors pertained to asking questions in an intimidating manner and correcting student errors in front of patients. Students' and teachers' ratings differed significantly on only six items. The results of this study should help clinical teachers identify and practice clinical teaching behaviors found to be effective, avoid teaching behaviors identified as hindering, and direct their continuing education toward appropriate areas.

Ricketts TC. "Education of physician assistants, nurse midwives, and nurse practitioners for rural practice." Health Service Research Center, University of North Carolina, Chapel Hill. ***J Rural Health.*** 6(4):537-43, Oct 1990.

Discusses education for medical students and allied health professionals and the determinants of the graduates' choice of practice location. Notes the growing trend towards specialization for allied health professionals. Discussion of special rural initiatives affecting education with suggestions for future research.

Banja JD. "Moral decision making and the PA curriculum." ***J Am Acad Physician Assist.*** 3(5): 372-6, Jul-Aug 1990.

Describes a mini course in "clinical" ethics at the Emory University PA program. Dr. Banja recommends a course early in the PA curriculum with moral issues integrated throughout the didactic phase. Among his suggestions: recognize student frustration with the issues and encourage input; enforce the significance of moral decision making as a process; distinguish between moral and legal decision making. If necessary, provide information on legal ramifications and important judicial findings on the issues discussed.

Currey CJ. "Choosing to become a PA: implications for student recruitment." ***J Am Acad Physician Assist.*** 3(4): 287-90, Jun 1990.

Journal abstract: Fifty-seven students, representing the entering classes of 1987 and 1988 at a university-based PA program, were surveyed to determine what motivated them to become a PAs and how their career decisions were made. Most had been planning for a health career since high school, but the decision to become a PA was made several years later. The majority made the decision independently, after first ruling out medical school and after researching the profession. The long-term career goals most often emphasized were the desire for challenging work and involvement in patient-management decisions. Dissatisfaction with a previous health care career was a moderate motivator. The most attractive features of the PA profession included opportunities to be involved with people, helping others, and dealing with medical problems. Recruitment strategies suggested by the data are outlined.

Lombardo P. "President's message... strategies for ensuring the supply of physician assistants." ***J Am Acad Physician Assist.*** 3(2): 93-4, Mar-Apr 1990.

Briefly enumerates the arguments for and against the development of new PA educational programs as a way of increasing the manpower supply of PAs and meeting the demand for PA services.

Sagen HB et al. "An organizational conception of curriculum and an application to professional education." 58 p. Paper presented at the Annual Meeting of the Association for the Study of Higher Education, Atlanta, GA, Nov 2-5, 1989.

Abstract: Curriculum may be more adequately explained as the work of an organization than as a plan for individual learning. Research is reported based upon case studies of four allied health programs in one university with the intent to employ concepts from the organizational literature to describe a group of curriculums, and to determine if relationships among variables exist and yield a coherent explanation. The four programs were medical technology, nuclear medical technology, physical therapy, and physician assistant. The programs are distinct in having varying relationships to the dominant health care profession of medicine. Descriptions of each program were combined

into one descriptive case study with the goal to promote internal validation by utilizing multiple sources of data and the perceptions of multiple investigators, and then rely heavily on internal consistency as the criterion of validity wherever possible. Results are discussed according to: environments of academic programs; boundary setting and boundary spanning; curriculum as an organizational technology; and outline of a tentative model. Curriculum can be most adequately explained by considering it an organizational phenomenon. Higher education curriculum might benefit from an emphasis on more complex organizational technology and structure issues.

Berry TR, Dieter PM. "Recruitment of physician assistants: implications for the future." ***J Am Acad Physician Assist.*** 2(5): 383-92, Sep-Oct 1989.

Journal abstract: To better understand recruitment of PA students and the projected future supply of PAs, the AAPA Public Education Committee initiated two questionnaire studies. One queried 1098 first-year PA students to determine the factors that prompted them to choose the profession. The second was a telephone questionnaire administered to 150 high school guidance counselors and 150 college career advisors throughout the United States to evaluate their knowledge base about the PA profession. Results of these studies suggest that personal contact with practicing PAs is probably the most effective recruitment tool for the profession. Although more than three-fourths of high school and college counselors are aware of the profession, 40% have no information about the profession, and half the respondents could not name an institution with a PA program.

Curry RH. "Recruitment and retention of PAs: implications for the future." ***J Am Acad Physician Assist.*** 2(5): 322-4, Sep-Oct 1989.

Editorial discusses specific findings of the AAPA's national surveys on issues surrounding the recruitment and retention of individuals for the physician assistant profession. Stresses the need for education on the PA role for career counselors and potential students and employers. Graduate PAs, physician employers of PAs, state PA chapters and grassroot PAs can play a direct role in providing this education. Lists several critical questions regarding recruitment and retention to be addressed by further research.

Jarski RW, Kulig K, Olson RE. "Allied health perceptions of effective clinical instruction." School of Health Sciences, Oakland University, Rochester, MI 48309-4401. ***J Allied Health.*** 18(5):469-78, Fall 1989.

Journal abstract: Clinical instruction is a critical component of allied health education. The purposes of this study were to identify those behaviors of clinical instructors perceived as both most effective and most hindering in facilitating learning, to identify and compare the behaviors of clinical instructors as perceived by two different allied health groups, and to categorize into meaningful domains the behaviors identified. A published 58-item questionnaire was completed by 311 clinical students and instructors from eight physical therapy and ten physician assistant programs. Results were analyzed by multivariate analysis of variance. Instructor behaviors rated as most helpful in learning included answering questions clearly, taking time for discussion and questions, and providing opportunities for practicing skills. Behaviors most hindering to learning were asking questions in an intimidating manner and correcting student errors in front of patients. Ratings were significantly different (P less than or equal to .001) between the physical therapy and physician assistant groups on 13 items, and posed important considerations for allied health educators.

Niebuhr BR, Rahr RR. "Short-term memory constraints upon the generation of diagnosis hypotheses by novice clinicians." Office of Academic Affairs, School of Allied Health Sciences, University of Texas Medical Branch, Galveston 77550. ***Acad Med.*** 64(9):550-1, Sep 1989.

Journal abstract: The structure and function of memory affect medical problem solving. The purpose of this 1982 study was to test the assertion that the number of diagnoses actively entertained by novice clinicians during a simulated case would not be greater than seven, the average maximum storage capacity of short-term memory. A total of 24 junior physician's assistant students took mock medical histories and gave mock physical examinations using simulated patients. Each of the eight cases investigated by each group included a primary problem with various numbers of secondary problems. Three successive time periods, called interludes, were provided in which each student had three minutes to list all the hypotheses he or she was actively considering concerning the diagnosis of the patient's problem. Each interlude was scheduled at a progressively more complete point in the student's knowledge of the case. The results supported the assertion that was tested.

Lombardo P. "President's message...decrease in the number of applicants to educational programs for health professionals." ***J Am Acad Physician Assist.*** 2(4): 247-8, Jul-Aug 1989.

The significant national decrease in the number of applicants to educational programs for health professionals has affected the PA profession. Among the reasons cited are a general decrease in the number of available applicants and the comparative loss of prestige for health careers. PAs must take a proactive role in projecting a positive image of the profession to prospective applicants, the public and other health professionals. Membership in the AAPA will support the efforts to increase the number and quality of applicants.

Finerfrock W. "Federal programs that affect physician assistant education." ***J Am Acad Physician Assist.*** 2(3): 210-1, May-Jun 1989.

Under the Health Omnibus Programs Extension of 1988 (Public Law 100-607), federal grants for PA education were continued. PA programs compete against each other for funds which will total $5.4 million in 1991. Competitive grants are available for funding of geriatric education centers at PA programs. Funds are also available to support interdisciplinary training programs for health professionals committed to practice in rural areas. New loan repayment programs will provide repayment for service in NIH research in AIDS, Indian Health Service center, Native Hawaiian health center, rural health facility, private nursing facility with 60% Medicaid patients or a community health center.

Stumpf SH, Bottom WD. "Evaluation of admission interviews in physician assistant programs." ***J Am Acad Physician Assist.*** 2(2): 122-6, Mar-Apr 1989.

Journal abstract: In an effort to evaluate the efficacy of admission interview practices, physician assistant educational programs were compared. A national survey showed that nearly all programs conducted interviews, but that the number of interviews required and interviewers used varied. Within the group of programs interviewing once or twice, there was a distinct subset of programs that preferred highly structured interviews. No similar trend was observed among programs interviewing more than twice. Programs preferred interview structures that allowed for spontaneous questions.

Physician assistants for the future: an in-depth study of PA education and practice in the year 2000. Alexandria, VA: The Association of Physician Assistant Programs. 1989. 41 p.

Yeo G, Fowkes VK. "The effects of a program for faculty development in geriatrics for physician assistant teachers." ***Gerontol Geriatr Educ.*** 9(4):83-94, 1989.

Journal abstract: A Geriatric Education for Physician Assistant (PA) Faculty program enrolled teachers from 21 of the 55 PA training programs in the country to participate in three-week training sessions at Stanford University. The faculty trainees took part in lecture/discussion, audio-visual review, clinical training, and individual conferences. They prepared a lecture and a complete geriatric teaching plan for their home program, and were assigned a text and numerous articles to read. Measures of effect of the training found the following: a significant increase in knowledge scores, although the trainees came into the program with relatively high scores; a heightened awareness and increased positive attitudes toward aging; high ratings of performance on a functionally oriented comprehensive health assessment; and augmented geriatric curriculum and clinical training in their home PA programs.

Fasser CE, Shelton SR. ***Physician assistant training in home health care. Final report.*** Sponsor: Texas University Medical Branch at Galveston and Bureau of Health Professions, Division of Medicine, Rockville, MD. 1988. 96p. See also Executive Summary, HRP-0907251.

Abstract: The project developed a home health care model didactic module for use in physician assistant (PA) training programs. The curriculum materials and role competencies included in the module received positive evaluations from the 39 faculty and 360 students who participated. The project developed a model didactic curriculum module containing 11 competencies and 72 behavioral objectives delineating the PA's role in home health care as well as the essential knowledge skills and attitudes needed to support the competencies and objectives. Audiovisuals and flow diagrams and instruments for determining students' knowledge, skills, and attitudes regarding home health care were also included. These products may lend themselves to other PA curriculum development efforts. The contractor made 5 recommendations which if implemented would encourage PA training and practice in home health care: (1) PA faculty should work more closely with pediatric and family practice residency programs and geriatric medicine fellowship programs to develop home-based health care experiences, (2) Medicare regulations should be revised to provide for reimbursement of PA services in the home setting, (3) resources should be sought to devise an instructional resource guide which includes evaluation protocol and instrument development, (4) future Federally-supported curriculum development projects should be of longer duration to facilitate curriculum change in participating programs, and (5) since this type of training is new to most PA programs and only a few recent graduates have been educationally prepared to provide health care in the home, the products of this contract should be available to PAs in practice.

Directory of curriculum guidelines for geriatric education. 40p. Health Resources and Services Administration (DHHS/PHS), Rockville, MD: Bureau of Health Professions. Dec 1988.

This directory contains information on the nature and availability of curriculum guidelines for education and training programs in geriatrics and gerontology. The curriculum guidelines or model curricula were prepared by professional associations or with federal support, most notably through the Administration on Aging or the Health Resources and Services Administration's Bureau of Health Professions. The guide lists geriatric educational materials for the following disciplines: counselors, dental hygienists, dentists, homemakers-home health aides, multidisciplinary, nurses, occupational therapists, optometrists, pharmacists, physicians, physician assistants, psychologists, social workers, and speech, language, and hearing personnel. Descriptions of each set of guidelines include information on discipline, title, sponsor, content, background, source, and price of the materials. An appendix lists geriatric education center grants.

Mahon JT, Champion ME, Stein WA. "Pros and cons of endorsing the baccalaureate degree as the minimum degree for PAs." ***J Am Acad Physician Assist.*** 1(6): 417-8, Nov-Dec 1988.

In a letter to the editor in response to Mr. Stein's editorial advocating a minimum degree for PAs, Mr. Mahon defends the quality of care provided by certificate-only PAs. Mr. Champion argues that the development of an external degree program for PAs should be explored by the AAPA in concert with APAP. Mr. Stein replies that the forum for changes in education rests solely within the purview of accredited educational institutions.

Jarski RW. "An investigation of physician assistant and medical student empathic skills." School of Health Sciences, Oakland University, Rochester, Michigan 48309-4401. ***J Allied Health.*** 17(3):211-9, Aug 1988.

Journal abstract: Empathic skill levels in allied health professionals are associated with both patient satisfaction and compliance. These skills have been related to clinicians' educational backgrounds. The primary purpose of this study was to compare the empathic skill levels of health care students having different educational preparation but a similar practice orientation. The secondary purpose was to examine these students' self-perceptions of their own empathic skill levels. The subjects were physician assistant and medical students. Reliability was increased by using four different published instruments to obtain multiple measures on both subject self-ratings and an observer ratings of the subjects. Medical students rated themselves significantly lower (P less than 0.001) than the observers on one instrument, and physician assistant students rated themselves the same as the observers. The scores on observer-rated instruments were consistently higher for physician assistant students than for medical students, but these differences were not statistically significant.

Fasser CE, Mullen PD, Holcomb JD. "Health beliefs and behaviors of physician assistants in Texas: implications for practice and education." Physician Assistant Program, Baylor College of Medicine, Houston, TX 77030. ***Am J Prev Med.*** 4(4):208-15, Jul-Aug 1988.

Journal abstract: Concern has been expressed over how the volume and effectiveness of physicians' practices relative to prevention can be increased. While a review of the health care services provided by physician assistants in medical practices indicated an emphasis on health education and patient counseling, there has existed an absence of data regarding their beliefs and practices in the area of health promotion. Based upon an analysis of self-reported data from 256 respondents (89%) of a random sample (n = 289) of the 870 physician assistants in Texas, it appears that physician assistants perceive themselves as having a role in health promotion, are generally satisfied with their preventive health care role, view health promotion activities as being more important in the future, and disagree with the idea that health promotion would not be well received by patients. They routinely gather information on health behaviors and discuss or recommend ways to reduce at-risk behavior. Furthermore, while expressing certainty about their knowledge and skills to educate and influence individuals to change certain risk behaviors, physician assistants indicate less certainty about patient follow-through when it relates to such activities as smoking, drinking, and the use of illicit drugs. Considering the perceived challenge and the view that health promotion will become an even larger component of the physician assistant's future role, these findings suggest a need for additional skills training to better assist patients to modify their more complex health risk behaviors.

Oliver D, Whitten P. "Analysis of physician assistant programs in the United States, 1984 to 1987." ***J Am Acad Physician Assist.*** 1(4): 292-300, Jul-Aug 1988.

Journal abstract: During the 1986-1987 academic year, physician assistant programs across the

nation were surveyed to obtain information on specific characteristics of the programs. Forty-eight of the 49 programs responded. This article provides composite data on the institutional sponsorship and budget of programs; characteristics of faculty, staff, and administrations; and the courses comprising the didactic and clinical physician assistant curriculum. The number and characteristics of the applicants and students enrolled, the employment status of 1986 graduates as well as those students who graduated from the program in previous years, and an estimate of the number of physician assistants currently in clinical practice are also reported. In addition to presenting descriptive statistics for the average program, trends over the past 3 years are identified and interregional comparisons of programs are provided.

Stumpf SH, Kent WG. "Increasing correspondence between test items and objectives as part of a physician assistant curriculum evaluation." Primary Care Physician Assistant Program, University of Southern California School of Medicine, Los Angeles. ***J Med Educ.*** 63(6):488-9, Jun 1988.

The University of Southern California School of Medicine Primary Care Physician Assistant Program began a curriculum review of its classroom and clinical instruction in 1986. Courses were reviewed for clarity of course objectives and completeness of content. The first step was an evaluation strategy that used old examinations to clarify course objectives by assessing correspondence of the examination items to course objectives. A detailed report of the test evaluation and its development is presented.

Sparkes KJS, Stein WA. "The pros and cons of endorsing the baccalaureate degree as the minimum degree for PAs." ***J Am Acad Physician Assist.*** 1(3): 177-81, May-Jun 1988.

Journal abstract: The American Academy of Physician Assistants endorses the baccalaureate degree as the current minimum degree for physician assistants and encourages all physician assistants to possess a minimum of the baccalaureate degree. In addition, the AAPA encourages programs to assist individuals in achieving this goal. The AAPA recognizes that many currently practicing PAs graduated from non-baccalaureate programs and believes that the practice ability of these PAs should remain unchanged.

Bottom WD. "A computerized approach to discipline-specific bibliographies in the allied health sciences." Physician Assistant Program, University of Florida, Gainesville 32610. ***J Allied Health.*** 17(2):143-51, May 1988.

Journal abstract: The traditional subject headings in *Index Medicus* and other standard indexes have frequently proved too broad for researchers in the allied health sciences. Therefore, the Physician Assistant Program at the University of Florida has developed a computerized bibliography program designed to expedite research by using a selected list of keywords as subject headings and subheadings tailored to the interests and concerns of the physician assistant profession. Each subject heading and subheading is translated into a numerical coding system that permits efficient data entry and rapid identification of items in the professional literature as well as reducing the incidence of operator error in data entry. The program can be used for review of the literature, curriculum design, identification of supplementary reading material for education courses, and identification of appropriate resources to enhance the study of the physician assistant profession. Through the development of discipline-specific keywords, the program can be tailored to the educational and research interests of any discipline in the allied health sciences or other educational fields.

Mullen PD, Holcomb JD, Fasser CE. "Selected allied health professionals' self-confidence in health promotion counseling skills and interest in continuing education programs." School of Public Health, University of Texas Health Science Center, Houston 77225. ***J Allied Health.*** 17(2):123-33, May 1988.

Journal abstract: Mail surveys of samples of dental hygienists (n = 90, 36% response), registered dietitians (n = 262, 52% response), and physician assistants (n = 289, 89% response) in Texas and certified nurse midwives (n = 143, 57% response) in the US provided data regarding their confidence that they possess skills and knowledge to counsel patients about selected areas of health promotion (self-efficacy). Also, the surveys gathered information regarding respondents' beliefs that patients will follow through on their recommendations (adherence expectation), and their interest in continuing education programs. Overall, respondents displayed highest self-efficacy with regard to counseling patients about blood pressure and smoking. Confidence was lowest in illicit drug abuse and mental health areas. Certified nurse midwives and physician assistants indicated confidence in many more areas than the other two groups. Respondents consistently expressed less certainty about patient adherence than about their own skills and knowledge. They generally indicated a high degree of interest in continuing education across the several health promotion topics. Modest relationships were observed between self-efficacy and interest in continuing education programs for physician assistants and registered dietitians, indicating that those with greater self-efficacy had a greater interest in building their skills. A similar pattern was observed among physician assistant respondents with respect to adherence expectations.

Schmidt BA. "Expanding the PA applicant pool." ***Physician Assist.*** 12(5):16, 21, May 1988.

Journal abstract: The PA profession has experienced a decline in the applicant pool and the actual number of PA students in training programs. This comes at a time when demand for PAs has increased dramatically. Basic questions facing the profession regarding this critical issue include: What is the current situation facing the most PA programs? Who are the individuals seeking to become PAs? What are the viable options for the future? How can individual PAs impact the applicant pool, attracting and retaining qualified students? PA leadership must address these questions immediately. All PAs must take an active role in recruiting more students.

Currey CJ, Bottom WD. "A survey of PA educators." ***J Am Acad Physician Assist.*** 1(2): 141-7, Mar-Apr 1988.

A survey of physician assistant educators showed that physician assistant faculty were demographically similar to most physician assistants in clinical practice. However, the average years in clinical practice were 3 years for faculty members; 11.4% reported having no clinical experience. The physician assistant faculty role was multifaceted, with most faculty having a number of teaching and administrative responsibilities. Physician assistant faculty were strongly motivated by a desire to teach, were moderately satisfied with their jobs, and were enthusiastic about the future of the physician assistant profession. Unlike most educators, the majority of physician assistant faculty did not fill tenure-earning positions and seldom engaged in research activities.

Bottom WD. "A computerized information management system for educational programs in the health sciences." University of Florida College of Health Related Professions, Gainesville. ***J Med Educ.*** 62(10):829-35, Oct 1987.

Journal abstract: The Physician Assistant Program at the University of Florida has developed and implemented a computerized information management system that eliminates time-consuming

duplication of effort in record-keeping and covers all functional components of the educational program. Data-base files for admissions, curriculum and/or evaluation design, student records, graduate follow-up, and research activities and a master file for administrative activities permit rapid accessing and transfer of information across files, continual updating of information, and efficient generating of records and reports pertaining to all program functions. Research about the program is enhanced through the correlation of data available in the five data-base files. This comprehensive system facilitates the audit of the program's educational process and the evaluation of its accomplishment of its stated objectives. The system can be easily adapted for use by other educational programs in medicine and the allied health sciences.

Fasser CE. "Educating physician assistants: the past ten years." ***Physician Assist.*** 11(10):152-4, Oct 1987.

Journal abstract: During the past ten years of PA education, new methods of instruction have been introduced and tested, and curricula have been expanded. Clinical experience is being provided in a widening range of medical settings. Greater emphasis has been placed on standardization and accreditation of instruction. Most PA programs are now sponsored by four-year colleges, with instruction leading to a bachelor's degree.

Curry RH, Fasser CE, Schafft GE. "Physician assistant training and practice in geriatric medicine." ***Gerontol Geriatr Educ.*** 7(3-4):55-66, Spring-Summer 1987.

Journal abstract: This study reports on an increasing educational emphasis by physician assistant (PA) programs on didactic and clinical experiences in geriatrics... When asked to rate the importance of various topics to a physician assistant's scope of practice with elderly patients, there was exceptional congruence in the relative weights of the items given by educators and practicing physician assistants.

Keith DE, Doerr RJ. "Survey of graduates of a physician assistant internship concerning practice characteristics and adequacy of training." ***J Med Educ.*** 62(6):517-9, Jun 1987.

In 1984 a survey questionnaire was mailed to all graduates of the Postgraduate Surgical Internship Program for Physician Assistants from 1971 through 1983. Generally the graduates felt they were satisfactorily prepared for acute care practice and that their ability to contribute significantly in complex clinical situations enhanced their professional relationships with other health-care providers. The parameters most affected by postgraduate training were salary, job preparedness, and professional relationships.

Yeo G, Tully D. ***Model geriatric clerkship for physician assistant students: the continuum of elder care. Manual for physician assistant programs.*** Stanford Univ., Calif. School of Medicine. 1987. Sponsoring Agency: Health Resources and Services Administration (DHHS/PHS), Rockville, MD. Bureau of Health Professions. Available from: Stanford Geriatric Education Center, 703 Welch Road, Suite H-1, Stanford, CA 94304-1708, 415/723-7063.

This manual is intended to acquaint the faculty of physician assistant (PA) training programs with a model geriatric clerkship and to assist them in the process in implementing a similar clerkship. A detailed outline of the curriculum goals of a geriatric clerkship is included. The next section contains curriculum units on the following topics: communication skills, evaluation of health status, management of common health problems in noninstitutional elderly persons, health promotion/ disease prevention, family and elder counseling, and long-term care issues. Suggested criteria for

establishing a clerkship are enumerated. The following implementation steps are discussed: obtaining administrative support; adapting the model clerkship to the individual clerkship structure of a given program; implementing a preclerkship geriatric curriculum; generating faculty support for the clerkship plan; locating, selecting, and negotiating with appropriate training sites; selecting clinic preceptors and providing faculty development as necessary; selecting or developing written and audiovisual training materials and evaluation forms; developing a learning experience schedule; recruiting and scheduling individual students; following students and evaluating their progress; and evaluating the clerkship program. (Ten appendixes include an annotated bibliography on the role of PAs in geriatric medicine, an abstract of Medicare provisions for reimbursement of PAs, lists of geriatric care centers, bibliographies of materials on geriatrics, lists of facilities providing geriatric care, and answers to the post-assessment test.) Available from: Stanford Geriatric Education Center, 703 Welch Road, Suite H-1, Stanford, CA 94304-1708, 415/723-7063.

Glennon VB, Greenberg SB. ***Supervisory skills and challenges: a handbook for physician assistants.*** Northeastern Univ., Boston, Mass. 1986. 50p.; Appendix 2 may not reproduce well due to small print. Sponsoring Agency: Health Resources Administration (DHHS/PHS), Hyattsville, MD: Bureau of Health Professions.

A handbook for supervisors of students training as physician assistants is presented, based in part on workshops and interviews conducted at Northeastern University (Massachusetts). Topics include: the role and attributes of the supervisor, needs of adult learners and adult learning styles, beginning the supervisory process, use of skills in ongoing supervision, special problem areas for supervisors, and evaluation and grading. Qualities students want in a supervisor include: being supportive and friendly, listening actively, and possessing professional knowledge and good judgment. The supervisory process begins with getting acquainted, providing orientation materials, a guided tour, working out the learning contract, and scheduling meeting times. Skills in ongoing supervision include: demonstration and observation, teaching through feedback, using negative feedback (assertion and confrontation), and group supervision. Special problem areas for supervisors may involve student stress, the unassertive student, and dealing with difficult students. Concerns in evaluation/grading include objectivity vs. subjectivity, preparing for the final evaluation, performance assessment, and measuring change and growth. Two sample learning contracts are provided, along with a form for providing feedback to supervisors, and a student evaluation form.

Pennell TC. "Medical education. What now?" *N C Med J.* 47(9):429-30, Sep 1986.

In an "address" to a graduating class of physician assistants, Dr. Pennell catalogs concerns about the climate of health care today but remains optimistic about opportunities for physician assistants.

Oliver D, Conboy JE, Donahue W, McKelvey PA. "Survey of physician's assistant programs in the United States." *J Med Educ.* 61(9 Pt 1):757-60, Sep 1986.

Describes the process and findings of the first national survey of physician assistant programs conducted by the Association of Physician Assistant Programs. The 1984 survey collected information on the administration, faculties and staffs, curricula, students, and graduates of the programs and was the basis for the ***First annual report on physician assistant educational programs in the United States, 1984-85.***

Hafferty FW, Goldberg HI. "Educational strategies for targeted retention of nonphysician health care providers." ***Health Serv Res.*** 21(1):107-25, Apr 1986.

Journal abstract: This study examined the impact of a community-based, totally decentralized training program on the likelihood that graduates would establish their first practice within predefined and limited geographic regions. We found that when students in a physician assistant/ nurse practitioner program received their preclinical and terminal training (preceptorship) in a region geographically proximate to their home residence, the likelihood that they would establish their first practice in that region was greatly increased. Similar results were found for students who took their preclinical training away from their home region but returned there for terminal training. Three additional training pathways were identified as being associated with markedly lower rates of regionally based graduate retention. Discriminant analysis was used to compare the relative impact of training and personal variables on retention. The educational process itself was found to be the single most important predictor of graduate retention. When structural variables were controlled, personal variables such as marital status, age, or sex had no predictive capabilities. With appropriate attention to the structural components of training—particularly terminal training (preceptorship)—experiences, PAs and NPs can be targeted to specific and relatively focused areas of medical need. These data suggest that several decentralized training strategies exist for physician assistants and nurse practitioners that would contribute to meeting health care delivery needs in chronically underserved areas.

Roush RE et al. "The training of multicompetent allied health professionals using a combined-fields method." ***J Allied Health.*** 15(1): 23-31, Feb 1986.

Journal abstract: Discusses the training of multicompetent health care providers by combining one or more aspects of their respective curricula. Three methods—intra-, across-, and extra-field combinations—of melding two historically separate fields are described. An example of an across-field combination—the Baylor College of Medicine Physician Assistant/Perfusion Technology Program—is given.

Schafft GE, Fasser CE, Cyr AB. Sponsor: Administration on Aging, Office of Human Development Services, US Department of Health and Human Services. ***The assessment and improvement of knowledge and skills in geriatrics for physician assistants: Final report.*** Arlington, VA: American Academy of Physician Assistants.

Schafft GE, Fasser CE, investigators. Sponsor: Administration on Aging, Office of Human Development Services, Department of Health and Human Services. ***The assessment and improvement of knowledge and skills in geriatrics for physician assistants : Final report : supplement.*** Monograph series on geriatric medicine for physician assistants. Arlington, VA: American Academy of Physician Assistants. 1986. GPO Item No. 447-A-1 (microfiche).

Stanford Univ., CA, School of Medicine. ***Geriatric education for physician assistant faculty. Final report.*** Sponsor: Bureau of Health Professions, Div. of Medicine. Rockville, MD. 1986. 244p. See also Summary Report, HRP-0906971.

Abstract: This is the final report of a two-year faculty development project for Physician Assistant (PA) teachers in geriatrics — the GEPAF project. It was significant for at least two reasons: (1) It is the first and, to date, the only national faculty development project funded for teachers in PA programs; (2) It has helped prepare PA faculty to provide their students with geriatric skills that will be increasingly in demand through the next few decades, especially now that Medicare

reimbursement has been authorized for PAs.

Yeo G, Tully D, Fowkes VK, Goldstein M. ***Geriatric curriculum resource package.*** Stanford University, CA, School of Medicine. Sponsor: Bureau of Health Professions, Rockville, MD. 1985. Available from: Stanford Geriatric Education Center, 703 Welch Road, Suite H-1, Stanford, CA 94304-1708, 415/723-7063.

Abstract: The materials included in the *Geriatric Curriculum Resource Package (CRP)* were written and selected to assist Physician Assistant faculty members to develop and implement geriatric curricula. The contract for the GEPAF project specified that the topics covered in the CRP should include, but not be limited to the following: (1) Philosophy of caring for the elderly; (2) Major influences on, and the needs of, the elderly; (3) Major measures of care for the well and the ill elderly; (4) Description of pertinent learning experiences for physician assistant students; (5) Competencies and attributes that should be possessed by the physician assistant providing care for well and for ill elderly people; (6) Annotated references appropriate to the physician assistant's role in care of the elderly. See Yeo and Tulley, p. 35.

Page-Robin EK. ***Integrated gerontological improvements in physician assistant education. Final report.*** Sponsor: Administration on Aging, Washington, DC. Kalamazoo: Western Michigan University. 1985. 110p.

Abstract: The report addresses the work of the Integrated Gerontological Improvements in Physician Assistant Education project. The project had three objectives: (1) to develop a model curriculum on aging which can be incorporated into the Physician Assistant Program at Western Michigan University; (2) to provide faculty development experiences to systematically include materials and information in course work and clinical supervision about older persons, their particular needs, and psychosocial aspects of their circumstances and situations; (3) to disseminate results of curriculum and faculty development through professional papers and workshops presented at national meetings of physician assistants and gerontology associations; continuing medical education courses for physician assistants, physicians, and other medical personnel; and through systematic training to enable workshop participants to provide such information to their colleagues in their practice sites and localities.

Anderson D, Bach S, Bate HL, Christenson R, Denenfeld M. Western Michigan University, Physician Assistant Program and Gerontology Program. United States Administration on Aging. ***Gerontology and geriatrics for physician assistants: a videotaped workshop series.*** Washington, DC: Administration on Aging, Office of Human Development Services, US Department of Health and Human Services. 1985. GPO Item No.447-A-1 (microfiche).

Abstract: The text, which forms part of a videotape series, addresses issues facing the older person, his family, and the medical practitioner. Ethical considerations in the treatment of the elderly as patients are reviewed. For example, it is pointed out that since chronic and terminal conditions are more prevalent in this age group than in any other, ethical issues with regard to treatment and use of life-saving and life-prolonging techniques arise in this population with some frequency. Physician assistants are instructed as to how to treat older patients with dignity and understanding, to deal with their medical and psychosocial problems, and to develop the attitudes, knowledge, and clinical skills to achieve these needs. To assist physician assistants in accomplishing these objectives, a series of facts pertaining to the elderly is listed. Further, it is concluded that the attitudes of physician assistants and other health care personnel can affect the medical care, mental state, and physiologic response of any person, including older people.

Anderson D, Bach S, Bate HL, Christenson R, Denenfeld M. Western Michigan University, Physician Assistant Program and Gerontology Program, United States, Administration on Aging. ***Implementation of gerontological/geriatric objectives for physician assistants, final report.*** Washington, DC: Administration on Aging. 1985. 88p.

Abstract: The manual discusses the education and use of physician assistants (PAs) in care to the aged. The decision to integrate gerontological/geriatric materials into the existing curriculum at Western Michigan University (WMU) is reported and the development of educational objectives in gerontology/geriatrics for the curriculum is described. The experience of WMU's program in implementing the objectives is recounted and general issues in implementation are described. The need for the addition of gerontology/geriatrics to the PA curriculum to be considered from the beginning, with the full knowledge and involvement of the teaching faculty, is emphasized. Steps in planning to add gerontology/geriatrics to the curriculum are reviewed. Additionally, the need for a curricular review to determine what is already being taught and in what courses, is cited. Appendixes contain the final list of educational objectives, curricular and course descriptions, and objectives with mean priority rankings.

Watson JE, Belland JC. "Use of learner data in selecting instructional content for continuing education." ***J Instructional Dev.*** 8(4): 29-33, 1985.

Journal abstract: Describes an instructional development project in which data adequately describing learner characteristics was used to identify content for 18 continuing educational instructional modules for physician assistants. Utilization of learner data to provide instructional designer with precise criteria required to select content for both health and non-health related instruction is advocated.

Oliver D, Conboy JE, Preston M. "A comparison between the performances of medical students and physician's assistant students in interdisciplinary courses." ***J Med Educ.*** 60(12):946-8, Dec 1985.

Findings of a study that compared PA and medical student performances in a basic and a clinical science course to determine whether students with differing levels of academic preparation can benefit by interdisciplinary educational experiences. Findings suggest that PA students can perform acceptably in selected medical school courses and that the early association is likely to result in improved relationships between the groups and a better understanding of one another's future professional roles.

Holcomb JD, Mullen PD, Fasser CE, Smith QW, Martin JB, Parks LA, Wente SM. "Health behaviors and beliefs of four allied health professions regarding health promotion and disease prevention." Center for Allied Health Professions, Baylor College of Medicine, Houston, Texas 77030. ***J Allied Health.*** 14(4):373-85, Nov 1985.

Journal abstract: Certified nurse midwives, certified physician assistants, registered dental hygienists, and registered dietitians were surveyed to determine to what extent important health promotion and disease prevention behaviors are a part of their lifestyle. Also assessed were beliefs about health promotion and disease prevention practices. The study found that the respondents perceive themselves as important providers of health promotion and preventive services. Although most of the respondents are good health role models, many should consider changes in their own behaviors. Additionally, continued learning by many of these professionals appears warranted, particularly in recognizing the significance of certain health behaviors as they relate to preventing disease and promoting health.

Niland-Weiss J, Duda M, Dreskin M, Tramel J, Zarnegar Z. "Computerized evaluation of clinical experiences in the training of health professionals." ***J Allied Health.*** 14(3): 255-66, Aug 1985.

Journal abstract: The Physician Assistant Program at the University of Southern California School of Medicine in Los Angeles established a computerized data base in 1980 to evaluate the clinical experiences of its students. Data on patient encounters are collected by means of "patient contact cards." The data focus on three main areas: patient demographics, diagnoses/therapeutics, and student responsibility levels. A FORTRAN computer program was written to produce summary reports for individual students as well as for the entire class. The information generated can be used to ensure adequate experience in each clinical area, document the student's background for employers, serve as a basis for curriculum revision, and allow evaluation of the adequacy of clinical services in the community. The computer program is transferable to other institutional locations as well as to other types of health care provider training programs. The design of the patient data system, the computerization process, the implementation of the program, and its applications are discussed.

Shepard K et al. "Successful components of interdisciplinary education." ***J Allied Health.*** 14(3): 297-303, Aug 1985.

Journal abstract: This article presents 10 ideas for developing successful interdisciplinary curricula as suggested in the allied health literature. Implementation of the ideas is illustrated by examples from a clinical geriatric course involving physical therapy, physician assistant, nurse practitioner, and medical students.

Stark R, Yeo G, Fordyce M, Grudzen M, Hopkins J, McGann L, Shepard K. "An interdisciplinary teaching program in geriatrics for physician's assistants." ***J Allied Health.*** 13(4):280-7, Nov 1984.

Journal abstract: An interdisciplinary curriculum committee within the Division of Family Medicine, Stanford University Medical Center, developed and taught a beginning course in clinical geriatrics for medical students and student physician's assistants, physical therapists, and nurse practitioners. Through a series of Saturday classes held in community facilities serving seniors, physician's assistant students had the opportunity to learn clinical geriatrics from a faculty team including a physician's assistant, physician, nurse, physical therapist, social worker, gerontologist, and health educator. Local seniors served as consumer consultants and models of health and vigor. This interdisciplinary approach was modeled by the faculty to demonstrate the need for a team approach to deliver quality care to seniors. In this well-received course, the role of the physician's assistant in health care was made evident to their future physician employers and physical therapy co-workers through faculty modeling as well as through informal contacts and patient conferences. Older people constitute a growing and increasingly medically underserved population. Team training may serve to stimulate physician's assistant students to include geriatrics in their career plans while educating their future physician employers about their role.

Goldberg H, Hafferty F, Fowkes VK. "The effect of decentralized education versus increased supply on practice location. Experience with physician assistants and nurse practitioners in California, 1972-1982." ***Med Care.*** 22(8):760-9, Aug 1984.

Journal abstract: To improve the geographic distribution of physician assistants and nurse practitioners in California, the Primary Care Associate Program established five community-based training sites in outlying areas while continuing to operate its core program within the San Francisco Bay Area. To evaluate this effort, the authors prospectively compared the employment locations

of graduates from both groups, achieving a follow-up rate of 95%. Graduates from community sites were twice as likely to locate first practices outside the Bay Area (91% vs. 43%, P less than 0.05) and in towns with less than 10,000 inhabitants (33% vs. 16%, P less than 0.05). Over the decade, the percentage of graduates practicing outside the Bay Area rose from 0 to 9% for trainees both recruited from and entirely trained within the Bay Area versus 76-84 % for trainees experiencing any element of decentralization. The slopes of these two lines represent the effect of the increasing supply of graduates on practice location away from Stanford (9%); the distance between the lines, the greater effect of decentralization (73%). Given the goal of statewide deployment of a small number of graduates, decentralization appears to have been an effective approach.

Davis SW, Best DL, Marion GS, Wall GH. "Sex stereotypes in the self- and ideal descriptions of physician's assistant students." ***J Med Educ.*** 59(8):678-80, Aug 1984.

The study identifies characteristics of students training to be PAs, examines characteristics believed to be attributes of an ideal PA, analyzes how conceptions change throughout training, and compares PA and medical student profiles. PA students, like medical students, were aware of the importance of nurturant, interpersonal attributes. Both male and female PAs described themselves as more nurturant and more dependent than did medical students. Both male and female PA students described themselves more femininely than their ideal, particularly males who considered themselves to have more stereotypically feminine needs than physicians or men in general. These differences were amplified for PAs entering highly interpersonal specialty fields.

Glazer-Waldman HR. "Perceptions of patient-provider relationships in allied health education textbooks." ***J Allied Health.*** 13(2):104-11, May 1984.

Journal abstract: The objective of this research was to determine the degree to which selected allied health education textbooks presented information on aspects of the patient-provider relationship. Five textbooks were selected from two allied health areas: physician assistant and dental hygiene. Content analysis was used to systematically identify inclusion of four variables: patient-provider relationships; barriers to health care; sex differences; and racial, ethnic, or cultural differences in relation to health beliefs and behaviors. Results indicated a wide discrepancy among the textbooks for the four variables. Analyses indicated that minimal content had been allocated to patient-provider relationships and barriers to effective health care. This study demonstrated the use of content analysis as a methodology for reviewing course textbooks, and it demonstrated the need for faculty members to increase the presentation of information on patient-provider relationships.

Carter RD, Emelio J, Perry H. "Enrollment and demographic characteristics of physician's assistant students." ***J Med Educ.*** 59(4):316-22, Apr 1984.

Journal abstract: The authors in this paper describe enrollment trends and provide demographic information for a representative sample of physician's assistant (PA) students enrolled during 1978-1982 in 46 PA programs accredited by the American Medical Association. In February 1983, there were 2,871 such students enrolled in 54 primary care and three surgeon's assistant programs. The typical PA program, which is two years in length, provides six to nine months of preclinical course work and nine to 15 months of clinical experience. Most programs are based in either medical schools or four-year colleges and offer baccalaureate degrees. From the demographic information obtained by the authors from this sample, the typical PA student is 28 years old and has three to four years of college and one to two years of prior health care experience. There has been a steady increase in the enrollment of women and individuals with four or more years of college. More than half of the PA students enrolled in 1983 were women. Former military medical corpsmen, who once

predominated the PA profession, now represent only a small proportion of the PA student population. Most PA students continue to want to practice with family practitioners in small communities.

Flournoy DJ, Hyde RM. "Essential qualities of a good lecture." ***J Okla State Med Assoc.*** 77: 52-55, Feb 1984.

Journal abstract: The authors gave a questionnaire regarding the essential qualities of a good lecture to second-year medical, dental, and physician's assistant students. The findings may suggest that medical school lecture attendance relates to the quality of the lectures' presentation. The lecture should (1) be well prepared, (2) have a logical progression of major lecture points, (3) clearly identify expectations of material mastery, (4) be well understood, and (5) clarify important areas.

Johnson NP. "The physician's assistant: gatekeeper to care." ***Alcohol Health Res World.*** National Institute on Alcohol Abuse and Alcoholism, Volume 8, Number 1, Fall 1983. US Department of Health and Human Services, Public Health Service, Alcohol, Drug Abuse and Mental Health Administration.

Describes generally the physician assistant profession and its demographics. Focuses on alcohol and drug abuse information and its integration in the PA curriculum. The activities of the Physician Extender National Substance Abuse Advisory Board (PENSAAB) and the development of curriculum guides on substance abuse for PAs are discussed.

Wilson WM, Murdock RT, White GL, Kotrady K, Pedersen DM. "Decentralized training for physician's assistants in Utah: an evaluation." ***J Med Educ.*** 58(9): 746-748, Sep 1983.

From 1973-77 the Utah Medex project initiated and conducted an experimental decentralized training and evaluation program called the Alternate Certification System (ACS). The ACS program was seen as an alternative method of certifying persons who were unable or unwilling to enroll in the regular Medex training program. The performance of the ACS students in the program, their performance on the certifying examination, and postgraduate data were examined to help gauge their success relative to that of the concurrent (1975-77) regular Utah Medex classes. The original objectives of the ACS project were met and the certification examination results for informally trained PAs indicated that a majority of the ACS students would have failed the examination had they not participated in the ACS program. However, the methodology was judged as far from efficient and requiring too much teaching time by busy physicians.

Farber N, Stolberg S. ***"Abstract: Use of an experimental and didactic program for teaching drug adherence."*** Association of Physician Assistant Programs. Proceedings of the Paper Presentation Session. Eleventh Annual Physician Assistant Conference. May 29-Jun 2, 1983. St. Louis, Missouri, p. 9-10.

Adherence to drug regimens is an important aspect of medical care; however, only 50% of patients adequately take medications. This aspect of patient care deserves more attention in health professions curricula. Although various educational programs have been used, none have been adequately evaluated. This study of physician assistant students was performed to assess the impact of an educational program on the attitudes towards, and knowledge of, drug adherence. The program included an opportunity to experience medication-taking for one week followed by didactic material. This study indicates that an educational program of taking a benign medication (i.e. Vitamin C) for one week combined with a didactic program favorably influences the attitudes and knowledge of PA students regarding drug adherence.

Oliver DR, Conboy JE, Daniels M. ***"Abstract: predicting clinical performance of the graduate: can it be done?"*** Association of Physician Assistant Programs. Proceedings of the Paper Presentation Session. Eleventh Annual Physician Assistant Conference. May 29-Jun 2, 1983. St. Louis, Missouri. p. 17-18.

The purposes of this study were (1) measure PA clinical services as reported by physician-employer satisfaction in three skill areas, (2) evaluate the level of satisfaction as a function of the type of practice setting, medical specialty of the employing physician, and sex of the physician assistant, and (3) determine whether significant relationships exist between physician satisfaction and specific indices of prior student performance.

Reisz WG, Cawley JF, DeAtley CA. ***"Abstract: National survey of clinical coordinators in physician assistant programs."*** Association of Physician Assistant Programs. Proceedings of the Paper Presentation Session. Eleventh Annual Physician Assistant Conference. May 29-Jun 2, 1983. St. Louis, Missouri. p. 5-6.

The role of the clinical coordinator in physician assistant education is widely regarded as pivotal. Clinical coordinators extensively influence the clinical and professional development of PA students. Past studies of PA program clinical coordinators (Willis, Western Michigan University, 1979) suggest that turnover rates in the position may be high; that prior clinical experience and continued clinical competence are regarded as important requirements for the position; and that a majority of coordinators intended to return to clinical practice, possibly due to insufficient clinical time afforded by the position. Lack of clinical practice opportunities in the position alone appears not be a major reason for excess clinical coordinator turnover. Rather, a combination of factors, perhaps including high behavioral and professional expectations of directors, the innate difficulty of the job, insecure academic status, and desire for upward professional growth appear to contribute to the high turnover rates for PA program clinical coordinators.

Shorter SG, Johnson NP, Freemire RL, Shouse DW. ***"Alcohol and drug abuse education for physician's assistants: a national survey of PA educational programs."*** Association of Physician Assistant Programs. Proceedings of the Paper Presentation Session. Eleventh Annual Physician Assistant Conference. May 29-Jun 2, 1983. St. Louis, Missouri. p. 45-64.

The educational program survey clearly indicates a need for further research on education for PAs in substance abuse. It is apparent from the data that a number of programs include required hours devoted to drug and alcohol information. We expect that through the effort of the Physicians' Extender National Substance Abuse Advisory Board (PENSAAB) and other groups that the amount of substance abuse information provided to graduates has been and will be enhanced.

Curry RH. "Underserved rural primary care preceptorship project." ***Physician Assist.*** 7(6): 91-92, 97, 130, Jun 1983.

Golden AS, Cawley JF. "A national survey of performance objectives of physician's assistant training programs." ***J Med Educ.*** 58(5): 418-424, May 1983.

Journal abstract: A nationwide survey of physician's assistant (PA) training programs was carried out to determine the performance expected of students upon graduation. A list of tasks reflecting primary medical care problems was sent to PA program directors asking whether they expected their graduates to be able to perform the task, only to know about the task, or neither to be able to perform nor to have knowledge of the task. The results indicated that all students were expected

to perform a history and physical examination. Almost all of the program directors expected students to establish a working diagnosis for the most common problems and to formulate a management plan for many of them. Extensive skills in patient education and counseling were expected. There was considerable congruence among the directors in performance expectations of students. The expected performance of the PA student by graduation emerged as comprehensive and not merely technical.

Fowkes VK, Hafferty FW, Goldberg HI, Garcia RD. "Educational decentralization and deployment of physician's assistants." ***J Med Educ.*** 58(3): 194-200, Mar 1983.

Journal abstract: A community-based educational network was established to improve the deployment of physician's assistants away from the original site of training in California's San Francisco Bay Area. The philosophy underlying the program decentralization, lessons learned during its implementation, and outcomes of the decentralization are discussed. The graduates' practice locations for a seven-year period are compared before and after the decentralization of the program. Before decentralization, 58 percent of the graduates established their first practice outside of the Bay Area. Following decentralization, 100 percent of the students trained entirely within community settings took their first jobs away from the Bay Area. Unique aspects of this decentralization experience compared with those reported previously included the lack of a required student-preceptor match at the time of entry into the program, the provision of clinical training in or near the site of student residence, and the opportunity to compare before and after effects of decentralizing educational components other than preceptorships.

Harmon RG, Turnipseed S, Schlittenhard S, Penman A. "Training physician assistants for the Pacific Northwest. The Medex Northwest ten-year experience." ***West J Med.*** 138(2): 280-284, Feb 1983.

Journal abstract: The student characteristics and employment status of physician assistants trained at Medex Northwest in Seattle between 1969 and 1979 were surveyed. There were 201 graduates and an attrition rate of 11.1 percent. Of 142 respondents, 88.7 percent were currently employed as physician assistants or nurse practitioners. Most (77.5 percent) were employed by their teaching preceptors following graduation. A majority (55.6 percent) were working in public or nonprofit private sector facilities. In all, 70 percent were practicing in Washington state, 75 percent were in family practice and 62 percent were working in communities of less than 50,000 population. These results compare favorably with rural and primary care practice data for physician assistants and physicians nationally. An effective preceptorship and deployment system is proposed as an important reason for the results.

Gairola G. "Physician assistant graduates: factors related to rural-urban practice location." ***J Community Health.*** 8(1): 23-32, Fall 1982.

Journal abstract: The purpose of this study is to examine the influence of selected individual and background characteristics and values of physician assistant (PA) graduates on practice location. Information was gathered through a survey of graduates practicing as physician assistants from the first four classes of the University of Kentucky's Clinical Associate Program. No significant differences were found in rural-urban practice location by examining sociodemographic characteristics of graduates or residential background of graduates and their spouses. The only exception was that female graduates tended to practice in urban locations more than did male graduates. However, differences were found between rural- and urban-based graduates in the importance they placed on selected characteristics of communities.

Cawley JF, Katterjohn KR. ***"Abstract: A survey of postgraduate residency training programs for physician assistants."*** Association of Physician Assistant Programs. Proceedings of the Paper Presentation Session. Tenth Annual Physician Assistant Conference. May 30-Jun 3, 1982. Washington, DC. p. 5-9.

A recent development in the PA profession is the emergence of formal postgraduate clinical training experiences, frequently termed "PA residencies." These programs accept graduates of primary care physician assistant training programs and offer additional clinical and didactic experiences in specialty areas. Presently, at least nine such programs exist and two others are known to be under development. This survey attempts to describe several aspects of these programs with specific regard to institutional setting, students, curriculum, faculty, and perceived professional and educational issues.

Freemire RL, Hammond JB, Ridings HD, Shorter SG. ***"SCAMPTED: A model for physicians' assistants program community involvement."*** Association of Physician Assistant Programs. Proceedings of the Paper Presentation Session. Tenth Annual Physician Assistant Conference. May 30-Jun 3, 1982. Washington, DC. p. 33-34.

To assess and improve existing community awareness of various health issues and information, while also increasing the visibility of Physicians' Assistants Programs through community involvement in health education via public presentations geared toward specific interests of the audience.

Neibuhr B, Rahr RR. ***"Abstract: Group and individual learning methods for teaching clinical problem solving."*** Association of Physician Assistant Programs. Proceedings of the Paper Presentation Session. Tenth Annual Physician Assistant Conference. May 30-Jun 3, 1982. Washington, DC. p. 1.

The purpose of the study was to evaluate a group-learning method for teaching clinical problem solving to junior physician assistant students in a clinical medicine course. The results found here are useful for PA educators. We can state that the group-learning method is not deleterious compared to a more traditional teaching method. The students and faculty generally described the group-learning method as valuable. Thus, there is support for continuing such a teaching method. The finding that the students actively entertain a small number of diagnostic hypotheses (less than 10) is consistent with previous research implicating the limits of short-term memory in clinical problem-solving.

Oliver DR, Conboy JE, Daniels M. ***"Abstract: Biographical and academic comparisons between physician assistant and medical students."*** Association of Physician Assistant Programs. Proceedings of the Paper Presentation Session. Tenth Annual Physician Assistant Conference. May 30-Jun 3, 1982. Washington, DC. p. 10-11.

To date few studies have been published which compare biographical and academic characteristics of students entering the physician assistant (PA) and medical professions. This study reports the results of such a comparison at a major midwestern medical center where the curriculum overlaps extensively. Results of the academic comparisons indicated that highly significant differences existed in the entry level characteristics measured between the two groups. The medical students had more extensive science course backgrounds and significantly higher GPAs. The didactic performance of the two groups in pharmacology and ICM was also significantly different. This finding was not unexpected in as much as the two groups differed extensively in academic

preparation. The PA students did well in the courses and had a pass rate of 100%. Less difference was noted in the preceptor evaluation of the student's skill in performing a physical examination and obtaining a medical history on both real and simulated patients. It is speculated that the PA students may compensate for having less extensive academic preparation by a high degree of motivation and benefit by having health related experience prior to entering their educational program.

Westberg J, Jason H. ***Workshops in educational administration for administrators/teachers in PA programs.*** Sponsor: Bureau of Health Professions, Div. of Medicine, Hyattsville, MD. Washington, DC: Association of Physician Assistant Programs. 1981. 111p.

Abstract: This document is meant as a resource for persons who intend to supervise, plan and/or carry out workshops in educational administration for administrators and teachers who are in PA programs (or in other health professions instructional programs, such as medical or nursing schools). To be optimally effective, workshops must be custom-designed to meet the unique needs of each particular workshop audience. The goals and strategies of individual workshops are also dependent on such factors as the skills of the workshop leaders, available financial resources, space, time and more. For all these reasons, this document does not provide a blue print of a specific workshop. It is not possible to be responsive to the special needs of separate groups with a single, standard workshop design. Instead of a fixed format, some general guidelines to be considered when planning and implementing workshops are provided.

Develop, implement and evaluate workshops in educational administration for key teacher/ administrators involved in the training of physician assistants, Final report. Sponsor: Bureau of Health Professions, Div. of Medicine, Hyattsville, MD. Washington, DC: Association of Physician Assistant Programs. 1981. 57p.

Abstract: The purpose of this contract was to develop, implement and evaluate four workshops in educational administration for key faculty administrators involved in the training of physician assistants. During the early months of the contract, the trainees were identified. Their needs (in the area of educational administration) were determined via a written questionnaire distributed to all of them. Using the resulting data as a guide, the faculty, with input from the Advisory Committee, designed the workshop format and content. Trainees were informed about the purposes of the workshops, as well as ways they could prepare themselves to receive maximal benefits. See also ***Executive Summary,*** HRP-0903676/5.

Oliver DR, Preston M. ***"Abstract: The performance characteristics of physician assistants applying to various professional schools."*** Association of Physician Assistant Programs. Proceedings of the 1981 Midyear Meeting Paper Presentations. In conjunction with the 92nd Annual Meeting of the Association of American Medical Colleges, Oct 31-Nov 5, 1981, Washington, DC. p. 37.

The relationship between age, sex, pre-admission and program performance factors and whether PA students or graduates apply to dental, osteopathic, medical or graduate school is reported. The results indicate that pre-admission factors are not significant predictors; performance in the program was significant. Age was not a significant factor but sex of the individual was significant.

Osborn S, Hyde RM, French RH, Godkins T. ***"Abstract: Project level I: factors leading to 'ease of stress' in a physician associate program by assessment of potential predictors."*** Association of Physician Assistant Programs. Proceedings of the 1981 Midyear Meeting Paper Presentations. In

conjunction with the 92nd Annual Meeting of the Association of American Medical Colleges. Oct 31-Nov 5, 1981, Washington, DC. p. 36.

The Nelson-Denny Reading Test was administered to post-admission, pre-entry PA students. Utilizing Nelson-Denny results in the comprehension, vocabulary and reading rate areas along with other performance measures, correlation coefficients were generated. Preliminary findings indicated significant correlations. Using these results, intervention approaches were identified and initiated and evaluational studies conducted.

Runde PC, Poehlmann MM. ***"The application of a micro-computer data base management system for administering physician assistant clinical preceptorships."*** Association of Physician Assistant Programs. Proceedings of the 1981 Midyear Meeting Paper Presentations. In conjunction with the 92nd Annual Meeting of the Association of American Medical Colleges. Oct 31-Nov 5, 1981, Washington, DC. p. 25-33.

The strategy of developing the information system, as well as the prototype for gathering and maintaining data, offers a benchmark for transference to other physician assistant programs. Since the preceptor prototype was developed for use with the micro-computer, planning efforts in this program are being directed to move toward implementing student profile development as well as instructional profile development. This case study provides evidence that effective superintendence of the preceptorship is buttressed by instituting serial maintenance activities via micro-computer programming.

Shelton SR, Niebuhr BR. ***"Evaluation of a university-based family practice rotation: use of patient contact data."*** Association of Physician Assistant Programs. Proceedings of the 1981 Midyear Meeting Paper Presentations. In conjunction with the 92nd Annual Meeting of the Association of American Medical Colleges. Oct 31-Nov 5, 1981, Washington, DC. p. 18-24.

The most extensive patient contact project to date in print, the Virginia Study of Family Medicine contacts was designed, in part, to provide a data base for curriculum design and evaluation. The purposes of the present paper are to (1) describe the clinical experiences of physician assistant students in a university-based family medicine rotation, (2) compare their experiences to those reported in the literature, specifically, the Virginia Study, and (3) to discuss methods whereby curricular evaluation and revision may be done.

Andrus PL, Fasser CE, Yeoman L. "Interdisciplinary learning in pharmacology: analysis of M.D. and P.A. student performance." ***J Med Educ.*** 56(9 Pt 1): 757-761, Sep 1981.

Journal abstract: Interdisciplinary courses of instruction for medical (MD) and physician's assistant (PA) students have been underway at Baylor College of Medicine since 1974. An analysis of MD and PA student comparative performances was felt appropriate in view of the PA's increasing involvement with the implementation and monitoring of therapeutic programs. The results of both student populations on the National Board of Medical Examiners' Subject Examination in Pharmacology are presented.

Borland JJ. "Behavioral science content for training physician's assistant students." ***Mil Med.*** 146(7): 500-503, Jul 1981.

The student preparing for a career as a health care-giver needs to have an understanding of the conceptual base of human behavior. This paper reports on the author's involvement in developing a program for teaching behavioral science material to students in a PA program. The author used personal experience and information from a program survey to develop a course which had a dual focus, presenting behavioral science content while using the interpersonal process of the class as an example.

Petrusa ER. "Structuring clinical medical education: a problem specific, performance based framework." ***Ann Conf Res Med Educ.*** 20: 175-180, 1981.

Palmisano P, Edelstein J. "Teaching drug promotion abuses to health profession students." ***J Med Educ.*** 55: 453-455, May 1980.

Students' attitudes concerning pharmaceutical promotion were explored in an educational seminar. Findings indicate that health practitioners may be influenced by the drug industry in their view of potential conflicts of interest with a significant trend toward softer ethical values within their own profession. This seminar coupled with an attitude poll developed into an efficient teaching tool for bringing issues of conflict-of-interest to the attention of future health professionals and *may* contribute to a more objective approach to prescribing.

Westberg J, Lefever D, Jason H. "Clinical teaching in physician's assistant training programs." ***J Med Educ.*** 55: 173-180, Mar 1980.

Journal abstract: This is a report on the clinical component of physician's assistant (PA) training programs. Given the significant role physicians played in establishing the new profession, it is not surprising many PA programs are built on the traditional model of medical education, with clinical training occurring after didactic and laboratory-based courses in the basic sciences. It is also not unexpected that programs rely heavily on physicians as clinical instructors. This situation, however, is changing. An increasing number of PA graduates are serving as role models and as instructors in patient care settings. These graduates are also assuming positions of leadership in PA programs. Like their counterparts in medical schools, the PA faculty members surveyed in this project are not adequately prepared for their work as teachers, but they do demonstrate an eagerness to enhance their skills and to continue to upgrade the quality of teaching in their programs. Two areas in which PA faculty would particularly like help are evaluation and faculty development.

National Commission on Allied Health Education. ***The future of allied health education: Alliances for the 1980's.*** 320 p. San Francisco: Jossey-Bass Publishers.

Lanier RA, Williams B, Niebuhr BR. "Teaching effectiveness: a comparison of student ratings and graduate effectiveness." ***Ann Conf Res Med Educ.*** 18: 171-176, Nov 1979.

Neibuhr BR, Shelton SR, Werner SA. "A structured interview for the selection of physician's assistant students." ***Ann Conf Res Med Educ.*** 1: 151-156, Nov 1979.

Fowkes VK, O'Hara-Devereaux M, Andrus L. "A cooperative education program for nurse practitioners/physician's assistants." ***J Med Educ.*** 54: 781-787, Oct 1979.

Journal abstract: Traditionally, nurse practitioners and physician's assistants have been trained separately. Despite similarities in curriculum and graduate practice, there has been little or no articulation between their training programs or professional organizations. In 1977 the Family Nurse Practitioner Program at the School of Medicine, University of California, Davis, and the Primary Care Associate Program at Stanford University Medical Center merged clinical curricula. In this article the authors describe the cooperative educational venture and evaluate its first year.

US Government. Department of Health, Education, and Welfare. Alcohol, Drug Abuse, and Mental Health Administration. ***Guide to curriculum topics and resources in substance abuse for nurse practitioners and physician assistants.*** No. 271-77-1213, Work Order No. 2. Feb 1979.

"...The National Institute on Drug Abuse and the National Institute on Alcohol Abuse and Alcoholism have...sponsored this curriculum guide to provide NP and PA faculty with information about the knowledge and skills needed...to effectively manage the drug and alcohol abuse problems of their clients. Prepared by a committee of experts with experience in nurse practitioner, physician assistant, and substance abuse education and program planning, this guide suggests topics that educators should include in their NP and PA programs to prepare students for several levels of involvement with substance abuse. This guide is not a substance abuse curriculum, although a full-course curriculum is provided. ...Faculty members can use the suggested topics and materials to design courses which are consistent with the unique philosophy, structure, and priorities of each program."

Lasdon G, Major E. "Developing criteria for evaluating physician assistants and their educational programs." ***PA J.*** 8(4): 231-235, Winter 1978.

Journal summary: Variables which may have validity as predictors of success for both physician assistants and the programs which educate them are discussed. Data from the Hahnemann Physician Assistant Program is used to illustrate a direction for developing evaluation schema to validate these variables. Clearly, analysis of data available from one program cannot be conclusive. It is hoped that this analysis will be helpful in development of a model based on results from many programs to aid in the admissions process for predicting success in the physician assistant profession.

Bruhn JG, Bunce H, Greaser R. "Predictors of academic performance among physician assistants." ***PA J.*** 8(3): 181-187, Fall 1978.

Journal summary: Predictors of academic success were studied among 98 physician assistants admitted to five classes at The University of Texas Medical Branch at Galveston. Students were given three personality tests, a test of mental ability, and a reading test at the time of admission to the program. The personality tests were readministered at the end of the two year program. In addition, grade point averages on entry and at the end of the program, class rank and National Board scores were available. Data were analyzed on the 51 students who graduated to date to determine what, if any, changes occurred in the personality characteristics of the students during training, and whether personality characteristics and other factors obtained on entry to the program could predict academic performance. IQ, GPA (science), and Nelson-Denny Reading Rate on entry to the program were positively correlated with GPA at graduation. IQ and Nelson-Denny Reading Rate were positively correlated with National Board scores.

Krug R, Stanhope W. "A curriculum model in substance abuse: its implications for PA training and utilization." ***PA J.*** 8(3); 164-169, Fall 1978.

Journal summary: The problems of substance abuse are of considerable magnitude without adequately trained manpower to provide necessary services. Federal agencies are working to create demand for PAs as members of the substance abuse treatment team. A proposed curriculum for existing programs in a model preceptorship is presented which is easily adaptable to existing program curriculum. It is the opinion of the authors that physician assistants can expect a challenging and rewarding career in substance abuse and that is the responsibility of physician assistant programs to provide students with the fundamental education necessary for such a career.

Petrusa E, Taylor C, Simmons R, Cabe W. "A three-component course in psychiatry for primary care physician's assistant." ***J Med Educ.*** 53: 770-772, Sep 1978.

Description of content of a psychiatry course in a Utah Medex program. The main components of the program are: (1) basic instruction which does not vary year to year, (2) experiential content (i.e., counseling and interviewing skills), and (3) training in psychiatric data collection and diagnosis. The first and third components which are primarily self-instructional, have proved efficient and cost-effective teaching methods. The program and an analysis of the students' performance on the module quizzes are discussed.

Rosoff N. "Physician assistants and nurse practitioners: new educational models for new professionals." ***J Applied Behav Sci.*** 14(3): 335-347, Jul-Aug 1978.

Journal abstract: The task was twofold: (a) to define why a gap exists between the training of PAs and NPs and their ability to be fully and effectively utilized once employed; and (b) to determine the most effective behavioral science intervention strategy for bridging this gap. In summary, the success of an intervention to facilitate the utilization of new health professionals depends on the ability of the intervention staff to work effectively with the program director and faculty: (a) to design and implement a program to increase students' social and behavioral knowledge and skills in conjunction with their clinical training; (b) to work with the PA and NP on their ability to deliver health care within the context of their support role in relation to other health care professionals; and (c) to utilize students' educational and field work settings as laboratories for simulating the problems they may confront in their work environment as a means of increasing their confidence, clarifying their roles, and learning to manage conflict.

Ekwall R. "Medical school applicants: a manpower pool for physician assistants?—Guest editorial." ***PA J.*** 8(2): 66-68, Summer 1978.

The author discusses eight factors for consideration when selecting for admission to a physician assistant program. These factors differentiate between the two professions (physician and physician assistant) and may differentiate between the types of applicants. The author states that while outwardly and initially the medical school applicant may appear to be an excellent prospect, these eight factors should be carefully considered.

Gladhart SC, Christensen M. "A model for the evaluation of allied health education." ***J Allied Health.*** 7(3): 199-205, Summer 1978.

To help programs identify information needs and consolidate evaluation efforts, a model based on the "Systems Theory" is presented. It provides a comprehensive framework for the study of all

aspects of program operations including input, process, product and environment components. The systems model allows a break from the limiting view of evaluation as strictly the measurement of student or teacher performance; it is also flexible and may allow adaptation of only selected components of the whole model.

Harris J, Saunders D, Zasorin-Connors J. "A training program for interprofessional health care teams." ***Health Social Work.*** 3(2): 36-53, May 1978.

Journal conclusion: The experimental elective in training students from various disciplines to be members of health care teams demonstrated that familiarity does not breed contempt--rather it breeds contentment. Professional interaction was improved, and professional willingness to collaborate in the resolution of health care problems utilizing the various community resources and expertise of other professionals was enhanced. Most important, the program laid the foundation for a more substantial training effort that will combine the didactic discussions and the health care assessments of the initial program with a formal clinical experience available in a new expanded program.

Buhmeyer K, Johnson A. "Predicting success in a physician-extender training program." ***Psychol Rep.*** 42:507-513, 1978.

Journal abstract: Objective psychological measurements and personal historical data were taken on 67 physician extenders. A multiple regression analysis was done between these variables and grades in didactic, clinical, and interpersonal skill evaluations, which were averaged to calculate a cumulative grade point average (AGPA). Nine of the independent variables accounted for 47% of the variations observed in the AGPA. The significant variables are consistent with common sense expectations and have provided the basis for further study. The relationship between personality and program success has proved useful in considering candidates for admissions and in counseling students already matriculated.

Conine T. "Should continuing education be required? Views of allied health professionals." ***J Allied Health.*** 6(4): 34-39, Fall 1977.

Journal abstract: Views of 989 allied health professionals, representing five different fields, were analyzed regarding their: (1) preference for type of continuing education (required, voluntary, or none at all), and (2) reasons for the expressed preference. A significant majority (98%) believed that continuing education is necessary and should be voluntary (76%). Chi-square tests of contingency indicated that the expressed preference by a professional was not related to his field of specialty or his demographic, educational or employment characteristics.

Golden A. ***Do selection and education make a difference in physician assistant and nurse practitioner practice? A discussion paper for the conference--"Nurse practitioners and physician assistants: A research agenda."*** Airlie, VA. Jun 1977.

This paper presents a framework for providing a single frame of reference for developing curricula which consider both the heath professions education or educational system and the health care delivery system. The importance of studying the products of such curricula is stressed; a methodology of evaluating the practice and practice setting of the graduates is presented.

Wise J, McCally M, Piemme T. "A comparison of medical student and physician assistant performance." ***PA J.*** 7(1): 33-37, Spring 1977.

Journal summary: The objective of this study was to determine whether new health practitioner (physician assistant and nurse practitioner) students and medical students with different basic science backgrounds, and preparing for different professional roles, could profitably share a common educational experience. The method used was to compare the two student populations in performance on Part I of the National Board of Medical Examiners as a measure of basic science preparation, and performance on a comprehensive "problem-solving" examination in clinical science following a common course in Introduction to Clinical Medicine. Physician assistant students are different from medical students in age, academic preparation and prior health care experience. The medical student basic science preparation is accomplished in three semesters over 18 months; the physician assistant basic science preparation encompasses one semester.... It was concluded that in problem-solving abilities in clinical science the difference between the two groups was significant but less marked than in basic science. Both groups profited from the same course material and enjoyed the secondary gain of being educated in a "mixed" classroom.

McCally M, Sorem L, Silverman M. "Interprofessional education of the new health practitioner." ***J Med Educ.*** 52: 177-182, Mar 1977.

Results of telephone interview of representatives of PA and NP programs to determine the efficacy of various techniques employed to educate new health practitioners in the team delivery of primary health care. Findings indicated that the most commonly used and effective methods were intermixing students of various health professions in both classroom and clinical settings as well as the inclusion of specific courses on role and professional identity.

Tworek R. "Interinstitutional cooperation: a working model for preparing new health care practitioners." ***J Med Educ.*** 52(2): 143-144, Feb 1977.

A PA training program jointly sponsored by the Albany Medical College and the Hudson Valley Community College started in 1971 demonstrated that "the mutual sharing of resources in an articulated, interinstitutional process offers one solution to the current problems of austerity budgets and reduction of potential funding for the development and operation of health related programs." The program design and organization are briefly described.

Greenberg S. "The selling of the physician assistant concept." ***PA J.*** 6(4): 202-205, Winter 1976.

A program to educate potential employers about the role of physician assistants in three New England states is described. A program was designed to answer questions on education, duties, places of employment and legal issues relevant to PAs. Some of the conclusions report that there was a tremendous advantage to involving local people in the planning of educational efforts. Clinical exposure to PAs was rated as the best educational method with next best being communication by someone who uses one. Follow-up with individuals who attended meetings often resulted in specific training or employment opportunities.

System Sciences, Inc. ***Nurse practitioner and physician assistant training and deployment study.*** Final Report. Prepared for Health Resources Administration, Department of Health, Education and Welfare. Contract HRA 230-75-0198. 613 p. Sep 30, 1976. Available from National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia, 22161. Telephone 703/487-4650.

Study abstract: Objectives of this 15-month study were to collect descriptive and comparative data on the selection, applicant/graduate characteristics, program objectives, training content and structure, deployment, and cost of training nurse practitioners and physician assistants in DHEW-funded programs. Descriptive and comparative analyses were to be made from the data. Data were collected on the universe of 145 programs from headquarters and Regional Office files. Forty-four programs were selected for intensive study and on-site data collection. Six categories of training programs were included in intensive study sample: Nursing Practitioner (NP) Masters, Pediatric NP Certificate, Family NP Certificate, Adult NP Certificate, Physician Assistants and Medex. Findings were extensive in all study areas. One of the overriding findings of the study is the great diversity of curriculum length and course content, both within and between programs.

Heller LE, Fasser CE, Middleton J. "A problem oriented journal as a method for evaluating clinical experiences of physician assistants." ***PA J.*** 6(3): 141-146, Fall 1976.

Journal summary: By using a problem oriented journal as a method of evaluation, a program can begin to assure to a greater extent that students are getting clinical experiences on their rotation which parallel their future practice in health care settings. The journal is designed to directly monitor student exposure to patient management by collecting information on the type of problems they encounter and the level of responsibility for managing those problems. The information provided by journals can be used to develop problem oriented objectives that students and preceptors can use to structure learning opportunities during a rotation. These objectives can serve as guidelines for developing formal examinations to measure student's knowledge upon completion of a rotation. The journals can also be used to evaluate student growth in terms of their willingness to interact, their degree of interaction with different types of problems, and their assumption of responsibility for patient management. Finally, the information can be used to compare the learning experiences provided by similar rotations in different settings.

Koewing J, Howes B, Metz D. "Four characteristics for regional continuing education in medical allied health." ***J Allied Health.*** 5(4): 31-40, Fall 1976.

An appropriate strategy for the regional coordination of continuing education is discussed in terms of four criteria: multidisciplinary focus, coordinated use of available resources, interdisciplinary experiences and cost-effectiveness. The context of the study was the Area Health Education Centers Program created through the Comprehensive Health Manpower Act of 1971.

Lurie H, Callen WB, DeMers J. "Teaching behavioral science skills using experimental methodology." ***PA J.*** 6(3): 155-161, Fall 1976.

Journal summary: This paper examines experiential teaching methods which have been effectively utilized in a new health practitioner program in Washington (Medex). The paper describes planning, implementation, evaluation, and anecdotal experiences relevant to the program, as well as suggestions for implementation which might be useful to other centers contemplating the use of such teaching techniques.

Tworek R. "Developing and organizing a physician assistant preceptorship program." ***PA J.*** 6(3): 147-154, Fall 1976.

Journal summary: This paper is written in an attempt to expose, in a pragmatic approach, the methodology of developing, organizing, implementing, and evaluating a preceptorship experience for the physician assistant student. The reader is introduced to several important considerations in the design of a preceptorship program, which include recruitment of preceptors; developing and organizing a workshop for indoctrinating physician preceptors for this educational program; and a discussion, with examples, for evaluating the educational experience in the preceptorship....

Condit D. "External baccalaureate degrees for physician assistants." ***PA J.*** 6(2): 89-91, Summer 1976.

Journal abstract: Many physician assistants practicing today are graduates of "certificate" programs and do not possess a baccalaureate degree in the health field. A program which will grant an external baccalaureate to a qualified candidate is described.

Heikkinen C. "The admissions headache: Selections meet competence in physician assistant education." ***PA J.*** 6(6): 36-42, Spring 1976.

Journal abstract: Based on previous studies showing little relationship between commonly used admissions criteria and clinical performance, this study examined correlations between selected admissions criteria and effectiveness in the academic and clinical phases of the Yale Physician's Associate Program. Subjects included the 49 students of the first 4 classes. The findings: (a) challenged assumptions that extensive patient contact experience; sex; extensive college science coursework; a college major in biological science; marriage; and age, when equated with maturity, are related to academic or clinical effectiveness; (b) showed that high school rank in class may be a better predictor of academic performance than either aptitude tests or college achievement; (c) indicated that Scholastic Aptitude Test scores, the best predictors of overall performance, account for little variance; (d) revealed no satisfactory predictors of clinical performance; and suggested that future research on clinical effectiveness would most fruitfully be directed at examination of applicant personality characteristics.

Fasser CE. "Credentialing pressures: where to go from here?" ***J Allied Health.*** 5(2): 58-60, Spring 1976.

Outlines the educational and credentialing process of the physician assistant profession. To define the competent PA, there has emerged an accreditation mechanism aimed at the standardization of teaching programs and a certification process directed at identifying the degree of competence attained and maintained by the PA. PAs also have responded to the need to show continued competence by opting for periodic recertification by examination.

American Academy of Physician Assistants. ***Curriculum resource document: Final report.*** Arlington, VA: American Academy of Physicians' Assistants. 1976. 2 v. illus.

DeMers JL, Callen WB, Lawrence DM. ***Educating new health practitioners: the Medex Northwest approach.*** Seattle: Medex Northwest, University of Washington. 1976. 303 p. illus.

Jewett R. "Characteristics of physician's assistant programs." ***J Med Educ.*** 50(12 pt 2): 92-6, Dec 1975.

General information on the PA concept, its inception, the training programs available, and certification procedures. Also discussed the problems with reimbursement policies, deployment and utilization.

Lawrence D. "Medex–the education-deployment interface." ***J Med Educ.*** 50(12 pt 2): 85-92, Dec 1975.

Discusses the Medex model and its structure for training and deployment which has three objectives: (1) the provision of high-quality education in primary care, (2) education of the practicing physician in the utilization and supervision of the new health practitioner, and (3) the development of ongoing, functioning primary care units in areas of need. The preceptorship is at the heart of the education-deployment interface; a variety of monitoring techniques, such as patient logs, chart audits and site visits, is used during the preceptorship to provide an assessment of progress towards the stated objectives. Strengths and weaknesses of the strategy are also discussed.

Peterson M. "Educational programs for team delivery–interdisciplinary education of health associates: the Johns Hopkins experience." ***J Med Educ.*** 50(12 pt 2): 111-117, Dec 1975.

The experience of forming a curriculum for interdisciplinary education is described. A Health Maintenance Organization (HMO) in Maryland served as a setting for teaching and research. Analysis of activities in the HMO led to a concept of a knowledge base required for the practitioner to be able to understand the purposes of performing the functions. These bases were further subdivided according to the fields of knowledge relevant for an instructional program of didactic and practical teaching. Evaluation of this program was ongoing and no descriptive or analytical data is available in this writing. Observations of the primary care team showed progressively greater involvement of the nonphysician members of the health team; nearly half the visits for illness were largely handled by the nonphysician. Similar patterns were seen for injuries, health review and pediatrics.

Sadler A. "New health practitioner education: problems and issues." ***J Med Educ.*** 50(12 pt 2): 67-73, Dec 1975.

Briefly touches on some of the basic issues in the education, development, and utilization of new health practitioners in primary care settings. Consideration is given to the new health practitioners' role in improving access and quality of patient care as well as their impact on physician productivity and cost of medical care. Some of the problems in incorporating these nonphysician personnel into the traditional framework are also discussed.

Ilk C, Goldstein E. "An educational program in psychiatry for physicians' assistant students." ***PA J.*** 5(2): 109-111, Summer 1975.

Describes an educational program in psychiatry, launched in 1974, for PA students. The program's purpose was to provide the students with diagnostic skills in psychiatry and to familiarize them with types of therapeutic modalities. The curriculum included seminars and working experience in a variety of settings to enable the students to recognize and handle a variety of psychiatric problems in a primary care setting.

Crovitz E. "Comparison of male and female physician's associate program applicants." ***J Med Educ.*** 50(7): 672-676, Jul 1975.

Journal abstract: Using personality measures, the author examined Physician's Associate Program applicants at the Duke University School of Medicine, comparing male and female applicants and the outcome for these applicants in terms of acceptance into paramedical training. The percentage of women accepted into training was similar to the percentage who applied for training. However, women invited for interview were more aggressive, autonomous, impulsive, playful, and flexible than the males invited to interview, suggesting self-selection by women in applying for paramedical training. Women accepted for training were more "feminine" in the conventional sense, and bias against female applicants less accepting of social mores and the traditional female role was revealed. The implications of these findings are discussed.

US Government, Comptroller General of the US, General Accounting Office. ***Report to the Congress: Progress and problems in training and use of assistants to primary care physicians.*** Department of Health, Education, and Welfare. MWD-75-35. 61p. Apr 8, 1975.

The General Accounting Office reviewed 19 physician extenders programs in the US to determine whether their objectives and congressional expectations were being achieved. Findings in the areas of training, deployment, legal recognition, and reimbursement are discussed and recommendations are offered to HEW. Comments by HEW on the draft report are included.

Freilich H. "Evaluation of physician associate programs." ***Hosp Top.*** 53(2): 14-18, Mar-Apr 1975.

Series of recommendations, guidelines and a sample questionnaire are presented to assist hospitals in the objective evaluation of PA programs and their influence on hospital service.

Crovitz E. "Comparison of personality traits of male and female physician associate program applicants and male and female medical school applicants." ***PA J.*** 4(4): 5-8, Winter 1974.

The results of this study suggest different configurations of personality characteristics for applicants to medical school as opposed to applicants for physician associate training.

Wilson H, Mason J, Pharris JL. "Educational needs of the physician assistant as seen by Bowman Gray graduates." ***PA J.*** 4(4): 54-58, Winter 1974.

Journal abstract: Feedback from graduates of medical training programs provided a valid means to achieving curricula relevant to practice. The results of a detailed survey of physician assistant graduates of three consecutive classes were utilized to modify learning objectives and instructional techniques. Chief curricular alterations led to earlier and more extensive clinical experience in patient evaluation and problem definition. Other programs may be stimulated to do similar surveys to assure a dynamic, rather than static, curriculum.

Nelson E, Jacobs A, Nelson J. "A change in characteristics of Medex applicants and trainees." ***PA J.*** 4(3): 54-64, Fall 1974.

Journal abstract:...This study was designed to describe some of the important characteristics of individuals who aspire to this new role, and to determine whether or not the more successful physician's assistant trainees have any characteristics in common which differ systematically from the less successful trainees. The study is based on the 698 individuals who applied to the Medex-

New England Program and on the 74 individuals who were selected for training. The results indicate that there have been changes in both the composition of the applicant pool and in the classes of trainees over time, that there are intentional and unintentional preferences for certain types of individuals in the admissions process, and that it may be possible to identify specific attributes of trainees that are related to success as a physician's assistant.

Schroeder S, Wermer S, Piemme T. "Primary care in the academic medical centers: a report of a survey by the AAMC." ***J Med Educ.*** 49: 823-833, Sep 1974.

Journal abstract: This report contains a summary of the responses to a survey questionnaire which was sent to all academic medical centers in the United States in April 1978 concerning programs in health services delivery and primary care education. The questionnaire dealt with five major areas; ambulatory care teaching, prepaid medical care, new health practitioner education, graduate training in primary care, general issues, including programs in emergency care, alcoholism and drug abuse, health care research, and health care management and manpower. The survey demonstrates intense activity in the development of primary care programs and ... that primary care education at the academic medical centers in a period of transition.

Fasser CE, Bartow J. "AAPA membership: another look at distribution." ***PA J.*** 4(2): 38-30, Summer 1974.

Short article with general statistical data on geographical distribution of PAs and their training programs in 1974. Though PAs were located in 42 states, the majority were situated in the Southern and Northeastern regions. Authors conclude "that the absence of an educational program and not so much the existence of legislation regulating activities directly affects the presence of functioning graduates in a state."

Heikkinen CA. "Sheep or goats? Selection for physician's assistant education." ***PA J.*** 3(4): 32-35, Fall 1973.

Abstract: To date, little published material exists on the personality and motivational characteristics used either for medical school or for physicians' assistant program selection. Yet, the need is growing to select individuals, for example, who will be compassionate practitioners and effective health care members. A model for selection of physician's assistant students which addresses this need, is presented in this paper. The model may also prove valuable for medical school selection.

Crovitz E, Huse M, Lewis D. "Selection of physician's assistants." ***J Med Educ.*** 48(6): 551-555, Jun 1973.

Data collection from 1965 through 1971. Selection measures such as Scholastic Aptitude Test (SAT) scores, Minnesota Multiphasic Personality Inventory scores, and records of length of previous health care experience were collected and compared with the intention of determining which was most effective in predicting success in the training program. The SAT scores alone predicted students' actual performance and graduation from the program. Personality measures and length of previous medical experience did not augment the power of the SAT in predicting success as a PA student.

Kacen A. "The physician's assistant movement: potential impetus for a competency-based medical school curriculum." ***PA J.*** 3(2): 6-10, Apr 1973.

Journal summary: The need to reform the American system of health care delivery has been amply documented. The potential contributions of the A-category physician's assistant (PA) to patient care have likewise been the object of much recent research. However, in view of the fact that approximately 50-55 A-category Physician Assistant programs are already presently operative, a feature that is likely to grow in importance as the PA becomes established as a health worker is the impact he will have on the education of the physician.

Detmer L. "The American Medical Association Council on Medical Education accreditation program for the education of assistants to primary care physicians." ***Physician's Associate.*** 3(1): 4-8, Jan 1973.

The adoption of the "Essentials of an Approved Educational Program for the Assistant to the Primary Care Physician" by the AMA House of Delegates in 1971 is discussed. The formation of the Joint Review Committee on Educational Programs for the Assistant to the Primary Care Physician is outlined and the process for program accreditation is given. This article serves as a good capsule history.

Stone L, Bassett G, Brosseau J, DeMers J, Stiening J. "Psychological test characteristics associated with training-success in a Medex (physician's extension) training program." ***Psychol Rep.*** 32: 231-234, 1973.

Journal summary: A multiple regression model for predicting trainee success in a Medex training program is reported. This model employs selected MMPI and Strong scales as predictor variables. Although the model has not yet been cross-validated (plans to do so are underway), elements of it seem consistent with evaluations based on clinical judgment.

Stone L, Brosseau J. "Cross validation of a system for predicting training success of Medex trainees." ***Psychol Rep.*** 33: 917-918, 1973.

Journal summary: An already developed multiple-regression model for predicting success of Medex trainees in their training program was cross-validated using a new group of Medex trainees. Six psychological test predictor variables (2 on the MMPI and 4 on the Strong) "held up" upon cross-validation. The results lent credence to the use of multidimensional judgment scaling for establishment of a personnel evaluation-grading criterion measure.

Smith R. "Medex--an operational and replicated manpower program: increasing the delivery of health services (editorial)." ***Am J Public Health.*** 62(12): 1563-1565, Dec 1972.

Discusses the Medex program, its inception and training programs. It is stressed that Medex is not a training program but a training *and* deployment system with emphasis on linking the physician and his community with the Medex trainee early in his paraprofessional development. Physician productivity, in terms of numbers of patients seen, has been shown to go up anywhere from 75% to 149%. General discussion of deployment, receptivity, and legal issues follows.

Danforth N. "The current status of the Medex programs and their relationship to the physician's assistants concept." ***Physician's Associate.*** 2(4): 128-132, Oct 1972.

A preliminary study of six Medex programs in New England. Basic aim of study was to evaluate the performance of Medex. No formal analysis is given. The curriculum--a highly-structured, problem-oriented approach emphasizing clinical and task-oriented experience and recognition of the abnormal--is described.

Smith R, Bassett G, Markarian C, Vath R, Freeman W, Dunn G. "A strategy for health manpower--reflections on an experience called Medex." ***JAMA.*** 217(1): 1362-1367, Sep 6, 1971.

Journal abstract: Medex is a program creating a new class of medical professionals who are helping overworked physicians provide more and better medical care. The program takes advantage of training given medical corpsmen by the Armed Forces. Working with a physician, the Medex relieves the practitioner of much routine work not requiring a physician's sophisticated knowledge and skill. The Medex program experience has developed a technological tool which has implications for many facets of the health manpower field, including the training of para-physicians who have not had previous health training. The nomenclature in this rapidly emerging field of physician support personnel is garbed in confusion. The Medex program has given us an opportunity to base health professional imagery upon actual performance rather than traditional roles. We have thus been stimulated to offer nomenclature alternatives based upon performance rather than hierarchically based terminology.

Lohrenz F. "The Marshfield Clinic physician-assistant concept: critical evaluation of advantages, disadvantages and prospects." ***New Engl J Med.*** 284(6): 301-304, Feb 11, 1971.

Journal abstract: Over a five-year period (1965-1970), 16 "physician assistants" were used in general surgery, neurosurgery, orthopedics, oncology, diabetes, gastroenterology and ophthalmology, and in screening patients without appointments....Acceptance among patients is good. The physicians working with such "assistants" have to be able to define what can be delegated, with continued maintenance of good quality patient care. The relation of physician and assistant--not a job classification or licensure requirement--has to be evolved with close coordination between one, or at most two, physicians and a given "assistant."

Haggerty R. "Preparing personnel to meet the demand." ***J Med Educ.*** 46: 3-10, Jan 1971.

From journal summary: The academic health center should be responsible for a few settings where primary care is given in reasonably realistic settings to meet educational needs--a population large enough to cause pressure on the center in order to learn efficiency and stimulate use of physician expanders; a range of social class patients perhaps achievable only by using two or three different settings (at least until residential living patterns become more mixed socially); planned space; and staffing and funding for education as well as service needs, with responsibility for education of the whole range of health workers needed for primary care. This will require some reorganization of universities, with either special departments or perhaps better inter-departmental programs devoted to education for primary care....

Estes E, Howard D. "Potential for newer classes of personnel: experiences of the Duke physician's assistant program." ***J Med Educ.*** 45: 149-155, Mar 1970.

General discussion of the then five-year old Duke PA program. Characteristics of the students and the curriculum and observations on acceptance rate, utilization and legal status are given.

Stead E. "Conserving costly talents--providing physicians' new assistants." ***JAMA.*** 198(10): 182-183, Dec 5, 1966.

Presents recommendations of an ad hoc committee at Duke University regarding the objectives and methods for developing a program to bring new types of personnel into the health field. A description of the physician's assistant and other new health team members is contained in the recommendations which evolved from the April 1965 committee meeting.