

A Physician Assistant... Who is That?

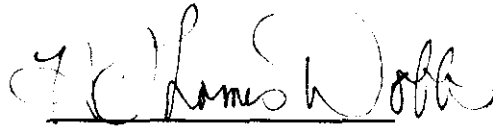
An Honors Thesis (HONRS 499)

by

Stacielynn Slater

Thesis Advisor:

Mr. Thomas Dobbs

A handwritten signature in black ink, appearing to read "Thomas Dobbs", written over a horizontal line.

Ball State University

Muncie, Indiana

July 20, 1996

Sp 6/1
12/1
1/10
1977

ABSTRACT

The Physician Assistant field is a very competitive career, that is not completely understood by the general public. The purpose of this thesis is two-fold. First, I hope to educate the consumer on the qualifications physician assistants have in treating common health problems. Secondly, I would like to give advice on how interested students can go about entering this health profession, from my own personal experiences attempting to enter this field. This thesis gives a history of the PA profession, describes the duties that PAs are trained to perform, explains the training process, and includes various studies that prove that PAs are a high quality alternative to the shortage of health care workers found in the medical field.

Stacielynn Slater

Honors Thesis

A Physician's Assistant....Who is that?

When somebody asks me the question, What profession do you want to enter? I know this will not be a brief conversation. My response of physician assistant (PA) requires entertaining a question and answer session, along with explaining about this field in medicine. My goals of this thesis are two-fold. First, I would like to educate the general public about this not very well known field, in order for them to become better health care consumers. Secondly, I would like to give advice to interested students on how to enter this very competitive medical field, from my own personal experiences. When I began my search for a physician assistant school, I really did not know much about this field. I had more access to information and the ability to interact with PAs in my home state of Pennsylvania compared to Indiana. My lifeline to essential information that I used to begin my search came from the 1995 Physician Assistant Programs Directory.

The physician assistant field requires the combined characteristics of caring supplied by a nurse and curing which is commonly given by a physician. Physician assistants are often referred to as the glue that bonds the knowledge of the physician to the questions and concerns of the patient and family members. This permanent fixture in the office, clinic, or hospital provides continuity that enables the health providers to be more efficient

in treating their patients. The PA's job is to make the facility run smoother. A PA often bridges the communication gap between physicians and patients. The physician assistant is qualified to provide a wide range of medical care. A physician assistant may practice medicine under the supervision of a licensed physician. PAs are taught to provide the same expertise and services that physicians provide on a daily basis. A more accurate name to describe the vast amount of roles that can be accomplished by a PA would be a physician associate. A PA is qualified to undertake no less than 70% of the procedures originally done by the general practice physician (Sargent 5). PAs are qualified to take health histories, order and administer tests, perform physical exams, assist in surgery, set fractures, determine the illness and how to treat it, counsel patients, give medical advice, and PAs are licensed to prescribe medication in 40 states. PAs can also be experienced to suture, give injections, immunizations, and care for wounds. The job description of a PA may also include stating discharge summaries, writing progress notes, record and analyzing research data, and developing community and individual patient education programs. PAs may also assist the physician by doing hospital rounds, house calls, and visiting nursing homes. In theory, physician assistants are able to spend more time with the patients and provide better personal attention than physicians. Non-physicians health care workers spend approximately 50% longer on each initial patient visit compared to the physician (Sargent 32). The patients appreciate this personalized care. This added attention increases compliance which reduces hospitalization,

additional appointments, and complaints of symptoms. However, PAs have stated that they have the same amount of duties and patients as physicians. Instead of splitting the current patient clientele, the physician, practice, or clinic tends to increase the number of patients that are treated. The PAs are used for the patients with routine illnesses. This enables the physician to be relieved of some responsibilities and be able to focus on the more serious patients. By relieving the physician of some of his workload, the PA enables the physician to attend more conferences and additional educational programs to keep up with the changes in medicine. The physician would also be able to spend more time on tasks requiring his knowledge and less time on menial busy work. Lastly, physicians would have more leisure time in theory, this would enable the physician to spend more time with his family and prevent occupational burnout. The PA can take over the physician's role since the physician will only be gone for a short amount of time and can be reached by the telephone if any questions arise. A study in 1981 reported that PAs see an average of 100 patients in a period of a week (Sargent 31). PAs wrote 133 million prescriptions, and had 130 million patient contacts, in 1994 (Association of Physician Assistant Programs 12).

The idea of a physician assistant began in Russia during the eighteenth century. These feldshers helped physicians perform technical tasks in urban areas, and perform preventative medicine in rural areas. The idea of using physician assistants hit the United States in 1961. The concept of an educated middle man

acting as the go between for the physician and patient was suggested by Dr. Charles L. Hudson, former president of the American Medical Association. In 1965, the first physician's assistant program began at Duke University Medical Center in Durham, North Carolina. The program was founded by the chairman of the Department of Medicine at Duke, Dr. Eugene A. Stead Jr. Dr. Stead was disappointed by the lack of interest physicians had in his postgraduate education program for physicians at Duke University. Dr. Stead later found out that the reason for the lack of support was due to the physicians being overworked and could not justify leaving their assigned jobs (Schneller, 22). This gave Dr. Stead the idea of training intermediate level professionals to help ease the physician's workload. The first PA class at Duke consisted of four ex-military corpsman. These four men would be the first of many students to be educated as assistants to the primary care physician. The PA profession has grown greatly from Dr. Stead's time. He created a physician assistant to do medical tasks, but not to interpret the results. Dr. Stead believed that everything a PA needs to know can be learned in 24 hours, today it takes at least two years of education (Zarbock and Harbert 84). This first formal PA educational program was developed to increase the access and quality of health services for all individuals. Even though Stead and his colleagues were the fighting force to this new occupation, they fought against licensing these professionals. He believed that if PAs did receive a license, it would result in bad performance and lower pay for members. The first four-year PA program was developed at Alderson-Broaddus

College in Phillippi, West Virginia in 1968. The next program opened in 1969, a one-year MEDEX program at University of Washington. This program was begun by Dr. Richard A. Smith, and trained former military medical corpsmen for a career as a physician assistant. Over the years this program has attracted students with various educational backgrounds and different health care experiences.

There were three stages to the development of the PA occupation. The first period lasted between 1966-1968, and covered the design and selling of this innovative role to the general public. The key to this stage was to gain the support of the patients. The second period, from 1969-1970, encountered the planning and establishment of the PA occupation. One of the important steps in this period involved attempting to eliminate any employment problems of PAs. The last period lasted between 1971-1973. The third period involved the enrichment of the occupational innovation. The PA occupation was accepted as a medical field in the medical/paramedical hierarchy during this time. In period one, the PAs had jobs, but the physician assistant's occupation was not accepted by the medical hierarchy until phase three. There was a sudden growth of PA programs from 1960 to the 1970's (Zarbock and Harbert 7). These programs were supported at first by \$6.1 million in ordinance with the Health Manpower Act of 1972. This field exploded when Medicare and Medicaid were implemented in 1966 (Zarbock and Harbert 7). The physicians were overwhelmed by the number of patients and used PAs as helpers to treat the new demand for medical care.

Until 1972, PAs were unable to diagnose illnesses or write prescriptions. At this time, the AMA House of Delegates on Licensure of Health Occupations decided on a license that resulted in the PA to fully enter all aspects of the medical field, even prescribing medication (Schneller 27). Congress attempted to eliminate geographic and specialty maldistribution of health care by having the Bureau of Health Manpower, Health Resources Administration pass in June 1972 a mandate of the Public Health Service Act, called "The Comprehensive Health Manpower Training Act of 1971." This act took responsibility for twenty-four of the thirty-one programs as well as starting sixteen new ones. Three objectives were hopefully going to be met by this act: train PAs for the delivery of primary care in emergency settings, persuade members of medically underserved areas, minority groups, and women to enter the PA profession, and the last goal was to place graduates of the PA program in medically deprived areas. Twenty-one of the thirty-one programs by 1972 were supported by agencies such as the Model Cities Program, Veterans Administration, Department of Defense, Office of Economic Opportunity, Department of Labor, and the Public Health Service.

PAs began working in medically deprived areas, and now can be found in almost every health care organization, in any setting, and at any geographical location in the United States. Most of the medically underserved areas tend to be rural in nature. In order for physician assistants to practice in rural areas, physicians must be present for the necessary supervision. Physicians tend to dislike moving to rural areas because of a

decrease of clientele, low patient income, fewer facilities, and fewer support services. In 1981, 25.7% of PAs were practicing in non-shortage areas for health care, 67.8% were in part shortage areas, and only 6.5% of the PAs in the United States were practicing in whole shortage areas with 4.6% of primary care physicians (Sargent 13). Agriculture occupations are one of the most dangerous of all careers (Sargent 44). Keeping in mind that most farmers work in rural areas, more emergency care is needed in these geographical locations. The recent moving of people from large cities to rural areas has magnified the health care shortage. At the time of 1987, the only states in the North Central Region to not license physician assistants were Minnesota and Missouri (Sargent 10). Kansas had the lowest percentage of counties underserved by health care and both North and South Dakota had the highest percentage of counties underserved in 1985 (Sargent 13). This data shows that the Dakotas are the "worst off" when it comes to the amount of medical care available. The largest estimated supply for PAs in the North Central states was lead by Ohio with 797, Michigan with 677, and Wisconsin with 375 (Sargent 12). Indiana was farther down the list with 143 positions (Sargent 12). As soon as the physicians begin to migrate to smaller communities with less health care, there will be a decrease in PA jobs in large cities (Zarbock and Harbert 16). The popularity of PAs has been a result of HMOs, PAs working in the hospital setting, and the acceptance of this occupation by the health care field. For example, 28% of the PAs work in a hospital setting, 27% work in a group practice, 8% work in a HMO, 8% work in a

military/Veterans facility, and 7% work in a rural/inner city clinic (Association of Physician Assistant Programs 11).

In a community hospital environment, a PA would perform a history and physical examination on incoming patients. They have the ability to start intravenous solutions, insert urethral catheters, do venipuncture and arteriotomy for blood gas analysis, suture, draw blood, and perform incisions and drainings. PAs can also order x-rays, blood glucose, EKG, and other laboratory diagnostic tests. They also counsel and evaluate patients during their daily rounds. They may also perform defibrillation, administer oxygen, order fluids, diets, and request patient activity. However, PAs are not able to order blood transfusions or pronounce the time of death.

Some hospitals provide services at fitness clubs or wellness centers. A physician assistant may be placed in these facilities if they possess expertise in sports medicine. These PAs would do initial physicals, identify possible problem areas in the patients, treat injuries, do fitness prescriptions, and conduct workplace injury rehabilitation therapy. The PA can be found in various specialties. Thirty-four percent of the PAs are found in family practice, 9% in internal medicine, 9% in emergency medicine, 9% in surgical subspecialties, 8% in general surgery, 8% in orthopedics, 3% in OB-GYN, 3% in occupational medicine, 2% in pediatrics, and 15% in other specialties, such as psychiatry, cardiology, geriatrics, and sports medicine (Association of Physician Assistant Program 12). By the year 2000, the surgical field will have the most openings available for PAs compared

to any other non-primary care specialty (Zarbock and Harbert 16).

Health care for the elderly is going to increase for two reasons in the future. The baby boomers will be entering this age group in the next couple of years, and individuals are living longer which creates a greater need for geriatric specialists. About 85% of all elderly adults have a chronic condition that requires hospitalization, rehabilitation, or doctor's visits (Zarbock and Harbert 22). In 1986, the elderly used one-third of the health care budget (Zarbock and Harbert 23). Through a survey given to medical schools, only three schools admitted requiring their medical students to take geriatric courses (Zarbock and Harbert 23). This study shows that a PA could be educated in the knowledge that the general physician is lacking concerning geriatrics. The physician assistant could benefit nursing home patients by visiting them on a regular basis. Health care and manpower hours would be reduced to nursing home patients over the long run. The medical problems in these patients could be found and medication treatment begun sooner. A decreased amount of medication side effects would be seen because of education and constant monitoring by the PA. The communication between the physician and nursing home workers would be improved via the PA. Lastly, this added medical attention would improve the opinion family members and patients have about nursing home care. PAs can also be used to lower health care of elderly patients by providing home visits. In 1982, Medicare reported that the average cost of a hospital stay per day was \$350 compared to

a \$39 charge for a home visit (Zarbock and Harbert 25). In order to do home visits, more health providers must supplement an already small physician population providing this personalized care. Geriatrics is a specialty where PAs will be needed in the future, with the combination of an increase of elderly and a shortage of physicians to treat this population.

Another field that PAs can be found in is occupational and environmental health. Some large companies such as DuPont, Exxon, General Motors, Hershey Foods, Maytag, Mobile, Polaroid, US Steel, and Westinghouse Electric employs PAs to supplement their health care team (Zarbock and Harbert 37). This choice is found to be very cost effective for the company. The PA tends to be younger than a physician, which increases the ability to relate to the younger employees (Zarbock and Harbert 41). The lines of communication are kept open between the employers and employees via the PA (Zarbock and Harbert 41). The occupational PA can perform physicals to determine the medical status of each applicant for a position in the company. They can perform emergency care, treat job related injuries, and give general medical advice. These health care workers also may help with the development of health-related activities. Opportunities for PAs will also be found in industrial areas in the future. Health promotion and disease prevention will become a new area for PAs, when the popularity of preventative medicine increases.

Current health care is expensive because of a shortage of physicians and the increasing number of primary care specialties. The PA field is becoming a very popular field in a short period

of time. The reason for this great demand for PAs is the hope to decrease health care costs for the average patient. There are currently 30,000 PAs practicing medicine in the United States (Association of Physician Assistant Programs 11). The Bowman Gray Physician Assistant program states that about 2,100 PAs graduate each year from various PA programs. For every PA graduate there are seven job openings ready to be filled by these professionals. Between 1992 and 2005, a 36% increase in job openings for PAs was predicted by the Department of Labor according to the 1995 Physician Assistant Program Directory (11). The Physician Assistant profession was named one of the Department of Labor's top fifteen career choices, due to it's overwhelming demand (Saint Francis Physician Assistant Program Pamphlet). Even though it is very easy to find a job once an individual graduates from a PA school, it is very difficult to be accepted into this vigorous program. The average starting salary for a PA, in 1994 was \$46,000 (Association of Physician Assistant Programs 12). This changes with experience, advanced degrees, the practice, location, medical specialty, and amount of hours per week worked. According to the Saint Francis Physician Assistant Program, a salary of over \$100,000 has been reported by some PAs. PAs are now fighting with physicians for jobs. Clinics and practices are likely to hire a qualified PA to assist them, since a PA's salary is lower compared to another physician's salary. Hospitals will use PAs to fill positions that residents occupied in the past. These new professionals will also work at satellite based emergency care centers in the future. PAs

will always be in demand because of their cost effectiveness. These PAs create four to five times their salaries in profits for their practice (Zarbock and Harbert 17). One way in which health care costs can be decreased is to hire cost effective PAs. However, third-party payment services sometimes makes it difficult for the PA to be reimbursed for their time with a patient. The reason for the cost effectiveness of a PA is that training for a student to become a physician assistant is cheaper than to become a physician. A PA's care is more affordable, since a PA's salary is less than that of a physician. Health care costs can also be reduced by using PAs, since the more frequent access to a medical provider, the greater chance a disease can be caught early in its course. This reduces medical expenses in the long run. The average doctor's visit cost is the same or even lower in practices that utilize physician assistants (Zarbock and Harbert 17). Doctors that use PAs also tend to make more money than those physicians that do not have a PA in their facility.

Malpractice of the PA is attempted to be eliminated by requiring the PA to practice under a doctor of medicine or osteopathy. The malpractice insurance of the physician assistant is attached to the physician's policy. Even though the PA is responsible for his own actions, the final liability falls on the doctor who the PA practices under on a daily basis. In the first nine years of this occupation, there were only two malpractice suits against PAs (Willard 172). Both suits never reached court. Physicians who hire PAs believe that PAs actually reduce the

number of malpractice suits (Willard 172). This is accomplished by spending more time with the patients and improving the health care given at the facility. The amount of responsibility that a physician gives to a PA is determined by the trust the physician has in the PA's medical knowledge, decision process, and talent. However, the PA must know his own limitations, and feel comfortable to ask for the physician's expertise in any unfamiliar situation (Willard 172).

This career is readily available to females and minorities, compared to the white male dominated physician's field. From 1982-1988, 77% of students in the pre-physician assistant program were females (Benathen 163). Sixty-four percent of women PAs work in large communities compared to 49% of male PAs (Zarbock and Harbert 11). The pediatrics and obstetrics/gynecology specialty consists of 15% females and 3% of male PAs (Zarbock and Harbert). Female PAs are less likely to specialize in surgery. Almost 50% of female PAs work in family medicine (Zarbock and Harbert). Male PAs prefer to practice in rural and small communities, and larger communities tend to be occupied by female PAs (Sargent 15). The female gender also tends to work less hours a week compared to her male cohorts. During the time of this study, 46% of the students were black, 37% were white, 11% were hispanic, and 6% belonged to other ethnic groups (Benathen 163).

The acceptance of PAs by the community and the patients is usually good, once the initial uncertainty has been eliminated, and the patient's trust has been gained. A study was done at Kaiser-Permanente System in Portland, Oregon to compare the results

of the MD's ability to care for four common illnesses with the ability of the PA. The PAs tended to practice in a more conservative matter, since they issued more x-rays and lab tests than did the physicians (Bliss and Cohen 255). The PAs relied more on diagnostic measures than did the MDs. PAs also treated their patients with less visits and fewer complications (Bliss and Cohen 255). This could be due to the fact that the physician's patients tended to be older, sicker, and have more effects of polypharmacy compared to the PA's patients (Bliss and Cohen 256). However, PAs also spent more time with their patients to gain all the knowledge they needed to know to determine the reason for the symptoms. The overall results showed that PA and physicians had very similar success rates in treating their patients, and there was no evidence from this study that proved that PAs provide inferior health care (Bliss and Cohen 259). During this same study in 1975, the patient complaints were compared for one year between that of PAs and physicians. The complaint rate of PAs for general attitude was only 47% of the total physician's complaint rate (Bliss and Cohen 259). The PA complaint rate for diagnosis treatment was only 67% that of all of the physicians's complaints (Bliss and Cohen 259). The complaints of the patients in this study included the general attitude of the provider, positive diagnosis, and treatment effectiveness, patient waiting time in the clinic, quality of communication, time spent with the patient, returning phone messages, and etc. From this study the PA's performance and patient acceptance was comparable and sometimes exceeded the physician's results (Bliss and Cohen 259).

In another study trying to compare the capacities and effectiveness of PAs compared to other health care professionals, neonatal patients in an intensive care unit were used as subjects. The care given to these patients by a team consisting of physician assistants and nurse practitioners were compared to the results and procedures carried out by a team of pediatric residents. At Nemours Children's Clinic in Jacksonville, Florida, 244 consecutive neonatal intensive care patients under five days of age were given to one of the two teams for treatment (Carzoli et al. 1271). Team one cared for 100 infants and 127 infants were under the care of team two (Carzoli et al. 1273). Each of the two teams cared for similar patients from July 1, 1989 to December 31, 1989 (Carzoli et al. 1272). A neonatologist, one third-year pediatric resident, and three second-year pediatric residents made up team one. Team two consisted of another neonatologist, seven neonatal nurse practitioners (NNP) and two PAs. The NNPs and PAs were required to complete four months of classroom work and five months of supervised clinical training before being qualified for this line of work. The PAs and NNPs held the same responsibilities as the residents, such as patient care, writing daily progress notes, orders, and performing procedures. The differences in management, outcome, and charges were used to compare the results of the two teams. The management component compared length of hospital stay, number of transfusions, oxygen usage, and utilizing various procedures. Outcomes include complications, and even death. The charge component includes both physician and hospital costs. Hospital costs included room

and board, laboratory, radiology, respiratory therapy, and medication among other charges. The pediatric residents in this study worked about 70 to 80 hours a week (Carzoli et al. 1276). The NNPs and PAs worked eight to twelve hour day shifts, which ended up to be about forty hours of work a week (Carzoli et al. 1276). The patients that were cared for by the NNPs and PAs paid more than \$500,000 less a year than the patients under the care of the residents (Carzoli et al. 1276). This resulted in a 6% difference in cost between the two teams (Carzoli et al. 1276). The NNPs and PAs provided their care in a more cost effective manner compared to the residents with no reduction in quality of care to the patients (Carzoli et al. 1276). The results of this study showed that both teams were similar in each category. This similarity proved that neonatal nurse practitioners and physician assistants can provide high quality patient care to the neonatal population (Carzoli et al. 1271). These health care workers may help decrease the shortage in neonatal health care due to the increase of survivor rate of very-low-birth weight infants and the decrease of resident involvement in the neonatal population (Carzoli et al. 1271).

Once in a while PAs are confused about their health care role, in relation to the roles of nurses and physicians. However, a 1992 survey showed that PAs are very satisfied with working for a Health Maintenance Organization (HMO) (Freeborn and Hooker 714). This questionnaire asked 5,000 non-physician employees of the Northwest Region of Kaiser Permanente, open-ended and structured questions (Freeborn and Hooker). The following

professionals were included in the survey: PAs, nurses, practitioners, chemical dependence counselors, mental health specialists, and optometrists. The results revealed that PAs enjoyed working for HMOs, even though less than 10% of PAs work in this setting (Freeborn and Hooker 715). These professionals reported a lower turnover rate and less stress than nurses (Freeborn and Hooker 715). The PAs that worked in smaller communities tended to have more satisfaction than urban PAs (Freeborn and Hooker 715). The PAs were the most satisfied with the variety of tasks, working hours, coworkers' support, responsibility, job security, physician's supervision, salary, and benefits (Freeborn and Hooker 714). They were not as satisfied with the lack of advancement, amount of work, and inability to control work pace (Freeborn and Hooker 714). The lack of physician support compared to coworkers attitude and work environment was the main reason for not being satisfied with the PA career (Freeborn and Hooker 714). In the KPNW work place, 75% of PAs were satisfied with their jobs and 67% were happy working for this particular company (Freeborn and Hooker 717). The worker's content with pay consisted of 62% of the PAs, 88% of the PAs were very satisfied with the health plan benefits (Freeborn and Hooker 717). Only 50% of the PAs were satisfied with their vacation time and 62.1% were pleased with the number of sick days that they were given each year (Freeborn and Hooker 718). The PAs ranked vacation time as the component that they were least satisfied with according to to this study. The chemical dependence counselors were the most satisfied of all nonphysicians working at NWKP, in all of

the questioned areas (Freeborn and Hooker 718). Optometrists expressed the lowest satisfaction with their job compared to other employees of NRKP (Freeborn and Hooker 717).

In order for PAs to be successful, the attitude nurses and physicians have about the PA role must be positive. Sometimes physicians and nurses believe that PAs are a threat to their fields (Zarbock and Harbert 29). PAs and nurses can work well together if each of these workers show respect for each other. Nurses must be educated about the physician assistant's role in health care. The nursing staff must have access to the supervising physician and the PA's protocol to answer any questions they may have. Two fears of the PA professional is the risk of being assigned all of the physician's "dirty" work, and receiving no individual patients (Schneller 112). Compared to physicians, PAs lack the status and responsibility that society gives physicians. The prestige of a physician assistant fits between a physician and a RN nurse, which moves all of the other health care fields lower in the pyramid of medical hierarchy (Schneller 4). However, with these drawbacks comes the ability to divide responsibility, fewer hours of work a week, and more time to spend with family for the PA (Schneller 100). The most attractive aspect of the PA field given by the 1977 graduating class is the ability to use "people skills" to heal sick people (Schneller 109). The majority of PAs work more than 45 hours a week, and 50% of PAs spend forty hours a week in direct patient contact (American Medical Association 141). Almost 50% of PA professionals report spending additional hours a week on call (American Medical

Association 141).

Some states are more favorable to practice medicine as a physician assistant compared to other states in the United States. In a 1994 study to determine the supply and demand of physician assistants in each individual state, a 100 point scoring system was used (Sekscenski et al. 1266). Forty points were given for the ability to write prescriptions, forty points were awarded to the states who reimbursed PAs for working with patients, and twenty points were added to the total score for legal status of a PA in that state (Sekscenski et al. 1266). The best state for a physician assistant to practice his career would be given 100 points, and the worst state for a PA would receive a score of zero. The score for a PA ranged from Washington with 100 points to Mississippi with zero points (Sekscenski et al. 1267). Four of the twenty states with a score of over 89 points were: Arizona 99, Iowa 99, Oregon 99, and New York with a score of 98 points (Sekscenski et al. 1268). The worst states for PAs to practice medicine according to this study, registered a score of less than fifty points. Five of the fourteen states that compiled less than 50 points were: Florida 48, Hawaii 38, Indiana 37, Kentucky 42, and South Carolina with a score of 37 points (Sekscenski et al. 1268). Some other scores were: Michigan received a score of 89, Pennsylvania 86, Colorado 80, Texas 77, California 58, and Ohio received a score of 51 (Sekscenski et al. 1268). For every 100,000 people living in a specific state, 21 states had more than nine PAs for every 100,000 people, and thirteen states had five or fewer PAs for every 100,000 people (Sekscenski

et al. 1267). Maine had the highest PA to 100,000 people ratio with 24.6, Alaska 20.8, South Dakota 19.5, and North Dakota had the fourth highest ratio of PAs to residents with 18.2 (Sekscenski et al. 1268). Other ratios were Pennsylvania 11.5, Michigan 10.4, Florida 8.2, Kentucky 6.2, California 5.1, Texas 4.8, Ohio 4.5, Indiana 2.4, and Illinois had a ratio of 2.1 of PAs to 100,000 people (Sekscenski et al. 1268). The lowest PA to 100,000 people ratio was Mississippi with a ratio of .2 (Sekscenski et al. 1268). The states in the West and Northwest tended to have high practice-environment scores, while the southeastern states had low scores (Sekscenski et al. 1268). Most of the states that received low scores did so because PAs in their state were not able to prescribe medicine. Sixteen of the seventeen states with the lowest practice-environment scores did not allow PAs to write prescriptions at the time of this 1968 survey (Sekscenski et al. 1968). However, the number of states that enable PAs to write prescriptions continues to increase over the years. This is why previously in this thesis, it was stated that at the current time of the survey there were forty states that had the ability for PAs to write prescriptions. Overall the study showed that more PAs tended to work in states that had more favorable practice-environment scores than states that did not have as many privileges for the PA (Sekscenski et al. 1969).

Individuals tend to decide in their adult lives to enter the physician assistant field. The average age of accepted recipients into a PA program is 26 years old. This career is usually not pursued as a childhood dream. Many students enter

PA school after a few years of health care experience. PA students come from a variety of educational backgrounds. The PA field attracts therapists, nurses, EMT specialists, technicians, or ex-medical corpsmen that would like to make a career change. Students who were rejected from medical school are also attracted to this field. However, in a 1971-1972 study, no rejected pre-medical students were accepted into PA school (Schneller 98). Entering a PA program can be a very competitive process. For example, at Dartmouth College Medical School, about 2,000 applicants apply for 25 positions each year (Willard 2). There are usually around 1,000 applicants that apply for only 35 student positions at each physician assistant school (Bliss and Cohen 46).

The Committee on Allied Health Education and Accreditation of the American Medical Association accredits PA programs. A student will not be eligible to sit for the national certification test if the individual does not graduate from an accredited PA program. If the PA program is not accredited at a particular school, that school's program will not receive any federal grants. The certifying examination is given by the National Commission on Certification of Physician Assistants. This certification is required in order to practice in most states (Benathen 163). The title "Physician Assistant Certified" or "PA-C" is given to students who pass this test. PAs must retake the exam every six years, and complete 100 hours of continuing medical education every two years in order to remain nationally certified (Benathen 163). This requirement enables the PA to be aware of changes

in modern medicine. The job of the National Commission on Certification of Physician's Assistants (NCCPA) is to regulate the competency of PAs through testing, continuing medical education (CME), and recertifications. The certifying examination for assistants of primary care physicians was developed by the American Medical Association and the National Board of Medical Examiners in July 1972 (Bliss and Cohen 93). On December 1973, the first certification exam was given to 880 candidates at 38 test centers (Bliss and Cohen 95). In order for the individuals to sit for the first examination, they must have graduated from an AMA council on Medical Education approved PA program (Bliss and Cohen 96). The training program could have been funded by the Bureau of Health Resources Development. The first examination contained two written sections that were completed in one day. Multiple choice questions tested the PAs knowledge and ability to undergo health care functions in the first section of the test. The second section consisted of clinical cases in which the PA had to determine the appropriate procedures in order to determine the diagnosis of the patient. In 1974 the practical portion was also added to the certification process (Bliss and Cohen 102). The PA was tested on one situation from each of the five following components: heart, lungs, eyes, abdomen, and nervous system. The candidate is tested on three components by one test examiner, and two of these categories by another examiner. This practical part was worth 25% of the PAs total score in 1974 (Bliss and Cohen 102).

There are three types of educational programs that one can

choose to enroll in to become a physician assistant. The first one is the Medex program, which lasts between twelve to fifteen months. This program was developed for former military corpsmen. Three months of didactic work in clinical and basic sciences at a university medical center is followed with nine to twelve months with a practicing physician. The student receives a certificate upon completion of this program. The university medical center-based program is another training program that has nine to twelve months of didactic work and twelve to fifteen months of various clinical rotations. The students receive a certificate and/or a baccalaureate degree. The last way to prepare to become a PA is to attend a college or university in a non-medical school setting. The first nine to twelve months is when the book work is completed, and the last ten to fifteen months requires the student to participate in rotations. A certificate, associate, or baccalaureate degree is granted to graduating students. In some Master's programs a student must have received a Bachelor degree in physician assistant before enrolling in this advanced program. The first year of a two year program is spent in didactic education which emphasizes medical information, basic sciences, psychosocial, and interpersonal needs of the patients and their families (Benathen 163). The following classes may be taken during various PA programs: anatomy, physiology, biochemistry, microbiology, psychology, pharmacology, physical assessment, preventative medicine, law and medicine, human pathology, interpretation of medical literature, laboratory medicine, medical research, bioethics, medical history taking, public health, physical

diagnosis, and behavioral sciences (Bliss and Cohen 44). Some of the classes during the first year of a PA program are foundation classes, while others are preparing the students for their specific clinical rotations. The second full year is spent experiencing a variety of clinical settings such as: family practice, emergency medicine, pediatrics, obstetrics, gynecology, surgery, geriatrics, internal medicine, orthopedic, and sports medicine (Benathen 163). The selection of didactic and clinical studies is determined by the courses that a particular program offers.

The physician assistant program at the University of Southern California School of Medicine offers a class that introduces the student to a variety of cultures and socioeconomic issues (Stumpf and Bass 113). These students work on the ability to deal with sensitive issues that relate to the stereotyping of cultures and different health care beliefs within a specific population. The students attempt to put the knowledge they gained through this class to win the trust and compliance of the multicultural patient population at Los Angeles County Hospital. The theme of this class is "Differences + Discomforts = Discoveries" (Stumpf and Bass 113). The student gains knowledge about underserved groups and recognizes and learns how to deal with any prejudicial feelings the student may have. The goal is for the physician assistant to be able to provide unbiased high quality medical care to people of all ethnical and cultural backgrounds. The need for this type of course was recognized because of the increase of national and local problems. The booming homeless and immigrant populations are two examples of world concerns

that may influence the future of health care (Stumpf and Bass 115). Racial tension in this particular PA program resulted in the beginning of this class (Stumpf and Bass 115). A letter that contained racial slurs was found in an African American student's locker (Stumpf and Bass 115). This note was assumed to be written by a class member of this PA student (Stumpf and Bass 115). Each PA student begins this class in cross cultural communications during the first semester of the Southern California School of Medicine program. The student continues the course for the two year duration of the program. The six underserved groups that are covered during this class are: the homeless, Hispanics, African Americans, Native Americans, Asian-Pacific Islanders, and homosexual men and women (Stumpf and Bass 114). Each unit covers a lecture, discussion with a panel of guests, and a videotaped workshop. The lecture and discussion time educates the student on the ethnic backgrounds and beliefs of each group. The students are given a chance to ask representatives of that particular culture various questions during the panel discussion period. During the workshops, students split off in twos and ask each other controversial questions. These two minute interviews are videotaped then watched and critiqued by the class and professor immediately after the interview. In addition to the three activities, the students are also required to complete a reading list for each of the six different cultures (Stumpf and Bass 114). The students make and sample native dishes from each ethnic background on the last day of each unit (Stumpf and Bass 114). At the end of the second year, each student is required to conduct

structured interviews or do volunteer community work representing their newly gained multicultural sensitivity (Stumpf and Bass 115). Each student then writes a report about their experiences dealing with a previous unfamiliar culture. This class has proved to deal positively with fear, bias, insensitivity, and prejudice to other cultural lifestyles (Stumpf and Bass 115).

There are a variety of required courses that an individual must complete before applying to a specific PA program. The minimum entrance requirements are determined by each program. Most programs request: two semesters of biology, two semesters of chemistry, two semesters of psychology, anatomy, physiology, microbiology, and college math (either algebra or statistics). Some PA programs demand students to have patient care experience, humanities, English composition, biochemistry, genetics, inorganic, and/or organic chemistry. A few of the California PA programs require their applicants to be fluent in Spanish. Some schools request their applicants to take the GRE or Allied Health Professions Admissions Test (AHPAT) before applying to their program.

Each PA school has different selection factors they use to accept students into their program. Some of these personality characteristics are: being a team player, multicultural sensitivity, ability to interact in a genuinely concerned and compassionate manner with patients and families, commitment to a career as a PA, motivation, professional goals, personal initiative, familiarity with PA roles and responsibilities, ability to maintain composure and emotional stability during periods

of high stress, self-confidence, communication skills, maturity responsibility, leadership, stability, flexibility, interpersonal skills, empathy, and a pleasant personality. The acceptance board also reviews personal references, extracurricular activities, life experiences, overall GPA, science and math GPAs, results of SAT, GRE or AHPAT examinations, health care experience, results of individual school's screening examinations, essays, strong verbal skills, community participation and involvement, completion of required classes, study skills, evidence of financial planning, reliable transportation and shadowing and monitoring experience with a certified PA.

Studies show that the interview is the most important component of the admittance process for those academically qualified applicants (Bliss and Cohen 47). My invited visit to Saint Francis College in Loretto, Pennsylvania lasted about seven hours. St. Francis had about 800 people apply to their program and invited 185 individuals for an interview. This number was later narrowed to 35 students, who were accepted into their PA program for the 1996 fall semester. On the day of my visit they oriented us with their program, school, community, and financial expenses. We then took a 150 point multiple choice test on the computer. This test consisted of anatomy, physiology, microbiology, and medical terminology multiple-choice questions. We were given a tour of the college and the PA facilities. I was also required to write two essays in fifteen minutes. My individual interviews ended my day at Saint Francis. I had three thirty minute interviews with three different people. These interviews consisted of

personal, financial, and hypothetical questions. Some questions that should be answered during the interview are the school's pass/fail percentage on the national boards, the student to faculty ratio, job placement after graduation, how many students apply and how many students are accepted into the program. The location of the school, cost of the training, course requirements, what kind of program and certification you will be awarded upon graduation, and when and how long the program lasts all should be considered when determining which schools to apply to as well as making the final decision.

The following information was found in the Physician Assistant Programs Directory. There are four different types of PA program: certification, bachelor's, associate, and master's degrees. The application costs range from zero to \$55 depending on the program. Most of the PA programs begin in May, June, August, or September and last between 15-48 months. The average program for an individual already possessing a bachelor's degree usually lasts two years. The price of tuition fluctuates accordingly to the type of school, length of program, and whether or not you are a resident of the state. For a two year program the cost ranges from \$2,600- \$37,000. A 48 month program can range from \$13,968- \$53,700. Class sizes range from sixteen to seventy students accepted per year. However, the average class size tends to consist of thirty to forty accepted applicants into the PA program a year. Student/faculty ratios tend to be very low at PA schools, this enables more individual attention and monitoring by the instructors. For example, the student/faculty

ratio at St. Francis is 8:1.

I have some advice from my own personal experience of trying to be accepted into a physician assistant program. First, try to enroll in a school that has a four year Bachelor program right out of high school. This is a much easier process than trying to transfer into the junior year of a PA program after receiving a Bachelor degree in another major. This process is very competitive. If you do decide to pursue the PA career after graduating with another degree, make sure you begin the application process early. The information you receive from these programs will tell you what classes you must complete before you apply to their program. I also suggest that you get as much health care work experience and volunteer hours as possible. It will also be helpful to shadow and meet at least one physician assistant. This PA will be able to answer any of your questions and give you advice on the process of getting accepted into a PA program. PA programs are also interested that you understand the PA role completely. My last piece of advice is to apply to as many schools that you are interested in attending. Since each PA program looks for different qualities and qualifications in their applicants, you never know what each of the programs look at as selection factors.

There are many reasons that I choose to pursue a physician assistant career and not follow my original plan of becoming a physician. First, I did not want to attend additional years of medical school. Since the average PA program is only two years, this type of schooling is cheaper than medical school.

I also did not want all of the responsibility of treating patients on my shoulders, that a physician would have. I enjoy the idea of having a supervising physician always available to answer any questions that I may encounter. As a physician assistant, I will not have to work and be on call as many hours compared to a physician. This would enable me to raise a family and spend adequate time with my family as well as my career.

Work Cited

- American Medical Association. Allied Health Education Directory, 1992. 20th ed. Chicago: American Medical Assn, 1992.
- Assn. of Physician Assistant Programs. Physician Assistant Programs Directory, 1995. 13th ed. Alexandria: Assn. of Physician Assistant Programs, 1995.
- Benathen, Isaiah A. "The Physician Assistant Program, Training for a Medical Career without Medical School." American Biology Teacher 51 March 1989: 162-164.
- Bliss, Anne A., and Eva D. Cohen, eds. The New Health Professionals. Germantown: Aspen Systems Corp., 1977.
- Carzoli MD, Ronald P., et al. "Comparison of Neonatal Nurse Practitioners, Physician Assistants and Residents in the Neonatal Intensive Care Unit." Archives of Pediatrics and Adolescence 148 Dec. 1994: 1271-1276.
- Freeborn, PhD, Donald K., and Roderick S. Hooker, PA, MBA.
"Satisfaction of Physician Assistants and Other Non-physician Providers in a Managed Care Setting." Public Health Reports 110 Nov.-Dec. 1995: 714-719.
- Maxmen, Jerrold S. The Post-Physician Era, Medicine in the Twenty-

First Century. New York: Wiley, 1976.

Sargent, Charles A. Nurse Practitioners and Phisician Assistants in the North Central Region: Their Status and Role in Rural Primary Health Care. West Lafayette: Purdue University, Jan. 1987.

Schneller, Eugene Stewart. The Physician's Assistant, Inovation in the Medical Division of Labor. Toronto: Lexington, 1978.

Sekscenski, M.P.H, Edward S., et al. "State Practice Environments and the Supply of Physician Assistants, Nurse Practitioners, and Certified Nurse-Midwives." New England Journal of Medicine n.v. Nov. 10, 1994: 1266-1270.

Stumpf, EdD, Steven H., and Karen Bass, PA-C. "Cross Cultural Communication to Help Physician Assistants Provide Unbiased Health Care." Public Health Reports 107 Jan.-Feb. 1992: 113-115.

Willard, Richard H. "The Role of the Physician's Assistant." Journal of the Maine Medical Assn. 66 n.d.: 170-172.

Zarbock, PA-C, Sarah F., and Kenneth Harbert, PA-C, eds. Physician Assistants, Present and Future Models of Utilization. New York: Praeger Pub., 1986.