NEWSLETTER
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AAPA

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JOB DISCRIPTION AND LICENSING

Most professional educators, and most of the planners in the health field, have been critical of the Duke program for training the physician's assistant because we have avoided a detailed job description and because we have proceeded with the program without any provision for licensing the physician's assistant.

It is difficult to be right all the time, and this is one of the times the experts were wrong. I will present the argument for the Duke position.

The medical profession has never had assistance in the care of patients from a group of career-dedicated men selected, trained and paid by doctors. Selling assistants to doctors had many of the aspects of selling bathtubs in a country which never had plumbing. What do you do with bathtubs? Similarly, what do you do with assistants?

The doctor is trained for the medicine of today and the medicine of tomorrow. A large part of the educational program is directed toward giving the doctor a background which will allow him to adapt to changing society and to changing technology. Only a part of his education is related to the medicine of today. A large part of the problems of today can be handled by an assistant. The doctor without experience in the use of assistants will always underestimate what the assistant can do well.

We did not want a rigid job description. We wanted to produce capable and flexible assistants who could work with doctors. On the basis of this new experience, we could eventually write reasonable job descriptions.

Most professionals in the field have emphasized the desirability of setting up some form of licensing the P.A. I have had little enthusiasm for this because the license at the present time would result in low performance and income ceilings.

If the P.A. works closely with a doctor or group of doctors, he can increase his area of competence each year. Doctors have spent many years in educational institutions. The senior residents on my service have spent more time in college, medical school and graduate school than have the instructors teaching my children in college. The doctor in practice, with this long commitment to education, has no one to teach. He does not have the time to teach green manpower who turn over each year. He can teach his own assistants who, as they increase their proficiency, can return time to his day.

I believe the medical centers producing the P.A. should be licensed. They should have the power to amend the P.A. certificate, after proper examination, to cover new areas of competence attained by learning from the doctor in practice. If the doctor in practice should not wish to teach the new skills to the P.A., he could send the P.A. back to the medical center for further training.

In this frame of reference, the P.A. has no ceiling on his activities except that they be performed under supervision of a doctor. The P.A. is structured as a dependent component of the doctor's health team. His independence should lie in the opportunity to evolve into a doctor. Medical schools will learn that skill in the medicine of today can be mastered before the general education and scientific preparation of the doctor is complete. If the P.A. can qualify for medical school, he should be given due credit for his clinical preparation. This would shorten the medical school course by two years.

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A NEW PROGRAM

Medical Specialty Assistant Program

This program originated and is now in progress at Grady Memorial Hospital in Atlanta, Georgia. It is sponored by the Georgia Regional Medical Program, is funded through a federal grant, and is promoted by J. Willis Hurst, M.D. (famous for his great work in Cardiology). The program is designed to train persons in the practical and the technical aspects of patient care in medical coronary units.

The assistant would be skilled in the operation of cardiac monitors, pacemakers, and respirators. He or she should be proficient in nursing care and be able to administer medications. The assistant will be capable of doing tasks routinely done by the physician such as minor suturing, cut-downs, cardio-pulmonary resusicitation, recognition of arrhythmias, defibrillation, and endotracheal intubation.

The program is two years in length, accepts both male and female (ages 20-45), and gives preference to corpsmen in the Armed Services.

The curriculum consists of the following courses:

Course	Hours
1) Anatomy and Physiology	60 class, 90 lab.
2) History, Philosophy, and Ethics of Medicine	30 class
3) Human Behavior	30 class
4) Chemistry (Human Metabolism)	24 class, 6 lab.
5) Pharmacology	60 class
6) Medical Terminology	30 class
7) Laboratory Tests	15 class, 15 lab.
8) Intensive Care Unit Techniques	48 class, 240 lab.
9) Pathology I (Cardiac)	84 class
10) Pathology II(Renal)	24 class
11) Pathology III (Pulmonary)	24 class
12) Pathology IV (Neurological)	24 class
13) Electric Monitoring	24 class
14) Arrythmias	48 class
15) Physical Diagnosis	104 class

Clinical experience is gained on the cardiac care unit, intensive care unit cardiac catheterization laboratory, pulmonary function laboratory, and the renal dialysis unit.

In addition to the education the student receives other benefits. The student receives a $300.00 a month stipend during the first year and $350.00 a month stipend during the second year with no charges for the education received. The student must pay for his or her textbooks, but has the benefits of low-priced student living accommodations, free student health and free hospitalization if necessary. On graduation the student receives a certificate as a Medical Specialty Assistant from Grady Memorial Hospital. The program hopes to become an associate degree program in the near future, but at the present time is not endorsed by the American Medical Association.[1]

EMPLOYMENT OFFERS

It is again our privilege (as it will always be) to make several employment offers available to our membership. Any Physician's Assistant or Physician's Assistant Student well into his or her final year is welcome to inquire. It must be appreciated that one should not rely on this Newsletter for all of his job offers and should contact Dr. Robert Howard for specific job placement (since these are but a few of the many).

Here are the job offers available at the present time:
1) Pulaski Family Clinic, 506 North Jefferson Ave., Pulaski, Va. 24301. The P.A. accepting this job offer would work in a general practice and would do "all that he is capable of doing and that which he is trained to do." The town has a population of 10,000 and whose main industry is farming. The local hospital has 140 beds. The P.A.'s salary is negotiable.
2) Dr. Charles Baird, Jr., Medical College of Virginia, Private Clinic, Marshall at 11th Ave., Richmond, Va. 23219. This cardiologist wants a P.A. to function mostly as a cardiopulmonary assistant. He would work on a mobile coronary care unit and would also perform some nursing care in the hospital.
3) Dr. Dewey Rhea, 310 E. Main St., Stigler, Oklahoma 74462. There are only two physicians in this community. The salary for this P.A. would be approximately $10,000.
4) Dr. Len Hughes Andrus, F.A.C.P., Medical Director, Southern Monterey County Medical Group, 210 Canal St., King City, California 93930. This P.A. would conduct histories and physical examinations, various clinical tests, perform orthopedic cast work, and make house calls on selected patients. There are eleven physicians in the community of 3,000 serving a total area of 16,000. The salary is "open, commensurate with experience."
5) Dr. Thomas E. Fitz, F.A.C.P., Internal Medicine and Cardiology, 11 Thirteenth Ave., N.E., Hickory, N. C. 28601. The P.A. would "do what he is trained to do or might be trained to do." The majority of this physician's work is done in an accredited 110-bed hospital. There are 75 physicians in the county with 50 physicians practicing in Hickory. Hickory has a population of approxi-40,000. The position and salary will be competitive.
6) Dr. Richard Warren, Harvard Medical School, Cambridge Hospital, Dept. of Surgery, 1493 Cambridge St., Cambridge, Mass. 02139. This doctor received a grant-in-aid to set up a post amputation prosthetic limb program. He would like a Physician's Assistant to work as an "orthopedic technician" to provide a major part of the services of this program. The salary for the Physician's Assistant accepting this offer would be approximately $10,000.

THE ORIGIN OF RUBBER SURGICAL GLOVES

The use of these thin, stretchable, protective gloves, which covered the sensitive skillful hands of the surgeon was not an invention which became famous and popular overnight.

One of the first men to wear gloves while performing surgical operations was Dr. William Halsted. The place, John Hopkins Hospital; the time, the 1890's. The germ origin as the cause of infections was by now a well accepted fact.

All doctors, nurses, students, and technicians would scrub very meticulously before each operation with a strong antiseptic. However, this method had one dangerous drawback, for as it was excellent in killing germs and bacteria, it would also produce a painful weeping rash on sensitive hands which would resist healing until the individual refrained from scrubbing.

Dr. Halsted's favorite nurse, who later became his wife, developed just such a rash. The dogmatic and pragmatic Dr. Halsted had a cast (plastic) made of her hands and took this to the Goodyear Company in New York and from the molds had some thin rubber gloves made for her. Eventually Halsted had gloves made for his own hands and thus became the first surgeon to operate while wearing the surgical gloves.

The gloves had the advantage of being more sterile than the best scrubbed hands since they could be boiled before use. Young doctors from Hopkins carried the idea to other hospitals and within a decade the surgeons' rubber gloves were standard everywhere.

by Mr. E. B. Eason

TECHNICAL TIPS

FOR FREQUENT IV INJECTIONS

The patient receiving frequent intravenous injections of large dose antibiotics and anti-coagulants rapidly realizes his position as a "human pincushion". This may easily be avoided with the insertion of a No. 19-23 guage scalp vein needle into a vein on the dorsal surface of the hand. The needle set up is then secured in place with a colloidin dressing to avoid contamination and undesirable movement often occurring with taping the needle in place.

The tubing cap is removed and a solution of 1cc Heparin 1:1000 and 9cc sterile saline is injected to fill the tube, and the cap replaced. The Heparin coats the inner walls of the tubing preventing clot formation[2]

FOR LONG TERM IV FLUID ADMINISTRATION

To avoid loss of accessible forearm and dorsal veins of the hand, initial intravenous long term therapy should be started as distally on the extremity as possible. The use of scalp vein infusion sets and the dorsal hand veins should be first. When IV fluids slow due to intimal vessel irritation and infiltration, one begins to move proximally on the extrimity. One should remember that the use of intravenous catheters is a common source of thrombophlebitis and hospital acquired infections.

To avoid undue thrombophlebitis, take into consideration the acid pH of the IV fluid medium alone, not to mention the added medicinal preparation. Excluding two or three IV solutions, their pH usually runs from four to six which in itself is enough to cause gradually increas- vessel irritation. Intravenous "push" of large dose antibiotics is often quite distressing to the patient many minutes following the giving of the medication. Slowing the IV push from thirty seconds down to five to ten minutes can avoid most traumatic situations.[3]

MEDI-QUIZ

1. All of the following are true except:
   A. Limb survival is generally greater when arteries of the upper extremity are acutely occluded than when arteries of the lower extremity are so involved.
   B. Delay in treatment of acute arterial occlusion adversely affects limb survival.
   C. A limb acutely deprived of arterial circulation should be positioned below the level of the heart.
   D. The main reason that ischemic skin is vulnerable to injury is because of the loss of pain perception.
   E. The larger the artery that is acutely occluded, the greater the mortality and the more often the loss of limb.

2. A 34 y.o. woman whose blood pressure was 170/100 mmHg was admitted to the hospital for evaluation. Initial laboratory studies:

Blood urea nitrogen	12 mg/100 ml
Serum electrolytes	
Sodium	149 mEq/liter
Potassium	1.9 mEq/liter
Chloride	102 mEq/liter
Bicarbonate	37 mEq/liter
Urine	Specific Gravity 1.009, trace protein

The patient was given a diet containing a 150 mEq Sodium per day and was given oral potassium chloride supplements (80 mEq/day).
One week later the patient's serum potassium was 1.8 mEq/liter. At this time, dietary sodium was reduced to 10mEq/day, and potassium supplement was continued. Within six days the serum K+ rose to 3.2 mEq/liter.
Which of the following statements is/are correct with respect to this clinical problem?

(1) The above observations are strongly suggestive of hyperaldosteronism.
(2) A positive potassium balance occurred because sodium restriction reduces the rate of sodium-potassium exchange in the distal portions of the nephron.
(3) On the fifth day her urinary excretion was approximately 150 mEq/day.
(4) The subsequent rise in serum potassium militates against a diagnosis of an autonomously secreting "aldosteronoma" of the adrenal gland.

One or more of these completions to the statement are correct:

(a) If only 1, 2, and 3, are correct
(b) If only 1 and 3 are correct
(c) If only 2 and 4 are correct
(d) If all are correct

EDUCATIONAL ARTICLES

Lung Scan or Angiography

Pulmonary scanning and angiography are complementary, not competitive, procedures for diagnosis of pulmonary embolism.

Both satisfactorily reveal emboli of the larger vessels. Angiography permits more specific anatomic localization when surgery is comtemplated and is more helpful when a number of pre-existing conditions give false-positive scans. On the other hand, the scan is simpler, fairly accurate, less risky, and superior for localization of peripheral emboli and, done serially, permits ready observation of the progress of the disease. The incidence of the so-called false-positive scans can be reduced by study of a chest x-ray obtained immediately before or after the isotope study. Processes causing diminished perfusion on the scan are easily recognized on the chest

film. False-positive results then become expected positive results under these circumstances, pulmonary angiography may be better than scanning.

The angiogram is difficult to interpet for pulmonary embolism. The sole pathognomonic sign is a filling defect within the vessel, with or without a sudden cutoff of the affected vessel. Air superimposed in the bronchi can appear as a filling defect, especially where the left main-stem bronchus crosses under the left pulmonary artery. A major intravascular defect may appear on only one of two films in a series of fifteen or more, because increasing density of the contrast medium can obscure the defect. Therefore careful research by an experienced operator is essential. Indirect evidence of embolism revealed by angiograms includes segmental reduction in flow-vessel attenuation and tortuosity, poor capillary filling, and a-vascularity.

Experience confirms that (1) bilateral emboli may be present without recognizable alterations on the chest film, (2) an infiltrative process on the film does not preperformance of a scan, (3) at least two projections on a lung scan are needed, and (4) in specific areas, angiography may reveal more than a scan, as when pneumonia is superimposed upon congestive heart failure.[6]

Herpes Zoster - Real Distress To Elderly Patients

Herpes zoster is much more common in the aged than in children. In mixed age groups, four or five persons in every thousand may be expected to have an attack in any year. Among persons over seventy, the incidence rises to one or two out of every hundred.

The disease can be especially painful and disfiguring in the elderly patient, and because of associated depression, a potential cause of suicide unless the patient is psychologically prepared for its effects. When one sees that severe post-heptic pain is likely, forewarning the patient concerning the nature of the disease process, including the intrinsic depression, may prevent much anxiety.

Zoster in the elderly is probably caused by a reactivation of zoster varicella cirus that has been dormant in the sensory ganglia since a childhood attack of chickenpox. Reactivation results in zoster, however, only when the level of circulating antibody falls below that necessary to neutralize the reverted virus.

In most instances, pain and malaise precede and accompany the eruption of zoster. This pain is usually controlled by salicylates. Dusting powder is sufficient treatment for a slight rash, but severe, ulcerated lesions are accorded the same attention as a third degree burn.

Post-therapeutic pain is common, persistent, often severe, and not relieved by analgesics. If zoster affects nerves with visceral branches, pain may be felt deeply and the patient must be reassured that he does not have a cancer. Tranquilizers usually are beneficial, but opiates and strong pain-relieving drugs are ineffective.

Loss of sight is common if the eruption involves an eye, and partial deafness may result if in an affected ear. Paralysis of ocular and facial nerves may occur; recovery in facial palsy is unusually complete, but pupil paralysis is often permanent.[7]

Characteristics of Hyperosmolar Nonketotic Coma

Hyperosmolar coma without ketoacidosis tends to occur in patients older than sixty years and is associated with approximately fifty percent mortality.

Characteristic features include hyperglycemia and hypernatremia or both, with associated hyperosmolarity, and azotemia. Hyperglycemia may pre-exist in many or all patients, although they may not have been known to be diabetic. As hyperglycemia develops, the resultant osmotic diuresis leads to progressive dehydration. Intense salt resorption in the nephron is secondary to significantly increased aldosterone secretion and is associated with excessively low urinary sodium and high potassium excretion. Irrespective of severe dehydration azotemia, distal tubular function continues and tubular necrosis does not develop. Increased potassium excretion probably prevents hyperkalemia despite the severe catabolic condition.

In treatment, intravenous fluids and insulin are given in large quantities. Because of hypernatremia, fluid replacement should comprise large volumes of five percent dextrose in water or half normal saline. Patients, especially if hypotensive, should be monitored with central venous pressures. While as much as seventeen liters of fluid have been necessary, more than five liters is seldom needed during the first twelve hours of treatment. Insulin requirements may be similar to those of ketoacidotic patients.

Complications include all those known in the severely decompensated diabetic state. Local and generalized infection, arterial and venous thrombosis, hypotension and shock, and tubular necrosis can occur, and focal cerebral seizures are frequent.[8]

MEDI-QUIZ ANSWERS

1) D[4]
2) A[5]

EDITORIAL

An Ideal Physicians' Assistant Program

An ideal Physicians' Assistant Program. What's that? It would have a few basic admission requirements. Average high school work, at least average College Entrance Examination scores, and an aptitude for medicine would be necessary. Race and sex would not be discriminatory. Once in the program the requirements would be many and

failure in more than one course would be an ominous sign. It would be a four year program that would give a bache-of science degree in medicine. The first two years would be composed of education in the arts to produce a well-rounded communicative individual. The third year would consist of classroom work and the final year of practical experience. The first two years would be transferable to any college and hopefully the major part of the practical experience would be acceptable by any medical school.

What should the P.A. be taught? The student must learn many varied technical and clinical tasks. It is of utmost importance that the student learn to think and react like a physician. The courses taught Physicians' Assistant students could and should be universal and should include the following:

Technical

1) Draw blood and start IV's
2) Interpret blood smears
3) Test urine, feces, sputum
4) Take and interpret EKGs and phonocardiograms
5) Insert gastric tubes and perform basic gastric analysis
6) Insert urinary catheters
7) Perform spinal punctures with spinal fluid analysis
8) Perform peritoneal dialysis with insertion of catheter and monitoring of I. & O. and electrolytes.

Clinical

1) Take excellent histories
2) Perform a complete physical examination
3) Perform adequately in the nursing arts.
4) Order appropriate diagnostic tests
5) Realize emergencies and react accordingly

The final year would be composed of mandatory rotations in cardiology, gastroenterology, nephrology, neurology, out-patient clinic and emergency room duty, and finally the rotation of the student's choice.

All courses and experience are aimed at producing a Physicians' Assistant who upon graduation is capable of performing certain *defined* tasks and upon which he can *build with further learning.* The major asset of the graduate - a person who can travel and perform not only in the technical and research areas, but in the clinical arena as well, releiving the physician of many chores once thought to be only his.

Who would make such a program work? An administration and faculty that would be dynamic, composed of good medical educators, graduate Physicians' Assistants, and business administrators. The key to the learning process would be the devoted teaching faculty and their availability to the student body. Each student would have certain instructors assigned as supervisors to aid the student with the many problems that arise and who would take small groups of students out of the classroom into the hospital words. A student could learn in the classroom about a certain disease process and then return to the ward with the supervisor to actually see the process as it prevails in man.

What to look for in the future? Accrediation of institutions training Physicians' Assistants will be necessary. The institutions and not the P.A. will need to be licensed. Organizations which have increased the quality of the practice of medicine in the past and present must investigate and sponsor such institutions training Physicians' Assistants. Sponsorship by an organization such as the American Medical Association with good definition of the P.A. and requirements for establishment of P.A. programs will guarantee a good product. Physicians' Assistants will want to continue their education will be able to choose between a medical school or a Graduate School for Physicians' Assistants. Physicians' Assistant Graduate Schools will be found at some (certainly not all), of the institutions training P.A.'s or at the great referral medical centers in this country such as Stanford (Palo Alto), Massachusetts General, Mayo Clinic and the Bames Complex (St. Louis).

So much for the ideal Physicians' Assistant Program and so much for the hopes and aspirations of this editor (the ideas expressed are not those of the American Association of Physicians' Assistants).

THE EDITOR'S SCRATCH PAD

How about the employment of Physicians' Assistants at Duke all for the *same* low starting salary; maybe the light will be seen when there are no longer any P.A.'s at Duke – good news, the average starting salary for the graduating class at Duke appears to be $10,000 – A visit to Alderson Broaddus College (home of the only other P.A. Program in the country) reveals a relatively new and small college, the wonderfully small Broaddus Hospital, the Myers Clinic, the dirty dying small town of Philippi, West Virginia, and the amazing, brilliant, creative, and pace setting Dr. Hu Myers, Director of the P.A. Program there. – A "thank you" goes to Mr. Bill Stanhope for delaying the production of this Newsletter. – Congratulations to the Grady Memorial Hospital Medical Specialty Assistant Program for their graduates have been offered membership in the American Association of Physicians' Assistants – Has anyone read the definition of the Duke Physicians' Assistant lately? – Next issue, a critical evaluation and assessment of the salary and benefits offered Physicians' Assistants at Duke Medical Center; and the attitudes of Professional Nurses toward Physicians Assistants at Duke.

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Editor

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