

THE PHYSICIAN'S ASSISTANT— NEW PROGRAMS FOR TRAINING NEW HEALTH TEAM MEMBERS

Efforts at training "assistants"
to solve health manpower shortages
go in two directions—
"Specialist" and "Generalist"

There is a concerted effort on the part of virtually every group in medicine in the development and training of new categories of health personnel. The thrust of this effort is towards solving health manpower shortages.

Thirteen programs are now operating. Nine "specialist" and four "generalist".

Specialist

1. Orthopedic Asst., Pacific M.C.: 2 years, San Francisco City College and eight hospitals
2. Child Health Associate, U. of Colorado M.C.: Req. 2 yr. college then 3 yrs. in training (2 yr. academic plus 1 internship)
3. Pediatric Nurse Practitioner, U. of Colorado M.C.: Similar to the above but geared to nurses
4. Child Health Asst., Bowman Gray School of M.: 2 yr. program, req: 2 years of college or "adequate" training for ex-medical corpsmen for entrance
5. Medical Specialty Asst., Grady Memorial H.: A 2 yr. program, req: H.S. grad. plus 2 yrs. of armed forces med. experience (Coronary ICU emphasis)
6. Ophthalmic Asst., Baylor U. College of M.: 8-week course, req: 2 yrs. of college for admission
7. Anesthesia Asst., Emory U. School of M.: 21 months towards a master's
8. Emergency Medical Technician, U. of Pittsburgh: 1 yr. of training
9. Surgeon's Asst., U. of Alabama: 2-yr. program

Generalist

1. Medex, U. of Washington: 15 months for ex-military corpsmen (includes 12-month preceptorship). To perform tasks not requiring physician's skills
2. Physicians Asst., Duke U.: 2-yr. program, offers training in one of 13 specialty areas. An additional 2 yrs. can lead to B.S. in Medicine
3. Clinical Corpsmen, Cleveland Clinic H.: 1 yr., Req: 2 yrs. prior medical experience. Various tasks such as inhalation therapy, ECG etc.
4. Physicians Asst., Broaddus H.: 4-yr. program leading to Baccalaureate. Histories, I.V., Basal metabolism, ECG etc.

There is still considerable debate as to which direction is best. But these programs are in action. Four additional programs are near initiation.

SLEEPY DRIVER TEST MEASURES ABILITY TO MAINTAIN ALERTNESS

Clinical test seeks to identify those likely to fall asleep at the wheel and who are unsafe drivers at any speed

Drowsiness or sleepiness that overwhelms a driver is an important cause of automobile accidents. Only certain drivers are especially prone to this problem and the ability to remain alert while driving varies in different persons. Decreased wakefulness can be detected by measuring spontaneous changes in pupillary size and behavior.

Pupil changes occur as follows:

- In the alert person pupils are large during wakefulness
- In the alert person pupils are small during sleep
- Pupils have varying intermediary sizes during periods when a person is "tired," "drowsy" or "very sleepy"

Using these facts the investigators classified 5 levels of alertness based primarily on the measurement of the pupil diameter and secondarily on the eyelid behavior. The test takes 10 minutes and their study represented over 200 patients and controls.

The Five Levels of Wakefulness

Levels of wakefulness	Pupils		Eyelid behavior	Subjective state
	Mean diameter (%) (compared to maximal diameter when alert)	Pupillary waves		
1	100	Small	No ptosis	Alert and "sharp"
2	95±	Small	No ptosis	Alert but losing "sharpness"
3	85±	Small and medium	Occasional mild ptosis	"Tired" but not "drowsy"
4	70±	Medium and large	Frequent mild ptosis; occasional severe ptosis and lid closures	"Drowsy"
5	50±	Medium and large	Severe ptosis and frequent lid closures	"Very sleepy"

The results generally show that:

- Alert drivers maintain alertness easily, have large, stable pupils during test
- In sleepy drivers the level of wakefulness drops easily in the test, their pupils get smaller, pupillary waves develop, eyelids may droop

The authors conclude that they can separate the obviously unsafe sleepy driver from the obviously safe ones from their data. Thus the criteria for the unsafe driver are:

- Level 4 in first 5 minutes of test
- Level 5 any time during 10-minute test
- Eyelid closure lasting more than 5 seconds during test

Screening prospective drivers with this type of test may lead to greater highway safety.