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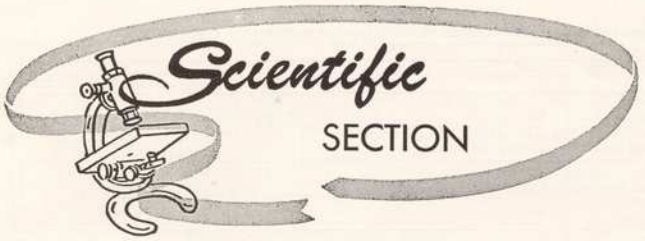

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Medical literature[7] and the press both convey a crisis-like[16] condition in health care services manpower with various[3, 8, 19] solutions posed, one of which is the physician's assistant (PA). The endorsement of Essentials for an Assistant to a Primary Care Physician[6] by the AMA suggests that some semblance of agreement has been achieved for the PA concept. However, a review of the literature shows that differing views are held regarding the concept and particularly the tasks[1, 9, 11] to be performed by a PA.

Several studies[4, 5, 14, 24] have sought physician reactions to specific tasks being performed by a PA, with findings indicating general or basic functions essentially approved for such delegation. Many studies have related a predisposition on the part of physicians to delegate tasks to nurses, indicating preference for nurses over a new type of manpower.[2, 12, 17] Pediatricians[12, 18, 21, 22] have studied task delegation to nurses more than any other specialty group. Recently, obstetrics-gynecology,[23] surgery,[13] and radiology[15, 20] have evaluated a reallocation of tasks to other personnel.

Such studies have suggested evidence of support for delegation of task performance to others, and identification and support[19] of such tasks by specialities. However, there are few studies of local or regional physicians, concerning views about such tasks being performed by a supervised PA.

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PURPOSE OF THE STUDY

The major purpose of this study was to answer the following questions:

1. Do physicians support delegation of AMA identified tasks to PA's, and if so, to what extent?
2. Do physicians differ in their reactions to delegation of tasks according to specialty?
3. Do physicians differ in their reactions to delegation of tasks according to the settings in which they are performed?
4. Do physicians differ in their reactions to delegation of tasks according to year of graduation from medical school?

TABLE 1

PHYSICIAN RESPONSE TO TASK PERFORMANCE BY PHYSICIAN'S ASSISTANTS

Task	Approve	Undecided	Disapprove	Mean	S.D.
I. Office A. Taking History 1. Collect historical data of present and past health problems involving patient and his family	84	6	10	1.9	1.1
B. Physical Examination Perform examination on body systems and record results using: 2. Inspection	44	14	42	3.0	1.3
3. Palpation	35	17	48	3.2	1.3
4. Auscultation	30	20	50	3.3	1.2
5. Percussion	31	19	50	3.3	1.2
6. Order basic clinical laboratory tests	65	11	24	2.5	1.2
7. Perform diagnostic evaluation procedures as directed by physician using — visual testing, tonometry, naso-gastric intubations, lavage, otoscope	82	7	11	2.1	1.0
C. Laboratory and Related Functions 8. Draw blood samples	98	1	1	1.5	.6
9. Perform blood counts and urinalysis	94	2	4	1.6	.8
10. Perform pulmonary function tests	92	4	4	1.7	.8
11. Injections of test substances (i.e., IVP dye)	55	17	28	2.6	1.3
12. Perform skin tests	88	6	6	1.8	.9
D. Therapeutic Duties (in accordance with standing orders of the physician) 13. Administer injections and immunizations	91	4	5	1.7	.8
14. Assist in disease or injury management	86	9	5	1.9	.8
15. Cleanse, dress wounds, and suture minor wounds	79	8	13	2.1	1.1
16. Ear irrigations	81	9	10	2.0	.9
17. Catheterizations	89	6	5	1.8	.8
18. Removal of casts	92	5	3	1.8	.7
II. Special Procedures (after you personally are satisfied of the P.A.'s proficiency and under your direction) 19. Proctoscopy	11	15	74	3.9	1.0
20. Sigmoidoscopy	7	16	77	4.0	.9
21. Venous Cut downs	25	18	57	3.5	1.2
22. Spinal taps	11	13	77	4.0	1.0
23. Tracheotomy (emergency)	34	21	45	3.2	1.2
24. Needle thoracentesis	15	21	65	3.7	1.0
III. Task Analysis (According to patient care setting, other than office)					
A. Hospital 25. Accompany physician on hospital rounds, assisting as directed	89	6	5	1.8	.8
26. Assist physician employer in clinical management of hospitalized patients	74	13	13	2.2	1.0
27. Check on clinical status of patient and report to physician	79	10	11	2.1	.9
28. Explain projected tests and therapy to patient	70	13	17	2.3	1.1

TABLE 1

(Continued)

Task	Approve	Undecided	Disapprove	Mean	S.D.
29. Check on status, currency of laboratory studies	89	6	5	1.9	.8
30. Assist in documentation of care	86	8	6	1.9	.8
B. Extended Care Facility					
31. Record data from hospital/office — assist in documentation of care	92	5	3	1.7	.7
32. Perform history and physical examination as needed	49	21	30	2.7	1.2
33. Evaluate progress, consult with nurse, physical therapist, and other members of health team	72	14	14	2.3	1.0
34. Examine for basic illness-complications — intercurrent illnesses	46	23	31	2.8	1.2
35. Obtain specimens of blood and urine for tests	97	1	2	1.7	.6
C. Patient's Home (as directed by physician) Chronic bedridden patients					
36. Accomplish history and physical examination	55	17	28	2.6	1.2
37. Examine for basic illness — complications — intercurrent illness — emotional impact	54	19	27	2.6	1.2
38. Administer IV fluids — insert feeding tube — change catheters — remove fecal impactions	89	6	5	1.9	.8
Acute illness/injury					
39. Examine for extent and nature of illness/injury, evidence of shock — assist physician in initiating supportive management — accompany patient to hospital, if needed	77	11	12	2.2	1.0
40. When physician is not present, evaluate patient status, consult with physician by phone about therapy and plan for patient	77	11	12	2.2	.9
41. Assist family in adjusting to patient's condition through counseling	81	11	8	2.0	.9
D. Health Maintenance Programs					
42. Be involved with evaluations or relatively well adults, and periodic infant and child evaluations, including taking and recording the history of previous illnesses, family health and review of systems	86	7	7	1.9	.9
43. Review immunization status of the patient, review the health habits of the patient, perform a health hazard appraisal, counsel the patient or family regarding tobacco, alcohol, drugs, obesity, mental health, contraception, etc.	86	6	8	1.9	.9
44. Provide counseling and instruction on physician's orders in the area of diet, prenatal care, child care and physical therapy	92	4	4	1.8	.8
MEAN	67	11	22	2.3	.9
Question	**Yes**	**Undecided**	**No**		
45. Would you personally participate in the training of such a student?	52	29	19		
46. Would you employ such a trained Physician's Assistant in your practice at some time in the future?	47	34	19		

Note: N = 630

All values are given in per cent, rounded off to the nearest whole number.

METHOD

Data on Dallas County were selected for analysis from a larger study[14] involving 21 counties in north-central Texas. A single-page, double-faced survey was developed involving 44 tasks and two general questions (Table 1) derived from the literature, PA curricula in the U.S., the report of the AMA Task Force[19] and a local **ad hoc** committee of physicians. All tasks were arranged according to performance within discrete health care settings. A five-point scale was used to elicit degrees of feeling: Strongly Approve (1); Approve (2); Undecided (3); Disapprove (4); and Strongly Disapprove (5). Physician specialty and year of graduation from medical school were sought since specialty distinctions and time away from formal education could affect responses.

Physicians who were members of the Dallas County Medical Society served as the population contacted (1,572). The principal officer of the county medical society was contacted concerning the purpose of the study, to review the survey, and to secure an endorsement for the covering letter to accompany the materials sent to each member. All materials required anonymous response. Materials were mailed to the members on February 1, 1972. Three months were allowed for response, since this was part of a larger study. No second mailing or other contact was made with the membership.

RESULTS AND DISCUSSION

Usable surveys returned equaled 40% (630), though response rate was higher. Many returns were rejected because of incomplete information. Table 2 depicts the study sample by physician specialty, classified according to AMA nomenclature. Internal Medicine (127), Surgery (110), Family Physician (85), and Pediatrics (62) represented the four dominating specialties (61% of the sample). This distribution appeared similar to other urban physician studies.

TABLE 2

STUDY SAMPLE BY PHYSICIAN SPECIALTY

Code Number	Specialty	Number
01	Administrative	4
02	Anesthesiology	18
04	Dermatology	10
05	General Practice-Family Physician	85
06	Internal Medicine	127
07	Neurology-Neurological Surgery	7
08	Obstetrics-Gynecology	48
09	Ophthalmology	26
11	Otology-Rhinology-Laryngology	8
12	Pathology	18
13	Pediatrics	61
15	Physical Medicine and Rehabilitation	5
16	Psychiatry	42
18	Radiology	23
19	Surgery	110
21	Urology	10
	No Specialty Recorded	28
	Total	630

Table 3 provides a distribution of the sample by year of graduation from medical school, and shows a mean year of 1952 and a median of 1953. Nearly 70% of the sample were graduated since World War II.

TABLE 3

YEAR OF MEDICAL SCHOOL GRADUATION FOR STUDY SAMPLE

Year Graduated from Medical School	Number
66 - 70	12
61 - 65	115
56 - 60	118
51 - 55	109
46 - 50	84
41 - 45	70
36 - 40	41
31 - 35	22
26 - 30	9
21 - 25	1
16 - 20	3
11 - 15	3
No Year Recorded	43
Total	630
Mean	1952
Median	1953

TASK ANALYSIS

For ease of interpretation, scale categories were merged, i.e.: Strongly Approve and Approve became Approve; Strongly Disapprove and Disapprove became Disapprove. Extreme feelings on any task were interpreted where significant.

A synthesis of Table 1 found that the area of Physical Examination (Tasks 2-5) and tasks 32 and 34, both involving examination procedures, were moderately disapproved and showed significant indecision on the part of the physician. Responses to these tasks were somewhat consistent, regardless of the performance setting. Special Procedures (tasks 19-24) represented the most significant disapproval, as well as indecision, exhibited for any tasks in the study.

Viewing all tasks, physicians significantly approved (over-all 67%) performance by a PA. The bulk of disapproval (over-all 22%) seemed influenced by the moderate to strong disapproval exhibited in the Physical Examination and Special Procedures tasks. The significant indecision (over-all 11%) about these tasks must also be interpreted essentially as lack of contact with a PA, and the need for experience with such a person.

For questions 45 and 46, responses indicated support for training participation and employment of a PA, though significant indecision was again interpreted as resulting from lack of information and experience with a PA. For the educational institution, the fact that one-half of the urban physicians in the study were disposed toward training participation and potential employment was very encouraging.

Only tasks 1 and 8 showed Strongly Approve responses greater than Approve, which suggested an experiential effect by physicians with other personnel when these tasks were evaluated. No tasks showed Strongly Disapprove responses greater than Disapprove.

ANALYSIS OF RESPONSES BY PHYSICIAN SPECIALTY

Because training and performance of specialties in medicine sometimes presumes relatively homogeneous behavior, responses in this study were analyzed according to specialty (Table 4). Such distinctions could have implications for PA training programs. Chi Square analysis was used to assess the extent to which responses to tasks were independent of physician specialty. Comparisons were made between all specialties having statistically significant numbers to allow analysis (Table 2).

A synthesis of Table 4 yielded the following information:

1. Pediatrics was significantly more approving on 28 tasks, cited 70 times, when

TABLE

CHI SQUARE ANALYSIS OF TASK

		Anesthesiology N = 18		Dermatology N = 10		Family Physician N = 85		Internal Medicine N = 127		Obstetrics- Gynecology N = 48		Ophthalmology N = 26	
		A	D	A	D	A	D	A	D	A	D	A	D
Anesthesiology	D										22		
	A					1, 10, 13, 14, 15, 16, 17, 18, 22, 33, 35, 38, 41, 42, 43		7, 8, 9, 10, 13, 14, 15, 16, 17, 18, 22, 33, 35, 38, 41, 42, 43		1, 8, 9, 13, 14, 15, 16, 17		1, 7, 8, 9, 10, 25, 26, 35, 39, 44	
Dermatology	D												
	A	1, 9, 10, 14, 15, 16, 17, 18, 25, 27, 30, 35, 39, 42						1, 7		7, 31, 43		2, 7	
Family Physician	D												
	A			39				15, 16		1, 29, 43		25, 28	
Internal Medicine	D						23						
	A												
Obstetrics-Gynecology	D												
	A			30, 36, 39		31, 35, 36		16, 31, 35				1	
Ophthalmology	D												
	A							16, 17		6			
Pathology	D						23				22		22
	A	9, 14		9		9, 14		9, 10, 12, 33, 46		6, 9, 26 27, 43		1, 9, 26	
Pediatrics	D				5				3, 4, 5		3, 4, 5		
	A	10, 18				40				39			
Psychiatry	D				5		23						
	A	39, 42				1, 13		12, 16, 17		29		1, 28	
Radiology	D												
	A			18, 39		1, 2, 28, 33, 34, 37, 41		6, 15, 16, 28, 33, 34, 37, 39, 41		28, 33, 34		1, 17, 28, 33, 39	
Surgery	D						24						
	A	10, 39, 41, 42						8, 10, 15, 16		6		1, 28	
Urology	D		2, 3, 32								2, 3		
	A	9, 10								6, 36			

Note: Physician specialty column heading indicates primary direction of approval (A), or disapproval (D) over physician specialty row heading. All entries significant at $< .05$; $df = 4$.

ASSOCIATION WITH PHYSICIAN SPECIALTY

		Pathology N = 18		Pediatrics N = 61		Psychiatry N = 42		Radiology N = 23		Surgery N = 110		Urology N = 10	
		A	D	A	D	A	D	A	D	A	D	A	D
Anesthesiology	D								34				
	A	16, 41		1, 2, 3, 4, 5, 8, 12, 13, 14, 15, 16, 17, 32, 33, 34, 39, 41, 42, 43, 44		2, 8, 9, 10, 14, 15, 16, 17, 23, 25, 26		1, 16, 17		1, 8, 14, 16, 17, 18, 25, 33, 34, 38		8, 11, 22, 31, 33, 35, 39, 41	
Dermatology	D												
	A	7		1, 7		1, 6, 7		7, 15, 16, 17, 31, 37		7, 27		6	
Family Physician	D								3, 4, 5				
	A			1, 14, 16, 39		25		16, 17, 18, 38, 43		25		2, 3, 32	
Internal Medicine	D				19, 23, 24								
	A			1, 2, 10, 39, 42				1, 17, 18, 31, 38, 42					
Obstetrics-Gynecology	D												
	A	23		1, 2, 16, 28, 36, 42, 43, 44		40		16, 17, 18		36, 38		30, 32, 37	
Ophthalmology	D												3
	A			16				16, 34		17		2	
Pathology	D				23		20				23		
	A			1, 6, 9, 10, 33, 39, 45, 46		6, 9, 10, 14		9, 14, 16, 17 26, 27, 33		9, 14, 26, 27			
Pediatrics	D								3, 4, 5				4, 5
	A					2, 3, 25		14, 15, 16, 17, 18, 42				2, 3, 32	
Psychiatry	D				4, 5, 20, 23				3		2, 3, 20, 23		
	A			1, 16, 39, 41				16, 17, 18		17		3, 32	
Radiology	D												
	A	41		1, 2, 6, 13 28, 32, 33, 34, 39, 41, 43, 44		2, 6, 15, 28, 33, 34, 39, 40, 41				6, 28, 33, 34, 37		28, 30, 33, 37, 41	
Surgery	D				24								3
	A			1, 13, 16, 42, 43				16, 17, 18, 38				32	
Urology	D								2, 3, 32, 34		2		
	A			16		2, 36		16, 38					

Note: Physician specialty column heading indicates primary direction of approval (A), or disapproval (D) over physician specialty row heading. All entries significant at $< .05$; $df = 4$.

compared with all specialties. Five tasks, cited nine times, compared with four other specialties showed Pediatrics significantly more disapproving.

2. Internal Medicine was significantly more approving on 26 tasks, cited 47 times, when compared with 10 specialties; while showing three tasks, compared with a single specialty, in which it was significantly more disapproving.
3. Family Physician was more approving on 22 tasks, cited 32 times, when compared with seven specialties; while showing two tasks, cited four times, compared with four specialties in which it was significantly more disapproving.
4. Psychiatry was significantly more approving on 22 tasks, cited 34 times, when compared with eight specialties; while showing significantly more disapproval on a single task compared with one specialty.
5. Obstetrics-Gynecology was significantly more approving on 21 tasks, cited 31 times, when compared with all specialties; while showing significantly more disapproval on five tasks, cited seven times, compared with three specialties.
6. Radiology was significantly more approving on 17 tasks, cited 47 times, when compared with all specialties; while showing significantly more disapproval on six tasks, cited 12 times, compared with four specialties.
7. Surgery was significantly more approving on 17 tasks, cited 26 times, when compared with nine specialties; while showing significantly more disapproval on four tasks, cited six times, compared with three specialties.
8. Anesthesiology was significantly more approving on 15 tasks, cited 26 times, when compared with six specialties; while showing significantly more disapproval on three tasks compared with one specialty.
9. Urology was significantly more approving on 14 tasks, cited 27 times, when compared with nine specialties; while showing significantly more disapproval on three tasks, cited four times, compared with three specialties.
10. Ophthalmology was significantly more approving on 13 tasks, cited 29 times, when compared with nine specialties; while showing significantly more disapproval on a single task compared with one specialty.
11. Dermatology was significantly more approving on five tasks, cited seven times, when compared with four specialties; while showing significantly more disapproval on two tasks compared with two specialties.
12. Pathology was significantly more approving on four tasks, cited five times, when compared with four specialties; while showing no significant task disapproval when compared with any specialty.

With respect to specialties differentiating themselves on approval of tasks, all but tasks 19, 20, 21, and 24 were involved. These tasks represented those significantly disapproved in this study. Tasks 2, 3, 4, 5, 19, 20, 22, 23, 24, 32, and 34 were significantly discriminating in disapproval, which was consistent with disapproval values noted in Table 1.

For all the specialties, an average profile of task approval yielded 17 tasks, cited 32 times, involving eight specialties; while an average profile of task disapproval yielded one task, cited four times, involving two specialties.

In terms of the total survey, the relatively small (11) disapproval discrimination of tasks among specialties when compared to the number of tasks discriminating approval (40) among specialties, suggested that physician specialties do not differ except in positive ways. With reference to tasks involved in this study, Pediatricians appeared to be the most disposed to delegation of tasks to PA's, of any specialty group in the study. This evidence was congruent with studies in the U.S.[12, 18, 21, 22]

ANALYSIS OF RESPONSES BY YEAR OF GRADUATION FROM MEDICAL SCHOOL

It has been postulated that acceptance of physician support manpower varies with the recency of formal educational experiences of the physician. Chi Square analysis was used to assess the extent to which physician responses to tasks were independent of year of graduation. Data on year of graduation (Table 3) were placed into six intervals for analysis in pairs: 1970-1956; 1955-1951; 1950-1946; 1955-1912; 1950-1912; and 1945-1912.

Findings (Table 5) indicated physicians who graduated from 1956-1970 were significantly more approving on 13 tasks (28% of survey) when compared to classes of 1912-1955. Graduates during 1951-1955 were significantly more approving on one task when compared to classes of 1912-1950; the latter was significantly more approving on two tasks. Graduates during 1946-1950 were significantly more approving on one task when compared to classes of 1912-1945. Magnitude of task disapproval did not discriminate any of the class intervals. Data suggested that physicians who graduated in the last 25 years were more disposed to approving tasks (15) for performance by a PA than were earlier graduates (2 tasks).

TABLE 5

CHI SQUARE ANALYSIS OF TASK ASSOCIATION WITH YEAR OF MEDICAL SCHOOL GRADUATION

	1970-1956 N = 245	v.s.	1955-1912 N = 342
Tasks Approved	8, 10, 11, 12, 13, 15, 25, 26, 34, 37, 41, 43, 45		
Tasks Disapproved			
	1955-1951 N = 109	v.s.	1950-1912 N = 233
Tasks Approved	10		25, 39
Disapproved Tasks			
	1950-1946 N = 84	v.s.	1945-1912 N = 149
Tasks Approved	7		
Disapproved Tasks			

Note: All entries significant at <.05; df = 4
Tasks under year column heading indicate primary direction of approval or disapproval over other half of the pair.

SUMMARY

Dallas County Medical Society members responded (630 or 40%) to a survey (44 tasks, two questions) regarding delegation of task performance to a physician's assistant (PA). Over-all, 67% approval, 22% disapproval, and 11% undecided responses were recorded. Tasks in Physical Examination and Special Procedures areas were notably disapproved. Consistency of response was noted for specific tasks regardless of performance setting. Moderate approval was given training participation and employment of the PA.

Task disapproval (11) when compared with high incidence of task approval (40) suggested that specialties did not differ except in positive ways. Pediatricians were more approving of delegation on a wider array of tasks compared to all specialties; with Internal Medicine, Family Physician, Psychiatry, and Obstetrics-Gynecology next. Pathology showed the least number of task discriminations compared with all specialties. Year of graduation appeared to have an association with type of task response. Graduates during the last 25 years were significantly more approving of task performance (15) by a PA than were earlier graduates (2).

Local physicians appeared to support the concept of the PA performing specified tasks under supervision. Wider generalizations cannot be made due to the limited number of respondents.

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