

**Statement of
Robert F. Hale
Assistant Director
National Security Division
Congressional Budget Office**

**before the
Subcommittee on Military Personnel
and Compensation
Committee on Armed Services
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NOTICE

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Madam Chairman, thank you for the opportunity to appear before this Committee today to discuss the willingness of physicians to remain in the military medical corps--commonly referred to as physician retention. My testimony will discuss trends in retention since 1982 and how those trends affect the military's ability to meet its requirements for physicians. I will also briefly discuss the Department of Defense's December proposal to change physician pay.

Analysis by the Congressional Budget Office (CBO) shows that the willingness of physicians to remain on active duty eroded between 1982 and 1988, particularly among less experienced physicians. That erosion has not yet reduced the number of physicians in the workforce; there are about 640 more today than in 1982. In the long run, however, today's retention rates would produce a medical corps that falls short of what the Department of Defense (DoD) calls its "ideal force," both in numbers and experience.

In response to concerns about retention, DoD has proposed pay increases that vary widely depending on a physician's medical specialty and other factors. Unfortunately, the report did not present enough information to justify these particular pay increases.

TRENDS IN RETENTION AT THE END OF THE INITIAL OBLIGATION PERIOD

Upon entering the military, each physician agrees to serve a certain number of years. Retention rates at the end of this period of initial obligation mold the medical corps' profile, since those physicians who make this first decision to stay usually remain for a full career. Therefore, I will focus my remarks mainly on retention rates at the end of a physician's period of initial obligation.

Since fiscal year 1982, retention at the end of the initial period of obligation has been on the decline in each service, with a notable drop in 1987. For those physicians whose period of initial obligation ended in 1982, the retention rate was 53 percent; that is, slightly more than half of these physicians were still on active duty at the end of the year (see Table 1). But the overall retention rate at the end of initial obligation fell to 47 percent in 1986, to 39 percent in 1987, and continued down to 37 percent in 1988. (I have selected 1982 as the basis for comparison since it was the first full year for which CBO has adequate data.)

Service Patterns

Declines occurred in all the services (see Table 1). In the Navy, initial retention in 1982 averaged 53 percent. But it dropped ten percentage points in fiscal year 1987 to 43 percent, and slipped three percentage points lower in 1988. Similar patterns appeared in the other services. Initial retention among Army physicians was 58 percent in 1982, but fell to 43 percent in 1987 and 42 percent in 1988; Air Force rates declined from 51 percent in 1982 to 33 percent in 1987 and 31 percent in 1988.

Patterns Within Specialties

Declines cut across almost all military medical specialties (see Tables 2, 3, and 4). Indeed, with few exceptions, no major specialty retained a larger percentage of physicians past their initial obligation in 1988 than it had in 1982. The chief exceptions are anesthesiologists in the Navy (their initial retention rate climbed from 27 percent in 1982 to 38 percent in 1988, directly contrary to the trends in the Air Force and Army), family practitioners in the Navy, and radiologists in the Army.

These declines should not obscure the gains brought about by the Uniformed Services Health Professionals Special Pay Act of 1980. That act increased physician pay and undoubtedly avoided declines to even lower levels of retention. For example, in 1979, of those physicians who entered the military after receiving a scholarship that paid for all or part of their initial medical education, only one in ten stayed past the end of his or her initial obligation. Today, at least three in ten remain on active duty.

WHY RETENTION RATES HAVE DECLINED AT THE END OF THE INITIAL OBLIGATION PERIOD

Why have retention rates declined among physicians at the end of their period of initial obligation? We can point to a number of factors.

Effects of the Changing Mix of Physicians

One key reason for the decline is the changing mix between physicians who entered the military as volunteers (that is, already trained and licensed) and those who entered after receiving scholarships that paid for part or all of their medical education. In 1982, when initial retention was 53 percent, more than one-half the physicians making their

initial decision whether to stay or leave the service were volunteers, and only one-third of them were physicians who had received scholarships (under the Armed Forces Health Professions Scholarship Program). By 1988, when overall retention was down to 37 percent, only one-fifth of physicians making their first decision about continuing on were volunteers, and three-quarters had received scholarships.

Such a shifting mix is significant, since the willingness to stay varies according to the type of physician. Volunteers are the most likely to stay past their initial obligation (54 percent did so in 1988). Less likely to remain are those recipients of scholarships who enter active duty and receive their residency training in the military (36 percent stayed in 1988). Least likely to stay are those recipients of scholarships who defer their active-duty service to receive residency training in a civilian institution (22 percent stayed in 1988). As others have noted, it may always be difficult to increase retention among those physicians who join for one-time benefits--scholarships or residency training--and thus have less "taste" for military service.

This changing mix of entering physicians affected overall retention rates to a significant degree. If the mix of volunteer physicians and those with scholarships had been the same since 1982, the overall rate of initial retention would have been 49 percent in 1987 and 47 percent in 1988, or about 10 percentage points above the actual rates.

Put another way, a changing mix of physicians accounted for about one-half the decline in initial retention rates between 1982 and 1988.

Effects of Pay

The widening gap between military salaries and potential civilian earnings also contributed to declines in retention rates. CBO's statistical analysis of the relationship between pay and initial retention found that a 10 percent decrease in the relative value of military pay would lead to about a 6 percent decrease in the retention rate. (Pay was measured as the ratio of military to civilian earnings, varied by specialty and years of experience.) Compared with average net civilian income for physicians, military pay for physicians at the end of their initial period of obligation fell by about 16 percent between 1982 and 1987, and so caused about one-third of the decrease in overall retention rates during that period.

Other Factors

Certain inconsistencies in retention rates among the services, however, suggest that pay and the changing mix of physicians entering the service are not the only factors causing this decline. Consider, for

example, the following differences among services in their initial retention rates for obstetricians and gynecologists. If one compares the rates in 1988 with the average for 1982 through 1986, the proportion of those who stay on has not changed in the Navy, but it has fallen by one-quarter in the Army and by one-half in the Air Force. Variations of this sort are not entirely explained by pay--which varied little by service--or by the mix of volunteers and recipients of scholarships. Instead, the differences point up the importance of non-pay factors, including differences among the services in working conditions, operating tempos, regulations, and ancillary support.

TRENDS IN RETENTION PAST THE INITIAL OBLIGATION PERIOD

Once physicians elect to stay the first time, they tend to continue in the military. That trend has not changed much between 1982 and 1988. Depending on the service, retention rates beyond the period of initial obligation have declined by at most five percentage points between 1982 and 1988, resulting in overall retention rates of about 85 percent (see Table 1). However, in contrast to retention rates at the end of the initial period of obligation, which have declined for all services and almost all specialties, the pattern of changes in rates beyond the period of initial obligation has varied widely since 1982.

Differences Among Services and Medical Specialties

In the Army, retention rates in most specialties declined in 1987, relative to the average for the 1982-1986 period (see Tables 2, 3, and 4). But the trend reversed between 1987 and 1988; retention in several specialties--including surgeons, orthopedic surgeons, otolaryngologists, and anesthesiologists--improved in 1988, though not enough to return to the 1982-1986 levels. Only three Army medical specialties that had declining retention continued to erode by more than one percent in 1988: obstetricians/gynecologists, psychiatrists, and dermatologists.

In the Navy, the retention rates for 9 out of 15 major specialties improved between 1987 and 1988. The rates for four of those specialties--otolaryngologists, family practitioners, internists, and pediatricians--rose to or above the average for the 1982-1986 period. Only retention rates for obstetricians and gynecologists suffered further decline in 1988 after falling in 1987 to a level below the 1982-1986 average. In the Air Force, however, the retention of obstetricians and gynecologists actually improved between 1987 and 1988. These widely varying trends suggest one would be hard-pressed to discern a pattern in the retention rates of experienced physicians.

Such differences are not surprising. Research on military retention in the enlisted forces suggests that the more years of service an individual has accumulated, the less effect changes in pay will have on that individual's decision about whether to stay or leave the military. Therefore, recent declines in pay are likely to produce a much smaller percentage change in retention rates among more experienced physicians. Other factors--such as working conditions and opportunities for senior positions--are likely to be important, but will also vary widely.

HOW SERIOUS ARE THE DECLINES IN RETENTION?

In sum, retention rates for physicians who are beyond their initial period of obligation have not eroded significantly since 1982, but retention rates for those at the end of their initial obligation have declined. How serious are these declines? The Department of Defense put it well in its December report to the Congress on health professionals: "Noting that retention is high or low at a specific point is not particularly helpful. It must be placed in the context of what is needed--what is needed to meet the requirement."

One way to assess the effects of declines in retention rates is to compare the number of physicians today with those in 1982. By that measure, the services are modestly better off. The total number of

physicians on active duty, including those in graduate medical education, was about 13,200 in 1988. That puts the medical corps 860 physicians (7 percent) ahead of its strength in 1982. Total numbers have increased--despite declines in rates of retention--because of the large numbers of new physicians entering the military and because of increases in retention rates in the early 1980s, caused in part by pay increases enacted in 1980.

The number of physicians in the workforce--that is, not in training--has also increased. In 1988, 9,400 physicians were in the workforce, 640 more than in 1982. Growth has differed among the services. The number of physicians in the workforce has held steady in the Navy, but has grown by 10 percent in the Army and the Air Force. Moreover, the average experience of physicians in the workforce has increased. In 1988, Army physicians had an average of 8.6 years of military service, up more than a year from 1982; the proportion of physicians with 13 to 20 years of active-duty service was 16 percent, up from 9 percent in 1982. The other services experienced similar gains.

The current numbers of physicians may not, of course, reflect DoD's needs. To outline its requirements, last December the Department submitted to the Congress a report describing its "ideal force." In peacetime, this ideal military medical corps would have 14,000

physicians--only about 6 percent more physicians than are currently on active duty. But the ideal force would require significantly greater experience. Roughly 14 percent of today's medical corps has served in the military for more than 13 years; under the ideal force, that proportion would be 25 percent.

Present retention rates will not move the medical corps much closer to the profile required by this ideal force. Indeed, if one projects current retention rates into the long run and assumes that numbers of newly entering physicians will remain roughly at current levels, then the medical corps would eventually be about 10 percent smaller than it is today. The proportion of experienced physicians would be somewhat higher, but still not up to the level in the ideal force.

Unfortunately, it is difficult to assess the validity of the requirements outlined in this ideal force. As the December report to the Congress stated, peacetime requirements depend on two key decisions: the care to be made available to each patient and the proportion of care to be provided by military physicians. Peacetime requirements should also reflect the military's need for physicians early in a war before civilian doctors can be brought into the military.

These broad decisions depend, in turn, on more detailed assessments. For example, the military buys the services of civilian

physicians under the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS). But CHAMPUS care is generally expensive compared with care in currently operating military facilities. If a growing medical corps is needed to "recapture" the CHAMPUS workload, then an ideal force might number more than 14,000 physicians. On the other hand, DoD might be able to handle the CHAMPUS workload without increasing the number of physicians--for example, by making managerial efficiencies, improving productivity, and enhancing auxiliary support. If the Defense Department's efforts to contain growing costs curb the use of health care services and limit the demand for care, then the services might even "require" a smaller medical corps in peacetime.

The December report presents only some of the details necessary to justify its particular choice of requirements. Without a full set of analyses, it is hard to know whether the DoD's ideal force is the appropriate basis for making changes in the military medical corps.

In addition, DoD's ideal force does not specify requirements by medical specialty. The services have requirements by specialty based on their budget authorizations, but these requirements may reflect budget realities more than carefully analyzed needs. Nor do budget authorizations indicate requirements for experience within each

specialty. Therefore, it is difficult to judge the desirability of increases in pay that vary by medical specialty.

DoD'S DECEMBER PAY PROPOSAL

The special pay plan presented in DoD's December report to the Congress is a good case in point. The Administration has not yet formally approved this plan, and so it could be modified. Yet, it illustrates the type of proposal that the Congress might debate.

Under the plan, about 40 percent of all physicians not in training (that is, not in a graduate medical education program) would receive extra pay if they agree to stay on active duty for at least one more year. The amount of added special pay varies widely depending on a physician's medical specialty and depending on how many years of extra service the physician agrees to perform. At the high end of the scale, surgeons and orthopedic surgeons would collect \$50,000 a year in extra pay for signing a four-year contract, \$37,500 a year for a three-year contract, \$25,000 a year for a two-year contract, and \$16,500 in extra pay for agreeing to stay for one more year. Anesthesiologists and other surgical-related specialties rank just below the surgeons--their supplements would range from \$13,200 to \$40,000--followed by radiologists and obstetricians and gynecologists

(\$10,000 to \$30,000), cardiologists and dermatologists (\$6,600 to \$20,000), and certain subspecialists in internal medicine and pediatrics (\$5,000 to \$15,000). The pay increases in this proposal apparently are designed to reflect the wide variation in compensation available to civilian physicians, rather than actual differences between military retention rates and requirements.

Physicians in many specialties--a total of 60 percent of all military physicians who have already been through training--would not receive any extra pay under this proposal. This group consists mainly of those physicians delivering primary care--namely, family practitioners, general internists, and most pediatricians.

The December report did not present an adequate justification for this new pay plan. It did not estimate how much retention of physicians would increase under the new pay plan. Without such projections--which suggest how many additional physicians would remain on active duty several years hence--one cannot assess the costs and effects of improving pay. Nor, as I have already noted, did the report present well-established requirements by medical specialty, even though pay increases under the proposed plan vary widely by specialty. Moreover, the report did not justify increasing pay for all physicians beyond three years of experience, even though retention problems are concentrated at the end of initial obligated service.

CBO is now working on analyses that will, among other things, project changes in retention under a range of pay options. Yet, even when our analysis becomes available, the Congress will need more information from DoD about the extent of projected shortfalls and the requirements that underlie them.

CONCLUSION

To summarize our findings, retention rates for experienced physicians--those who have completed their initial period of obligation--have declined only modestly between 1982 and 1988. Retention rates for those physicians at the end of their of initial obligation period, however, have declined more substantially in all of the services and in almost all medical specialties. The decline accelerated in 1987 and continued in 1988, though at a slower pace. A variety of factors caused this decline; reductions in military pay relative to income available in the civilian sector appear to explain only part of the decline.

TABLE 1. RATES OF RETENTION FOR MILITARY PHYSICIANS WHO ARE NOT IN TRAINING, 1982 TO 1988 (In percents, by fiscal year)

Service	Continuation Rates								Percent Change		
	1982	1983	1984	1985	1986	1982- 1986	1987	1988	From the 1982-1986 Period to:	From	1987-1988
Initial Retention Rates a/											
Army	56	71	66	43	52	58	43	42	-26	-27	-1
Navy	53	54	53	52	49	52	43	40	-17	-23	-7
Air Force	51	52	37	33	39	42	33	31	-22	-27	-8
DoD	53	60	51	43	47	50	39	37	-22	-26	-5
Post-Initial Retention Rates b/											
Army	88	93	89	87	87	89	85	85	-4	-4	0
Navy	86	85	81	80	82	83	83	85	0	2	2
Air Force	89	90	83	87	84	87	86	84	-1	-3	-2
DoD	88	89	85	85	85	86	85	85	-2	-2	0

SOURCE: Congressional Budget Office, from data supplied by the Office of the Assistant Secretary of Defense for Health Affairs.

NOTE: Physicians are classified by the specialty to which they are assigned, regardless of their primary specialty or education. The table excludes duty specialties in Aviation, General, Physical, Preventive, and Undersea Medicine.

- a. The percentage of physicians on active duty at the start of a fiscal year, whose first period of obligated service ended during that year and who stayed on active duty through the fiscal year's end.
- b. The percentage of physicians on active duty at the start of a fiscal year, whose first period of obligated service ended in an earlier year and who stayed on active duty through the fiscal year's end.

TABLE 2. RATES OF RETENTION FOR ARMY PHYSICIANS ON ACTIVE DUTY BY DUTY SPECIALTY, 1982 TO 1988 (In percents, by fiscal year)

Specialty	Continuation Rates								Percent Change		
	1982	1983	1984	1985	1986	1982- 1986	1987	1988	From the 1982-1986 Period to:	From	
									1987	1988	1987-1988
	Initial Retention Rates										
Anesthesiology	63	50	50	71	75	65	35	29	-46	-56	-18
Dermatology	60	75	100	67	100	81	50	13	-38	-85	-75
Emergency	100	100	75	60	70	76	10	33	-87	-56	233
Family Practice	42	39	80	74	59	54	35	38	-34	-30	6
General	49	56	71	79	55	57	20	22	-65	-62	10
Internal	54	78	89	77	93	77	42	44	-45	-43	3
Neurology	25	100	89	100	75	80	25	80	-69	0	220
Ob/Gyn	61	81	83	67	79	74	62	56	-17	-25	-10
Ophthalmology	33	33	100	100	88	74	11	33	-85	-55	200
Orthopedic Surg.	50	60	80	50	50	58	41	25	-30	-57	-39
Otolaryngology	0	100	100	100	100	83	31	56	-63	-33	81
Pathology	90	85	96	100	91	91	69	61	-24	-33	-12
Pediatrics	62	77	68	94	77	74	54	47	-26	-37	-14
Psychology	63	89	92	80	85	81	41	58	-50	-28	43
Radiology	39	50	92	83	100	66	41	48	-37	-27	17
Surgery	52	78	89	88	93	78	44	46	-43	-40	4
Urology	40	67	100	100	80	72	56	25	-23	-65	-55

(Continued)

TABLE 2. RATES OF RETENTION FOR ARMY PHYSICIANS ON ACTIVE DUTY BY DUTY SPECIALTY, 1982 TO 1988 (In percents, by fiscal year)

Specialty	Continuation Rates								Percent Change		
	1982	1983	1984	1985	1986	1982-1986	1987	1988	From the 1982-1986 Period to:	From	
						1986			1987	1988	1987-1988
Anesthesiology	80	92	86	90	93	88	79	86	-10	-2	9
Dermatology	96	100	91	100	95	96	92	86	-4	-11	-7
Emergency	75	94	95	87	95	90	79	90	-12	1	15
Family Practice	76	91	94	93	97	91	92	88	1	-3	-4
Internal	89	95	96	97	97	95	86	86	-9	-9	0
Neurology	100	92	94	97	100	96	80	81	-17	-16	2
Ob/Gyn	86	92	95	94	90	91	85	76	-7	-17	-10
Ophthalmology	87	98	95	97	98	94	79	95	-16	1	20
Orthopedic Surg.	80	94	93	98	98	92	85	87	-7	-5	2
Otolaryngology	82	100	100	100	95	93	81	83	-13	-11	2
Pathology	82	94	97	100	97	94	91	92	-4	-2	1
Pediatrics	91	100	94	99	98	96	90	88	-7	-8	-1
Psychiatry	95	99	97	99	96	97	92	86	-5	-12	-7
Radiology	91	95	96	96	96	95	80	83	-16	-13	4
Surgery	87	95	95	96	97	94	89	91	-5	-3	2
Urology	94	93	97	100	97	96	89	90	-7	-6	1

SOURCE: Congressional Budget Office, from data supplied by the Office of the Assistant Secretary of Defense for Health Affairs.

NOTE: Physicians are classified by the speciality to which they are assigned, regardless of their primary specialty or education. The table excludes duty specialties in Aviation, General, Physical, Preventive, and Undersea Medicine.

TABLE 3. RATES OF RETENTION FOR NAVY PHYSICIANS ON ACTIVE DUTY BY DUTY SPECIALTY, 1982 TO 1988 (In percents, by fiscal year)

Specialty	Continuation Rates								Percent Change		
	1982	1983	1984	1985	1986	1982-		From the	From		
						1986	1987	1988	1982-1986 Period to:	1987	1988
Initial Retention Rates											
Anesthesiology	27	22	25	30	35	29	36	38	25	31	5
Dermatology	a/	40	40	71	100	65	50	67	-23	2	33
Family Practice	23	65	43	43	46	44	52	37	18	-16	-29
Internal	44	79	48	48	42	50	42	29	-16	-41	-30
Neurology	0	40	100	0	0	36	50	67	40	87	33
Ob/Gyn	71	11	50	41	57	45	25	45	-45	-1	80
Ophthalmology	100	50	67	67	50	60	80	75	33	25	-6
Orthopedic Surg.	67	40	33	54	53	51	50	35	-2	-31	-29
Otolaryngology	0	50	20	50	33	37	56	56	50	50	0
Pathology	50	70	75	73	54	64	50	50	-22	-22	0
Pediatrics	82	72	68	44	63	67	40	50	-40	-25	25
Psychiatry	88	71	50	62	67	66	40	57	-39	-13	43
Radiology	83	54	45	29	29	46	28	16	-39	-65	-44
Surgery	67	75	38	75	47	59	56	45	-5	-23	-19
Urology	0	67	50	57	56	52	25	38	-52	-28	50

(Continued)

TABLE 4. RATES OF RETENTION FOR AIR FORCE PHYSICIANS ON ACTIVE DUTY BY DUTY SPECIALTY, 1982 TO 1988 (In percents, by fiscal year)

Specialty	Continuation Rates								Percent Change		
	1982	1983	1984	1985	1986	1982-		From the 1982-1986 Period to:		From 1987-1988	
						1986	1987	1987	1988		
Post-Initial Retention Rates											
Anesthesiology	80	87	80	77	69	78	77	67	-2	-15	-13
Dermatology	97	84	89	78	78	86	80	71	-7	-18	-12
Emergency	100	75	67	83	86	82	75	78	-9	-5	4
Family Practice	86	85	81	77	84	83	88	84	7	1	-5
Internal	93	87	81	93	84	87	87	80	-1	-8	-8
Neurology	75	92	79	69	75	78	100	91	28	16	-9
Ob/Gyn	84	90	75	92	72	82	73	78	-11	-5	6
Ophthalmology	89	93	85	75	88	86	76	79	-11	-8	3
Orthopedic Surg.	84	86	74	93	67	81	75	77	-7	-4	3
Otolaryngology	71	90	73	84	75	79	75	73	-5	-7	-2
Pathology	97	91	78	90	95	90	89	93	-1	4	4
Pediatrics	97	91	89	88	89	91	91	89	0	-2	-2
Psychiatry	92	90	84	81	83	86	82	77	-4	-10	-6
Radiology	91	87	78	79	80	83	91	80	10	-3	-13
Surgery	87	88	84	83	82	85	77	79	-9	-7	3
Urology	84	86	84	96	80	86	85	79	-1	-8	-7

SOURCE: Congressional Budget Office, from data supplied by the Office of the Assistant Secretary of Defense for Health Affairs.

NOTE: Physicians are classified by the speciality to which they are assigned, regardless of their primary speciality or education. The table excludes duty specialties in Aviation, General, Physical, Preventive, and Undersea Medicine.

- a. None ended an initial obligation during the fiscal year.
- b. Only one neurologist completed the initial obligation during 1988.