
Licensed Physicians Who Work in Prisons: a Profile

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SYNOPSIS

A profile of the personal and professional characteristics of the physicians who work in America's prisons was obtained by analyzing data from a larger study of all licensed physicians in the United States who worked in a prison at least 12 hours a month during the fall of 1979. Psychiatrists were not included, nor were physicians working in jails.

The population of 382 prison physicians comprised two major groups—those who worked in prisons full time and those who worked in them part time. Part-time physicians, who represented the majority of physicians involved in prison work (58 percent), were found to resemble closely the typical physician in the United States; they were predominantly trained in America, specialized, and board certified. In contrast, full-time prison physicians, who accounted for 73 percent of the total hours physicians spent working in prisons, differed significantly from the typical U.S. physician. They were older, less specialized, less likely to be board certified, and more likely to be graduates of non-U.S. medical schools.

The professional characteristics of the full-time prison physicians raise serious questions about the quality of medical care they are likely to provide. It would seem, based on their professional attributes, that the part-time physicians are able to provide better quality care than their full-time colleagues. Prison health system could thus assure higher quality care to inmates by relying primarily on part-time rather than full-time practitioners.

PHYSICIANS WHO PROVIDE HEALTH CARE in prisons work in one of the most difficult practice settings a physician is likely to encounter in the United States. Prison health systems and the physicians who work in them face many problems. A major problem has been financial. Prison health systems, like the correctional systems that usually operate them, have been sorely underfunded for many years (1). In addition, the provision of health services to inmates has not been viewed historically as a high priority by corrections officials, who typically have been more concerned about security, housing, and food services (2). Underfunding and low priority status resulted in prison health systems that, in most cases, failed to meet community standards. Existing descriptions portrayed many prison health programs as virtually primitive (3, 4).

A major force for change in prison health care has been the courts. In a landmark 1976 legal case (*Estelle v. Gamble*, 429 U.S. 97 [1976]) and in several subsequent cases, the courts ruled that inmates have the right to receive medical care at the prevailing community standard (5). Facing the

threat of inmate lawsuits and Federal receivership if they did not meet the community standard of medical care, many prison systems began upgrading the quality of their health services.

Reallocated State funds and Federal funds provided by the Department of Health and Human Services and the Law Enforcement Assistance Administration were used to upgrade the scope, content, quality, and management of health programs in many prisons (3). In addition, several professional societies, including the American Public Health Association, the American Medical Association (AMA), and the American Correctional Association, promulgated standards for correctional health programs. Despite advances at some prisons, however, the state of prison health care remains inadequate (3, 6). And for physicians, working in a prison is a very different experience than practicing in almost any other setting (7).

Physical facilities for providing medical care in prisons are frequently small, dark, noisy, old, and crowded, and technical equipment and supplies are often antiquated or unavailable (1, 3, 6). The num-

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ber of personnel, both professional and ancillary, is often inadequate (1). Security rules and security personnel may infringe on the physician's autonomy (7). Patients' attitudes have been portrayed as demanding, disrespectful, uncooperative, and hostile, and patients are said to frequently feign illnesses to avoid work or other duties (4, 7). Clinically, inmate populations have been found to have higher levels of illness than the general population of similar age (8). Pay, under civil service schedules, is usually extremely low for physicians working in prisons, and the status they are accorded by their medical colleagues suffers (9). Fear for one's safety, which must affect all physicians working in prisons to some degree, further contributes to making the practice of medicine in a prison a seemingly unattractive endeavor (4).

Yet hundreds of licensed physicians in the United States do work in prisons, some for extended periods of time. Who are these physicians? What is their motivation for working in prison health care? How do they compare with the general population of U.S. physicians? To answer these questions, we have analyzed data from a larger survey, made inferences about the probable quality of care provided by physicians who work full time in prisons, and offered a strategy to cope with the situation.

Methods

Data presented in this paper were obtained as part of a larger study to identify the organizational characteristics of prison health programs that were associated with physician satisfaction and retention (9). Since the objective of that study was to identify possible approaches for retaining licensed physicians in the prison setting, data were not collected on any unlicensed (usually foreign-trained) physicians who may have been working in prisons. Although some contend that unlicensed physicians are a major source of health manpower in correctional facilities (10), others argue that omitting unlicensed physicians from the study is inconsequential. The immedi-

ate past president of the American Correctional Health Services Association stated that, due to legal pressures, the use of unlicensed physicians in prisons is now "rare" (Richard Kiel, personal communication, September 8, 1983). "In the last few years, there has not been a large enough number of unlicensed physicians practicing as the responsible physician in prisons to have any impact on this study's findings at all." Unlicensed physicians notwithstanding, the data presented do reflect accurately the licensed physicians who worked in prisons at the time of the study.

The study was conducted in fall 1979. The population included all licensed physicians in the United States who diagnosed or treated patients with non-psychiatric problems, on a regularly-scheduled basis, for at least 12 hours per month, inside a Federal or State prison for adults or adolescents. Besides omitting the unlicensed physicians, the study also excluded most psychiatrists, physicians who treated inmates in their own offices or in nonprison hospitals, and physicians who practiced inside prison walls only occasionally.

Physicians working in jails—as opposed to prisons—were also excluded. A jail generally houses persons who have not yet been convicted of a crime but are awaiting trial and, often, persons already convicted but sentenced to less than 1 year. Jails are usually operated by local (county or municipal) jurisdictions, although some States and the U.S. Bureau of Prisons operate jails. In contrast, prisons house persons who have been convicted of crimes and sentenced to terms longer than 1 year. In the United States, prisons are operated by 52 jurisdictions—the 50 States, the District of Columbia, and the Federal Government.

Names of eligible physicians were obtained from corrections officials in each of these 52 jurisdictions. All 588 physicians meeting study criteria were sent a self-administered questionnaire eliciting information about personal and professional characteristics, job satisfaction with several aspects of work, and intentions of staying on or leaving the job. Followup procedures consisted of three additional contacts by mail and one by telephone.

A total of 382 usable questionnaires was received, a response rate of 65 percent. The response rate by correctional system is shown in table 1. Some physicians did not answer all questions, which accounts for totals not adding to 382 in some of the tables. To the extent possible, nonrespondents were compared with respondents in terms of personal and professional characteristics. This analysis showed

Table 1. Response rate among eligible physicians, by correctional system

State	Number of respondents	Number of physicians eligible	Percent responding
Alabama	1	2	50
Alaska	1	4	25
Arizona	4	6	67
Arkansas	2	2	100
California	29	49	59
Colorado	4	4	100
Connecticut	2	2	100
Delaware	0	2	0
Florida	20	30	67
Georgia	5	9	56
Hawaii	3	4	75
Idaho	1	2	50
Illinois	17	28	61
Indiana	5	10	50
Iowa	..	0	..
Kansas	5	6	83
Kentucky	3	5	60
Louisiana	11	21	52
Maine	1	2	50
Maryland	12	20	60
Massachusetts	9	30	30
Michigan	17	23	74
Minnesota	2	3	67
Mississippi	1	1	100
Missouri	1	3	33
Montana	4	5	80
Nebraska	1	3	33
Nevada	2	4	50
New Hampshire	1	2	50
New Jersey	6	14	43
New Mexico	2	3	67
New York	29	37	78
North Carolina	30	36	83
North Dakota	..	0	..
Ohio	11	18	61
Oklahoma	7	9	78
Oregon	2	5	40
Pennsylvania	15	24	63
Rhode Island	1	3	33
South Carolina	1	3	33
South Dakota	0	1	0
Tennessee	10	10	100
Texas	14	16	88
Utah	1	1	100
Vermont	1	1	100
Virginia	17	27	63
Washington	7	17	41
West Virginia	2	2	100
Wisconsin	6	11	55
Wyoming	1	2	50
District of Columbia	4	6	67
U.S. Bureau of Prisons	51	69	74

only one important difference: foreign medical graduates were somewhat less likely to respond to the questionnaire than graduates of American medical schools. Of the respondents, 23 percent had been graduated from non-U.S. schools, compared with 30 percent of the nonrespondents. This difference

Statistically significant differences between profiles of full-time prison physicians and all U.S. physicians were found in all five bases of comparison.

should be borne in mind when interpreting the data that follow.

Results

Characteristics of licensed prison physicians. Data on personal and professional characteristics of licensed prison physicians are presented in tables 2-4. The mean age of the physicians was 48 years (table 2). Seven percent were under 30 years old and 4 percent over 70, with the remainder about equally distributed in their 30s, 40s, 50s, and 60s. Nearly all (96 percent) prison physicians were males, a figure that mirrors the proportion of male prisoners (96 percent) (6).

Seventy-seven percent of the respondents were graduates of American medical schools, and 23 percent were graduates of foreign medical schools (table 3). If there had been a 100 percent response rate, about 25 percent would be foreign medical graduates, based on information we found about nonrespondents. Ninety-five percent of the respondents were fully licensed by the States in which they worked. The other 5 percent consisted of physicians with only Federal licenses, including National Health Service Corps personnel (about 1 percent), and physicians with licenses restricted to the institution employing them (4 percent).

Thirty-seven percent of the respondents were certified by one or more specialty boards, 24 percent were board eligible, and 7 percent restricted their practice to a specialty although they were neither board eligible nor certified; 32 percent claimed no specialty. (Family practice was considered a specialty in this survey.) Forty-two percent of the respondents were employed full time in prisons (at least 35 hours per week), and 58 percent worked in prisons only part time. The average number of years respondents had worked in prisons was 5.7, mostly at their current institution (an average of 5.2 years).

Questions concerning physicians' reasons for taking jobs in prisons were also included (table 3). Twenty specific reasons in the questionnaire have been grouped into four categories—monetary rea-

The profile of full-time prison physicians indicates that a disproportionate number have characteristics associated with lower quality care.

sons, positive interest, job-related reasons, no alternatives.

Monetary reasons. Supplementary income while building a private practice; income while deciding on future plans; supplementary income during retirement; good pay; supplementary income to military pay.

Positive interest reasons. Interest in correctional health; inmates need care; interesting caseload; rep-

Table 2. Age distribution of prison physicians by employment status

Group	Number	Age groups (percentages)						Mean age (years)
		Under 30 years	30-39 years	40-49 years	50-59 years	60-69 years	70 or more years	
All prison physicians ¹	378	7	25	23	21	21	4	48
Full-time prison physicians	160	8	18	16	31	26	² 2	50
Part-time prison physicians	218	6	30	27	14	18	5	47

¹ Sexual distribution: 96 percent male; 4 percent female (N = 380).

² Total does not add to 100 percent because of rounding.

Table 3. Specific characteristics of licensed prison physicians by employment status (percentages)

Characteristics	All prison physicians (N = 382)	Full-time physicians (N = 160)	Part-time physicians (N = 221) ¹
Training:²			
American medical school graduate	77	68	84
Foreign medical school graduate	23	³ 33	16
Licensure status:⁴			
Fully licensed	95	89	99.5
Restricted to specific institutions	4	8	.5
Federal license	1	3	0
Specialty status:⁵			
Board certified	37	28	46
Board eligible	24	22	23
Self-proclaimed specialist	7	8	8
Nonspecialist	32	42	23
Reasons for entering correctional work:			
Positive interest:			
Yes	49	41	55
No	51	59	45
Monetary interest:			
Yes	49	35	59
No	51	65	41
Job related:			
Yes	41	58	28
No	59	42	72
No alternative to correctional work:			
Yes	16	19	14
No	84	81	86

¹ No data on 1 respondent.

² No data on 2 respondents.

³ Percentages do not add to 100 percent because of rounding.

⁴ No data on 1 respondent.

⁵ No data on 18 respondents.

resents a challenge; a source of patients in my specialty area.

Job-related reasons. Provides job security; poor personal health or age made other work difficult; wanted regular hours; interested in an organized practice; it was an alternative to military service; wanted a change of pace.

No alternatives. Was having licensure problems; had limited alternatives; was having malpractice problems; and group has a contract to provide services.

Each physician could select his or her two most significant reasons for entering correctional practice. Their reasons are presented in table 3 in dichotomous fashion, indicating the percentage of physicians who did or did not select each category as one of their two choices. Only 16 percent indicated that they chose correctional work because they had no alternative to that field. The dominant reasons for entering prison health care were a positive interest in the field or a monetary interest (49 percent each). Slightly fewer physicians (41 percent) chose job-related factors such as regular hours or job security.

Differences between full- and part-time physicians. Although 42 percent of respondents worked in prisons full-time, they accounted for most of the hours spent by physicians practicing in prisons. We felt it imperative to describe the characteristics of these full-time prison physicians and to contrast them with those of their part-time colleagues (tables 2-4). Tests of statistical significance are inappropriate and were not used here because the data represent differences for a population rather than a sample.

The full-time physicians were an older group than the part-time physicians. Their mean age was 50 years, and 57 percent were over 50 years old, compared with the part-time physicians, whose mean age was 47 years and only 37 percent of whom were over 50 years of age. Full-time physicians were somewhat less likely to be fully licensed by a State, with 8 percent holding restricted State licenses. Virtually all part-time practitioners were fully licensed (table 3). Full-time physicians were also less likely than their part-time counterparts to be board-certified specialists (28 percent versus 46 percent) and more likely to declare no specialty at all (42 versus 13 percent). The two groups of physicians also differed in the location of their medical school training. Only 16 percent of the part-time physicians

Table 4. Income and time worked in prison

Characteristic	Full-time physicians	Part-time physicians
Average income per hour:		
Board certified	\$23	\$40
Board eligible	21	38
Self-proclaimed specialist ...	21	36
Nonspecialists	19	32
Overall	20	38
Hours per week (average): ¹		
In correctional work	42	11
In other settings	6	39
Total	48	50

¹ 160 full-time and 221 part-time physicians.

were foreign medical graduates, but twice that proportion, or 33 percent, of full-time practitioners were graduates of foreign medical schools.

Levels of direct pay received by part- and full-time prison physicians differed markedly (table 4). Part-time physicians received an average hourly compensation of \$38 an hour, but their full-time colleagues averaged only \$20 an hour. The rates for full-time physicians, however, do not reflect the value of their fringe benefits. Those benefits, which are not available to part-time prison physicians, may virtually equalize the overall costs of compensation to the prison systems.

Pay differences between full- and part-time physicians reflected their specialty credentials to varying degrees. Direct pay of part-time physicians ranged from \$32 an hour for nonspecialists to a high of \$40 an hour for diplomates of specialty boards. In contrast, full-time physician direct pay was less reflective of credentials, ranging from \$19 an hour for nonspecialists to \$23 an hour for board-certified specialists. Significantly, the full-time physicians with board certification were paid at rates about 28 percent lower than part-time practitioners with no specialty training and 43 percent lower than the part-time physicians with board certification. Even fringe benefits would not account for this skewed pattern of compensation.

Full-time practitioners worked an average of 42 hours per week in the prisons and the part-time physicians averaged only 11 hours per week (table 4); the full-time providers accounted for 6,720 (73 percent) of 9,151 total physician hours. Full-time physicians were clearly the mainstay of correctional health care despite the larger number of part-time practitioners.

The two groups of physicians also revealed differences in their reasons for entering work in the field

of corrections (table 3). Only a small percentage in each group felt that they had no alternative to prison work, with little difference between the two groups (19 and 14 percent of full- and part-time physicians, respectively). There were large differences, however, in the other three categories of reasons for entering prison health work. Full-time physicians were most likely (58 percent) to have entered the field for reasons related to the job, such as regular hours and job security, rather than for reasons related to a positive interest in the field (41 percent) or for monetary reasons (35 percent). In contrast, only 28 percent of part-time physicians entered the field for job-related reasons; 59 percent took the position for monetary reasons, such as supplemental income, and 55 percent because of a positive interest in the field and the patients.

Differences between the profiles of prison physicians and of all U.S. physicians. To put the profile of physicians working in prisons in perspective, we compared characteristics of the entire population of prison physicians and the subgroups of part-time and full-time prison physicians with a profile of all U.S. physicians (11) prepared in 1980 by the American Medical Association (table 5).

The entire population of prison physicians did not differ statistically from the general physician population with respect to mean age, age distribution, or

percentage of foreign medical graduates. Statistically significant differences were found, using a test of proportions with the normal approximation (12), between these two populations in the percentages of women, board-certified physicians, and physicians declaring no area of specialization. Women accounted for 4 percent of the prison physicians and 9 percent of all U.S. physicians. Board-certified specialists represented 37 percent of the prison physicians and 49 percent of the all-U.S. group. Thirty-two percent of the prison physicians declared no specialty, but only 16 percent of the general physician population did so. All of these differences are significant at $P < .001$.

Part-time prison physicians were notably similar to the all-U.S. group of physicians. The two groups showed no statistically significant differences in age, sex distribution, proportion of foreign medical graduates, or percentage of board-certified specialists. Only in the proportion of physicians declaring no specialty, 23 percent of the part-time prison group and 16 percent of the all-U.S. physician group, did the two groups reveal a statistically significant difference (test of proportions, $P < .01$).

Profiles of full-time prison physicians and all U.S. physicians were compared also, and the differences were striking. Statistically significant differences were found in all five bases of comparison—age distribution and the percentages of women, foreign

Table 5. Comparison of prison physicians with all U.S. physicians (percentages)

Variables	All U.S. physicians ¹ (N = 437,486)	All prison physicians (N = 382)	Part-time prison physicians (N = 221)	Full-time prison physicians (N = 160)
Age	2 100.0	100.0	100.0	100.0
Less than 35 years	27.4	³ 19.3	³ 22.0	⁴ 15.6
35-44 years	25.0	23.5	26.1	19.4
45-54 years	19.5	23.0	22.5	23.8
55-64 years	14.5	23.0	17.9	30.0
65 or more years	13.5	11.3	11.5	11.3
Mean (years)	47.0	48.0	47.0	50.0
Sex	100.0	100.0	100.0	100.0
Male	⁵ 91	⁶ 96	³ 94.5	⁶ 97.5
Female	9	4	5.5	2.5
Training	100	100	100	100.0
American medical school graduate	⁵ 80	³ 77	³ 84	⁶ 67.5
Foreign medical school graduate	20	23	16	32.5
Specialty status:				
Board certified	49	⁶ 37	³ 46	⁶ 28
No specialty	16	⁶ 32	⁷ 23	⁶ 42

¹ SOURCE: Reference 11, pp. 140, 148, 149.

² Totals do not equal 100 percent because of rounding.

³ Not significant.

⁴ Chi square goodness of fit test, $P < .005$.

⁵ Percentage of physicians involved in patient care.

⁶ Test of proportions using the normal approximation, $P < .001$.

⁷ Test of proportions, $P < .01$.

medical graduates, board-certified physicians, and nonspecialists.

Full-time prison physicians, whose mean age was 50 years, were significantly older ($P < .005$) as a group than the AMA profile of all U.S. physicians, which had a mean age of 47 years, as determined by the chi square goodness of fit test (13). In the 55–64 year age group, the full-time physicians had a particularly high concentration when compared with the U.S. physician group.

The full-time physician group had a lower percentage of women than the overall U.S. physician population, presumably due to the predominance of male inmates. Full-time prison practitioners also differed in terms of training, specialization, and background. The percentage of foreign medical graduates was nearly 33 percent in the full-time prison group, compared with 20 percent in the overall U.S. physician population. In terms of board certification, only 28 percent of the full-time prison physicians were diplomates of specialty boards, while 49 percent of all U.S. physicians had attained that status. No specialty was declared by 42 percent of the full-time prison group and 16 percent of all U.S. physicians. These differences were all significant at $P < .005$.

Conclusion

Physicians who work in prisons are an extremely diverse group, with a wide range of backgrounds, specialty training, and practice experience.

Two distinct subgroups—part-time and full-time physicians—have been noted. The majority are part-time physicians who also practice outside penal institutions. They closely resemble the typical U.S. physician in the AMA profile. Their presence no doubt decreases the isolation of prison medicine and permits inmates access to providers whose personal and professional attributes are virtually indistinguishable from health care providers available to members of the larger community.

Although fewer in number than their part-time colleagues, full-time prison practitioners provide nearly three-fourths of the physician-hours in the nation's prisons, and they can be considered the dominant providers of physician care to prison inmates. Full-time physicians differ from the profile of all U.S. physicians and from that of their part-time colleagues in a number of important ways. Although no definitive conclusions can be drawn from a statistical profile such as the one we have presented, the characteristics of the full-time prison

physicians do raise questions about the probable quality of the care they render in comparison with physicians in the mainstream of medical care.

In the absence of data about the technical quality of the care actually delivered by these full-time physicians, inferences about the quality of care they render may be made based on their professional attributes (14). One cannot be sanguine about the quality of care the full-time prison physicians are likely to provide since their profile indicates that a disproportionate number have characteristics associated with lower quality care.

Licensure, longer periods of training, board certification, and specialization have all been associated with higher quality performance (15–17). Among full-time prison physicians there is a high percentage with restricted licenses, limited postgraduate medical training, no area of specialization, or no board certification. The physician's age, although it is confounded with the amount of training, has also been found to be associated with quality (15). Older physicians, particularly those in general practice with no additional training, have been found to provide lower quality care (18). Fifty-seven percent of the full-time prison physicians were nonspecialists over the age of 45.

Another striking characteristic of full-time prison physicians is the high proportion (33 percent) who are graduates of foreign medical schools. Several authors (15–17, 19, 20) have compared the quality of care provided by graduates of foreign and U.S. medical schools, and their results seem to indicate that, in general, foreign medical graduates perform as well as U.S. graduates. This is particularly true when the foreign medical graduate has received additional postgraduate medical training and is a specialist (19, 20). Because these characteristics do not describe most foreign medical graduates who work full time in prisons, we can infer that they probably provide care of lesser quality than the typical U.S. physician (17, 19). The vast majority of foreign medical graduates working full time in prisons are not board certified (84 percent). Most lack advanced training (56 percent), and many practice no specialty (47 percent) or have only a restricted license (25 percent). The ability to speak English has also been associated with the quality of care provided by foreign medical graduates in the United States (19, 20). Although we do not know anything about the language skills of the foreign medical graduates working full time in prisons, any problems they have in providing high quality care would be exacerbated by a poor command of English.

Certain structural attributes of practice settings, such as a high degree of staff organization, extensive use of peer review, affiliations with medical schools, and the group practice rather than solo practice mode of delivery, have also been associated with higher quality care (17, 19, 20). Several studies found that even physicians with characteristics associated with lower quality can provide high quality care in appropriately structured facilities and organizations, while the absence of such structural characteristics can make matters worse for the individual clinician (16, 17, 19, 21). Unfortunately, the prison health systems across the United States, with some exceptions, have few of these positive structural characteristics. Most are not organized to supervise full-time providers properly, except, perhaps, where part-time physicians are active in such endeavors (1, 3, 6). Thus, the characteristics of full-time providers and the nature of their work settings cause further concern about quality of care.

Since the part-time physicians who work in prisons seem, based on their professional characteristics, more likely to provide high quality care than current full-time practitioners, and since the fiscal and "environmental" conditions that make full-time prison practice unattractive to mainstream providers are not likely to change soon, perhaps the staffing of prison health programs should be reconsidered in favor of a much heavier reliance on part-time physicians. Although many bureaucratic and financial impediments are likely, it would seem, based on considerations of physician quality alone, that this is the best way of assuring inmates of high quality care. Through the use of appropriate recordkeeping and full-time nonphysician health personnel such as nurses, nurse practitioners, and physician assistants, continuity of care can be maintained without a full-time physician. Coupled with functioning medical information systems, utilization reviews, medical audits, and pharmacy profile systems, reliance on part-time physician staffing might further decrease the isolation of prison health programs and at the same time improve their clinical quality.

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