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ABSTRACT

A study examined the relationship between accreditation status and hourly wages of medical record technicians (MRTs) in four major metropolitan areas (Chicago, St. Louis, Kansas City, and Atlanta) during August 1975. Multiple regression analysis of the hourly wages of 590 female, full-time MRTs collected through a government hospital wage survey revealed a $0.62 per hour advantage for accredited record technicians over those not accredited. Also related to the MRT hourly wage were job location and hospital funding source. Based upon these data, conclusions were drawn concerning the importance of accreditation to employing hospitals and to individual MRTs. (Author/MN)

RELATIONSHIP BETWEEN ACCREDITATION STATUS AND HOURLY WAGES OF MEDICAL RECORD TECHNICIANS

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Relationship Between Accreditation Status and Hourly Wages of Medical Record Technicians

An average of 2949 openings are expected to be available annually in the United States through 1985 for medical record technicians (MRT's) (Passmore, Marron, Norton, & Mohamed, in press). Losses of MRT's due to death, retirement, sickness, and family responsibilities will account for four of every ten of these openings. Six of every ten of these openings will be created by growth in the demand for health services.

In 1977, the American Medical Association (1977, p. 1) accredited 64 MRT training programs, 85 percent of which were managed by vocational-technical schools or junior/community colleges, serving 1681 enrollees and producing 521 graduates. The number of accredited programs increased exponentially from 10 in 1953. Graduates of accredited programs can attempt the Accredited Record Technician examination offered by the American Medical Record Association (AMRA). Medical record clerks with several years work experience can complete AMRA correspondence courses, and, upon course completion, can attempt the accreditation examination. The U. S. Department of Labor (1978, pp. 479-480) counsels job seekers that most employers prefer to fill positions with graduates of formal, school-based training programs over those completing correspondence courses.

Research reported in the remainder of this paper found that female Accredited Record Technicians employed by private as well as nonfederal government hospitals during August 1975 in four major metropolitan areas earned about $0.62 per hour more than their non-accredited counterparts. Data analyzed in this study were derived from the results of a hospital wage survey conducted by the U. S. Bureau of Labor Statistics in 23 U. S. Standard Metropolitan Statistical Areas between August 1975 and January 1976. Results of this survey for many health-related occupations were provided by the U. S. Department of Labor (1977); however, Passmore, Marron, Hamil, and Fowler (1979, Table 4) presented the only published wage data for MRT's from this survey.

Contained in the next section of this paper is a detailed description of data used to consider the relationship between accreditation status and wages of MRT's, followed by a statement of methods of analysis applied to these data. Then, after the results of this data analysis are displayed, implications of

this analysis are listed for individual MRT's and for those who manage their training programs. Last, a summary is provided, and references are cited.

Method

Data

Data examined in this study were generated through an hospital wage survey conducted by the Industry Wage Division of the U. S. Bureau of Labor Statistics between August 1975 and January 1976 (see U. S. Department of Labor, 1977, for detail on the scope and method for this survey). The sampling universe for this survey comprised 11,093 hospitals employing over 100 workers, not managed by the federal government, and selected from the Master Facility Inventory maintained by the National Center of Health Statistics, U. S. Public Health Service. Three-fourths of the hospitals in the universe were privately managed, with nine-tenths of these non-profit. The remaining one-fourth included such nonfederal government hospitals supported by state and local taxes as municipal hospitals and state psychiatric or chronic care hospitals. Hospitals in the universe employed 1,087,700 workers.

For the wage survey, 615 hospitals employing 760,000 workers were sampled in 23 Standard Metropolitan Statistical Areas. More large than small hospitals are represented in the sample than in the universe. Personal visits to each hospital for collection of hourly wage and other employment-related data by U. S. Bureau of Labor Statistics field staff was thought to improve the accuracy of the survey.

For this study, MRT wage data were used which were collected in a single month, August 1975, so that observed wage differences would be comparable. Only four metropolitan areas which presented complete data for MRT's on all variates examined in this study were retained for this analysis. Because only about one percent of the MRT's employed in these four areas were males, this study was restricted to data from female MRT's. Also, wage data from full-time MRT's only were used. With these restrictions on the sample, the analysis presented in this paper focused on the role of certification as an Accredited Record Technician in the hourly wages of 590 female MRT's working full-time in St. Louis, Atlanta, Chicago, and Kansas City during August 1975.

Analysis

Ordinary least squares methods were used to regress accreditation status, job location, and hospital funding source on the hourly wages (in cents per

hour) of MRT's during August 1975. Each MRT's accreditation status entered the model as a dummy variate (Accredited Record Technician, or not), as did the employing hospital's funding source (nonfederal government, or not). The MRT's job location entered the model as three dummy variates: one variate indicated that the MRT was employed in Atlanta, or not; another indicated that the MRT was employed in Chicago, or not; the third job location variate indicated employment in Kansas City, or not. The reference category for each of the three job location variates was St. Louis. For instance, the regression coefficient for the Atlanta job location variate compared the wages of MRT's in Atlanta to those earned by MRT's in St. Louis.

The importance of hospital funding source might vary from city to city due to local politics, unionization, population level and composition, the structure of health insurance arrangements, and other factors. Therefore, also incorporated in the regression model were three interaction terms to probe the differential patterns of hourly wages by job location and hospital funding source.

Coefficients for each variate in the regression model fit to these hourly wage data for MRT's are reported and interpreted in the next section of this paper.

Results

Results are shown in Table 1 of the regression of accreditation status, hospital funding source, and job location on hourly wages of MRT's during August 1975. The regression model fit the data fairly well, producing a multiple correlation of 0.71 ($F_{8,581} = 74.1$, $p < 0.001$), a squared multiple correlation of 0.50, and a standard error of estimate of \$0.50 per hour. Means, standard deviations, and correlations displayed in Table 1 should allow other analysts to replicate or reformulate the analysis presented in this paper.

Insert Table 1 About Here

Holding constant all other variabes in the model at their mean values, the net difference in hourly wages between Accredited Record Technicians and those not accredited was \$0.62 per hour. Assuming a year-round, full-time work schedule, this amount would total, by extrapolation, to \$1290 (in 1975 dollars) per year. MRT's employed in nonfederal government hospitals realized a net advantage of \$0.45 per hour over those employed in privately managed hospitals.

Regional variations in hourly wages were evident. MRT's working in Atlanta earned $0.17 less per hour than those employed in St. Louis; in Kansas City, $0.26 per hour less than St. Louis. In contrast, Chicago MRT's earned $0.72 per hour more than those employed in St. Louis.

The interaction terms were dominated by the job location variate. The signs of the regression coefficients for interaction terms remained in the same direction as those for job location variates. Perhaps local wage structures have a stronger association with the wages of MRT's than does the type of employing hospital. One explanation for this association may be that the local labor market structure of the hospital industry is one of imperfect competition in both the product (i.e., the selling of medical care services) (Jacobs, 1974) and resource (i.e., the hiring of health care labor) (Davis, 1973) markets. This situation tends to arise when labor is specialized, such as are MRT's, and employed in only one or a few firms, such as hospitals. Hospitals employed over 95 percent of all MRT's in 1974 (Passmore, Marron, Norton & Mohamed, in press, Table 1); hospital care at the local level is a concentrated industry according to Salkever (1978), with few hospitals actually competing for products or resources.

Discussion

Although only 35 percent of the MRT's examined in this study were Accredited Record Technicians, accreditation was associated with $0.62 increment in hourly wages. This result is independent of job location and hospital funding source, both of which also were related strongly, by themselves, to hourly MRT wages. These data suggest a willingness among employers to hire MRT's who were not accredited, while being willing to pay a premium for accreditation. This association also reveals the economic importance of accreditation to MRT's.

If this positive return to accreditation has persisted since the hospital wage survey, then individual MRT's would be wise to prepare to complete the Accredited Record Technician examination successfully as soon as they are eligible. Managers of MRT training programs should facilitate this preparation and should describe the potential benefits of accreditation to MRT trainees. Moreover, from the perspective of career counseling and job placement, this analysis shows the need for careful choice of job location and hospital type during job search.

At least two cautions should be considered in interpreting the analysis reported in this paper. First, MRT labor markets and returns to accreditation may have changed since the 1975 hospital survey. However, these are the most

recent and comprehensive data available. Second, other variates, not available for inclusion in the model tested, could be related to accreditation as well as hourly wages. For example, job and occupational tenure, collective bargaining relationships, educational attainment, and internal labor market structures of individual hospitals could be important correlates of MRT hourly wages. Perhaps the hourly wage differences attributed to accreditation are biased by not including such variates in the model. However, more extensive data would be needed to test for the presence of these biases.

Summary

Examined in this study was the relationship between accreditation status and hourly wages of medical record technicians (MRT's) in four major metropolitan areas during August 1975. Multiple regression analysis of the hourly wages of 590 female, full-time MRT's collected through a government hospital wage survey revealed a $0.62 per hour advantage for Accredited Record Technicians over those not accredited. Job location and hospital funding source also were related strongly to MRT's hourly wages. These data reveal the importance of accreditation to employing hospitals and to individual MRT's.

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Table 1.

Results of Multiple Regression of Accreditation Status, Job Location, and Hospital Funding Source on Hourly Wages of 590 Female, Full-Time Medical Record Technicians

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Correlations								
Criterion Variable									
Hourly Wages (1)	1.00								
Variates									
Accredited Record Technician vs. not accredited (2)	0.30	1.00							
Atlanta vs. St. Louis (3)	-0.26	-0.08	1.00						
Chicago vs. St. Louis (4)	0.52	-0.19	-0.38	1.00					
Kansas City vs. St. Louis (5)	-0.27	0.23	-0.22	-0.41	1.00				
Nonfederal government vs. privately managed (6)	0.03	0.08	0.40	-0.26	0.03	1.00			
Atlanta and nonfederal government hospital (7)[a/]	-0.12	0.13	0.73	-0.27	-0.16	0.63	1.00		
Chicago and nonfederal government hospital (8)	0.32	0.03	-0.09	0.23	-0.09	0.37	-0.06	1.00	
Kansas City and nonfederal government hospital (9)	-0.09	0.11	-0.10	-0.18	0.45	0.42	-0.07	-0.04	1.00
Mean[b/]	$4.00	0.35	0.17	0.41	0.19	0.21	0.10	0.04	0.05
Standard Deviation	$0.71	0.47	0.38	0.49	0.40	0.41	0.30	0.19	0.21
Unstandardized Regression Coefficient (Constant = $3.51)		$0.62[*/]	-$0.17	$0.72[*/]	-$0.26[*/]	$0.45[*/]	-$0.28	$0.25	-$0.35[*/]

Source: August 1975 Hospital Wage Survey by Industry Wage Division, U. S. Bureau of Labor Statistics.

a/ Variates (7), (8), and (9) are interaction terms structured to cross job location with hospital funding source. For example, variate (7) is defined as employed by an Atlanta nonfederal government hospital vs. an Atlanta privately managed hospital or any type of St. Louis Hospital.

b/ Means for dummy variates are proportions in the positive category.

*/ Denotes coefficient at least twice as great as its standard error.