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The Impact of Vendorship Legislation and Interprofessional Competition in the Market for Social Workers' Services

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Introduction

Currently 24 states and the District of Columbia have some form of vendorship legislation (phone conversation with Leila Whiting, NASW 2/13/1991).[1] Vendorship legislation requires that third-party payers directly reimburse certified or licensed clinical social workers for covered mental health services.[2] This legislation effectively unbundles or unties the sale of mental health services provided by social workers from the services provided by psychiatrists and psychologists. Social workers are able to bill third-party payers directly for their services in states with vendorship laws, but must bill for their services through a consulting physician in states without vendorship laws.

Vendorship has important implications for social workers, as well as for the mental health service delivery system. Economic theory suggests that elimination of this tying requirement between the services provided by social workers and the services provided by other mental health providers will affect the level of competition and prices in the market for mental health services. Economists have suggested that tying requirements may have an exclusionary effect (Bowman, 1957; Posner, 1976) and that sellers with market power may use tying requirements to increase profits through price discrimination (Bowman, 1957) or through strategies of pure and mixed bundling (Stigler, 1968; Adams &

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[1]In addition to state laws expanding mental health insurance coverage to social workers, the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) with approximately 6.2 million eligible beneficiaries and the Federal Employees Health Benefit Program with approximately 10 million eligible beneficiaries recognize social workers as independent mental health treatment providers (NASW, 1987).

[2]For example, the Massachusetts insurance law on mental illness expenses states, "In the case of outpatient benefits, these shall cover, to the extent of five hundred dollars over a twelve-month period, . . . consultations on diagnostic or treatment sessions, provided that such services under this clause are rendered by a psychotherapist or by a psychologist or licensed independent clinical social worker licensed under the provisions of chapter one hundred and twelve or by a clinical specialist in psychiatric and mental health nursing certified under the provisions of said chapter one hundred and twelve; and provided, further, that such services are within the lawful scope of practice for such certified clinical specialist" (175, Section 47B).

Yellen, 1976; Schmalensee, 1982).[3] Further, there is some evidence that tying requirements in markets with many sellers increase price, yet have a statistically insignificant effect on quality (Haas-Wilson, 1987).

In the market for mental health services, the vendorship laws may affect the willingness and ability of social workers to open private practices, to expand their private practices, and to work in organized settings, such as general hospitals, psychiatric hospitals, community mental health centers, and children's and family service agencies. If the number of social workers in private practice increases, then competition between social workers, psychologists, and psychiatrists may increase.

There is evidence that social workers, when competing with psychologists and psychiatrists on an equal footing, can attract clients. For example, under CHAMPUS plans 22% of all outpatient mental health visits were billed by social workers in fiscal 1980 (McGuire *et al.*, 1984). Data from Massachusetts Blue Shield suggest that one year after the passage of vendorship legislation in Massachusetts the market shares of psychiatrists, psychologists, and other MDs in the outpatient mental health service market decreased by 5.9, 1.5, and 2.3 percentage points, respectively (Fairbank, 1989).

Data from Massachusetts and Maine suggest that enactment of vendorship laws has been associated with a decrease in the percentage of social workers in private practice. Shatkin, Frisman, and McGuire (1986) found that between 1982 and 1983, or 4 and 18 months following enactment of a state vendorship law in Massachusetts, the percentage of social workers engaged in private practice in either their primary or secondary work setting decreased from 35.4 to 34.0%. Lieberman, McGuire, and Shatkin (1986) found that between 1984 and 1985, or 4 and 16 months after enactment of a state vendorship law in Maine, the percentage of social workers engaged in private practice in either their primary of secondary work setting decreased from 42.2 to 39.3%. However, the percentage of social workers in private practice in their primary setting increased from 52.1% in 1984 to 61.4% in 1985. Haas-Wilson (1990) found that after correcting for the potential self selection bias, increasing the relative return to private practice does not increase the probability that a social worker will choose private practice over salaried employment.

Previous vendorship research has used the state as the unit of analysis. However, given transportation and time costs, the geographic market for outpatient mental health services is clearly smaller than the state. Thus, earlier research has not examined whether the impact of vendorship laws will vary across markets, depending on the level of competition in local markets. Further, earlier research in health economics has shown that the level of competition in local markets affects providers' fee setting behavior (Pauly & Satterthwaite, 1981; Mitchell *et al.*, 1986; Haas-Wilson, 1988).

Accordingly, this article examines the impact of vendorship legislation and the level of competition on social workers' employment choices and fees using the county as the geographic market. Using data from Massachusetts, a

[3]Price discrimination is the sale of two units of the same product at different prices when the price differential does not reflect differences in supply costs. A seller of two products is involved in a strategy of pure bundling when she requires a buyer to purchase both in order to get either. A seller of two products is involved in a strategy of mixed bundling when buyers can buy the products separately or buy the bundle.

"provider-dense" state, and Maine, a "provider-sparse" state, the relationships between social workers' fees, social workers' employment choices, and competition with psychiatrists are examined. Further, this article addresses the question of what is the optimal size private practice for social workers or what practice size minimizes the average cost of providing mental health services.

Specifically, the following issues concerning the impact of competition in the market for mental health services are addressed:

1. Is the average price for social workers' services lower in counties where a higher percentage of social workers are in private practice?
2. Is the average price for social workers' services lower in counties with a higher psychiatrist-to-population ratio?

In addition, the following issues concerning the impact of vendorship legislation in the market for mental health services are addressed:

1. Will vendorship legislation result in a larger increase in the number of social workers in private practice in counties with a lower psychiatrist-to-population ratio?
2. Will vendorship legislation result in a larger increase in social workers' time spent in private practice in counties with a lower psychiatrist-to-population ratio?

Data

The data used for this study were collected by surveying social workers in Massachusetts and Maine. Two surveys of Licensed Independent Clinical Social Workers (LICSWs) were conducted in Massachusetts in August 1982 and October 1983, or 4 and 18 months after vendorship legislation took effect in Massachusetts. The first survey was sent to a 10% random sample (n = 440) of LICSWs and the second survey was sent to a 14% nonduplicated sample (n = 607) of LICSWs. However, because information on zip codes was not obtained in the first Massachusetts survey, this data cannot be aggregated into counties. Thus, the 1982 Massachusetts data are not used in this study.

In Maine, surveys were conducted in May 1984 and May 1985, or 4 and 16 months after vendorship legislation took effect in Maine. The Maine surveys were sent to a 100% sample of Certified Social Workers with Independent Practice Status and Licensed Clinical Social Workers (n = 283 and 350, respectively).

Data on the psychiatrist-to-population ratio by county were obtained from the Area Resource File. The numerator of the ratio measures the total number of psychiatrists in patient care in 1983.

Results

Table 1 shows that in the provider-sparse state of Maine in 1984, there was much variation in average fee by county ($21.60 to $42.50)[4] and there were

[4]Of the 65 social workers reporting private practice as their primary of secondary work setting, 63 social workers (97%) reported their fees.

TABLE 1
The Level of Competition and Social Workers' Employment Choices and Fees by County in Maine, 1984

County	Percentage of Social Workers in Private Practice[a]	Average Fee of Social Workers in Private Practice[b]	Psychiatrist-to-Population Ratio, 1983
Androscoggin	40% (n = 15)	$34.67 ($n$ = 6)	.80
Aroostook	0% (n = 3)	—	.22
Cumberland	42% (n = 52)	$37.32 ($n$ = 22)	.24
Franklin	40% (n = 5)	$30.00 ($n$ = 2)	1.42
Hancock	50% (n = 18)	$29.44 ($n$ = 9)	.71
Kennebec	23% (n = 22)	$21.60 ($n$ = 5)	.99
Knox	60% (n = 5)	$30.00 ($n$ = 3)	.90
Lincoln	0% (n = 2)	—	.38
Oxford	25% (n = 4)	$35.00 ($n$ = 1)	.00
Penobscot	67% (n = 6)	$23.75 ($n$ = 4)	.94
Sagadahoc	33% (n = 6)	$35.00 ($n$ = 2)	.34
Somerset	25% (n = 4)	$40.00 ($n$ = 1)	.00
Waldo	40% (n = 5)	$27.50 ($n$ = 2)	.00
York	33% (n = 18)	$42.50 ($n$ = 6)	.28

[a] n = number of social workers reporting their work setting.
[b] n = number of social workers in private practice reporting their fee for individual psychotherapy.

three counties with at least 50% of social workers in private practice. Table 2 shows that in the provider-dense state of Massachusetts, there was much less variation in average fee by county.[5] Fees ranged from $42.19 to $47.50, with the exception of $55.00 in Worcester. And only Franklin County had more than 50% of social workers in private practice.[6]

[5] Of the 127 social workers reporting private practice as their primary of secondary work setting, 106 social workers (83%) reported their fees. Note, however, that only one social worker in Worcester reported a fee.

[6] Franklin County is a relatively rural county.

TABLE 2
The Level of Competition and Social Workers' Employment Choices and Fees by County in Massachusetts, 1983

County	Percentage of Social Workers in Private Practice[a]	Average Fee of Social Workers in Private Practice[b]	Psychiatrist-to-Population Ratio, 1983
Berkshire	38% (n = 8)	$45.00 ($n$ = 3)	2.18
Bristol	20% (n = 15)	$46.67 ($n$ = 3)	0.46
Essex	33% (n = 42)	$47.21 ($n$ = 14)	1.10
Franklin	67% (n = 3)	$45.00 ($n$ = 2)	1.24
Hampden	43% (n = 14)	$45.83 ($n$ = 6)	0.70
Hampshire	29% (n = 7)	$47.50 ($n$ = 2)	2.80
Middlesex	35% (n = 148)	$44.40 ($n$ = 52)	4.52
Norfolk	18% (n = 17)	$44.33 ($n$ = 3)	3.78
Plymouth	29% (n = 14)	$47.50 ($n$ = 4)	0.51
Suffolk	28% (n = 58)	$42.19 ($n$ = 16)	3.47
Worcester	8% (n = 12)	$55.00 ($n$ = 1)	1.06

[a] n = number of social workers reporting their work setting.
[b] n = number of social workers in private practice reporting their fee for individual psychotherapy.

Given these differences between the states, it is not surprising that the Maine and Massachusetts data yield different pictures with respect to the relationship between price and percentage of social workers in private practice. The Maine data suggest a negative relationship between social workers' prices and percentage of social workers in private practice, while the Massachusetts data suggest no relationship. In Maine, social workers' fees tend to be lower in counties with the highest percentage of social workers in private practice (i.e., Penobscot, Knox, and Hancock) and social workers' fees tend to be higher in counties with the lowest percentage of social workers in private practice (i.e., Oxford, Somerset, York, and Sagadahoc).

With respect to the relationship between social workers' fees and the psychiatrist-to-population ratio, the data from Maine and Massachusetts yield similar results. In both Maine and Massachusetts, social workers' fees tend to be lower in counties with higher psychiatrist-to-population ratios (i.e., Franklin, Kennebec, and Penobscot in Maine; Middlesex, Norfolk, and Suffolk in

TABLE 3
The Effect of Vendorship on Social Workers' Employment Choices by County in Maine

County	Percentage of Social Workers in Private Practice, 1984[a]	Percentage of Social Workers in Private Practice, 1985[a]	Percentage of Social Workers' Time in Private Practice, 1984	Percentage of Social Workers' Time in Private Practice, 1985
Androscoggin	40% (n = 15)	35% (n = 23)	14%	28%
Aroostook	0% (n = 3)	0% (n = 2)	0%	0%
Cumberland	42% (n = 52)	46% (n = 63)	35%	31%
Franklin	40% (n = 5)	20% (n = 5)	9%	9%
Hancock	50% (n = 18)	32% (n = 19)	44%	34%
Kennebec	23% (n = 22)	18% (n = 28)	64%	23%
Knox	60% (n = 5)	30% (n = 10)	61%	6%
Lincoln	0% (n = 2)	50% (n = 4)	0%	21%
Oxford	25% (n = 4)	0% (n = 5)	8%	0%
Penobscot	67% (n = 6)	67% (n = 3)	62%	71%
Sagadahoc	33% (n = 6)	17% (n = 6)	7%	6%
Somerset	25% (n = 4)	40% (n = 5)	15%	49%
Waldo	60% (n = 5)	*	5%	*
Washington	*	50% (n = 2)	*	20%
York	33% (n = 18)	35% (n = 23)	9%	12%

[a]n = number of social workers reporting their work setting.
*Data unavailable.

Massachusetts). Social workers' fees tend to be higher in counties with lower psychiatrist-to-population ratios (i.e., Oxford, Somerset, Cumberland, and York in Maine; Bristol and Plymouth in Massachusetts). This suggests that competition from psychiatrists, measured as the psychiatrist-to-population ratio, has a negative impact on the prices charged by social workers in private practice.

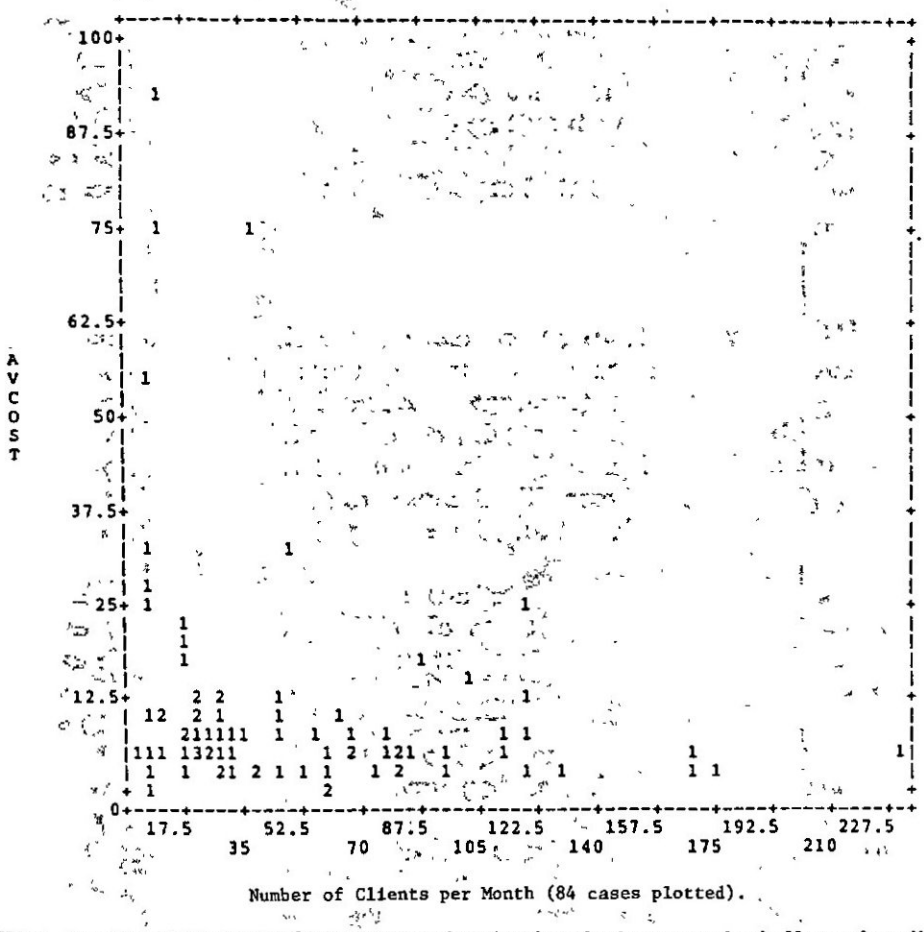

FIGURE 1. Average costs of social workers' services by size of private practice in Massachusetts, 1983.

With respect to the impact of vendorship legislation in the market for mental health services, the data in Table 3 suggest that between May 1984 and May 1985, or approximately one year after vendorship legislation became effective in Maine, the percentage of the total number of social workers in private practice declined in seven counties, increased in four counties, and remained the same in two counties. And the percentage of social workers' time spent in private practice declined in six counties, increased in five counties, and remained the same in two counties. The counties with the largest decreases in the percentage of total social workers in private practice (i.e., Franklin and Knox) and the counties with the largest decreases in the percentage of social workers' time in private practice (i.e., Kennebec and Knox) also have relatively high ratios of psychiatrists to population. Further, the countries with the largest increases in the percentage of social workers in private practice and the percentage of social workers' time in private practice tend to have relatively low psychiatrist-to-population ratios. This suggests that the impact of vendorship legislation varies by local market, depending on the extent of competi-

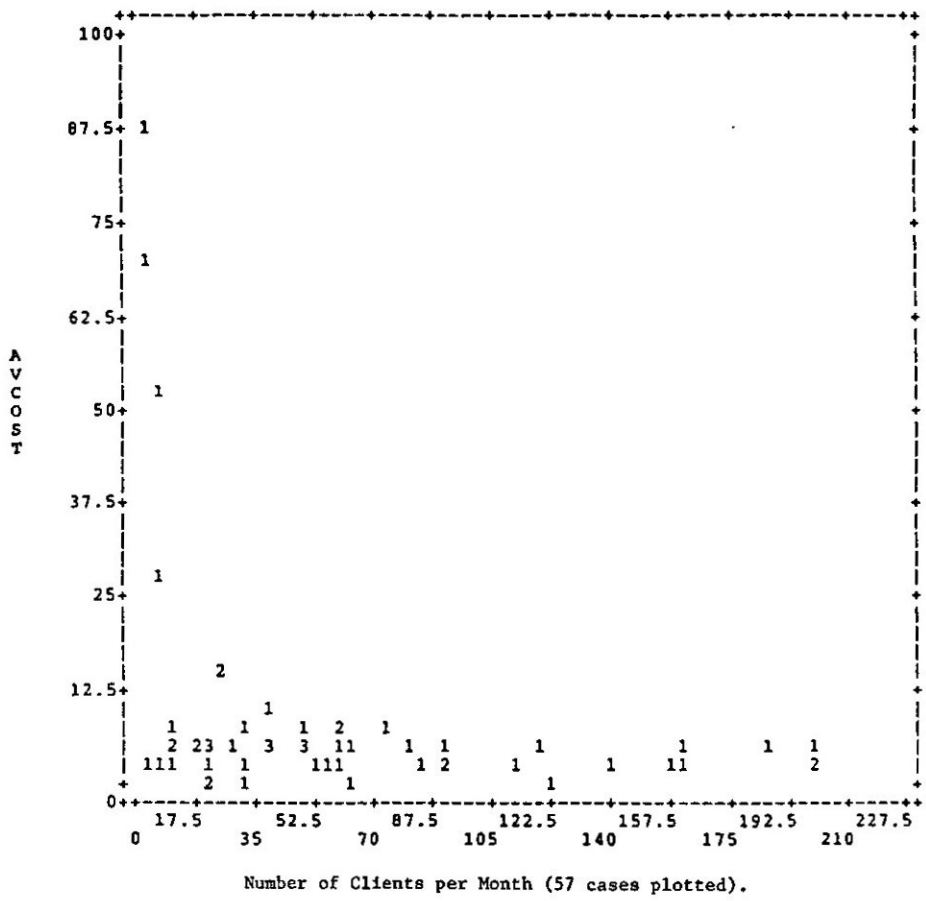

FIGURE 2. Average costs of social workers' services by size of private practice in Maine, 1984.

tion from other mental health providers. Where competition from psychiatrists is more intense, social workers appear to be less likely to work as private practitioners.

The Massachusetts and Maine surveys also asked social workers to estimate their monthly private practice expenses. Social workers in private practice provided estimates of their costs for billing and secretarial service, malpractice insurance, office rental and utilities, supervision and consultation, and telephone and answering services. These costs were aggregated into an estimate of total monthly costs for each social worker. Then, each social worker's monthly total costs were divided by his/her monthly client load to get an estimate of the average cost per client.

Figures 1 and 2 show the relationship between the average cost of providing mental health services per client and practice size, measured as the number of clients served per month.[7] The data from Maine and Massachusetts suggest

[7]Social workers that provide group therapy may see many clients. The number of clients seen is not equal to the number of visits per month.

that average costs decline sharply as practice size increases up to approximately 18 clients per month. Then social workers' average costs of providing mental health services appear to remain relatively constant as practice size increases beyond 18 clients per month. This suggests that the optimal size private practice for social workers or the practice size that minimizes the average cost of providing mental health services ranges from 20 to 200 clients per month.

Summary

The results of this article suggest that, in the short run, vendorship legislation will not result in a large shift of social workers from organized settings into private practice. However, vendorship legislation appears to increase the number of social workers in private practice in areas that have not attracted as many psychiatrists. Thus, vendorship may have a favorable impact on the geographic distribution of mental health providers. Vendorship legislation may result in increases in private practice social workers in underserved areas.

The results also suggest that social workers and psychiatrists compete in the market for mental health services. In counties with higher psychiatrist-to-population ratios, fees for social workers' services are lower. Further, in counties with higher psychiatrist-to-population ratios, the number of social workers in private practice decreased after vendorship.

Finally, there is a large range of optimal practice size for social workers. Social workers with 20 or more clients per month can provide mental health services at the lowest average cost per client. Thus social workers operating either full-time or part-time practices with more than 20 clients per month can provide mental health services efficiently.

References

Adams, W., & Yellen, J. (1976). Commodity bundling and the burden of monopoly. *Quarterly Journal of Economics, 90*, 475–498.

Bowman, W. (1957). Tying arrangements and the leverage problem. *Yale Law Journal, 67*, (1987). 19–36.

Fairbank, A. (1989). Expanding insurance coverage to alternative types of psychotherapists: Demand and substitution effects of direct reimbursement to social workers. *Inquiry, Summer*, 170–181.

Haas-Wilson, D. (1987). Tying requirements in markets with many sellers: The contact lens industry. *The Review of Economics and Statistics, February*, 170–175.

Haas-Wilson, D. (1989). Employment choices and earnings of social workers: Comparing private practice and salaried employment. *Inquiry, Summer*, 182–190.

Haas-Wilson, D. (1990). Consumer information and providers' reputations: An empirical test in the market for psychotherapy. *Journal of Health Economics*, 321–323.

Lieberman, A., McGuire, T. & Shatkin, B. (1986). The impact of social work vendorship in Maine. Unpublished manuscript.

McGuire, T. Gurin, A., Koistinen Frisman, L., Kane, V. L., Shatkin, F. (1984). Vendorship and social work in Massachusetts. *Social Service Review, September*, 373–383.

Mitchell, J., Cromwell, J., Schurman, R., & Hewes, H. (1986). *Psychiatric office practice study*. Health Economics Research, Inc., Needham, MA.

National Association of Social Workers. (1987). *Professional social work recognition: Vendorship report*.

Pauly, M., & Satterthwaite, M. (1981). The pricing of primary care physicians' services: A test of the role of consumer information. *Bell Journal of Economics, 12*, 488–506.

Posner, R. (1976). *Antitrust law—an economic perspective.* Chicago: University of Chicago Press.

Schmalensee, R. (1982). Commodity bundling by single-product monopolies. *Journal of Law and Economics, 25,* 67–71.

Shatkin, B. F., Frisman, L. K., & McGuire, T. G. (1986). The effect of vendorship on the distribution of clinical social work services. *Social Service Review, September,* 437–448.

Stigler, G. (1968). A note on block booking. In *The organization of industry.* Homewood, IL: R.D. Irwin.