



Factors influencing physician participation in Medicaid in the USA

Physician participation in Medicaid

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Abstract Physician participation in Medicaid is an important factor in the determination of access to health care for low-income individuals. This study seeks to provide insight into the factors that affect physicians' decisions to participate in the Medicaid program. As Medicaid is administered under broad federal guidelines, there is some degree of commonality between the different programs in each state and many physician and market unique factors traverse state lines. On this basis, several propositions are presented. Physician participation in Medicaid is posited to be positively associated with Medicaid reimbursement rates, the percentage of the available patient base in the Medicaid program, physician perceived autonomy and whether the physician is a foreign medical graduate. Alternately, participation decisions are proposed to be negatively associated with practice costs, competition for paying patients, the difference between the marginal revenue derived from paying patients and revenue from Medicaid patients, and board certification. This study seeks to provide a deeper understanding of the effects of changes to the Medicaid program, and suggests their likelihood of success in providing care to vulnerable populations.

Introduction and importance

Since colonial times, two general tracks of medical care have existed: one for paying patients and one for the indigent. Throughout history, care for the poor has been subsidized by the charity of physicians in one form or another. Prior to 1929, patients paid physicians completely out-of-pocket. As a result, to compensate for losses physicians often engaged in cost shifting by charging lower fees or providing free care for the poor and collecting larger fees from the patients who could pay. As the cost of medical care was relatively low by today's standards, this practice of shifting costs was generally unquestioned (Watson, 1995; Williams and Torrens, 1993).

After the Second World War, technological advances and more stringent educational requirements marked the beginning of an increasing cost trend that continues today. Better equipment, techniques and procedures provided a number of medical advances and breakthroughs but these successes came with hefty price tags. As a result, private employment-based and voluntary health insurance such as Blue Cross and Blue Shield became commonplace. These third-party payers financed the increasing cost of health care that was caused by several factors: physician investments in education, and costly diagnostic procedures, medications, equipment and tools (Watson, 1995).

The advances in medicine increased the "gap" between the two tracks of the health care community. Paying patients received primary care from



office-based physicians and inpatient care in the better hospitals. The indigent received primary care from overburdened emergency rooms or public clinics and inpatient care in the less desirable hospitals that were often staffed by interns (Watson, 1995; Williams and Torrens, 1993).

Partially as an attempt to reduce the “gap”, the federal government enacted the Medicaid and Medicare statutes covering the indigent and the elderly, respectively. Medicaid was developed as, and continues to be, a state administered program operated under broad federal guidelines. The intent of Medicaid and Medicare was to reduce disparity in a two-pronged focus:

- (1) by offering poor patients the opportunity, if they so chose, to utilize the same institutions and services frequented by paying patients; and
- (2) by providing funding which could offer opportunities to improve the facilities previously frequented by only the poor.

Unfortunately, and despite the obvious benefits to the general public, organized physicians adamantly opposed both programs as government subsidized care. The essence of most complaints involved concerns of governmental control, enticement and intervention in medicine. Additionally, some physicians were concerned that Medicare and Medicaid would reduce the level of physician salary that the “market” would bear, that is, reduce their incomes. Many physicians, because of the numerous training programs and physicians providing charity care, expressed the sentiment that the dual-track medical system was separate but adequate (Watson, 1995).

To prevent anarchy and to solicit the support of physicians, Congress derived a reimbursement system that matched private insurance rates and paid physicians “their usual and customary fees.” This move had two very extreme results: many physicians began to support Medicare and Medicaid, but many physicians also abused and defrauded the government for large sums of money. As a result of the second effect, several statutory amendments between 1967 and 1972, and new regulations by the Department of Health, Education and Welfare (HEW), introduced a number of changes that included reduced reimbursement rates. This effectively reduced the growth of Medicaid and the abhorrent abuses of the system. However, as to be expected, physicians began to refuse Medicaid patients.

From the 1980s until today, Medicaid reimbursement rates have trailed private insurance and even Medicare rates in some areas. As a result, physician participation in Medicaid has been declining since the mid-1970s (Silverstein, 1997). The Omnibus Budget Reconciliation Act of 1981 (OBRA), the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA), and more recently, the Balanced Budget Act of 1997 (BBA) introduced major changes that affected Medicaid reimbursement rates, eligibility and covered services, and provisions relating to managed care coverage (Federal Registry, 1998; Watson, 1995; Williams and Torrens, 1993).

Historically, physicians cite several reasons for their lack of participation in the Medicaid program. A majority of these reasons fall under the auspices of

economic incentive and desire for autonomy. This study seeks to provide insight into the association between the aforementioned and other variables, and physician participation in Medicaid. The underlying research question of this study is the following: what factors affect physician participation in Medicaid?

Data collection and methodology

The primary data for this study were derived from articles published in academic, non-trade journals between 1983 and the present. This limitation was imposed due to the introduction of the Omnibus Budget Reconciliation Act of 1981 (OBRA) and the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA). These two pieces of legislation introduced changes that vastly altered the reimbursement rates, eligibility and covered services of the Medicaid program (Watson, 1995; Williams and Torrens, 1993). Therefore, research conducted after the enactment of this legislation is more reflective of the present status of the program.

While applicable, the statistical findings of the published studies are compared and contrasted to determine prevalent themes and provide empirical support for theoretical postulations. Although Medicaid is a state administered program and differences do exist between states, the program is operated under federal guidelines. It is under these guidelines that this study finds its applicability and posits that significant similarities exist between the states. As a result, multi-state, multi-specialty and large sample studies are given more credence than single state, single specialty and small sample studies.

Theoretical foundation and propositions

The economic two-market theory

The economic two-market theory is pertinent when considering physician participation because historically, physicians have received different fees for providing the same service to different patients. Physicians are posited to have two markets, defined by the source of payment, in which to sell their products: The private market consisted of paying and upper level more generous insurance subsidized patients, and the public market consisted of lower level less generous insurance subsidized patients and government subsidized indigent patients (Adams, 1994; Fossett and Peterson, 1989; Gifford, 1997; Hadley, 1979; Perloff *et al.*, 1986, 1987; Sloan *et al.*, 1978).

According to the theory, physicians are the price setters in the private market. However, in the public market, physicians are the price takers agreeing to the amount received as payment in full. The amount of compensation they collect in this second market is generally well below the fees they charge. As a result, physicians will exert a conscious effort to exploit the private market as much as possible before considering the public market.

From an economic standpoint, physicians are expected to participate in the public market only when marginal revenue from private patients nears the public fee level. In other words, if paying patients cannot compensate

physicians far enough above the costs associated with providing their care and as incremental reimbursements from private patients near amounts received from treating Medicaid patients, physicians are expected to increase their Medicaid participation.

Private market patient economic factors have different effects on the public and private markets. If patients in the private market experience significant declines in income or insurance, physicians should increase the Medicaid portions of their practices, and vice versa (Adams, 1994; Fossett and Peterson, 1989; Hadley, 1979; Perloff *et al.*, 1986, 1987; Sloan *et al.*, 1978). This is posited to occur as the net return from paying patients approaches Medicaid reimbursements.

Factors associated with private market patients, such as increases in income and education and decreases in health status, should increase demand in private markets. These increases in demand are expected to cause decreases in the supply of physicians participating in Medicaid. Conversely, factors such as increases in Medicaid reimbursement rates and marked improvements in private market patients' health status theoretically make Medicaid patients more financially attractive and thereby should increase participation.

Reimbursement rates. Physicians have historically cited low reimbursement rates as a reason for their lack of participation in the Medicaid program. Published studies provide support for this position (Adams, 1994; Bushmann and Passmore, 1988; Davidson *et al.*, 1983; Fox and Phua, 1994; Margolis *et al.*, 1992; Perloff *et al.*, 1995; Mitchell, 1983; Smith *et al.*, 1991; Weaver *et al.*, 1986).

Mitchell (1983), in the first of two national studies, surveyed medical and surgical specialists ($n = 410$) and discovered that reimbursement rates, and several other factors, significantly impacted physician participation in the Medicaid program. Specifically, a 10 percent increase in Medicaid fees yielded a 3 percent increase in participation.

In a study of 791 pediatricians in 13 states with differing Medicaid program characteristics, low reimbursement was found to be a statistically significant deterrent to full participation (Davidson *et al.*, 1983). Empirically supportive results were also found in a Mississippi study ($n = 541$) which surveyed pediatricians, obstetricians, general practice and family practice physicians (Weaver *et al.*, 1986), a Missouri study ($n = 802$) which surveyed office-based MDs and DOs (Bushman and Passmore, 1986) and an additional Mississippi study ($n = 1,371$) which surveyed licensed physicians in the state via claims data (Smith *et al.*, 1991). Anderson (1986) found similar results in a study of medical groups ($n = 441$).

As a result of these findings, the following proposition is presented:

- P1.* There is a positive association between Medicaid reimbursement rates and physician participation in the Medicaid program.

The findings of the aforementioned studies also suggest that other factors may moderate the effect of changes in reimbursement rates on physician participation in Medicaid. Perloff *et al.* (1995) in a national study of office-based

physicians ($n = 1,885$) discovered that an increase in reimbursement has a greater effect on converting partial participants to full participants but has little effect on encouraging non-participants to participate in the program. Additionally, the authors suggest that the fee increase required to bring about a major change in participation, which is in line with private third party entities, is politically and economically unfeasible.

In a study of North Carolina nonacademic primary care pediatricians ($n = 332$), Margolis *et al.* (1992) discovered that the effects of reimbursement were weakened, but were still significant, when controlling for community size, physician attitudes and the availability of alternate care for Medicaid patients (14). Fox and Phua (1994), in a study of Maryland physicians ($n = 386$) and Adams (1994) in a study of Tennessee physicians, both using claims data, found a fee increase to have significant but only moderate effects on participation. Finally, two extensive studies considered the effects of the ratio of Medicaid reimbursement rates and usual fees (Perloff *et al.*, 1986; Bushmann and Passmore, 1988) and an additional study considered the ratio of these rates and Blue Shield fees (Mitchell, 1983). These studies provide findings that support a positive relationship between these ratios and physicians' decisions to participate, and further support for the effects of the degree of difference between public and private market patients.

An explanation for the aforementioned instances of less significant effects of Medicaid reimbursement rate changes is found in the two-market theory. As posited, when the "value" of the reimbursement from Medicaid patients relative to private market patients is depreciated, physicians often decrease their participation. In a study of obstetricians and gynecologists (OB/GYN) in Chicago ($n = 221$), Gifford (1997) discovered the moderating effects of per capita income and physician competition. Competition was measured by the supply of physicians given increased physician capacity in more affluent areas. These findings are further supported by a Kansas study involving primary care physicians (Ubokudom, 1997) and a study of primary care physicians in Maine and Michigan (Coburn *et al.*, 1999). These two factors acted to produce a moderating and negative effect on physician participation in Medicaid.

As a result of these findings:

- P2. There will be a stronger association between Medicaid reimbursement rates and physician participation as the difference between Medicaid revenue and the marginal revenue from private third party payers increases.
- P3. There will be a stronger association between Medicaid reimbursement rates and physician participation as the proportion of physicians to patients increases, and physician competition increases.

Practice costs. Few studies specifically assessed the significance of the costs of practicing medicine in determining physician decisions to participate in the

Medicaid program. However, reimbursement rates and practice costs can generally be viewed as different sides of the same coin because they can both exacerbate participation “value” problems.

In considering non-physician personnel costs (Mitchell, 1983; Davidson *et al.*, 1983) and professional liability costs (Bushman and Passmore, 1988), increases in these costs seemed to deter primary care physician decisions to participate. In a study of specialists, Mitchell (1983) and Perloff *et al.* (1986) failed to detect a significant relationship when considering this group of physicians. One explanation for this second finding is that specialists tended to spend most of their time in hospitals, so overhead was less of an issue. Finally, Gifford’s (1997) study of OB/GYNs provides significant support that suggests that practices with reduced appointment times and those who order more tests, have higher rates of participation in Medicaid. This is posited to occur due to the indirect effects of these factors to reduce marginal practice costs and increase the value of Medicaid reimbursements. Preliminary evidence from Medicaid managed care programs also seem to support this notion.

As a result of these findings, the following propositions are presented:

- P4. Among primary care physicians, there is a negative association between practice costs and physician participation in the Medicaid program.
- P5. Among specialists, there is not a significant association between practice costs and physician participation in the Medicaid program.

Target income hypothesis

The target income hypothesis (TIH) posits that physicians have expected levels of income and that if they are unable to achieve their expected income level, they will adjust their behavior to adjust their income. This is achieved through increasing fees, increasing the number of procedures performed or by reducing the number of Medicaid patients if the private market offers a much higher rate and has excess capacity for physicians. Empirical tests of the TIH have offered numerous arguments for the basic premise of the hypothesis (Rizzo and Blumental, 1994/1995).

There is inconclusive evidence regarding physician salary level and participation. However, reimbursement rates as an indirect determinant of physician salary, provide insight into the effects of physician salary levels. Mitchell (1983), Davidson *et al.* (1983), Perloff *et al.* (1986), Bushmann and Passmore (1988) and Adams (1994) provide findings which suggest a positive relationship between the percentage of the available patient base in the Medicaid program and physicians’ decisions to further participate in the program. This can be explained by the physicians’ perception of the potential salary that can be commanded. In a market saturated by Medicaid patients, a physician surely cannot command the same salary as a physician in a market with few or no Medicaid patients.

Therefore:

- P6. There is a positive association between the percentage of the available patient population in the Medicaid program and physician participation.

Sociological theories

Professional autonomy and social identity. Sociologic theories of professional autonomy present an additional consideration in understanding physician participation in Medicaid. These theories suggest that the degree of sovereignty that is afforded a physician influences the physician's decision to participate. The importance of autonomy appears to increase with several physician factors which include increased age and experience as well as board certification and graduation from a national medical program (Mitchell, 1983; Davidson *et al.*, 1983; Fossett and Peterson, 1989).

Social identity theories suggest that because physicians, as professionals with advanced degrees and social stature, may have some difficulty identifying with indigent patients, they are therefore likely to evaluate them more critically. This potential to be more critical can translate into a lack of participation. Further, some physicians may prefer not to serve the poor due to the prejudicial feelings that some of their private market patients may indulge.

As a result of sociological factors, the degree of autonomy provided to a physician is expected to have a positive correlation with Medicaid participation. These effects appear least severe in cases where physicians cannot, for whatever reason, command premium prices for their services in the private market. This group includes foreign medical graduates (FMGs), less experienced and younger physicians and non-board certified physicians. The more differentiated the social status of the physician, as defined by country of training, experience and credentials, the less likely physicians are to participate in the Medicaid program. Additionally, these demarcations can in some instances reduce or even negate the effects of increases in reimbursement (Perloff *et al.*, 1997).

Policies or guidelines that require physicians to acquire prior approval for even routine or widely accepted procedures are expected to be perceived as infringements upon their autonomy. As many third party payers require some degree of prior approval, only incidents in which Medicaid was the only payer requiring prior approval are considered to have an effect on participation.

Weaver *et al.* (1986), Bushmann and Passmore (1988), Smith *et al.* (1991) and Margolis *et al.* (1992) all discovered a negative relationship between physician perceived autonomy and participation. Mitchell (1983) and Davidson *et al.* (1983) provide support for a positive relationship between autonomy and whether the physician was a FMG and a negative relationship between age and board certification when considering physician decisions to participate in the Medicaid program. Perloff *et al.* (1986, 1995) supports the importance of board certification for primary care physicians and whether the physician was a FMG.

There is little evidence to refute the significance of these sociological effects on participation but Gifford (1997) provides evidence to suggest that these effects are also moderated by per capita income and physician competition. It is important to note that all of these studies used physician self-reported frustrations with autonomy. These results must therefore be interpreted with care. Consequently:

- P7.* There is a positive association between the degree of physician perceived autonomy and physician participation in the Medicaid program.
- P8.* Among primary care physicians, there is a negative association between board certification and physician participation in the Medicaid program.
- P9.* There is a positive association between the proportion of physicians being FMGs and physician participation in the Medicaid program.

Discussion

This study provides a review of empirical studies and theoretical postulations that seek to better understand physicians' decisions to participate in the Medicaid program. Common themes include the value of Medicaid reimbursements relative to revenue from private market or paying patients, and sociologic factors that are rooted in social class differences.

The broad review of empirical studies cited in this study suggests that reimbursement rates must be considered relative to physicians' alternative paying patient sources. That is to say that careful consideration and an understanding of the prevailing market rate(s) are imperative to manage and maintain acceptable levels of physician participation. Further, the moderating effects of social class issues that can be indirectly measured via per capita income levels or other metrics cannot be ignored in efforts to optimize the use of very limited governmental funds.

The underlying contribution of this study was to present the complex issues associated with physicians' decisions to participate in Medicaid. With the millions of Medicaid-eligible beneficiaries in the USA, even a small reduction in physician participation can translate into significant access problems for underserved and vulnerable populations. Knowing the factors associated with physicians' decisions provides opportunities for policy makers at the state and federal level to address more adequately problems of access for Medicaid patients.

Limitations and opportunities for further research

Many of the published studies addressing physician participation decisions utilize combinations of primary and secondary data sources. These data sources introduce potential problems of inaccuracy because they are being used for other than their original purpose. Of course no data set is perfect, but this issue should be carefully considered if useful and generalizable results are desired.

Several studies use physician self-reported participation rates. Given the propensity for physicians to overestimate their participation (McManus *et al.*, 1991), more research should be conducted, using different data, to ultimately provide firm support or rejection.

Additional opportunities for new research can involve the use of periodic studies specifically aimed at young physicians to gauge potential future trends. To the degree that their future aspirations and desires reflect their actual behavior in the future, this could provide much needed policy guidance for the states and the federal government.

To assess the adequacy of the Medicaid program in its ability to provide comparable care to the poor, future studies could incorporate more patient assessments. Specifically, collecting patient behaviors and attitudes regarding Medicaid, and their assessments of patient satisfaction could be useful. As opposed to using just physician reported participation rates, a data set composed of physician, patient and state reported claims and utilization data, could be developed to accurately depict participation rates among physicians. This could provide better quality data for analysis.

Finally, factors such as physician and private market patient social prejudices (treatment success beliefs, interaction propensities) against indigent patients should be explored. The fear that an increased number of indigent patients will flood the waiting area and drive paying patients away could cause physicians to limit severely their participation in the Medicaid program.

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