

**EMPLOYER PURCHASING  
COALITIONS AND MEDICAID:  
EXPERIENCES WITH RISK  
ADJUSTMENT**

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## **EMPLOYER PURCHASING COALITIONS AND MEDICAID: EXPERIENCES WITH RISK ADJUSTMENT**

### **EXECUTIVE SUMMARY**

Few problems in American health policy are more important—or more difficult to solve—than the problem of risk selection. Wherever buyers of health insurance are able to choose between two or more insurance options, some insurers may by chance enroll a group of members who are sicker or healthier than average. In addition, health plans have a clear financial incentive to induce healthier enrollees to select them and discourage sicker ones. Thus, the societal benefits of competition among health plans will never be fully achieved until incentives to select healthy enrollees are replaced by incentives to provide high-quality, cost-effective care.

Private employers, insurance purchasing coalitions, and Medicaid and Medicare managed care programs that offer a choice of health plans are all faced with the risk selection problem. In response, many analysts have called for the use of “risk adjusters” that would bring payments to health plans into line with the expected cost of caring for enrollees. This paper reviews a range of risk adjustment strategies currently in use in programs other than Medicare, including state Medicaid agencies, state employee health plans, state insurance pools and purchasing cooperatives, and business coalitions.

The experiences of these organizations offer several lessons. Their efforts confirm that implementing risk adjustment is very difficult, and that few entities are ahead of the Medicare program in using diagnosis-based risk adjustment. They prove that diagnostic risk adjustment systems can be implemented successfully, and that health plans seem willing and able to provide the data needed for diagnostic risk adjustment. They also show that less sophisticated systems, such as high-cost condition pools, are easier to implement than comprehensive risk adjustment systems but potentially less valuable. Another method, the “ceding” of high-cost cases back to fee-for-service coverage, has not been tried but should prove relatively easy to implement. Finally, it seems clear that the movement of sicker and disabled populations into Medicaid managed care programs increases the need for risk adjustment and that implementing risk adjustment methods for disabled Medicaid managed care enrollees is particularly urgent.

## **EMPLOYER PURCHASING COALITIONS AND MEDICAID: EXPERIENCES WITH RISK ADJUSTMENT**

### **INTRODUCTION**

Few problems in American health policy are more important—or more difficult to solve—than the problem of risk selection. Wherever buyers of health insurance are able to choose between two or more insurance options, some insurers may by chance enroll a group of members who are sicker or healthier than average. In addition, health plans have a clear financial incentive to induce healthier enrollees to select them and discourage sicker ones. Thus, the societal benefits of competition among health plans will never be fully achieved until incentives to select healthy enrollees are replaced by incentives to provide high-quality, cost-effective care.

Private employers, insurance purchasing coalitions, and Medicaid and Medicare managed care programs that offer a choice of health plans are all faced with the risk selection problem. In response, many analysts have called for the use of “risk adjusters” that would bring payments to health plans into line with the expected cost of caring for enrollees.<sup>1</sup> This paper reviews the strategies to reduce risk selection being used in health insurance programs other than Medicare, following up on a previous paper (also produced with support from The Commonwealth Fund) that reviewed risk selection in the Medicare program and made a number of recommendations that were adopted in the Balanced Budget Act of 1997.<sup>2</sup>

This review is not a comprehensive account of all the risk adjustment schemes currently in use. Even so, this sample shows decisively that, despite the theoretical benefits of risk adjustment, very few state Medicaid agencies or private employers have attempted to adjust payments to health plans to take account of risk. Rather, the conditions that foster risk selection seem to be increasing. In 1995, 62 percent of all workers offered insurance by their employers were given a choice among two or more health plans; the comparable percentage in 1991 was 46 percent.<sup>3</sup> In firms with more than 200 employees, 84 percent of workers had such a choice in 1995, a growth of nine percentage points since 1993. This growth reveals a large and growing potential for risk selection among health plans.

### **THE PROBLEM OF RISK SELECTION**

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<sup>1</sup> See, for example, Marilyn Moon and Karen Davis, “Preserving and Strengthening Medicare,” *Health Affairs* 14(4):31–46, Winter 1995.

<sup>2</sup> Joseph P. Newhouse, Melinda Beeuwkes Buntin, and John Chapman, “Risk Adjustment and Medicare,” *Health Affairs* 16(5):26–43, September/October 1997. See also Joseph P. Newhouse, “Risk Adjustment: Where Are We Now?” *Inquiry*, Summer 1998 (forthcoming).

<sup>3</sup> Gail Jensen et al., “The New Dominance of Managed Care: Insurance Trends in the 1990s,” *Health Affairs* 16(1):125–36, January/February 1997.

Purchasers of health insurance, both public and private, have found that attempts to contain costs by enrolling beneficiaries in managed care plans can be stymied by risk selection. Risk selection is especially likely to occur when beneficiaries are given a choice of remaining in a fee-for-service health insurance plan or enrolling in a managed care plan, since those who choose managed care tend to be healthier than average. If the managed care plan premium reflects the average rate for the entire group (or worse, if it reflects the average rate for those remaining in the indemnity plan), costs will rise. HMOs may attract so healthy a group of enrollees that even relatively low managed care premiums produce higher overall costs to the payor.

Medicaid managed care plans that feature voluntary enrollment are especially vulnerable to this problem. To apply for a federal waiver to enroll Medicaid beneficiaries in managed care, a state must demonstrate that its capitation rate is below the average fee-for-service cost. As a result, state Medicaid agencies have historically set payments to health plans at 95 percent of the average cost of caring for a fee-for-service enrollee.<sup>4</sup> Over time, favorable selection pushes up the average costs for beneficiaries remaining in the fee-for-service arrangement, thus raising HMO payments. In Medicare, where this cycle has also occurred, the Balanced Budget Act of 1997 broke the link between changes in the average cost of fee-for-service enrollees and changes in the capitated amount paid to health plans.

Like Medicare payments, Medicaid capitation payments are usually adjusted according to an enrollee's age, gender, and eligibility category, and place of residence is often weighed, as well. However, it appears that no comprehensive assessment of the predictive power of these adjusters within the Medicaid context has been conducted. Studies in the Medicare and private employer-sponsored contexts have not found these variables to be strongly predictive, and there is no reason to believe that the situation would differ markedly in Medicaid. Indeed, an investigation of the predictive power of these factors in the disabled Medicaid population found that age and sex predicted only 0.2 to 0.8 percent of the variation in disabled beneficiaries' annual costs, a percentage roughly similar to that predicted in Medicare by the adjusted average per capita cost (AAPCC).<sup>5</sup>

As has also happened under Medicare, states may increase their overall Medicaid costs when they implement managed care programs. A RAND study of a Medicaid

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<sup>4</sup> Personal communication with Deborah Freund, Ph.D., Vice-Provost, Indiana University, 1997.

<sup>5</sup> Richard Kronick, Zhiyuan Zhou, and Tony Dreyfus, "Making Risk Adjustment Work for Everyone," *Inquiry* 32(1):41–55, Spring 1995. On age and gender as predictors in the private employer context, see Joseph P. Newhouse, Willard G. Manning, Emmett B. Keeler, and Elizabeth Sloss, "Adjusting Capitation Rates Using Objective Health Measures and Prior Utilization," *Health Care Financing Review* 10(3):41–54, Spring 1989.

managed care demonstration found that a voluntary Medicaid HMO that appeared to reduce utilization had actually produced higher expenditures, after controlling for selection.<sup>6</sup> Freund and colleagues, in an evaluation of six early Medicaid managed care demonstrations, found that “the rates established in several of the demonstration sites in the years examined were not accurate enough to yield the expected 5-to-10 percent savings.” In fact, they found that costs in two sites were higher than they would have been in the absence of the demonstration.<sup>7</sup>

Selection can potentially increase overall costs for private employers, as well. The Federal Employees Health Benefit Program, for example, has experienced problems with risk selection in its “high-option” indemnity insurance plan. Because government payments are tied partly to this plan but not to all plans, overall government costs may well have increased.<sup>8</sup>

Most observers recognize that adjusting health plan premiums for risk can affect the terms of competition between health plans: plans may compete to deliver care efficiently to a given risk or they may compete by selecting individuals with lower-than-average service needs. Without competition over the efficient delivery of care, however, real savings for purchasers, including Medicaid and Medicare, are difficult to achieve. Because risk adjustment techniques attempt to bring health plan payments into line with the expected costs of caring for the individuals enrolled, competition to select good risks becomes less profitable.

The most intensive and promising research on risk adjusters has concentrated on diagnoses and prior use of health care services. The Health Care Financing Administration is funding two competing diagnosis-based risk adjustment models for the Medicare population: the Ambulatory Care Group (ACG) system being developed by Jonathan Weiner and colleagues at Johns Hopkins University, and the Diagnostic Cost Group (DCG) system being developed by Arlene Ash and colleagues at Boston University.<sup>9</sup> Another leading risk adjustment system for disabled Medicaid beneficiaries,

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<sup>6</sup> Arleen Leibowitz, Joan Buchanan, and Joyce Mann, “A Randomized Trial to Evaluate the Effectiveness of a Medicaid HMO,” *Journal of Health Economics* 11:235–57, 1992.

<sup>7</sup> Deborah Freund et al., “Evaluation of Medicaid Capitation Demonstrations,” *Health Care Financing Review* 10(3):81–97, Spring 1989.

<sup>8</sup> James R. Price, James W. Mays, and Gordon R. Trapnell, “Stability in the Federal Employees Health Benefits Program,” *Journal of Health Economics* 2(3):207–24, December 1983.

<sup>9</sup> Randall P. Ellis, Gregory Pope, Lisa Iezzoni, John Ayanian, David Bates, Helen Burstin, and Arlene Ash, “Diagnosis-based Risk Adjustment for Medicare Capitation Payments,” *Health Care Financing Review* 17(3):101–28, Spring 1996; Jonathan Weiner et al., “Risk-Adjusted Capitation

the disability payment system, or DPS, is being developed by Richard Kronick and colleagues at the University of California, San Diego.<sup>10</sup> As summarized in our earlier study, these methods still leave substantial room for risk selection, but they improve sufficiently on traditional methods to be worthy of implementation on a large scale.<sup>11</sup>

## **RISK ADJUSTMENT BY STATES AND EMPLOYERS**

Medicaid programs, states, and business coalitions have developed a variety of risk adjustment strategies, despite the absence of intensive, well-funded research on risk adjusters for their own populations. Their strategies include adapting the risk adjusters developed for the Medicare population, using the DPS, developing simpler risk adjustment methods focused on high-cost conditions, and negotiating premiums with health plans based on estimates of population risk.

### **State Medicaid Agencies**

State Medicaid agencies appear to be in a particularly good position to implement risk adjustment. As they enroll new populations in managed care plans, for example, these agencies have access to comprehensive fee-for-service claims data that could be used for diagnostic adjustment. They also set standards for participation by health plans—a power that could be used to require participating plans to submit diagnostic data. According to Kronick and Dreyfus, however, Medicaid programs have done “more planning than implementation of health-based payment.”<sup>12</sup> Indiana, Wisconsin, and Ohio have used prior expenditures to adjust payments for a small number of patients in voluntary enrollment programs, and Minnesota and Oregon are now holding public hearings on risk adjustment.

Two states—Maryland and Colorado—have implemented more ambitious programs of risk adjustment. Maryland’s Medicaid managed care program is using diagnostic adjustment. Colorado’s system for the disabled Medicaid population is under consideration in other states. A more detailed look at developments in these two most advanced states may provide useful lessons.

**Maryland.** As part of Maryland’s new Section 1115 Medicaid Managed Care

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Rates for Medicare Using Ambulatory and Inpatient Claims Diagnoses,” *Health Care Financing Review* 17(3):77–99, Spring 1996.

<sup>10</sup> Richard Kronick, Tony Dreyfus, Lora Lee, and Zhiyuan Zhou, “Diagnostic Risk Adjustment for Medicaid: The Disability Payment System,” *Health Care Financing Review* 17(3):7–33, Spring 1996.

<sup>11</sup> Newhouse et al., “Risk Adjustment and Medicare,” 1997.

<sup>12</sup> Richard Kronick and Tony Dreyfus, “The Challenge of Risk Adjustment for People with Disabilities: Health-Based Payment for Medicaid Programs,” Center for Health Care Strategies, Inc., November 1997.

program, participating HMOs are paid diagnosis-based capitation rates for many of their enrollees, using a risk adjustment methodology based on the ACG system.<sup>13</sup> The program began enrolling beneficiaries in July 1997.

Under the ACG risk adjustment system, beneficiaries are assigned to groups based on diagnoses in their claims history. The cost of caring for beneficiaries in each group is then assessed and used as a basis for payment or cost estimation. In Maryland, groups with similar costs have been further combined into “resource adjusted categories.” The costs associated with each group and category were calculated based on adjusted fiscal year 1995 claims of beneficiaries who were eligible for Medicaid for six months or more and were not enrolled in a managed care plan. In all, there are 17 “resource adjusted categories,” 9 for beneficiaries in the low-income women and children Medicaid population, and 8 for disabled beneficiaries. Separate rates were developed for neonates, persons with AIDS, and mothers eligible under Medicaid eligibility expansions. A supplemental payment is also made upon the birth of a child.

Maryland also developed adjusters for age, gender, and place of residence. These determine payments for beneficiaries without six months of Medicaid claims history, including newly eligible beneficiaries, beneficiaries who were enrolled in HMOs, and neonates. Interestingly, although the place of residence adjustment was made to reflect substantial differences in costs between those living inside Baltimore City and those living in other areas of the state, the discrepancies were found to be inconsequential after the ACG adjustments were made.<sup>14</sup>

**Colorado.** Colorado has had a sizable voluntary enrollment into full-risk managed care plans by Aid to Families with Dependent Children recipients and people with disabilities.<sup>15</sup> Approximately 20 percent of disabled beneficiaries are enrolled in such plans, and two plans enroll a total of approximately 85 percent of those individuals.

The impetus for risk adjustment grew out of a perception by managers of both of these plans that their organizations were experiencing adverse selection. One plan, Colorado Access, enrolled a particularly high-cost population through its university

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<sup>13</sup> The Center for Health Program Development and Management at the University of Maryland, Baltimore County, and the Actuarial Research Corporation contributed to the development of the rates. The eight health plans participating in the program were also involved in the rate-setting process.

<sup>14</sup> Gordon R. Trapnell, “Maryland Medicaid Managed Care Program (1115 Waiver): Development of MCO Rates—Methodology,” Actuarial Research Corporation, November 1, 1996.

<sup>15</sup> The description of Colorado’s program is drawn from Kronick and Dreyfus, “The Challenge of Risk Adjustment for People with Disabilities,” 1997.

hospital and children's hospital, producing average expenditures twice those of the population as a whole before they enrolled in the plan. This led to an interim risk adjustment system based on prior expenditures of beneficiaries who switched into managed care plans: payments for disabled beneficiaries in 1997 were based on enrolled beneficiaries' 1995 fee-for-service expenditures.

Colorado has now implemented the DPS to adjust managed care rates for disabled beneficiaries. This system predicts costs more accurately for this group than the ACG or DCG system. To implement the DPS, Medicaid staff collaborated with state health plans and helped collect the encounter data needed for diagnostic risk adjustment. The plans submitted sufficient 1996 encounter data to enable the computation of adjusted payment rates for 1998.<sup>16</sup>

### **State Employee Health Plans**

State agencies other than Medicaid programs have also pursued strategies to limit risk selection and adjust health plan payments. The administrators of state employee health benefits plans are well aware of the danger that risk selection will increase their costs. Even so—and despite the fact that most states collect cost and utilization data—relatively few public employee benefits plans employ sophisticated risk adjustment methods.<sup>17</sup>

Twelve states, or one of four, claim to adjust premiums within their public employee health benefits programs to reflect risk selection.<sup>18</sup> In most cases, the adjusters are limited to the age and gender of enrollees: Virginia, for example, uses a prospective age/gender adjustment and calculates an end-of-year adjustment for plans with actuarially higher or lower risks. California and Washington use somewhat more sophisticated adjusters.

**California Public Employees Retirement System (CalPERS).** One of the largest public employee benefits administrators, CalPERS uses demographic risk assessment in its rate-setting process. Rate targets are used to negotiate premiums with health plans. These targets are not “hard and fast” and are not released to plans before they submit bids.<sup>19</sup> The extent to which premiums reflect the assessments, therefore, is not clear. Also, neither employee nor employer contributions are adjusted to account for risk

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<sup>16</sup> Daniel Dunn, “Case Studies of Health Risk Adjustment: What Can Be Learned from Experience to Date?” *Inquiry*, Summer 1998 (forthcoming).

<sup>17</sup> Among respondents to a Lewin Group survey (40 states), 90 percent collect cost and utilization data. Lewin-VHI, “States as Purchasers: Innovations in State Employee Health Benefit Programs,” report to the National Institute of Health Care Management, April 1995.

<sup>18</sup> Lewin-VHI, “States as Purchasers,” 1995.

<sup>19</sup> Personal communication with Margaret Stanley, Assistant Executive Officer, CalPERS, 1997.

differences. CalPERS and other employers who use similar methods do believe, however, that risk assessments improve their ability to negotiate successfully with health plans.

**Washington State Health Care Authority.** Washington's benefits program for public employees has used a risk adjustment system that incorporates demographic information and is now in the process of phasing in a diagnostic-based system. Early in the development of the new system, researchers at the University of Washington, led by Carolyn Madden, used data from six health plans to test three risk adjustment models: Diagnostic Cost Groups, Ambulatory Care Groups, and chronic disease scores. The research team now is implementing a prospective payment system based on a variant of the DCG model. Plans began to be paid under the new system in January 1998.

Before implementing the new system, the authority identified 23 areas in which detailed analysis would be needed, including the use of inpatient and/or ambulatory data, confidentiality and data security, nonstandard plan design, gaming, audits, cost of implementation, geographic variation, and outlier hospital payments.<sup>20</sup> The use of ambulatory data, in particular, caused concern because of the difficulty and unreliability of data collection.<sup>21</sup> As a result, the authority decided to adjust payments in 1998 by only plus or minus 2 percent, based on differences in risk measured by the DCG system. In the year 2000, plan payments will be fully adjusted using the DCG model and demographic adjustment will be phased out.<sup>22</sup>

### **State Insurance Pools and Purchasing Cooperatives**

In the early 1990s, a number of states created agencies to facilitate the purchase of insurance by small employers. Many of these efforts were subsequently repealed, but insurance pools continue to function in New York, California, and Washington.

**New York.** New York implemented open enrollment and community rating in its small group and individual health insurance market in 1993. To protect HMOs and other health insurers from experiencing losses due to adverse selection in these markets, the state also established an insurance pool.<sup>23</sup>

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<sup>20</sup> Alpha Center, "Implementing Diagnostic Risk Adjustment in an Employed Population," *HCFO News and Progress*, March 1997.

<sup>21</sup> Jana Sansbury, "Washington State May Risk-Adjust Pay to Plans Based on Health Status of Public Employees," *State Health Watch*, February 1997.

<sup>22</sup> Dunn, "Case Studies of Health Risk Adjustment," 1998.

<sup>23</sup> Carole Lee and Deborah Rogal, "Risk Adjustment: A Key to Changing Incentives in the Health Insurance Market," Alpha Center, March 1997.

To fund the pool, all insurers within a geographic region make quarterly per-beneficiary payments; the pool is then distributed according to demographic information—including age, gender, and family size of employees—and the presence of high-cost medical conditions. According to Sandra Hunt, a Coopers and Lybrand analyst working with plans to revise the risk adjustment methodology, the demographic adjustments triggered some adjustments across plans.<sup>24</sup> These adjusters are being phased out over the next four years in favor of an expanded high-cost condition pool, which would transfer an equivalent volume of payments. The high-cost condition pool currently makes payments of approximately \$7 million per quarter to insurers covering AIDS, transplant, ventilator-dependent, and neonate patients.

**Health Insurance Plan of California.** Legislation in 1993 created the Health Insurance Plan of California (HIPC) to help small groups achieve the health insurance purchasing benefits of large employers. The legislation allowed the use of a prospective risk adjustment process in order to compensate participating carriers fairly.<sup>25</sup>

The California Managed Risk Medical Insurance Board (MRMIB), which oversees the HIPC, has implemented a system that calculates the relative risk assumed by each health plan according to the age, gender, family size, and “marker diagnoses” of its enrollees. Marker diagnoses are high cost (\$15,000 or more per year), relatively predictable diagnoses that are associated with inpatient stays. Participating carriers submit proof of marker diagnoses using claims or encounter data or case management or utilization review records. The marker diagnosis feature is easier to implement than a comprehensive diagnostic risk adjustment system, and the data are less difficult to obtain.<sup>26</sup> By agreement of the MRMIB, adjustment is triggered only when a carrier’s risk is 5 percent greater than the average assessed risk of all participating carriers.

In the first round of risk assessment and adjustment, conducted in 1996, approximately 1 percent of total premium dollars were reallocated among plans. The plan that received the most favorable selection paid \$11.80 per contract per month (PCPM) into the pool, and the plan that received the most adverse selection received \$46.04 PCPM.<sup>27</sup> In 1997, less money changed hands overall, but more plans paid or received adjustments. Of 27 participating health plans, four paid out a maximum of \$8 PCPM, and

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<sup>24</sup> Personal communication with Sandra Hunt, Partner, Coopers and Lybrand LLP, 1997.

<sup>25</sup> Sandra Shewry, Sandra Hunt, John Ramey, and John Bertko, “Risk Adjustment: The Missing Piece of Market Competition,” *Health Affairs* 15(1):172–81, Spring 1996.

<sup>26</sup> Health Insurance Plan of California, “Risk Assessment and Risk Adjustment Calculations: Results for 1997–98 Contract Year,” December 10, 1996.

<sup>27</sup> A contract is defined as a subscriber unit (such as a family, if family coverage is selected).

one (a preferred provider organization) received \$16 PCPM.<sup>28</sup> The lower volume of transfers reflects both changes in premiums and the departure from the pool in early 1997 of the largest receiver plan.

### **Business Coalitions**

Business coalitions would seem to be in an excellent position to pursue innovative health purchasing strategies, including risk adjustment: they are not governed by federal or state regulations, are not tied to the political process, often have fairly substantial financial resources, and wield considerable market power. Also, because they typically offer employees of member businesses a choice of health plans, they would stand to gain from reducing risk selection.

For a variety of reasons, however, business coalitions are rarely leaders in risk adjustment. Still relatively new, coalitions must prove themselves accountable to member businesses looking for tangible health care savings and improvements in quality. They must avoid creating “winners” and “losers” among their members, who participate on a voluntary basis. Firms with lower than average costs may be unwilling to participate in a system that involves negotiating a single rate across firms. Also, business coalition administrators often lack the authority and resources to implement change. Finally, some employers may see risk adjustment as endangering labor relations. In the employment setting, implementing a risk adjustment scheme can be costly because younger, better-risk employees tend to be paid less and are more likely to have chosen low-cost plans. For those workers, premiums will tend to rise when a risk adjustment system is implemented unless the employer compensates by raising the contribution rate.

Ninety-six local members participate in the National Business Coalition Forum on Health, but only 45 of those are involved in health insurance purchasing, which does not necessarily include contracting directly with health plans. Some use risk assessment primarily as a tool to negotiate premiums, often by employing projections developed by a private firm (such as MEDSTAT) for a demographically similar population in a similar community.<sup>29</sup> Similarly, research by the General Accounting Office (GAO) has found that large employers use relatively crude risk adjustment techniques—often only age and gender—to evaluate premiums as a prelude to negotiations.<sup>30</sup> Business coalitions that are currently investing in risk assessment and associated technologies employ a range of

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<sup>28</sup> Dunn, “Case Studies of Health Risk Adjustment,” 1998.

<sup>29</sup> Personal communication with National Business Coalition Forum on Health, 1997. MEDSTAT, a private company, collects medical claims information.

<sup>30</sup> General Accounting Office, “Access to Health Insurance: Public and Private Employers’ Experience with Purchasing Cooperatives,” HEHS-97-71, May 1997.

techniques, some more sophisticated than others.

**Gateway Purchasing Alliance.** This alliance, based in St. Louis, encompasses a range of employers with very different risk profiles, from small retailers to the United Auto Workers, a very high user of services. Although Gateway has succeeded in implementing only rudimentary adjustment strategies, these represent a significant improvement for employers, some of whom formerly paid premiums unrelated to their demographic profiles.

As a first step, Gateway provides managed care plans with demographic information on the alliance's entire covered population. Each plan then quotes a price for an average enrollee and a standard benefit design. The premium is adjusted to reflect changes in the benefit design (there are currently 70 variations) and the age and family size composition of each employer's prior-year managed care enrollees. To determine an employer's premium, demographic characteristics of that employee group are compared with those of the entire pool.

**Pacific Business Group on Health (PBGH).** This nonprofit coalition of 33 public and private employers in California and Arizona is among the most sophisticated now operating. With support from a foundation, PBGH collaborated with researchers from Kaiser Permanente and the University of California, San Francisco, to develop and test several risk adjustment models: a demographic model; a model including demographics and personnel variables, such as length of employment; a model including demographics and self-assessed health status; and each of those models with high-cost cases excluded. Excluding high-cost cases was found to be the most promising strategy, but personnel information also showed promise.

PBGH chose not to implement any of the models tested for several reasons. Their research showed, for example, that models built with data from one employer or health plan did not accurately predict risk for other employers or plans, while the personnel data proved difficult to work with and the group's survey of health status had a low response rate. Administrative difficulties, such as inconsistencies in employers' use of family size and other variables, were another stumbling block in creating categories to price. Also, although the study tested models only on enrollees under age 65, PBGH believes that its risk selection problem is especially acute in its retiree population, whose members typically have a choice between Medigap supplemental coverage and Medicare at-risk plan coverage. Finally, PBGH employers did not reach consensus regarding thresholds for triggering a risk adjustment process or acceptable variations in risk mix across plans. At the same time, PBGH's participating health plans were most interested in geographic-based

adjustments, although the analysis did not reveal consistent geographic variations in cost.

PBGH also found that price variation narrowed after it began using risk data to negotiate premiums and that “overall, risk spreads when PBGH employers were pooled did not vary much across plans.”<sup>31</sup> Even so, PBGH continues to pursue possible demographic and geographic risk adjustment strategies and is currently examining findings that indicate that marital status and the age and sex of an employee’s dependents are reasonable predictors of costs.<sup>32</sup> The alliance currently has no plans to use diagnosis information for risk adjustment.<sup>33</sup>

**Buyer’s Health Care Action Group (BHCAG).** Located in the Minneapolis/ St. Paul area, this alliance consists of 28 self-insured employers, with approximately 250,000 covered lives.<sup>34</sup> Since 1993, BHCAG has offered its members a self-insured point-of-service plan called Choice Plus, which includes a negotiated fee schedule with a network of providers, a standardized benefits package, and administration by Health Partners and Aetna. Member employers have the option of offering Choice Plus alone or offering multiple plans.

Choice Plus succeeded in reducing costs by 11 percent in 1993, and its premiums have increased by only about 4 percent annually since then. Approximately 100,000 employees chose to enroll in Choice Plus, and membership in BHCAG grew. BHCAG also created and continues to fund the Institute for Clinical Systems Integration, a nonprofit organization that assists the Choice Plus provider network with quality initiatives.

Although pleased with the performance of Choice Plus, BHCAG implemented a new, more competitive purchasing strategy in 1996, after analyses indicated that more efficient provider groups were, in effect, subsidizing less efficient ones. BHCAG was concerned that incentives to improve quality, service, and cost were insufficient at the network level and that consolidation in the Minnesota managed care market was stifling competition. In addition, BHCAG believed that substantial overlaps in provider networks indicated that plans were not competing on the basis of quality. The alliance hoped that its direct contracts with provider groups would create stronger incentives to provide care efficiently.

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<sup>31</sup> Presentation by Patricia Powers, Executive Director, and Karen Shore, Research Analyst, Pacific Business Group on Health, September 26, 1996.

<sup>32</sup> Pacific Business Group on Health, “Developing Practical Risk Assessment Tools for Large Employers and Testing Risk Adjustment Approaches in Health Care Purchasing,” February 25, 1997.

<sup>33</sup> Personal communication with Karen Shore, Research Analyst, Pacific Business Group on Health, September 15, 1997.

<sup>34</sup> Dunn, “Case Studies of Health Risk Adjustment,” 1998.

Under its new “enhanced competitive model,” BHCAG contracts directly with “care systems,” defined as “primary-care centered health systems with affiliated specialty, hospital, and allied professional arrangements.”<sup>35</sup> Any care system that meets BHCAG quality standards is eligible to participate, but primary care providers may belong to only one care system. BHCAG plans to give employees comparative information about care systems and incentives to choose cost-effective systems.

In order to foster beneficial competition among provider groups, BHCAG has also adopted a novel version of the ACG system. Networks bidding to serve BHCAG member employees are given three years of claims data on the covered population and asked to submit claims targets based on a standard benefit package and enrollee mix. BHCAG then sets a fee schedule for each network based on its target. Claims experience is adjusted quarterly using ACGs, and the fee schedule is revised to reflect experience over the past 12 months. This adjustment process is more sophisticated than that used by Gateway because it employs diagnostic information. Although its self-insured status prevents BHCAG from recovering losses or gains from the networks, the alliance adjusts enrollee premiums based on the claims target of the network chosen.<sup>36</sup>

## CONCLUSIONS

State agencies and employers are just beginning to deal with the issue of risk selection, and very few are using risk adjustment at the present time. As outlined in the table, the leading methods range in sophistication from prospective diagnostic adjustment, on the high end, to risk assessment and premium negotiation, on the low end.

Surprisingly, no pattern has emerged in the types of risk adjustment being adopted by particular types of purchasers. Effective risk adjustment certainly demands a capacity for complex data analysis, and three of the five example organizations shown in the table (the Maryland and Colorado Medicaid programs and PBGH) have close affiliations with university-based risk adjustment experts. Even so, such affiliations do not guarantee implementation, while two organizations have succeeded in implementing programs without assistance from university experts. Outside funding to pursue risk adjustment is no panacea; PBGH’s risk adjustment research, despite external support, did not produce a risk adjuster that has been implemented.

What can other entities, including the Medicare program, learn from the efforts of these pioneers? First, as the paucity of working risk adjustment schemes suggests, implementing risk adjustment is difficult. Few entities are ahead of the Medicare program

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<sup>35</sup> Buyer’s Health Care Action Group, *1996 Annual Report*.

<sup>36</sup> Personal communication with Steve Wetzell, Executive Director of Policy and Public Affairs, Buyer’s Health Care Action Group, 1997.

in using diagnosis-based risk adjustment, the best method currently available. On the contrary, the majority of large purchasers of health care are less advanced than either the Medicare program or those Medicaid programs that have implemented age, gender, and eligibility information to adjust their capitation rates.

Second, some purchasers have proven that diagnostic risk adjustment systems can be implemented successfully. Health plans contracting with these purchasers have agreed to provide the data needed for diagnostic risk adjustment and seem capable of doing so. Also, less sophisticated but still valuable systems, such as high-cost condition pools, seem easier to implement than comprehensive risk adjustment systems, perhaps because they require less data and are easier to understand. Another method, the “ceding” of high-cost cases back to fee-for-service coverage, has not been tried but is similar to reinsurance and should prove relatively easy to implement.<sup>37</sup>

Finally, as shown in Colorado, as sicker and disabled populations move into Medicaid managed care, the need for risk adjustment increases dramatically. The Medicare program and Medicaid agencies in particular would stand to gain from careful consideration of Colorado’s experience before enrolling disabled beneficiaries in managed care plans. Indeed, the disabled population is more predictably heterogeneous than are either the low-income women and children Medicaid population or the commercial population.<sup>38</sup> As a result, implementing risk adjustment methods for disabled Medicaid managed care enrollees is particularly urgent.

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<sup>37</sup> Newhouse et al., “Risk Adjustment and Medicare,” 1997.

<sup>38</sup> Kronick et al., “Making Risk Adjustment Work for Everyone,” 1995.

### Advantages and Disadvantages of Current Risk Adjustment Approaches

	<b>Prospective diagnostic adjustment</b>	<b>Retrospective diagnostic adjustment</b>	<b>Prior fee-for-service expenditures</b>	<b>High-cost condition pool</b>	<b>Risk assessment and premium negotiation</b>
<b>Organization</b>	Maryland and Colorado Medicaid programs (after 1997)	Buyer's Health Care Action Group	Colorado Medicaid program (before 1997)	Health Insurance Plan of California	Pacific Business Group on Health
<b>Sophistication</b>	High	High to medium	Medium	Medium	Low
<b>Advantages</b>	Best available method of risk adjustment. Health plans paid more to care for sicker patients and thus have fewer incentives to select.	May be more subject to gaming than prospective diagnostic adjustment, but does reduce incentives to select.	Prior fee-for-service expenditures usually known or calculable. Past costs are fairly good predictors of future expenses and thus reduce incentives to select.	Less data intensive than comprehensive risk adjustment yet reduces plans' incentive to avoid enrollees with high-cost conditions.	Easier to implement than other methods.
<b>Disadvantages</b>	Requires substantial data collection and analysis and is therefore expensive and difficult to understand. Using ambulatory data may raise issues of accuracy and fairness.	Same as prospective risk adjustment.	Can only be used as a predictor for a limited amount of time. Also fairly data intensive.	Does not reduce risk differentials as much as more comprehensive methods. Plans do not know until after annual reconciliation what they will receive or pay.	Less precise than other methods and unlikely to mitigate the incentive to select.
<b>Evidence of success</b>	None yet available	None yet available	None yet available	Insurer with most high-cost cases dropped out of the market, perhaps indicating inadequate reimbursement.	Member companies satisfied that risk selection is a "wash" over time.