



**VALUE-BASED PURCHASING:  
A REVIEW OF THE LITERATURE**

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## EXECUTIVE SUMMARY

With dramatic increases in health care costs, and growing concerns about the quality of health care services, policymakers and experts are seeking ways to redesign the health care system. Recent initiatives have shown that public and private purchasers might play a role in these efforts through value-based purchasing activities. These are organized attempts by purchasers to ensure and improve the quality of health programs by wielding their considerable purchasing power.

In order to understand the strategies, extent, and impact of current value-based purchasing (VBP) activities, the authors performed a comprehensive literature review of peer-reviewed journals, non-journal publications, and reports by governmental and nonprofit organizations from 1995 to March 2002. [A related issue brief](#) by Neil I. Goldfarb and colleagues draws on interviews with experts to further examine the extent of current value-based purchasing efforts and identify the key obstacles to achieving broader engagement and greater impact.

### **Value-Based Purchasing Strategies**

The literature outlines six key value-based purchasing strategies: 1) collecting information and data on quality, 2) selective contracting with high-quality plans or providers, 3) partnering with plans or providers to improve quality, 4) promoting Six-Sigma quality, 5) educating consumers on quality issues, and 6) rewarding or penalizing plans or providers through use of incentives or disincentives.

The most commonly employed VBP strategy is data collection and analysis. For example, 31 state Medicaid agencies have recently reported collecting information about enrollees' satisfaction with care. In the first survey of the health care purchasing practices of large *Fortune* 500 companies, virtually all companies reported collecting some information about health plan quality.

### **Extent of Value-Based Purchasing Activities**

In the last 10 years, an enormous number of roundtables, conferences, meetings, and debates have been organized across the United States to keep purchasers informed about new purchasing models and tools. These are primarily aimed at improving health plan and provider performance, as well as sharing experiences and defining areas of collaboration among purchasers.

Despite these dissemination and education efforts, only a limited number of champions, particularly large employers and business coalitions, are actively involved in promoting quality through their purchasing decisions. Furthermore, experts believe that, although some purchasers have firmly committed to value-based purchasing, many purchasers, especially large companies, are losing interest in implementing value-based health plan programs. For instance, in a recent Washington Business Group on Health/Watson Wyatt Survey conducted among nearly 300 companies with at least 1,000 employees, respondents reported that the strategy they are planning to adopt at the fastest rate is “consumerism,” which involves empowering employees to make their own health care decisions. In an analysis of current purchasing strategies, Fraser et al. concluded that, thus far, employers have primarily been “quality takers,” rather than “quality makers.” Although purchasers appear to be committed to gathering performance data about health plans and providers, it is unclear whether they are using this information to influence quality.

### **Purchasers’ Barriers to Promoting Quality**

The literature reports a significant number of barriers that purchasers experience in seeking to implement value-based purchasing initiatives. For example, purchasers report being overwhelmed by the multiplicity of measures available. Moreover, purchasers sometimes question the reliability and validity of data, complaining for instance that performance data about plans published in different report cards often are inconsistent. The relatively high cost of engaging in quality improvement initiatives appears to be another important barrier. In fact, as purchasers become more proactive in pursuing quality, they may need significant organizational changes or increased resources. Finally, consumers’ preferences to select plans on the basis of cost rather than quality pose a significant challenge. However, more research is needed to understand better whether and how these factors affect the willingness of purchasers to include quality in their contracting negotiations.

### **Impact of Value-Based Purchasing**

Very few studies have been conducted to examine whether value-based purchasing initiatives are changing the behaviors of providers and insurers and, most important, whether they are affecting quality of care. In the 2001 Sixth Annual Washington Business Group on Health/Watson Wyatt Survey, most providers and health plans interviewed were convinced that employers concentrated on costs, and fewer than half believed that employers consider quality to be an important factor in selecting and evaluating plans. Recent reviews have found that, beyond anecdotal evidence, little is known about whether purchasers’ value-based purchasing activities have an impact upon quality outcomes.

## **Conclusions**

More research is needed to investigate the following important issues. First, research is necessary to determine the extent to which value-based purchasing strategies are being pursued and what types of strategies are being implemented. Second, research should be conducted to help define the factors that foster or impede these efforts. Ongoing value-based purchasing programs should be investigated to identify the initiatives and specific tools that have enabled them to grow. Concurrently, an endeavor should be made to determine which barriers are most frequently encountered so that actionable strategies can be selected and developed. Third, research should elucidate how providers and insurers perceive value-based purchasing activities and whether these initiatives are modifying their health care behaviors. Finally, methodologies should be developed to measure more systematically the extent and outcomes of value-based purchasing in terms of both quality and cost.

## VALUE-BASED PURCHASING: A REVIEW OF THE LITERATURE

### INTRODUCTION

After a decade of modest growth in health care spending, attributed largely to managed care, health care costs once again are increasing dramatically. With a per capita expenditure of \$4,675 in 2000, which represented 13.3 percent of the gross domestic product (GDP), the United States spent more than twice as much of any other industrialized country on health care on a per capita basis.<sup>1, 2</sup> Based on current trends, the Centers for Medicare and Medicaid Services forecasts that health care expenses will reach \$9,972 per person by 2012, corresponding to 17.7 percent of the GDP.<sup>1</sup>

This significant level of health care spending would not be intrinsically unacceptable if the U.S. public were receiving high-quality care (i.e., getting value for its money). Several data sources suggest that is not the case, however. The World Health Organization, in *WHO Health Report 2000*, ranked the U.S. health care system only 37th overall among 191 countries, with the major deficiencies being in the areas of health status, fairness in financial contribution, and responsiveness to people's expectations of the health system.<sup>3</sup> Moreover, Americans report a low level of satisfaction with the health care system; in a recent survey, only 40 percent of those interviewed reported being "fairly satisfied" or "very satisfied" with how health care is delivered in this country.<sup>4</sup> The Institute of Medicine has reported that 44,000 to 98,000 individuals die each year in inpatient settings as a result of medical errors.<sup>5</sup> Furthermore, consumers perceive that the health system is not producing value. In a 2001 Harris Poll, the majority of respondents (54%) felt that the trend toward more managed care would consistently harm the quality of care.<sup>6</sup> Policymakers and experts point to an urgent need to redesign the U.S. health care system to improve the quality of care and increase responsiveness to patients.<sup>7-10</sup> In a health market structured primarily to foster competition among plans, the challenge is to find the proper catalyst to encourage competitors to improve quality while simultaneously reducing costs.<sup>11, 12</sup>

Recent initiatives have shown that public and private purchasers may be able to influence the quality and costs of health care services through value-based purchasing (VBP). VBP can be defined as the organized attempts by purchasers to ensure and improve the quality of health programs when negotiating costs with providers and insurers.<sup>13</sup> In order to understand the characteristics and extent of VBP activities, the authors performed a comprehensive literature review of sources dating from 1995 to March 2002. They examined peer-reviewed journal articles as well as other relevant publications and materials, including non-journal publications, websites, and reports by governmental and nonprofit organizations. [A related issue brief](#) by Neil Goldfarb and colleagues draws on

interviews with experts to examine the extent of current value-based purchasing efforts and identify the key obstacles to achieving broader engagement and greater impact.

## **VALUE-BASED PURCHASING STRATEGIES**

Despite considerable progress in the last decades, the U.S. health care system still faces significant quality-of-care problems, which can be classified into incidences of overuse, underuse, and misuse.<sup>11, 14, 15</sup> Different approaches to quality improvement have emerged, including the use of evidence-based medicine and clinical practice guidelines, professional development, assessment and accountability, patient empowerment, and total quality management.<sup>16</sup> Because of the complexity of improving and changing patient care, however, none of these approaches has brought about substantial changes in clinical practice.<sup>16, 17</sup> M. J. Coye points out that these strategies have failed, in part, because of a lack of a clear “business case for quality” in health care.<sup>17</sup>

Nevertheless, some purchasers—public and private employers, business coalitions, and public programs (e.g., Medicare and Medicaid)—are attempting to build quality considerations into their health care purchasing programs.<sup>13</sup> After turning to managed care to hold down costs, state Medicaid agencies, which had more than 16 million enrollees as of 2000, are seeking to improve quality through the contracting process.<sup>18</sup> Since many Americans receive health insurance through their jobs, both public and private employers unquestionably play an important role in the demand for improved health care services.<sup>19</sup> In fact, 90 percent of nonelderly individuals with private health insurance are covered through employer-sponsored health plans.<sup>20</sup> Under the prevailing models of managed care, private purchasers’ decisions may affect costs as well as network availability and access to care.

Several explanations have been offered as to why purchasers might wish to factor quality as well as costs into their health purchasing decisions. First, purchasers, rather than patients, have begun to establish themselves as the real customers within the health care delivery system—giving them a tremendous responsibility to health care consumers and an interest in getting value for their money.<sup>21</sup> Second, enhanced health benefit packages, and the inclusion in benefit packages of providers perceived as being “high quality,” may help employers to retain employees. This may be especially important for firms facing shortages of skilled labor.<sup>22</sup> Third, high-quality health care may increase employee satisfaction and productivity and reduce absenteeism, which may in turn diminish long-term health costs.<sup>22, 23</sup> Finally, research has shown that employees, because of the complexity of the market, want to retain employers as their agents in the selection of health insurance

plans.<sup>20</sup> Workers believe that their employers can negotiate and purchase health insurance plans at lower prices than they could acting alone in the insurance market.

For these reasons, purchasers have a strong interest in seeking quality when making health care purchasing decisions. They are beginning to demand accountability from providers and are attempting to measure and monitor the value they receive for the health care dollars spent.<sup>21, 24</sup> Although VBP initiatives vary, the most common strategies can be classified into the following six categories.<sup>13, 14</sup>

### **Collecting Information on Quality**

Gathering information on the quality of care is the first step in most value-based purchasing initiatives. Purchasers may strengthen their activities by having reliable performance information on providers and health plans. Several recent studies have shown that both public and private purchasers are consistently involved in data collection or analysis. A survey conducted in Arizona, Kansas, Michigan, New Jersey, and West Virginia found that these states generally have improved the amount and quality of data they collect on the experiences of Medicaid clients.<sup>25</sup> A recent study by Landon et al. noted that 31 of the 45 states identified as having comprehensive managed care programs for their enrolled Medicaid populations were collecting information on satisfaction with care.<sup>18</sup> Using data from the 1998 National Business Coalition on Health Annual Survey, Fraser et al. found that 90 percent of the respondents collected data on quality using different sets of standards, such as HEDIS, consumer satisfaction, or NCQA accreditation status.<sup>22</sup> In the first study of the health care purchasing practices of *Fortune* 500 companies, J. Maxwell et al. found that virtually all companies reported collecting some information about health plan quality.<sup>26</sup>

### **Selective Contracting with High-Quality Providers**

Although few firms directly contract with provider networks, the potential quality and cost-saving benefits from doing so may be significant.<sup>27</sup> These types of contracts are common in pooled purchasing arrangements, which hinge upon a group of purchasers contracting selectively with plans or provider organizations based on demonstrated performance.<sup>13, 22</sup> The best-documented example of direct contracting is the Buyers Health Care Action Group, based in Minnesota's Twin Cities.<sup>28, 29</sup> The purpose of the program, called Choice Plus, is to foster competition over price and quality among a group of providers, with consumers' choices driving the process.<sup>30</sup>

### **Partnering with Providers or Plans for Quality Improvement**

Rather than eliminating plans through selective contracting, purchasers may improve health plan and provider performance by partnering with plans or providers on continuous quality improvement (CQI) efforts.<sup>31</sup> The principle of this VBP initiative is to hold plans and/or providers accountable by measuring and providing feedback on their performance, and then working closely with them to ameliorate that performance. Fraser et al. report on an analysis of the National Business Coalition on Health Survey, in which 84 percent of responding coalitions cited participation in what they described as CQI activities, with almost half claiming “extensive” involvement.<sup>22</sup> In Ohio, the Health Improvement Collaborative of Greater Cincinnati has been trying since its inception in 1992 to extend the concept of partnering to a broader, more holistic collaboration.<sup>31</sup> This collaborative, a nonprofit coalition of leaders from the hospital, physician, employer, insurer, government, public health, education, and consumer sectors, serves as a catalyst for community dialogue among all stakeholders. The collaborative attempts to create long-term strategic alliances and stimulate continuous, measurable improvement in the health of the Greater Cincinnati community.<sup>32</sup>

### **Promoting Six-Sigma Quality**

Some purchasers are expanding the idea of partnering with plans and providers by promoting the adoption of specific techniques that have been used as a business strategy for some time: the so-called Six-Sigma tools.<sup>14</sup> Six-Sigma methodology consists of five consecutive steps: define, measure, analyze, improve, and control. The objective is to reduce waste and improve the quality, cost, and time demands of a procedure in order to reach an adequate level of perfection.<sup>14, 15</sup> The Six-Sigma approach has been applied to contracts with health care providers and plans by several companies, such as General Electric and Motorola. Although in its infancy, the approach appears to be very promising for health care quality improvement.

### **Educating Employees on Quality Issues**

Both public and private purchasers have created several initiatives to provide consumers with educational material that would allow them to choose health plans, doctors, hospitals, and other facilities based upon quality.<sup>33-35</sup> Some experts believe that purchasers will not be able to improve quality significantly until the consumers they represent become active participants in the decision-making process.<sup>36, 37</sup> Engaging consumers in quality problems and safety issues might facilitate purchasers’ decision-making processes with regard to plans and providers, as well as lead to positive changes in the behavior of health care delivery organizations.<sup>38</sup> The utility of providing consumers with data on the quality of health care, however, remains unclear.<sup>39</sup> For instance, a 2000 national survey about the role of quality

information in consumers' health care decision-making, jointly conducted by the Henry J. Kaiser Family Foundation and the Agency for Health Care Research and Quality, revealed that only 4 percent of respondents had used quality information in selecting a doctor or a hospital and 9 percent had used such information in choosing a health plan. Overall, only 12 percent had used quality information at all.<sup>40</sup> Nevertheless, recent research suggests that consumers may be able to factor quality information into plan-selection decisions, although cost considerations may still dominate.<sup>41-44</sup>

### **Rewarding High Quality and Penalizing Poor Quality**

There are different ways to institute financial incentives (or disincentives) in contracts, including the use of bonuses or premium rebates or the withholding of payment.<sup>45</sup> Rewarding (or penalizing) providers or plans for their performance is a popular strategy among purchasers. For instance, 59 percent of the participants in the National Business Coalition on Health survey declared that their purchasing contracts incorporate financial incentives for performance.<sup>22</sup> In 1996, the Pacific Business Group on Health (PBGH), on behalf of the 17 large employers in its alliance, began a well-documented experiment with 13 of California's largest health maintenance organizations (HMOs). The PBGH's approach to holding HMOs accountable was to negotiate based on more than two dozen performance guarantees, with the HMOs placing 2 percent of their annual premium paid by PBGH employers at risk.<sup>46</sup>

### **EXTENT OF VALUE-BASED PURCHASING ACTIVITIES**

According to employer and public purchaser self-reports and the media, the value-based purchasing movement is flourishing. In the last 10 years, an enormous number of roundtables, conferences, meetings, and debates have been organized across the United States to keep purchasers informed about new purchasing models and tools. These are primarily aimed at improving health plan and provider performance, as well as sharing experiences and defining areas of collaboration among purchasers. Governmental agencies, such as the Agency for Health Care Research and Quality; nonprofit organizations, such as the Foundation for Accountability; and several business consortia, such as the National Business Coalition on Health and the Washington Business Group on Health, have been integral in fostering purchasers' interest in value-based purchasing. The Leapfrog Group, a consortium of many of the nation's largest health care purchasers, has identified and endorsed a set of targeted initiatives focused primarily on improving patient safety and the quality of care.<sup>47</sup> Notably, organizations and institutions have produced numerous reports describing in detail the strategies and initiatives pursued by purchasers.<sup>48-53</sup> Even the press has paid attention to value-based purchasing, generating public awareness of VBP activities.<sup>54-57</sup>

Despite the growing body of information about the value-based purchasing movement, however, many questions remain unanswered. To what extent are purchasers successfully using value-based purchasing strategies to buy quality care? Are these initiatives affecting providers' and insurers' behaviors and improving the quality of care? Most important, have investigators found evidence that value-based purchasing activities are concretely influencing the quality of care and costs?

Experts believe that, although some purchasers have firmly committed to value-based purchasing, many purchasers, especially large companies, are losing interest in implementing value-based health plan programs.<sup>58</sup> For instance, in a recent Washington Business Group on Health/Watson Wyatt Survey conducted among nearly 300 companies with at least 1,000 employees, respondents reported that the strategy they are planning to adopt at the fastest rate is "consumerism," which involves empowering employees to make their own health care decisions.<sup>59</sup> In an analysis of current purchasing strategies, Fraser et al. concluded that, thus far, employers have primarily been "quality takers," rather than "quality makers."<sup>61</sup> In other words, purchasers appear to be committed to gathering performance data about health plans and providers, but it is unclear whether they are using this information to influence quality.

A recent study on the use of performance data in health care purchasing decisions conducted by Lo Sasso et al. describes the results from two independent employer surveys: the 1997 Mercer/Foster Higgins National Survey of Employer-Sponsored Health Plans and their own 1999 survey of two business coalitions.<sup>61</sup> The former collected information from a random sample of 3,915 public and private employers with 10 or more employees. The latter was administered to 178 members of two business organizations, the Midwest Business Group on health and the Washington Business Group on Health. In the Mercer survey, 86 percent of respondents said that employers have "some responsibility" for the assessment of their health plans' quality. However, among items in the survey related to "responsible purchasing," only information on the geographic coverage of plans and member access were rated as "very important" by more than half of the firms. NCQA accreditation and member satisfaction were considered very important by less than one-third of respondents, and HEDIS measures by only 15 percent. Moreover, less than half reported taking action in managing their health plans, and only 19 percent eliminated plans on the basis of performance or negotiated performance guarantees. Respondents in the Lo Sasso survey of business coalitions were more inclined than respondents in the Mercer survey to use information about responsible purchasing, as indicated by two main findings. First, nearly three-quarters (72%) of respondents reported adopting health plan and provider performance standards. Second, more than half (53%) of respondents limited

their purchasing to plans/providers that met or exceeded the respondents' own performance standards.

Other studies have found that purchasers might consider quality but, in fact, act on cost. In a review of purchasing activities in 15 communities, researchers found that the majority of purchasers were taking traditional steps to control costs, such as shifting more of the financial burden of plans to employees. Very few purchasers used quality-related information to select health plans; large and prominent employers and community-based coalitions were among the few that did.<sup>62</sup> Still, in a 1997 Deloitte & Touche survey, less than half of employers interviewed considered any performance standards in their health plan contracts or monitored quality of care.<sup>63</sup> Maxwell et al. surveyed 14 large employers, and found that few were seeking to have a direct influence on quality through the contracting process.<sup>64</sup> Rather, the majority of companies surveyed shared information with their employees to promote informed choices among plans. Some companies also used financial incentives to encourage employees to enroll in the lowest-cost plan meeting the company's required minimum standards, thus shifting the burden of decision-making to workers.

In another survey, Hibbard et al. interviewed representatives of 33 large employers that purchased insurance for 1.8 million covered lives.<sup>65</sup> Study results suggested that, even though employers collected performance data in the form of HEDIS measures, consumer satisfaction levels, and NCQA accreditation, they did not place significant emphasis on quality in the decision-making process. Instead, costs were the driving force. Fraser et al. pointed out that, while the majority of business coalitions have some data collection mechanisms in place, the extent to which coalitions are attempting to use these data to promote quality remains unclear.<sup>22</sup>

Like many large employers, small employers did not appear to emphasize quality in making purchasing decisions. According to a recent survey of the members of RI Health, a Rhode Island health insurance purchasing coalition made up of 350 small employers, cost and premium rates are driving health care purchasing decisions, rather than quality measures.<sup>66</sup> Of even greater concern, the vast majority (93%) of survey respondents said they were not familiar with quality measures, such as HEDIS. As pointed out by Nelson et al., this lack of emphasis on quality is unfortunate since small employers—who employ 57 percent of the American workforce and provide health insurance for 47 percent of that population—might have the purchasing clout to motivate health plans and providers to improve their performance and raise the quality of care.<sup>66</sup>

The literature on the impact of value-based purchasing activities among public programs presents mixed findings. Landon et al. found that state Medicaid agencies are slowly but surely adopting certain aspects of value-based purchasing, requiring, for instance, that health plans measure their performance based on different indicators, including satisfaction with care and the quality of and access to care.<sup>18</sup> However, very few states are using this information when making their contracting decisions.<sup>18</sup> Similarly, other studies have found that quality data were not being emphasized in the contracting process.<sup>24, 67</sup>

## **PURCHASERS' BARRIERS TO PROMOTING QUALITY**

As seen above, the literature shows that a limited number of purchasers are actively involved in promoting quality when making their purchasing decisions. Some of the commonly discussed barriers that purchasers experience in implementing value-based purchasing initiatives are described below. More research is needed to understand whether and how these factors affect the willingness of purchasers to include quality in their contracting negotiations.

### **Data Issues**

The availability, credibility, and relevance of information significantly affect purchasers' ability to promote quality. For example, purchasers frequently complain that they get too much information and are overwhelmed by multiple measures. This may deter their use of performance data to promote quality of care.<sup>68</sup> Research found that most purchasers consider at least three categories of performance indicators (e.g., service quality, consumer satisfaction, and HEDIS) and that each of these categories can have multiple measures.<sup>18, 22, 61, 64, 65</sup> This abundance of data makes comparing information across plans difficult, even prohibitive, and ultimately makes purchasing decisions more complicated.<sup>69</sup> According to Hibbard et al., stakeholders have an emerging interest in NCQA accreditation, which integrates several characteristics in a single, easy-to-understand measure.<sup>65</sup> Along these lines, the National Quality Forum initiative to develop a common set of core measures for national use is viewed by purchasers, policymakers, consumer advocates, and other constituencies with strong and growing interest.<sup>70, 71</sup>

In addition, purchasers sometimes question the reliability and validity of data, complaining for instance that performance data about plans published in different report cards often are inconsistent.<sup>72</sup> Research also shows that purchasers express concerns about hospital outcomes measurement methodology and question whether the data are timely and valid.<sup>65</sup>

Purchasers also often report that performance data are not appropriate for their needs. For example, purchasers have noted that the HEDIS measurement set does not address factors important to them and their constituents, such as plan financial stability, costs of care, geographic access to providers, and quality of customer service.<sup>65</sup> Moreover, while HEDIS aggregates data at the health plan level, some purchasers have expressed a greater interest in obtaining quality data at the provider level.<sup>22</sup> This may be especially important for purchasers in health care markets served by a limited number of large provider groups or networks.

### **Financial Issues**

The relatively high cost of engaging in quality improvement initiatives appears to be another important barrier.<sup>72</sup> In fact, as purchasers become more proactive in evaluating quality, they may need to make significant organizational changes or increase resources devoted to health care.<sup>60</sup> Purchasers may also have to acquire knowledge of managed care in order to pursue quality-related objectives. Business coalitions and large purchasers may have sufficient market clout and the ability to take a long-term view on health care, and are certainly in a better position than smaller purchasers to improve quality and engage in quality initiatives.<sup>22, 74</sup>

### **User Preferences**

Although consumers' choices may be affected by information on quality, they appear to act primarily on the basis of costs when selecting health plans. Several surveys have indicated that consumers value cost more than measures of quality.<sup>20, 72, 74</sup> Consumer preferences may in turn encourage purchasers to prioritize cost over quality and thus limit their interest in value-based purchasing, or lead them to see VBP mainly as a tool for negotiating less expensive premiums.<sup>20, 72</sup>

## **IMPACT OF VALUE-BASED PURCHASING**

Some evidence suggests that purchasers are making efforts to include quality in their purchasing decisions. From a policy perspective, however, it is important to understand whether and to what extent value-based purchasing initiatives are changing the activities of providers and insurers and, most important, whether these efforts are having an impact on quality outcomes. To date the small amount of literature does not clarify these issues.

### **Changing Providers' Behaviors?**

In a 1993 Foster Higgins survey of 102 managed care organizations and 127 health care providers on their perception of the health care marketplace, 69 percent of respondents ranked price as the most critical factor for success in the marketplace, while only 20

percent considered a quality improvement strategy to be important.<sup>75</sup> According to the survey findings, many providers believe that purchasers focus primarily on price rather than quality when making health care purchasing decisions. Data from the 2001 Sixth Annual Washington Business Group on Health/Watson Wyatt Survey appear to confirm this.<sup>76</sup> Most providers and health plans surveyed were convinced that employers are concentrated on costs, and fewer than half believed that employers consider quality to be an important factor in selecting and evaluating plans. Managed care organizations and health care providers, however, currently appear to place more emphasis on and be more engaged in quality improvement than 10 years ago. Recently, Scanlon et al. asked plan medical directors of 24 managed care organizations about the degree to which these organizations were working to take responsibility for the quality of care and service they provide.<sup>77</sup> Research found that managed care organizations were revamping their management structures and building the technical capacity for quality improvement, suggesting that these organizations are responding to external pressures to be involved in such activities. However, the extent to which these pressures are coming from purchasers is not clear.<sup>77</sup>

### **Affecting Quality of Care?**

To date, there have been very few studies that track changes in quality of care. Research has been conducted recently to measure the impact of the Buyers Health Care Action Group initiative known as Choice Plus on costs and quality.<sup>28</sup> The study analyzed program outcomes, comparing data from one year before the implementation with data from the initiative's first and second years. Several variables, such as the number of enrollees, premiums, and quality indicators for selected chronic conditions and preventive services, were taken into account. Despite the limited time frame considered, research showed that, while overall health care costs increased slightly less than the national rate, measures for quality of care were stable or improved moderately over the study period.<sup>28</sup>

In their synthesis of past research on purchasers' behaviors, Fraser and McNamara concluded that, beyond anecdotal evidence, little is known about whether purchasers' value-based activities have an impact on clinical quality and quality outcomes.<sup>60</sup> As experts advocate, "systematic, objective, qualitative, and quantitative research" that gauges the impact of these initiatives on quality of care will be essential in making purchasers conscious of the value of quality improvement and willing to take more significant steps to pursue it.<sup>60</sup>

### **CONCLUSIONS**

Recently, concrete efforts supported by both public and private institutions and organizations have made all stakeholders more sensitive to the problems of quality and

safety of care, as well as to the costs of care. Most agree that the health care system needs a new framework to address these issues. Understanding and identifying who is qualified and willing to take the lead in this process is crucial. By wielding their considerable purchasing power, public and private purchasers might be able to hold health care providers and insurers accountable for both the cost and quality of the health services they deliver. Many purchasers are already taking steps in this direction. Indeed, they are starting to factor quality into the decision-making process by incorporating performance data when choosing health plans and providers.

More research is needed to investigate the following important issues. First, research is necessary to determine the extent to which value-based purchasing strategies are currently being pursued and which types of strategies are being implemented. Second, research should be done to help define the factors that foster or impede these efforts. Ongoing value-based purchasing programs should be investigated to identify the initiatives and specific tools that have enabled them to grow. Concurrently, an endeavor should be made to determine which barriers are most frequently encountered by purchasers, so that actionable strategies can be selected and developed. Third, research should elucidate how providers and insurers perceive value-based purchasing activities and whether these initiatives are modifying their health care behaviors. Finally, methodologies should be developed to measure more systematically the extent and outcomes of value-based purchasing in terms of both quality and cost.

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## **APPENDIX. METHODOLOGY**

A comprehensive search of publications related to value-based purchasing was performed. All searches were restricted to English-language publications. First, the Medline and HealthStar databases were searched for articles from 1995 to March 2002. Since value-based purchasing is variously defined, the search was conducted using variations on the following keyword terms: value, purchasing, purchaser, quality, management, health, care, improving, medical, employer, employee, consumer, insurance, measurement, performance, business, coalition, plans, benefit, HEDIS, CAPHS, and NCQA. Selected papers and abstracts were thoroughly reviewed and assessed for relevant content, and additional articles were identified from accompanying texts and references. The second component of the search involved reviewing non-journal sources, including non-journal publications and websites. Proceedings and reports of governmental agencies, such as the Agency for Health Care Research and Quality; non-profit organizations, such as the National Health Care Purchasing Institute, the Foundation for Accountability, The Commonwealth Fund, and the Milbank Memorial Fund; and business consortia, such as the National Business Coalition on Health; were taken into account. Finally, selected opinion leaders and experts involved in value-based purchasing activities were asked to contribute additional materials they thought to be related to the study objectives.

## RELATED PUBLICATIONS

In the list below, items that begin with a publication number are available from The Commonwealth Fund by calling our toll-free publications line at **1-888-777-2744** and ordering by number. These items can also be found on the Fund's website at **www.cmwf.org**. Other items are available from the authors and/or publishers.

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**#635** *How Does Quality Enter into Health Care Purchasing Decisions* (May 2003). Neil I. Goldfarb, Vittorio Maio, Chureen T. Carter, Laura Pizzi, and David B. Nash. This issue brief gauges the extent of the nascent value-based purchasing movement and identify obstacles to achieving broader engagement and results.

**#620** *Smallpox Vaccinations: The Risks and the Benefits* (April 2003, Web publication). Rena Conti. Prepared for the 2003 Commonwealth Fund/John F. Kennedy School of Government Bipartisan Congressional Health Policy Conference, this issue brief argues that offering voluntary smallpox vaccinations to the public presents benefits that must be weighed against associated medical, logistic, and economic risks. Policymakers must navigate complex tensions between scientific and political uncertainty, and between the government's role in protecting its citizenry while guaranteeing individuals' rights to self-determination.

**#619** *The Nursing Workforce Shortage: Causes, Consequences, Proposed Solutions* (April 2003, Web publication). Patricia Keenan. Prepared for the 2003 Commonwealth Fund/John F. Kennedy School of Government Bipartisan Congressional Health Policy Conference, this issue brief argues that projected long-term nursing shortages will create still greater cost and quality challenges, and that without increased payments from public or private purchasers, health care institutions will most likely have to make tradeoffs between investing in staffing and pursuing other quality-improvement efforts.

**#615** *Balancing Safety, Effectiveness, and Public Desire: The FDA and Cancer* (April 2003, Web publication). Rena Conti. Prepared for the 2003 Commonwealth Fund/John F. Kennedy School of Government Bipartisan Congressional Health Policy Conference, this issue brief discusses the challenges the FDA faces in balancing the need to ensure that cancer drugs are safe and effective against pressure to make therapies available quickly.

**#614** *The Business Case for Tobacco Cessation Programs: A Case Study* (April 2003, Web publication). Artemis March, The Quantum Lens. This case study looks at the business case for a smoking cessation program that was implemented through the Group Health Cooperative (GHC), a health system and health plan based in Seattle.

**#613** *The Business Case for Pharmaceutical Management: A Case Study* (April 2003, Web publication). Helen Smits, Barbara Zarowitz, Vinod K. Sahney, and Lucy Savitz. This case study explores the business case for two innovations in pharmacy management at the Henry Ford Health System, based in Detroit, Michigan. In an attempt to shorten hospitalization for deep vein thrombosis, Henry Ford experimented with the use of an expensive new drug, low molecular weight heparin. The study also examines a lipid clinic that was created at Henry Ford to maximize the benefit of powerful new cholesterol-lowering drugs.

**#612** *The Business Case for a Corporate Wellness Program: A Case Study* (April 2003, Web publication). Elizabeth A. McGlynn, Timothy McDonald, Laura Champagne, Bruce Bradley, and Wesley Walker. In 1996, General Motors and the United Auto Workers Union launched a comprehensive preventive health program for employees, LifeSteps, which involves education, health appraisals, counseling, and other interventions. This case study looks at the business case for this type of corporate wellness program.

**#611** *The Business Case for Drop-In Group Medical Appointments: A Case Study* (April 2003, Web publication). Jon B. Christianson and Louise H. Warrick, Institute for Healthcare Improvement. Drop-in Group Medical Appointments (DIGMAs) are visits with a physician that take place in a supportive group setting, and that can increase access to physicians, improve patient satisfaction, and increase physician productivity. This case study examines the business case for DIGMAs as they were implemented in the Luther Midelfort Mayo System, based in Eau Claire, Wisconsin.

**#610** *The Business Case for Diabetes Disease Management at Two Managed Care Organizations: A Case Study* (April 2003, Web publication). Nancy Dean Beaulieu, David M. Cutler, Katherine E. Ho, Dennis Horrigan, and George Isham. This case study looks at the business case for a diabetes disease management program at HealthPartners, an HMO in Minneapolis, Minnesota, and Independent Health Association, an HMO in Buffalo, New York. Both disease management programs emphasize patient and physician education, adherence to clinical guidelines, and nurse case management.

**#609** *The Business Case for Clinical Pathways and Outcomes Management: A Case Study* (April 2003, Web publication). Artemis March, The Quantum Lens. This case study describes the implementation of an outcomes center and data-based decision-making at Children's Hospital and Health Center of San Diego during the mid-1990s. It examines the business case for the core initiative: the development of a computerized physician order entry system.

**#623** *The Business Case for Quality: Case Studies and An Analysis* (March/April 2003). Sheila Leatherman, Donald Berwick, Debra Iles, Lawrence S. Lewin, Frank Davidoff, Thomas Nolan, and Maureen Bisognano. *Health Affairs*, vol. 22, no. 2 (*In the Literature* summary). In this article, the authors call for changes in health care payment policies to provide financial rewards to parties who invest in the development and implementation of improvements in health care

**#606** *Health Plan Quality Data: The Importance of Public Reporting* (January 2003). Joseph W. Thompson, Sathiska D. Pinidiya, Kevin W. Ryan, Elizabeth D. McKinley, Shannon Alston, James E. Bost, Jessica Briefer French, and Pippa Simpson. *American Journal of Preventive Medicine*, vol. 24, no. 1 (*In the Literature* summary). The authors present evidence that health plan performance is highly associated with whether a plan publicly releases its performance information. The finding makes a compelling argument for the support of policies that mandate reporting of quality-of-care measures.

**#603** *From Place to Place: Learning from Innovations in Health Policy* (January 2003). Karen Davis. In this essay—a reprint of the president's message from the Fund's *2002 Annual Report*—the author discusses the variety of ways that the Fund is supporting state-led efforts to expand health insurance coverage, extend drug benefits to seniors, foster the healthy development of children, raise nursing home quality, and improve the care provided to underserved populations. Her overview shows that learning from cross-state and cross-national experiences can prompt bold solutions to longstanding problems within our nation's health care system.

**#578** *Exploring Consumer Perspectives on Good Physician Care: A Summary of Focus Group Results* (January 2003, Web publication). Donna Pillittere, Mary Beth Bigley, Judith Hibbard, and Greg

Pawlson. Part of a multifaceted Commonwealth Fund-supported study, “Developing Patient-Centered Measures of Physician Quality,” the authors report that consumers can understand and will value information about effectiveness and patient safety (as well as patient-centeredness) if they are presented with information in a consumer-friendly framework.

**#563** *Escape Fire: Lessons for the Future of Health Care* (November 2002). Donald M. Berwick. In this monograph, Dr. Berwick outlines the problems with the health care system—medical errors, confusing and inconsistent information, and a lack of personal attention and continuity in care—and then sketches an ambitious program for reform.

*Achieving and Sustaining Improved Quality: Lessons from New York State and Cardiac Surgery* (July/August 2002). Mark R. Chassin. *Health Affairs*, vol. 21, no. 4. Copies are available from *Health Affairs*, 7500 Old Georgetown Road, Suite 600, Bethesda, MD 20814-6133, Tel: 301-656-7401 ext. 200, Fax: 301-654-2845. Available online at <http://www.healthaffairs.org/readeragent.php?ID=/usr/local/apache/sites/healthaffairs.org/htdocs/Library/v21n4/s8.pdf>.

*Improving Quality Through Public Disclosure of Performance Information* (July/August 2002). David Lansky. *Health Affairs*, vol. 21, no. 4. Copies are available from *Health Affairs*, 7500 Old Georgetown Road, Suite 600, Bethesda, MD 20814-6133, Tel: 301-656-7401 ext. 200, Fax: 301-654-2845. Available online at <http://www.healthaffairs.org/readeragent.php?ID=/usr/local/apache/sites/healthaffairs.org/htdocs/Library/v21n4/s9.pdf>.

*Factors Affecting Response Rates to the Consumer Assessment of Health Plans Study Survey* (June 2002). Alan M. Zaslavsky, Lawrence B. Zaboriski, and Paul D. Cleary. *Medical Care*, vol. 40, no. 6. Copies are available from Paul D. Cleary, Department of Health Care Policy, Harvard Medical School, 180 Longwood Avenue, Boston, Massachusetts 02115, E-mail: [cleary@hcp.med.harvard.edu](mailto:cleary@hcp.med.harvard.edu).

**#539** *Improving Health Care Quality: Can Federal Efforts Lead the Way?* (April 2002). Juliette Cubanski and Janet Kline. This issue brief, prepared for the 2002 Commonwealth Fund/Harvard University Bipartisan Congressional Health Policy Conference, discusses the ways in which various federal agencies can work to improve health care quality for all Americans. Available online only at [www.cmwf.org](http://www.cmwf.org).

**#535** *Assessing the Threat of Bioterrorism: Are We Ready?* (April 2002). Patricia Seliger Keenan and Janet Kline. This issue brief, prepared for the 2002 Commonwealth Fund/Harvard University Bipartisan Congressional Health Policy Conference, examines federal preparedness, state and local infrastructure, congressional actions to improve preparedness, and regulatory and legal policies regarding the threat of bioterrorism in the United States. Available online only at [www.cmwf.org](http://www.cmwf.org).

**#534** *Room for Improvement: Patients Report on the Quality of Their Health Care* (April 2002). Karen Davis, Stephen C. Schoenbaum, Karen Scott Collins, Katie Tenney, Dora L. Hughes, and Anne-Marie J. Audet. Based on the Commonwealth Fund 2001 Health Care Quality Survey, this report finds that many Americans fail to get preventive health services at recommended intervals or receive substandard care for chronic conditions, which can translate into needless suffering, reduced quality of life, and higher long-term health care costs.

**#520** *Quality of Health Care in the United States: A Chartbook* (April 2002). Sheila Leatherman and Douglas McCarthy. This first-of-its-kind portrait of the state of health care quality in the United States documents serious gaps in quality on many crucial dimensions of care: lack of preventive care, medical mistakes, substandard care for chronic conditions, and health care disparities. The chartbook is based on more than 150 published studies and reports about quality of care.

*A 58-Year-Old Woman Dissatisfied with Her Care, Two Years Later* (March 27, 2002). Anne-Marie Audet and Erin Hartman. *Journal of the American Medical Association*, vol. 287, no. 12. Copies are available from Anne-Marie Audet, M.D., The Commonwealth Fund, 1 East 75th Street, New York, NY 10021-2692, E-mail: ama@cmwf.org.

*Delivering Quality Care: Adolescents' Discussion of Health Risks with Their Providers* (March 2002). Jonathan D. Klein and Karen M. Wilson. *Journal of Adolescent Health*, vol. 30, no. 3. Copies are available from Jonathan D. Klein, Strong Children's Research Center, Division of Adolescent Medicine, Department of Pediatrics, University of Rochester School of Medicine and Dentistry, 601 Elmwood Avenue, RM 4-6234, Rochester, NY, Tel: 585-275-7660, E-mail: jonathan\_klein@urmc.rochester.edu.

**#503** *Accessing Physician Information on the Internet* (January 2002). Elliot M. Stone, Jerilyn W. Heinold, Lydia M. Ewing, and Stephen C. Schoenbaum. In this field report, the authors analyzed 40 websites that offer information about physicians. Finding many instances where websites had incomplete, missing, and possibly inaccurate or outdated data, the authors conclude that health care accrediting organizations, health plans, hospitals, and local and national industry organizations and associations should make efforts to improve the information on the Internet, saying that it is a potential valuable tool for consumers.

**#528** *The APHSA Medicaid HEDIS Database Project* (December 2001). Lee Partridge, American Public Human Services Association. This study (available on the Fund's website only) assesses how well managed care plans serve Medicaid beneficiaries, and finds that while these plans often provide good care to young children, their quality scores on most other measures lag behind plans serving the commercially insured.

*For-Profit and Not-for-Profit Health Plans Participating in Medicaid* (May/June 2001). Bruce E. Landon and Arnold M. Epstein. *Health Affairs*, vol. 20, no. 3. Copies are available from *Health Affairs*, 7500 Old Georgetown Road, Suite 600, Bethesda, MD 20814-6133, Tel: 301-656-7401 ext. 200, Fax: 301-654-2845, www.healthaffairs.org.

*Improving Quality, Minimizing Error: Making It Happen* (May/June 2001). Elise C. Becher and Mark R. Chassin. *Health Affairs*, vol. 20, no. 3. Copies are available from *Health Affairs*, 7500 Old Georgetown Road, Suite 600, Bethesda, MD 20814-6133, Tel: 301-656-7401 ext. 200, Fax: 301-654-2845, www.healthaffairs.org.

**#456** *A Statistical Analysis of the Impact of Nonprofit Hospital Conversions on Hospitals and Communities, 1985-1996* (May 2001). Jack Hadley, Bradford H. Gray, and Sara R. Collins. In this study, the authors analyze the effects of private, nonprofit hospital conversions that occurred between 1985 and 1993 by comparing converting hospitals to a control group of statistically similar private nonprofit hospitals that were estimated to have a high probability of conversion, but did not convert over the observation period. The report is available online only at www.cmwf.org.

**#455** *The For-Profit Conversion of Nonprofit Hospitals in the U.S. Health Care System: Eight Case Studies* (May 2001). Sara R. Collins, Bradford H. Gray, and Jack Hadley. This report examines the 87 for-profit conversions of nonprofit hospitals in the years 1985-1994, more than one-third of which took place in three states, and nearly half of which were in the Southeast. The report is available online only at www.cmwf.org.

*Measuring Patients' Expectations and Requests* (May 1, 2001). Richard L. Kravitz. *Annals of Internal Medicine*, vol. 134, no. 9, part 2. Copies are available from Richard L. Kravitz, Center for Health Services Research in Primary Care, University of California, Davis, 4150 V Street, PSSB Suite 2500, Sacramento, CA 95817, E-mail: rlkravitz@ucdavis.edu.

*Current Issues in Mental Health Policy* (Spring 2001). Colleen Barry. *Harvard Health Policy Review*, vol. 2, no. 1. Adapted from an issue brief prepared for the John F. Kennedy School of Government/Commonwealth Fund Bipartisan Congressional Health Policy Conference in January 2001. Available online at <http://hcs.harvard.edu/~epihc/currentissue/spring2001/barry.html>.

*Health Plan Characteristics and Consumers' Assessments of Quality* (March/April 2001). Bruce E. Landon et al. *Health Affairs*, vol. 20, no. 2. Copies are available from *Health Affairs*, 7500 Old Georgetown Road, Suite 600, Bethesda, MD 20814-6133, Tel: 301-656-7401 ext. 200, Fax: 301-654-2845, [www.healthaffairs.org](http://www.healthaffairs.org).

*Patient Safety and Medical Errors: A Road Map for State Action* (March 2001). Jill Rosenthal and Trish Riley. Copies are available from the National Academy for State Health Policy, 50 Monument Square, Suite 502, Portland, ME 04101, Tel: 207-874-6524, Fax: 207-874-6527. Available online at [www.nashp.org/GNL37.pdf](http://www.nashp.org/GNL37.pdf).

**#446** *The Quality of American Health Care: Can We Do Better?* (January 2001). Karen Davis. In this essay—a reprint of the president's message from the Fund's *2000 Annual Report*—the author looks at health care quality: how to define it, how to measure it, and how to improve it.

*Envisioning the National Health Care Quality Report* (2001). Committee on the National Quality Report on Health Care Delivery, Institute of Medicine. Copies are available from the National Academy Press, 2101 Constitution Avenue, NW, Box 285, Washington, DC 20055, Tel: 800-624-6242, E-mail: [www.nap.edu](http://www.nap.edu).

**#428** *Getting Behind the Numbers: Understanding Patients' Assessments of Managed Care* (November 2000). Margaret Gerteis, Teresa Harrison, Cara V. James, Michael Manocchia, and Susan Edgman-Levitan, The Picker Institute. Using data from the Medicare Managed Care Consumer Assessment of Health Plans Survey, this report examines nine managed care plans and identifies plan-level practices that contribute to a positive experience for plan members.

**#427** *Effective Clinical Practices in Managed Care: Findings from Ten Case Studies* (November 2000). Suzanne Felt-Lisk and Lawrence C. Kleinman. Using HEDIS effectiveness-of-care indicators, this summary analysis of ten high-performing managed care plans shows that the plans' ability to improve their performance is influenced by both their overarching approach to managed care and by the specifics of their quality improvement efforts.

**#409** *Perspectives on PPO Performance Measurement from Consumers, PPO Leaders, and Employers* (September 2000). Liza Greenberg, American Accreditation Healthcare Commission/URAC. This report presents findings from meetings with key players in the preferred provider organization (PPO) quality arena, in an attempt to determine if PPOs are capable of reporting standardized health care quality data using nationally recognized measures.

**#380** *Educating Medicaid Beneficiaries About Managed Care: Approaches in 13 Cities* (May 2000). Sue A. Kaplan, Jessica Green, Chris Molnar, Abby Bernstein, and Susan Ghanbarpour. In this report, the authors document the approaches used and challenges faced in Medicaid managed care educational efforts in 13 cities across the country.

*The Public Release of Performance Data: What Do We Expect to Gain? A Review of the Evidence* (April 12, 2000). Martin N. Marshall, Paul G. Shekelle, Sheila Leatherman, and Robert H. Brook. *Journal of the American Medical Association*, vol. 283, no. 14. Copies are available from Genuine Article/Institute for Scientific Information, 3501 Market Street, Philadelphia, PA 19104, Phone: 1-800-336-4474 option 5, Fax: 215-386-4343, E-mail: [ids@ininet.com](mailto:ids@ininet.com).

*Public Release of Performance Data: A Progress Report from the Front* (April 12, 2000). Arnold M. Epstein. *Journal of the American Medical Association*, vol. 283, no. 14. Copies are available from Genuine Article/ Institute for Scientific Information, 3501 Market Street, Philadelphia, PA 19104, Phone: 1-800-336-4474 option 5, Fax: 215-386-4343, E-mail: ids@ininet.com.

**#366** *National Medicaid HEDIS Database/Benchmark Project: Pilot-Year Experience and Benchmark Results* (February 2000). Lee Partridge and Carrie Ingalls Szlyk, American Public Human Services Association. This report summarizes the first year of a project to create national summaries of state Medicaid HEDIS data and national Medicaid quality benchmarks against which each state can measure its program's performance.

*To Err Is Human: Building a Safer Health System* (2000). Linda T. Kohn, Janet M. Corrigan, and Molla S. Donaldson (eds.). This book, produced by the Institute of Medicine's Committee on Quality of Health Care in America, concludes that medical errors are far more common, and deadly, than previously thought. Copies are available from the National Academy Press, 2101 Constitution Avenue, NW, Lockbox 285, Washington, DC 20055, Tel: 888-624-8373, Fax: 202-334-2451, E-mail: zjones@nas.edu.

*Regulating Managed Care: Theory, Practice, and Future Options* (2000). Stuart H. Altman, Uwe E. Reinhardt, and David R. Shactman. Copies are available from Jossey-Bass, 350 Sansome Street, San Francisco, CA 94104, Phone: 415-433-1740, Fax: 415-433-0499, E-mail: webperson@jbp.com, www.josseybass.com.

**#359** *Quality Management Practices in Medicaid Managed Care* (November 10, 1999). Bruce Landon and Arnold Epstein. *Journal of the American Medical Association*, vol. 282, no. 18. In their study of Medicaid plan quality, the authors discover that plans serving predominantly Medicaid beneficiaries were more likely than those with mainly commercial enrollments to provide services to patients that address their special needs, including those related to transportation, literacy, and nutrition.

**#342** *Income Levels of Bad-Debt and Free-Care Patients in Massachusetts Hospitals* (July/August 1999). Joel S. Weissman, Paul Dryfoos, and Katharine London. *Health Affairs*, vol. 18, no. 4. In this study, the authors find that most hospital patients whose expenses are written off to bad debt had incomes below the federal poverty level and thus were presumably eligible for either public programs or hospital-based free care. This disputes the common notion that these patients are able to pay their bills.

