THE EVOLUTION OF ARIZONA'S INDIGENT CARE SYSTEM

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Prologue: Over five years ago, Arizona embarked on a program to combine elements of competition with provision of health care for the state's poor population. This experiment, the Arizona Health Care Cost Containment System (AHCCCS), has been closely monitored by the health policy community and has received conflicting evaluations from its observers. AHCCCS has been called a "remarkable success" by some health analysts, while others, including lead author Bradford Kirkman-Liff, have noted that the program may have led to increased problems with access to health care for the poor (Health Affairs, Winter 1985). The General Accounting Office recently reported that AHCCCS was plagued with such problems as poor management and implementation, bankruptcies of some contracting health maintenance organizations (HMOs), and little monitoring of data. In this article, the authors trace the evolution of AHCCCS and discuss the problems that have haunted the program. If a lesson is to be learned, it is that "the environment is not static for these programs," said coauthor Jon Christianson. The health care organizations that expected to be the major players in AHCCCS are not. Today's Arizona program operates somewhat differently and does not meet the same objectives of true competition as originally envisioned by the program's architects. Bradford Kirkman-Liff, an associate professor at Arizona State University, received his doctorate in public health from the University of North Carolina. Christianson, who wrote about the Arizona experiment in its early stages for Health Affairs in 1983, is a professor in the Division of Health Services Research, University of Minnesota School of Public Health. Formerly on the faculty at the University of Arizona, he holds a doctorate in economics from the University of Wisconsin. Tracy Kirkman-Liff is a health care consultant and former director of the Arizona Coalition for Cost-Effective Quality Health Care. The Kirkman-Liffs are currently on a one-year leave to Erasmus University, Rotterdam, The Netherlands, and are helping to develop HMO-like systems there.

ver the past five years, Medicaid programs have aggressively implemented a variety of competitive strategies designed to control costs. These strategies frequently have involved some combination of prospective, often capitated, financing and managed care. Faced with programmatic changes of this nature, providers are likely to respond with varying degrees of effectiveness. Some will survive and a few will even prosper, while others will not. Since the behavioral responses of providers can have a major influence on the outcomes of competitive Medicaid strategies, it is important to understand how delivery systems evolve under new financing models and the implications of this evolution for public policy. In this article, we describe and analyze the changes over the past five years in the participating providers for a major, well-publicized experimental program: the Arizona Health Care Cost Containment System (AHCCCS).

The Anticipated Delivery System

AHCCCS is a demonstration program started in October 1982 that requires participating health care organizations (HCOs) to compete through a bidding/negotiation process for capitated, prepaid contracts to provide care to the poor population. Arizona, the only state that did not adopt traditional Medicaid, was granted a freedom-of-choice waiver from the Health Care Financing Administration (HCFA) to implement the demonstration. There is no fee-for-service option under the program; all of those considered indigent choose from among contracting HCOs or are assigned to an HCO.

Prior to implementation of AHCCCS, county governments were responsible for providing acute and long-term care to the poor, subject to state-imposed minimum standards. Eligibility standards, covered benefits, scope of services, and organizational arrangements for delivery of services varied considerably across counties. The legislative supporters of AHCCCS viewed these county delivery systems as bureaucratic, inflexible, and lacking in incentives for cost containment. AHCCCS was seen as a means of "opening up" these existing systems to the private sector under conditions that would contain costs. Counties could participate in the bidding process under the same requirements imposed on private organizations, in part to defuse potential county opposition to the program. However, AHCCCS legislative proponents, in general, expected that county delivery systems could not compete with private HCOs in attracting large numbers of enrollees or containing costs.

Private-sector contractors with AHCCCS were expected to come from two sources: existing health maintenance organizations (HMOs) and new HCOs formed to serve AHCCCS and private-sector enrollees. However, there was limited potential for existing HMOs to play a major

role in the program. At the time AHCCCS was established, there were only six HMOs in Arizona, two located in Phoenix and four in Tucson. Furthermore, the Phoenix HMOs were in the process of merging during the AHCCCS implementation period. The ability of the existing HMOs to enroll large numbers of the poor also was constrained by their structures: all were based on multispecialty group practices with limited facilities. AHCCCS sponsors realized that, for the program to be successful in creating a competitive environment involving the private sector, it would need to stimulate the formation of a significant number of new HCOs. It was expected that these new HCOs would consist primarily of individual practice associations (IPAs) sponsored by physicians and hospitals. To encourage their development, the AHCCCS legislation opened the bidding process to virtually any organization that could provide or arrange for services, without regard to previous organizational experience with prepaid financing. It also stated its intent to make winning AHCCCS bidders available to county and state employees as well as to private-sector groups.

All bidders were required to specify an upper bound for the number of enrollees they would accept, and it was expected that multiple contractors would be chosen for each geographically defined service area. In the event that HCOs could not be formed quickly enough, the state intended to provide technical assistance and, if necessary, actually assemble interested providers into consortia for contracting purposes. This did not prove necessary, since twenty distinct organizations participated in the first round of bidding, with seventeen being awarded contracts. Multiple winning bidders were chosen in most of Arizona's fourteen counties.

There are interesting contrasts between the anticipated delivery system for AHCCCS enrollees and the actual system generated by this initial round of bidding. Furthermore, there have been numerous changes in the composition and sponsorship of the organizations contracting with AHCCCS over the course of the program. In discussing this evolution, the reasons it occurred, and its broader implications, we rely on several sources of data, including structured interviews conducted with AHCCCS officials, contractors, legislators, and others in the spring of 1982 and again in 1986 (with an emphasis on contractor interviews in the later year); AHCCCS documents, newspaper reports, and other published materials; and internal documents and financial studies provided by some contractors.

Evolution Of The Delivery System

The various organizations that have participated as contractors in AHCCCS can be placed in four groups (Exhibit 1).² The first group is composed of urban-based HMOs that enrolled only employed groups

Exhibit 1
AHCCCS Plan Characteristics

Type of plan (March 1987)	Primary location	Largest enrollment (approximate)	Length of participation (years)
		(approximate)	(years)
For-profit IPA	* * 1	(5.000	
APIPA (pre-Chapter 11)	Urban	65,000	3
Health Care Providers	Urban	18,000	2.5
Dynamic Health Services	Rural	2,200	4
Western Sun	Rural	5,000	3
(Graham Co.) Doctors Health Plan	Rural	1,200	4.5
Gila Medical Services	Rural	2,200	4.5
AHCCCS Patients Choice	Urban	30,000	3.5
County hospital			
Maricopa Co. Health Plan	Urban	44,000	4.5
Pima Co. Health Plan	Urban	12,000	4.5
Pinal General Hospital	Rural	3,800	4.5
Coconino Co. Health Care	Rural	1,000	1
Preexisting HMO			
El Rio Santa Cruz	Urban	6,600	3
CIGNA	Urban	4,000	2
PimaCare	Urban	1,500	1
Nonprofit hospital			
Northern Arizona Family Health Plan	Rural	3,400	4.5
Comprehensive AHCCCS Plan	Rural	1,900	4.5
Samaritan Health Service	Rural	3,400	4.5
Family Health Plan of Northeast Arizona	Rural	2,200	3.5
Mercy Care Plan	Urban	24,000	3.5
Phoenix Health Plan	Urban	5,100	3.5
University Famli-Care	Urban	5,600	3.5
APIPA (post-Chapter 11)	Urban	37,000	1.5

prior to AHCCCS. The second group, initially the largest, consists of for-profit, IPA-model HCOs started by physicians and other entrepreneurs in direct response to the AHCCCS program. The third group comprises county government delivery systems that chose to bid for AHCCCS contracts. The last group includes nonprofit hospitals that sponsored HCOs in association with their medical staffs.

The retreat of the HMOs. Two HMOs in Phoenix and two in Tucson participated in the initial bidding and were awarded contracts. Three of the HMOs agreed to accept relatively small numbers of enrollees. The fourth, which was based in a neighborhood health center located in a low-income area of Tucson, bid for a large number of program eligibles relative to its delivery system capacity. During the first year of the program, the Phoenix HMOs merged and the other Tucson HMO was purchased by a national HMO firm. These organizations had withdrawn entirely from AHCCCS by the start of its third year. The neighborhood health center HMO experienced financial difficulties in the program's

third year, resulting in the assignment of its contracts to one of its major creditors, a nonprofit hospital. It continued to participate in AHCCCS as a subcontractor for the provision of ambulatory care to enrollees in an HCO sponsored in part by this hospital.

Since the implementation of AHCCCS, thirteen new HMOs have been formed in Arizona. All serve, or intend to serve, only private-sector enrollees and have not submitted bids to become AHCCCS contractors. As a result, except for one AHCCCS plan that successfully developed a private-sector program, AHCCCS HCOs and private-sector HMOs compete in totally separate markets. This clearly was not the intent of the AHCCCS legislation. However, program administrators were unsuccessful in implementing provisions in the legislation calling for enrollment of

employed groups with AHCCCS contractors.

HMO managers cite a variety of factors to explain their reluctance to participate in AHCCCS. Some believe that participation simply requires too many organizational adjustments to be profitable under prevailing reimbursement rates. Also, managers of the established HMOs that participated in AHCCCS felt that their plans attracted a disproportionate number of enrollees with serious chronic medical conditions during the program's first year. In their view, this "adverse selection" made it difficult for their HMOs to win contracts at profitable bid prices, and they were not willing to subsidize AHCCCS participation in the long run with profits from employed groups. In general, compared to other groups, the paperwork requirements for AHCCCS patients were seen as excessive, and program administration was viewed as overly bureaucratic and somewhat capricious.

Managers of new HMOs also saw the drawbacks to AHCCCS participation as outweighing the potential revenue gain from additional enrollment. They felt that established contractors, because of their experience in dealing both with program administrative demands and with the specific medical needs and cultural characteristics of a low-income population, had a competitive advantage in the AHCCCS program. Also, they feared that rapid enrollment of AHCCCS eligibles would stigmatize them as "low-income" health plans and make it more difficult to build private-sector enrollment. AHCCCS reimbursement rates were not sufficient, in their view, to compensate for these considerations.

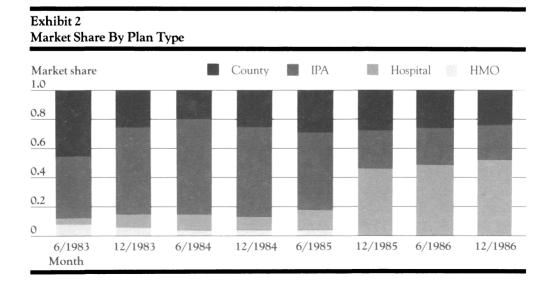
The rise and fall of the entrepreneurs. Six physician-initiated IPAs were awarded contracts in the first year of AHCCCS. The largest was Arizona Physicians IPA (APIPA), intended to be a statewide AHCCCS delivery system. The second largest entrepreneurial plan, Health Care Providers (HCP) won contracts to provide services in Phoenix and one adjacent rural county. The other four entrepreneurial HCOs were relatively small and served rural counties. None of these HCOs had any previous private-sector enrollment; they were established explicitly to

bid for AHCCCS contracts, and most intended to expand into the

private sector under provisions in the AHCCCS legislation.

In the first year of AHCCCS, the entrepreneurial HCOs enrolled slightly more than 40 percent of AHCCCS beneficiaries, and, by the second year, their market share had grown to nearly 70 percent (Exhibit 2). At this point, APIPA alone enrolled nearly 40 percent of all program eligibles. During this second year, a seventh entrepreneurial plan (AHCCCS Patients' Choice, or APC) also became a contracting provider. By the end of the second year, however, it was clear that attempts to offer AHCCCS contracting plans to the private sector were not likely to be successful. Furthermore, several entrepreneurial HMOs were experiencing financial problems.

In the summer of the third year of AHCCCS, APIPA went through a Chapter 11 bankruptcy and ultimately was acquired by a nonprofit hospital partnership. Health Care Providers was dissolved under a Chapter 5 bankruptcy, as was Western Sun, a rural entrepreneurial HCO. In the fourth year, Dynamic Health Services, another rural HCO, also experienced financial difficulties and was purchased by a nonprofit hospital HCO (Mercy Care Plan). Only three entrepreneurial plans survived, and their overall share of the program's total enrollment dropped to 22 percent (Exhibit 2). The largest of these plans (APC) was purchased by Lincoln National Corporation and recently reported an outstanding debt of about \$10.5 million. Lincoln National was required by AHCCCS officials to provide \$5 million in new capital for APC to avert an immediate contract cancellation in addition to \$3.5 million already supplied in response to a previous order of the Arizona Depart-



ment of Insurance.3

The rise and fall of the entrepreneurial plans can be attributed to a combination of factors, some inherent in the AHCCCS program and others related to individual plan management. Since AHCCCS could not rely on the limited number of existing HMOs to meet its needs, it had little choice but to base its initial delivery system on newly formed HCOs. The short implementation period dictated by the legislation meant that its major providers not only were inexperienced but also were unable to develop adequate financial controls and management information systems prior to program initiation. Furthermore, the state provided little in the realm of technical assistance during the first two years, as its resources were consumed by the demands of implementing AHCCCS and solving its operational problems. There were no systematic attempts by program administrators to monitor the financial condition and business practices of contracting providers. Thus, by the time the seriousness of the financial problems faced by the entrepreneurial HCOs became evident, there was little that AHCCCS staff could do to reverse them, short of granting substantial increases in reimbursement rates.

The problems created by the compressed implementation schedule for AHCCCS were compounded by questionable internal management decisions on the part of some of the HCOs. For instance, it seems likely that many entrepreneurial HCOs based their low bid prices on the belief that participation in AHCCCS eventually would provide them with access to employed groups, as intended in the legislation. When this access did not materialize, plan development and operational expenses could not be spread over other membership sources.

Also, in most cases, the entrepreneurial HCOs formed their physician panels by contracting with every agreeable physician; little or no effort was made to identify efficient providers or negotiate discounted rates. The drawbacks of this policy were magnified by the failure of the HCOs to put in place management information systems that could identify high-utilizing providers or service areas where costs were out of control. Rather than modifying available systems for this purpose, many HCOs attempted to develop their own software. This process took longer than projected so that, for the first two years, the HCOs had very limited information for use in monitoring utilization or forecasting costs. Without this information, some of the entrepreneurial HCOs suffered from what one AHCCCS administrator labeled "cash-flow hypnosis." They did not accurately estimate their incurred, but not reported, expenses and therefore made inappropriate dividend distributions or diverted cash to other business ventures that proved less than successful.⁴

Some of these decisions may have reflected weak management structures. For example, APIPA had a chairman of the board, a president, and an executive director; in addition, it employed a management consulting

firm and a data management firm, both with their own cadres of local executives. Under this structure, lines of authority were overlapping and decision-making responsibility was often unclear.

The financial failure of the entrepreneurial plans had substantial ripple effects throughout the AHCCCS program. Subcontracting hospitals suffered major financial setbacks, allegedly incurring as much as \$37 million in bad debt due to HCO bankruptcies. Enrollees also may have been affected adversely if, as some observers allege, their care was delayed or denied by physicians anticipating the bankruptcy of particular AHCCCS plans. Interestingly, most parties expressed the belief that access to care improved once bankruptcy was declared and that it remained at acceptable levels during the bankruptcy proceedings.

In the long run, the bankruptcies may have strengthened the management of the AHCCCS program. They highlighted the need for regular financial audits and more intensive plan oversight activities, and led to major improvements in these areas. They also demonstrated that AHCCCS administrators could transfer large numbers of enrollees between plans on limited notice. This probably made the threat of contract termination for poor performance more credible for the remaining contractors.

Survival of the county systems. A significant portion of the indigent population in Arizona has continued to receive care from county government delivery systems under AHCCCS (Exhibit 2). Four county governments, including the counties containing Phoenix and Tucson, were among the first seventeen AHCCCS contractors. During the program's first year, counties enrolled approximately 45 percent of AHCCCS eligibles. This percentage declined in subsequent years and appears to have stabilized at approximately 25 percent of program eligibles.

While county government delivery systems survived the establishment of the AHCCCS program and, in fact, did better than many legislators expected, the transition was not always smooth. A major factor in the decision by county governments to pursue AHCCCS contracts was their desire to provide a continued flow of patients to county-owned hospitals. In the three years prior to the initiation of AHCCCS, the Maricopa County (Phoenix) and Pima County (Tucson) hospitals experienced declines in occupancy rates of 14 percent and 40 percent, respectively. Under these circumstances, it was feared that failure to secure an AHCCCS contract would force the closure or sale of the hospitals. The counties were successful in securing AHCCCS contracts, but the occupancy rates of their hospitals continued to fall during the first three years of AHCCCS—by 11.5 percent in Maricopa County and 21 percent in Pima County. While a downward trend in occupancy rates was clearly established prior to AHCCCS, county officials blamed the program almost entirely for the politically sensitive layoffs of hospital personnel after AHCCCS began.

The deteriorating situation facing the urban county hospitals also had a direct impact on the reported finances of the county-sponsored HCOs. In Pima County, where occupancy rates declined most precipitously, the contract between the HCO and the hospital was redefined to yield reimbursement rates more favorable to the hospital. This contributed to a reported \$1.6 million in losses on the part of the HCO from July 1984 through December 1985. During this period, the county hospital reported surpluses that it attributed in large part to the managerial changes it had implemented to control costs. On the other hand, Maricopa County's HCO reported earnings of \$2.6 million from July 1984 through December 1985 and a resulting equity of \$4.4 million.⁷

The county hospitals and county-sponsored HCOs are interrelated both politically and organizationally, making it difficult to assess the actual financial performance of the county HCOs. However, they do appear to have competed with private HCOs in the AHCCCS program without major subsidization from county tax revenues, and they have performed well in quality-of-care reviews undertaken by AHCCCS administration. The role of the county health departments in the delivery of medical care to the indigent continues to be substantial, at least in Arizona's major urban areas, and exceeds the early expectations of

AHCCCS legislative proponents.

Growing dominance of hospital-controlled plans. In the initial contracting period, two HCOs were controlled by nonprofit hospitals and their medical staffs. In addition, when no qualified bidder was identified in one rural county, AHCCCS administrators asked a local hospital to organize a prepaid plan. In total, the three hospital HCOs enrolled less than 5 percent of all AHCCCS eligibles during the first program year. Four additional nonprofit hospital HCOs were developed for the second round of bidding, but their total membership was still relatively limited during the second year—about 15 percent of all AHCCCS enrollees. The importance of hospital-based HCOs in the AHCCCS program increased dramatically during the third and fourth years, paralleling the decline of the entrepreneurial HCOs. By the beginning of the fifth year of AHCCCS, over 50 percent of AHCCCS eligibles were enrolled in hospital-sponsored HCOs.

There is little doubt that hospital-sponsored HCOs were established and grew in response to the financial problems and ultimate demise of the entrepreneurial plans. Initially, hospitals adopted a "wait and see" attitude toward the AHCCCS program. They were uncertain about their abilities to organize and manage prepaid organizations and about the impact that the AHCCCS program ultimately would have on them. Consequently, they followed a strategy that allowed participation in AHCCCS yet, in their view, still provided some protection against its

financial risks: they subcontracted with AHCCCS winning bidders, and particularly with the entrepreneurial HCOs, under predominantly fee-for-service arrangements. The cash-flow problems and subsequent bank-ruptcies of the entrepreneurial HCOs exposed the shortcomings of this strategy. Hospital subcontractors experienced delayed payments and, eventually, received only a fraction of their billed charges when the HCOs initiated bankruptcy proceedings. In effect, while the entrepreneurial HCOs were at risk for the capitalization of their plans, hospital subcontractors bore financial losses through nonpayment of claims that were substantially larger than plan capitalization costs.

Their problems as subcontractors under AHCCCS led major nonprofit hospitals in Arizona to consider whether to become primary contractors as full-fledged AHCCCS HCOs or to forgo serving AHCCCS clients entirely. The existing, and projected, excess capacity among Arizona hospitals was an important factor in this decision. For example, from 1979 to 1985 the average occupancy rate for short-term. nongovernmental hospitals in Phoenix fell from 81 percent to 63 percent; for some individual nonprofit hospitals, the decline was even more dramatic. In an environment where competition for patients was becoming increasingly intense. AHCCCS enrollees represented new patients for most of these hospitals; indigent persons in Arizona had previously received their inpatient care primarily at county facilities. As long as participation as a primary AHCCCS contractor allowed hospitals to break even on outpatient services and cover the costs of staffing an otherwise empty bed, hospitals could realize financial gains from participating in AHCCCS as a primary contractor. At a minimum, they could protect themselves from incurring large losses in the future, due to bankruptcies of primary contractors. Combined with other potential benefits, including enhancement of medical staff organization, strengthening of referral patterns, and support of residency programs, this motivated nonprofit hospitals to develop and acquire AHCCCS HCOs. The increasing participation of these organizations helped to stabilize the AHCCCS delivery system and preserved private-sector alternatives to the county HCOs for AHCCCS enrollees.

AHCCCS Today

After five years, the medical care delivery system under AHCCCS differs markedly from the system anticipated by its architects as well as from the system that existed during the program's initial year. For instance, many of the entrepreneurial HCOs that were formed by physicians specifically to participate in AHCCCS no longer exist. Some have been liquidated, while others have been acquired by nonprofit hospitals. Also, while it was hoped that the HMOs that existed in Arizona prior to

AHCCCS would provide a foundation for the new indigent medical care delivery system, these organizations participated to only a minor degree in the first year of the program and no longer hold AHCCCS contracts. Nor have newly formed HMOs sought AHCCCS contracts to supplement their private-sector enrollments. Particularly in Arizona's urban areas, the current delivery system for AHCCCS is sponsored and administered almost entirely by county governments and nonprofit hospitals.

This narrowing of the spectrum of HCO sponsorship has resulted in a delivery system composed of organizations with greater experience and financial stability than the plans that served beneficiaries during the program's first year. In addition, the surviving HCOs have more sophisticated management information systems and more effective utilization review and quality assurance programs than existed in the larger contractors during the initial years of AHCCCS. The increased uniformity among HCOs in these and other areas reflects the more stringent requirements imposed by AHCCCS administration in response to past problems, as well as more intensive monitoring of contractor performance. As a result, contract management activities by program administrators have become more routine and less "crisis-oriented."

Why has the AHCCCS delivery system, based initially on a competitive model with few restrictions on the entry of new organizations, evolved in this manner? In our view, the present configuration of providers is not simply a result of the poor management practices that contributed to the demise of many of the newer, inexperienced contracting HCOs. Instead, we believe it reflects a series of fundamental program decisions made by both political leaders and AHCCCS administrators.

A major objective of AHCCCS initially was to obtain the lowest possible capitated price for the services it purchased. Competitive bidding along with direct negotiation were put to use in an aggressive attempt to hold down reimbursement rates and program costs. In this environment, it may be difficult for certain types of providers to survive even though they may be cost-effective within their organizational constraints. In the AHCCCS program, the HCOs that have survived over time are those that exist within a larger organization that controls an excess supply of hospital beds. Both the nonprofit hospital HCOs and the county-sponsored HCOs can "purchase" inpatient care for rates set internally by their parent organizations. In contrast, HMOs and entrepreneurial HCOs must purchase inpatient services from hospitals at whatever rates they can negotiate. Even if they concentrate enrollee inpatient use at a very limited number of hospitals, they are unlikely to secure the same discounted rates for volume that hospitals or county governments can charge internally for enrollees in their plans. Thus, by being part of a vertically integrated health care organization, the nonprofit hospitals

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and county-sponsored HCOs may enjoy a competitive advantage under AHCCCS that even the most effectively managed entrepreneurial HCOs and HMO plans cannot overcome.

Over time, AHCCCS program administrators appear to have reached a compromise between reliance on competitive processes to contain costs and a desire for increased program stability. Clearly, some stability in the delivery system of any public medical care program is desirable to facilitate the enrollment of beneficiaries, minimize program administrative costs, and maintain continuity of care. However, some program instability is required in any meaningful competitive process where losers, as well as winners, are created and where the threat of new competitors is genuine.

As HCOs failed, AHCCCS placed increasing emphasis on stabilizing its delivery system. Under the initial competitive bidding process, while the odds of being selected a winning bidder were high, there was still some risk involved even for organizations previously holding contracts. This became clear in the second round of bidding, when AHCCCS decided not to renew Maricopa County Health Plan's contract to serve much of the medically indigent/medically needy population in Phoenix. Despite public protests and the initiation of legal action by the county, all eligibles enrolled in its plan during the first year were transferred to other contractors. As AHCCCS evolved, the contracting process became more formalized, essentially forcing greater homogeneity among plans in quality assurance, utilization review, and information systems. AHCCCS staff began negotiating directly with HCOs using a "best and final" offer process, thus reducing the uncertainty faced by the plans relative to a strict competitive bidding approach.

This strategy had an indirect impact on the setting in which health care services were provided to program enrollees. While AHCCCS reduced the health care segregation of Arizona's indigent population relative to that experienced under the prior county-based system, it has not achieved its goal of enrolling employed groups with AHCCCS contractors or of attracting private-sector HMOs as participating providers. If private-sector HMOs continue to avoid AHCCCS, and AHCCCS contractors cannot expand their enrollment to include private employed groups, the current distinction between AHCCCS plans and "middleclass HMOs" will persist. As a result, AHCCCS enrollees will continue to receive their care primarily in clinics operated by nonprofit or county hospitals, or from physicians who have established facilities directed primarily at serving AHCCCS patients. We expect that other programs will experience similar outcomes if they place a strong initial emphasis on establishing and maintaining low capitated rates, particularly in communities where the private-sector market has not peaked with respect to HMO enrollment.

All indigent health care programs structured around competing HCOs must strike a balance between price competition and stability of their delivery systems. In practice, this balance will vary with individual program environments, the intensity of pressures for immediate savings, and the willingness and ability of program officials to manage the consequences of programmatic instability. Therefore, while the evolution of the delivery system under the competitive model adopted by Arizona is instructive, different patterns of development are certainly possible in other settings.

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NOTES

- 1. For an overview of the AHCCCS system and its implementation, see Jon B. Christianson and Diane G. Hillman, Health Care for the Indigent and Competitive Contracts: The Arizona Experience (Health Administration Press, 1986); Jon B. Christianson, Diane G. Hillman, and Kenneth R. Smith, "The Arizona Experiment: Competitive Bidding for Indigent Medical Care," Health Affairs (Fall 1983): 88–103; Bradford L. Kirkman-Liff, "Refusal of Care: Evidence from Arizona," Health Affairs (Winter 1985): 15–24; and Bradford L. Kirkman-Liff, "Health Care Under AHCCCS," Health Services Research 20 (1985): 245–266.
- 2. This article does not discuss the participation of University of Arizona physicians as a contracting HCO. The motivations of the groups that chose to participate in the first round of the AHCCCS competitive bidding process and the factors that influenced their submitted bid prices are discussed in Jon B. Christianson, "Provider Participation in Competitive Bidding Systems for Indigent Medical Care," *Inquiry* 21 (1984): 161–177 and Bradford L. Kirkman-Liff, Jon B. Christianson, and Diane G. Hillman, "An Analysis of Competitive Bidding by Providers for Indigent Medical Care Contracts," *Health Services Research* 20 (1985): 549–577.
- 3. See "AHCCCS Firm Saves Contract: \$5 Million Bailout Averts Cancellation," Arizona Republic, 9 April 1987.
- 4. The distributions of dollars made by APIPA and Health Care Providers to their principals are among several issues that are being considered in ongoing Grand Jury investigations under the direction of the Arizona Attorney General's office. In some cases, these distributions were substantial. For instance, about \$1.5 million was allegedly withdrawn from Health Care Providers during October and November 1983 by its three principal partners for activities characterized by a governor's aide as "personal use." See W. LaJeunesse, "Health Firm's Funds Siphoned, Audit Says," *Arizona Republic*, 22 March 1984.
- 5. Arizona Hospital Association, "AHCCCS Bankruptcy Bad Debts of Arizona Hospitals" (internal memorandum, 1987).
- 6. American Hospital Association Guide to the Health Care Field, 1980-1986 editions.
- 7. Peat, Marwick, Mitchell and Co., Report to Arizona Health Care Cost Containment System on Plan Operational and Financial Reviews, vol. I (December 1986).
- 8. For a detailed discussion of the role that nonprofit hospitals have played in AHCCCS, see Jon B. Christianson, Bradford L. Kirkman-Liff, Teddylen A. Guffey, and James R. Beeler, "The Behavior of Nonprofit Hospitals in a Competitive Environment: The Arizona Indigent Care Experiment," Hospital and Health Services Administration, forthcoming.
- 9. AHA Guide to the Health Care Field, 1980-1986 editions.

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