Defined-Contribution Health Insurance Products: Development And Prospects

A new model is working its way into the benefit offerings of large employers, signaling a shift from traditional managed care plans.

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ABSTRACT: Defined-contribution health insurance products have received considerable recent attention, stimulated by double-digit increases in health plan premiums and employers' desire to get their employees more involved in health care purchasing decisions. Existing products typically feature a consumer health spending account, a major medical or other insurance policy, and the use of the Internet to support consumer decision making. They vary in their use of provider networks, provider payment approaches, the specific design of spending accounts, marketing strategies, and infrastructure investment. The companies producing these products are now at a critical juncture. They could grow rapidly over the next few years, be acquired by existing health plans, or fail if they do not deliver on their promises.

DEFINED-CONTRIBUTION HEALTH INSURANCE products (DCPs) that make use of Internet technologies to varying degrees have garnered an enormous amount of attention over the past two years. They have benefited from aggressive marketing by their developers and other proponents and from substantial premium increases by managed care organizations (MCOs). Press releases, health care newsletter descriptions, newspaper interviews, and even conferences have been devoted to them.[1] Stock market analysts and consulting firms have produced reports for their clients that outline "threats and opportunities" believed to be inherent in

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these products.[2] Policy analysts have expressed concern about whether these products will further segment the employer insurance market, expose employees to unanticipated financial consequences of their health care decisions, facilitate the shifting of a greater portion of health care costs from employers to employees, and require new state or federal regulation.[3] Summarizing these concerns in dramatic fashion, Uwe Reinhardt speculated that Xerox's "trial balloon" proposal to restructure its health benefits along a specific defined-contribution approach, if adopted broadly by employers, "could totally unravel American health care."[4]

Somewhat surprisingly, given the amount of attention DCPs have received, most of what we know about them relates to general product designs and intentions, along with the credentials of the individuals and venture capital firms involved in their gestation. These products remain in the developmental or very early adoption stages; the enthusiasm of employers and employees for them remains largely untested; and their eventual impact on the health insurance market, much less "American health care," is highly uncertain.

In this paper we contrast several DCPs with respect to their characteristics and development processes, making use of information gathered from media accounts and product Web sites and from conference presentations by product developers, venture capitalists, and employers. However, we rely primarily on in-person and telephone interviews conducted from October 2000 through June 2001 with more than thirty persons nationwide, using structured interview protocols tailored to each person's vantage point. We interviewed chief executives from DCPs, product innovators, marketing managers, and medical directors. We also interviewed representatives from venture capital firms that had invested in DCPs, employers who offered DCPs, and providers who had agreed to participate in DCP networks (where networks were part of DCP designs). This paper reflects the varying perspectives of these respondents.

What Is Under The Defined-Contribution Umbrella?

The term *defined-contribution health insurance product* is itself ambiguous, being only one of many terms used to describe similar but not entirely overlapping concepts.[5] Part of the confusion arises from different historical uses of the "defined contribution" idea. Three decades ago Paul Ellwood and colleagues advocated a type of defined contribution in their proposed "health maintenance strategy," while seven years later Alain Enthoven advocated defined contributions on the part of employers as a component of his "managed competition" model.[6] Employers were encouraged to contribute the same amount toward any health insurance option chosen by an

employee, offer multiple options to stimulate competition, and play an active role in evaluating health plans and managing the competitive choice process. In contrast, the DCPs that are emerging in the current marketplace respond to employers' desire to reduce their involvement in managing health benefits and shift more decision making to employees.

DCPs that are being closely followed by employers include Definity Health, Destiny Health, HealthMarket, Lumenos, MyHealthBank, and Vivius. These products differ from traditional managed care products in several ways: (1) A portion of the employer's contribution toward employee health benefits is placed in an account from which the employee purchases services with tax-advantaged dollars. (2) A major medical or some other type of "wraparound" insurance policy is purchased with a portion of the employer's contribution. (3) Employees could, in any given year, need to spend their own dollars to cover an "actuarial gap" between the cost of services purchased using dollars in the "health spending account" (the DCPs use different names for this account) and the services covered by the insurance policy. (4) The Internet is used to facilitate and support employees' purchasing decisions.

Not surprisingly, given these common features, the DCPs tell similar stories concerning the problems of the present health care system and how their products would address them.[7] They point out that in the current system consumers have little knowledge regarding the cost of medical services and minimal incentives to consider cost in purchasing decisions. MCOs have failed, in their opinion, because they insulate consumers from the cost of care and, to control costs, impose restrictions and limitations that are objectionable to both consumers and employers. They argue that placing more decision making in the hands of employees, with appropriate tools to support that decision making, would increase employees' satisfaction with health care benefits, constrain medical care cost inflation (since consumers would be "spending their own money"), and ultimately reduce employers' administrative costs.

In their early development, many DCPs highlighted the role of the Internet in their product designs.[8] Dot-com enterprises of all types were proliferating, venture capital was being poured into dot-com development, and DCPs saw decided advantages to positioning themselves as part of the growing "new economy." As a result of recent instability in the technology sector of the economy, the Internet dimension of a DCP may no longer be viewed as positively by investors or by employers. Thus, DCPs now tend to portray the Internet as simply a convenient platform for managing the product or providing consumers with a "value-added" product dimension.

What Distinguishes Among Defined-Contribution Products?

DCPs differ in the emphasis they place on various dimensions of product design and strategy (Exhibit 1). However, any attempt to capture those differences should, at best, be considered a snapshot of a moving target. Many of the DCPs already have changed their characteristics and strategic approaches in response to initial experiences in raising venture capital, establishing provider networks,

EXHIBIT 1
Comparisons Of Defined-Contribution Health Insurance Plans

Plan	Venture capital source/amount	Personal health account?	Major medical?	Provider payment	Provider network
Destiny Health (2000 in U.S.; Chicago)	None; U.S. expansion of South African company	Yes; used for services not covered under insured benefit; carried over each year and follows customer when leaves plans	Yes; insurance also covers chronic illness medications and outpatient surgery	FFS	Private Health Care Systems (PHCS) provides discounted provider list; United Behavioral Health for mental health/ substance abuse and Advance PCS for pharmacy
HealthMarket (2000, Connecticut)	General Atlantic Partners; Whitney and Company; Chase Capital Partners, Acacia Venture Partners, Navis Partners; $57 million Round 1	Yes; provides first-dollar coverage for routine and preventive care; unused funds roll over	Yes	FFS; episode payments	Contracts with over 175,000 physicians and 3,000 hospitals nationwide; uses various existing networks
MyHealthBank (1999, Portland)	FBR CoMotion Venture Capital, LLC; $3 million	Yes; dollars equal what remains after purchasing insurance product; unused funds roll over	Yes	FFS	Regence BCBS network in Oregon; Regence BS network in Washington
Vivius (2000, Minneapolis)	Acacia Venture Partners, Delphi Ventures, Rahn Group, Salix Ventures, Affinity Capital Management, Sapient Capital; $12 million Round 1	Yes; surplus can be used toward copayments, other services; unused balance may roll over depending on tax-exemption rules to health care contributions	No; wraparound policy for services unavailable from network or for out-of-town services	Per member per month; FFS	Provider contracts developed by Vivius or insurer partners; consumer constructs personal network from list
Definity Health (1998, Minneapolis)	Merrill Lynch Venturer, Baen Capital, Aon, Kohlberg Kravis Roberts, Alta Partners, Psilos, Toronto Dominion Investments, Brightstone Capital; $23 million Round 1, and $25 million Round 2	Yes; unused balance rolls over for future health expenses of employees depending on tax-exemption rules for health care contributions	Yes	FFS	Preferred One/Beech Street; Merck Medco
Lumenos (1999, Alexandria, VA)	KBL Healthcare Ventures, Internet HealthCare Group, Johnson and Johnson Development Co., Draper Fisher Jurvetson, Liberty Partners, Novartis, Allianz; $4.4 million Round 1; $43 million Round 2	Yes; employer contributes annually to Health Savings Account (HSA); unused balance rolls over	Yes	FFS	No; contract with PHCS to provide members with list of providers offering discounts

EXHIBIT 1
Comparisons Of Defined-Contribution Health Insurance Plans (cont.)

	Internet use	Target market	Revenue source(s)	Other
Destiny Health	Member can track personal account status and access PHCS data	Small to midsize companies; began in Chicago with plans to expand to other markets; multiple benefit designs to serve different employer needs; 30+ employers with 500 members as of May 2001	Premiums from employers on fully insured product	Level of personal medical fund selected by consumer affects plan premium; product sold through brokers
HealthMarket	Personal "home page"; customer service; health care information; provider comparisons; Internet use not required	Companies of all sizes; national rollout; 1,000 enrollees as of June 2001	Percent of premium to cover administration expenses for insurance product; enrollment-based fee from contracting insurer for episode system	Two-part and three-part options available; three-part option features an episode allowance approach
MyHealthBank	Used by employees for plan selection, enrollment, and plan management including allocating defined contribution for premium or rollover reimbursement account	Oregon employers with 26–250 employees; 13 employers with 1,500 enrolled as of April 2001; entry in Washington State in August 2001	Percent of premium from partnering insurers (Regence BCBS of Oregon and Regence BS of Washington)	Consumers purchase a Regence plan option and select coverage; remaining funds can be spent on products and services chosen by consumer
Vivius	Use by consumers to construct network, track expenditures; chat rooms, bulletin boards, provider sites	Large and midsize employers; Kansas City and Twin Cities planned initially, but now in Kansas City in October 2001	Transaction fees included in provider price	Consumer designs benefit coverage (such as copays); no claims processing needed under original physician payment model; actuarial help provided to physicians in setting payment levels
Definity Health	Personal health advocate service—view account, get provider information, medical library, nurse contact, chat rooms, prices	Large employers; Medtronic began January 2001; also Aon Corporation, Ridgeview Medical Center; total enrollment 5,000–6,000 members as of July 2001	Per employee per month employer charge for administration of benefit; charge to employer for securing catastrophic insurance; optional employer charge for additional Internet services	Employee premium contribution depends on coverage options choices; personal account forfeited if employee switches plans or companies
Lumenos	Health news, provider information, health evaluation and references, chat rooms, buying club, health-e programs	Self-insured large employers with 300 members as of July 2001; additional employers announced late summer 2001	Administrative charge to employer, per employee per month	MSA available to employers with 50 or fewer employees; contributions tax deductible; at age 65 money can be withdrawn from health account and used for any purpose; will sell Internet tools to employers separately

SOURCE: Authors' compilation.
NOTES: BCBS is Blue Cross Blue Shield. MSA is medical savings account.

and marketing to employers. As they receive feedback from early-adopting employers and their employees, further changes are likely.

■ **Provider networks.** The most common provider network strategy (pursued by Destiny Health, Definity Health, Lumenos, and HealthMarket) has been to sign contracts with a variety of companies that offer "ready-made" networks. Destiny Health and Lumenos

both have contracts with Private Health Care Systems (PHCS), which offers a list of providers with specified discounts.[9] Because Destiny Health offers a fully insured product, network contracts are critical. Although Lumenos contracts with PHCS, it does not refer to this as a network arrangement, believing that "network" has a negative connotation relating to its use by MCOs. Instead, it portrays PHCS as providing consumers with information that they can use in shopping for services.

MyHealthBank's approach to provider networks is shaped by its strategy of "partnering" with insurers to facilitate market entry. Its partners offer provider contracts, underwriting, sales, member services, and claims processing. MyHealthBank contributes customer support and software applications for managing the health spending account.

Provider contracting under Vivius was initially driven in part by its unique approach to provider payment (since modified, as described below), which required that Vivius negotiate individual contracts with providers in each community it entered. At first, Vivius intended to roll out its product in Kansas City and the Twin Cities. It recently put its efforts in the Twin Cities on hold, in part because it was not able to negotiate satisfactory contracts with hospitals in that community.

■ **Provider payment.** Four of the six DCPs planned, from the beginning, that providers would be paid on a fee-for-service (FFS) basis; Vivius and HealthMarket initially proposed different approaches. Vivius developed twenty-two categories of providers (physicians and hospitals) to be paid a fixed amount per member per month. Under this approach, providers agreed to deliver all necessary services covered in their contracts to Vivius members who selected them to be part of personalized provider networks. Consumers essentially built their own care networks, choosing from among providers holding contracts with Vivius. Providers set their own payment rates, which varied by the consumer's age and sex, and could change these rates as frequently as desired. Because providers set their own rates, could change rates in response to experience, and were not at risk for costs in any other service category, Vivius argued that they were not exposed to substantial risk. Administrative costs were minimized because claims processing and adjudication were not required. However, Vivius found that many providers wished to avoid any payment risk, so it now offers FFS payment to providers as its primary option. Providers set their own fee schedules, which are then converted, using actuarial techniques, to a per member per month price seen by consumers. Enrollees select providers based on this price, but providers are paid FFS.

HealthMarket initially developed a payment approach in which it established dollar allowances for episodes of care for established illnesses or conditions.[10] Consumers with those conditions would receive this allocation of dollars to use in "shopping" for providers. The providers would be paid FFS, but it was hoped that in the future they would compete by offering "package prices" based on the episode definitions developed by HealthMarket. This product option remains available, but another product design also has been developed that does not include episode allowances. It offers a spending account in combination with major medical insurance provided by carriers under contract to HealthMarket.

■ **Spending accounts.** All DCPs offer some type of consumer-directed spending account, but the structure of these accounts varies. Vivius again presents a unique approach, under which employers establish health care spending accounts for each employee. The employee then selects providers for each of the twenty-two categories of services that are projected to cover 90 percent of total spending (consumers purchase a "wraparound" insurance policy for the remaining 10 percent) and selects copayment levels. The impact of these choices is tracked for consumers on the Vivius Web site. Once the selections have been made, Vivius transfers dollars to the selected providers each month.

The spending accounts offered by the other DCPs vary by services covered and consumers' "ownership" of account balances at the end of the benefit year. For instance, Definity Health establishes a "personal care account" for each member, funded by the employer. Consumers can spend dollars from this account for standard medical services and, depending upon employers' customization of the Definity Health product, a wide range of other services, including acupuncture, hearing aids, laser eye surgery, and dental and vision care. However, only spending on more conventional medical services "counts toward" the deductible in the member's major medical policy. Any dollars remaining at the end of the year can be carried forward in the account for the following year. Under Definity Health's contract with Medtronic, a large employer in the Twin Cities, the balance of the account is forfeited if the employee leaves the company (the fund is considered a "retention tool" in this respect) or switches to another insurance option within the company.

In another example, Destiny Health covers all hospital expenses, outpatient surgery, and medications for chronic illness with no deductible, at a coinsurance rate chosen by the employer.[11] These are considered nondiscretionary expenses and therefore inappropriate to be paid for using a personal spending account. A "personal medical fund" is established to be used for all other expenses, with mem-

bers selecting its annual level. The dollars in this fund grow with interest and can be carried over into the next contract year. Importantly, members who leave the plan for any reason are paid the fund balance. Destiny Health considers "ownership" of the fund to be critical in providing incentives for employees to be cost-conscious.

■ **Marketing.** In their early stages of development, DCPs focused their efforts on creating understanding and legitimacy for their concept and its supposed advantages over traditional managed care. Recently, the DCPs formed an association (Consumer Driven Health Care Association) for the purpose of educating employers, policymakers, and the general public about DCP concepts. The association's first conference, held in Chicago in June 2001, was attended by the DCP firms as well as employer representatives and marketing personnel for several large MCOs that do not now offer a DCP.

The expectation is that in the beginning DCPs will be offered alongside traditional plans, except in the case of small employers. Definity Health and Lumenos are targeting large employers nationwide. As noted, Definity Health has been offered to Medtronic, a large medical device manufacturer, while Lumenos will soon be offered to Novartis employees. Novartis, a pharmaceutical manufacturer, also contributed venture capital funding to Lumenos. The advantage of targeting large employers is that the health benefit decisions of these companies are highly visible. If a large employer offers a DCP, the DCP can use this early-adopting employer to its advantage in marketing to other employers. In effect, its acceptance by a large, visible employer reduces the perceived "riskiness" to other benefit managers of adding a DCP option to their health benefit plans.

Another key advantage of targeting large, self-insured employers (that are exempt from provisions of the Employee Retirement Income Security Act, or ERISA) is possibly avoiding the need to underwrite a health insurance product. Also, DCPs serving this market segment do not need to devote resources to complying with state health insurance regulations; this provides them with a possible "first-mover" advantage in the DCP market.

Vivius plans a product roll-out targeted at large employers. However, it is largely pursuing a "wholesale," rather than a "retail," approach; for instance, it will be offered in Dallas as a franchised product of Texas Health Choice, an established MCO.

HealthMarket is pursuing a national roll-out strategy targeted at employers of all sizes. It offers fully insured products in five states and will soon expand to eight more states. It expects this product to be most attractive to small and midsize employers. It also markets its product design to large self-insured employers. A large purchaser

coalition in St. Louis has recently selected HealthMarket as a design option for its members.

Both Destiny Health and MyHealthBank target small to midsize employers and have initiated regional marketing efforts, with plans for rapid expansion nationally. They believe that the question of how to offer affordable health benefits to employees is most acute for employers of this size and therefore that these employers will be more receptive to new alternatives. Destiny Health, a U.S. subsidiary of a South African insurer, chose Chicago as its U.S. entry market because of the large number of small and midsize employers there, but it hopes to expand to other communities in the next two years. MyHealthBank originated in Oregon. When it decided to pursue "insurer partnerships," it looked locally, linking with Regence Blue Cross Blue Shield.[12] Its subsequent expansion into Washington State capitalized on its name recognition in the Northwest, but MyHealthBank also intends to expand nationwide as new insurer partners are identified.

■ **Infrastructure investment.** Some DCPs have invested substantial amounts in information technology to support model development. HealthMarket used venture capital funds to develop its episode allowance approach and also created a relatively sophisticated Web site for customer support. On this site, customers can access their account balances, compare the cost and quality of providers, and get their "what-if" questions answered. (For example, what would be the impact on my account if I sought a particular service from a particular provider?) HealthMarket contracts with Internet vendors for provider comparison data and general health care information.

Infrastructure development also has been an important part of implementing the Vivius model. Vivius developed its own software to allow customers to access their accounts and to track the impact of their choices on their available funds. Vivius offers information about each contracting provider (submitted by providers), and consumers can enter comments related to their experiences with specific providers in Internet bulletin boards.

The other DCPs have invested somewhat less in developing an internal information infrastructure. However, Lumenos, Definity Health, and MyHealthBank offer customers access to a wide variety of online health care information sources. These sources list providers and their discounts, offer comparative data on provider characteristics and performance, and contain information on health problems.[13] In contrast, Destiny Health has taken the position that consumers already have access to an ample amount of health care information on the Internet. It does not contract with any "health

content" Internet providers, to avoid the appearance of endorsing specific information sources. It is the only DCP that processes and pays all claims and does insurance underwriting in house, reflecting the status of its parent corporation as a "full-line" health insurer.

What Is The Current Status Of DCPs?

DCPs portray themselves as innovations that will fundamentally change the way in which consumers relate to the health care system. By and large, they are being developed by entrepreneurs with venture capital financing. The literature on entrepreneurship and the diffusion of innovations suggests that new start-up firms progress through predictable stages as they try to move from "idea" to "market" and that consumers of these products also move through stages of acceptance.[14] As one attempts to understand the developmental trajectory for DCPs (as is typically the case with most biomedical and medical device start-ups as well), the decisions of venture capital investors also must be considered.

Most DCPs are now making the transition from general marketing of the DCP concept to extensive direct marketing to employers. Before this could be done, the various "pieces" that make up a DCP had to be in place. DCPs with the least complicated designs (some interview respondents labeled these designs "evolutionary" rather than "revolutionary") therefore have moved more quickly to market. Vivius and HealthMarket have taken longer, even though they were among the first to receive venture capital funds. Their initial models required a more intensive investment of time and funds in information technology infrastructure. Also, in the case of Vivius, the need to construct networks of contracting providers community by community slowed its early development relative to that of other DCPs. Under its current "wholesale" approach, it uses provider contracts established by existing health plans and no longer needs to contract with providers per member per month. This has the potential to accelerate its market entry process in the future.

■ **Employer acceptance.** DCPs have been successful in creating concept awareness on the part of employers and, according to a Price Waterhouse survey, more than 50 percent of employers plan to shift to some kind of DCP over the next ten years.[15] Other surveys by benefit consultants have been less sanguine regarding likely employer acceptance.[16] Also, as of the end of 2000 very few employers actually offered DCPs to their employees. This began to change in the first six months of 2001, as DCPs announced contracts with several major employers for the upcoming benefit period.[17]

As might be expected, these early-adopting employers are proceeding cautiously. In January 2001 Medtronic offered Definity

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Health as a benefit option to 9,000 of its 26,000 employees. When Novartis initially decided to offer Lumenos as an option, it restricted the offering to a subgroup of retirees and reportedly is considering whether to offer Lumenos to all employees. The literature on innovation diffusion suggests that other employers could quickly follow the lead of the early adopters, depending on their experiences.[18] Benefit consultants believe that the recent downturn in the business climate, accompanied by a loosening of the labor market and continued high rates of managed care premium increases, could accelerate adoption. However, the fact that employers make health benefit decisions once each year will constrain the rate of diffusion of DCPs into employers' health benefit offerings.

In the few firms where they have been offered alongside other insurance options, DCPs appear to attract 10–20 percent of potential enrollees. However, in one case where Definity was offered along with a preferred provider organization (PPO), it enrolled approximately 80 percent of an 800-person group. It should be noted that early-adopting firms are likely to be especially supportive of the DCP concept and to believe that their employees will be attracted to it. Initial penetration rates might be lower in firms that make later decisions to offer DCPs. Also, there is no evidence in the United States concerning employee satisfaction with DCPs, the year-to-year retention of enrollees in DCPs, or DCPs' ability to affect long-term trends in health benefit costs. In this respect, DCPs provide actuarial projections suggesting cost reductions of varying amounts resulting from employees' "spending their own money" and providers' competing aggressively for the business of newly empowered, price-sensitive employees. However, some analysts have noted that considerable consolidation has occurred among providers in local markets and that providers have been increasingly successful in negotiating more favorable rates with health plans.[19] Thus, even if DCPs make consumers cost-conscious purchasers of health care, newly empowered consumers may be limited in their ability to stimulate price competition among newly consolidated providers.

■ **Venture capitalist support.** In addition to providing an attractive product to employers, the development of DCPs to date has been dependent on offering a product that attracts venture capital. With the exception of Destiny Health, funded by its South African parent, all of the DCPs solicited venture capital funds to cover the

costs of developing their concepts and bringing them to market. Some DCPs are now soliciting a second round of venture capital funding to cover the costs of a rapid scaling-up of marketing efforts. Definity Health recently announced the receipt of an additional $25 million in funding, an impressive show of support given the tightening of venture capital availability over the past eighteen months.[20]

Typically, major venture capitalists participate on the boards of the DCPs, representing their ownership interests. The venture capitalists we interviewed agreed that a normal term of investment is three to five years, although a somewhat longer time period would be reasonable. This means that the manager of a venture capital fund would hope to liquidate the fund's investment in a DCP by the end of that period, through a public stock offering, the sale of the fund's investment to another private investor, or the acquisition of the DCP by another company. This time frame puts pressure on DCPs to redesign their products quickly if they are not initially successful and to consider a variety of ways to generate revenues quickly. For example, it encourages partnerships that promise to accelerate product development and acceptance.

■ **Competitors' responses.** As already noted, some DCPs view large health insurers and MCOs as potential partners or customers rather than competitors. Under a partnership arrangement, the MCO would offer the DCP under its own "label." The DCP would operate in a manner parallel to Intel in the computer industry, providing product design and infrastructure for multiple insurers. For example, the Vivius chief executive has stated his company's intent to establish relationships with a few major carriers in every market it enters. Thus, some DCPs may not actively market their products directly to employers and therefore may not grow into stand-alone insurers in the future, if other alternatives seem more likely to provide the revenue growth and returns expected by venture capital investors. The advantage to health plans of partnering with a DCP, according to Forrester Research, is that it allows them to market a DCP one year earlier than would otherwise be the case.[21]

Some health plans have responded to DCP development by designing their own plan options that mimic components of DCPs. For instance, HealthPartners in the Twin Cities, where both Definity Health and Vivius are headquartered, is marketing its own "defined-contribution" options. Also, in a press release issued in February 2001, Blue Cross of California announced FlexScape, targeted at small employers, which it describes as "an array of health coverage programs that include an innovative 'defined contribution' financing approach."[22] In September 2001 Aetna announced the national roll-out of a DCP-like product called Health Fund.[23] Other health

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plans are said to be monitoring the development of DCPs with the option of purchasing a DCP that has garnered market acceptance.

DCPs may find competition arising from sources other than existing health plans. For example, large self-insured employers could create a "virtual" DCP through complementary contracts. The employer could establish a flexible spending account for employees, at the same time contracting with a firm that offers discounted arrangements with health care providers and with a provider of major medical insurance.[24] In so doing, it would have assembled the core elements of a DCP, especially if it provided links for employees to major Internet health content providers. It seems likely that most employers would find this approach to be more complicated and costly than contracting with DCPs, but the fact that it is a feasible option imposes competitive restraints on DCPs.

What Does The Future Hold?

Many of our interview respondents suggested that DCPs are now at a critical juncture. The DCPs generally agree with this assessment and believe that they need to diffuse rapidly over the next three to five years, or they will be preempted by look-alike products offered by existing health plans. They have several factors in their favor.

In his seminal work on the diffusion of innovations, Everett Rogers identifies conditions that support relatively rapid diffusion.[25] Many of these conditions arguably apply to DCPs. For example, "compatibility" with existing values or needs typically results in faster diffusion of an innovation. DCPs are now perceived by many employers as being compatible with the need to give employees a greater role in health benefit decisions and the purchase of health care. Research also indicates that innovations are more likely to spread quickly if they can be introduced on a trial basis. This clearly is the case for DCPs, since employers can offer them initially to subgroups of employees alongside existing benefit options. "Observability" is also important in that if early-adopter results are easily observable, others will adopt more rapidly. In the case of DCPs, employer networks, associations, and conferences provide mechanisms for the sharing of employer experiences. The Midwest Business Group on Health already has held a conference focusing on DCPs, and Medtronic has shared its early experience with Definity Health at several such venues.

Arrayed against these factors that support relatively rapid diffusion of DCPs are some daunting challenges, one of which is the perceived complexity of the DCP models.[26] Rogers concludes that innovations diffuse less rapidly if they are perceived to be difficult to understand and use. Some employers have expressed concerns that DCPs will be confusing to their employees and that employees consequently will make poor decisions in using funds from their personal health accounts. If they do, employers fear that this could lead employees to be dissatisfied with their health benefits. Addressing the complexity issue through education of employers and employees will be an ongoing challenge for DCPs.

A second major challenge awaits those DCPs that do experience initial rapid growth.[27] Even considering their venture capital support, by almost any conventional measure DCPs are now small companies. Research on organizations suggests that the relationship between size and failure can be complicated, with some types of firms at high risk of failure as they grow from small to midsize organizations. There are several possible reasons for this, including the need to restructure management (the "hand-off" from the founding DCP entrepreneur to the operational manager) and the potential for being "trapped in the middle" between more nimble start-up firms and better-financed, entrenched health insurance competitors.

That being said, the prospects for DCPs look better than for many of the dot-com firms they "grew up with" in the past three years. Several DCPs have moved to the operational stage and have held employers' interest. In addition, the recent slowdown in the U.S. economy and accompanying softening of labor markets may make benefit managers more willing to experiment with new approaches. Combined with rising health insurance premiums, this may accelerate the use of DCPs in the near term. However, the long-term prospects for employers' interest in DCPs, whether offered by start-up firms or established insurers, will depend on their ability to induce consumers to play an active role in containing health care costs, an objective that, while laudable, has yet to be achieved.

This research was supported by a grant from the Robert Wood Johnson Foundation's Changes in Health Care Financing and Organization (HCFO) Initiative, which is administered by the Academy for Health Services Research and Health Policy. The authors are indebted to all of their interview respondents and to Suzanne Toledo for her help.

NOTES

1. With respect to conferences, note, for example, "Defining 'Defined Contributions': New Directions for Employer-Sponsored Health Insurance Coverage" (Conference sponsored by the Center for Studying Health System Change, Washington, D.C., 10 October 2000); "2001: A Health Benefits Odyssey—Employer and Employee Roles in the Age of Consumer-Driven Health Care" (Conference sponsored by the Midwest Business Group on Health, Chicago, Illinois, 22–23 March 2001); and "Health Benefits at a Crossroads: The Defined Contribution Alternative" (Conference sponsored by the Consumer Driven Health Care Association and Express Scripts, Chicago, Illinois, 21–22 June 2001).
2. See, for instance, J. Peters and T. Faulkner, "Self-Directed Healthcare: Consumerism Hits Health Plan Purchasing" (Minneapolis: Dain Rauscher Wessels, 28 September 2000); D. Marhula and E. Shannon, "Defined Contribution Defined: Health Insurance for the Next Century" (Minneapolis: U.S. Bancorp Piper Jaffray, June 2000); S. O'Dell and M. Franz, "The Emerging Health Plan: Consumerized and Digitized" (Long Beach, Calif.: First Consulting Group, June 2000); and B. Holmes et al., "HMOs' eHealth Plan Threat," *Forrester Report* (January 2001).
3. "The Employer-Sponsored Health Insurance System: Repair It or Replace It?" *Health Care Financing and Organization News and Progress* (March 2000); *Defined Contributions: The Search for a New Vision*, Issue Brief 37 (Washington: Center for Studying Health System Change, April 2001); D. Moskowitz, "What's Keeping Employers from Adopting Defined Contribution Health Benefit Plans?" *Medicine and Health Perspectives on the Marketplace*, 13 November 2001; and S. Trude and P. Ginsburg, *Are Defined Contributions a New Direction for Employer-Sponsored Coverage?* Issue Brief 32 (Washington: HSC, October 2000).
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5. The references in Note 2 use terms such as "digital health plans," "risk defined contribution plans" and "self-directed health coverage" in discussing DCPs.
6. P. Ellwood et al., "Health Maintenance Organization Strategy," *Medical Care* 9, no. 3 (1971): 291–298; and A. Enthoven, "Consumer Choice Health Plan," *New England Journal of Medicine* 298, nos. 12 and 13 (1978): 650–658, 709–720.
7. D. Aquilina, "Will Consumer-Driven E-Health Plans Reward Physicians for Quality?" *QI Physician.com* (Parsippany, N.J.: Premier Healthcare Resource, Inc., December 2000).
8. S. Lutz and S. Henkind, "The Web Fuels Interest in Defined Contribution," *HealthPlan* 41, no. 6 (Nov/Dec 2000): 62, 64, 66.
9. As one example, Destiny Health completes its list of providers with contracts with Advance PCS (a pharmacy benefit manager), American Specialty Healthcare Networks (alternative medicine), United Behavioral Healthcare, and Eye Plan of America.
10. S. Wiggins and D. Emery, "Self-Directed Health Plans: Web-Enabled Alternatives to Traditional Managed Care," *Managed Care Quarterly* 9, no. 1 (2001): 33–40.
11. K. Lee, "South African–Style MSAs Make Inroads in U.S.," *Employee Benefit News* 15, no. 1 (2001): 13.
12. "Oregon Blues Embraces Defined Contribution in Venture with MyHealthBank," *Managed Care Outlook* (28 July 2000): 1–2.
13. For instance, Lumenos offers consumers "My e-checkup," a program to evaluate an individual's overall health and identify serious health risks. It partners with WellMed to offer "My Family Health File," where family health histories

can be stored securely online, and with IntegrativMedicine to offer "Health References," a source of information on health topics. "Health News" (a partnership with Reuters) provides new health-related stories daily, while "Health Calculators" (a partnership with WellMed) contains user-friendly self-assessment tools. "DocPlus" locates doctors and other health care systems, providing information about fees and feedback from other Lumenos members about their services, while "My Health Discounts" (a partnership with MedAdvantage) contains a list of discounted fees by provider. Lumenos also partners with DoctorQuality for a listing of doctors and hospitals that can be sorted by various service and quality criteria. "Talk" is an online forum maintained by Lumenos for members to share concerns.

14. The seminal work on the diffusion of innovations is E. Rogers, *Diffusion of Innovations*, 4th ed. (New York: Free Press, 1995). The literature on entrepreneurs and entrepreneurship is diffuse and growing rapidly. See D. Tansik and G. Wolf, "Entrepreneurial Roles in the Process of Technological Innovation," in *Advances in the Study of Entrepreneurship, Innovations, and Economic Growth*, Vol. 1 (Greenwich, Conn.: JAI Press, 1986), 115–127. For a more recent discussion of entrepreneurship, see Z. Acs, B. Carlsson, and C. Karlsson, eds., *Entrepreneurship, Small and Medium-Sized Enterprises, and the Macroeconomy* (Cambridge: Cambridge University Press, 1999).
15. A. Jaffee, "New Coverage Idea Gains Favor with Employers, Workers," *Business Journal of Kansas City*, 6 October 2000.
16. See, for instance, "No Rush to Defined Contribution," *Medicine and Health*, 19 March 2001, 4–5.
17. In the first Consumer Driven Health Care Association conference, a panel of DCP innovators discussed whether it was any longer a "good idea" to widely publicize the decisions of major employers to offer DCPs. The publicity advantages of the announcements, and that publicity's effect on the willingness of other employers to offer DCPs, were weighed against the disadvantages of waking up the "sleeping giant" health insurance industry.
18. See Rogers, *Diffusion of Innovations.*
19. C. Lesser and P. Ginsburg, *Back to the Future? New Cost and Access Challenges Emerge*, Issue Brief 35 (Washington: HSC, February 2001).
20. E. Wieffering, "Definity Gets $25 Million in Venture Capital," *Minneapolis Star Tribune*, 14 June 2001.
21. *Forrester Report*, 14.
22. "Blue Cross of California Is First Major Health Plan to Offer Defined Contribution Program to Small Employers," *BW HealthWire*, 27 February 2001; and J. Jacob, "Some Insurers Embracing Defined Contribution Plans," *American Medical News*, 12 March 2001, 28–29.
23. A. Gonzales, "Aetna Combines PPO with Health Savings Account," *Business Journal of Phoenix*, 17 September 2001.
24. M. Freudenheim, "Buyers 'Clubs' for Medical Services Crop Up," *New York Times*, 25 August 2000.
25. Rogers, *Diffusion of Innovations.*
26. D. Moskowitz, "What's Keeping Employers from Adopting Defined Contribution Health Benefit Plans?" *Medicine and Health*, 13 November 2000, 2.
27. D. Wholey, J. Christianson, and S. Sanchez, "Organizational Size and Failure among Health Maintenance Organizations," *American Sociological Review* (December 1992): 829–842.