

Results From a National Survey on Chronic Care Management by Health Plans

Soeren Mattke, MD, DSc; Aparna Higgins, MA; and Robert Brook, MD, ScD

The number of people in the United States with 1 or more chronic conditions is expected to grow from 141 million in 2010 to 171 million by 2030, which means that almost 1 in 2 Americans will suffer from a chronic disease in the not-so-distant future.¹ In addition to affecting an individual's quality of life, the costs associated with treating chronic conditions increase as individuals' number of conditions increase,² and additionally, productivity losses due to chronic diseases are projected to triple to \$3.4 trillion from the current \$1.1 trillion.³ Therefore, improved management of chronic conditions is urgently needed.

In the past several years, health plans have introduced efforts to achieve this goal that include health coaching for members with unhealthy lifestyles, predictive modeling to identify and support members at risk for disease exacerbation, and remote monitoring of members in the critical transition phase after hospital discharge.^{4,5} While examples of health plan programs can be found in the gray (and sometimes the peer-reviewed) literature, we are unaware of any systematic studies that have examined the prevalence and scope of chronic care management programs offered by health plans.

Our study goal was to conduct a systematic examination of chronic care management programs offered by health plans in the commercial market (ie, in products sold to employers and individuals). Specifically, we sought to understand the current range of chronic care management services, to document how programs engage with patients and providers, and to elicit emerging industry trends. In addition, we explored factors that can impede a health plan's ability to design and implement effective chronic care programs.

Our study will be of interest to policy makers, providers, health plans, and other stakeholders. As a result of the Affordable Care Act, many individuals who have newly gained access to health insurance are likely to be diagnosed with chronic conditions and subsequently will require effective management. CMS is seeking to promote better chronic care management in the Medicare fee-for-service population through separate payments for such services under the current

ABSTRACT

Objectives: The growing burden of chronic disease necessitates innovative approaches to help patients and to ensure the sustainability of our healthcare system. Health plans have introduced chronic care management models, but systematic data on the type and prevalence of different approaches are lacking. Our goal was to conduct a systematic examination of chronic care management programs offered by health plans in the commercial market (ie, in products sold to employers and individuals).

Study Design and Methods: We undertook a national survey of a representative sample of health plans (70 plans, 36% response rate) and 6 case studies on health plans' programs to improve chronic care in the commercial market. The data underwent descriptive and bivariate analyses.

Results: All plans, regardless of size, location, and ownership, offer chronic care management programs, which identify eligible members from claims data and match them to interventions based on overall risk and specific care gaps. Plans then report information on care gaps to providers and offer self-management support to their members. While internal evaluations suggest that the interventions improve care and reduce cost, plans report difficulties in engaging members and providers. To overcome those obstacles, plans are integrating their programs into provider work flow, collaborating with providers on care redesign and leveraging patient support technologies.

Conclusions: Our study shows that chronic care management programs have become a standard component of the overall approach used by health plans to manage the health of their members.

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fee schedule. Finally, emerging payment and care delivery models such as accountable care organizations and patient-centered medical homes will increasingly require providers to focus on chronic care management for their patients. A better understanding of chronic care management approaches based on health plan experience in the commercial population can help to inform policy makers and providers alike.

METHODS

We used a mixed methods approach that combined a telephonic survey and in-depth case studies. The study was approved by RAND's Institutional Review Board.

For the telephonic survey, a random sample (stratified by commercial enrollment) of 70 health plans in the United States was drawn from a sampling frame consisting of plans with commercial enrollment of 50,000 or more that were listed in the 2011 Atlantic Information Services Directory of Health Plans. Of note, this directory lists health plans and includes both the parent companies and their subsidiaries. We chose the parent companies as a sampling frame because, for reasons of economies of scale, chronic care management programs are typically developed and operated at that level. The sample included for-profit and nonprofit plans, as well as integrated delivery systems that combine health insurance and care provision.

Of the 70 plans in the sample, 2 were not eligible to participate—1 did not offer full medical coverage products and 1 served only Medicaid beneficiaries. Of the remaining 68, the participation rate was 36% (25 plans), representing 51% of all commercial members in the sample because larger plans were more likely to participate. [eAppendices 1 and 2](#) (available at www.ajmc.com) summarize the sampling frame and characteristics of surveyed plans.

Participating plans were surveyed by telephone using a structured instrument. The survey was administered by a 2-person team and lasted 90 minutes. Respondents typically included the health plan's medical director or chief medical officer, or they designated a plan representative(s). The survey focused on the commercial segment of the plan's enrollment, with questions about the health plan, the range of its chronic care management programs, interactions with patients and providers, and factors affecting the operating environment.

Take-Away Points

We conducted a national survey of health plans and case studies to document current approaches to chronic care management in the commercially enrolled market segment. We found that all plans, regardless of size, location, or ownership, offer programs for members with chronic conditions. While internal evaluations suggest that these programs improve care and reduce cost, plans report difficulties in engaging members and providers. To overcome those obstacles, plans are integrating their programs into provider work flow, collaborating with providers on care redesign and leveraging patient support technologies.

- Health plans offer a broad range of services to support chronically ill members, but those resources remain underutilized.
- Improved coordination of these services with providers can improve utilization and impact.
- Better matching of interventions to member needs and preferences can increase engagement.

For the case studies, 6 health plans from the first phase were purposefully selected: 2 regional and 2 statewide plans in different parts of the country, and 2 national plans, as described in [eAppendix 3](#). The case studies entailed 1- to 2-day visits by a 2-person team to conduct semi-structured interviews with staff members, including management, medical directors, and chronic care program staff, as well as reviews of plan documents (eg, program materials, evaluation reports, publications). The surveys and case study site visits were conducted between 2011 and 2012.

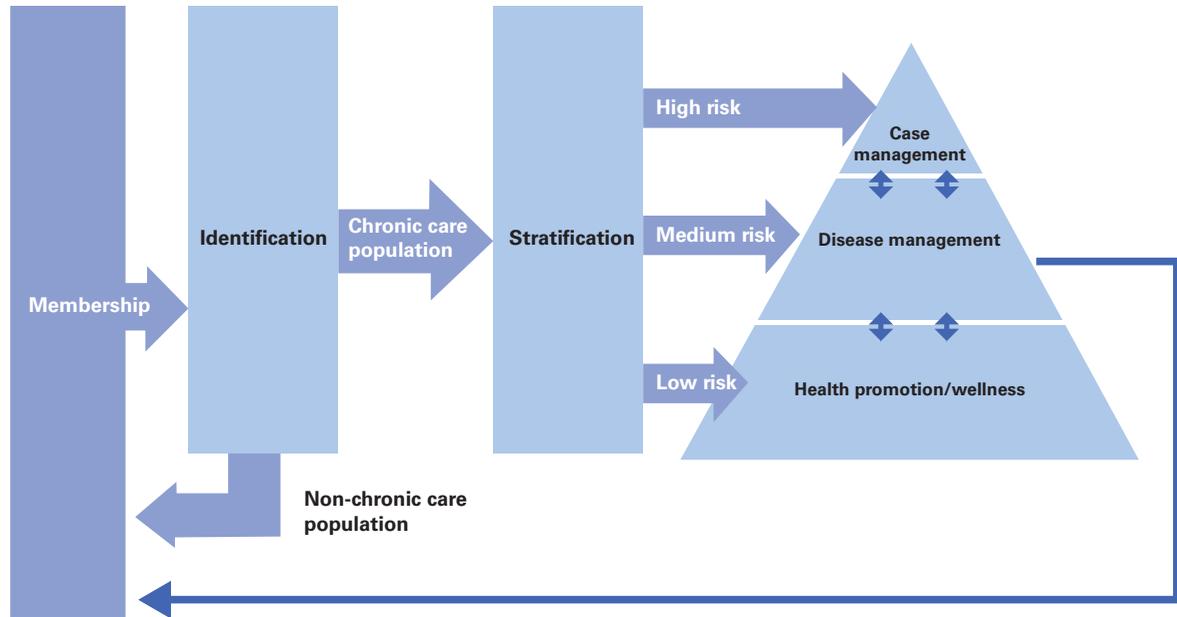
RESULTS

Key Components of Chronic Care Management Programs

We found that chronic care management programs were offered by all plans in our sample regardless of size, location, or ownership status. The programs were included as standard components of fully insured and self-insured plans as well as under integrated delivery systems, but our case studies show that some health plans allowed self-insured employers to opt out.

Our results suggest there is a similarity in the overall structure of health plan chronic care management programs. This "typical" structure is depicted schematically in [Figure 1](#). The first component of this structure is the identification of all members with chronic conditions, usually based on diagnoses recorded on claims data or on direct referral from providers or other plan programs. The second component is risk stratification of those members to match interventions and resources to patient need and risk—for example, using in-person interactions for members with repeated hospital admissions. Most typically, stratification is based on a combination of proprietary criteria for utilization (eg, number of office

■ **Figure 1.** Chronic Care Management Program



visits, hospital admissions, prescription drugs), care gaps (eg, lack of medication adherence and missed preventive services), and electronic lab data (eg, cholesterol and A1C level) when available.

Based on risk stratification, members are then assigned to 1 of 3 programs: health promotion/wellness, disease management, and case management. Health promotion and wellness programs focus on primary prevention and address unhealthy lifestyles (eg, smoking, lack of exercise) and risk factors (eg, high cholesterol, family history) through behavioral interventions that involve educational materials, individual and group coaching, and often workplace health promotion events. Disease management programs aim to improve clinical care of chronic conditions and patient self-management. Typically, call center-based nurses educate patients about their conditions and encourage them to take an active role in their management. In addition, providers are informed about gaps in care, such as overdue tests or lack of medication adherence. Finally, case management—sometimes described as a more intense extension of disease management—targets the members at highest risk, no matter what their underlying conditions are. After assignment, members are recruited for program participation, and upon consent, they are enrolled. As members “graduate” (ie, achieve the goals of their programs [eg, members in case management stabilizing their conditions to a level at which self-management suffices]), the plan may assign them to a different chronic care management program or even move them back to the general membership pool.

Despite the similarities across plans in the overall program structure, implementation of each of the components can vary significantly. With respect to member identification and risk stratification, plans use proprietary algorithms to determine which members are in need of chronic care management, and additionally, use different numbers of risk strata to stratify these members. We also found differences in the boundaries among programs. One case study plan, for example, is in the process of merging disease and case management into a unified program that offers in-person counseling for higher-risk patients. Plans also differ in their integration of chronic care management with other programs, such as utilization review, behavioral health, and pharmacy benefits management.

The intensity of services provided by health plans varies based on patient risk and needs. Survey data show that plans offer responses to patient- and caregiver-initiated questions by e-mail or phone (96%), patient tools to make decisions about treatment options (83%), and a 24-hour hotline available for urgent healthcare questions (75%). In-person coaching by nonclinicians is only offered by 13% of plans—none of which are large plans—while in-person counseling by clinically trained staff is offered by 33% of plans, of which 2 are small, 1 is mid-sized, and 5 are large.

The **Table** shows the additional services that members in case management receive. These services range from coordination with social care services (eg, home health agencies and meals-on-wheels), to coordination of care

among different providers (eg, primary care, specialty care, and rehabilitation services). More than half of the plans provide in-home services to these high-risk patients.

Patient Engagement in Chronic Care Management

Once members have been identified as eligible for chronic care management and matched to programs, an enrollment specialist will contact them for program recruitment. Our survey data show, however, that approximately 42% of health plans report substantial challenges to recruitment because of missing or invalid contact information or members not responding to repeated outreach attempts. In response, health plans have started using a wide variety of channels and touch points for their initial outreach, including mailings, online support tools, calls from trained recruitment specialists or chronic care management nurses, and tailored interactive voice response calls. Also, the timing of outreach matters, as calls immediately after hospital discharge are viewed as more successful than those unrelated to hospitalization. Several case study plans in our study place nurses in hospitals for recruitment into case management, where in addition to participating in the patient's discharge planning, they refer members to the plan's case management program (if appropriate) and obtain valid contact information for future communication.

Even if plans reach members, not all are willing to join a program. Those who are moderately ill are typically the hardest to engage because they are commonly asymptomatic and do not perceive a need to improve their health. For members who do join a program, surveyed plans report limited patient engagement (83%), health literacy (67%), and readiness to change (58%) as the main obstacles to improving chronic care. In response, 71% of surveyed plans state that they have learned that the "flexibility to tailor interventions to patient needs and readiness" is key to successful chronic care management. Following these lessons, plans are experimenting with new initiatives. One case study plan reported success with pre-scripted text messages that are sent every week (similar to a "tip of the week") to members with diabetes to help with adherence and lifestyle change. Another case study plan is transitioning toward high-touch personalized interactions in its chronic care management programs, making its programs as accessible as possible by extending outreach hours, putting case managers into provider practices and emergency departments, and experimenting with technology (eg, chat rooms for younger members).

Finally, incentives are viewed to be an important way to engage patients. Almost half of the surveyed health plans (48%) use incentives within their chronic care man-

■ **Table. Supplemental Health Services That Health Plans Only Offer to Case Management Patients**

Services	Number of Plans (%)
Coordination with social care	24 (96%)
Medical care coordination	23 (92%)
Home assessments	15 (60%)
Home visits	14 (56%)

agement programs. **Figure 2** shows the types of incentives used by plans; these incentives are primarily tied to enrollment into or completion of a program and less often to actual health outcomes.

Provider Engagement in Chronic Care Management

The need for coordination with providers was named by 38% of plans as the most important factor to make chronic care management programs work. Interestingly, small plans (less than 200,000 members) were more likely than larger plans (more than 1 million members) to name it as a critical factor (71% vs 17%, respectively).

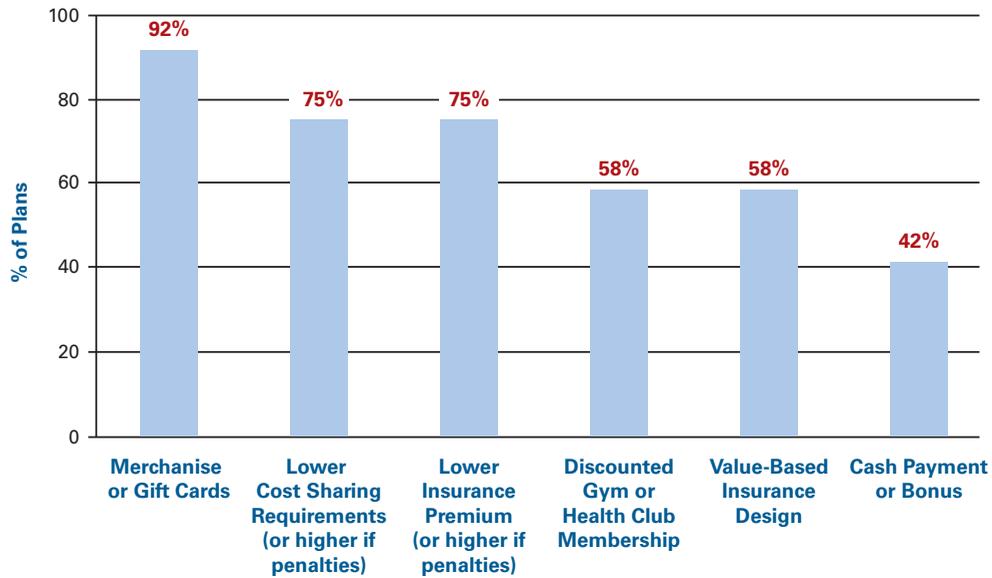
Figure 3 depicts the most common ways in which health plans work together with providers in managing patients with chronic disease. Survey data show that almost all plans send reports on care gaps, such as failure to refill chronic medications regularly, and the frequency of these care gap reports varies across plans. Among plans that offer such reports, 84% provide them at regular intervals, 16% on demand only, and 12% both at regular intervals and on demand. Over half of plans are actively working with their contracted providers on practice redesign models, such as patient-centered medical homes.

About two-thirds of plans (63%) in the survey stated that provider reluctance to change affects chronic care management program operations; many providers, they note, prefer to focus on their traditional encounter-based approach as opposed to population management. During one case study, we were told that smaller practices and providers close to retirement are especially reluctant to change their established practice models, as are those that had negative experiences with capitation models in the 1990s. Sixty-seven percent of surveyed plans reported that limited provider capabilities, such as overextension of staff and lack of patient registries and electronic medical records (EMRs), present barriers to effective chronic care management.

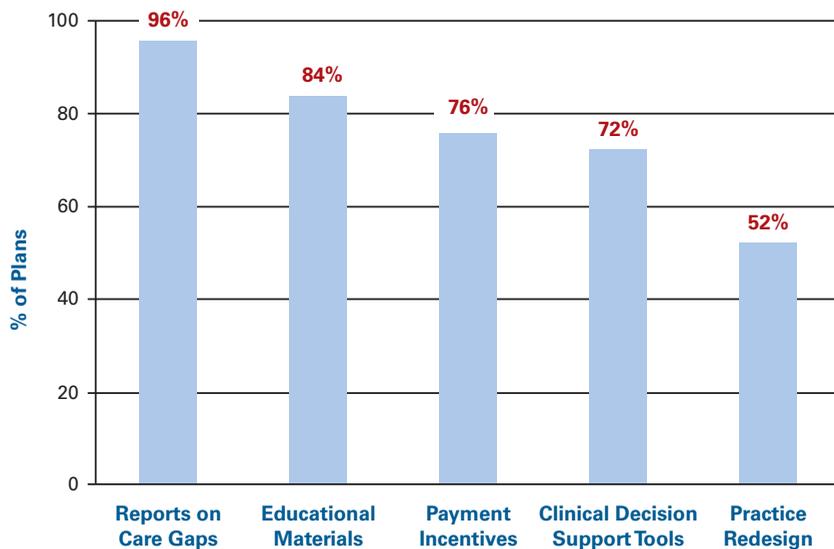
Emerging Practices in Chronic Care Management

Our findings suggest that health plans are in the process of changing their approach to chronic care management,

■ **Figure 2.** Types of Incentives Offered in Chronic Care Management Programs by Health Plans



■ **Figure 3.** Methods Used by Health Plans to Engage Providers in Chronic Care Management Programs



taking approaches that range from supporting currently existing models of care delivery to outright redesign.

Increased collaboration with providers. Four-fifths of the plans in our study stated that they attempt to integrate their chronic care management programs into provider work flow with 2 approaches. The first—taken by 24% of plans—is virtual integration, which happens either telephonically or by using information technology such as EMRs. The second—implemented by one-third of plans—is to embed health plan staff into practices and other care settings. For example, some case study plans mentioned

locating utilization management and behavioral health specialists in hospitals to assist members with discharge planning, while another plan places care management staff in practices with a high volume of its members. Staff members then educate patients with complex chronic conditions on program offerings and other support resources. A quarter of the plans combine both approaches.

Practice redesign. Health plans are making substantial efforts to redesign the current payment and delivery systems to align them more closely with the needs of chronically ill patients. Three-fourths of all plans in our sample

stated that they are working on reforming the current fee-for-service approach, and all 6 case study plans were at various stages of transitioning away from pure fee-for-service payment. Most case study plans also encourage practices to adopt patient-centered medical home models that offer continuous management of patient needs, team-based care, and expanded access, including same-day appointments, after-hours care, and electronic visits. To support the transition process, more than half of the plans in our sample (52%), including all 6 case study plans, offer providers staff resources, change management consulting, tools, and subsidies for adoption of health information technology.

Use of patient support technology. Numerous technologies to support chronic care and to motivate patients to adopt healthy behaviors are being offered or developed. These range from telemedicine solutions that allow remote interaction with providers, to remote monitoring products that transmit vital signs and other biometric data to providers from devices like scales, glucose meters, and heart-rate monitors. More recent developments include social media applications that allow patients to communicate with peer groups and other online communities. While patient care technologies are not yet widely adopted, some health plans are using or piloting them in their chronic care management programs.

About half of the plans said they used remote monitoring technology (56%) and online self-administered behavior change applications (48%), while 16% of plans reported using mobile health technology such as smartphone applications. During the case studies, we also learned that plans regard remote monitoring as a promising option, especially after hospital admission, if the patient has a provider who is able to respond to the data feeds.

Multiple case study plans mentioned upcoming pilots to test new tools, and some were even in the process of launching specific technology applications, including mobile phone applications and telemedicine on a broader scale. Two plans have started offering secure video chats for higher-risk members.

Survey respondents felt that patient care technologies showed great promise and that the role of technology would increase in the future. Many plans stated that they expected to expand the use of patient care technologies within their chronic care management programs and were interested in other plans' experiences, particularly with smartphone and social network applications.

Focused interventions. We found that health plans are increasing their efforts to tailor interventions to members' needs. Approximately four-fifths of plans use predictive

modeling to identify patients for disease management (84%) and case management (76%). Plans are also working on differentiated algorithms to predict high-cost events like exacerbations and hospital admissions, and to identify specific gaps in care, such as lack of follow-up after hospital discharge. Identification algorithms are becoming more complex. Whereas historically, claims data were the main source of information, plans are experimenting with adding other data sources, such as health risk assessments, electronic lab data, and member self-reported information, which the industry sometimes refers to as "Big Data."

More in-house delivery of chronic care management programs. Health plans' chronic care management programs are administered either in-house, using the health plans' own staff, resources, and facilities, or outsourced to a third-party vendor that specializes in those services, such as a disease-management vendor. In our sample, while the majority of plans (72%) had both in-house and outsourced components, we observed a trend toward insourcing. Thirty-eight percent of plans are bringing more of their chronic care management programs in-house compared with 4% that have increased outsourcing. We learned that cost considerations and the complexity of coordinating services with outside vendors are driving the trend forward to bringing programs in-house.

DISCUSSION

Our study shows that chronic care management programs have become a standard component of the overall approach used by health plans to manage the health of their populations, regardless of plan size, location, or ownership status. Also, health plan approaches to chronic care management are evolving. On the member-facing side, health plans are matching resources more closely to member needs through risk stratification and predictive modeling, which allows targeting of high-risk patients with resource-intensive services. On the provider-facing side, plans are redesigning care delivery and payment models that include integration of health plan chronic care management services with provider office workflow. Internally, plans are bringing more components of their program inhouse to facilitate coordination and integration.

This evolution toward increased collaboration with providers in delivering chronic care services more closely mirrors elements of the Chronic Care Model.⁶ This shift is important because evidence suggests that "light-touch" models of chronic care management are not ef-

fective. The Medicare Health Support Demonstration,⁷ a trial of remote disease management, achieved only modest improvements in quality-of-care measures, with no significant reduction in the utilization and cost. In contrast, evidence appears to suggest that a combination of interventions that include patient education, clinical decision support, and reminders can lead to improved outcomes.⁸⁻¹⁰

Limitations

First, with a response rate of 36%, we cannot rule out the possibility that the findings are not fully generalizable to all health plans. While participating and nonparticipating plans were statistically similar with respect to overall enrollment, region of operation, and ownership status, plans may have differed in non-observable characteristics. To mitigate this concern, the health plans responding to the survey accounted for 51% of the commercial enrollees in our sample and 22% of the overall sampling frame of health plans with more than 50,000 commercial enrollees. The findings from our study therefore apply to a majority of the sample health plan enrollees and to almost a quarter of organizations. Additionally, since our sample was randomly drawn, we believe that these results can be reasonably extrapolated to a national population. Finally, this study was focused on health plans and does not reflect the experience of patients and providers who participate in these programs. Despite these limitations, our findings provide new insights into the practices of health plans in chronic care management.

CONCLUSIONS

We find that chronic care management programs have become a standard offering of health plans. To date, there is a lack of clear scientific evidence on the combinations of interventions and their relative intensity that can help to ensure improved outcomes for patients with chronic disease. Therefore, there is a need for well-designed studies in this area, including evidence on methods that are most effective for increasing patient participation and retention, and for achieving long-term behavioral change.

The current unsatisfactory nature of the status quo presents an enormous opportunity to improve care and health for chronically ill patients.

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Author Affiliations: RAND Corporation, Boston, MA (SM), and Santa Monica, CA (RB); America's Health Insurance Plans (AH), Washington, DC.

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Address correspondence to: Soeren Mattke, MD, DSc, RAND Health Advisory Services, 20 Park Plaza #920, Boston, MA 02116. E-mail: mattke@rand.org.

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eAppendix 1. Sampling Frame

	Number of Commercial Plans
Enrollment $\geq 1,000,000$	29
Enrollment 200,000-999,999	44
Enrollment 50,000-199,999	39
Enrollment $< 50,000$	58

Source: AIS Data 2011.

eAppendix 2. Characteristics of Surveyed Health Plans

<i>Characteristic</i>	<i>Number of Plans (% of sample)</i>
Number of covered lives in commercial segment	
Less than 200,000	7 (28%)
200,000-1 million	6 (24%)
More than 1 million	12 (48%)
Offer all types of commercial plans (ie, fully insured individual market, fully insured small group market [<50 employees], fully insured large-group market [50+ employees], self-insured plan)	23 (92%)
Type of delivery system	
Integrated	5 (20%)
Not integrated	17 (68%)
Integrated and non-integrated components	3 (12%)
Profit status	
For-profit	6 (24%)
Nonprofit	17 (68%)
Offer both for-profit and nonprofit products	2 (8%)
Origin of plan	
Multi-specialty group practice	1 (4%)
Hospital organization	2 (8%)
Health insurance company	17 (68%)
Other (eg, mixed origin)	5 (20%)

eAppendix 3. Characteristics of the 6 Plans Selected for Case Studies

<i>Characteristic</i>	<i>Number (%)</i>
Number of covered lives in commercial segment	
Less than 200,000	2 (33%)
Between 1 million and 5 million	2 (33%)
Above 10 million	2 (33%)
Offer all types of commercial plans (ie, fully insured individual market, fully insured small group market [<50 employees], fully insured large group market [50+ employees], self-insured plan)	6 (100%)
Type of delivery system	
Integrated	0 (0%)
Not integrated	6 (100%)
Integrated and non-integrated components	0 (0%)
Profit status	
For-profit	2 (33%)
Nonprofit	4 (67%)
Origin of plan	
Multi-specialty group practice	1 (17%)
Hospital organization	1 (17%)
Health insurance company	4 (67%)