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American Well: The Doctor Will E-See You Now

On a crisp morning in November 2009, Ido Schoenberg was walking briskly through Boston's Logan Airport when he spotted his brother, Roy Schoenberg, standing in line to board a flight to Washington, D.C. The two brothers, cofounders of American Well, the Online Care company, were taking a flight to Washington to deliver a presentation at the World Health Care Innovation and Technology Conference (WHIT). With the debate over health-care reform raging in Washington and with Bill Clinton as the keynote speaker, this year's conference was sure to be a big event. As the flight lifted off, the view from the plane's window revealed the historic Boston cityscape, where many significant events leading to the American Revolution had taken place. But as they settled in for the short 90-minute flight, Roy and Ido had a different revolution on their mind.

Just three years ago, Ido and Roy founded American Well in an attempt to forever change health-care delivery and improve the way patients interact with physicians. Traditionally, patients had two primary choices when seeking medical care -- to show up at an emergency room or a similar acute-care facility, or to submit themselves to the schedule of their physician, which could result in weeks of waiting for an office visit. American Well's vision was to use the Internet and telephony to connect physicians and patients, within minutes in real time. Since its founding, the company was successful in developing the necessary technology platform, and its efforts to market the vision to major health insurance companies (also called health plan providers) in the U.S. had started to yield results. In fact, Blue Cross Blue Shield of Hawaii was the first to roll out the service earlier in the summer on a statewide basis, and so far the implementation of the platform had gone well.

American Well management faced several pressing questions regarding where the company should go next. Although focusing on a nationwide rollout and adding more health insurance companies to the service would be a monumental task for any start-up company, Ido and Roy were already considering new applications for their platform. Being well aware of the first-mover advantage that American Well enjoyed, they were thinking about the next service concept, called "Team Edition." While the service offered in Hawaii facilitated connectivity between patients and physicians, the next generation of service, if developed, would add connectivity between primary care physicians (PCPs) and specialists. Patients would no longer have to wait for weeks to see the specialist and then more time before coming back to their PCP for follow-up. Instead, Team Edition would connect the PCP and specialist instantly during the patient's initial office or online visit.

Professor Elie Ofek and Dr. Ron Laufer, Adjunct Professor, Indiana University Kelley School of Business, prepared this case. HBS cases are developed solely as the basis for class discussion. Cases are not intended to serve as endorsements, sources of primary data, or illustrations of effective or ineffective management.

Ido and Roy were also contemplating new customer segments for American Well's platform, including hospitals, retail clinics, and pharmacies. Having been approached by a number of non-U.S. health insurers, expanding into international markets was also a possibility worth exploring. Although Roy and Ido were confident that American Well's platform had revolutionary potential even beyond the health-care industry, they wondered: if they invested resources in new markets and product launches too early, would they undermine American Well's opportunity to become the definitive leader in Online Care?

Health-Care Delivery in the U.S.

In 2009, U.S. health-care expenditures were estimated to top $2.5 trillion and were projected to reach $4.3 trillion, or $13,100 per resident, by 2018.[1] This outlay represented 17.6% of gross domestic product (GDP)—a greater percentage than in any other country -- and reflected the fragmentation and complexity of a system that was the subject of intense reform debate in public policy circles in 2009. Chronic diseases (e.g., cancer, diabetes, and heart disease) were leading causes of disability and caused 7 of every 10 deaths each year in the U.S.[2] The prevalence of chronic disease made it a focal point for health-care providers, who were also bracing for the significant demographic shift expected to occur over the next two decades, by which time Americans over age 65 would comprise 20% of the population.[3] (See **Exhibits 1** and **2** for a breakdown of U.S. health spending in 2008.)

Players

The key players in the U.S. health-care system were patients, providers, public and private payors, and suppliers (of products such as therapeutic drugs and medical devices). Other supplier subsectors included health-care information technology (IT) providers, private equity and venture capital (VC) firms that financed health-care ventures, and academic and other institutional researchers.

Providers included entities involved in delivering care, such as hospitals, nursing homes, and health clinics, as well as physicians and other health professionals. Of the approximately 5,500 hospitals providing inpatient and outpatient services, close to 90% focused on acute care, while the remainder specialized in rehabilitation, psychiatric care, and other specialties.[4] Institutional providers also included nursing homes, assisted-living facilities, home-based care providers, and others.

Approximately 990,000 physicians worked in the U.S., 40% of which were PCPs:[5] generalist physicians who served as the first point of contact for their patients' physical and mental health needs.[6] Nonphysician providers included 2.5 million registered nurses, 74,000 physician assistants, 147,000 nurse practitioners, and others.[7] Some physicians were employed by hospitals, while others ran private practices comprising one or more physicians. On average, family doctors earned $168,000 per year (about $81 per hour), registered nurses earned $67,000 ($32 per hour), and pharmacists earned $107,000 ($51 per hour).[8]

Delivering and Paying for Patient Care

The type and quantity of care delivered to patients depended on several factors, including health insurance coverage (if any) and geographic location.[9] Patients with health insurance typically had a PCP who served as their chief contact for health concerns, and who referred them to specialists (e.g., cardiologists, dermatologists, surgeons, etc.) as needed. For patients without insurance, hospital emergency rooms often served as the main source of care. There were regional shortages of some specialists (e.g., mental health, obstetrics, and gynecology); as such, the patient experience of receiving care varied between and within states. Insufficient access to care was especially problematic

in rural areas, where provider shortages, low population density, and disproportionate reliance on self-employment and low-skill jobs—which had low rates of employer-sponsored health insurance—created barriers to care.[10]

The U.S. system for financing patient care was a complex web of public (federal and state) and private-sector payors. Coverage requirements, premium limits, reimbursement levels, and other constraints imposed on insurers varied by state. As of 2008, 53% of health spending was funded by private payors, including health insurance companies, individuals, and philanthropic sources.[11] Health insurance companies offered several types of health plans at different price and coverage levels. Individuals with private coverage either purchased plans independently or received coverage through their employer. Most firms with 50 or more workers offered health coverage; smaller companies were less likely to do so.[12] The format of employer-sponsored insurance varied, but typically involved employees paying a portion of premium payments and employers covering the rest. In 2009, the average annual premium for employer-sponsored insurance was $4,800 for individuals (17% paid by employee) and $13,400 for family coverage (27% paid by employee).[13]

The balance of health spending (47%) came from public payors, chiefly Medicare (federal program for Americans age 65 and over) and Medicaid (state program for eligible low-income and disabled residents), as well as the Department of Veterans Affairs (for military personnel) and SCHIP (State Children's Health Insurance Program). In some cases, public payors did not cover the full cost of care delivery, leading providers to rely heavily on revenues from privately insured patients. (See **Exhibit 3** for community hospitals' payment-to-cost ratios from different payors from 1980 to 2007.)

Patients without health insurance—about 17% of Americans under age 65—paid for care out of pocket and, in many cases, went without: one survey found that 14% of Americans did not see a doctor due to cost concerns in 2008.[14] This was even true of many who had insurance, because their plans had high deductibles—the required out-of-pocket payment before insurance kicked in—or had limits to the services or dollar amount that would be covered.

Health-Care IT Background

American Well's novel service model, which the company termed Online Care, came on the heels of a number of developments in the use of telecommunications and computer-based tools to collect, manage, and communicate health-care–related information and transactions. Examples included computerized decision-support and order-entry systems for physicians, electronic health or medical records (EHRs or EMRs), and tools for searching for health information (e.g., WebMD). Patients' use of health-related websites increased through the 2000s, and by 2006, 80% of respondents to a survey of Internet users reported searching online for health-related information.[15] Other electronic exchanges included bill-pay services, appointment scheduling, and communication of lab results. Many of these innovations aimed to reduce the administrative burden facing providers and payors. (See **Exhibit 4** for private insurance administrative cost data.)

Electronic Patient-Physician Interaction

By the mid-2000s, patients and physicians were becoming more comfortable communicating electronically through e-mail and secure messaging. In 2006, a survey found that 74% of respondents wanted to communicate with their doctors using e-mail, but only 4% were actually doing so, largely because such a service was not offered.[16] Concurrently, physicians' use of online communication was on the rise: one survey of Internet-using physicians in the U.S. noted that from 2001 to 2008, physicians who communicated with patients online increased from 23% to 36%.[17] Some data

suggested online communication created efficiencies; for example, a 2007 study of Kaiser Permanente, a large health-care system, found that e-mail-using patients were 7% to 10% less likely to schedule an office visit, and physicians offering e-mail communication received about 14% fewer phone calls.[18] (See **Exhibit 5** for consumer attitudes about e-mailing their PCP in 2009.)

Yet, many doctors were reluctant to engage patients via e-mail, as an April 2008 article noted:

> Some [physicians] say they worry it will increase their workload, and most physicians don't get reimbursed for it by insurance companies. Others say they fear hackers could compromise patient privacy—even though doctors who do e-mail generally do it through password-protected Web sites. There are also concerns that patients will send urgent messages that don't get answered promptly. And any problem raises the specter of legal liability.[19]

HIPAA The market success of health-care IT innovations depended on their compatibility with HIPAA (Health Insurance Portability and Accountability Act), enacted in 1996 to address privacy and security risks stemming from increasing use of electronic channels to transmit patient information. The act applied to providers, insurance companies, group health plans, and government payors.[20] HIPAA's Security Rule set national standards for protecting electronic health information, and its Privacy Rule dictated how patient information could be used and disclosed.[21] Since 1996, HIPAA had been revised in light of technological advancements, but users of new health-care IT remained wary about HIPAA compliance and malpractice risk.

Payment Physician adoption of new technology was also contingent upon payors' willingness to reimburse for electronic communication with patients. Physicians were typically reimbursed on a fee-for-service basis. For classification and billing purposes, services were "coded" by the American Medical Association (AMA) in conjunction with federal payor agencies. AMA assigned a descriptive phrase and numeric code to each medical service, and issued new codes periodically as the nature of services evolved. Payors would not reimburse services without a code. As such, the issuance of codes was critical to the success of new health-care IT innovations. In 2009, codes had been issued for some forms of health-care delivery via IT platforms. However, most insurers remained reluctant to cover online services due to concerns over security, privacy, and uncertain patient demand.[22]

Recent Developments in Health-Care Provision

Tele-Medicine Services

The term "tele-medicine" described a range of programs and services that involved health-related electronic exchanges with the objective of improving patient care. A number of companies offering such services are described below.

RelayHealth Founded in 1999, RelayHealth offered online solutions for facilitating patient-physician communication.[23] Through RelayHealth, patients could schedule appointments, update their health records, and request lab results, prescription renewals, and referrals. For nonurgent issues, patients could complete interactive online questionnaires describing their symptoms;[24] this information was then transmitted to the patient's physician, who determined whether an in-person office visit was necessary.[25] Most providers replied within eight business hours. RelayHealth pioneered the use of secure (HIPAA-compliant) e-mail between patients and providers. In 2006, McKesson Corporation, a health-care IT and automation supplier acquired RelayHealth. By mid-2009, 50 health-care systems and hospitals had contracted with RelayHealth.[26]

Medfusion Founded in 1996, Medfusion facilitated online physician-patient communication through its Virtual Office Suite, a secure, HIPAA-compliant web-based platform through which physicians could connect with patients by phone or online.[27] This included appointment requests, bill payment, and prescription renewal. Medfusion also offered virtual office visits, employing an interactive questionnaire similar to that used by RelayHealth.[28] In 2009, Medfusion served more than 28,000 physicians in various specialties across the U.S., and had over 1 million patient accounts.[29] "[Medfusion offers] a self-service technology providers want to make available to their patients so that patients can be more involved in their care," noted Medfusion CEO Steve Malik in 2009.[30]

TelaDoc Founded in 2002, TelaDoc offered patients year-round, 24-hour by 7-day phone access to a network of physicians in a call center model.[31] In a 2007 interview, TelaDoc CEO Michael Gorton described the question that had driven the creation of TelaDoc: "What percentage of primary care visits could be handled with just a telephone and an electronic medical record?"[32] The company suggested patients use the service when their PCP was unavailable (e.g., after normal office hours), when traveling, for short-term prescription refills, and to obtain physician advice to supplement that provided by their PCP. To request a medical consultation, which cost $38 or less, TelaDoc's more than 1.6 million "members" could access their online account or call TelaDoc.[33] After reviewing the request and the patient's EHR, a physician licensed to practice in the patient's home state phoned the patient, typically within one hour.[34] After the consultation, physicians updated the patient's EHR, which could be viewed online by the patient and her PCP.

Cisco TelePresence Founded in 1984, Cisco was a leading global provider of networking technology.[35] Cisco's TelePresence, which enabled live video conferencing and collaboration, was adapted to the health services setting to create HealthPresence, which combined TelePresence with medical devices to enable real-time interaction between health-care providers and patients. Using HealthPresence, patients could interact with physicians over video conference while also sending data (e.g., blood pressure) collected from medical devices to the physician, enabling a real-time evaluation. At a specific time and location where the HealthPresence technology was set up, trained professionals operated the medical equipment and helped the patient communicate with the remotely located physician. In 2009, Cisco was creating a nationwide network based on HealthPresence technology in collaboration with UnitedHealth Group, a large U.S. health insurer whose provider network included nearly 600,000 physicians and 5,000 hospitals.[36]

Convenient "Offline" Care

Nurse Practioners (NP) The idea for NPs was conceived in the 1960s to address the problem of PCP shortages in rural areas. NPs underwent more training than registered nurses and were licensed to perform many of the same tasks as physicians.[37] In 2009, NPs worked in numerous settings, including hospitals and emergency rooms, private practices, retail clinics, nursing homes, and schools. In addition to clinical care, NPs engaged in health promotion and education, disease prevention, and counseling. Each year, NPs engaged in approximately 600 million patient visits.[38]

MinuteClinic MinuteClinic was a provider of walk-in health clinics based primarily in large pharmacy or grocery chains (e.g., CVS, QFC, Cub Foods), as well as malls and corporate and government offices. In 2009, MinuteClinic had locations in 25 states offering medical care for nonemergency needs, as well as preventive care and vaccinations.[39] Clinics were open seven days a week, including evening hours, and patients were not required to make an appointment. In a visit that typically lasted no more than 15 minutes and cost $62, a physician assistant or NP could examine a patient for issues stemming from a minor illness or injury.[40] Patients often paid out of pocket, though many health insurance companies covered MinuteClinic services.

RediClinic Like MinuteClinic, RediClinic was a walk-in, retail-based clinic offering treatment for routine health issues, as well as vaccinations and certain health tests and screenings. RediClinics were located in the stores of Texas-based grocery and pharmacy chain HEB and staffed by physician assistants and NPs.[41] "Research over the past 30 years has consistently shown that the primary care provided by nurse practitioners is comparable in quality to that provided by physicians," said Webster Golinkin, CEO of RediClinic.[42] Several insurers covered RediClinic visits—treatment of conditions such as ear infection and common cold cost $79—though many patients paid out of pocket.[43] Golinkin noted that, "research shows that as many as 50% of the people who seek care at overburdened emergency rooms could be treated much less expensively in convenient care clinics."[44]

Take Care Clinic Part of Take Care Health Systems, a wholly owned subsidiary of convenience and pharmacy chain Walgreens, Take Care Clinics were located inside certain Walgreens locations throughout the U.S. Take Care Health Systems also managed workplace-based health services through its Take Care Employer Solutions division. In 2009, there were more than 340 Walgreens-based Take Care Clinics and some 370 workplace-based health centers.[45] Offering walk-in appointments starting at $65 for treatment of common ailments, Take Care Clinic claimed to "deliver healthcare that fits your life."[46] Walgreens pharmacies and Take Care Clinics began offering walk-in vaccinations for the H1N1 flu virus in December 2009.[47]

The Entrepreneurial Roots of American Well

Before becoming an entrepreneur, Ido Schoenberg was trained as a physician at the University of Tel Aviv Sackler School of Medicine in Israel. In 1996, Ido and his wife, Phyllis Gotlib, cofounded *i*MDsoft, a health-care enterprise software company. *i*MDsoft was among the first to recognize the opportunity for IT to have an impact on the nature and quality of critical care. Initially focusing on adult, pediatric, and specialty intensive care units, *i*MDsoft developed an expert system that monitored critically ill patients. Previously, doctors and nurses had to continuously observe several monitoring devices and integrate the information on the fly in an attempt to translate independent clinical measurements into a comprehensive clinical assessment. The software of *i*MDsoft integrated the separate measurements, enhanced the quality of decision making, reduced errors, and improved the financial performance in one of the most high-cost units of any hospital. In 2000, Ido left the company but continued to serve as chairman of its scientific advisory board. Gotlib stayed on to lead the company in becoming a global leader in hospitalwide acute care information systems.

In 2001, Ido became CEO of CareKey, a provider of electronic health management systems that his brother Roy founded the previous year using capital raised from angel investors. A graduate of Hebrew University Medical School, Roy had worked as an internal medicine physician in Israel before pursuing a research fellowship at the Center for Clinical Computing and a master's of public health degree from Harvard University. As a fellow, Roy published a scientific paper in the *British Medical Journal* that described a hypothetical online system of personal health records (PHRs).

The brothers envisioned CareKey as a model for enabling more direct interaction between patients and health insurance companies. CareKey was first to provide patients with Internet-based PHRs coupled with a comprehensive personalized set of tools to self-manage certain health and wellness issues, as well as communicate effectively with nurses and other staff members at their health plan. CareKey's platform greatly assisted health insurance companies in transitioning from the episode-of-care model—simply paying for each covered service an insured member received—toward an advanced care–management model, which sought to minimize members' long-term health costs through prevention and early detection. In the typical approach to care management, in which nurses

phoned patients when they were due for a test or checkup, patient compliance was poor. CareKey helped narrow this compliance gap by giving patients access to a personalized, on-demand platform for self-management and transactional communication with health plans' staff and resources. After growing CareKey over the next five years, Roy and Ido sold the private company to the TriZetto Group, one of CareKey's early corporate partners. By the end of 2009, more than 45 million people were using the CareKey system (renamed CareAdvance).

After selling CareKey, Ido and Roy frequently met to discuss the remaining gaps in health care and ways IT could help bridge those gaps. In the summer of 2006, Roy returned to Israel for a few months. He recalled:

> I settled in an apartment in Herzliya, Israel, overlooking the Mediterranean, and got into the vacation routine of relaxing on the beach in the morning, enjoying long lunches, and hanging out with friends. The problem with taking time off in your thirties is that all your friends are working during the day and available only at night, so I had lots of time on my hands. I started to reflect on all that we had learned through our CareKey experience about health-care IT. Of all the ideas Ido and I discussed, the issue of affordable, convenient access to quality care, particularly in terms of place and time of delivery, was an area where technology could really make a difference. I thought about my own experience as a clinician. Health care for patients is still perceived as seeing a doctor. That is how it has been for centuries—physically bringing the pain to a health-care professional. I asked myself whether someone is developing the technology to imitate that interaction with a doctor online. But everyone still thought the Internet was about redistribution of medical records. People did not recognize that you can redistribute medical services. And there was the opportunity. At that point, we decided the vacation was over. It was time to found a new company.

Online Care: From Concept to Reality

The two brothers formed American Well in 2006. As chairman and corporate CEO, Ido oversaw the company's business strategy and affairs, while Roy, who served as president and CEO of American Well Systems, was in charge of product development and operations. The cofounders believed technology could be leveraged to extend traditional health care into people's homes and workplaces. They envisioned a brokerage system that used web-based technologies and telephony to bring patients and physicians together in real time. "In most health care today," explained Ido, "supply and demand is geographically and temporally constrained—by the physical location and time availability of physicians and patients. We devised a service that eliminates these restrictions and links excess supply, wherever it is located and whenever available, with excess demand."

Physicians who were enrolled in the system would be able to log on essentially any time they wanted to conduct 10-minute sessions with patients. A patient would log on to the system, provide her credit card information, indicate what type of doctor she would like to consult with, and instantly get a choice of the current doctors online that matched her request. The chosen doctor would receive access to the patient's medical records and then interact with the patient via the phone or the Internet (including video or live chat options). Once the interaction ended, the system would manage the billing process seamlessly. Ido expanded: "All health care today is point-to-point: doctors and patients need to be at a specific place at a specific time in order for the service to take place. We've built a platform that is many-to-many: there is no appointment, no specific time and place, but rather care can be delivered from any place at any time. The American Well marketplace coordinates this."

The novel system was designed to provide different value propositions to the different parties involved. For patients, the focus was on immediacy, convenience, quality, affordability, and choice. The company recognized that there would likely be skepticism about whether physicians could effectively assess patients' health needs without a hands-on physical examination. However, there were other dimensions that American Well would be adding: there would not be a need to schedule the appointment in advance, the patient would be able to take the appointment at her location of choice (as long as it had a phone or Internet connection, preferably with a webcam), and it would offer a new form of privacy, thus eliminating potential elements of shame. (For example, it was believed that many of those with symptoms of depression did not seek medical attention because of the social stigma associated with the disease.)[48] In addition, patients using American Well's system would enjoy a much greater choice of providers and could seek a second opinion immediately after receiving a diagnosis. The patient experience was also more personalized: patients could access and manage their online medical information, personal self-management tools, and records of care before and after connecting with a physician. (See **Exhibit 6** for a description of the patient experience.)

For doctors, the value proposition was different. Having been clinicians themselves, Roy and Ido were well aware of what a service provider needed to put in place before she could practice medicine. That included accreditation, leasing and equipping an office, hiring and training staff, setting up a transaction system, purchasing necessary insurance, and so on. The American Well system would alleviate the need for much of that infrastructure and provide doctors with a new level of flexibility, as Roy explained:

> Docs that have had a clinic for many years and are fed up with the routine will be able to work in their clinic less days and make up the revenue from home. Others will keep working as usual, but on the weekend will be able to make additional money. Young docs will be able to add a second shift in the evening time, in case they have to leave their office early to pick up their kids from day care or school. Even retired docs will be able to come back to practice—people that quit midlife and didn't want to live the life of a traditional clinician.

Choosing a Customer

Given the value to patients and doctors, a direct-to-consumer (DTC) model, where American Well would directly sign up patients and doctors to a nationwide system run by the company, was definitely conceivable. As Yael Glassman, vice president of marketing, noted, "if we were running the service on our own, as a DTC company, we would have total control over the user experience. Not to mention that we would be able to establish ourselves as the one and only place to go to for Online Care." Yet, there were also significant benefits to building American Well as a B2B company that marketed to health insurance companies, as selling to insurers would be similar to a franchise model.

One argument for pursuing a DTC model was that adoption by insurance companies could be hampered by the volatile U.S. health-care environment, combined with the economic recession. President Obama had committed to reforming the health-care system, and it seemed he might actually be the first president to do so in decades. However, 11 months after Obama took office, it was still unclear what such reform would look like. As a result, a wait–and-see attitude started to dominate the health-care services industry. Many health insurance companies had implemented spending freezes, and it remained unclear when such restrictions would be lifted.

Danielle Russella, executive vice president of sales, argued that opting not to be a DTC company could be a competitive advantage: "I'm not saying we can't do DTC, but there are other companies which are trying to do that with call centers of doctors. In fact, that [could be] a differentiator for us."

Ultimately, American Well decided health insurance companies should constitute its primary target customer. Although the industry's spending freeze was worrying, Ido believed insurers would view American Well's service as part of a solution to their problems. Moreover, these customers could serve American Well as "aggregators," providing easier access to large pools of patients and doctors. They could also facilitate access to patients' medical records, and, importantly, they could sponsor online medical consultations directly or indirectly (via employer groups that would promote its use). Insurance companies had internal resources they could commit to the marketing efforts needed to encourage physicians and patients to use Online Care. In addition, because health insurance companies were financially strong, they represented a more lucrative customer channel than individual patients. (See **Exhibits 7** and **8** for major health insurers' 2008 revenues and net incomes, respectively.) The value proposition for health insurance companies had a clear economic component, as online visits would cost less than in-person office visits. Under available health plans, health insurance companies paid PCPs depending on the complexity of the visit, geographic location, and other factors; but on average, PCPs were paid about $100 for new patients and $75 for existing patients. Most specialists were typically paid at levels well exceeding those earned by PCPs (from hundreds to thousands of dollars). The typical copay (portion of cost paid by the patient) for a primary care office visit was approximately $15 to $20, and for a specialist visit was approximately $25 to $30, though these varied depending on the patient's health plan.[49] For emergency room visits, payors reimbursed hospitals and physicians also according to the complexity of care delivered. This could vary extensively—from a brief visit to multiple tests (e.g., X-rays and CT scans) to complex surgery—and cost hundreds to thousands of dollars. A 2009 analysis from *The Actuarial Digest* estimated that Online Care could save insurers $3.36 per patient per month (see **Exhibit 9**).[50]

Roy elaborated on that point:

> One of our main value propositions to health insurance companies will be significant savings. The amount they reimburse the physician per 10-minute online consultation, expected to be roughly $25, will be less than the reimbursement of an office visit and significantly less than that of an emergency room visit. Being able to resolve health problems online, at the cheapest point of care, will create those savings. In addition, our platform will allow treating medical conditions earlier because of the immediacy of receiving professional medical attention. For patients, this will mean better health outcomes, but for the health insurance companies, it will mean less costly complications.
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> Another value proposition will be the ability of health insurance companies to "open their doors" to nonmembers. Health insurance companies have a valuable asset, their network of doctors, but few ways to monetize that asset. The American Well platform will allow offering online consultations to anybody willing to pay out of pocket. Health insurance companies will be able to determine how much they want to charge for that service, with $45 to $50 seeming quite reasonable, and generate revenue from a market they never pursued before.

Ido added, "Health insurers offering Online Care could also see significant revenue and strategic gains by opening their physician network to nonmembers. Offering such a service to nonmembers can facilitate a dialogue with potential new clients often covered by the competition." Health insurance companies would also see benefits from the improved provider-driven care management enabled by Online Care. Ido explained:

> Rather than a nurse working for the health insurance company calling the patient at home out of the blue at an inconvenient time to explain how taking future steps could improve their health, our system can alert physicians or other providers during an active online session that the patient's gaps in care warrant discussing certain interventions. Patient compliance is likely

to be much higher when a physician recommends a certain test or service to a patient—and when the patient is ready to receive guidance ("a teachable moment") in a session she originated. Access to personalized content and tools before and after the session is also helpful. Employer groups are much more likely to sponsor this new type of highly targeted care management versus the existing model.

Ido believed health insurance companies would also see a reputational benefit by offering Online Care. Historically, the public image of health insurance companies had often been unfavorable. This was especially true recently, as health-care reform advocates argued in editorials and on nightly news programs that insurance companies were out of touch with average Americans and primarily driven by profit. By offering a novel, convenient, affordable, and personalized care service, insurers could build goodwill with their members. Insurers could also improve their image by offering Online Care to nonmembers, including underserved populations, individuals living in remote locations, disabled patients, and uninsured Americans whose lack of access to health care was frequently blamed on insurance industry greed.

Lastly, health insurance companies could use Online Care to address one of the most intractable problems they faced: aligning their financial incentives with those of physicians. As physicians were usually paid on a fee-for-service basis, they were often incentivized to increase the number of services they delivered; yet more services resulted in higher costs for insurance companies. Health insurers' costs could decrease if physicians encouraged their patients to use Online Care for nonemergency and follow-up appointments. American Well believed that by arranging to share these new cost savings with physicians, insurance companies would encourage greater Online Care utilization by physicians, resulting in a win-win situation for both parties. Moreover, Online Care could improve retention of PCPs and other providers by offering them a more attractive way to practice.

Employers also stood to gain from the American Well model. Most medium-size and large companies provided health benefits to their employees and negotiated with health insurers for an attractive benefit plan at the lowest possible cost to the employer. The value proposition to employers was threefold: first, the convenience and choice of American Well's service would likely boost employee satisfaction and improve retention; second, because faster access to care would enable discovery of health issues at an earlier stage, employers would probably see higher employee productivity and incur less cost associated with catastrophic illness and time off from work; and third, kiosks with webcam-equipped computers could be added to worksite health clinics, affording employees the convenience of American Well's service and avoiding the need to take time off to visit a doctor. Early trials had shown high employee utilization of Online Care–equipped worksite clinics. Ido commented, "Because of the strong value of Online Care to employers, health plans offering the service can be significantly more attractive when competing for employer group business."

Capturing Value for American Well

As far as the business model was concerned, American Well would seek a combination of upfront and recurring revenues. Health insurance companies offering Online Care would pay a one-time fee for each "addressable life" (individual members and nonmembers) who would have access to the service, an annual maintenance and support fee for each addressable life (a percentage of the one-time fee), and an annual hosting (on computer servers) fee per addressable life. While this revenue stream was independent of utilization, American Well would also earn $2 to $7 for every Online Care transaction (a session that lasted longer than 10 minutes would be prorated). In addition, if the health insurance company wanted continued tailored assistance in IT or marketing, American Well would provide these services on a per project basis (as a consultancy).

Rolling Out the Plan

With a business plan in hand, Ido and Roy set out to finance their new company. However, their previous experiences led them to shy away from traditional financing practices. Ido recalled:

> I would urge entrepreneurs not to think sequentially. The "salami financing" of seed, early, mid-stage, and late-stage rounds makes management focus on milestones that may not be relevant after a while. Every round creates anxiety and distraction and is bad for the company's development. It is better to over-finance and worry less about dilution. We mainly raised capital from high-net-worth individuals who are sophisticated investors, many of whom invested in our previous companies. Financing is not an event; it is a mark of a relationship. So you need to look for investors that are like minded. High-net-worth investors are often entrepreneurs who made their money the same way as we are trying to. They are like minded.
>
> We raised capital twice—the first round took 10 days, and the second round, a week. But that is the result of long-term relationships and preparing people. When it was time, we put a fair term sheet on the table and did not open it for negotiations.

Having secured financing, the company began the daunting task of building the platform. While many of the ideas in the business plan required novel technology solutions, those were also an opportunity for the company to develop proprietary intellectual property that could serve to block competition in the future. American Well invested $70 million to create a sophisticated technology platform that enabled physicians and patients to transition seamlessly among communication modalities—phone, video conference, and live online chat—and also allowed asynchronous communication (e.g., leaving a voice or e-mail message). Using this platform, a patient could begin chatting with a physician online, then, without any time lag, reroute the conversation to his phone by simply pressing a button. In addition, the technology allowed patients to view the queue for a specific doctor online, and, if the patient wished to speak to that specific doctor, she could add herself to the virtual queue. When the doctor became available, the patient would be notified by phone or e-mail. "The platform eliminates clinical waste," explained Ido. He continued:

> Today, many patients see a doctor when their issue could be handled by a nurse practitioner, and patients often see nurse practitioners when they could just be getting advice by accessing personalized content or tools. By offering a prescreening tool, our system can also improve the match between medical need and care recommended, with tiered pricing and reimbursement depending on the level of care provided.

From a marketing standpoint, the company put an emphasis on anticipating potential barriers to adoption and addressing them ahead of time. For example, physicians' fear of malpractice litigation was one such anticipated barrier. Matt Jarman, American Well's vice president of corporate development, elaborated:

> We worked with a leading insurance company in developing unique malpractice coverage for Online Care at the cost of a few dollars per session. It will cover physicians using our platform on a per consultation basis, regardless of whether their regular malpractice coverage includes Online Care or not. What was interesting to realize was that the cause of malpractice insurance claims is often something physical which the doctor did to a patient during the office visit. By keeping the interaction online, less is likely to go wrong.

Once the platform was near completion, Ido, Roy, and Russella started to present the concept in industry circles. As Russella recalled:

> Prior to American Well, I worked for one of CareKey's competitors. In fact, Ido and Roy were my formidable competitors and that's how I got to know them. As a result, we had complementing Rolodexes in an industry that values relationships and track record. We started to meet with executives from the large health insurance companies. Initially, they had several challenging questions for us. First, they had concerns about overutilization -- giving people a new "hobby" that will lead to overconsumption of health-care services. Second, they were concerned about the ability to recruit doctors into the system. They would often ask: "Aren't our doctors already overworked?" Third, there were questions about practicing medicine without being able to perform a physical examination. But we had answers for all those concerns. For example, we acknowledged that the system is not for every medical condition. In fact, we facilitated a major study to determine which medical conditions are most appropriate for Online Care [see **Exhibit 10** for selected episodes of treatment]. For the rest, there is still the office or the emergency room.

American Well made a point of attending and often speaking at industry-related conferences. Roy's and Ido's past track record and the desire of health-care executives to learn about how they could innovate often resulted in packed sessions whenever they spoke. At the 2007 WHIT conference, Ido and Roy delivered a talk and hosted a dinner, inviting select health-care industry players as guests. Among the attendees was an executive from the Hawaii Medical Service Association (HMSA), a member of the Blue Cross and Blue Shield (BCBS) Association. Ido and Roy had established a positive rapport with BCBS during their time at CareKey, and they believed Hawaii would be an ideal environment for launching American Well's service. First, access to care was an issue in Hawaii: due to the unique geography of the state, HMSA often had to fly doctors from one island to another to meet its members' needs. Second, the state was small and isolated, the perfect setting to experiment with the new service. Ido convinced the executive to seriously consider American Well's solution, and after a series of meetings in Hawaii, in January 2009, HMSA became the first health insurance company to offer Online Care using American Well's platform. Although HMSA had only 750,000 members, the company purchased 1.3 million "addressable life" licenses, as it anticipated utilization by nonmembers and, subsequently, an increase in membership.

Moving Forward: Important Decisions Ahead

By the fall of 2009, American Well was still busy supporting its first launch in Hawaii and preparing to launch for three other customers. BCBS of Minnesota was the first health insurance company in the continental U.S. to adopt, initially rolling out the system to its own 10,000 employees and family members, with the intention of making it available to employer groups and additional consumers later. BCBS of Minnesota was also the first to deploy virtual worksite clinics based on American Well's platform. At the same time, TriWest Healthcare Alliance, a provider of health-care benefits for U.S. military personnel and their families, decided to use American Well's platform to connect its members with psychologists and psychiatrists. Lastly, Optum Health, a UnitedHealth Group company, was getting ready to go into production with its "Now Clinic" service in Texas (with plans to expand nationwide) and use American Well technology. American Well was also in the process of business discussions with other health insurers and other companies across the U.S.

Everyone at American Well agreed that current and future launches by health insurers needed to be flawless and demonstrate the potential of the American Well solution. Glassman explained, "We work closely with our clients and provide them access to our knowledge and experience, as well as materials we developed as part of our Go to Market Center of Excellence, so that they will succeed in their launch. We assist them in recruiting physicians to the service, in marketing to patients, and in

communicating with the media. We provide channel management and consulting services by a dedicated team of American Well employees."

As these promising developments were unfolding, management was considering several new opportunities for expanding American Well's reach.

Product Development

Roy and Ido had begun developing the concept for American Well's next-generation product. Code-named Team Edition, the new product would revolutionize the interactions between doctors.

Traditionally, patients who needed to be evaluated by a specialist would receive a referral from their PCP, see the specialist per his or her scheduling availability, and then typically return to their PCP for further follow-up, again per their availability. The professional dialogue between the specialist and the patient's PCP would be conducted via visit reports and could take weeks to complete. With Team Edition, once a PCP determined that a consultation with a specialist was in order, the PCP would be able to log on to the system and reach out to any of the specialists who were available online. The consultation would take place right then, with the patient still in the PCP's office. The cycle time from the patient's initial visit to the follow-up with her PCP would be reduced from weeks or months to minutes. Team Edition could also improve the quality of care. Resolving medical problems early, before further complications arose, would deliver significant savings to health insurance companies. (See **Exhibits 11** and **12** for patient waiting times to see a physician.)

Team Edition would also relieve some medical licensing barriers that most states had traditionally put in place. Most often, state governments limited the access of their residents to physicians who were licensed to practice in their own state. However, PCPs were typically free to consult regarding their patients with specialists from anywhere in the United States.

Team Edition seemed to Ido and Roy like a natural extension of American Well's business plan. It would leverage the company's existing technology platform, add value to its existing stakeholders, and further drive the company toward its ultimate goal: being the market leader in enabling Online Care. However, they were less certain about the right timing for such a rollout. Trying to push multiple services in one sales pitch could be too confusing for certain health insurance companies and might delay adoption of the core product.

Market Opportunities

Although they had focused solely on the health insurance market to date, Ido and Roy saw several other potential customers along the health-care value chain. They believed delivery networks—hospitals, chains of health clinics, and other systems of providers—could achieve cost efficiencies, provide better customer service, and boost revenues by adopting American Well's platform.

Hospitals, for instance, could install an Online Care kiosk in emergency rooms, allowing patients in the waiting area to consult with a physician online while waiting to be seen, instead of sitting idly (and growing increasingly frustrated). Moreover, by the time hospital personnel could see the patient, he would already have preliminary information about his ailment. Many patient visits could thus be expedited, and the hospital's overall efficiency improved. Similarly, patients could consult a physician online from home, before leaving for the hospital. Beyond the ability to balance loads across facilities, hospitals in low-demand geographic locations could leverage their physicians' excess capacity using Online Care; doing so would also build relationships with patients, who might then be more willing to visit the particular hospital despite the distance.

Retail clinics could also augment their services by installing Online Care kiosks. American Well's research had revealed a patient preference to receive care—even Online Care—at dedicated health-care sites such as retail clinics. Because NPs were usually the highest-level clinical staff at retail clinics, offering access to physicians through an online service could boost patients' perceptions of the legitimacy of retail clinics. Retail clinics could also use the Online Care platform if the NP was not able to address a patient's issue or if the patient wished to obtain an immediate second opinion.

Pharmacy chains represented yet another potential customer base. Pharmacists provided expertise on prescription medicine usage, potential side effects, dangerous drug combinations, and other important information. However, many patients failed to ask questions of pharmacists in person, whether because they were embarrassed to do so in front of other customers or simply forgot to ask at the time of the transaction. If pharmacists were available online using American Well's platform, patients would have the freedom to ask pharmacists questions at the time and place of their choosing.

Finally, American Well was considering expanding its service internationally; would-be customers in Australia, Germany, and the United Kingdom had already expressed interest. Pursuing this route would, of course, require extensive changes to American Well's organizational structure. The company would also have to tailor its service to each individual market, as regulations governing privacy and online transfers of health information varied from country to country.

As they considered these options, Ido and Roy recognized that any new venture would require a significant marketing investment and divert resources from the U.S. health insurance market, where American Well was just starting to make inroads. Moreover, serving both the insurance and delivery network markets could create conflicts of interest with respect to noninsured patients. If nonmembers accessed American Well's platform through the insurance company channel, the insurer would reap the revenues; however, if this patient population accessed physicians or pharmacists through a hospital, retail clinic, or pharmacy channel, the insurance company would lose out.

A Change of Direction?

Ido and Roy were pondering these questions as their flight began its descent into Washington, D.C. To both brothers, it seemed that the Team Edition service offered a value proposition that would appeal to patients, providers, and payors alike. Team Edition held the promise of alleviating some of the greatest frustrations in a health-care delivery system fraught with costly inefficiencies. Roy and Ido also agreed that American Well could offer significant value to health-care delivery networks. But with only limited adoption of its core service so far, was it too soon for American Well to launch a major new undertaking? Pursuing any of these opportunities would likely require additional hiring (at the end of 2009, the company had under 100 employees) and securing additional funds.

Ido and Roy believed that the essence of American Well's model—linking real-time excess capacity with real-time excess demand—had applications well beyond the health-care industry. Numerous types of expertise—legal advice, accounting services, even religious counseling—could be delivered using American Well's platform. As they weighed the benefits and disadvantages of pursuing the almost endless opportunities they envisioned, Ido and Roy kept returning to the same quagmire: diverting resources to focus on new ventures could undermine the company's initial Online Care rollout, but if American Well waited too long, would another company seize these opportunities? They agreed that the most important thing was to maintain excellent client satisfaction, concluding that "you are only as good as your first failure."

Exhibit 1 U.S. Health Expenditures by Source of Funds, 2008 ($ billions)

	2008
Private	
Consumer out-of-pocket	$277.8
Consumer private health insurance	$783.2
Other private (e.g., philanthropic sources)	$171.1
Public	
Federal	
Medicare	$469.2
Medicaid	$201.3
Other federal	$146.4
State and local	
Medicaid	$143.0
Other state and local (inc. SCHIP)	$146.8
Total health expenditures	$2,338.7

Source: Adapted from "National Health Expenditure Data—Historical—NHE Web Tables (Table 3)," Centers for Medicare and Medicaid Studies, http://www.cms.hhs.gov/NationalHealthExpendData/02_NationalHealthAccountsHistorical.asp#TopOfPage, accessed December 2009.

Note: Numbers may not add to totals due to rounding.

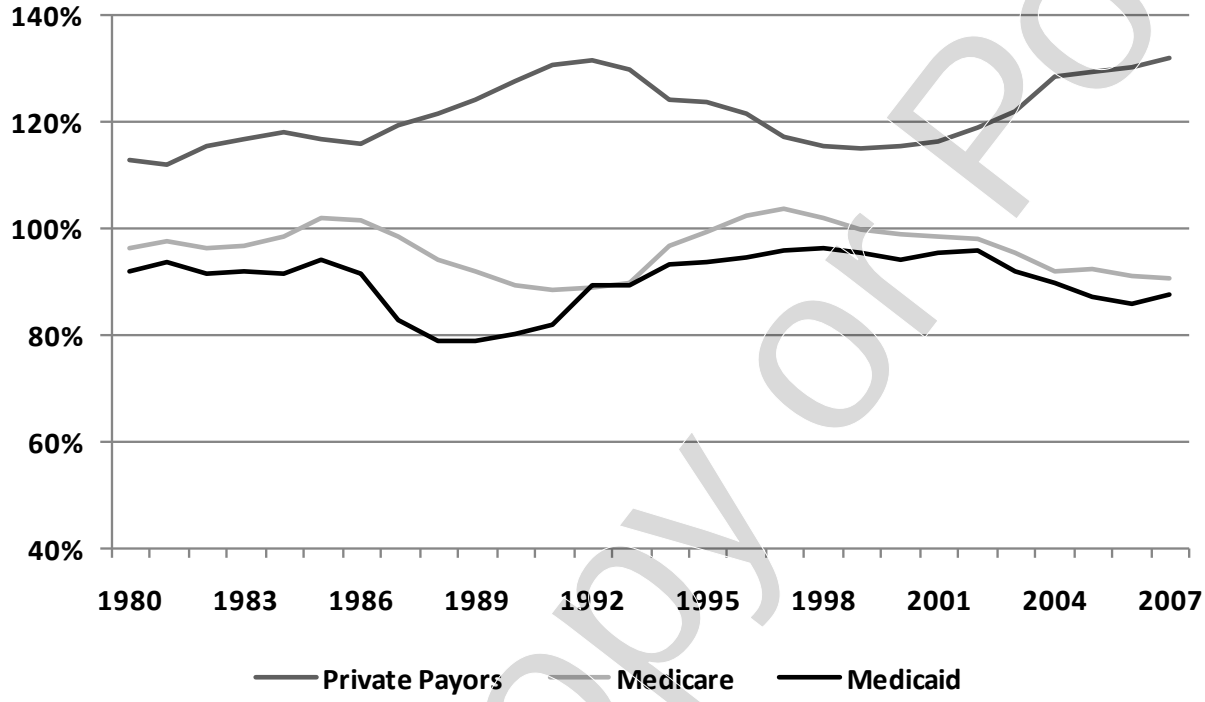
Exhibit 2 U.S. Health Expenditures by Type, 2008 ($ billions)

	2008
Hospital care	$718.4
Physician, clinical, and other professional services	$561.9
Dental services, other personal health care	$169.3
Home health care	$64.7
Nursing home care	$138.4
Prescription drugs	$234.1
Durable medical equipment, nondurable medical products	$65.5
Gov. admin and public health work, private insurance net cost	$229.0
Investment in research, structures, and equipment	$157.5
Total health expenditures	$2,338.7

Source: Adapted from "National Health Expenditure Data—Historical—NHE Web Tables (Table 2)," Centers for Medicare and Medicaid Studies, http://www.cms.hhs.gov/NationalHealthExpendData/02_NationalHealthAccountsHistorical.asp#TopOfPage, accessed December 2009.

Note: Numbers may not add to totals due to rounding.

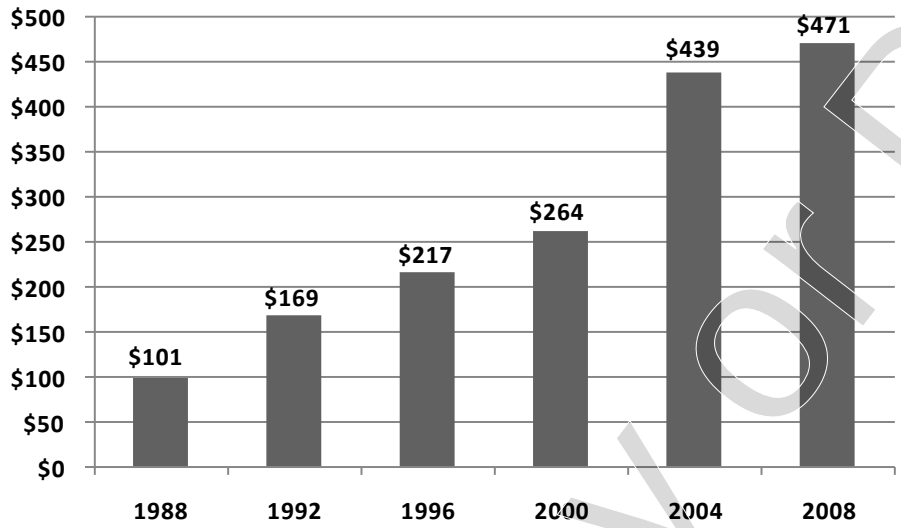
Exhibit 3 Community Hospitals' Payment-to-Cost Ratios* by Payor (%), 1980 to 2007



Source: "Fast Facts—Costs/Insurance--Community Hospital Payment-to-Cost Ratios, by Source of Revenue, 1980–2007," Kaiser Family Foundation, http://facts.kff.org/chart.aspx?ch=179, September 16, 2009, citing American Hospital Association and Avalere Health analysis of 2007 American Hospital Association Annual Survey data, for community hospitals, *Trendwatch Chartbook 2009, Trends Affecting Hospitals and Health Systems,* Table 4.4, p. A-35, accessed December 2009.

*Note: Ratios illustrate the extent to which each payors' reimbursement to hospitals covered the hospitals' cost of providing patient care. They cannot be used to compare payment levels across payors, however, because the service mix and intensity vary. Medicaid includes Medicaid Disproportionate Share payments.

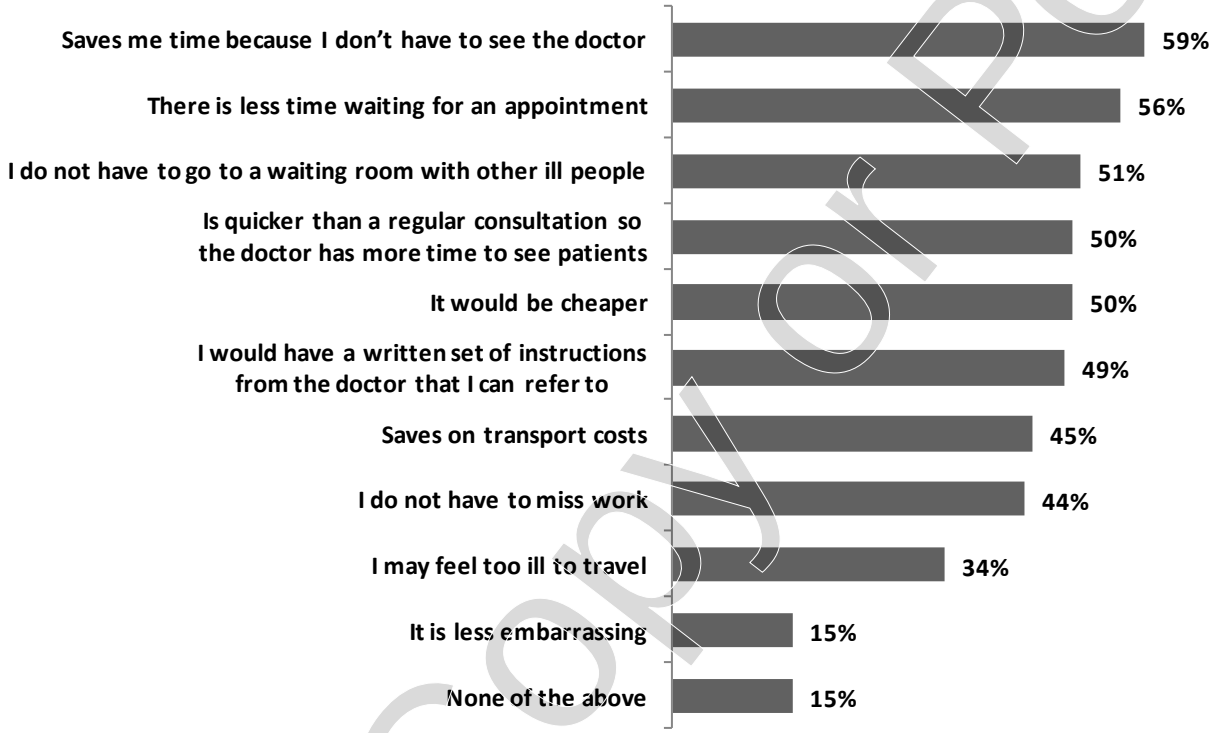
Exhibit 4 Private Health Insurance Net Administrative Costs* per Person Covered, 1988 to 2008 ($)



Source: Adapted from "Fast Facts—Costs/Insurance--Private Health Insurance Administrative Costs Per Person Covered, 1986–2008," Kaiser Family Foundation, http://facts.kff.org/chart.aspx?ch=217, January 7, 2010, citing the KFF calculations NHE data from Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group; and private health insurance enrollment data from Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group, accessed February 2010.

* Note: Data show the net cost of private health insurance per private enrollee (including Blue Cross/Blue Shield, commercial insurance, HMOs, and self-insured plans), as calculated by the Centers for Medicare and Medicaid Services (CMS). Net cost of insurance is the difference between premiums earned and benefits incurred, and includes insurers' costs of paying bills, advertising, sales commissions, and other administrative costs; net additions/subtractions from reserves; rate credits and dividends; premium taxes; and profits or losses. Private enrollment is estimated by CMS using the National Health Insurance Survey and the Current Population Survey.

Exhibit 5 Survey Responses by U.S. Consumers on Advantages of E-mailing Their PCP or Family Doctor Regarding an Illness or Condition, August 2009 (% of respondents)



Source: "Hassle-Free Healthcare, Delivered Digitally," November 9, 2009, via eMarketer Digital Intelligence, citing "Consumers Would Embrace Email Communication with Their Doctor," Lightspeed Research press release (Basking Ridge, NJ, September 29. 2009), Chart 2, p. 2, http://www.lightspeedresearch.com/pdf/LSR_PR_ConsumersWouldEmbraceEmailCommunication.pdf, accessed December 2009.

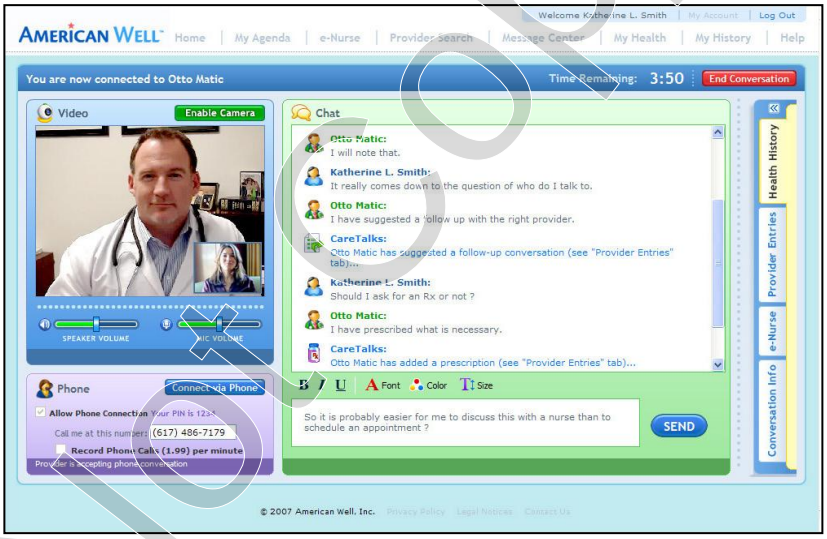
Note: n = 1,000

Exhibit 6 American Well Consumer Experience: Description and Screen Shot

American Well makes it easy for consumers to talk to physicians, immediately, from home. Consumers don't need to call ahead or wait for a doctor. By logging on or using their phone, consumers can connect to a physician of their choice immediately. Of the many doctors available on American Well, the service helps consumers choose the physician who is right for them. Consumers can review doctors' credentials, satisfaction ratings, and even watch personal video introductions. Once the consumer selects a physician he or she is comfortable with, a live conversation begins.

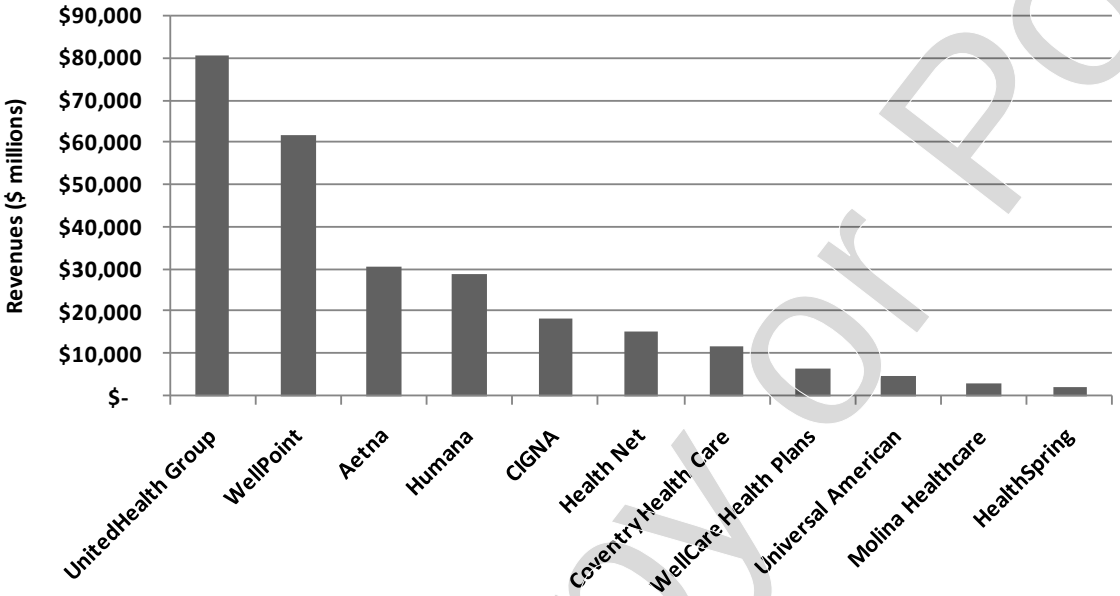
Some consumers may be unsure about what kind of physician to talk to or may have difficulty describing the exact nature of their symptoms or conditions. Consumers may present with a symptom, (e.g., headache) and need help identifying the right type of provider to see. American Well guides the patient to the most appropriate provider and helps articulate discussion topics for the conversation. By helping to structure the consultation process, the service ensures that consumers maximize their time with the physician.

Once connected, the consumer can interact with the physician using online chat, live web-conferencing, or phone. The consumer can also share relevant medical information and past conversations. American Well maintains a full record of the discussion, allowing consumers to forward comprehensive care reports to primary care physicians, ensuring continuity of care.



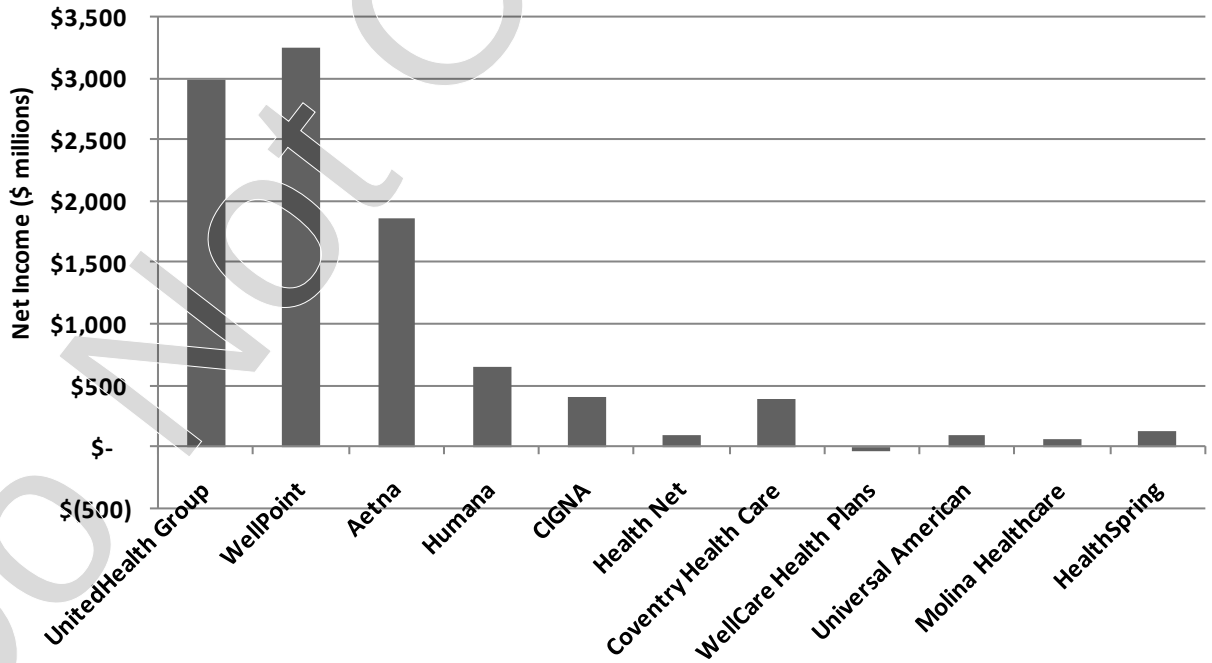
Source: Company documents.

Exhibit 7 Top Publicly Owned Managed Care Organizations, 2008 Revenues ($ millions)



Source: Adapted from Phillip M. Seligman, "Healthcare—Managed Care—Industry Profile," April 16, 2009, Standard & Poor's Industry Surveys via NetAdvantage, accessed February 2010.

Exhibit 8 Top Publicly Owned Managed Care Organizations, 2008 Net Income ($ millions)



Source: Adapted from Phillip M. Seligman, "Healthcare—Managed Care—Industry Profile," April 16, 2009, Standard & Poor's Industry Surveys via NetAdvantage, accessed February 2010.

Exhibit 9 Breakdown of Costs for Commercial Health Plan and Estimated Savings Using Online Care

The actuarial model estimated that Online Care would enable a $3.36 net difference in first-dollar costs per-member-per-month, representing a 9.3% difference on a starting cost estimate of $36.06 in traditional service on a per-member–per-month basis.

Service	Utilization per 1,000 Members	Allowed Cost per Service	Allowed per Member per Month
Estimated first-dollar values			
Emergency department facility	161.05	$933.58	$12.53
Emergency department physician	142.59	142.25	1.69
Acute physician office visits	2,762.99	82.33	18.96
O/P psychiatric visits	286.81	100.92	2.41
Urgent care visits	79.81	71.26	0.47
	3,433.25	$126.05	$36.06

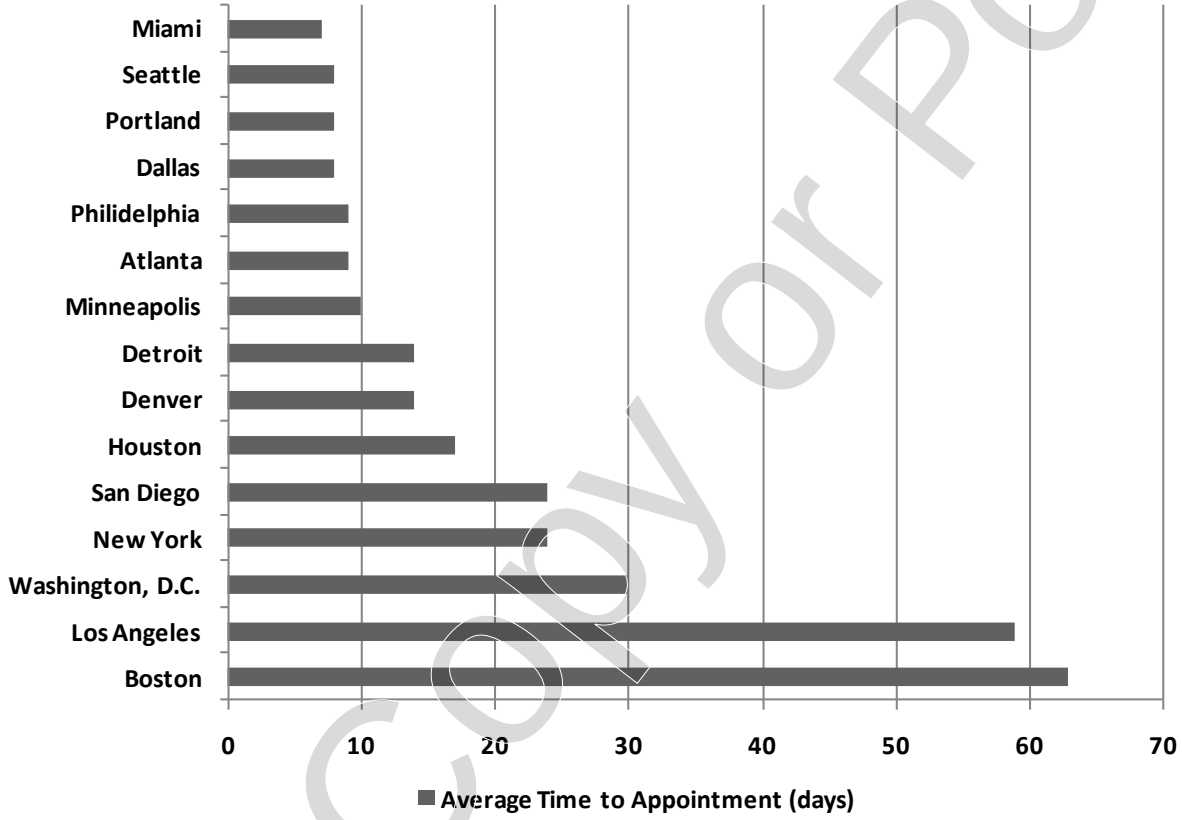
Source: Adapted from Art Wilmes, FSA, MAAA, "What if Healthcare Worked Like iTunes?" *The Actuarial Digest*, Summer 2009, p. 10.

Exhibit 10 Selected Episodes of Treatment Potentially Suitable for Online Care

Acute	Maintenance (cont'd)	Maintenance (cont'd)
Minor infectious disease	Benign hypertension, w/ or w/o co-morbidity	*Ongoing Rx therapy w/o provider intervention (cont'd):*
Tonsillitis, adenoiditis or pharyngitis, w/o surgery	Chronic sinusitis, w/o surgery	Parkinson's Syndrome therapy
Allergic rhinitis	Asthma, w/ or w/o co-morbidity	Neurology
Acute sinusitis	Chronic bronchitis, w/ or w/o complication, w/ or w/o co-morbidity	Glaucoma therapy
Other ear/nose/throat infection, w/o surgery	Emphysema, w/ or w/o chronic bronchitis	Ophthalmology
Minor ear/nose/throat inflammatory conditions, w/o surgery	Inflammation of the esophagus, w/o surgery	Anticoagulant therapy
Acute bronchitis, w/o co-morbidity	Ulcer, simple	Antiplatelet therapy
Minor infectious pulmonary disease other than acute bronchitis	Irritable bowel syndrome	Antiarrhythmic therapy
Gastritis and/or duodenitis, simple	Hiatal hernia, w/o surgery	Hypertension/Heart Disease therapy
Monilial infection of the vagina (yeast)	Hemorrhoids, simple or complicated w/o surgery	Cardiology
Minor burns	Adult rheumatoid arthritis, w/o co-morbidity	Fluoride therapy
Minor skin trauma, except burn and open wound	Joint degeneration, localized, w/o surgery	Sinusitis/Rhinitus therapy
Major orthopedic trauma other than fracture or dislocation, w/o surgery	*Ongoing Rx therapy w/o provider intervention:*	Otolaryngology
Minor orthopedic trauma	Non-HIV Antiviral therapy	Asthma therapy
Bursitis and tendinitis, w/o surgery	HIV/AIDS Antiviral therapy	Bronchodilator therapy
Other minor orthopedic disorder	Leprosy therapy	Emphysema/COPD therapy
Exposure to infectious diseases	Infectious diseases	Pulmonology
Prophylactic proc. other than inoculation & exposure to infect. disease	Diabetes Mellitus therapy	Inflammatory Bowel Disease therapy
Poisonings and toxic effects of drugs	Hyperuricemia/Gout therapy	Irritable Bowel Disease therapy
	Impotence therapy	Acid Peptic Disease therapy
Maintenance	Antihyperlipidemic therapy	Gastroenterology
AIDS	Nutritional therapy	Benign Prostatic Hypertrophy therapy
HIV sero-positive without AIDS	Pancreatic enzyme replacement therapy	Incontinence therapy
Insulin dependent diabetes, w/ or w/o co-morbidity	Respiratory Enzyme Deficiency therapy	Urology
Non-insulin dependent diabetes, w/ or w/o co-morbidity	Thyroid Hormone Replacement therapy	Vaginal Antifungal therapy
Female sex gland disorders	Testosterone Replacement therapy	Gynecology
Male sex gland disorders	Weight Reduction therapy	Acne therapy
Gout	Endocrinology	Antifungal/skin therapy
Hyperlipidemia	Colony Stimulating therapy	Topical Retinoid therapy
Obesity, mild	Hematology	Dermatology
Obesity, morbid w/o surgery	Anxiety/Panic Disorder therapy	Arthritis/Anti-inflammatory therapy
Minor depression	Depression therapy	Osteoporosis/Bone Disease therapy
Anxiety disorder or phobias, minor	Mania/Affective Disorder therapy	Skeletal Muscle Spasm therapy
Migraine headache, common	Psychosis/Schizophrenia therapy	Orthopedics & Rheumatology
Eating disorder	Psychiatry	Contraceptive therapy
Psychosexual disorder	Anticonvulsant therapy	Hormonal Replacement therapy
Alcohol dependence, w/o complication	Alzheimer's Disease therapy	Preventative and administrative
Migraine headache, common	Migraine therapy	Insomnia therapy
Congestive heart failure, w/ or w/o co-morbidity	Multiple Sclerosis/ALS therapy	Pain therapy
		Isolated signs and symptoms

Source: Compiled from Arthur L. Wilmes, FSA, MAAA, "An Actuarial Analysis of Online Care—Appendix: Chart F.5," Milliman, pp. 1–17.

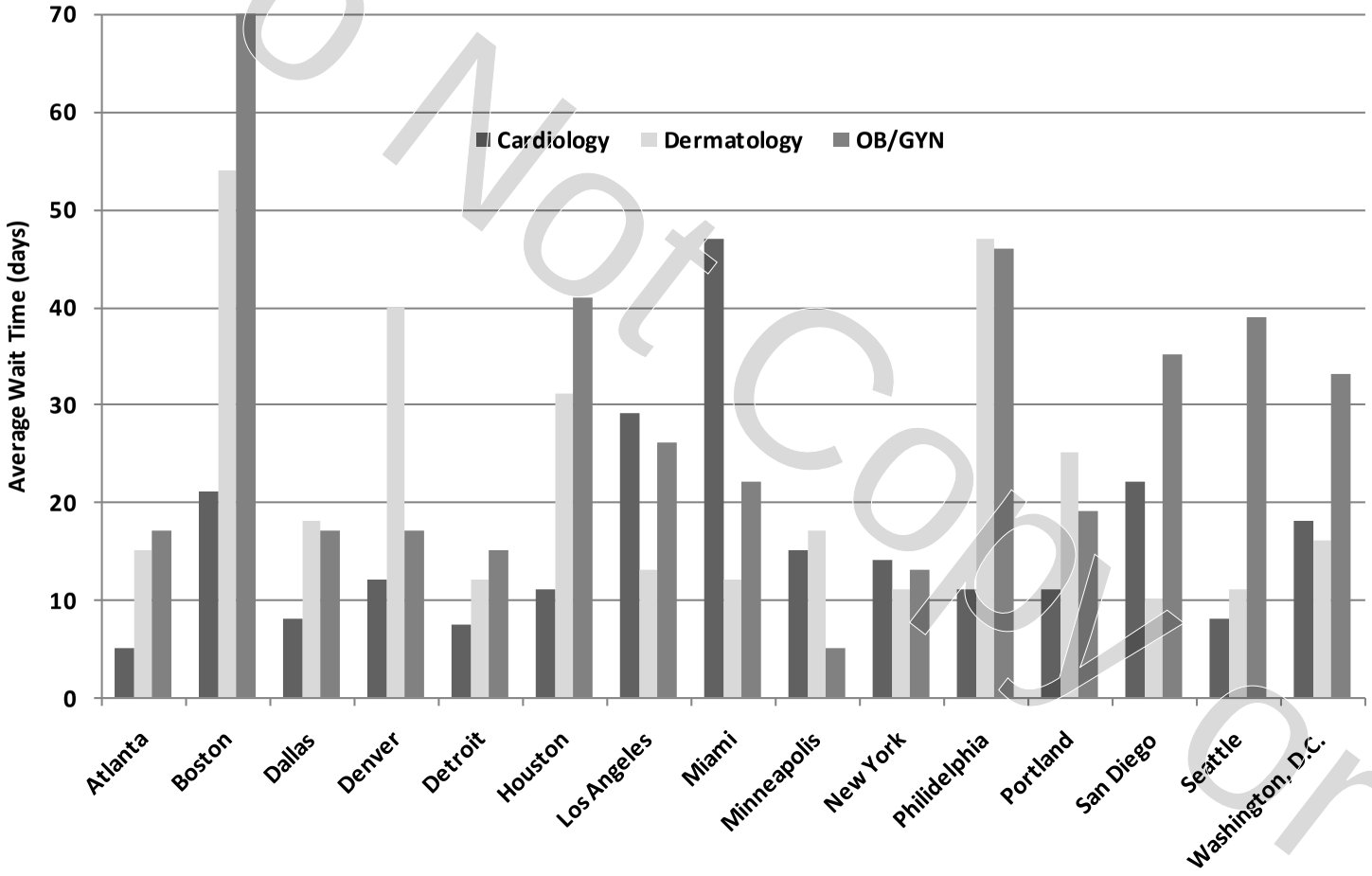
Exhibit 11 Average Time New Patients Wait for Appointment with Family Practice Physician, Selected Cities, 2009*



Source: Adapted from "2009 Survey of Physician Appointment Wait Times," Merrit Hawkins & Associates, p. 9, http://www.merritthawkins.com/pdf/mha2009waittimesurvey.pdf, accessed February 2010.

* Data reflect results of phone survey of physician offices (10–20 per metropolitan area) conducted by Merrit Hawkins & Associates from September 2008 to March 2009.

Exhibit 12 Average Time New Patients Wait for Appointment for Cardiology, Dermatology, and Obstetrics/Gynecology (OB/GYN), Selected Cities, 2009*



Source: Adapted from "2009 Survey of Physician Appointment Wait Times," Merrit Hawkins & Associates, p. 8, http://www.merritthawkins.com/pdf/mha2009waittimesurvey.pdf, accessed February 2010.

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