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American Well: A Viral Solution

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INTRODUCTION:

Susan awoke as she did on any normal Wednesday. Her intentions were to begin preparing her children's lunch and starting her strenuous day as a full-time mom and part time administrative assistant. She grabbed her ritualistic cup of coffee and sat down at the kitchen table with her iPad to read the daily news. Something didn't seem right. As she loaded her news website she realized things were moving very slowly, visual cues were not as expected and white dots began flashing on the dark portions of the screen. She took a deep breath and hoped a quick boost of oxygen would settle her down. With a schedule like hers any break in routine is a recipe for disaster. If the kids haven't left in time then she will have to drop them off at school on her way to work. If she has to leave early for work she won't have time to let the dog out. If she doesn't let the dog out Fido will begin barking loudly and paw at the new glass door. If Fido barks and paws at the door it will wake up her husband who just got off of work from the midnight shift. Her head begins to throb. The long deep breath did nothing, and if anything, the situation got worse. More white dots appeared and items began to shake in her path of vision. "Oh no!" she shouted "not today, not right now. I have to be at the office in 45 minutes and the kids have to catch the bus in 30 minutes." This, however, was not frustration from an iPad malfunction, but frustration from concern for personal health, because her iPad was working just fine. Her body was feeling quite ill and she, not her iPad, was experiencing the slowness and visual distortions.

With panic beginning to set in and her illness worsening, she picked up her iPad once again. This time it wasn't to read the daily news, she was opening her American Well app that enabled her to get immediate medical consultation on her condition. In 45 seconds she had logged in and requested a consult. Within another 30 seconds a physician had made contact via a platform that enabled face to face conversation through Susan's camera on her iPad. In three more minutes Susan had uploaded her medical records and had explained her current condition to the physician. She laid her iPad down on the table and lurched her way up the stairs to wake the children. She returned to the table and picked the iPad up once more. The he suggested that she have a glass of orange juice and possibly a donut if the orange juice didn't improve her condition. He noticed in her records that her family history was full of diabetic conditions, and that she had shown characteristics, through previously conducted blood tests, of potential diabetic complications.

From these findings and her verbal expression of symptoms he deduced that she was experiencing a high level of insulin within her blood and that in order to reach a physiological norm she would have to quickly ingest an item with high sugar content. She quickly exchanged her cup of coffee for one of orange juice and began taking large swigs. She began noticing an improvement of vision within seconds, and quickly began feeling much better. With the physician still in contact via her American Well App on her iPad she expressed her thanks. The physician stated he would record this occurrence within her medical records and recommended she see a family physician or a diabetic specialist as soon as possible. She agreed to do so, said her goodbyes, and hit the "end call" button on the bottom of her screen.

Just as she hit the button, her children ran downstairs. She packed their lunch pails and sent them out the door. She had ten minutes to spare. She let Fido out put on the clothes hanging below her ironing board and sat down to finish her daily news read. Without her American Well App that enabled her to receive immediate consultation from a physician her daily routine would have been in compromised and her health could have been at significant risk.

American Well is paving the way for instantaneous communication between patients and physicians via digital platforms accessed through computers, tablets, and smartphones. Their service is readily available anytime and anywhere an internet connection can be established. The service offers medical record storage for immediate transfer to the consulting physician and enables face to face conversations by using digital video feed capabilities found within most of our personal computers, phones, or tablets. No previous relationship with the physician is required and anyone with access to the site can acquire services in exchange for a monetary fee.

American Well's founders have experienced success from providing a technological service within the healthcare field. The brothers, Ido and Roy Schoenberg, have successfully established, developed, and lead prior healthcare information technology firms prior to American Well and done so with remarkable results. After selling their previous firm, they spent time relaxing and not becoming heavily involved in other endeavors. During this down time they begin to think of new undertakings and noticed a need for a direct to physician platform with worldwide access capabilities. With that in mind they begin developing American Well.

The brothers hold a unique position within the healthcare field; both are formally trained physicians with a track record of success and experience within administrative roles. Roy, American Well Systems President and CEO, received his Masters of Public Health in Healthcare Management from Harvard University. Ido, American Well Corporation's Chairman and CEO, founded iMDSoft a medical enterprise software firm that became a market leader and held a CEO position for CareKey Inc. until there acquisition by TriZetta Group. With their experience and their knowledge, they identified a need for a service which American Well could provide.

The market for this type of service is growing and other companies have joined in creating quite a level of competition. While American Well provides access to anyone who registers and has the capability to connect to the internet most of their competitors market directly to a physician, which minimizes the amount of consumers that can freely use competitor's services.

American Well remains steadfast within the market and continues to compete with firms much larger in breadth and financial clout. Will American Well's freedom of access and entrepreneurial success of its founders prove to be valuable within a quickly growing, highly competitive market?

HISTORY:

In 2006, a revolutionary new concept was introduced. In an endeavor to transform healthcare delivery and advance the way patients interacted with physicians forever, American Well (AW) was created. This new concept brought about the use of the internet and telephone to connect physicians and patients promptly and in "real time". Based in Boston, American Well brought healthcare into the workplaces and homes of patients. The web-based telehealth program–Online Care–permitted patients and healthcare suppliers to utilize live, immediate, and clinically significant visits through video, phone, and secure text chats (About us AW, 2012). American Well has made a sizable profit in promoting this idea to leading health insurance corporations in the United States.

The next initiative, "Team Edition", added connectivity as the primary care physicians referred patients to an online specialist. The connection was made during the preliminary visit, saving time and unnecessary concern for the patient. New consumers for American Well also began to include hospitals, retail clinics, and pharmacies in 2009 (Laufer & Ofek, 2010). The most recent innovation

took place in May of 2012, Online Care 6.0. New mobile applications have allowed American Well consumers to connect with available, appropriate nurses and physicians from their iPhone, iPad and iPod touch mobile devices, improving convenience and access to care (About us AW, 2012). "Real time" connectivity for medical devices has also been established so that providers have been able to link key medical pieces of equipment directly into their computers and broadcast readings during live online visits (About us AW, 2012). Some of these devices have included stethoscopes, derma-cams and spirometers to check blood pressures.

The creators of American Well, the Schoenbergs, were both educated in Israel: Ido graduated from the University of Tel-Aviv Sackler School of Medicine and Roy graduated from the Hebrew University Medical School (Laufer & Ofek, 2010). Roy also completed a research fellowship at the Center for Clinical Computing and a Masters of Public Health degree from Harvard University (Laufer & Ofek, 2010).

American Well has had a brief company history, but has had significant milestones and moments within the short time period (See Figure 1). The information was taken directly from a listing of press releases from the website (About us AW, 2012).

ORGANIZATIONAL MANAGEMENT:

Drs. Ido and Roy Schoenberg founded and created American Well (About us AW, 2012). Physicians and IT innovators, the two brothers, formed the company with grand hopes and expectations for the advancement of healthcare delivery.

Ido Schoenberg, MD, Chairman & CEO American Well Corporation

Brother Number One has had notable success in the healthcare field with his technology innovations. After cofounding iMDSoft (a project software company that computerizes hospital critical care units) Ido developed the enterprise into a market leader in the United States, East Asia and Europe (About us AW, 2012). Headquartered in Massachusetts, with offices in the Netherlands, Germany, Israel, and Australia, iMDSoft has been able to sustain strategic affiliations and pacts with leading suppliers of medical equipment and software systems that share a common vision and value (About, 2012). Ido's next venture was to join CareKey Inc. as CEO in 2001 leading the way in an acquisition by TriZetto (About us AW, 2012). According to the website, from 2001 to 2006 he served as the Chief Business Strategy Officer of the Group (About us AW, 2012). TriZetto has made it possible for payers and providers to succeed in the developing healthcare market. Fifty percent of the U.S. insured population and more than 21,000 physician offices representing more than 90,000 providers are affected by TriZetto's advancements (About us TriZetto, 2012). Success has come effortless to a leader with Ido's extensive background. However, Ido Schoenberg is only one half of the team!

Roy Schoenberg, MD, MPH President & CEO American Well Systems

Brother Number Two has had enormous success in the healthcare field with his technology innovations, as well. Product development and general operations have been Roy's area of responsibility within AW's tag team approach to leadership. Roy Schoenberg has also been the dreamer of the two. He not only came up with the concept for American Well, but he has been also credited with envisioning and creating CareKey, Inc. Roy was heavily involved, while at CareKey, with marketing, product development, and the implementation of its web-based health management advancements (About us AW, 2012). Like Ido, Roy sustained his commitment to CareKey through the acquisition by TriZetto and served as Senior Vice President and Chief Internet Solutions Officer for the Group (About us AW, 2012). Roy has authored numerous publications, and books on the subject of Medical Informatics as well as lecturing whenever his busy schedule allows.

Vision and Mission

Vision: "to harness technology to transform healthcare delivery in the US and around the world". (About us AW, 2012)

Mission: "to redistribute healthcare while improve quality and access to care". (About us AW, 2012)

According to the website, American Well's services have been adopted by many prominent national and local health campaigns, pharmacies chains, various employers, delivery systems and standalone physician practices. These customers have been partnered with and supported by American Well throughout the entire process of their communication services. Beginning with the introduction and implementation of its services, and continuing through the adoption by patient, provider, and employer groups, American Well remains dedicated to building a successful, lasting partnership with its customers in telehealth services. American Well has also made a promise to its customers: "to fulfill our mission across the country and around the world" (About us AW, 2012).

GENERAL ENVIRONMENT:

Understanding general environment is substantial in making decisions about a firm's current and future strategy. American Well uses its software technology to provide online healthcare to people at their work place or their home. It has to understand the general environment in which it operates, and focus on the continuously changing dynamics of the industry. American Well must study dimensions that would affect its operations and success. The most crucial dimensions for American Well to analyze would be Demographic and Political/Legal segments of the general environment.

Demographics:

In 2012, total healthcare expenditure accounted for $2.6 trillion, comprising health consumption of $2.5 trillion (Martin, Lassman, Washington, Catlin, & the National Health Expenditure Accounts Team, 2012). This total expenditure was 17.9% of the U.S. Gross Domestic Product. This increase in total healthcare expenditure has led to individual spending of $8,402 annually. The government payers, Medicare and Medicaid, showed a growth in their expenditures to 5% and 7.2%, as compared to 2009 (Martin et al., 2012). Medicare and Medicaid expenditure increased due to an aging population known as 'Baby Boomers'. In 2010, the first Baby Boomer turned 64. In the United States (U.S.), when a person turns 64 years he qualifies for benefits of Medicare. The Medicare beneficiaries as of 2012 account for 40.4 million people. This number would grow to 72 million in 2030 (See Figure 2). According to the US Census Bureau 2010, not only are they living longer, but also seniors have been increasing at a faster rate as compared to the younger populations. People aged more than 85 years would increase to 19.5 million by 2030 (CDC, 2003). By 2050, this older population would grow by 350% (Weiner & Tilly, 2002). The increase in the older people will have a profound impact on the delivery and organization of healthcare services. The radical shift will be from acute care to chronic care, as these old people would develop chronic conditions like diabetes, heart disease, osteoporosis, Alzheimer's disease and hypertension. Obesity has also become a serious threat, and at least 20% of the total population in the U.S. is obese. Obesity results in chronic diseases like heart disease, stroke, eye disease, and diabetes. The population of rural areas is at least 65% obese (CDC, 2009). These conditions will demand more healthcare services than other generations, and more resources including technology (AHA, 2007). The chronic conditions will require ongoing management of disease; doctors have to build a long term relationship with these patients to help them with their disease. Chronic conditions also often come with a disability, which will require long term care, like home health, adult day care, nursing homes, and personal care, resulting in high expenditures for Medicare (Weiner & Tilly, 2002).

All the care discussed above requires more healthcare professionals, physicians, registered nurses, skilled nursing staff, and long-term care providers. In 2008, the Association of American Medical Colleges (AAMC) conducted a thorough assessment to predict the future regarding the demand and supply of healthcare professionals. Present current number of medical schools, medical graduates, and foreign medical graduates are not enough, and the U.S. will face an unavailability of 124,000 physicians, working full time, by 2025 (Association of American Medical Colleges [AAMC], 2008). The shortage is due to a high growth level of an aging population, increased physician visits and the U.S. population growth (AAMC, 2008). The AAMC has recommended increasing the enrollment of students in U.S. medical schools, but this initiative is not enough to meet the shortage in supply of physicians and other healthcare providers. The delivery of healthcare should be reconfigured; physicians and other healthcare providers should be more efficient in providing effective and quality care to patients (AAMC, 2008).

Political/Legal:

Federal and state regulatory agencies establish rules and regulations for healthcare providers and facilities to ensure patient safety and quality of care. The check on healthcare providers is necessary as legal implications of negligence could lead practitioners to a lawsuit, and facilities to bankruptcy. Congress has established various rules and regulations to ensure the effectiveness and efficiency of the healthcare provider. In March 2010, one such reform was the Patient Protection and Affordable Care Act (PPACA). A main element of the health care reform law, PPACA, is the individual directive—a stipulation that will require most persons to buy healthcare insurance or pay a price, effective in 2014 (Healthcare.gov, 2012). The reform also included a ban on lifetime limits, ban on excluding children less than 19 years with pre-existing conditions, coverage of preventive medical services, right to appeal the denials, and restrictions on yearly coverage quota (Healthcare.gov, 2012). The reforms tend to strengthen the U.S. healthcare system by expanding the primary care workforce, equipping primary care practitioners with new capabilities, and reorienting actual delivery system through payment and organizational reforms (Friedberg, Hussey, Schneider, 2010). According to Kocher, Emanuel, & DeParle (2010), the PPACA will provide health insurance to 32 million uninsured people, and will ensure new polices to slow down increase in costs to make healthcare more affordable for U.S. citizens.

Besides the PPACA, President Clinton enacted the Health Insurance Portability and Accountability Act (HIPPA) in 1996. The law imposes the restriction on a new employer plan to exclude new employees with preexisting conditions, from the enrollment in its health insurance plan. It also prohibits employers, when enrolling employees in their health plan, to discriminate on the basis of past health insurance claims, and the gender of their employees (U.S. Department of Labor, 2012). The law also protects privacy and security of patient's health information. The Act regulates the way in which healthcare providers gather, record, maintain and disclose a patient's personal health records. The privacy rule under HIPPA assures protection of the patient's health records. However, the rule allows the flow of information to healthcare providers as to make informed and better decisions for the patient's well-being (HHS.gov, 2012).

In addition to the privacy rule, the security rule under HIPPA also protects the privacy of the patient's health information. The security rule allows healthcare facilities to adopt new technologies like electronic health records, computerized physician order entry system, and various clinical applications for pathology, radiology and pharmacy systems, to improve efficiency and quality of care given to patient (HHS.gov, 2012).

Other regulation to ensure quality care and patient safety is the Patient Safety and Quality Improvement Act of 2005 (PSQIA). The Act encourages a voluntary reporting system to gather information to analyze and solve quality care and patient safety issues (HHS.gov, 2012).

OVERVIEW OF THE HEALTH CARE INDUSTRY:

American Well imagined a system where patients and physicians could interact in "real time" through web based telephony and online technology. Today geographical and time constraints have limited access to healthcare services. To address these restrictions American Well formulated a service that linked the supply of healthcare providers to the demand of patients. According to the 2012 North America Industry Classification, American Well falls under Sector 62 that is, Health Care and Social Assistance Industry (United States Census Bureau, 2012).

The healthcare industry in the U.S. is the world's largest industry with more than 90,000 physicians and 5,745 hospitals (American Hospital Association, 2012), together accounting for 51% of the total healthcare expenditure in 2010. Rise in chronic conditions, administrative costs, new medical technologies and prescription drugs have increased the healthcare expenditure. As people are living longer, prevalence of chronic illnesses is higher than ever. The percentage of the total healthcare expenditure spent on the treatment of chronic illnesses is 75% of the total healthcare expenditure (Congressional Budget Office, 2008).

Rapidly changing US Healthcare industry

U.S. healthcare industry dynamics, which were responsible for change in the recent decades, has changed dramatically. Recent dynamics have established a new set of factors that are responsible for change in the healthcare industry. The factors include purchasing power of buyers; government, private insurance, the price competition led by the buyers and providers, the formation of managed care organizations and their practices, the drive for market power, new roles of patients and employers, new laws regulating healthcare industry, and the assumption of investment and insurance risk (Etheredge, Jones and Lewin, 1996). In addition to these factor Pricewaterhouse Coopers's (PwC) Health Research Institute also indicated important issues for the healthcare industry. These issues included pay-for-performance reimbursement, shortage of drugs due to a sudden increase in the demand, delay in manufacturing and quality issues with the manufacturers of generic drugs, deferring to seek healthcare due to higher copay and deductibles, privacy and security issues due to the modern technology introduced in healthcare like computerized patient medical records, and the emerging use of social media like Facebook and Twitter to get information healthcare related issues (PricewaterhouseCoopers (PwC) Healthcare Research Institute, 2012). In 2011 PwC conducted a web-based survey of 1,000 people aged 18-24 years to see the percentage of U.S. adults who defer healthcare due to high costs associated with its services (See Figure 3).

Furthermore, the passing of laws such HIPPA and ACA, have assured patients that they are at the center of the healthcare industry. HIPPA has assured privacy of patients along with their insurance coverage at all times even between changing jobs. In addition to HIPPA, ACA serves as the healthcare reform that will change the practices of all players of the healthcare industry. The focus has shifted from the quantity of patients seen to the quality of care provided to patients.

In addition to the above changes, ACA has impacted the foremost healthcare players to align them with the goal of providing greater access to healthcare at affordable prices by reducing healthcare costs.

ACA Impact on Major Players in the Healthcare Industry

The major players in the healthcare industry include physicians, hospitals, patients, pharmaceutical companies, commercial insurance companies, suppliers of equipment and medical supplies, government insurance programs namely Medicare and Medicaid. Moreover, the suppliers in the healthcare industry also include healthcare information technology providers, financial

institutions or private equity that have provided investments to healthcare projects and institutional and academic researchers (Harvard Business School, 2011).

The ACA will affect the relationships and roles of leading players in the healthcare industry in the following way:

Health Insurers

The presences of third party payers and insurance companies have always made healthcare delivery an issue in the United States. The insurance companies have restricted access to healthcare by dropping the insurance coverage for people, by denying coverage to adults and children with pre-existing conditions, applying life time limits on the insurance coverage, and by charging high premiums. The law of ACA has put an end to the harmful practices of insurance companies. The ACA has provided government with authority to oversee and regulate the practices and premiums of the insurance companies. It also encouraged competition between health plans on the basis of price and covered services (Healthcare.gov, 2012). The ACA has mandated purchasing of insurance coverage by all citizens of the U.S., providing millions of customers to the insurance companies. The ACA has required the insurance companies to contribute a small percentage of their profits towards the healthcare costs; the healthcare industry has opposed this requirement. The ACA has also informed health insurers about its consideration of an additional tax on high cost health plans; health insurers are not in harmony with the consideration (Galewitz, 2009).

Hospitals

In response to the ACA, hospitals made a deal with the State Finance Committee, and the President to give up $155 billion in the form of Medicare funds, accepting an 8% cut on the revenue (Galewitz, 2009). The ACA will help hospitals in treating an increased number of paying patients. The paying patients will generate money for hospitals in return. The ACA promised hospitals the federal disproportionate share to treat uninsured people until the insurance is not wholly expanded.

Pharmaceutical Companies

Pharmaceutical companies made a deal with the government to put up approximately $80 billion dollars for the expansion of health insurance coverage. They also agreed to sell the brand-name drugs at half price to the senior citizen when these citizens hit the gap in their Medicare Part D plan; the citizens will pay full price for the brand name drugs in their coverage gap. In addition to this discount, pharmaceutical companies will provide high rebates to the Medicare and Medicaid eligible individuals (Galewitz, 2009). The pharmaceutical companies will be giving up $80 billion in discounts and rebates, but they will benefit with a number of insured people who will pay for their drugs. Moreover, in exchange for $80 billion, they would also get 12 years of exclusivity protection from competitors producing cheaper medicines compared to their expensive biologic drugs (Galewitz, 2009).

Physicians

Before ACA, Medicare used a formula to reimburse physicians, on the basis of which Medicare threatened physicians a 20% reduction in the reimbursement every year. Congress has decided to eliminate this formula and has allocated an extra $230 billion for physicians over the next decade (Galewitz, 2009). The ACA has not made any significant changes in medical liability that still haunts physicians compelling them to do defensive medicine (Galewitz, 2009).

Along with the general environment and the laws of the healthcare industry, it is beneficial for success to know about the closest competitors, and strategic groups.

Strategic Groups

The set of firms that offer similar services to patients form a strategic group. As telehealth is a key business, its strategic group consists of all the firms that offer Telehealth to bring physicians and patients together. Some of firms that offer Telehealth are Connect MD, Bosch Healthcare, American Telecare, Philips, Vitel Net, Specialists On Call, Care Innovations, and Bayer Healthcare (American Telemedicine Association, 2012).

Target Market:

The healthcare industry is an extraordinarily large and complex industry that is full of companies designed to provide services that will make them money. In order to make money and stay competitive companies need customers who will pay for your services, this is where companies like American Well strategically decide who their target customers are going to be. Many factors come into consideration like when making this decision. American Well provides a unique service that allows it to target a large number of people from many geographical locations.

American Well is a company that uses technology to deliver care and communicate to patients. This service has come to be recognized as telemedicine telehealth. This allows companies like American Well to provide patients with a high quality of care for a cost-effective price. By 2020, the world market for telemedicine services will exceed $27 billion (Global Telehealth Market Set to Exceed $1 Billion by 2016, 2011). This is a large increase compared to the $10 billion the market was seeing in 2010. One main reason for growth in the telemedicine market is the Affordable Care Act (ACA). President Obama signed the healthcare law in 2010, and it will be fully implemented during 2014. The law has brought significant attention to telemedicine within the United States. Customers are wondering how telemedicine can help increase access and provide a high quality of care. With all this attention comes the need to differentiate from the competition, and American Well is trying to do so by targeting almost every demographic of people.

Roy Schoenberg, co-founder and CEO of American Well explained it the best by saying how they are seeking people who want easier access to physician care because they do not have the time to go to the doctor, do not have close access to a hospital or want immediate care (Miller, 2009). By using Telemedicine, American Well is removing all barriers of access to increase the quality of care. The decision to target directly to the consumer or to healthcare insurance companies were the final step in their decision making process.

Danielle Russella, EVP of sales was highly skeptical of using the direct to consumer approach. She believed that the insurance companies could be set American Well apart from everyone else. (Ofek & Laufer, 2010). American Well eventually came to the decision that the insurance company would be the primary target customer for the company.

With the decision to target the insurance companies, American Well needed to make their services seem valuable to the insurance companies. One of the main ways of doing this is by offering a low cost service that would save the insurance companies money. A patient that chose to use American Well's Online Care service would save the insurance company $3.36 per month (Wilmes, 2009). The cost to use the Online Care service is just $25 for a 10 minute visit; this is much lower than reimbursement for a primary care physician and significantly lower than going to the emergency room. This allows the patient to receive a high quality of care for the cheapest cost, which is immensely appealing to the insurance companies.

American Well also wants to open their services to the uninsured customers. This new service will expand their market coverage and increase revenue. Patients without insurance can use the Online Care service for around $45-$50. This service method is cheaper than going to see a physician and paying out-of-pocket. This will allow the insurer to receive money from a market that they never thought about investing in before (Ofek & Laufer, 2010).

Insurance companies are the main focus for American Well, but large and medium business provides an opportunity for growth. Employers that provide health insurance could benefit from using the Online Care service. American Well believes that by providing employees with easier access care, the convenience of the online visits and placing kiosks in the workplace will improve their overall satisfaction with their healthcare coverage. Ido Schoenberg, co-founder and CEO of American Well liked the idea of Online Care in the workplace and believed that health plans offering their service could be more attractive when competing against other insurers for employer business (Ofek & Laufer, 2010). Some of the health plans include WellPoint, UnitedHealth, and Blue Cross Blue Shield. American Well also counts hospital systems, physician practices, the Department of Veterans Affairs (VA), and retail pharmacy chains as customers (Dolan, 2012). This wide range of customers is giving the company the opportunity to enter markets they previously never considered.

Telemedicine is a market that is going to keep expanding due to the increase in technology being developed all over the world. American Well has decided that their target market will be insurance companies and employers. Insurers offer American Well with a lucrative opportunity due to the large number of people within the network. American Well avoids the question of what insurer to pay by piggybacking on the insurance company which saves them the time and hassle of paperwork. The insurers are receiving reduced medical costs which result in revenue growth by choosing to provide American Well services in the network. As for employers, they can see a reduced cost in medical expenses, increased productivity due to on-demand service by a physician and an improve in employee satisfaction due to the anytime anywhere service they can receive. The target market for American Well was a tough decision but one they feel will allow them to keep expanding and become a leader in healthcare service.

Suppliers:

American Well is a large company that offers services through the use of technology, so the suppliers have to be at the top of the technology market. The major supplier for American Well is Microsoft. In 2008, the two companies made an agreement that allowed American Well to use Microsoft's HealthVault technology. This integration allows live and on-demand interaction between patients and physicians (American Well and Microsoft Enter Into a Strategic Collaboration to Bring Healthcare to People's Homes, 2008). The HealthVault platform is what makes American Well so attractive to the consumer.

Microsoft's HealthVault allows people to manage personal health information and share it with their physician. This system also allows the patient to store records from multiple sources like hospitals, nursing homes, home monitoring devices and emergency room visits. Before the consumer would just talk a physician without having the tools to and information instantly, now with help from Microsoft, the patient has everything he or she will need when talking with a physician.

With the advancement in technology, American Well has all the tools needed to become a leader in the industry. All they require now is security to protect their system. In 2010, IMB agreed to install all security measures for American Well's Online Care network. IBM is a leader in data security and becomes a particularly valuable supplier of security for the company. The partnership with IMB also gives American Well's patients a sense of confidence that their private information is safe and secures (Horowitz, 2010). American Well is a company that uses many partnerships to help increase their high demand of technology. The two main partners with American Well are IBM and Microsoft.

Competitors:

Intuit:

Intuit Inc. is a large firm that has established itself with its offerings of business operation and consumer finance software systems. The firm started as a small business in California 1983, with the idea of simply balancing a checkbook. Intuit developed Quicken personal finance software. The software became a success and the company continued growing, in 1993, becoming publicly traded under the Nasdaq Symbol INTU. The firm currently employs over 8,500 professionals (Corporate Profile, 2012). With their familiarity of software designed to promote efficiency, Intuit embarked on an expansion of services to include other efficiency-minded clientele. This expansion extended the reach of the firm to include a portfolio of holdings. The holdings are segmented into four categories, the Small Business Group, the Tax Group, The Financial Services Group and the Other Business Group (Intuit form 10-K, 2012). The combined net revenue of all segments exceeded 4.1 billion dollars in 2012 with a net income of 792 million dollars in the same year (Intuit form 10-K, 2012). As shown by (Figure 4) Intuit's net revenue had increased every year since 2008 at a rate of 3.2% through 2009, 10.7% through 2010, 10.8% through 2011, and 10% through 2012 (Intuit Form 10-K, 2012). Intuit's net income has also risen, but not every year. Since 2008 only one year experienced a decline in net income and that was 2009 with a decline of 6.3%. In 2010 net income showed an increase of 28.4% which compensated for the previous year's loss and more. In 2011 net income continued to grow with an increase of 10.4% and 2012 did the same with an increase of 24.9% (Inuit Form 10-K, 2012). The firm continues to grow an incorporate new portions or business such as their healthcare focused efficiency tool.

Intuit Health is a portion of the Other Business segment and was established to provide efficiency within the healthcare field through employee management software, provider service software, practice management systems, and electronic health records provisions. Intuit Health enhanced its spectrum of offerings in 2011 by acquiring the previously titled telehealth firm Medfusion (Baldwin, 2010). Intuit Health will now include telehealth service provisions to its consumers along with medical practice websites, professional scheduling software, lab report reviews, front desk solution services for providers, clinical solutions such as digital prescription services, and billing services. The newly offered services place Inuit Health in direct competition with American Well. The number of Intuit Health registered users now exceeds three million and the number of patients that Intuit Health affects is 4.3 million (Corporate Profile, 2012).

The entry of a conglomerate as large as Intuit into a niche market will increase the difficulty of expansion by American Well. The difficulty will arise through the creation of new barriers to market capture such as consumer loyalty experienced by those providers already using an Intuit product. With Intuit Health Portal's capabilities to deliver telehealth services and solutions they are able to market their expertise in administrative operations and telehealth in a bundled package. Some partnerships that have already been established with Intuit are those with the American Academy of Family Physicians which includes over 2,500 practitioners, Medical Group Management Association's AdminiServe partnership, and the North Carolina Medical Society. These are not the only alliances, other include associations such as the Physicians Alliance and MedAxiom which consist of over 35,000 and 5,000 physicians respectively (Intuit Health associations & partnerships, 2012). These are just a portion of the 49,000 physicians that are involved with Intuit Health (Corporate Profile, 2012). These relationships created by Intuit provide access to leading providers in practice management software, leading group purchasing organizations and electronic medical record vendors. This is a valuable collection of resources that can be used to fuel growth and expansion of service offerings for Intuit. Access for consumers is limited, in order to become a user of Intuit Health's patient portal; a patient must select a provider that offers Intuit Health programs if

they wish to have access to the services. Unlike American Well, where a patient can log on at any given moment and have access to a physician or clinician consultation.

McKesson Corporation:

McKesson is a firm founded in New York City in 1833 by John McKesson and Charles Olcott and originally focused on importation of therapeutic drugs. Since their initial inception, the firm has grown to incorporate many other service offerings (Our History, 2012). McKesson is now ranked number 14 on the Fortune 500 list, traded under the NYSE symbol of MCK and employs over 36,400 professionals (Our History, 2012). McKesson operates an established array of services including the largest pharmaceutical distribution network in North America; the nation's leading health care information technology firm, and a patient and medication safety technologies and electronic health records systems (Our Company, 2012). McKesson operates within two segments the McKesson Distribution Solutions segment and the McKesson Technology Solutions segment (McKesson form 10-K, 2012). The firm's total revenues throughout all segments exceeded 122 billion dollars in 2012 and culminated into a 1,403,000,000 dollar net income. As shown by (figure 5), McKesson's net revenue has grown each year since 2008 at a rate of 4.8% through 2009, 1.9% through 2010, 3.1% through 2011, and 9.5% through 2012. McKesson's net income has not increased every year but had grown since 2009. In 2009 McKesson's net income decreased by 17.9% from 2008. In 2010 the net income increased by 53.4%. In 2011 net income decreased again by 4.8%, and in 2012 increased by 16.7%. So although the income has not been steady, it has inclined. The technology solutions segment generated 3.3 billion dollars of net revenue which was up from 3.1 in 2010 (McKesson form 10-K, 2012).

With newly acquired telehealth services via a 2006 acquisition of RelayHealth under their technology segment, the firm established its presence within the telehealth market. With McKesson's entry into the market they now compete directly with American Well. McKesson is currently expanding their spectrum of healthcare offerings. The acquisition of RelayHealth enabled McKesson to begin offering digital communication mediums for connection of patient to physicians, pharmacies, payers, and financial institutions (Our Businesses, 2012). RelayHealth allows McKesson to provide connectivity to healthcare providers for basic communication, patient access to diagnostic test results, consultation for non-emergency health issues, and digital payment options (Patients, 2012). This vast array of offerings has established a customer base of over one million users (Chillmark Research, 2008). These users include 200,000 physicians, 26,000 retail pharmacies, 10,000 long-term care sites, 5,000 hospitals 2,000 medical-surgical manufacturers, 750 homecare agencies, 600 healthcare payers, and 450 pharmaceutical manufacturers (Our History, 2012). With RelayHealth now operating as a segment of McKesson's technology offerings, McKesson added an additional 12.6 billion transactions of financial and clinical communications annually (McKesson form 10-K, 2012).

McKesson markets RelayHealth specifically to providers and other healthcare professionals. In order to have these services available as a patient you must choose to procure services from a provider who offers RelayHealth technologies (FAQ, 2012). This limits the amount of consumers that RelayHealth is able to capture do to service access barriers. However, McKesson's contracts include CVS Caremark Pharmacies. CVS operates 7,300 locations, serves over 60 million plan members with its pharmacy benefits manager and operates the nation's largest retail health clinic system with more than 600 MinuteClinic locations (Investor Relations, 2012). The existing relationship with CVS may provide an increased value in reaching a broader consumer base if McKesson is able to establish presence of RelayHealth telehealth kiosk within the CVS locations or if an alliance is formed with CVS's existing retail medical clinic segment Minute Clinic.

Cisco Systems:

Cisco Systems is a California based company that was founded in 1984 by Leonard Bosak and Sandra Lerner. The firm designs, manufactures, and sells networking services and equipment. During the first six years the firm grew from two employees to 251 in 1990 when CISCO went public. The firm is traded on the Nasdaq under the symbol CSCO. Since the firm has gone public the growth has continued. Today Cisco employs 66,639 (Corporate Timeline, 2008) professionals and is a market leader in Internet Protocol based networking and other information technology products. These products include a plethora of hardware and software options that enable companies and organizations to transport data, voice, and video feeds within private locations or throughout the world (Cisco form 10-K, 2012). The firm's products are designed with the purpose of creating a more streamline communication and collaboration process. The five foundational focuses of Cisco are leadership in their core business market (routing, switching and associate services), collaboration, video, architecture for business transformation, and data center virtualization with cloud capabilities (Cisco form 10-K, 2012). In the 2012 fiscal year Cisco had total net sales of over 46 billion dollars and earned a net income of over 8 billion. As shown in (figure 6), net sales have increased following a decline in 2009 at a rate of 9.8% for 2010, 7.4% for 2011, and 6.2% for 2011. Net income on the other hand has risen and fell within the same period following a rise in 2008 at the rates of -24.9% in 2009, 22.1% in 2010, -17.5% in 2011, and 20.3% in 2012 (Cisco form 10-K, 2012).

Cisco has long been involved within the healthcare industry. Their primary customers are enterprises driven by efficiency so naturally they would market to healthcare organizations. Today they offer a variety of products and services targeted at healthcare providers. These products include, enterprise networking solutions, wireless networking equipment and software which is endorsed by the American Hospital Association Company (AHA Endorsement, 2012), continuing health education and business collaboration products, and compliance and medical device management (Industry Solutions Healthcare, 2012). Along with these services Cisco has developed hardware and software that enables care to be provided at a distance. This offering places them in direct competition with American Well. The product line is titled Care-at-a-Distance and consists of multiple offerings (Industry Solutions Healthcare, 2012). These products and services include HealthPresence a program developed to extend the reach of delivery, increase communication capabilities, and connect patients to providers (Cisco Connected Health, 2011). TelePresence for Healthcare is a product that coupled with cisco hardware enables a multitude of unique connection functionalities to providers. These functionalities include the T1 and T3 hardware and software package which creates an immersive real time meeting environment over a network for collaborating professionals not located in close geographic proximity. TelePresence Clinical Presence system allows specialist to instantaneously be present via video feed at the point of service for better collaboration. TelePresence intern MXP enables portable self-contained collaborative capabilities by providing all the functions within a portable unit. Of all the options available the one with the most competitive presence for American Well is Cisco's Expert on Demand which provides web based communication between patients, providers, and caregivers with on-demand audio and video conferencing (Cisco Connected Health, 2011). WebEx is marketed by Cisco as a tool to help cut cost, improve patient care, and reach more customers (Cisco WebEx for Healthcare Solution, 2012). But just like the previous two competitors, Cisco does not provide access to these networks or products and services to all patients. They market directly to providers who then expand their services by providing access to existing or newly acquired patients.

COMPETITIVE POSITIONING:

American Well has positioned itself within a market that is full of much larger and much more mature firms. With the presence of McKesson, Cisco, and Inuit the market is filled with high levels of competition. American Well provides a service that is different than the previously mentioned firms. Although all of the competition within this market offers telehealth services and products, the marketing of those products and more specifically the target market of those products is not the same as American Well's. American Well's Online Marketplace allows almost immediate access for any individual with an internet connection that wishes to receive digital consultations with a physician or clinician for non-emergency health concerns.

This is not similar to the competition's products which require an individual to first become a patient of a provider that has the services available through their offices. The requirements to obtain these services through means provided by the competition are rather time consuming and surely not convenient during the moment of necessary service procurement. If the patient is not pre-established within one of the offering providers' systems he or she must first schedule an initial appointment in person with the physician or at the very least make contact during working hours to establish registration within the telehealth system. With American Well's services this is not required. A patient can simply log onto the provided platform via a computer or personal device with web browsing and video feed capabilities and make an instant connection with a physician. The patient has the option to immediately connect to a provider or choose a provider offering services via American Well's platform based on reviews, native language, and gender.

Immediate interaction and consultation is not the only feature offered by American Well. Other key features include collaborative workflow management, scheduling features for non-immediate consultation needs, a clinical data exchange system, EMR storage and exporting capabilities, personal health records storage and access, e-prescribing, digital payment options and easy to use apps for iPhone and iPad. American Well's system also enables collections of providers to come together as a group and provide services via telehealth platforms in the same way a brick and mortar group practice would operate (Online Care, 2012). These features mimic offerings provided by competitors but do not reach the breadth of offerings that the competitors have available.

Direct-to-consumer marketing is not the only plan being pursued by American Well. The firm also markets their software and platform to independent physicians. They stress the ease of use that their product provides during provider targeted marketing. The firm identifies four key benefits for their Online Care Practice system. The first key benefit is the affordability of the product. The second key benefit is the deployment simplicity due to no IT integration being needed to use the system. The third key benefit is speed to market a physician can have a system up and functional in just a few weeks. The last key benefit is an included marketing program proven to drive excitement, trial, and utilization (Online Care Practice, 2012).

For the larger healthcare organizations American Well offers an enterprise version of their program. The enterprise version of their service is targeted to payers, employers, and delivery networks (Online Care Enterprise, 2012). The system is designed to provide clinically meaningful care with no time or geographical barriers. The program is marketed on three key benefits. The first key benefit is the actionable insight or real-time data exchange in conjunction with integration of clinical, claims, and revenue systems. The second key benefit is that the program is designed to be flexible so that as the provider or payer or firm changes the program can be suited to fit specific solutions. The last key benefit expressed is the support offered by American Well. The support services include on-site marketing, training, and implementation support (Online Care Enterprise, 2012).

With the available offerings American Well has presented, their position in the market is unique. They are the only firm marketing access capabilities to patients, providers, and payers. Within the marketing strategies low cost, ease of access, efficiency, and effectiveness are used to target all three consumer segments. This marketing strategy is different than the strategies of their competitors.

Alliances and partnerships within the healthcare field are common practice. American Well has engaged in a multitude of partnerships to help establish them in a position of greater consumer reaching capabilities. The first of many partnerships was with the Blue Cross Blue Shield (BCBS) of Hawaii which established access to over 1.3 million customers in Hawaii alone (Press Releases, 2012). In 2009 BCBS of Minnesota which has over 2.8 million members in Minnesota announced a partnership that would offer the service to 10,000 employees at BCBS' campuses in Minnesota (Blue Cross & Blue Shield of MN, 2012). Other BCBS partnerships were to follow, BCBS of Western New York in 2010 and BCBS of North Carolina in 2012 (Press Releases, 2012). Other partnerships have included Walgreens, which was a third party in the 2012 BCBS of North Carolina partnership. Allscripts has included American Well into their EHR system, the University of Southern Florida has partnered with them to bring telehealth to senior living communities, and Rite Aid in conjunction with OptumHealth have established in-store online care kiosk using American Health's platform (Press Releases, 2012). These relationships create value for American Well by creating new users through immediately affected consumers and through higher levels of exposure which results in greater consumer awareness. The relationships also create a loyalty between partners which may increase the reach of American Well in the future if the partners choose to implement the same style of agreements throughout more locations.

HEALTHCARE POLICIES:

Across the United States, healthcare expenditures have increased faster than incomes, raising the costs of healthcare for employers and individuals. Furthermore, new healthcare policies are merging, and others are being updated in order to address this issue and follow new economics, demographics, political, technology trends. Affordable Care Act (ACA), Health Insurance Portability and Accountability Act (HIPAA), and Health Information Technology for Economic and Clinical Health (HITECH) are policies that must be followed by American Well and all healthcare organizations seeking to provide better quality of health for their enrollees.

Affordable Care Act (ACA)

All U.S. citizens, independent of race or ethnicity, should receive good quality of care when needed (Ofusu, 2011). With forty-four percent of Americans uninsured or underinsured during the year 2010, it is evident that U.S. healthcare reform is urgent and necessary (Schoen, Doty, Robertson, & Collins, 2011). Thus in the same year, the U.S. passed the Affordable Care Act (ACA) that will be fully implemented in 2014. The ACA estimates that 32 million Americans without insurance will be covered with health insurance and coverage will be more affordable for millions of other American citizens (Ofusu, 2011). This estimative of insurance coverage will be fully in place by the year of 2018, and it will decrease the portion of the uninsured population to about six percent of the total U.S. population (Williams, McClellan, & Rivlin, 2010). The ACA seeks to improve management of chronic diseases and prevent additional disease and disability, with the main goal of delivering better quality of care and containing health spending (Kenneth, Ogden, & Ogden, 2010). Starting in 2014, the ACA plans to promote income-related premium assistance and cost-sharing arrangements to expand healthcare access and produce financial protection for low income population (Schoen et al., 2011).

The Congressional Budget Office (CBO) estimates that the ACA will decrease the deficit by over than $100 billion in the first decade and more than $1 trillion between the years 2020 and 2030 (Orszag & Emanuel, 2010).

The ACA expects to strengthen American healthcare by expanding the primary care workforce, equipping primary care practitioners, and reorganizing the current delivery system (Friedberg, Hussey, & Schneider, 2010). Some provisions were established for U.S. healthcare such elimination of out-of-pocket payments for preventive care (32 million Medicare patients will receive preventive screening at no cost, and pregnant women will receive coverage for prenatal visits); insurance companies are not allowed to deny patients with preexisting conditions from contract plans; adult children can now stay with their parents' healthcare plans until the age of 26, and individuals over age 55 who are ineligible for Medicare can integrate reinsurance program (Hawks, 2012).

In addition, ACA has established other outlines seeking improvement on quality of care and cost containment, which include Accountable Care Organizations (ACO), payment reform, and care coordination.

First, ACO is defined as groups of providers who are appealing and capable of taking responsibility for elevating the health status as a whole, care efficiency, and the healthcare experience for a particular population with the ultimate goal of enabling the population to take charge of health and enroll in shared decision making with providers (DeVore & Champion, 2011).

The second target of the ACA is the payment method. The current fee-for-service payment system generates overpayments and does not promote quality improvement. Providers under this payment method raise revenues by increasing the quantity of services provide for each patient since each service is paid separately. ACA purposes to pay a single fee for an entire episode of treatment in bundling payment system. This system expects to enforce quality of care by transferring the responsibility of better quality of care and faster treatments to the provider. Providers under this system receive a single payment regardless the quantity of services provided or quantity of hospitalization days. Another category of payment promoted by the ACA is pay-for-performance. Pay-for-performance rewards more the provider that meets specific criteria for quality and efficiency in treat outpatient or inpatient (Cutler, 2010).

The third outline is care coordination. This provision is designated for Medicaid enrollees with chronic conditions and is a community-based care transition model in Medicare (Cutler, 2010). Care coordination is supported by community health teams composed of interdisciplinary primary care teams of nurses, nurse practitioners, social and mental health professionals, health educators, and public health nurses (Kenneth et al., 2010). These teams work together with primary care practices to associate clinical and community preventive and health improvement services. They deliver care coordination, integrated community-based primary prevention care (includes weight loss and smoking cessation), provide health orientation, and encourage engagement in adequate medication regimen (Kenneth et al., 2010). Compared to other developed countries, the U.S. is ranked low on many health marks and its relative position is falling down (Williams et al., 2010). As an example, the costs of the U.S. obesity epidemic accounts for about thirty percent of the growth in healthcare spending (Williams et al., 2010). Moreover, obesity-related spending such as growing incidences of diabetes and health diseases are predicted to continue rising. In the next twenty-five years, it is estimated that there will exist over forty-four million Americans suffering from diabetes, and this is possible to triple the annual cost of treatment to $336 billion (Williams et al., 2010). Focused on prevention care in the healthcare system and inside of the communities, care coordination aims to reduce the costs spent on healthcare and enlarges the value for expenditures with chronic diseases (Kenneth et al., 2010). Promoting access to preventive care, combined with

better management and coordination of care, is a contribution that enhances health outcomes and productive lives at lower costs (Ofosu, 2011).

Healthcare systems based on strong primary care services have better healthcare quality and better outcomes at lower costs comparing with systems focused on disease treatment, like in the U.S. (Schwartz, 2011). It is estimated that more than 120,000 deaths per year could have been prevented through raising the number of primary care physicians, and it is proved that patients assisted by primary care physicians produce lower healthcare costs than those without this preventive assistance (Schwartz, 2011).

Tripartite partnerships among hospitals, employers, and communities enhance the health of a population and patient's experience, at the same time that can reduce healthcare costs. This integration provides an outstanding care that is safe, effective, efficient, timely, and cost effective, focused on prevention and healthcare cost containment (Hawks, 2012).

Based on all the provisions of ACA, American Well can positively contributes to the healthcare system, delivering online care for patients at low costs, through its technology, establishing preventive care that reduces the treatment of patients in worse conditions at hospitals. In addition, American Well service provides online management of patients with chronic conditions, which contributes to reduction in costs to treat these patients in healthcare facilities.

In summary, ACA provides a great opportunity to revolutionize the current healthcare system, promoting disease prevention and improving the quality of care for U.S. citizens while reducing healthcare costs.

Health Insurance Portability and Accountability Act (HIPAA)

Medical specialization and areas of expertise increased dramatically in the past two decades especially because of the development of new technology (Eddy, 2000). Essentially, a contemporaneous patient can visit specific doctors for determined symptoms such as one doctor for an annual checkup, another physician for bone damage, another one for headaches, and more other distinct visits (Eddy, 2000). These modern patients made the necessity for creation of appropriate health information records in order to have accurate patient information transferred from one healthcare facility to another (Eddy, 2000).

In response to the prompt expansion of technology and the necessity for a creation of standards for the healthcare industry, the U.S. congress delivered the Health Insurance Portability and Accountability Act (HIPAA) in 1996 to address issues involving patient information privacy, security, and electronic transference (Volonino & Robinson, 2004). HIPAA accounts for two main provisions: insurance reform, where insurance companies cannot refuse patients with preexistent conditions when they change jobs, and administrative simplification, expected to diminish healthcare spending through the standardization of information transactions (Volonino & Robinson, 2004).

HIPAA is comprised of different elements such as standard code sets (evolves diagnosis and procedures), unique identifiers (National Provider Identifier and Tax ID number), privacy standards (applying the use of Protected Health Information – PHI), and security standards (physical, technical, and administrative procedures to preserve PHI) (Volonino & Robinson, 2004).

This case study will focus only in two elements of the HIPAA: privacy and security standards. First, privacy standards or rules apply to PHI in all modes, involving oral, written, and electronic (Choi, Capitan, Krause, & Streeper, 2006). The main goal of the privacy rule is to encounter the pressing demand for national standardization to control the continuity of health information and determine punishments for misuse or inadequate disclosure of this information (Choi et al., 2006). The privacy rule protects patient's PHI by determining how and when an individual's PHI can be disclosed and for what purpose (Choi et al., 2006). It admits more patients' engagement by enabling them certain rights to visualize their medical records and to solicit

amendments, to permit or limit the disclosure of their information in some situations, to be communicated of how their information is distributed with others, and to be communicated of their rights concern to privacy (Choi et al., 2006). McGowan (2012) emphasized

> The privacy rule protects all individually identifiable health information' (also called "protected health information"), including demographic information, that relates to the (1) individual's past, present, or future physical or mental health or condition; (2) provision of healthcare to the individual; or (3) past, present, or future payment for the provision of healthcare to the individual, and any information that can be used to identify the individual, including name, address, birth date, and Social Security number.

The information inside of the present medical records is excessively personal, such as dietary habits, sexual orientation, sexual activities, employment status, income, eligibility for governmental assistance, history of diseases, realized treatments, medications taken, diagnostic information, psychological profiles, genetic testing, family history, doctor's and nurse's notes about patient personality and mental state, and so on (Goldberg, 2000). Schnieder & Mercuri (2004) defined the medical records as "an entire workup of your being"; where if the medical information reaches the wrong person, it could destroy a patient's social, vocational, and religious life.

Second, security rule of HIPAA punctually addresses PHI in electronic model. It dictates that PHI, electronically accumulated or transmitted, must be maintained confidential and protected against users that are not authorized and hazards to its security or integrity (Choi et al., 2006). The security rule determines minimum steps of security that all covered organizations must guarantee, but it does not determine standards for computer applications functional capabilities (Choi et al., 2006).

The security rule requests some agreement actions by healthcare organizations, including American Well, in the following categories: administrative safeguards (established procedures to manage security and personnel); physical safeguards (preservation of computer systems and facilities within they are located); technical safeguards (control and monitor information accessibility, involving technology to protect data-in-transit); organizational requirement (business related contracts); and policies and procedures and documentation requirements (related to the privacy rule) (HHS, 2012).

In general, security is addressed as it is part of administrative, physical, and technical safeguards. Thus, American Well, as well as all healthcare organizations, must establish a plan to compliance policies and procedures designed by the administrative safeguards, which are responsible to hire a security and privacy officer and organize a security and privacy committee. This plan must include the definition of security certification process for employees and contractors, revising employee records to determine the security appropriateness for each job position, evaluating the agreement of Management Information System (MIS) sector with the security rules, and establishing consequences for noncompliance with security standards (HHS, 2012).

In addition, healthcare organization must also define the physical safeguards to control the limit of information accessibility. Healthcare facilities can create locks on doors to limit access to patient's information, request an electronic swipe card to access computers or rooms that contain patient medical records, or request sign-in stations at computer terminals or medical storage areas to permit access to patient's information only by authorized staff (HHS, 2012).

The technical safeguards are important elements to be considered by healthcare organizations. The technical professionals can create obstacles to protect computers against viruses or worms, once computer networks are unstable and liable to security risks (Panko, 2005). In order to avoid these threats, technical professionals must create levels of abstraction to protect networks and keep them away from attackers (Choi et al., 2006).

Technology enables new possibilities of recording and transmitting patient data. However, it brought hackers and misconduct in the use of data, which guided to the introduction of possibilities of protect individual data, which sometimes hackers and wrongdoers will crack, then new ways of protect patient data will be created, and then the cycle perseveres (Choi et al., 2006).

If lack of security or privacy were evident, patients could omit information for clinicians, which could reduce the quality of care for the patient and also could have jeopardized the welfare of the healthcare professionals, who assist deadly and debilitating diseases on a daily basis (Choi et al., 2006). With that in mind, the government considered privacy and security standards under HIPAA to ensure privacy and quality in healthcare, supplemented by the protection of patient's rights and privileges.

In conclusion, HIPAA is a complex rule to be established in the workplace. A successful compliance depend on involvement of all members of the healthcare organization, from the bottom to the highest-ranked administrative position, in order to achieve the main goal proposed by the Act, delivering better quality of care, protecting patient's medical records, which in turn promoting the patient's rights and privileges.

Health Information Technology for Economic and Clinical Health (HITECH)

In 2009, the U.S. enacted the Health Information Technology for Economic and Clinical Health Act (HITECH) as part of the American Recovery and Reinvestment Act, also known as the stimulus bill (Blumenthal, 2010). Several actions were authorized by the HITECH through interoperable, private, and secure electronic health information systems (Blumenthal, 2010). The first action was explaining how physicians, hospitals, and other healthcare professionals could earn billions of dollars of extra Medicare and Medicaid payments by utilizing what is being called "meaningful use" of Electronic Health Records (EHR) (Blumenthal, 2010). The second one explains the standards and certification criteria that EHR must follow in order for their users to receive payments (Blumenthal, 2010).

The purpose of the HITECH is not only raise investments in technology, but also an attempt to promote the health of Americans and effectiveness of their healthcare system (Blumenthal, 2010).

There are several obstacles facing healthcare providers as they adopt Health Information Technology (HIT), program acquisition cost and personnel training are only two examples of those barriers. To help eligible healthcare providers surpass these obstacles, HITECH designated funds; where up to $44,000 in extra payments can be given to providers between 2011 and 2015 if they adopt meaningful use of EHR in their facilities, collecting an initial bonus and extra payment when a Medicare patient is discharged. In addition, Medicaid providers may earn about $63,750 between 2011 and 2021 because of the existence of a specific formula for this sector of the healthcare system (Blumenthal, 2010).

Under HITECH, meaningful use is defined as a set of standards created by the Center for Medicare & Medicaid Services (CMS) in which programs that manage the use of EHR and enable eligible healthcare providers to receive incentive payments by following certain criteria are rewarded. The main goal is to contribute to the spread of EHR in order to improve healthcare in the U.S. (HealthIT, 2012). Complete and accurate information is one of the advantages of meaningful use since EHR helps providers obtain all the information they need to better understand their patients and their patients' history prior to the examination and in turn to deliver better quality of care. Better access to information can also be listed as one advantage since EHR improves access to health information facilitating advanced diagnosis of health problems and providing better health outcomes for patients. In addition, EHR also facilitates the sharing of information among physicians' offices, hospitals, and other healthcare facilities, promoting coordination of care. Finally, patient

empowerment helps patients to be in charge of their health and the health of their family members through receiving electronic copies of their records and sharing their health information securely over Internet systems (HealthIT, 2012).

The meaningful use goals and measures are comprised of three stages that should be implemented over five years, starting in 2011. Stage one is going to be developed between 2011 and 2012 and involves data capture and sharing. There are fifteen core objectives that eligible healthcare providers must meet to receive an EHR payment incentive (Figure 7). Computerized Provider Order Entry, (CPOE) is one example of those core objectives that require an electronic system where a physician or a licensed staff person can input medication orders, to avoid misunderstandings with handwritten medication prescriptions and so preventing mistakes (HealthIT, 2012). Stage one has some overall objectives to be achieved during the first year of implementation such as gathering electronic health information in a standardized model, using the health information to pursue patients' clinical conditions, transferring healthcare information for coordination of care, starting the reporting of measures in clinical quality and public health information, and taking the healthcare information to empower patients and their families in their own care (HealthIT, 2012). In order to be considered as a meaningful user, health care providers must meet all the core objectives of the Act.

Stage two of the meaningful use will be implemented in 2014 and will focus on advance clinical processes. There will be some objectives that healthcare providers must meet under stage two of meaningful use in order to receive the financial incentives presents in the Act such as more rigorous health information exchanges, requirements for e-prescribing and incorporating lab results. An electronic communication of patients care reports will also be required across multiple facilities, and patients will have even more power to control their data (HealthIT, 2012).

In 2016, the stage three will be focused on improved outcomes. The overall objectives of stage three are: enhancing quality, safety, and efficiency, supporting decisions for national high-priority conditions, providing patients access to self-management tools, accessing comprehensive patient information through patient-centered health information exchanges, and finally enhancing population health (HealthIT, 2012).

Although the payments incentives for providers proposed by meaningful use seem to be very attractive, it fails to prove that the established standards will result in improvement of care (Classen & Bates, 2011). It was suggested that achieving the objectives of meaningful use of EHR could be more difficult than expected. On the other hand, it is relevant to note that the embracement of HITECH and meaningful use are expected to be a starting point for transforming the system, once these programs are connected to the healthcare reform under the ACA (Classen & Bates, 2011).

The attractiveness of financial incentives provided by meaningful use can motivate eligible healthcare providers to adopt EHR. However, there are some providers such as nursing homes, home health agencies, long-term acute care hospitals, inpatient rehabilitation hospitals, and inpatient psychiatric hospitals that are not considered eligible to participate in the program basically because of funding constraints and uncertainty about how ready they are to adopt EHR systems (Wolf, Harvell, & Jha, 2012). Therefore, to advance the formation of a nationwide health information technology framework, federal and state policy makers should contemplate other types of measurement. Potential types include incorporating health information technology standards and EHR system certification criteria adequate for these ineligible healthcare providers and defining low-interest loan programs for the acquirement and utilization of certified EHR systems by non-eligible providers (Wolf et al., 2012).

American Well will have to spend time training its staff to accumulate experience to meet the meaningful use requirements. On the other side, with the personnel trained, American Well will have

an advantage in the market promoted by HITECH that will enable interoperability through standardized access to EHR, facilitating the firm's service, operating in a single system for all of its partners.

In conclusion, HITECH promises to create an electronic standardized system for healthcare information that nurtures the practice of medicine, research, and public health, assembling better healthcare professionals and increasing the quality of health for the U.S. population (Blumenthal, 2010).

WHAT THE FUTURE HAS IN STORE:

It was possible to notice different legislation in the past two decades opened a big avenue for IT firms in the health care field. System vendors seized the financial incentives promoted by HITECH through "meaningful use" to raise their sales. More people covered under the Affordable Care Act expanded the market for health care providers, including online health care providers. Also, firms that provide online care services had advantages over HITECH that has as one of the main goals decreasing health care expenses. A cheaper cost of Internet-based consultation compared with regular clinic consultation is one of the ways used for the health care industry to drive down costs.

Despite the fact that new legislation and police reforms have helped to develop IT industry in the health care field, including online health care businesses, American Well has now to find a way to grow its business after the legislation era.

"Online Care Suite 6.0," America Well's latest launch, on April 30, 2012, gives an idea of the road the firm will take. Different from its first version launched in mid-2011, Online Care 6.0 is focused on the patient rather than on the health care plans or on the physicians. This recently released technology enables patients to make video consultations through mobile devices, such as tablets and cellphones with webcams. It was described by Ido Schoenberg "it used to be that telehealth was thought of as a healthcare system-oriented service. It had become a consumer-oriented service. Everyone has begun to realize that online care is a service for patients" (Dolan, 2012). By focusing on the patient demand, American Well seems also to be focusing on expanding its market directly to the consumer especially for those noninsured ones.

The new American Well online care suit also offers support for medical devices such as derma-cams, otoscopes, ophthalmoscopes, and stethoscopes, which can be a big step towards another American Well project, called Team Edition (McGee, 2012). Team Edition aims to connect primary care physicians, who can easily operate those medical devices, and specialist, who will be responsible for reading, interpreting, and elaborating technical reports for a specific patient. This project can be a breakthrough in the traditional referral specialist consultation since the patient can have access to a specialist consultation at the time of a primary care visit (Ofek & Laufer, 2010).

Also, the possibility of connecting other medical devices such as glucose meters to the Online Care Suit 6.0 enhance the participation of the American Well company in the treatment process of chronic patients. This opens its field of operation from not only online care consultations, but also a broader spectrum of monitoring chronic conditions.

Besides the in-home opportunities American Well is seeking, there are also international opportunities of business. Australia, Germany, and the United Kingdom have already demonstrated interest (Ofek & Laufer, 2010). Another prominent market possibility is Brazil. UnitedHealth, already an American Well partner, has recently bought the biggest Brazilian insurer company in a $4.9 billion transaction, which can become an entrance for the operation of American Well in the Brazilian market (Humer, 2012). Overseas operations also bring great barriers such as different regulations of health files' transfer and privacy requires the company to adjust for each new market.

Despite any course that American Well takes or may be already taking, their existing market meets the company's vision and mission and big investments in new avenues can threaten their organic growth.

Event	Date
Hawaii BC/BS Insurance Company adopts American Well for 700,000	1/09
OptumHealth, AW Join to Forces to Provide 24/7 Online Access to Physicians	3/09
American Well Contracts for Mental Health Services with US Military	8/09
AW Announces Agreement to Provide Rite Aid New Pharmacy Service in Select Stores	4/10
WellPoint And AW To Collaborate To Bring Health Care Into People's Homes	6/10
IBM and American Well Team to Enhance Security for Online Health Data	12/10
AW Launches Online Care For Providers, Bringing Telehealth to Practices Nationwide	4/11
Medibank and AW to Launch Online Care in Australia and New Zealand	6/11
American Well Drives Telehealth Into Mainstream Healthcare	1/12
AW Launches Patient-facing Mobile Video Consults Mobi Health News	4/12
Allscripts Integrates Telehealth into Electronic Health Records	8/12
BC/BS of NC Walgreens Health Systems and AW Team Up to Provide Telehealth	**10/12**

Figure 1: 12 Defining Moments in American well's History
Source: American Well Press Release Archive, (2012)

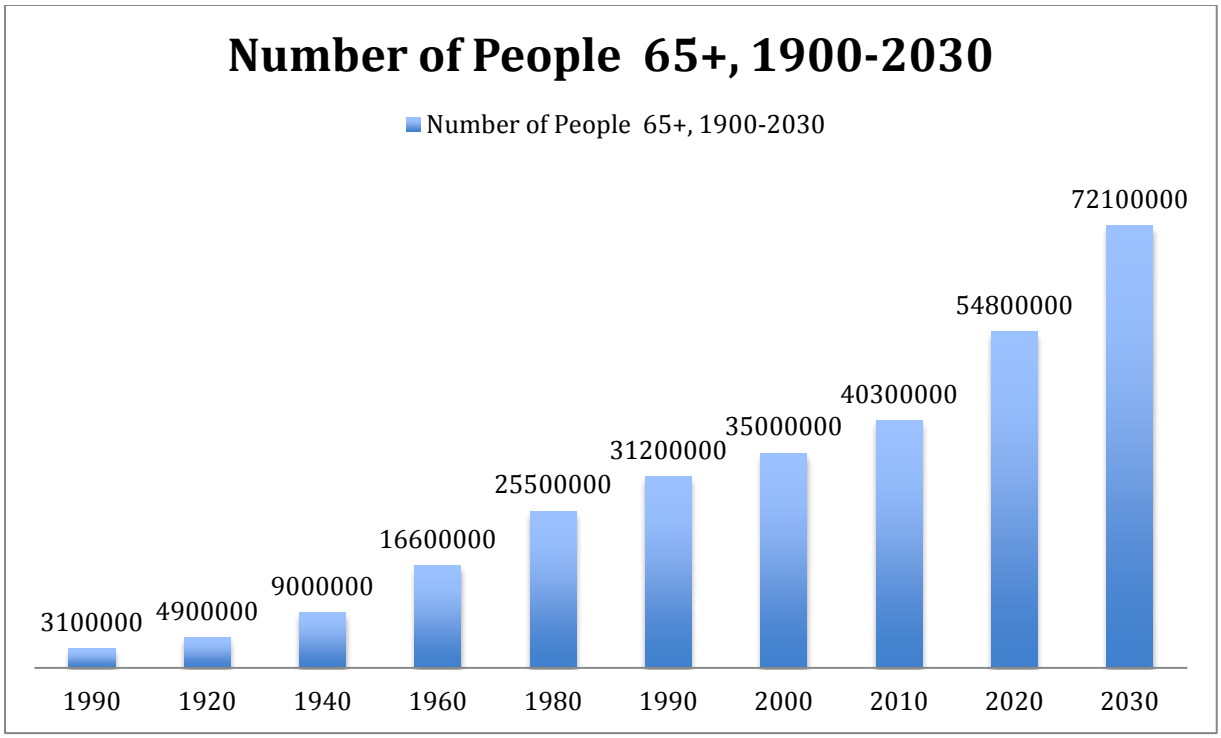

Figure 2: Number of Persons 65+, 1900-2030
Source: Department of Human Health and Services, (2011).

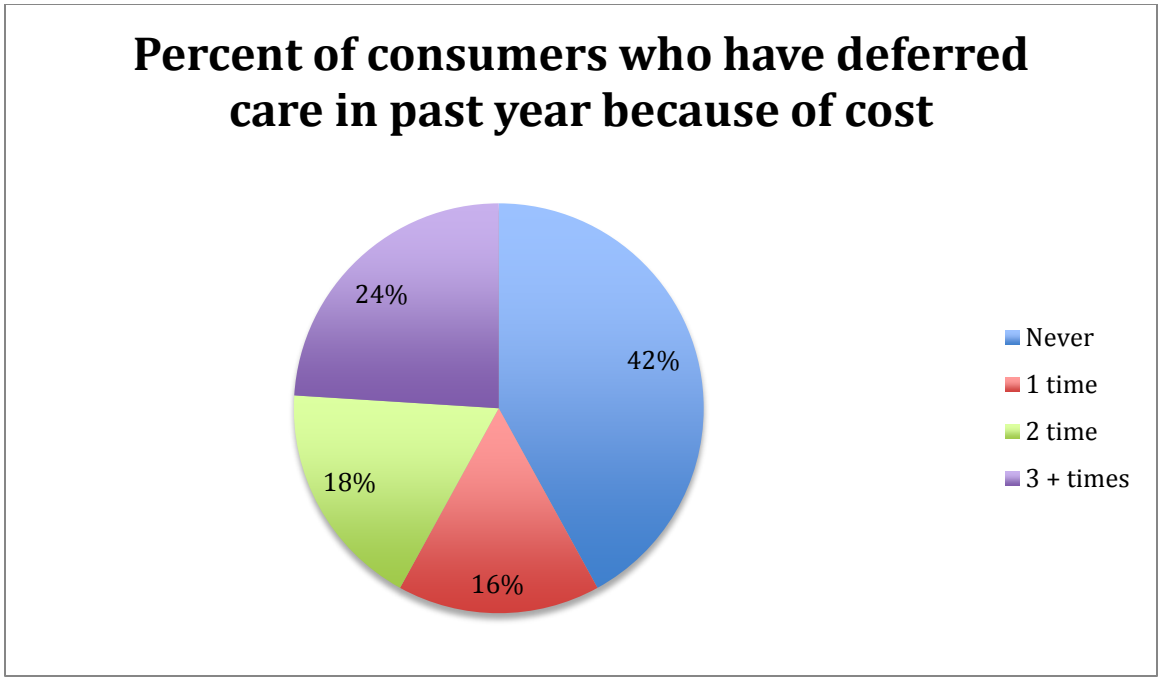

Figure 3: Percent of Consumers who have Deferred Care in Past Year because of Cost
Source: PricewaterhouseCooper's [PwC], (2012).

Numbers in millions

Intuit	2012	2011	2010	2009	2008
Net Revenue	$ 4,151	$ 3,772	$ 3,403	$ 3,073	$ 2,978
Net Income	$ 792	$ 634	$ 574	$ 447	$ 477

Figure 4: Intuit financial figures
Source: Intuit's form 10-K (2012)

Numbers in millions

McKesson	2012	2011	2010	2009	2008
Net Revenue	$ 122,734	$ 112,084	$ 108,702	$ 106,632	$ 101,703
Net Income	$ 1,403	$ 1,202	$ 1,263	$ 823	$ 990

Figure 5: McKesson financial figures
Source: McKesson's form 10-K (2012)

Numbers in millions

McKesson	2012	2011	2010	2009	2008
Net Revenue	$ 46,061	$ 43,218	$ 40,040	$ 36,117	$ 39,540
Net Income	$ 8,041	$ 6,490	$ 7,767	$ 6,134	$ 6,163

Figure 6: Cisco financial figures
Source: Cisco's form 10-K (2012)

Stage 1 – 15 core objectives
1 – Computerized provider order entry (CPOE)
2 – Drug-drug and drug-allergy interaction checks
3 – Maintain an up-to-date problem list of current and active diagnoses
4 – E-Prescribing (eRx)
5 – Maintain active medication list
6 – Maintain active medication allergy list
7 – Record demographics
8 – Record and chart changes in vital signs
9 – Record smoking status for patients 13 years or older
10 – Report ambulatory clinical quality measures to CMS/State
11- Implement one clinical decision support rule
12 – Provide patients with an electronic copy of their health information, upon request
13 – Provide clinical summaries for patients for each office visit
14 – Capability to exchange key clinical information among providers of care and patient-authorized entities electronically
15 – Protect electronic health information

Figure 7: Meaningful use Stage One: Fifteen core objectives
Source: HealthIT (2012)

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CASE ANALYSIS

The previous case presented an overall look at American Well, its position within the telehealth market, and a look at the market and market affecting factors. The following analysis will be conducted using the information presented in the case and will identify strengths, weakness, strategies and provide discussions of special topics.

What are some pressing key issues? What is the most critical general environmental dimension? What does the industry look like?

The healthcare industry is going through significant reforms since March 2012 when President Obama signed Affordable Care Act (ACA) into law. As discussed in case the key pressing issues included high costs associated with the healthcare industry, increasing number of an aging population and their increasing demand for treatment of chronic illnesses and the uninsured people in U.S. are putting a burden of their healthcare on the government and the taxpayers. ACA is supposed to address these issues by providing healthcare to 32 million uninsured people and by reconfiguring the healthcare to contain costs and reduce unnecessary utilization.

The healthcare expenditure reached 17.9% in 2012. This percentage is expected to grow as the healthcare consumption is expected to increase due to rising population of Baby Boomers. As the significant issues are mostly related to the population and the specific age group, demographic segment is the most critical segment of the general environment.

Moreover, the increasing population of Bay Boomer requires more healthcare services, which requires more physicians and healthcare professionals. According to Association of American Medical Colleges (AAMC) by 2025 the U.S. would face a shortage in the number of physicians amounting to 124,000. AAMC recommended increasing enrollment at the medical colleges to address the shortage of physicians and healthcare professional in coming years.

Furthermore, the challenge for the healthcare industry is to align itself with the changing dynamics brought upon by the ACA and other laws and regulations established to provide quality of care to patients. ACA has established reporting of quality measures and physicians and other healthcare providers will be paid for the quality of care provided to patients rather than quantity of care. The shift is moving from the quantity to quality of care keeping patient at the center of the care provided. Insurance companies would also be affected by the ACA as the law tightens these third payers by prohibiting their ability to deny claims, putting restrictions due to pre-existing conditions, and putting life time limits on the amount of coverage offered to patients. Pharmaceutical companies would also share their profits to help the government providing insurance coverage to 32 million uninsured Americans. Patients are also given the right to privacy, confidentiality, and the right to access and maintain their medical records under the law passes in 1996 by President Clinton, called Health Insurance Portability and Accountability Act (HIPPA). Besides HIPPA, in 2005 the law on quality care and patient safety reporting named Patent Safety and Quality Improvement Act, was also established to solve patient issues related to lack of value and quality of care.

The healthcare industry is complex and has the significant government involvement. On industry level, it does not have any competitor. It is a unique industry which deals with the life of people. First, the industry has a unique set up where the insured patient is liable for the minimum amount of the healthcare service rendered to him while the third party payers, insurance companies pays the rest of the amount. Second, physicians alone possess the knowledge on the diagnoses and treatment, which gives physicians, the suppliers of healthcare services higher bargaining power. Both factors provide low bargaining power to patients. The U.S. government and insurance companies are the major buyers of healthcare services as they buy services for their beneficiaries they possess high bargaining power. Moreover, the industry is attractive because it has high barriers to entry. This

is because of the huge capital requirement, for the most advanced and technology-based industry, and also because of the rules and regulations established by the government.

What are the firm's strengths and weaknesses? What does the firm have a sustainable competitive advantage in? Who should the firm pursue a joint venture with?

The strengths demonstrated by American Well can be categorized into external and internal. Beginning with the external, these strengths can be separated into two areas: those strengths associated with insurance companies, and those associated with employers.

External strengths could also be interpreted as types of opportunities for insurance companies. According to Laufer and Ofek (2010), these strengths include (1) significant savings to health insurance companies, (2) the ability of health insurance companies to open their doors to nonmembers, (3) health insurers observing significant revenue and strategic gains by opening their physician network to nonmembers, (4) health insurance companies noticing a reputational benefit by offering Online Care, and (5) health insurance companies using Online Care to address their financial incentives with those of physicians.

External strengths for employers would be four-fold: (1) the convenience and choice of the service would likely boost employee external satisfaction and improve retention, (2) faster approach to care would facilitate discovery of health concerns (3) employers would more likely see greater employee productivity and acquire less cost connected with tragic illness and time off from employment and (4) computers with web cams could be additions to worksite health clinics, giving employees the convenience of American Well's service and sidestepping the need to take time off to visit a physician.

Internal strengths can be separate into two areas, as well: the strengths associated with patients and the strengths associated with physicians. Several internal strengths for patients include (1) convenience, (2) immediate attention, (3) quality, (4) affordability, (5) choice, (6) no appointment needed in advance, (7) location of the patient's choice, (8) privacy, (9) choosing a provider, and (10) receiving quick second opinions. Patients can access and manage their own medical information, self-management tools, and records of care before and after connecting with a physician.

Internal strengths for the physicians include (1) alleviating the need to setup new practice particulars such as accreditation, leasing an office, hiring and training staff, and purchasing necessary insurance, (2) working more hours on the weekend for extra income, and (3) working evening hours from home. Retired physicians may also take part in the program to stay connected and create extra income.

Weaknesses have been broken down into three challenges: (1) concerns in relation to over utilization that will eventually lead to overconsumption of healthcare services, (2) concerns about the capability to recruit physicians into the system, and (3) questions with reference to practicing medicine without actually performing a physical examination. American Well has also been slow in their affiliations and transactions with insurance companies.

American Well's sustainable competitive advantage lies in the firm's continual advancements with innovations in the field of telehealth. They seem, always, to be one step ahead of the competition. Just when their competitors start to catch up, they are on to something new. They also focus on telehealth while others have a much broader plan which doesn't enable a complete focus on telehealth offerings, but rather a small focus on telehealth and a serious focus on other e-health offerings like EHR's pharmacy management and operations software.

The most likely firm that American Well should pursue a joint venture with is Blue Cross. American Well has a pre-established relationship with them via the Hawaii partnership. Blue Cross also has a huge amount of consumers, and not only would that provide easier access for patients, but also savings on behalf of Blue Cross through more efficient service provisions.

Business Level Strategy

A business-level strategy is a set of commitments and actions the firm uses to gain a competitive advantage by exploiting core competencies in specific product markets. Customers are the foundation of an organization's business-level strategies. Who will be served, what needs have to be met, and how those needs will be satisfied have to be determined by upper level management. The two main business-level strategies to choose from are cost leadership and product differentiation.

American Well is in the telehealth industry, and they have been positioned to compete at a high level. They provide healthcare for a lower cost than the competition, therefor they are a cost leader. While the cost leadership strategy can be highly successful, it can be difficult for companies to make a profit. This strategy involves offering a low cost product that consumers want to buy. This means the company needs to minimize costs and pass the savings on to their customers. American Well offers a high quality physician consultation for a lower cost than all the competitors. Their services are highly convenient, and at a lower than the competition, this results in a competitive advantage.

When looking at some of the practices of American Well, the cost leader strategy becomes more apparent. Among the key benefits sections of the all of the firm's product guides is a low cost statement. None of American Well's competitors market based on affordability. Another key marketing difference is that American Well markets direct to consumer as well as payers and providers. All other competitive firms market only to payers and providers. With the direct to consumer marketing strategy American Well is able to minimize the cost of a consultation by minimizing provider expenses and passing the cost savings onto the consumer or patient. The direct to consumer functionality of American Well's platform enables a much wider audience to use their product and provides a greater opportunity at market capture.

The strategy used for manufacturing is one that provides American Well with the best technology available. They decided to partner with Microsoft for the manufacturing of the software. This cuts down on all labor costs for American Well and provides them with advanced technology. Due to the high rate of technology being utilized, comes the need for security. American Well made the decision to partner with IMB. This partnership provides American Well with the most advanced technology in Cyber Security. Partnering with these two companies in the manufacturing process has provided American Well with the best technology at a lower cost than developing their own.

American Well made the strategic decision become a cost leader in the telehealth industry. They provide a service for a lower cost than all the competitors and at a higher rate of convenience. This business-level strategy has been a highly successful one as American Well is continuing to emerge as a leader in the entire healthcare industry.

Is the firm diversified? What are its ethics and values? Is the firm optimally organized?

First, corporate-level strategy is a company-wide strategy that leads the firm to coordinate diverse business to create value for the corporation as a whole. This strategy specifies actions firms take to gain a competitive advantage by selecting and managing a group of different business competing in many industries and product markets. Corporate-level strategy is comprised of some kinds of strategies such as diversification, alliances, and acquisition.

Because the question is focused on diversification, it is important to define this term. Diversification strategy, by definition, allows firms to utilize their knowledge areas while seeking for developing new capabilities and acquiring new resources. Whereas, product diversification refers to industries' scope and markets in which firms are competing, in addition, how firms buy, create, and

sell different business to match the firms' skills and strengths with opportunities presented to the firms.

Based on that, American Well is not a diversified firm because it is focused in providing a unique service of online healthcare delivery in only one industry, healthcare. American Well established some alliances with some insurance companies to increase geographically the market for other countries and to Hawaii.

Other aspects inquired are about the American Well ethics and values. American Well has to be compatible with the new regulations such as Affordable Care Act (ACA), Health Insurance Portability and Accountability Act (HIPAA), and Health Information Technology for Economic and Clinical Health (HITECH) to provide "the right thing" to the patient. American Well is compromised with the privacy and security of patients' electronic medical records, providing affordable care with quality and safety.

American Well has as value "bringing telehealth to you". The main goal of the company is providing online, affordable, convenient, and timely care for its patients, regardless barriers such as distance, and promoting the quality of healthcare.

The last question regards the firm's organization. American Well is optimally organized and led by two brothers Ido Schoenberg and Roy Schoenberg. Both of them are physicians and IT innovators with enormous hopes and expectations for improvement in healthcare delivery system.

Ido Schoenberg works as a chairman and CEO of the company and oversees the company's business strategies and affairs. Ido has a strong background of successfully managing technology companies in the healthcare field. Roy Schoenberg serves as president and CEO of the company and is the creator of the American Well concept. As a CEO, he leads the company's product development for the operations divisions.

In addition, American Well has other very capable professionals working for the company's success such as executive vice-president and chief financial officer, executive vice-president of customer solutions, senior vice-president, vice-president of product management and professional services, vice-president of research and development, vice-president of corporate development, vice-president of visual design, vice-president of hosting, and vice-president of quality assurance.

What about the additional areas?

In the additional areas were discussed the influence that new polices and legislation had not only on American Well business but also how health care industry was affected as a whole due to political changes in the past two decades. First, and surely the most impacting legislation on the health care industry was the Affordable Care Act (ACA), also known as Obama Care Act, which gained even more power with Obama's reelection. The ACA is expected to include over 32 million of people in the health industry. Those uninsured people will increase the demand of the industry and thus the amount of money involved in the industry. However, raise health care expenses are not desired and can be very harmful for America's economy. One well accepted alternative to control cost is through telehealth. Companies such as American Well are benefiting from the ACA not only by having its demand increased with new people covered but also because technologies such as videoconferencing, offered by American Well, is seeing as one of the most promising alternative to contain heath care costs.

Secondly, was discussed the impact of Health Insurance Portability and Accountability Act (HIPAA) on American Well business. HIPAA established patterns to electronic transference of medical records and how patient information can be utilized and disclosed. This police impacted in how American Well had to grow its business following strict standards to meet HIPAA requirements. To meet HIPAA standards, American Well has constantly to invest in web protection and train its personnel to avoid malpractice and keep a reliable product to offer.

Finally, Health Information Technology for Economic and Clinical Health Act (HITECH), enacted in 2009, established financial incentives for health care providers that use information technology in a meaningful use. American Well has products that can meet those providers' necessities, which saves money for providers and establishes a symbiotic relationship between American Well and its clients.

Concluding new policies and regulations are constantly changing health care industry, which in turn has helped American Well to grow its business. However, to meet regulatory standards, American Well has also to invest in technological advancements.