

A Model for Telephonic and Audio-Video Primary Care Medical Consults

Guidelines for Decision-makers



Tommy G. Thompson

Donald Arthur, MD

Richard Boxer, MD

Henry DePhillips, MD

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Tommy G. Thompson
Former U.S. Secretary of Health and Human Services
Chief Executive Officer of Thompson Consulting Group

Donald Arthur, MD
Vice Admiral, U. S. Navy, retired
35th Surgeon General of the Navy

Richard Boxer, MD
Chair of National Health Policy Council

Henry DePhillips, MD
Fellow, American Academy of Family Physicians
Chief Medical Officer, Teladoc, Inc.

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Executive Summary

Telephone (telehealth) and Audio-Video (telemedicine) based medical care delivered by fully trained and qualified primary care physicians has become a staple of healthcare delivery throughout the United States. As the marketplace demonstrates its continued confidence in this mainstream model, the growing use of telephone and audio-video based consultations -- particularly for physician cross-coverage -- promotes more efficient interactions between patients and providers. Telehealth and Telemedicine primary care doctors include family practice physicians, internal medicine physicians, pediatricians and emergency medicine physicians.

Increased reliance upon this proven method for delivering health services is already generating significant cost savings for plan sponsors and benefits payers and will favorably impact access to care for individuals living in rural and urban settings. Both public and private sectors are highly receptive to the concept with accelerated adoption rates tied to the increased focus on healthcare consumerism, more timely access to services, the growing primary care physician shortage and ongoing pressures to reduce healthcare expenditures. Currently, over 8 million Americans enjoy access to these services.

Historically, physicians have relied upon telephone consults as a means of communicating with patients. This applies not only to the individuals in their own practices but also those patients for whom they take responsibility in cross-coverage arrangements with medical colleagues. The modernized progressive model which focuses on patient-centric care utilizes a fully portable, continuity of care (CCR) electronic health record (EHR) which is updated before, during, and after each telephone or audio-video consult. It has become evident that this robust, technology enabled level of communication is particularly valuable in addressing illnesses that arise quickly and tend to run a brief course, typically 5-10 days.

Today, many common, uncomplicated, non-emergent medical issues can be managed and definitively treated in this manner, providing consumers with more immediate access to clinically sound medical advice and treatment options. Studies demonstrate that users are very satisfied with the advice they receive and would recommend the service to friends, family, and business colleagues. Additionally, primary care physicians embrace the opportunity to readily facilitate cross-coverage services as well as to enhance their revenues.

The simplicity of the model, its fully transparent pricing, and the use of a freely available EHR support our national goals for streamlined continuity of patient care and the development of the patient centered medical home.

Telephone and audio-video medical consults support these national trends:¹

- Equivalent healthcare outcomes at lower costs for participating Americans
- Increased focus on personalized, private consultations that are of high quality, affordable and readily accessible
- Streamlined, coordinated care through the use of an open, privacy-protected and Advanced Encryption Standard (AES) 128 Bit-encrypted Electronic Health Record (EHR)
- Widespread adoption of the medical home model and reliance upon primary care physicians
- Timely care for rural Americans and the nearly one-in-four citizens who have problems missing work to see a physician for routine medical services
- Consumer centric programs and empowering individuals to purchase their own healthcare
- Relieving pressures on overcrowded, understaffed, expensive hospital emergency rooms
- Expanded practice options for physicians

This document was developed to help decision-makers define the essential parameters of this formalized platform of telephone and audio-video medical consults delivered by physicians and to better understand their role in improving the quality, accessibility and affordability of health services across the country.

Defining the Model: A Gold Standard of Care

Telehealth and telemedicine programs have proven their value in a variety of healthcare specialties and settings, with ongoing demonstrated achievements in the criminal justice system and home healthcare programs. They have also become an important component in the supplemental management of chronic conditions such as hypertension, diabetes, arthritis, depression, and obesity. Now, there is widespread acknowledgment of their usefulness to impact routine care for common, uncomplicated, non-emergency medical problems.

Delivered on a national level, telephonic and audio-video medical consults emerge as a new frontier in telemedicine – one that offers convenient, cost-effective options for healthcare consumers and more attractive pricing for health benefits sponsors. There is growing recognition of the delivery of healthcare via telehealth and telemedicine as a safe, practical, and necessary practice.

The following requirements represent the Gold Standard of Care for telephone and audio-video medical consults, and adherence to these standards should be mandated to ensure quality and consistency of care:

Routine medical care

Telephone and audio-video medical consults conducted by experienced primary care physicians appropriately address routine, acute, non-emergent, non-recurrent medical conditions with marketplace receptivity for its merits in addressing minor issues. In researching possible methods for nurse telephone triage for interventions, some large health plans have identified nearly 5000 clinical scenarios and 320 symptoms from which an intake nurse can choose. After further questions, approximately 15 ultimate scenarios may arise from any one symptom. Experience has determined that there are about 550 clinical scenarios as candidates for telehealth and telemedicine consultations; 120 of these scenarios may be appropriate for physician intervention instead of or in addition to a nurse.² Some examples include:

- Respiratory Infections
- Gastroenteritis
- Sinusitis
- Bronchitis
- Urinary Tract Infections
- Pharyngitis
- Seasonal Allergies
- ALSO: Prescription refills as appropriate for the short-term, excluding controlled substances

Figure 1 demonstrates the large number of commonly diagnosed and easily treated conditions.

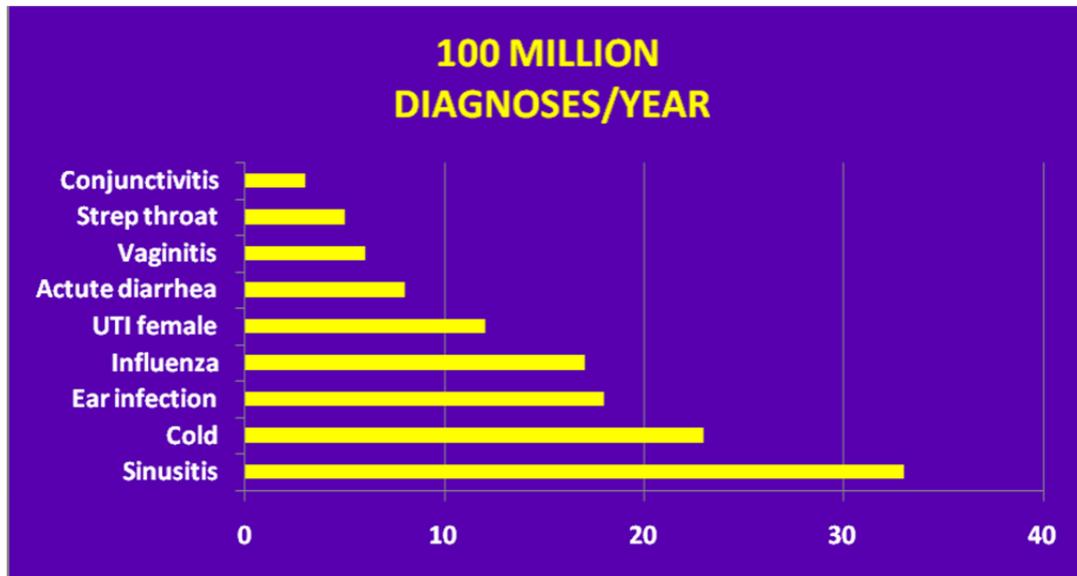


Figure 1: Diagnoses per Year

Patient age

Provided there is an articulate, mature assistant present when needed (parent, guardian, etc.), this model is well-suited to meet the needs of persons of all ages. Common, uncomplicated medical problems can be handled telephonically or via audio-video means for any age patient, as long as communication with the physician is clear and provided the proper specialty physician is available. Telehealth and telemedicine can also be quite beneficial, cost-effective, and efficient for follow-up care of patients with stable, chronic medical illness.

Physician licenses

All consultations should be delivered by physicians licensed in the state where the patient is presently located. Ideally, the business model favors physicians who live in, work in and are licensed in the state where the patient is calling from.

Prescriptions

One of the key value points of telehealth and telemedicine consultations is the ability for physicians to prescribe medications. However, controls should be in place to establish limits: short-term prescriptions; refills of no more than one month; and no DEA controlled substances or lifestyle drugs (generally defined as drugs taken to satisfy a non-medical or non-health-related goal³). The EHR should reflect each prescription with an alert message (flag) that the patient has received a refill from a telemedicine consult to prevent abuse of this benefit. Follow up with the patient's PCP is essential.

The ideal telemedicine service gives the patient, physician and the payer the following advantages:⁴

- Easy access for the patient
- Quality care that is accountable with programmatic quality assurance at every level
- Board certified primary care physicians with 5-15 years of practice experience and no record of medical malpractice
- Physicians who are committed to returning consultation requests within one hour or less

- Affordability for the patient and for the sponsor
- Efficiency for the patient and for the physician regardless of their location
- Convenience for the patient
- High level of patient satisfaction
- High productivity from a healthy work force that does not need to leave work for a doctor's appointment or an ER visit for a common, uncomplicated medical problem
- Reliable, searchable record of interactions that demonstrates the economic advantages
- Privacy-protected, portable and instantly accessible medical records to improve the quality of care given by the telemedicine doctor; sent to the patient's PCP immediately after the consult
- 24/7/365 coverage throughout the entire U.S.
- Rapid access for rural and urban populations
- Reasonable and rapid payment to physicians for their work and coverage for their malpractice insurance
- Allied in principles and practices of the American primary care professional organizations and with the medical home concept

Electronic Health Records Improve the Quality of Physician Cross-Coverage Care

As physicians go off duty, they provide information to a "cross-covering" physician who will care for patients in the interim,⁵ with the process often referred to as "taking call." Customarily, these arrangements do not involve the sharing of patient charts or files since few doctors use an EHR that is accessible over the Internet. Furthermore, because privacy laws prohibit sharing of medical information without a signed release, each physician would be required to obtain permission for their patients' medical record to be shared with the cross-covering physician. Privacy laws prohibit sharing of medical information without a signed release.

The President's Executive Order issued April, 2004 calls for widespread use of electronic health records for all Americans. Yet adoption rates for this technology remain low. The CDC's National Center for Health Statistics show that between one quarter and one half of the nation's physicians report using full or partial electronic health records (EHRs) in their office based practice. However, a much smaller percentage report using EHRs with the four basic functions (e-prescribing, computerized provider order entry, automated reporting of test results, and physician documentation) considered necessary for a complete EHR system.⁶

This leaves the covering physician at a loss for critical information regarding patient medical histories, a situation which can diminish the quality of patient encounters. Covering physicians must be aware of the patient's previous illnesses or medical conditions, current medications, allergies and other vital data to arrive at an accurate diagnosis and recommend appropriate treatment, including prescriptions. The patient's best interests must always be the physician's main concern and focal point.

The advent of the telephone and audio-video cross-coverage model materializes as one of the best examples of the power of this platform to make medical care safer: physicians "cover" for one another via the telephone or Internet device on a round-the-clock basis and have an electronic health record at their fingertips. It also ensures that every patient has access to a primary care physician – wherever they are located and whenever they require medical attention, in the event they cannot quickly access their own PCP.

When patients register for telephone and audio-video consult services, it is appropriate and it accrues to their benefit and safety to provide their medical histories in order to build or edit their own unique EHR prior to each consult. With access to the patient's EHR, covering telehealth and telemedicine physicians are able to update the EHR with documentation of each patient encounter, contributing to a patient's universal medical record.

The beauty of this process is that patients are naturally incentivized to contribute the information required for a personalized EHR, since they cannot access the benefit without it. Physicians must also use the EHR, updating the electronic medical record prior to and during every patient encounter. The patient has instant access to the updated EHR and he/she may give it to his/her doctor at any time. This also allows the fully transparent health record to be available to the patient for evaluation. Further, 100% of the time when the patient gives permission, a complete copy of the encounter is sent securely to the patient's PCP immediately after the consultation is complete, for continuity's sake.

Contrary to prevailing reports about the failure of physicians to adopt EHRs – with pushback regarding the cost of acquisition, implementation, and training – the market can expect to hear accolades from physicians about the role of EHRs in the telehealth and telemedicine model. They access the patient record via their device, review and enter new information, and proceed with an efficient, streamlined telephone or audio-video encounter.

Information is easily recorded, without changing the manner in which physicians practice telehealth, telemedicine or deliver care. To promote interoperability across the healthcare spectrum, the EHR should ideally utilize a CCR-compliant data structure and be fully portable. It should be available 24/7/365, and be provided free to both patients and physicians, and it should be delivered on demand worldwide.

Ubiquitous EHR availability is clearly driving the success of this model, supporting the continuity of patient care across medical entities -- including primary care physician (PCP) offices, emergency departments and hospital specialty clinics. EHRs are helping link together doctors, patients, and hospitals in seamless, digital environments, making it possible for a patient's records to be transferred quickly and accurately and with all necessary privacy protections.

EHRs represent a viable solution for helping Americans to receive high-quality medical care -- saving lives, reducing medical errors, and eliminating duplication of services. They are a vital component of this physician-driven telehealth and telemedicine model and can provide a needed boost to the widespread adoption of electronic patient records across the country.

Thus, it is essential that the creation and updating of an EHR be a requirement of any telehealth or telemedicine consultation program.

Ensuring the Quality of Care

Robust oversight of all consults and a formal Continuous Quality Assurance (CQA) program conducted by physicians must be an integral part of any telehealth and telemedicine program, with a baseline requirement stipulating automatic review of 10-15 percent of all consultations. These CQA activities should include benchmarking of quality standards, establishing guidelines for treatment, and articulating current best practices and standards of care. All data that are collected should be available for internal and external audits, creating a simple, transparent system that incorporates quality indicators for each patient record.

It will be important to monitor patient utilization of services in order to identify individuals who may be over-utilizing the system inappropriately. Telehealth and telemedicine cannot and should not be a substitute for a primary care physician (PCP) relationship. These cases should be queued for physician review, pointing to a need for supplementary evaluation and triggering additional research as warranted to further clarify each patient's health needs. When utilization is more frequent than would be anticipated, it will be critical to determine if the patient has a recurring or chronic illness which may need more than episodic care. Any patient who has used the telemedicine consult service for a recurrent issue or who has used the service more than three times in 90 days or 8 times in one year for the same or related diagnosis should be contacted to strongly reiterate the need to seek care from their own doctor. If the inappropriate use continues, then the patient would be excluded from using the system altogether.

Once physicians are performing telephone or audio-video consults, they should be reviewed on a regular basis to ensure they meet evidence based standards of care. The following systems should be in place to ensure optimal performance:

- Daily random audits to identify medical appropriateness. Any variances outside certain pre-defined parameters are flags for further investigation and action as warranted
- Key issue audits conducted monthly to focus on specific issues of particular importance in this environment or employer or health plan specific audits, as requested. One example is the study of appropriate antibiotic use
- Satisfaction survey results reporting patient satisfaction after their consults. Any issues arising from this process should be specifically investigated and appropriate actions taken
- Outcomes review of specific cases, chief complaints, and other benchmarks should also be reviewed regularly. These would be actual case-specific issues that arise and are deemed to warrant review outside the normal process described above
- Outcome studies will help to determine the effectiveness of the encounters. Data should be compared on a per physician basis to assure quality encounters

To further ensure accountability, a mechanism should be created to solicit consumer feedback and evaluate patient levels of satisfaction with the consultation. Expect to see high ratings, since 96 percent of patients utilizing a leading telephone and audio-video medical consult service consistently report a positive experience.⁸

Finally, rules should be established for all prescriptions written by telehealth and telemedicine physicians with ongoing monitoring of all prescriptions to ensure that physicians prescribe only those medications which are appropriate for the patient encounters. As a caveat, policies should be in place to prohibit physicians from authorizing multi-month refills or prescribing DEA controlled medications -- including "lifestyle drugs" (i.e., erectile dysfunction medications). Furthermore, physicians should be trained and held accountable for the accuracy of the prescriptions, appropriately considering such issues as allergies, contraindications, and potential drug interactions. A drug interaction tool should be embedded into the technology platform.

Improving Access and Reducing the Cost of Healthcare

Recognizing that healthcare costs must be contained, proponents of medical telephone and audio-video consults have developed fully transparent models which offer a flat rate fee schedule -- +/- \$40.00 per consult – with no hidden expenses. This is approximately what an insured patient may have as a "co-pay" at the physician's office.

This model mitigates the high costs of visits to the ER or to the urgent care center. Determination of cost savings are possible by identifying where patients would have gone if the telehealth or telemedicine consultation was not available. Table 1 compares these costs:

Table 1: Cost Comparison

Place of Service	Average Cost	Total cost (range)
ER	\$1029	\$550-1530
Urgent Care	\$194	\$104-235

Sources: NC BlueCross BlueShield 2007 Provider Economics/Wellmark

Figure 2 displays a demonstration of potential cost reduction based upon one telemedicine company's survey.

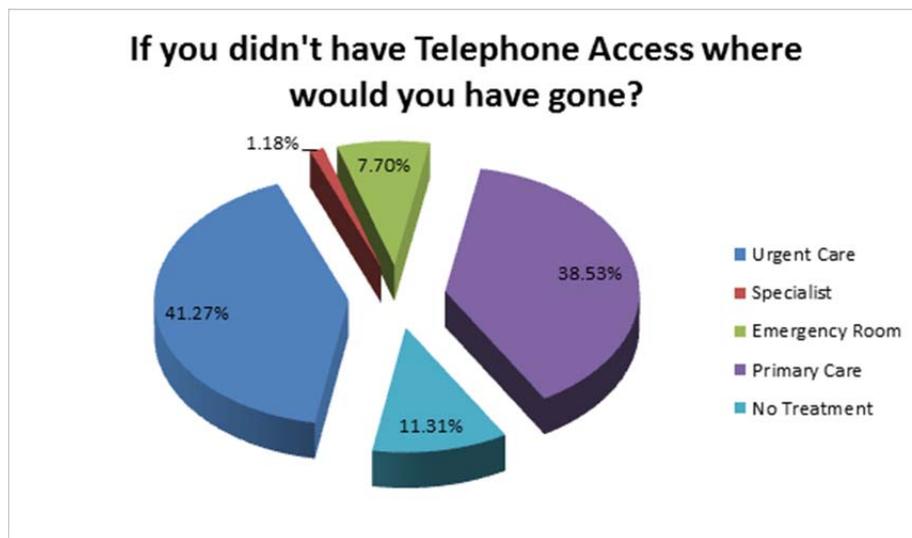


Figure 2: Cost Reduction Survey Results 2013

Significant access to care benefits:

Employees are not forced to leave work in order to consult with physicians. With telehealth or telemedicine consultations, they get timely treatment – resulting in reduced workforce absenteeism, decreased probability of spreading infections to other employees, and improved access for patients with pre-existing conditions who might forego receiving proper care for minor issues. Employees and employers find it especially convenient for the treatment of common, uncomplicated illnesses, when the patient's own PCP is not readily available.

Rural residents dealing with economic constraints, cultural and social differences, educational shortcomings, and the sheer isolation of living in remote rural areas can rely upon a physician telephone or audio-video consult program to more rapidly deliver quality medical services at a reasonable cost. This enhances patient safety. In the U.S., 25 percent of the population lives in rural areas, whereas only 10 percent of physicians practice in rural areas.⁹

Travelers – for business or pleasure – find these consumer-friendly services to be extremely convenient. Telephones, PDAs and tablets are universally available at any time and from anywhere, allowing patients to access care at home, in a hotel, or in the office. People who forget to pack their medications can also take advantage of short-term prescription refills.

Culturally appropriate care – Programs must make a multi-lingual helpline available 24/7/365. This will help the most culturally isolated members of our workforce obtain timely care that is comfortable for them.

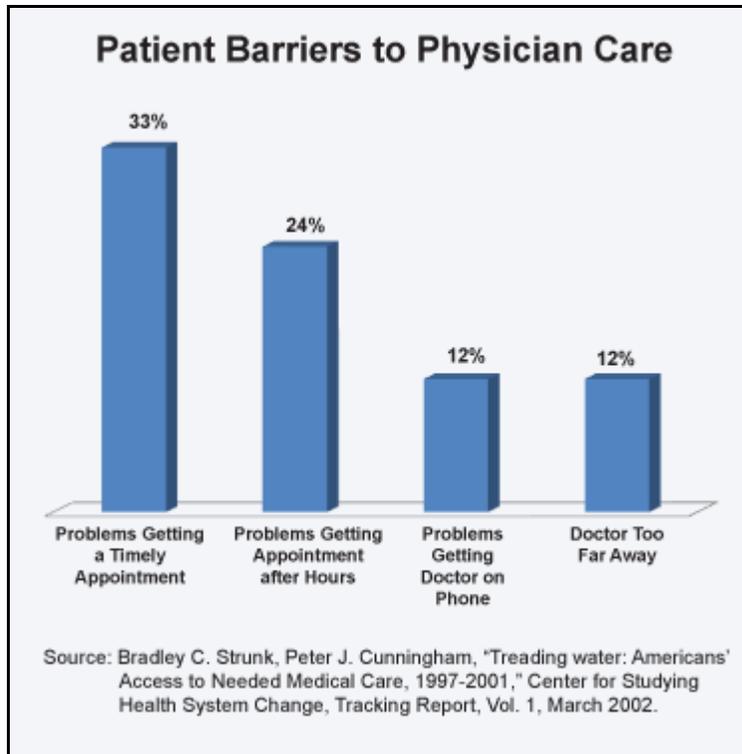


Figure 3: Patient Barriers to Physician Care

TelaDoc reports that corporate acceptance of the program is even more robust, with many companies purchasing telehealth and telemedicine services for their employees and making the service available during working hours, in addition to nights and weekends. It is particularly effective for employees who travel, such as truck drivers and sales staff who are often on the road and away from the state where they live.

Several Fortune 1000 employers utilize the program to enhance their clinic operations which employ video consultation systems during their short hours of operation. The physicians conducting these clinics report using telephonic and remote audio-video consults to meet the needs of staff who conduct business outside the office or who, for one reason or another, are unable to get to the onsite clinic. These visits keep these employees focused on their work-related tasks and attentive to their job responsibilities. It also helps them feel "connected" to the home corporate office.

Conclusion

As government leaders at both state and federal levels, decision-makers and regulators search for opportunities to improve access to quality healthcare at lower costs, it is natural that they would increasingly embrace telephone and audio-video medical consults conducted by qualified primary care physicians. In fact, in California, legislators have enacted AB415 creating the California Telehealth Advancement Act of 2011 with the following provisions:

"SECTION 1. This act shall be known, and may be cited, as the Telehealth Advancement Act of 2011.

SEC. 2. The Legislature finds and declares all of the following:

- (a) Lack of primary care providers, specialty providers, and transportation continue to be significant barriers to access to health services in medically underserved rural and urban areas.
- (b) Parts of California have difficulty attracting and retaining health professionals, as well as supporting local health facilities to provide a continuum of health care.

- (c) Many health care providers in medically underserved areas are isolated from mentors, colleagues, and the information resources necessary to support them personally and professionally.
- (d) It is the intent of the Legislature to create a parity of telehealth with other health care delivery modes, to actively promote telehealth as a tool to 90 advance stakeholders' goals regarding health status and health system improvement, and to create opportunities and flexibility for telehealth to be used in new models of care and system improvements.
- (e) Telehealth is a mode of delivering health care services and public health utilizing information and communication technologies to enable the diagnosis, consultation, treatment, education, care management, and self-management of patients at a distance from health care providers.
- (f) Telehealth is part of a multifaceted approach to address the problem of inadequate provider distribution and the development of health systems in medically underserved areas by improving communication capabilities and providing convenient access to up-to-date information, consultations, and other forms of support.
- (g) The use of information and telecommunication technologies to deliver health services has the potential to reduce costs, improve quality, change the conditions of practice, and improve access to health care, particularly in rural and other medically underserved areas.
- (h) Telehealth will assist in maintaining or improving the physical and economic health of medically underserved communities by keeping the source of medical care in the local area, strengthening the health infrastructure, and preserving health care-related jobs.
- (i) Consumers of health care will benefit from telehealth in many ways, including expanded access to providers, faster and more convenient treatment, better continuity of care, reduction of lost work time and travel costs, and the ability to remain with support networks.
- (j) It is the intent of the Legislature that the fundamental health care provider-patient relationship cannot only be preserved, but can also be augmented and enhanced, through the use of telehealth as a tool to be integrated into practices.
- (k) Without the assurance of payment and the resolution of legal and policy barriers, the full potential of telehealth will not be realized.”

Furthermore, this platform is a viable component of the solution for all Americans -- regardless of geography or individual insurance coverage or even employment status. Public and private sector health benefits payers benefit from the transparent, straightforward and predictable pricing options which significantly impact the overall costs of care.

This is a model which complements broader initiatives for system-wide transformation, positively impacting stakeholders across the spectrum. It is founded upon a vision for enhanced patient safety and a more efficient, technology enabled approach to physician-patient interaction.

Teladoc is used as a model for understanding the concept of telephonic and audio-video medical consults. With more than 7 million sponsored members, Teladoc is the nation's oldest and largest telephone and audio-video based cross coverage and convenience-based provider. Teladoc provides a network of board certified, 50 state licensed primary care physicians that delivers cross coverage consultations for common, uncomplicated medical issues 24 hours a day, 7 days a week, and 365 days a year with typical response times under 30 minutes. The strictest credentialing standards are used, garnering Teladoc certification with a perfect site visit score by the National Committee for Quality Assurance (NCQA).

Systems like the one built by Teladoc are bringing an improved new standard of care and delivery to our ailing healthcare system. The bullet points below are excerpted from the Teladoc experience:

- Rapid access to a primary care physician (via telephone, smart phone, tablet or PC). Teladoc's model has a *1 hour or it's free* guarantee.
- Telephonic cross coverage should handle acute, episodic, self-limited and minor illnesses; available to individuals of all ages

- Fully portable Electronic Health Record (EHR) provided free to both patients and physicians, available 24/7/365, delivered on demand worldwide; fully CCR-compliant data structure
- Teladoc data has demonstrated that telephone and audio-video consultations are typically 10-12 minutes vs. the national average for office visits running 3-6 minutes
- Patients with pre-existing conditions are welcome customers; hence the importance of the required medical history disclosure
- Telephone and audio-video based services provide concierge-type medicine
- Because costs are well understood, telephone consultations come with a transparent and typically low price tag. (i.e., Teladoc charges \$40 per consultation, regardless of length or complexity)
- 96 percent of patients are happy (20%) or extremely happy (80%) with the service
- Physicians can make more money working inside an efficient model (Table 2)

Table 2: Sample Physician Income Chart

Sample Physician Income Chart						
	Consults per hour	Hours per Day	Days per Week	Weeks Vacation	Monthly Income	Annual Income
Physician 1	2	4	3	4	\$2,208	\$26,496
Physician 2	3	6	4	4	\$6,624	\$79,488
Physician 3	4	8	5	4	\$14,720	\$176,640
Physician 4	5	8	5	4	\$18,400	\$220,800

Source: TelaDoc Medical Services, 2008.

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¹ Gingrich, Newt; Boxer, Richard MD; Brooks, Byron MD; Telephone Medical Consults Answer the Call for Accessible, Affordable and Convenient Healthcare; Center for Health Transformation, Washington, DC; 2008

² Boxer, Richard; 2007

³ Flower, Rod. *Lifestyle drugs: pharmacology and the social agenda*; Department of Biochemical Pharmacology, The William Harvey Research Institute, Charterhouse Square, London EC1M 6BQ, UK ; http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6T1K-4BSVS6X-1&_user=10&_rdoc=1&_fmt=&_orig=search&_sort=d&view=c&_acct=C000050221&_version=1&_urlVersion=0&_userid=10&md5=bb2c6cdc687b258ae7f41bc97c5d842f

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⁵ Evidence Report/Technology Assessment, No. 43; Making Health Care Safer, A Critical Analysis of Patient Safety Practices; Agency for Healthcare Research and Quality, *Chapter 42. Information Transfer*; Subchapter 42.2. Sign-Out Systems for Cross-Coverage; <http://ahrq.hhs.gov/clinic/ptsafety/chap42b.htm>; 2008.

⁶ Centers for Disease Control. *Media Advisory: More Physician Using Electronic Medical Records*. 2006. Accessed April 14, 2007, at <http://www.cdc.gov/od/oc/media/pressrel/a060721.htm>

⁷ Gingrich, Boxer, Brooks; 2008

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⁹ van Dis J. MSJAMA. *Where we live: healthcare in rural vs.urban America*. JAMA 2002; Jan 2;287(1):108

About the Authors

Tommy G. Thompson

Former U.S. Secretary of Health and Human Services

Chief Executive Officer of Thompson Consulting Group

Mr. Thompson has dedicated his life and career to public service, first as a state lawmaker from his hometown of Elroy, Wisconsin, followed by an unprecedented four terms as Governor of Wisconsin and four years as the Secretary of the U.S. Department of Health and Human Services.

As Governor of Wisconsin from 1987 to 2001, Thompson repeatedly cut taxes while holding the line on state spending. Under Thompson, Wisconsin led the nation in moving tens of thousands of families off of the dependence on a welfare check to the independence of a paycheck. He also empowered students in Milwaukee by allowing them to attend schools of their choice, regardless of their socioeconomic background. He gave hard-working families access to affordable health care by expanding coverage to tens of thousands hard-working families who lacked insurance but made too much money to qualify for government health programs.

Thompson took that willingness to innovate and ability to get things done to Washington as the Secretary of Health and Human Services from 2001 to 2005. Thompson led the way in rebuilding our nation's crumbling public health infrastructure after 9/11. He worked tirelessly to provide prescription drug coverage to our nation's seniors once and for all. And as Chairman of the Global Fund to Fight AIDS, Tuberculosis and Malaria, he was the driving force in America's unprecedented investment to stop the spread of AIDS, tuberculosis and malaria around the world. Thompson is now a senior partner at a Washington D.C. based law firm and heads a health care think tank.

Donald Arthur, MD

Vice Admiral, U. S. Navy, retired

35th Surgeon General of the Navy

Dr. Arthur retired from the Navy in 2007 following a 33 year career in the U. S. Navy, culminating in his role as its 35th Surgeon General. As Surgeon General, he was responsible for delivery of medical and dental services to over 700,000 active duty service members and 2.6 million retirees and family members. His oversight included 28 hospitals, 266 free standing clinics, 4 regional support offices, and 6 research centers in 4 countries.

Dr. Arthur has been the Chief Executive Officer of two medical facilities: the National Naval Medical Center in Bethesda, Maryland, and the Naval Hospital in Camp Lejeune, North Carolina. For five years, he was Chief of the Navy Medical Corps, responsible for personnel policies, recruiting, career planning, graduate medical education, research activities, and all other professional programs for the Navy's 4100 physicians.

Other Navy assignments included service as the Deputy Surgeon General, Navy Medicine's Chief Operating Officer, Medical Center Chief Operating Officer, Department Head for Emergency Medicine at a residency training Medical Center, Director of Medical Programs for the Marine Corps, Senior Medical Officer aboard an aircraft carrier, practicing physician in a variety of clinical settings, and researcher in the environmental sciences.

A native of Northampton, Massachusetts, Dr. Arthur received his Doctor of Medicine degree from the College of Medicine and Dentistry of New Jersey and is a member of the Alpha Omega Alpha Honor Medical Society. After a surgical internship, he completed Navy training in aviation,

submarine, and diving medicine. Dr. Arthur is residency trained in emergency medicine and attained board certification in Emergency Medicine and Preventive Medicine (Aerospace).

Dr. Arthur is a Fellow and Past President of the Aerospace Medical Association and was President of the Association of Military Surgeons of the U.S. in 2005. He is a member of the Alpha Omega Alpha Honor Medical Society. He was also the 2002 recipient of the American College of Healthcare Executives' Federal Excellence in Healthcare Leadership Award and 2002 Association of Military Surgeons of the U.S. Outstanding Federal Healthcare Executive Award.

Dr. Arthur has been awarded two Navy Distinguished Service Medals, four Legions of Merit, three Meritorious Service Medals, three Navy Commendation Medals, and a Navy and Marine Corps Achievement Medal in addition to unit, service, and campaign awards.

Richard Boxer, MD
Chair of National Health Policy Council

Dr. Boxer graduated from the University of Wisconsin-Madison with honors from both the undergraduate and medical schools. He served a residency in urology at U.C.L.A., is Professor of Clinical Urology, University of Miami, Clinical Professor in the Department of Family and Community Medicine and Clinical Professor in the Department of Health Policy at the Medical College of Wisconsin, as well as Clinical Professor the Department of Surgery/Urology at the University of Wisconsin in Madison. He has written over 40 scientific articles and chapters for books, won a national award for cancer research, was awarded a Presidential Citation from the American Urological Association for excellence in Urology, patented a medical device and has lectured around the world on treatment for cancer of the prostate gland and urinary tract.

Doctor Boxer was honored as one the best urologists in Milwaukee by his peers in the only five surveys by the *Milwaukee Magazine* in 1987, 1991, 1996, 2000, and 2004. He was named among the top doctors in America in 1999 and 2003. He serves as Medical Director of two prostate cancer foundations, is the former Chair of Surgery at St. Michael and Mt. Sinai Hospitals, past president of the Milwaukee Urological Society, and an advisor to Medicare. Dr. Boxer was a Section Editor for *Oncology Spectrums*, reviews scientific articles for the *Archives of Internal Medicine*, *Urology*, *The Journal of Urology*, and *Oncology*. He has been invited to deliver over 35 keynote lectures. Dr. Boxer is presently or has been on the Board of Directors of sixteen philanthropic organizations and he is National Chairman of the National Health Policy Council.

Henry DePhillips, MD
Fellow, American Academy of Family Physicians
Chief Medical Officer, Teladoc, Inc.

Dr. Henry DePhillips has deep expertise in the practice of medicine, medical management, health informatics and how to use informatics to best influence personal and clinical decision-making. At Teladoc, Henry is responsible for the overall delivery of high quality clinical care to Teladoc patients as well as the supervision and expansion of Teladoc's physician network.

Early in his career, he received an undergraduate degree in Biochemistry from Trinity College and his MD at Hahnemann University School of Medicine; he performed his residency in Family and Community Medicine at the Medical Center of Delaware. Afterwards, Henry spent ten years in private practice and he continues to be Board Certified in Family and Community Medicine.

Prior to joining Teladoc, Henry held multiple leadership positions within the healthcare consulting, health insurance and health care information technology sectors. He was Senior Medical Director at Independence Blue Cross of Pennsylvania, and later held positions as Chief Medical Officer at MEDecision, a clinical care management software company; at Medem, a physician hosted website and PHR company; at PDR Network, an electronic patient safety communications company; and at Audax Health, a consumer engagement technology company. Henry was also the Head of Business Development, North America for McKinsey's international Health Systems Institute.

Henry is passionate about improving the quality of healthcare with the help of technology and he believes that leveraging technology to allow patients to receive care when and where they want is a critical component to improving access to the medical system.