HB 281

<TARGET><BILL>HB 281</BILL><SUBJECT>HB 281</SUBJECT><COMM>SHSS28</COMM></TARGET>

SENATE COMMITTEE REPORT

DATE: 4/8/14

FURTHER: Labor and Commerce

DATE TURNED IN TO OFFICE: 4/14/14

Health and Social Services Committee considered CS FOR HOUSE BILL NO. 281(L&C)

HB 281-PRESCRIPTION WITHOUT PHYSICAL EXAMINATION

"An Act relating to prescription of drugs by a physician without a physical examination."

and recommends:

[ ] be **replaced** with **SCS** _____ (_____) *[ ] Same Title [ ] Technical Title Change [ ] New Title/SCR No._____*

[ ] adopt **previous SCS** _____ (_____) *[ ] Same Title [ ] Technical Title Change [ ] New Title/SCR No._____*

[ ] attached amendment(s)

[ ] adopt _____Letter of Intent

[ ] further referral to _____Committee

Dept Abbr.	
ADM	LWF
CED	LAW
COR	LEG
CRT	MVA
EED	DNR
DEC	DPS
DFG	REV
GOV	DOT
DHS	UA

NEW FISCAL NOTE(S)				
Dept.	Fiscal	Indet.	Zero	FN #

PREVIOUS FISCAL NOTE(S)				
Dept.	Fiscal	Indet.	Zero	FN #
CED			✓	1

[ ] **APPROPRIATION - no fiscal note**

SIGNATURES AND RECOMMENDATIONS:	PRINTED LAST NAME	DO PASS	DO NOT PASS	NO REC	AMEND
	Micciche			✓	
	Kelly	✓			
	Ellis			X	
CHAIR:	Stedman			✓	

Comparison of SB80 and HB 281—Telemedicine

Both SB 80, Section 2, and HB 281 prohibit the medical board from sanctioning licensees for prescribing non-controlled prescription drugs without a prior physical examination.

SB80

SB 80, Section 2, is almost identical to HB 281.

SB 80 would provide definitions for telemedicine and insurance billing but are not key to solving the critical problem caused by the Medical board.

HB 281

HB281 requires prescribing physicians must be located in Alaska. This is appropriate as the only issue covered by this bill would be those who are prescribing without the physical examination. This would not impact any current physician and their patients nor a physician covering for another physician

HB 281 requires the physician must have a physician to cover follow-up care if unavailable to the patient.

The exemption for prescribing controlled substances to an existing patient is not included, as HB 281 does not affect established physician-patient relationships.

Fiscal Note

State of Alaska
2014 Legislative Session

Bill Version: CSHB 281(HSS)
Fiscal Note Number: 1
(H) Publish Date: 2/28/14

Identifier: HB281-DCCED-CBPL-02-06-2014
Title: PRESCRIPTION WITHOUT PHYSICAL EXAMINATION
Sponsor: GATTIS
Requester: House Health and Social Services

Department: Department of Commerce, Community and Economic Development
Appropriation: Corporations, Business and Professional Licensing
Allocation: Corporations, Business and Professional Licensing
OMB Component Number: 2360

Expenditures/Revenues

Note: Amounts do not include inflation unless otherwise noted below. (Thousands of Dollars)

	FY2015 Appropriation Requested	Included in Governor's FY2015 Request	Out-Year Cost Estimates				
OPERATING EXPENDITURES	**FY 2015**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**
Personal Services							
Travel							
Services							
Commodities							
Capital Outlay							
Grants & Benefits							
Miscellaneous							
Total Operating	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Fund Source (Operating Only)							
None							
Total	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Positions							
Full-time							
Part-time							
Temporary							
Change in Revenues							

Estimated SUPPLEMENTAL (FY2014) cost: 0.0 *(separate supplemental appropriation required)*
(discuss reasons and fund source(s) in analysis section)

Estimated CAPITAL (FY2015) cost: 0.0 *(separate capital appropriation required)*
(discuss reasons and fund source(s) in analysis section)

ASSOCIATED REGULATIONS

Does the bill direct, or will the bill result in, regulation changes adopted by your agency? No
If yes, by what date are the regulations to be adopted, amended or repealed?

Why this fiscal note differs from previous version:

Not applicable, initial version.

Prepared By: Don Habeger, Director — Phone: (907)465-2536
Division: Corporations, Business and Professional Licensing — Date: 02/07/2014 10:20 AM
Approved By: Jeanne Mungle, Director — Date: 02/07/14
Agency: Administrative Services

FISCAL NOTE ANALYSIS #1

STATE OF ALASKA
2014 LEGISLATIVE SESSION

BILL NO. CSHB 281(HSS)

Analysis

HB 281 adds a new section into AS 08.04 so that the State Medical Board may not impose disciplinary sanctions on a physician for prescribing medication that is not a controlled substance without conducting a physical examination. The prescribing physician would have to be located in the state and under certain conditions records may have to be sent to a primary care provider.

The Division of Corporations, Business, and Professional Licensing does not anticipate fiscal impact from this legislation.

THE STATE of ALASKA
GOVERNOR SEAN PARNELL

Department of Commerce, Community, and Economic Development

STATE MEDICAL BOARD
Debora Stovern, Executive Administrator

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March 18, 2014

The Honorable Fred Dyson
State Senate
Alaska State Capitol
Juneau, Alaska 99801-1182

The Honorable Lynn Gattis
House of Representatives
Alaska State Capitol
Juneau, Alaska 99801-1182

Dear Senator Dyson and Representative Gattis:

At their March 6-7, 2014 meeting, the Alaska State Medical Board reviewed Senate Bill 80 and House Bill 281 and discussed telemedicine issues. They noted that the current system of telemedicine is practiced lawfully and successfully throughout the state. Though it originated in Tribal Health Programs, it does not deny access to anyone, and may be practiced by any Alaska-licensed physician. Under current practice standards, an Alaska-licensed physician may lawfully engage in telemedicine practice if they either have an established physician-patient relationship, or if there is an appropriate (licensed) health care provider with the patient to assist the physician with their examination and diagnosis process.

These bills propose to allow for a corporate model of telemedicine practice without one or the other of these two elements, and would therefore be below the current standard of care in Alaska. While the bills imply a solution to poor rural health care access, Alaska has been for years and remains far ahead of the lower 48 states regarding rural access to health care. These bills will have a small impact in rural Alaska, as there are few sites in those areas without a provider and existing telemedicine. As these bills make no distinction between rural and urban practice of telemedicine, the much larger impact will be in the urban setting. The real question becomes, "do we need a different telemedicine model in Anchorage, Fairbanks, and Juneau?" As with many technological "advances" in medicine, the motivation behind this bill seems more related to promoting technology and reimbursement than providing good patient care.

The Board has concerns regarding possible consequences of changing practice standards through the proposed legislation:

- potential for missed diagnoses and overprescribing associated with no physical examination of the patient
- negative consequences of the proposed legislation on current medical practice in Alaska
- potential liability and investigative costs related to misdiagnosis or mismanagement with resultant poor outcomes
- decreasing the standard of care throughout Alaska
- setting practice standards by statute instead of Board-promulgated regulation

While Alaska is second to none regarding rural health care access, the Board has recognized that there are areas that do not have any health care provider (physician, physician's assistant, nurse practitioner, nurse, or community health aide). To address this, the Board is proposing a specific exemption to current regulations to allow expanded telemedicine in these areas.

The Board has taken the following position on the proposed legislation:

> The essence of the practice of medicine is founded in the physician-patient relationship which includes the physical examination of the patient. These bills attempt to forego this essential element and re-define Alaska standards for the practice of medicine. This is not in the best interest of public safety/protection, which is our charge.

Sincerely,

David A. Miller, M.D., F.A.C.S
Board President
Alaska State Medical Board

Cc: Legislators hearing SB 80 or HB 281
Members of the Alaska State Medical Board

Alaska State Legislature

Representative Lynn Gattis

Representative.Lynn.Gattis@akleg.gov

HB 281 Sponsor Statement

House Bill 281, "An Act relating to prescription of drugs by a physician without a physical examination."

Much of our contemporary life is conducted online or over the phone. In this age of prevalent communications technology it should not be necessary to drive to the doctor's office and have a physical consultation for many common ailments.

Under HB 281 patients will be able to obtain over-the-phone or online consultations where physicians can diagnose an ailment and, if necessary, provide a prescription. This practice is called telemedicine. Telemedicine based medical care would be delivered by fully trained and qualified primary care physicians residing in Alaska. Some benefits of telemedicine are:

- Convenience for the patient.
- Affordability ($40 average consultation fee vs. over $1000 for the ER).
- Rapid access.
- Higher productivity from a healthy workforce.
- Primary care access for business and leisure travelers when they are away from their home state.

These practices can favorably impact access to care for individuals living in both rural and urban settings. With 20% of our population living in rural areas it is imperative that access to routine medical care be as quick and economical as possible. Anyone needing medical care would be a candidate for this system but imagine the benefits for a working mother with a sick kid, a rural homesteader, or an employee who cannot take time off of work. HB281 will revolutionize how we access our primary care providers and I ask for your support in this bill.

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Alaska State Legislature

Representative Lynn Gattis

Representative.Lynn.Gattis@akleg.gov

HB 281 Explanation of Changes

Version A to Version U

Section 1. (page 1, lines 10-11)

Change "physician" to "physician or another physician in the physician's group practice".

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HB 281 Explanation of Changes

Version U to Version N

Section 1. (1)(B) allows doctors, such as those working with Health and Social Services, Dept. of Corrections and the Mental Health Board, to prescribe controlled substances over the phone or online when a licensed health care provider is present with the patient to assist with examination, diagnosis, and treatment.

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LEGISLATIVE RESEARCH SERVICES

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Research Brief

TO: Representative Lynn Gattis

FROM: Roger Withington, Legislative Analyst

DATE: January 31, 2014

RE: Urban and Rural Population of Alaska, 2010 Census
LRS Report 14.193

You asked for information on the population of Alaska. Specifically, you asked for the population of Alaska as determined by the 2010 Census, delineated by urban and rural populations.

According to Demographer David Howell, the Alaska Department of Labor and Workforce Development (DOLWD) currently classifies areas of the state as either rural or urban at the census area or borough level.[1] The Department defines as urban the Municipality of Anchorage and the Matanuska-Susitna, Fairbanks North Star, Kenai Peninsula, and Juneau boroughs. All other boroughs or census areas are classified as rural. Using figures from the 2010 Census, we constructed Table 1 which provides, for each borough or census area in the state, the population and the percent of the total state population the area represents. As you can see from Table 1, urban areas contain approximately 80 percent of the state's population. We also include a map which illustrates the boundaries of the borough and census areas in the state

[1] Mr. Howell can be contacted at 907-465-5970

Table 1: Population of Alaska by Borough or Census Area, 2010

Area	Borough or Census Area	Population	Percent of State Total
Urban Areas	Anchorage, Municipality of	291,826	41.1%
	Matanuska-Susitna Borough	88,995	12.5%
	Fairbanks North Star Borough	97,581	13.7%
	Kenai Peninsula Borough	55,400	7.8%
	Juneau City and Borough	31,275	4.4%
	Urban Total	**565,077**	**79.6%**
Rural Areas	Aleutians East Borough	3,141	0.4%
	Aleutians West Census Area	5,561	0.8%
	Bethel Census Area	17,013	2.4%
	Bristol Bay Borough	997	0.1%
	Denali Borough	1,826	0.3%
	Dillingham Census Area	4,847	0.7%
	Haines Borough	2,508	0.4%
	Hoonah-Angoon Census Area	2,150	0.3%
	Ketchikan Gateway Borough	13,477	1.9%
	Kodiak Island Borough	13,592	1.9%
	Lake and Peninsula Borough	1,631	0.2%
	Nome Census Area	9,492	1.3%
	North Slope Borough	9,430	1.3%
	Northwest Arctic Borough	7,523	1.1%
	Petersburg Census Area	3,815	0.5%
	Prince of Wales-Hyder Census Area	5,559	0.8%
	Sitka City and Borough	8,881	1.3%
	Skagway, Municipality of	968	0.1%
	Southeast Fairbanks Census Area	7,029	1.0%
	Valdez-Cordova Census Area	9,636	1.4%
	Wade Hampton Census Area	7,459	1.1%
	Wrangell City and Borough	2,369	0.3%
	Yakutat City and Borough	662	0.1%
	Yukon-Koyukuk Census Area	5,588	0.8%
	Rural Total	**145,154**	**20.4%**
State Total		**710,231**	**100.0%**

Notes: Classifications are from David Howell, Demographer, Alaska Department of Labor and Workforce Development, 907-465-5970.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section, *http://labor.alaska.gov/research/census/*.

We hope this is helpful. If you have questions or need additional information, please let us know.

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FOR IMMEDIATE RELEASE

Study: Telehealth Expands Access to Health Care

RAND reports Teladoc consultations less likely to require follow-up care than physician and emergency department visits

(DALLAS) Feb. 6, 2013 – Teladoc, the nation's largest provider of telehealth services, has been shown to expand access to health care and provide cost savings, according to a study released by the RAND Corporation (RAND). With current physician shortages and misuse of the ER for non-emergent issues, the RAND findings show that Teladoc provides convenient access to high quality health care for patients.

According to the press release issued by RAND, "Interest has grown in telemedicine programs because of the shortage of primary care physicians, which will likely worsen as more Americans acquire medical coverage under the Affordable Care Act. Telemedicine is one of the alternatives touted as a way to better provide primary health care without greatly expanding the number of doctors. Patients who used the [Teladoc] service suffered from a wide assortment of acute medical problems such as respiratory illnesses and skin problems, and researchers found little evidence of misdiagnosis or treatment failure among those who used the service. RAND researchers say the finding suggests that health problems were most likely adequately addressed during the Teladoc visits."

"The RAND study helps quantify the significant value Teladoc brings to the health care delivery system," said Jason Gorevic, CEO of Teladoc. "Teladoc clearly improves access to care for consumers who are seeking convenient access to quality care, especially during hours when physicians' offices are closed or the only option is an urgent care center or Emergency Room."

The study, published in the February edition of the journal *Health Affairs*, found that more than one-third of visits occurred on weekends and holidays, and patients who used Teladoc were less likely to require follow-up consults, with only six percent doing so compared to 13 percent who visited an office and 20 percent who visited an emergency room. RAND also found telehealth to be a potential entry point to the health care system for people who have difficulty accessing their regular physician, including employees who are unable to take time off work to obtain care. The study points out the distinct advantages of the service because of the use of simple, widely available, inexpensive technologies.

"Teladoc is dedicated to innovation while providing the highest quality of care," said Gorevic. "This contributes to the cost-savings our clients have seen. The fact that Teladoc patients

(more)

require significantly less follow-up care than those patients seen in the emergency department or a physician's office demonstrates that Teladoc's focus on quality and robust clinical programs are yielding benefits for consumers."

By managing its own provider network, Teladoc has built the first nationally independent physician network in telehealth. Teladoc's physicians are board-certified and state-licensed with an average of 15 years of practice. Teladoc's rigorous credentialing process, proprietary clinical guidelines and ongoing quality assurance efforts ensure the highest quality of care for Teladoc's members. Teladoc is the first and only telehealth provider to receive certification from the National Committee for Quality Assurance (NCQA) for its physician credentialing process.

Recognized as one of *Fast Company*'s Top 10 Most Innovative Companies in Health Care; Teladoc leads the health care industry with the only fully integrated clinical, technology and member engagement solution for telehealth. Through Teladoc, patients have on demand access to physicians via phone, secure online video, mobile app or HealthSpot™ Station (a private, walk-in kiosk) to receive treatment for non-emergency medical issues including cold and flu, urinary tract infections, allergies, bronchitis, skin rashes and sinus problems.

To view the complete study, visit: http://content.healthaffairs.org/content/33/2/258.abstract

About Teladoc
Founded in 2002, Teladoc is the nation's first and largest provider of telehealth services with 7.5 million members and more than 200,000 consults annually. Teladoc provides 24/7 access to affordable, high-quality medical care for adults and children experiencing non-emergency medical issues via phone, secure online video, mobile app or HealthSpot™ Station – a private, walk-in kiosk. Through a directly-managed network of U.S.-based, board-certified physicians, Teladoc delivers a 95 percent patient satisfaction rate with an average response time of 16 minutes. Teladoc is the first and only telehealth provider to receive certification from the National Committee for Quality Assurance (NCQA) for its physician credentialing process, scoring 100 percent. Recognized by Fast Company as "One of World's Most Innovative Companies in Health Care" in 2013, Teladoc partners with health plans, corporations, organizations and patients that seek accessible and affordable high-quality medical care. For more information, please visit www.Teladoc.com.

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By Lori Uscher-Pines and Ateev Mehrotra

DOI: 10.1377/hlthaff.2013.0989
HEALTH AFFAIRS 33,
NO. 2 (2014): 258–264

Analysis Of Teladoc Use Seems To Indicate Expanded Access To Care For Patients Without Prior Connection To A Provider

Lori Uscher-Pines (luscherp@rand.org) is a policy researcher at the RAND Corporation in Arlington, Virginia.

Ateev Mehrotra is an associate professor in the Department of Health Care Policy, Harvard Medical School, in Boston, Massachusetts, and a policy analyst at the RAND Corporation in Boston.

ABSTRACT **Despite the potential benefits of telehealth applications, little is known about their overall impact on care. This is critical because rising health care costs and a shortage of primary care providers make it likely that telehealth services will play an increasingly important role in health care delivery. To help fill this gap in knowledge, we describe early experiences with Teladoc, one of the largest telemedicine providers in the United States, which provides care directly to patients over the telephone or via the Internet. We analyzed claims data for a large California agency serving public employees that recently offered Teladoc as a covered service. The 3,701 Teladoc "visits" we studied were for a broad range of diagnostic categories, the most common of which were acute respiratory conditions, urinary tract infections, and skin problems. Compared to patients who visited a physician's office for a similar condition, adult Teladoc users were younger and less likely to have used health care before the introduction of Teladoc. Patients who used Teladoc were less likely to have a follow-up visit to any setting, compared to those patients who visited a physician's office or emergency department. Teladoc appears to be expanding access to patients who are not connected to other providers. Future research should assess the impact of Teladoc and other telehealth interventions on the quality and cost of care.**

Teladoc is one of the largest telehealth providers in the United States, offering patients with minor illnesses around-the-clock access to physicians via telephone or video consultations through the Internet. In 2013 alone Teladoc reported that its six million members nationwide had collectively requested more than 120,000 consults.[1,2] Along with retail clinics, e-visits, and urgent care centers, Teladoc is one of the growing number of alternatives for acute care that focus on convenience and after-hours access.[3]

Health plans and employers have contracted with Teladoc primarily to improve access and decrease costs. As with other telehealth applications, there are several potential benefits and drawbacks to Teladoc.

Because Teladoc uses the telephone and Internet, it can provide medical care at a patient's home or workplace. This could increase access in areas where there is a shortage of other providers. By replacing emergency department (ED) or primary care visits with a Teladoc visit, patients could save time, potentially improving productivity by taking less time away from work. In addition, Teladoc charges only $38 per visit. Thus, using Teladoc to replace at least some office and ED visits could generate large savings for health plans.

However, the use of Teladoc could also lead to unintended consequences such as further frag-

mentation of care, and the impact of Teladoc on the quality of care is unclear. Teladoc physicians do not have access to information that is attainable during a face-to-face visit, such as the results of physical examinations or diagnostic testing. In telephone encounters, Teladoc physicians are unable to use visual cues to aid in diagnosis. Together, these limitations could lead to misdiagnosis and higher rates of follow-up visits—findings that have already been demonstrated with e-visits and telephone consultations.[4,5] It is also unclear whether short delays associated with initiating and participating in a Teladoc consult instead of immediately seeking care in the ED could pose a safety risk for patients with emergent conditions.

Despite the potential benefits and drawbacks of Teladoc, little is known about the overall impact of the use of such telehealth services on care. This is critical because rising health care costs and a shortage of primary care providers make it likely that telehealth will play an important role in health care delivery.[6]

To fill this gap in knowledge, we describe the early experiences with Teladoc of enrollees at a large agency serving public employees across California. We explore the reasons patients sought Teladoc consults and compare the sociodemographic characteristics and care patterns of enrollees who used Teladoc with those of enrollees who used EDs and physicians' offices for similar conditions.

Study Data And Methods

SETTING In April 2012 the California Public Employees' Retirement System (CalPERS) first offered Teladoc as a covered benefit with no copayment to the approximately 300,000 members enrolled in its Blue Shield of California health maintenance organization plan.[7] CalPERS members enrolled in Medicare Advantage or a Medicare supplemental plan were not offered Teladoc as a covered benefit. CalPERS sent informational materials to its enrollees that promoted Teladoc as an alternative to ED visits for nonurgent conditions.

This study describes CalPERS enrollees' experience with Teladoc in the first eleven months of the program, April 2012 through February 2013.

HOW TELADOC VISITS ARE PROVIDED To initiate a Teladoc visit, patients must first create an online account and enter information about their medical history. When they need care, they request a consult with a Teladoc physician via telephone or the Internet. Patients do not list their symptoms as part of the request, and there are no screening questions to assess the urgency of the complaint.

Teladoc physicians respond to requests twenty-four hours a day, seven days a week. The consulting physician does not have any established relationship with the patient; however, the patient will be matched to a physician licensed to practice in his or her state of residence. The physician receives the patient's request; reviews the patient's medical history; and contacts the patient, usually within twenty to twenty-five minutes after Teladoc receives the request. The visit then occurs over the phone or via video through the Internet. Almost all (98–99 percent) of Teladoc visits for CalPERS enrollees occur by telephone.

The physician diagnoses the patient's condition; discusses the diagnosis and treatment options; and, if indicated, sends a prescription to the patient's preferred pharmacy.

DATA SOURCE For this study, CalPERS supplied deidentified health plan claims data and enrollment information. We obtained the complete medical claims of 2,718 Teladoc users as well as the medical claims of a random sample of 72,191 nonusers of Teladoc from the 306,027 eligible enrollees with Teladoc coverage. We obtained data on all Teladoc users, both children and adults. However, we limited the comparison sample of nonusers of Teladoc to people ages eighteen and older who had been continuously enrolled in their health plan from April 2012 through February 2013 and who were not enrolled in Medicare Advantage or Medicare supplemental plans.

Data provided by CalPERS included enrollees' sex, age, ZIP code of residence, and complete information about health care use—such as site of care, date of service, and diagnoses—from January 2011 through February 2013. We used the data for the period January 2011 through December 2011 to assess enrollees' use of health care before they became eligible for Teladoc and to identify comorbidities.

STUDY VARIABLES The primary *International Classification of Diseases*, Ninth Revision (ICD-9), diagnosis code was available for all visits. In 99.5 percent of all Teladoc claims, only one diagnosis code was listed for each visit. To describe enrollees' use of Teladoc, we reviewed these codes and classified Teladoc visits into the following diagnostic categories: acute respiratory illnesses; urinary tract infections (UTI) and urinary symptoms; skin problems; general advice, counseling, and refills; eye problems; influenza and general viral illnesses; allergies; abdominal pain, vomiting, and diarrhea; vaginitis; back and joint problems; headache; ear infections (internal and external); mental health; vertigo or ringing in the ears; chronic illness; pregnancy-related problems; and other. Specific

codes are listed in the online Appendix.[8]

Acute respiratory illnesses, UTI and urinary symptoms, and skin problems were the three leading diagnostic categories for which adult patients sought Teladoc consults. We identified adult patients who sought care in EDs or physicians' office for these three diagnostic categories during the study period. An ED or office visit was included in our sample if a diagnosis classified as an acute respiratory illness, UTI or urinary symptom, or skin problem was one of the diagnosis codes on the record. Because the same patterns appeared across all three diagnostic categories, we present pooled data in this article.

We calculated the number of comorbid conditions using the Charlson Comorbidity Index.[9] Because we had data from 2011, we captured comorbidities for a full year before Teladoc was offered as a covered service. To measure enrollees' use of health care before the introduction of Teladoc, we calculated the total number of visits for any reason to any health care provider in 2011. We also obtained data from the Census Bureau on the median income in each enrollee's ZIP code.

To assess the timing of visits, we classified visits as weekend or holiday versus weekday visits. Weekend or holiday visits were those that occurred on Saturday, Sunday, or a national holiday during the study period.

We used follow-up visits as a rough proxy for clinical resolution. We first identified "index visits"—that is, the first visit in a twenty-one-day period in which the enrollee sought care at any location (ED, physician's office, or Teladoc) for a diagnosis of acute respiratory illnesses, UTI and urinary symptoms, or skin problems.[10] If the enrollee had a visit to any location in the twenty-one days following the index visit, we classified the subsequent visit as a follow-up visit. We examined follow-up visits both for a diagnosis in the same diagnostic category as the index visit and for any condition.

ANALYSES In our analyses, the health care visit was the unit of analysis. Therefore, a single enrollee could contribute more than one visit. The one exception is when we compared the characteristics of Teladoc users to those of users of other care settings; for this comparison the unit of analysis was the enrollee.

We first examined patterns of Teladoc use among children and adults. We then compared average monthly Teladoc visits to average monthly ED and office visits among adults (but not children) who sought care for the three leading conditions during the study period.

We compared baseline demographic, socioeconomic, comorbidity, and utilization variables across the three groups of adults in our sample—those who visited Teladoc, the ED, or physicians' offices—using chi-square tests and *t* tests. We also used multivariable logistic regression analysis to test for an independent relationship between the type of index visit (Teladoc versus office visit) and follow-up visit to any location within twenty-one days for a diagnosis in the same diagnostic category, adjusting for age, sex, and Charlson comorbidity score.

Using Teladoc to replace at least some office and ED visits could generate large savings for health plans.

LIMITATIONS Our analyses have various limitations. First, we describe only the early experiences of CalPERS with Teladoc. Thus, we cannot generalize our findings to entities outside of California. Second, visit patterns might change as enrollees gain more experience with Teladoc.

Third, we limited our comparison to weekend or holiday versus weekday visits when examining whether Teladoc disproportionately served enrollees after hours. Because of data limitations, we probably underestimated the extent to which Teladoc provided after-hours care (for example, care provided at 9:00 p.m. on a Tuesday).

Fourth, we used follow-up visits as a rough proxy for clinical resolution. However, we had no independent contact with enrollees to assess clinical resolution.

Fifth, we adjusted for age and comorbidities in our analysis of follow-up visits. Nonetheless, we cannot rule out residual (incompletely controlled) confounding and thus the possibility that adult Teladoc users had fewer follow-up visits because they were younger and healthier than adult enrollees who received care in other settings.

Finally, we relied on diagnosis codes to categorize visits. It is possible that the codes we used were not always accurate.

Study Results

From April 2012 through February 2013, 2,718 adults and children who were CalPERS members

(0.9 percent of all eligible members) had a total of 3,701 Teladoc visits, with an average of 1.36 visits per Teladoc user. Monthly Teladoc visits remained relatively stable during the study period, although there was a significant dip in the number of visits during the summer months (Exhibit 1).

During the study period, 2,066 (76 percent) Teladoc users had a single visit, and 200 (7 percent) had three or more visits. Across our sample of 74,550 adult enrollees, including both users and nonusers of Teladoc, the average number of monthly visits for all conditions were 291 Teladoc visits, 39,431 office visits, and 883 ED visits. Thus, Teladoc visits accounted for a very small proportion of health care use.

Teladoc users sought care for 395 distinct diagnosis codes overall. The leading three categories of reasons for visits by children and adults were acute respiratory illnesses, UTI and urinary symptoms, and skin problems (Exhibit 2).

The top nine categories accounted for 80 percent of all Teladoc visits. The reasons for the remaining 20 percent of visits included allergies, mental health, vaginitis, vertigo, headache, chronic illness (such as asthma and hypertension), and chest pain. Excluding children from the analysis had no impact on the ordering of the leading nine conditions.

We compared the characteristics and follow-up patterns of adult enrollees who visited Teladoc, the ED, or a physician's office for the three leading diagnostic categories (Exhibit 3). Teladoc users were more likely to be younger than enrollees who visited physicians' offices for similar conditions. Teladoc users were more likely to have fewer chronic conditions and to not have used health care in 2011 compared to enrollees who visited the ED or physicians' offices for similar conditions.

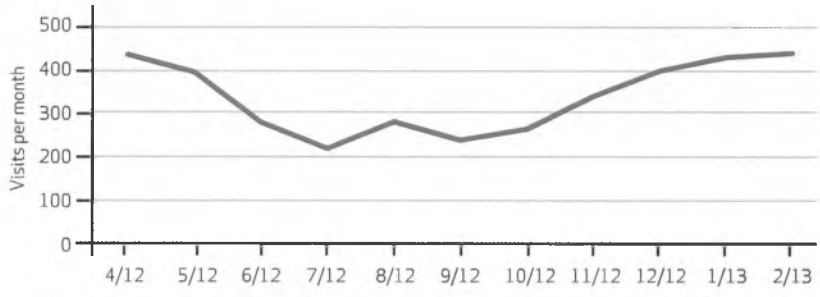
Women made up a slightly larger proportion of Teladoc users, compared to enrollees who visited the ED and physicians' offices (Exhibit 3). And Teladoc users lived in slightly more affluent communities than users of other settings.

We also explored utilization characteristics across the three care settings for the leading diagnostic categories (Exhibit 4). Thirty-four percent of Teladoc visits occurred on weekends and holidays, in contrast to 8 percent of office visits. The timing of Teladoc visits closely resembled the timing of ED visits.

Across the leading conditions, Teladoc visits were less likely than visits to the ED or physicians' offices to result in a follow-up visit for a similar condition in any setting (Exhibit 4). Six percent of Teladoc visits resulted in a follow-up visit for a similar condition, in contrast to 13 percent of office visits and 20 percent of ED visits.

EXHIBIT 1

Monthly Number Of Teladoc Visits Among 2,718 Children And Adults, April 2012–February 2013



SOURCE Authors' analysis of claims data from the California Public Employees' Retirement System.

The lower follow-up visit rate for Teladoc visits versus office visits was also seen after we adjusted for age, sex, and comorbidity score (odds ratio 0.44; $p < 0.01$).

Discussion

Our analysis found that in the first eleven months after Teladoc's introduction, a small number of CalPERs enrollees in California were using Teladoc for a diverse set of conditions. Adult Teladoc users were younger and healthier and lived in more affluent communities than enrollees who visited physicians' offices or the ED for similar conditions. Teladoc users were also less likely to have used health care before Teladoc's introduction.

And contrary to concerns expressed in the literature,[4,5] the rate of follow-up visits was not higher for Teladoc visits than for visits to other care settings. In fact, enrollees who used Teladoc had fewer follow-up visits than enrollees who

EXHIBIT 2

Leading Reasons For Teladoc Visits By Children And Adults, April 2012–February 2013

	Visits	
Condition	**Number**	**Percent**
Acute respiratory illnesses	1,151	31.1
Urinary tract infections and urinary symptoms	439	11.9
Skin problems	335	9.1
Abdominal pain, vomiting, and diarrhea	231	6.2
Back and joint problems	190	5.1
Influenza and general viral illnesses	172	4.7
General advice, counseling, and refills	169	4.6
Eye problems	138	3.7
Ear infections (internal and external)	137	3.7
All others	739	20.0

SOURCE Authors' analysis of claims data from the California Public Employees' Retirement System.
NOTE Percentages do not sum to 100 because of rounding.

EXHIBIT 3

Characteristics Of Adult Enrollees With Teladoc, Office, And Emergency Department (ED) Visits, April 2012–February 2013

	Enrollees who visited for top three conditions					
	Teladoc (*n*=1,287)		Office (*n*=20,907)		ED (*n*=1,099)	
	Number	Percent	Number	Percent	Number	Percent
SEX						
Male	423	33	7,798	37	405	37
Female	864	67	13,109	63	694	63
AGE (YEARS)						
18–30	254	20	3,571	17	336	31
31–50	702	55	9,221	44	443	39
51 or more	331	25	8,115	39	330	30
COMORBIDITIES						
0	1,116	87	16,363	78	741	67
1	143	11	3,312	16	248	23
2 or more	28	2	1,232	6	110	10
MEDIAN ANNUAL INCOME IN ZIP CODE (2011 DOLLARS)						
Less than $45,000	203	16	3,050	15	182	17
$45,000–$65,000	436	34	7,525	36	427	39
More than $65,000	645	50	10,307	49	489	44
VISITS IN 2011						
0	271	21	1,543	7	116	11
1	93	7	1,307	6	68	6
2 or more	923	72	18,057	87	915	83

SOURCE Authors' analysis of claims data from the California Public Employees' Retirement System. **NOTES** The enrollee is the unit of analysis and is not counted more than once for any single location (Teladoc, office, or ED). The top three conditions are acute respiratory illnesses, urinary tract infections and urinary symptoms, and skin problems. Differences in each category are significant ($p < 0.01$).

visited EDs and primary care offices.

ACCESS Our results indicate that Teladoc might have increased access for the small subset of enrollees who used it, although this finding requires further investigation. More than one-third of Teladoc visits occurred on weekends and holidays, and 21 percent of Teladoc visits were made by patients who had not used health care

EXHIBIT 4

Follow-Up Care And Timing Of Teladoc, Office, And Emergency Department (ED) Visits, April 2012–February 2013

	Visits for top three conditions					
	Teladoc (*n*=1,674)		Office (*n*=39,143)		ED (*n*=1,215)	
	Number	Percent	Number	Percent	Number	Percent
TIMING OF VISITS						
Weekdays	1,110	66	36,168	92	781	64
Weekends and holidays	564	34	2,975	8	434	36
FOLLOW-UP VISITS WITHIN 21 DAYS AFTER INITIAL VISIT (UNADJUSTED)						
For similar condition	100	6	5,089	13	243	20
For any reason	151	9	18,006	46	631	52
	Odds ratio	**95% CI**	**Odds ratio**	**95% CI**	**Odds ratio**	**95% CI**
FOLLOW-UP VISITS WITHIN 21 DAYS AFTER INITIAL VISIT (ADJUSTED)[a]						
For similar condition	0.44	0.36, 0.55	Ref	Ref	1.72	1.47, 2.01
For any reason	0.12	0.10, 0.14	Ref	Ref	1.30	1.15, 1.48

SOURCE Authors' analysis of claims data from the California Public Employees' Retirement System. **NOTES** CI is confidence interval. Ref is reference. Differences in each category are significant ($p < 0.01$). [a]Adjusted for age, sex, and Charlson comorbidity score.

Teladoc has distinct advantages because it uses simple, inexpensive technologies that are widely accessible.

in 2011.

Teladoc might have been the entry point into the health care system for people who did not have frequent contact with a primary care provider or had difficulty accessing their regular physician. It might also have served people who could not take time off work to obtain health care.

Increasing access and convenience is important for all patients. However, the population of patients attracted to Teladoc—a more affluent and likely more technologically savvy group—might have fewer access needs then people living in areas characterized by a shortage of primary care or socioeconomic disadvantage. Further research is needed to understand whether Teladoc might be improving access for patients with lower incomes and those in rural areas and, if not, whether it could be positioned to do so in the future.

COST Our analysis did not explore the issue of cost. However, on a per visit basis, it is highly likely that Teladoc visits (which cost $38 a visit and had very low follow-up rates) are less expensive for payers, compared to visits to physicians' offices and the ED. However, it is unclear to what extent Teladoc visits are substituting for office or ED visits and to what extent they represent new use of health care for conditions that would have resolved themselves without intervention. If Teladoc visits do represent new use, they could lead to increased utilization and costs.

QUALITY Our findings provide some insights regarding the quality of care. First, it is reassuring that Teladoc patients were less likely than enrollees who used other care settings to have follow-up visits to any setting for a similar condition. If we consider follow-up to be a rough proxy for clinical resolution, there is very little evidence of misdiagnosis or treatment failure in Teladoc visits.

This could mean that Teladoc providers are successfully diagnosing and treating a wide range of illnesses via telephone consultations. However, it is also possible that Teladoc patients are seeking care for complaints that are so minor that follow-up vists are not necessary. Alternatively, the severity of illness might be comparable across care settings, but the threshold for Teladoc patients to seek follow-up care in a face-to-face encounter might be higher.

We found that Teladoc served patients with surprisingly diverse diagnoses. In contrast to retail clinics that have a very limited menu of services, Teladoc does not restrict its care to selected conditions. At retail clinics the top three categories of diagnoses represent 72 percent of their business.[11] In contrast, the top three categories of diagnoses represent 52 percent of Teladoc's business (Exhibit 2).

PROS AND CONS There are both potential advantages of and concerns about the Teladoc approach. By serving a broader group of patients with differing needs, Teladoc can play a larger number of roles than retail clinics can. In addition to treating nonurgent acute conditions, Teladoc might serve the roles of triage and education. As such, it could have a much larger impact on the health care system as a whole than retail clinics do.

In contrast to other forms of telemedicine that require specialized equipment, Teladoc has distinct advantages because it uses simple, inexpensive technologies that are widely accessible. Ease of use clearly facilitates the expansion of Teladoc to new groups of patients.

However, because Teladoc's scope of practice is broader, people may present with symptoms that cannot be managed effectively over the telephone. For example, it is unclear to what extent skin problems can or should be treated without the use of photos or videos, or whether strep throat can be diagnosed without a physical exam.[12]

Our results indicate that Teladoc providers saw patients with many diagnoses that typically require a physical exam, diagnostic testing, or both. Without the use of additional technology, Teladoc will continue to be limited in its ability to support the diagnosis and management of many conditions. Additional research is needed to address questions about the quality of care, such as rates of antibiotic prescribing across settings, the management of conditions that require physical exams or diagnostic testing, and the use of Teladoc by patients with potentially emergent conditions.

Conclusion

Additional work is needed to fully explore the impact of Teladoc on access, quality, and costs.

However, our research suggests that Teladoc is offering a useful and potentially cost-effective service.

Because alternatives to the ED and physicians' offices for acute care, such as Teladoc, are growing rapidly, a clear understanding of early experiences with Teladoc can help predict the likely impact of these alternatives. ■

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NOTES

1 Teladoc [Internet]. Dallas (TX): Teladoc; c2002–14. Press release, Teladoc first telehealth provider to receive NCQA certification for provider credentialing. 2013 Jun 5 [cited 2014 Jan 3]. Available from: http://www.teladoc.com/news/2013/06/05/teladoc-first-telehealth-provider-to-receive-ncqa-certification-for-provider-credentialing/

2 Teladoc [Internet]. Dallas (TX): Teladoc; c2002–14. Press release, Teladoc acquires Consult A Doctor, expands service offerings and member base. 2013 Sep 4 [cited 2014 Jan 3]. Available from: http://www.teladoc.com/news/2013/09/04/teladoc-acquires-consult-a-doctor/

3 Mehrotra A. The convenience revolution for treatment of low-acuity conditions. JAMA. 2013;310(1):35–6.

4 Angstman KB, Rohrer JE, Adamson SC, Chaudhry R. Impact of e-consults on return visits of primary care patients. Health Care Manag (Frederick). 2009;28(3):253–7.

5 McKinstry B, Hammersley V, Burton C, Pinnock H, Elton R, Dowell J, et al. The quality, safety and content of telephone and face-to-face consultations: a comparative study. Qual Saf Health Care. 2010;19(4):298–303.

6 Institute of Medicine. The role of telehealth in an evolving health care environment: workshop summary. Washington (DC): National Academies Press; 2012.

7 Teladoc [Internet]. Dallas (TX): Teladoc; c2002–14. Press release, Teladoc joins Blue Shield of California to bring telehealth solution to 350,000 CalPERS members in California. 2012 Oct 9 [cited 2014 Jan 6]. Available from: http://www.teladoc.com/news/2012/10/09/teladoc-joins-blue-shield-of-california-to-bring-telehealth-solution-to-350000-calpers-members-in-california/

8 To access the Appendix, click on the Appendix link in the box to the right of the article online.

9 Charlson ME, Pompei P, Ales K, MacKenzie CR. A new method of classifying prognostic comorbidity in longitudinal studies: development and validation. J Chronic Dis. 1987;40(5):373–83.

10 Mehrotra A, Paone S, Martich GD, Albert SM, Shevchik GJ. A comparison of care at e-visits and physician office visits for sinusitis and urinary tract infection. JAMA Intern Med. 2013;173(1):72–4.

11 Mehrotra A, Wang MC, Lave JR, Adams JL, McGlynn EA. Retail clinics, primary care physicians, and emergency departments: a comparison of patients' visits. Health Aff (Millwood). 2008;27(5):1272–82.

12 Centor RM, Witherspoon JM, Dalton HP, Brody CE, Link K. The diagnosis of strep throat in adults in the emergency room. Med Decis Making. 1981;1(3):239–46.

Teladoc

The Honorable Lynn Gattis
Alaska State Legislature
120 4th Street, State Capitol, Room 3
Juneau, Alaska 99801

February 10, 2014

Dear Representative Gattis,

On behalf of Teladoc, I am contacting you to voice our support for pending House Bill No. 281 regarding the practice of telemedicine. The Bill would allow all physicians and podiatrists licensed by the State Medical Board, to practice telemedicine in the state under certain circumstances.

As background, health care costs are rising across the nation. Alaska, specifically, represents a challenge to control health care costs given the long distances its citizens must travel for treatment and regulatory barriers to entry. All these features have exacerbated the growing shortage of primary care physicians and access to primary care physician medical services in the State of Alaska.

Telemedicine is an essential component that allows companies and health plans to offer its employees and members an affordable, accessible and high-quality health care option. It is an important solution to driving down health care costs and providing primary care access when resources are scarce.

For many health care patients, leaving work to see a physician and losing hours at work can be an extreme burden from an economic standpoint. Because of that, they wait until after hours to seek care, when their primary care physician is often not available. This frequently forces these patients to visit emergency rooms, driving the cost of care up even higher. A telemedicine option, like Teladoc, allows patients to receive safe, quality care when they need it, and without the burden and cost of being examined in person beforehand. When factoring in time off from work and the cost of other options, we have been able to save employers, health plans and consumers more than $200 per consultation (based on national averages).

However, the current regulatory requirement for a prior in person physical examination of patients by physicians conducting telemedicine prevents wider

adoption of telemedicine. HB 281 will address and ease those licensing issues and allow our company to offer health care delivery options and patients the right to access quality care. In other states, such as California, telemedicine services are widely able to provide care unencumbered, allowing employers, state employees and health plans the ability to lower costs, remain competitive and offer a well-rounded benefits package.

Passing HB 281 would help improve access to quality care in Alaska while reducing health care costs and provide patients with the right to choose an option that fits their individual needs. Please help move this Bill forward so we can continue to offer this effective and beneficial service to our client's members.

Thank you for your support in this matter.

Sincerely,

Jason Gorevic
Chief Executive Officer
Teladoc

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from American Telemedicine Assoc.

What is Telemedicine?

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Formally defined, telemedicine is the use of medical information exchanged from one site to another via electronic communications to improve a patient's clinical health status. Telemedicine includes a growing variety of applications and services using two-way video, email, smart phones, wireless tools and other forms of telecommunications technology.

Starting out over forty years ago with demonstrations of hospitals extending care to patients in remote areas, the use of telemedicine has spread rapidly and is now becoming integrated into the ongoing operations of hospitals, specialty departments, home health agencies, private physician offices as well as consumer's homes and workplaces.

Telemedicine is not a separate medical specialty. Products and services related to telemedicine are often part of a larger investment by health care institutions in either information technology or the delivery of clinical care. Even in the reimbursement fee structure, there is usually no distinction made between services provided on site and those provided through telemedicine and often no separate coding required for billing of remote services. ATA has historically considered telemedicine and telehealth to be interchangeable terms, encompassing a wide definition of remote healthcare. Patient consultations via video conferencing, transmission of still images, e-health including patient portals, remote monitoring of vital signs, continuing medical education, consumer-focused wireless applications and nursing call centers, among other applications, are all considered part of telemedicine and telehealth.

While the term telehealth is sometimes used to refer to a broader definition of remote healthcare that does not always involve clinical services, ATA uses the terms in the same way one would refer to medicine or health in the common vernacular. Telemedicine is closely allied with the term health information technology (HIT). However, HIT more commonly refers to electronic medical records and related information systems while telemedicine refers to the actual delivery of remote clinical services using technology.