Health Workforce Policy Brief
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Are State Telehealth Policies Associated With The Use of Telehealth Services Among Underserved Populations?

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Introduction

Telehealth is widely viewed as being a key strategy for increasing access to care for underserved populations.[1,2] Yet empirical evidence is still lacking on the prevalence of telehealth utilization among the overall population and whether state policies play a role in increasing the use of telehealth utilization. We examined trends in telehealth usage over time, as well as the role state telehealth policies play in telehealth use when controlling for population characteristics.

Methods

We used a nationally representative biannual survey of consumers commissioned by the Association of American Medical Colleges from June 2013 to December 2016. This study used a repeated cross-sectional time series design with a state fixed effects specification. A total of 22,294 respondents were analyzed in the study. We first conducted a trend analysis to examine overall telehealth utilization over time by eight different modalities (such as appointment, test results, email, phone, video, live chat, mobile text, and mobile app). We then examined whether telehealth use varied by population characteristics and state telehealth coverage and reimbursement policies using Chi-square tests. In doing so, we focused on live video communication, the most predominantly reimbursed form of telehealth modality. Multivariate logistic regression models were also constructed to examine whether more favorable state telehealth policies (American Telemedicine Association ratings of A or B vs. C or F) were associated with higher rates of live video communication specifically among underserved populations.

Findings

Telehealth use increased dramatically over the period of 2013-2016, with new modes such as live video, live chat, texting, and mobile apps gaining traction across all population groups (Figure 1). The rate of live video communication rose from 6.6% in June 2013 to 21.6% in December 2016. Age, health status, insurance type, income, and rural location were found to be the most important predictors of using live video communication (Table 1). We found the use of live video communication was most dominant among: 1) working age and higher income

Conclusions and Policy Implications

1. Telehealth use increased dramatically over the period of 2013-2016, with new modes such as live video, live chat, texting, and mobile apps gaining traction across all population groups.
2. Key underserved populations, including Medicaid beneficiaries, low income, and rural populations have significantly lower use of telehealth.
3. Favorable state telehealth policies, such as parity of coverage, were not statistically significantly associated with increased usage after controlling for population characteristic Policymakers and payers may need to identify new financial incentives to encourage telehealth use among poor and rural population
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populations, who may have a difficulties taking time off from work, and 2) Medicare beneficiaries under 65, presumably with significant disabilities and may therefore be more homebound. However, the reported use of telehealth is the lowest among Medicaid beneficiaries, low income or rural populations, compared to the rest of the study population. Favorable state telehealth policies, such as parity of coverage, were not statistically significantly associated with increased usage after controlling for population characteristics.

Conclusion

The use of telehealth has increased dramatically across all population groups over the past four years. While we found evidence that Medicare beneficiaries under 65, and those with self-reported physical or mental health concerns that limit activities are among the highest users of telehealth, key underserved populations, including Medicaid beneficiaries, low income, and rural populations, have significantly lower use of telehealth. We did not find any statistically significant association with favorable state telehealth policies on increased use of live video communication once we controlled for population characteristics. These findings held true when examining the relationship with telehealth policies on specific populations, including Medicaid beneficiaries, the population most directly impacted by the majority of state telehealth policies.

Policy Implications

Though telehealth is widely viewed as being a key strategy for increasing access to care for underserved populations, the use of telehealth is not as prevalent among Medicaid beneficiaries, low income, and rural populations compared to the rest of the study population. One explanation for why live video use remains low for underserved populations may relate to lack of availability. Only 39% of community health centers, a major service provider for Medicaid beneficiaries, uninsured, low income, and rural populations, offer telehealth.[3] In addition, even when telehealth service is available, it is possible that consumers may not know how, when, or where to use it. Enhancing consumer education in underserved communities may help to improve telehealth use for underserved populations. This study also suggests state efforts alone to remove barriers to using telehealth may not be sufficient and new incentives for providers and consumers to adopt and use telehealth may be needed. It is important to continue to explore strategies for increasing access to care through telehealth, particularly for the poorest populations and those is rural areas who are in need of telehealth services.

References

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Figure 1. Rates of telehealth use over time, 2013-2016

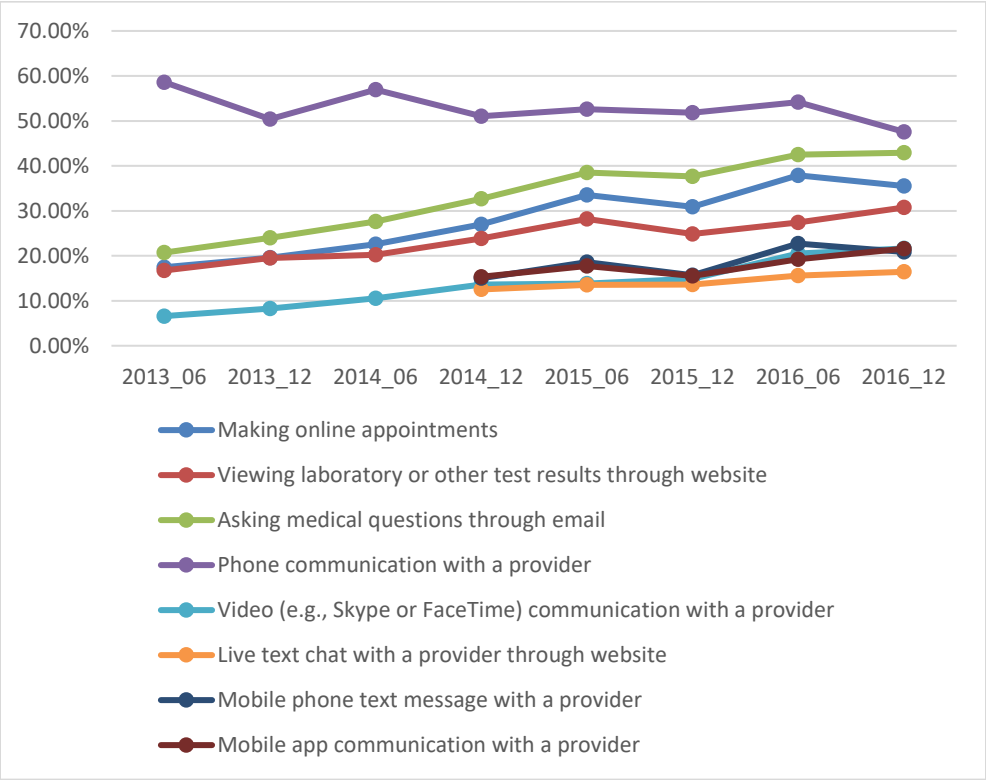

Table 1. Likelihood of using live video communication by population characteristics and state telehealth policies, 2013-2016

	Model 1 OR (95% CI)	Model 2 OR (95% CI)
State telehealth policies		
A or B		1.338
		(0.979 - 1.828)
C or F (ref)		
Sex		
Male (ref)		
Female	0.510****	0.510****
	(0.446 - 0.584)	(0.445 - 0.583)
Age		
18-24	11.83****	11.80****
	(5.637 - 24.83)	(5.622 - 24.79)
25-44	16.24****	16.35****
	(7.880 - 33.47)	(7.920 - 33.76)
45-64	3.685****	3.703****
	(1.769 - 7.677)	(1.775 - 7.724)
65+ (ref)		
Race		
Native American	1.893**	1.904**
	(1.092 - 3.281)	(1.107 - 3.276)
Asian	1.439***	1.440***
	(1.097 - 1.887)	(1.099 - 1.887)
Black	1.865****	1.858****
	(1.529 - 2.275)	(1.523 - 2.266)

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Pacific Islander	3.527***	3.606***
	(1.649 - 7.543)	(1.668 - 7.798)
White (ref)		
Other	1.015	1.013
	(0.482 - 2.136)	(0.480 - 2.136)
Multi	1.240	1.238
	(0.910 - 1.690)	(0.908 - 1.688)
Ethnicity		
Non Hispanic (ref)		
Hispanic	1.324	1.324
	(0.995 - 1.762)	(0.994 - 1.763)
Physical problems		
No (ref)		
Yes	1.449****	1.447****
	(1.249 - 1.681)	(1.248 - 1.678)
Mental and emotional problems		
No (ref)		
Yes	2.393****	2.396****
	(2.043 - 2.802)	(2.047 - 2.805)
Insurance		
Private (ref)		
Medicare <65	1.891****	1.881****
	(1.512 - 2.365)	(1.505 - 2.353)
Medicare 65+	0.346**	0.348**
	(0.135 - 0.888)	(0.135 - 0.896)
Medicaid	0.656****	0.653****
	(0.512 - 0.841)	(0.509 - 0.837)
Dual	1.300	1.300
	(0.991 - 1.705)	(0.991 - 1.705)
TRICARE/VA/IHS/Parent	1.025	1.026
	(0.801 - 1.313)	(0.802 - 1.313)
No Insurance	0.933	0.933
	(0.650 - 1.340)	(0.650 - 1.339)
Income		
Under $25,000 (ref)		
$25,000-$49,999	1.602****	1.600****
	(1.235 - 2.080)	(1.233 - 2.077)
$50,000-$74,999	1.916****	1.907****
	(1.461 - 2.512)	(1.455 - 2.501)
$75,000–$99,999	2.824****	2.812****
	(2.148 - 3.714)	(2.139 - 3.698)
$100,000 and over	4.022****	4.008****
	(3.075 - 5.260)	(3.064 - 5.243)
Rural		
Non rural (ref)		
Rural	0.778**	0.779**
	(0.619 - 0.976)	(0.621 - 0.978)
Interaction of state telehealth policies with race		
A or B*Native American		
A or B*Asian		
A or B*Black		

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A or B*Pacific Islander		
A or B*Other		
A or B*Multi		
Interaction of state telehealth policies with ethnicity		
A or B*Hispanic		
Interaction of state telehealth policies with insurance		
A or B*Medicare <65		
A or B*Medicare 65+		
A or B*Medicaid		
A or B*Dual		
A or B*TRICARE/VA/IHS/Parent		
A or B*No Insurance		
Interaction of state telehealth policies with income		
A or B*$25,000-$49,999		
A or B*$50,000-$74,999		
A or B*$75,000–$99,999		
A or B*$100,000 and over		
Interaction of state telehealth policies with rural		
A or B*Rural		
Wave dummies	YES	YES
State dummies	YES	YES

SOURCE: Authors' analysis of data from the Association of American Medical Colleges Consumer Survey and state telehealth policies ranked by the American Telemedicine Association

NOTES: Not shown is a 3rd model including interaction terms of state telehealth policies with race, ethnicity, insurance type, income, and rural location was reported in APPENDIX EXHIBIT A4. None of the interaction terms were statistically significantOR is odds ratio. CI is confidence interval. ****p<0.001, ***p<0.01, **p<0.05

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