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Identifying Barriers to Successful Completion of Video Telemedicine Visits in Urology

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Abstract

Purpose: The utilization of video telemedicine has dramatically increased due to the COVID-19 pandemic. However, significant social and technological barriers have led to disparities in access. We aimed to identify factors associated with patient inability to successfully initiate a video visit across a high-volume urologic practice.

Materials and Methods: Video visit completion rates and patient characteristics were extracted from the electronic medical record and linked with census-level socioeconomic data. Associations between video visit failure were identified using multivariate regression modeling and random forest ensemble classification modeling.

Results: 6,086 patients and their first video visits were analyzed. On multivariate logistic regression analysis, Hispanic or Latino patients (OR 0.52, 95%CI 0.31-0.89), patients insured by Medicare (OR 0.46, 95%CI 0.26-0.79) or Medicaid (OR 0.50, 95%CI 0.29-0.87), patients of low socioeconomic status (OR 0.98, 95%CI 0.98-0.99), patients with an un-activated MyChart patient portal (OR 0.43, 95%CI 0.29-0.62), and patients unconfirmed at appointment reminder (OR 0.68, 95%CI 0.48-0.96) were significantly associated with video visit failure. Patients with primary diagnosis category of men's health (OR 47.96, 95%CI 10.24-856.35), and lower urinary tract syndromes (OR 2.69, 95%CI 1.66-4.51) were significantly associated with video visit success. Random forest analyses identified insurance status and socioeconomic status as the top predictors of video visit failure.

Conclusions: An analysis of a Urology video telemedicine cohort reveals clinical and demographic disparities in video visit completion and priorities for future interventions to ensure equity of access. Our study further suggests that specific urologic indications may play a role in success or failure of video visits.

Introduction

Telemedicine allows patients and providers to connect remotely through diverse communications platforms such as audio, video, and messaging [1]. Healthcare systems have responded to the ongoing COVID-19 pandemic and the subsequent need to protect patients, clinicians, and staff with a rapid transition to telemedicine; for example, one large cohort study reported that in 2020, telemedicine visits accounted for 23.6% of all clinical interactions compared to 0.3% in 2019 [2]. Telemedicine will continue to be utilized at high rates due to clinician and patient convenience, efficiency, and ability to expand healthcare delivery to underserved populations nationally and throughout the world [3].

Video, compared to audio-only, is the preferred telemedicine modality due to the ability to see patients which can provide key clinical information, build rapport, and improve patient-provider communication [4, 5]. During the COVID-19 pandemic, video visits have been determined to be the standard for telemedicine, with a favorable expanded reimbursement policy compared to audio-only communication [6, 7]. However, the rapid use of video telemedicine raises important questions concerning equity of access, which is likely a multi-factorial problem: video visits necessitate possession of a smartphone or computer, digital literacy to navigate screens, webpages, and applications, stable internet connections for fluent conversation and examination, access to interpreter services, and more [8].

Telemedicine has been used in urology for many years, and studies have reported video visits to be faster, similar quality, and easier to access compared to in-person clinic visits [9, 10]. Like other clinical specialties, urologic practices quickly adopted video telemedicine platforms during the COVID-19 pandemic [9]. At our institution, the rapid implementation of video telemedicine in response to COVID-19 resulted in an institution-wide increase in the proportion of overall visits conducted through video from 7-18% to 54-72% [11]. In this study, we hypothesized that significant disparities in video telemedicine exist, and sought to identify intervenable factors associated with video visit failure at our academic institution.

Methods

This study was approved by the Institutional Review Board (IRB protocol 21-35886). All video visits were performed using a HIPAA (Health Insurance Portability and Accountability Act)-compliant video conferencing platform (Zoom Video Communications Inc) with a pre-existing workflow. Patient demographic, clinical, and technological data on adult video visits was extracted from the electronic health record based on video visit status from 6/1/2021 to 12/31/2021. The date range was chosen to exclude early COVID-19 pandemic variations in video visits as clinics ramped up telemedicine, as well as account for status changes in failed video visit electronic health record (EHR) smart phrases. Procedural follow-ups, onsite video visits, and telephone visits were excluded. Due to differing workflows, all other campuses except for the urology/urologic oncology departments at Parnassus and Mission Bay hospitals were excluded. IRB approval was obtained

Data included patient characteristics such as age, sex, address, insurance payor, primary language, need for interpreter, marital status, race/ethnicity, MyChart status as of appointment date, and primary diagnosis. Patient diagnosis was categorized into 7 major groups: oncology, endourology/stone disease, men's health, lower urinary tract symptoms/voiding dysfunction, reconstructive urology, urology tract infection/pain syndrome, and other, based on primary encounter diagnosis ICD-10 code. Additionally, data extracted included video visit appointment information such as scheduled date, schedule source, appointment length, encounter department/specialty, provider type, reminder status, confirmation status, completion status, and whether the video visit was for a new patient or established patient. Patient rural or urban status was assigned at the ZIP code level using the Rural Urban Community Area codes classification [12]. Area Deprivation Index (ADI) national percentiles [13], based on a patient's US Census block group location, were used as a proxy measure of socioeconomic status.

Video visits analyzed were restricted to a patient's first video visit, and the primary outcome was the status of completion of that video visit. Successful completion was narrowly defined as being able to establish a video connection. Video visits were classified as failed if they were marked with a standard failure EHR smart phrase and successful completion of a visit encounter. The failure EHR smart phrase is standard across every ambulatory encounter at the institution and is the recommended and easiest way to properly bill for a video visit.

Differences in the patient cohort conditioned on initial video visit status were compared using the Chi-squared test for categorical features and two sample t-test for continuous features. As part of a sensitivity analysis, an interaction term for age and insurance term was included, given Medicare patients are >65 in age, and there was no significant change in the model estimates. Multivariate logistic regression models were created to assess predictors of initial video visit outcomes. Collinearity of covariates was assessed by calculating variable inflation factors values (VIF) with covariates excluded with values > 5. A random forest ensemble classification model was built in conjunction to examine the importance of covariates. Mean decrease accuracy and mean decrease Gini scores were calculated from the random forest model. All analyses were performed using R 3.5.1. A p-value of <0.05 was considered significant.

Results

Information from 29,562 video visits for 14,344 unique adult patients were extracted from the electronic health records system for analysis. After filtering for first-time video visits, accounting for differences in workflow, and excluding timeframes prior to proper smart phrase implementation, a final cohort of 6,086 patients and their first video visits were analyzed. From 6/1/2021 to 12/31/2021, mean failure rate was 4.9% (**Figure 1a**).

Patient characteristics for initial video visit failure are summarized in **Table 1**. The cohort of patients for initial failure was composed of similar sex and had the same provider types compared to those with initial success. Patients who had a failure during their initial video visit appointment were more likely to be >65 in age (60.4% vs 44.2%; p<0.01), of non-White race/ethnicity (48.1% vs 39.0%; p<0.01), have a non-English primary language (10.6% vs 5.2%; p<0.01), and have non-commercial health insurance (77.4% vs 52.4%; p<0.01). Patients with initial failures were more likely to live in a rural classified zip code (11.4% vs 6.5%; p<0.01) and live in a census block group of lower ADI national percentile ranking (9 vs 4; p<0.01). Video visit failures were more likely for new video visits (62.5% vs 56.1%; p=0.04), for the newer oncology UCSF campus (68.2% vs 47.2%; p<0.01), and for appointment length >30 minutes (69.6% vs 52.8%; p<0.01). Video visit failures were more likely for patients who did not confirm their appointments (73.6% vs 67.2%; p=0.03) and who did not have an activated MyChart account (44.2% vs 23.8%; p<0.01). Video visits failures were significantly different depending on diagnoses category (**Figure 1b**).

In a multivariate model (**Table 2**), patients of Hispanic or Latino race/ethnicity (OR 0.52, 95%CI 0.31-0.89; p=0.01), patients insured by Medicare (OR 0.46, 95%CI 0.26-0.79; p<0.01), Medicaid (OR 0.50, 95%CI 0.29-0.87; p=0.01) or other non-commercial insurance (OR 0.38, 95%CI 0.16-1.00; p=0.03), and patients of low socioeconomic status (OR 0.98, 95%CI 0.98-0.99; p<0.01) were less likely to have successful video visits. Patients with an un-activated MyChart patient portal (OR 0.43, 95%CI 0.29-0.62; p<0.01), and patients unconfirmed at appointment reminder (OR 0.68, 95%CI 0.48-0.96; p=0.03) were associated with video visit failure. Patients with a primary diagnosis category of men's health (OR 20.57, 95%CI 3.96-379.52; p<0.01) and lower urinary tract syndromes (LUTS; OR 2.69, 95%CI 1.66-4.51; p<0.01) were highly associated with successful completion of a video visit. Random forest modeling was used to determine the most important variables for predicting video visit failure, which identified insurance type and socioeconomic status as the most important drivers of video visit success or failure (**Figure 2**).

Discussion

Video telemedicine has rapidly become the standard-of-care modality for clinical care during the COVID-19 era, and will likely remain relevant in clinical urologic practice after the pandemic. Examination of the roles of demographic, clinical, and technological characteristics provides insight into the successes and failures of video telemedicine, and highlights potential opportunities to improve these experiences. In this study to identify characteristics associated with video visit failures in urologic patients, we performed a retrospective analysis of all urology video visits in the year 2021 at a large academic institution with a well-established telemedicine program. Our final analysis included 6086 initial video visits for unique urology patients, and included assessment of demographic and clinical factors, and factors unique to the electronic medical record at our institution. To our knowledge this is the largest analysis to date of urologic patients who accessed telemedicine during the COVID-19 pandemic.

Multiple factors were found to be significantly associated with an inability to initiate a urologic video visits. Hispanic or Latino ethnicity, Medicaid- and Medicare-insured status, and ADI National Percentile, a surrogate for socioeconomic status, were significantly associated with video visit failure, findings which have been described in prior studies across all clinical specialties [14-16], and in a study restricted to urology [17]. Interestingly, age >65 was not significantly associated with failure of video visits in our multivariate analysis, whereas it has been identified as a significantly associated factor in other studies across all clinical specialties [14-16, 18], and in a study restricted to urology [17]. This may be explained in part by an intervention that was implemented at our institution in April 2020 which involves phone call outreach providing instructions and technology troubleshooting for patients above 65 years of age who are scheduled for a video visit appointment and had not previously completed a successful video visit. A pre-visit telephone call and education has been shown to increase the likelihood of successfully completing a video visit in other settings [19]; together this data suggests that targeted outreach to older patients, Hispanic or Latino patients, patients with non-private primary insurance, and patients of lower socioeconomic status as defined by ADI percentile as a logical strategy for improving the implementation of video telemedicine.

Multivariate analysis revealed that patients who were being seen for men's health indications, which encompasses reproductive and sexual health diagnoses such as erectile dysfunction and Peyronie's disease, and LUTS, which encompasses voiding symptoms, were much more likely to complete a video visit compared to patients seeing a urologist for other indications such as oncology. A recent study by Javier-DesLoges et al. who found that patients were more likely to participate in telemedicine visits if they were seen for a urologic condition related to infertility (OR 1.43, 95% CI 1.14-1.80, p=0.002) compared to general urology/endourology, female urology, urologic oncology, or reconstructive surgery [17]. These differences could represent a relative importance of men's health and LUTS indications among urology patients, or could represent sufficiency of video telemedicine to meet patient needs and expectations for these visits compared to those of other specialties. Support for the latter includes a study demonstrating success of telemedicine appointments in an academic andrology-focused urology practice at achieving high levels of patient satisfaction [20]. Similarly, management of LUTS has been shown to be amenable to telemedicine during the COVID-19 pandemic [21]; furthermore, additional technology such as smartphone apps to monitor LUTS have been utilized with great success during the pandemic, and represent useful tools for telemedicine moving forward [22]. Furthermore, we found that new patients were significantly more likely to fail video visits compared to established patients, and may require additional outreach efforts to help navigate a potentially new clinical or telemedicine system.

Finally, our study discovered some novel associations between technological factors and the success of video visits. We found that patients who had not activated an account on MyChart, a secure online health application integrated with the electronic medical record that includes notifications for appointments and communication with providers, were much more likely to fail video visit than those who had. Additionally, patients at our institution receive a reminder about their video telemedicine appointment and can confirm attendance in advance; patients who did not confirm their appointments were much more likely to fail video visit compared to those who did. Together these data suggest that outreach efforts to increase patient enrollment in MyChart or provide additional targeted interventions for patients that did not confirm their appointment in advance may represent effective future interventions.

A limitation of our study is the non-randomized and retrospective nature of the study, which may be subject to confounding variables and introduce bias such as selection bias. Another limitation was that the study represents patients at a single, academic center with a unique telemedicine framework, which may limit generalizability to other settings such as smaller, community practices. A third limitation is that video visit failures were determined by EHR and visit coding data, which is dependent on provider documentation and thus may underestimate the number of failed video visits. However, this EHR workflow is automatically included in every video visit, is the fastest way to document a failed video visit for accurate billing, and providers have to click through it before closing their video encounters. Finally, the definition of success or failure of video visits used in this study does not account for quality, clinical outcomes, or patient satisfaction outcomes; although these metrics are important for the successful implementation of video telemedicine, creation of a successful video visit connection between patients and providers is the first and arguably most important step in the pipeline, and was thus the primary outcome of our study. Despite these limitations, to our knowledge this is the largest analysis to date of urologic patients who accessed video telemedicine during the COVID-19 pandemic, and identifies areas of potential intervention to improve the video telemedicine experience for urology patients.

Conclusion

In this study, we identified predictors of video visit success and failure amongst a urology cohort at a single, large, urban academic center. Future interventions to improve telemedicine usage rates may prioritize patients with non-commercial insurance, patients of lower socioeconomic status, Hispanic or Latino patients, or patients less engaged in the digital health infrastructure. Without a doubt, telemedicine will continue to play a major role in healthcare, and it is important to ensure equity of access across all populations. Our results suggest areas of focus and optimization in the future to implement the highest yield interventions.

References:

1. Dorsey, E.R. and E.J. Topol, *State of Telehealth.* N Engl J Med, 2016. **375**(2): p. 154-61.
2. Weiner, J.P., et al., *In-Person and Telehealth Ambulatory Contacts and Costs in a Large US Insured Cohort Before and During the COVID-19 Pandemic.* JAMA Netw Open, 2021. **4**(3): p. e212618.
3. Temesgen, Z.M., et al., *Health Care After the COVID-19 Pandemic and the Influence of Telemedicine.* Mayo Clin Proc, 2020. **95**(9S): p. S66-S68.
4. Rush, K.L., et al., *Videoconference compared to telephone in healthcare delivery: A systematic review.* Int J Med Inform, 2018. **118**: p. 44-53.
5. Hammersley, V., et al., *Comparing the content and quality of video, telephone, and face-to-face consultations: a non-randomised, quasi-experimental, exploratory study in UK primary care.* Br J Gen Pract, 2019. **69**(686): p. e595-e604.
6. Chang, J.E., et al., *Telephone vs. Video Visits During COVID-19: Safety-Net Provider Perspectives.* J Am Board Fam Med, 2021. **34**(6): p. 1103-1114.
7. Krist, A.H., et al., *Redesigning Primary Care to Address the COVID-19 Pandemic in the Midst of the Pandemic.* Ann Fam Med, 2020. **18**(4): p. 349-354.
8. Herzer, K.R. and P.J. Pronovost, *Ensuring Quality in the Era of Virtual Care.* JAMA, 2021. **325**(5): p. 429-430.
9. Gadzinski, A.J., et al., *Implementing Telemedicine in Response to the COVID-19 Pandemic.* J Urol, 2020. **204**(1): p. 14-16.
10. Thelen-Perry, S., R. Ved, and C. Ellimoottil, *Evaluating the patient experience with urological video visits at an academic medical center.* Mhealth, 2018. **4**: p. 54.
11. Lonergan, P.E., et al., *Rapid Utilization of Telehealth in a Comprehensive Cancer Center as a Response to COVID-19: Cross-Sectional Analysis.* J Med Internet Res, 2020. **22**(7): p. e19322.
12. USDA. *2010 Rural-Urban Commuting Area (RUCA) Codes*. August 17, 2020; Available from: https://www.ers.usda.gov/data-products/rural-urban-commuting-area-codes/documentation/.
13. Kind, A.J.H. and W.R. Buckingham, *Making Neighborhood-Disadvantage Metrics Accessible - The Neighborhood Atlas.* N Engl J Med, 2018. **378**(26): p. 2456-2458.
14. Eberly, L.A., et al., *Patient Characteristics Associated With Telemedicine Access for Primary and Specialty Ambulatory Care During the COVID-19 Pandemic.* JAMA Netw Open, 2020. **3**(12): p. e2031640.
15. Schifeling, C.H., et al., *Disparities in Video and Telephone Visits Among Older Adults During the COVID-19 Pandemic: Cross-Sectional Analysis.* JMIR Aging, 2020. **3**(2): p. e23176.
16. Rodriguez, J.A., et al., *Differences in the use of telephone and video telemedicine visits during the COVID-19 pandemic.* Am J Manag Care, 2021. **27**(1): p. 21-26.
17. Javier-DesLoges, J., et al., *Disparities in Telemedicine Utilization for Urology Patients During the COVID-19 Pandemic.* Urology, 2022.
18. Crotty, B.H., et al., *Analysis of Clinician and Patient Factors and Completion of Telemedicine Appointments Using Video.* JAMA Netw Open, 2021. **4**(11): p. e2132917.

19. Gusdorf, R.E., et al., *A patient education intervention improved rates of successful video visits during rapid implementation of telehealth.* J Telemed Telecare, 2021: p. 1357633X211008786.
20. Shiff, B., et al., *Patient Satisfaction With Telemedicine Appointments in an Academic Andrology-focused Urology Practice During the COVID-19 Pandemic.* Urology, 2021. **153**: p. 35-41.
21. Collins, L., R. Khasriya, and J. Malone-Lee, *An evidence-based perspective on Lower Urinary Tract Symptoms and telemedicine during the COVID-19 pandemic.* Health Technol (Berl), 2021. **11**(5): p. 1119-1124.
22. Morselli, S., et al., *The use of a novel smartphone app for monitoring male luts treatment during the COVID-19 outbreak.* Prostate Cancer Prostatic Dis, 2020. **23**(4): p. 724-726.

Table 1: Patient demographics by initial video visit outcome

	Failed Video Visit	Successful Video Visit	P-value
Total Visits (n)	283	5803	
Patient Age			
<65	112 (39.6%)	3240 (55.8%)	<0.01
65 or older	171 (60.4%)	2563 (44.2%)	
Male	225 (79.5%)	4580 (79.3%)	1
Ethnicity			
White	147 (51.9%)	3542 (61.0%)	<0.01
Black or African American	21 (7.4%)	263 (4.5%)	
Hispanic or Latino	45 (15.9%)	519 (8.9%)	
Asian, Native Hawaiian or Other Pacific Islander	34 (12.0%)	726 (12.5%)	
Other/Unknown	36 (12.7%)	753 (12.7%)	
Primary Language - English	253 (89.4%)	5503 (94.8%)	<0.01
Primary Language - Other	30 (10.6%)	300 (5.2%)	
Urban	248 (88.6%)	5344 (93.6%)	<0.01
Rural	32 (11.4%)	370 (6.6%)	
ADI National Percentile (Median, IQR)	9 (3 - 29)	4 (2 - 13)	<0.01
Marital Status			
Married/Partnered	159 (56.2%)	3598 (62.0%)	0.06
Single/Separated/Other	124 (43.8%)	2205 (38.0%)	
Insurance			
Commercial	64 (22.6%)	2760 (47.6%)	<0.01
Medicare	166 (58.7%)	2347 (40.4%)	
Medicaid	44 (15.5%)	544 (9.4%)	
Other	9 (3.3%)	152 (2.6%)	
Appointment Length			
<30 min	86 (30.4%)	2739 (47.2%)	<0.01
>30 min	197 (69.6%)	3064 (52.8%)	
MyChart Status			
Activated	158 (55.8%)	4424 (76.2%)	<0.01
Un-activated	125 (44.2%)	1379 (23.8%)	
Reminder Status			
Confirmed	75 (26.5%)	1903 (32.8%)	0.03
Unconfirmed	208 (73.5%)	3900 (67.2%)	
Provider Type			
Physician	227 (80.2%)	4849 (80.6%)	0.61
Non-Physician	56 (19.8%)	954 (19.4%)	
Visit Type			
Established Patient	106 (37.5%)	1837 (31.7%)	0.04
New Patient	177 (62.5%)	3966 (68.3%)	

Schedule Method			
Cadence	257 (90.8%)	5109 (88.0%)	0.19
Other	26 (9.2%)	694 (12.0%)	
Patient Diagnosis Category			
Oncology	172 (63.7%)	1989 (36.6%)	<0.01
Endourology/Stone Disease	26 (9.6%)	26 (9.9%)	
Men's Health	2 (0.7%)	955 (17.6%)	
LUTS/Voiding Dysfunction	34 (12.6%)	1193 (22.0%)	
Reconstructive Urology	7 (2.6%)	152 (2.8%)	
UTI/Pain Syndrome	18 (6.7%)	457 (8.4%)	
Other Disease	11 (4.1%)	150 (2.8%)	

Table 2. Multivariable logistic regression model of predictors of initial video visit failure

Variable	OR	95% CI	P-value
Age (vs <65) 65 or older	0.85	0.50 - 1.45	0.55
Race/Ethnicity (vs White)			
Black or African American	0.71	0.39 - 1.36	0.27
Hispanic or Latino	0.52	0.31 - 0.89	0.01
Asian, Native Hawaiian or Other Pacific Islander	0.67	0.41 - 1.13	0.12
Other	0.74	0.45 - 1.25	0.25
Marital Status (vs Married/Partnered)			
Single/Separated/Other	0.76	0.54 - 1.07	0.11
Insurance (vs Commercial)			
Medicare	0.46	0.26 - 0.79	<0.01
Medicaid	0.50	0.29 - 0.87	0.01
Other	0.38	0.16 - 1.00	0.03
Sex (vs Male)			
Female	1.09	0.73 - 1.67	0.68
Language (vs English)			
Primary Language Non-English	0.87	0.50 - 1.55	0.62
Appt length >30min (vs <30 min)	0.79	0.49 - 1.25	0.32
Urban	1.00	0.55 - 1.72	1.00
ADI National Percentile	0.98	0.98 - 0.99	<0.01
Provider (vs Physician)			
Non-Physician	0.90	0.52 - 1.58	0.70
MyChart Status (vs Activated)			
Not Activated	0.43	0.29 - 0.62	<0.01
Reminder Status (vs Confirmed)			
Unconfirmed	0.68	0.48 - 0.96	0.03
Patient Type (vs established patient)			
New Patient	1.22	0.74 - 2.01	0.45
Schedule Source (vs Cadence)			
Other Schedule Source	1.25	0.76 - 2.14	0.39
Patient Diagnosis Category (vs Oncology)			
Endourology/Stone Disease	1.62	0.90 - 3.07	0.12

Men's Health	47.96	10.24 - 856.35	<0.01
LUTS/Voiding Dysfunction	2.69	1.66 - 4.51	<0.01
Reconstructive Urology	1.74	0.77 - 4.70	0.22
UTI/Pain Syndrome	1.48	0.83 - 2.77	0.20
Other Disease	1.37	0.62 - 3.50	0.47

Figure 1: A) Percentage of failed video visits by month from June 1, 2021 to December 31, 2021. B) Percentage of failed video visits by Urologic specialty from June 1, 2021 to December 31, 2021.

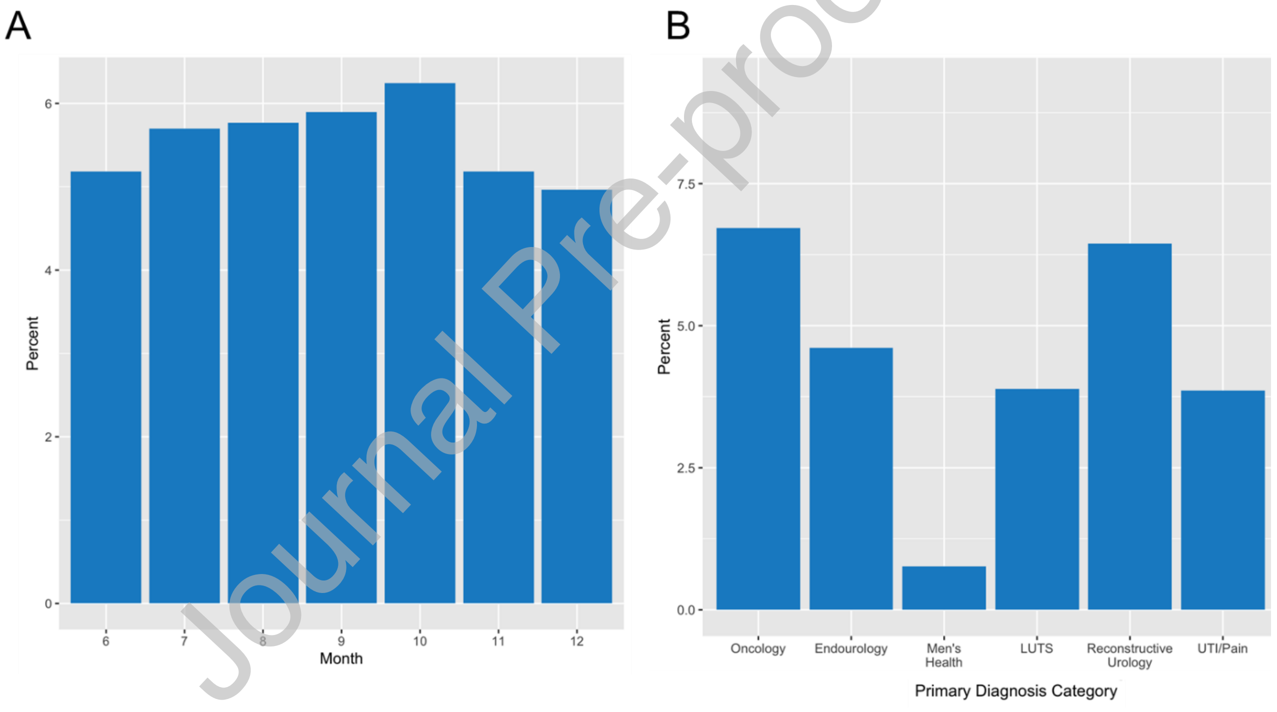

Figure 2: Forest ensemble classification model to examine the importance of covariates on success and failure of video visit using A) mean decrease accuracy and B) mean decrease Gini score.