Online Supplement

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	A. List of Stop Codes to Identify Telehealth and Mental Health Stop Codes* Stop Codes Identifying Telehealth
Stop Code	Description/Notes
690	Records at the patient's site (originating site), real time clinical video telehealth care
	provided to patients.
692	Records at the provider site, real time clinical video telehealth care provided to patients
	where the site of the provider and the site of the patient share the same STA3 (Company
	Code) such as in the case of a Community-Based Outpatient Clinic (CBOC) and its
	parent station.
693	Records at the provider site, real time clinical video telehealth care provided to patients
	where the site of the provider and the site of the patient have a different STA3 (Company
644, 645	Code). Records at the nations site (originating site), real time alinical video telebralth core
044, 043	Records at the patient site (originating site), real time clinical video telehealth care provided to patients by a provider at a National Telehealth Center.
648	Records at the provider site (distant site), real time clinical video telehealth care provided
040	to patients at a non-VAMC location (i.e., Vet Center, University Clinic, Indian Health
	Service Clinic).
179	Records workload using real-time videoconferencing as a means to replicate aspects of
	face-to-face assessment and care delivery to patients in their homes.
Example S	Stop Codes Identifying Mental Health Care Services and Substance Use Dependence
Stop Code	Description/Notes
502	Mental Health Clinic; Records individual patient visit for the evaluation, consultation,
	and/or treatment by clinical staff trained in mental diseases and disorders. Includes
	provider and support services.
503	Mental Health Residential Care; Documents visits to Veterans with mental health needs
	residing in VA approved community residential care homes, medical foster homes,
7 00	assisted living, personal care homes, and family care homes by VA personnel.
509	Psychiatry – Individual; Records patient visit for the purpose of evaluation, follow-up
	and treatment provided by a physician trained in mental, emotional and behavioral disorders.
510	Psychology – Individual; Records patient visit for the purpose of evaluation, follow-up,
310	and treatment provided by a psychologist.
512	Mental Health Consultation; Records patient consultation with a health care provider
312	trained in mental, emotional and behavioral disorders.
513	Substance Use Disorder Individual; Records patient visit for individual evaluation,
	consultation, follow-up, and treatment provided by a facility's formal Substance Use
	Disorder Treatment Program. Includes provider and support services.
516	Group PTSD; Records consultation and/or treatment follow-up provided to more than
	one individual. Treatment is provided to those patients with PTSD.
519	Substance Use Disorder/PTSD Teams; Records visits to a treatment team designed to
	treat substance use disorders (drug and alcohol) in conjunction with PTSD (SUPT).
523	Opioid Substitution; Records treatment in the facility's formal licensed DEA and Joint
	Commission accredited opioid substitution substance abuse program for opiate
	dependent clients (including methadone maintenance)
539	MH Integrated Care Group; Records group patient visits for mental health integrated care
	by a mental health provider in Primary Care-Mental Health Integrated programs.
547	Intense Substance Use Disorder Group; Records group visits for intensive substance
	use disorder services provided by substance use disorder treatment program staff.

54	x A. List of Stop Codes to Identify Telehealth and Mental Health Stop Codes* Intense Substance Use Disorder Individual; Records individual visit for intensive				
54	substance use disorder services provided by substance use disorder treatment program staff.				
550	Mental Health Clinic – Group; Records services assigned to a group of outpatients any clinical specialty assigned to the Mental Health Clinic				
557	Psychiatry Group; Use by psychiatrist only when care is not delivered in an				
558	interdisciplinary setting such as a Mental Health Clinic or PTSD Clinical Team. Psychology Group; Use when the psychologist's care is not delivered in an				
5	interdisciplinary clinic setting such as a Mental Health Clinic or PTSD Clinical Team. Substance Use Disorder Group; Records patient visit for group evaluation, consultation, follow-up, and treatment provided by a facility's formal Substance Use Disorder Treatment Program.				
564	MH Team Case Management; Records visit with a patient and/or their families or caregivers by members of a mental health case management team performing mental health community case management at all locations. Includes provider and support services.				
566	MH Risk actor Reduction Group; Captures workload, primarily psycho-educational in nature, provided in group sessions. Groups typically are informational in nature and are provided by mental health personnel who may teach strategies for accomplishing some therapeutic goal (smoking cessation, diabetic education, cardiac rehabilitation, etc.).				
571	Services for Returning Veterans-Mental Health - Individual; Records patient visit in VA mental health or primary care settings with veterans returning from active duty and/or their families.				
572	Services for Returning Veterans-Mental Health Group; Records group visits in VA mental health or primary care settings with veterans returning from active duty and/or their families.				
576	Psychogeriatric – Individual; l Records patient visit for the evaluation, consultation, and/or treatment in a designated psycho-geriatric patient clinic.				
577	Psychogeriatric – Group; Records treatment, evaluation, and/or rehabilitation provided to a group of patients in a designated psycho-geriatric clinic.				
590	Community Outreach Homeless Veterans; Community Outreach to Homeless Veterans by Staff other than HCHV and RRTP Programs Records outreach services to Veterans carried out by VA staff other than designated staff of the HCHV or RRTP (Residential Rehabilitation Treatment Programs) programs.				
591	Incarcerated Veterans Re-Entry; Records interventions for incarcerated Veterans e iting correctional institutions and reentering community living. V				
592	Veterans Justice Outreach; Records interventions for justice-involved Veterans who a) have crisis encounters with law enforcement in the community, or b) have been arrested and are in jail custody, or c) are being adjudicated or monitored in court settings.				
596	Admission Screening Services; Records all activities associated and involved in the screening and admitting process of patients applying for RRTP care. T				
598	Outpatient Individual; Records provision of individual therapy by RRTP staff for Veterans screened and approved while awaiting admission to a mental health RRTP.				
Utili atio Health A Associati	I from (1) Adams SV, Mader MJ, Bollinger MJ, ong ES, Hudson TJ, ittman AJ. n of Interactive Clinical Video Telemedicine by Rural and Urban Veterans in the Veterans dministration Health Care System. J Rural Health. 2019;35 308-318; and (2) National on of Veteran Affairs Optometrists. 14 Active DSS Identifiers. Available at www.navao.org/wp-content/uploads/2016/02/ 14-Active-DSS-Identifiers.pdf. Accessed				

Appendix A. List of Stop Codes to Identify Telehealth and Mental Health Stop Codes* † Bolded stop codes used for substance use disorder visits

Appendix B. Schematic for Classification of Telehealth Exposure Variable

	Days From Initiating Buprenorphine Treatment							
Veteran	Encounter Type*	85 15 16 17 18 18 18 18 18 18 18 18 18 18	358 365					
A^{\dagger}	Gaps In-Person Telehealth	X X X X X X X						
B [‡]	Gaps In-Person Telehealth	X X X X X X X X X X X X X X X X X X X	X					
\mathbf{C}^{\S}	Gaps In-Person Telehealth	X X X X X X X X X X X X X X X X X X X						
\mathbf{D}_{l}	Gaps In-Person Telehealth	X X X X						

^{*} Represents exposure classification for substance use encounters (primary) and mental health encounters (secondary). Solid colors represent how the time-varying exposures were classified. Days marked with an "X" represent when the visit for either an in-person or telehealth encounter occurred. These examples represent individuals who were followed up to 1 year from buprenorphine treatment, but censoring occurred when the Veteran transitioned to another medication for OUD, at the end of the study period (December 31, 2017), or end of maximum follow-up period of 1 year.

[†] Veteran A represents a scenario where there was no telehealth encounter during buprenorphine treatment. When an in-person encounter occurred, Veteran A was considered exposed for up 28 days from the encounter. After 28 days, they were classified as having no encounters until the next encounter date.

[‡] Veteran B also represents a scenario where there was no telehealth encounters during the course of treatment. However, Veteran B had overlapping in-person encounters, and the 28 day window was extended or reset at each new encounter.

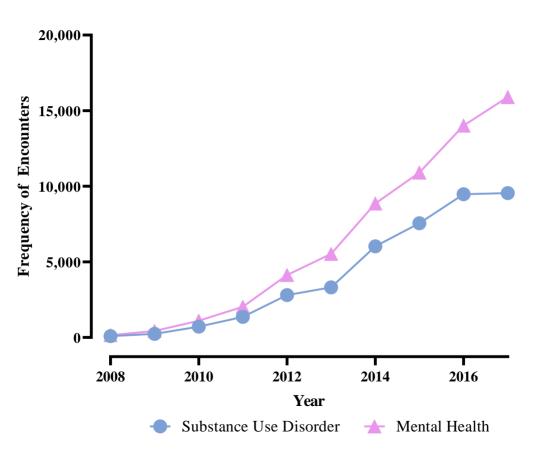
[§] Veteran C represents the scenario where telehealth encounters occurred. In the absence of a telehealth encounter, the Veteran was classified as having inperson visits for 28 days from each new encounter. When a telehealth and in-person encounter occurred concurrently, days were treated as exposed to telehealth until the end of the 28-day window.

Veteran D represents someone who stopped buprenorphine and were censored after last known supply date

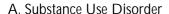
Appendix C. Frequency of Most Common Types of Primary Stop Codes Utilized

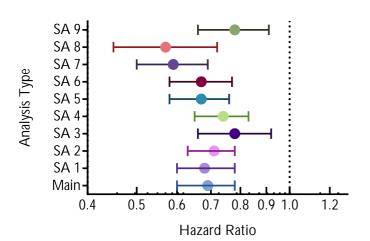
Substance Use Dependence	Encounters		
Video-Specific Telehealth (N=41,134)	N	%	Cumulative %
Substance Use Disorder (Individual)	24,039	58.4	58.4
Substance Use Disorder (Group)	10,154	24.7	83.1
Opioid Treatment Program	5,056	12.3	95.4
Intense Substance Use Disorder (Group)	1,799	4.4	99.8
Intense Substance Use Disorder (Individual)	84	0.2	100.0
General Telemedicine (N=44,503)			
Substance Use Disorder (Individual)	24,039	54.0	54.0
Substance Use Disorder (Group)	10,154	22.8	76.8
Opioid Treatment Program	5,056	11.4	88.2
Telephone SUD	2,099	4.7	92.9
Intense Substance Use Disorder (Group)	1,799	4.0	97.0
In-Person Encounters (N=3,060,433)			
Substance Use Disorder (Individual)	1,048,081	34.2	34.2
Substance Use Disorder (Group)	823,284	26.9	61.1
Opioid Treatment Program	709,056	23.2	84.3
Intense Substance Use Disorder (Group)	285,599	9.3	93.6
Residential Rehabilitation Treatment Program (Group)	49,567	1.6	95.3
Mental Health Encou	nters		
Video-Specific Telehealth (N=63,055)	N	%	Cumulative %
Substance Use Disorder (Individual)	24,039	38.1	38.1
Mental Health Clinic (Individual)	15,056	23.9	62.0
Substance Use Disorder (Group)	10,154	16.1	78.1
Opioid Treatment Program	5,056	8.0	86.1
Intense Substance Use Disorder (Group)	1,799	2.9	89.0
General Telemedicine (N=102,138)			
Telephone Mental Health	32,145	31.5	31.5
Substance Use Disorder (Individual)	24,039	23.5	55.0
Mental Health Clinic (Individual)	15,056	14.7	69.7
Substance Use Disorder (Group)	10,154	9.9	79.7
Telephone SUD	6,297	6.2	85.9
In-Person Encounters (N=5,272695)			
Substance Use Disorder (Individual)	1,048,081	19.9	19.9
Substance Use Disorder (Group)	823,284	15.6	35.5
Opioid Treatment Program	709,056	13.4	48.9
Mental Health Clinic (Individual)	687,107	13.0	62.0
Intense Substance Use Disorder (Group)	285,599	5.4	67.4

Appendix D. Frequency of Telehealth Encounters by Year

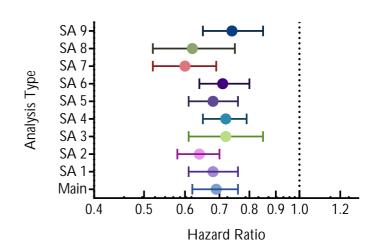


Appendix E. Sensitivity Analyses of Telehealth Utilization and Risk of Discontinuation within 1 year from Buprenorphine Treatment Initiation among Veterans Treated in the VHA, 2008-2017





B. Mental Health



Main: Represents main analysis results as displayed in Table 2

SA 1: Excludes low utilizers of the VHA prior to treatment initiation as a method of accounting for incomplete co-morbidity data

SA 2: Limits analysis to those who continued buprenorphine treatment beyond 28 days

SA 3: Limits analysis to 10 facilities most frequently using telehealth

SA 4: Addresses potential outcome misclassification using a definition of discontinuation of no treatment for 7 days

SA 5: Addresses potential outcome misclassification using a definition of discontinuation of no treatment for 28 days

SA 6: Addresses potential outcome misclassification using a definition of discontinuation of no treatment for 90 days

SA 7: Addresses potential exposure misclassification using 14 days of exposure effects of a visit compared to the main analysis of 28 days of no encounters

SA 8: Accounts for impact of telehealth on treatment discontinuation for those with previous telehealth encounters for mental health or substance dependence

SA 9: Accounts for impact of telehealth on treatment discontinuation for those naïve to telehealth for mental health or substance dependence prior to treatment initiation