Evidence Brief: Barriers and Facilitators to Use of Medications for Opioid Use Disorder

Supplementary Materials

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APPENDIX A. INCLUSION/EXCLUSION CRITERIA

PICOS	Inclusion/exclusion criteria	Exclusion code
Population	**Include:** Adults eligible for OUD treatment **Exclude:** Pregnant women, children, adults using opioids that do not have OUD, or adults with exclusively alcohol or other substance use disorder.	E1
Intervention	**Include:** Buprenorphine or extended-release naltrexone for initial treatment of OUD **Exclude:** Methadone or other treatment for OUD; use of buprenorphine or extended-release naltrexone for continuing/retention in treatment of OUD	E2
Comparator	**Include:** No MAT treatment, no comparator	E3
Outcome	**Include:** Any including but not limited to: · Quantitative (factors shown by multivariate analysis to be associated with rates of MAT use, prescribing capacity, and acceptability) · Qualitative (patient- and provider-identified factors impacting MAT use such as stigma, lack of institutional support, and lack of expertise)	E4
Setting	**Include:** United States **Exclude:** Any other country	E5
Study Design	**Include:** Study aim is to examine barriers and facilitators in general, or one patient, provider or system barrier/facilitator in particular, including factors or predictors of MAT adoption or prescription **Exclude:** Study that discuss effectiveness of MAT or MAT models of care; study that describes barriers/facilitators but that were not explicitly part of the study design.	E6
Publication type	**Include:** Studies (qualitative or quantitative) **Exclude:** Commentary, abstract, or other article that is not a study	E7
Outdated systematic review	**Exclude**: Systematic review that includes studies published before 2014	E8
Language	**Include:** English	E9

	Exclude: Any other language	
Year	**Include:** Published 2014 or later **Exclude:** Published before 2014	E10

Abbreviations: OUD=Opioid use disorder; MAT=Medication-Assisted Treatment

APPENDIX B. SEARCH STRATEGIES

1. Search for current systematic reviews **Date Searched: 3/19/19**	
Sources:	**Strategy:**
AHRQ	Search: opioid; opiate
CADTH	Search: opioid; opiate
NICE (NHS Evidence)	Search: opioid use disorder; opiate use disorder
ECRI Institute	Search: opioid; opiate
VA Products: VATAP, PBM, HSR&D publications, VA ART Database	A. http://www.hsrd.research.va.gov/research/default.cfm B. http://www.research.va.gov/research_topics/ C. http://art.puget-sound.med.va.gov/default.cfm Search: opioid; opiate
Cochrane Database of Systematic Reviews	Database: EBM Reviews - Cochrane Database of Systematic Reviews <2005 to March 13, 2019> Search Strategy: --- 1 exp Buprenorphine/ or (buprenorphine or Probuphine or Sublocade).ti,ab. (24) 2 exp Naltrexone/ or (Revia or Vivitrol or naltrexone).ti,ab. (14) 3 exp Buprenorphine, Naloxone Drug Combination/ or (Bunavail or Cassipa or Suboxone or Subutex or Zubsolv).ti,ab. (0) 4 (medicat* adj2 assist* adj2 (treat* or therap* or regimen* or interven* or program*)).ti,ab. (0) 5 ((opiate* or opioid* or narcotic*) adj2 (substitut* or replac* or maint*) adj2 (treatment* or therap* or regimen* or program* or interven*)).ti,ab. (5) 6 or/1-5 (36) 7 (barrier* or facilitat*).ti,ab. (257) 8 stigma*.ti,ab. (12) 9 (health service and demand).ti,ab. (1) 10 or/7-9 (270) 11 6 and 10 (1) **********

2. Systematic reviews currently under development (forthcoming reviews & protocols) **Date Searched: 3/19/19**	
Sources:	**Strategy:**
PROSPERO (SR registry)	Search: opioid; opiate Relevant Results: https://www.crd.york.ac.uk/PROSPERO/display_record.php?RecordID=98777 https://www.crd.york.ac.uk/PROSPERO/display_record.php?RecordID=103836 https://www.crd.york.ac.uk/PROSPERO/display_record.php?RecordID=109375 https://www.crd.york.ac.uk/PROSPERO/display_record.php?RecordID=87236

DoPHER (SR Protocols)	Search: opioid; opiate

3. Current Guidelines **Date Searched: 3/19/19**	
Sources:	**Strategy:**
VA/DoD Clinical Practice Guidelines	Search: N/A
Guideline Central	Search: opioid; opiate
PubMed: Guideline Search	((Guideline[Publication Type] OR (Clinical[All Fields] AND Guideline[Publication Type]) OR Practice Guideline[Publication Type]) AND (opioid[Title/Abstract] OR opioid'[Title/Abstract] OR opioid's[Title/Abstract] OR opioidactivated[Title/Abstract] OR opioidaddiction[Title/Abstract] OR opioidal[Title/Abstract] OR opioidbenzomorphans[Title/Abstract] OR opioiddependent[Title/Abstract] OR opioidderivative[Title/Abstract] OR opioiddosage[Title/Abstract] OR opioiddoses[Title/Abstract] OR opioide[Title/Abstract] OR opioiderg[Title/Abstract] OR opioidergic[Title/Abstract] OR opioidergic'[Title/Abstract] OR opioideric[Title/Abstract] OR opioides[Title/Abstract] OR opioidfentanyl[Title/Abstract] OR opioidic[Title/Abstract] OR opioidinduced[Title/Abstract] OR opioidlike[Title/Abstract] OR opioidmanager[Title/Abstract] OR opioidmimetic[Title/Abstract] OR opioidmimetics[Title/Abstract] OR opioidoergic[Title/Abstract] OR opioidogenic[Title/Abstract] OR opioidok[Title/Abstract] OR opioidophobia[Title/Abstract] OR opioidphobia[Title/Abstract] OR opioidprescribing[Title/Abstract] OR opioidprescriptions[Title/Abstract] OR opioidreceptor[Title/Abstract] OR opioidrequirements[Title/Abstract] OR opioidrezeptoren[Title/Abstract] OR opioidrgic[Title/Abstract] OR opioids[Title/Abstract] OR opioids'[Title/Abstract] OR opioidsas[Title/Abstract] OR opioidscompared[Title/Abstract] OR opioidsdagger[Title/Abstract] OR opioidsfor[Title/Abstract] OR opioidsleads[Title/Abstract] OR opioidterapia[Title/Abstract] OR opioidtolerant[Title/Abstract] OR opioidverabreichung[Title/Abstract] OR opioidy[Title/Abstract])) AND "opioid use disorder"[All Fields]

4. Current primary literature **Date Searched: 3/19/19**	
Sources:	**Search Strategy/ Evidence:**
MEDLINE	Database: Ovid MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Daily and Versions(R) <1946 to March 18, 2019> Search Strategy: ---------- 1 exp Buprenorphine/ or (buprenorphine or Probuphine or Sublocade).ti,ab. (6762) 2 exp Naltrexone/ or (Revia or Vivitrol or naltrexone).ti,ab. (9527) 3 exp Buprenorphine, Naloxone Drug Combination/ or (Bunavail or Cassipa or Suboxone or Subutex or Zubsolv).ti,ab. (369) 4 (medicat* adj2 assist* adj2 (treat* or therap* or regimen* or interven* or program*)).ti,ab. (490) 5 ((opiate* or opioid* or narcotic*) adj2 (substitut* or replac* or maint*) adj2 (treatment* or therap* or regimen* or program* or interven*)).ti,ab. (1324) 6 or/1-5 (16939)

	7 (barrier* or facilitat*).ti,ab. (709715) 8 stigma*.ti,ab. (31334) 9 Health Knowledge, Attitudes, Practice/ (101536) 10 Health Services Accessibility/ (68106) 11 (health service and demand).ti,ab. (952) 12 "Attitude of Health Personnel"/ (114617) 13 or/7-12 (969001) 14 6 and 13 (1227) 15 limit 14 to english language (1189) 16 limit 15 to humans (760) **********
PsycINFO	Database: PsycINFO <1806 to March Week 2 2019> Search Strategy: --- 1 exp Buprenorphine/ or (buprenorphine or Probuphine or Sublocade).ti,ab. (2529) 2 exp Naltrexone/ or (Revia or Vivitrol or naltrexone).ti,ab. (3294) 3 exp Buprenorphine, Naloxone Drug Combination/ or (Bunavail or Cassipa or Suboxone or Subutex or Zubsolv).ti,ab. (104) 4 (medicat* adj2 assist* adj2 (treat* or therap* or regimen* or interven* or program*)).ti,ab. (292) 5 ((opiate* or opioid* or narcotic*) adj2 (substitut* or replac* or maint*) adj2 (treatment* or therap* or regimen* or program* or interven*)).ti,ab. (841) 6 or/1-5 (6314) 7 (barrier* or facilitat*).ti,ab. (207296) 8 stigma*.ti,ab. (27490) 9 Health Knowledge, Attitudes, Practice/ (0) 10 Health Services Accessibility/ (0) 11 (health service and demand).ti,ab. (264) 12 "Attitude of Health Personnel"/ (0) 13 or/7-12 (230906) 14 6 and 13 (491) 15 limit 14 to english language (467) 16 limit 15 to human (387) **********
CCRCT	Database: EBM Reviews - Cochrane Central Register of Controlled Trials <February 2019> Search Strategy: --- 1 exp Buprenorphine/ or (buprenorphine or Probuphine or Sublocade).ti,ab. (1912) 2 exp Naltrexone/ or (Revia or Vivitrol or naltrexone).ti,ab. (1937) 3 exp Buprenorphine, Naloxone Drug Combination/ or (Bunavail or Cassipa or Suboxone or Subutex or Zubsolv).ti,ab. (50) 4 (medicat* adj2 assist* adj2 (treat* or therap* or regimen* or interven* or program*)).ti,ab. (72) 5 ((opiate* or opioid* or narcotic*) adj2 (substitut* or replac* or maint*) adj2 (treatment* or therap* or regimen* or program* or interven*)).ti,ab. (236) 6 or/1-5 (3896) 7 (barrier* or facilitat*).ti,ab. (27161) 8 stigma*.ti,ab. (1469) 9 Health Knowledge, Attitudes, Practice/ (5455) 10 Health Services Accessibility/ (604) 11 (health service and demand).ti,ab. (54)

	12 "Attitude of Health Personnel"/ (1845) 13 or/7-12 (34848) 14 6 and 13 (142) 15 limit 14 to english language (108) **********
EMBASE	Database: Embase <1974 to 2019 March 18> Search Strategy: --- 1 exp Buprenorphine/ or (buprenorphine or Probuphine or Sublocade).ti,ab. (16799) 2 exp Naltrexone/ or (Revia or Vivitrol or naltrexone).ti,ab. (14815) 3 exp Buprenorphine, Naloxone Drug Combination/ or (Bunavail or Cassipa or Suboxone or Subutex or Zubsolv).ti,ab. (1662) 4 (medicat* adj2 assist* adj2 (treat* or therap* or regimen* or interven* or program*)).ti,ab. (667) 5 ((opiate* or opioid* or narcotic*) adj2 (substitut* or replac* or maint*) adj2 (treatment* or therap* or regimen* or program* or interven*)).ti,ab. (2020) 6 or/1-5 (31615) 7 (barrier* or facilitat*).ti,ab. (860286) 8 stigma*.ti,ab. (39965) 9 Health Knowledge, Attitudes, Practice/ (81062) 10 Health Services Accessibility/ (131200) 11 (health service and demand).ti,ab. (1265) 12 "Attitude of Health Personnel"/ (60401) 13 or/7-12 (1131869) 14 6 and 13 (1979) 15 limit 14 to english language (1905) 16 limit 15 to human (1498) **********

5. Primary literature currently under development (forthcoming studies & protocols) **Date Searched: 3/19/19**	
Sources:	**Search Strategy/ Evidence:**
Clinicaltrials.gov	Search: Opioid Abuse OR Opioid Related Disorders OR Opioid Dependence OR Opioid-use Disorder | MAT OR medication assisted therapy Relevant Results: https://clinicaltrials.gov/ct2/results?cond=Opioid+Abuse+OR+Opioid+Related+Disorders+OR+Opioid+Dependence+OR+Opioid-use+Disorder&term=&type=&rslt=&age_v=&gndr=&intr=MAT+OR+medication+assisted+therapy&titles=&outc=&spons=&lead=&id=&cntry=&state=&city=&dist=&locn=&strd_s=&strd_e=&prcd_s=&prcd_e=&sfpd_s=&sfpd_e=&lupd_s=&lupd_e=&sort=

APPENDIX C. LIST OF EXCLUDED STUDIES

Exclude reasons: 1=Ineligible population, 2=Ineligible intervention, 3=Ineligible comparator, 4=Ineligible outcome, 5=Ineligible timing, 6=Ineligible study design, 7=Ineligible publication type 8=Outdated or ineligible systematic review

#	Citation	Exclude reason
1	Alanis-Hirsch K, Croff R, Ford JH, 2nd, et al. Extended-Release Naltrexone: A Qualitative Analysis of Barriers to Routine Use. *J Subst Abuse Treat.* 2016;62:68-73.	E1
2	Borders AE, Weiss D, Dixon M, Saroyan K, Keenan-Devlin L, Lee King PA. 242: Hospital readiness to care for mothers and newborns affected by opioids. *American Journal of Obstetrics and Gynecology.* 2019;220(1 Suppl):S174-S175.	E1
3	Brown SE, Altice FL. Self-management of buprenorphine/naloxone among online discussion board users. *Subst Use Misuse.* 2014;49(8):1017-1024.	E1
4	Carroll JJ, Rich JD, Green TC. The More Things Change: Buprenorphine/naloxone Diversion Continues While Treatment Remains Inaccessible. *J Addict Med.* 2018;12(6):459-465.	E1
5	Knudsen HK, Abraham AJ, Oser CB. Barriers to the implementation of medication-assisted treatment for substance use disorders: the importance of funding policies and medical infrastructure. *Eval Program Plann.* 2011;34(4):375-381.	E1
6	Schultz NR, Martinez R, Cucciare MA, Timko C. Patient, Program, and System Barriers and Facilitators to Detoxification Services in the U.S. Veterans Health Administration: A Qualitative Study of Provider Perspectives. *Subst Use Misuse.* 2016;51(10):1330-1341.	E1
7	Timko C, Schultz NR, Britt J, Cucciare MA. Transitioning From Detoxification to Substance Use Disorder Treatment: Facilitators and Barriers. *J Subst Abuse Treat.* 2016;70:64-72.	E1
8	Wakeman SE, Baggett MV, Pham-Kanter G, Campbell EG. Internal medicine residents' training in substance use disorders: a survey of the quality of instruction and residents' self-perceived preparedness to diagnose and treat addiction. *Subst Abus.* 2013;34(4):363-370.	E1
9	Alexandridis AA, Dasgupta N, McCort AD, et al. Associations between implementation of Project Lazarus and opioid analgesic dispensing and buprenorphine utilization in North Carolina, 2009-2014. *Injury Epidemiology.* 2019;6 (1) (no pagination)(2).	E2
10	Azar P, Nikoo M, Miles I. Methadone to buprenorphine/naloxone induction without withdrawal utilizing transdermal fentanyl bridge in an inpatient setting-Azar method. *Am J Addict.* 2018;27(8):601-604.	E2
11	Bozinoff N, Anderson BJ, Bailey GL, Stein MD. Correlates of stigma severity among persons seeking opioid detoxification. *J Addict Med.* 2018;12(1):19-23.	E2
12	Chatterjee A, Yu EJ, Tishberg L. Exploring opioid addiction and treatmentamong in-dividuals experiencing homelessness as part of a family. *J Gen Intern Med.* 2018;33(2 Suppl 1):191-192.	E2
13	Damian AJ, Mendelson T, Agus D. Predictors of buprenorphine treatment success of opioid dependence in two Baltimore City grassroots recovery programs. *Addict Behav.* 2017;73:129-132.	E2
14	Finlay AK, Wong JJ, Ellerbe LS, et al. Barriers and Facilitators to Implementation of Pharmacotherapy for Opioid Use Disorders in VHA Residential Treatment	E2

#	Citation	Exclude reason
	Programs. *Journal of studies on alcohol and drugs.* 2018;79(6):909-917.	
15	Friedmann PD, Hoskinson R, Jr., Gordon M, et al. Medication-assisted treatment in criminal justice agencies affiliated with the criminal justice-drug abuse treatment studies (CJ-DATS): Availability, barriers, and intentions. *Subst Abus.* 2012;33(1):9-18.	E2
16	Khatiwoda P, Proeschold-Bell RJ, Meade CS, Park LP, Proescholdbell S. Facilitators and Barriers to Naloxone Kit Use Among Opioid-Dependent Patients Enrolled in Medication Assisted Therapy Clinics in North Carolina. *N C Med J.* 2018;79(3):149-155.	E2
17	Knudsen HK, Roman PM. Financial factors and the implementation of medications for treating opioid use disorders. *J Addict Med.* 2012;6(4):280-286.	E2
18	Kourounis G, Richards BD, Kyprianou E, Symeonidou E, Malliori MM, Samartzis L. Opioid substitution therapy: Lowering the treatment thresholds. *Drug Alcohol Depend.* 2016;161:1-8.	E2
19	Lagisetty P, Klasa K, Bush C, Heisler M, Chopra V, Bohnert A. Primary care models for treating opioid use disorders: What actually works? A systematic review. *PLoS ONE.* 2017;12 (10) (no pagination)(e0186315).	E2
20	Lin LA, Lofwall MR, Walsh SL, Knudsen HK. Perceived need and availability of psychosocial interventions across buprenorphine prescriber specialties. *Addict Behav.* 2019;93:72-77.	E2
21	Lloyd JJ, Ricketts EP, Strathdee SA, et al. Social contextual factors associated with entry into opiate agonist treatment among injection drug users. *Am J Drug Alcohol Abuse.* 2005;31(4):555-570.	E2
22	MacDonald K, Lamb K, Thomas ML, Khentigan W. Buprenorphine Maintenance Treatment of Opiate Dependence: Correlations Between Prescriber Beliefs and Practices. *Subst Use Misuse.* 2016;51(1):85-90.	E2
23	McMurphy S, Shea J, Switzer J, Turner BJ. Clinic-based treatment for opioid dependence: a qualitative inquiry. *Am J Health Behav.* 2006;30(5):544-554.	E2
24	Mitchell SG, Willet J, Monico LB, et al. Community correctional agents' views of medication-assisted treatment: Examining their influence on treatment referrals and community supervision practices. *Subst Abus.* 2016;37(1):127-133.	E2
25	Ober AJ, Watkins KE, McCullough CM, Setodji CM, Osilla K, Hunter SB. Patient predictors of substance use disorder treatment initiation in primary care. *J Subst Abuse Treat.* 2018;90:64-72.	E2
26	Oser CB, Roman PM. A categorical typology of naltrexone-adopting private substance abuse treatment centers. *J Subst Abuse Treat.* 2008;34(4):433-442.	E2
27	Rieckmann T, Moore L, Croy C, Aarons GA, Novins DK. National Overview of Medication-Assisted Treatment for American Indians and Alaska Natives With Substance Use Disorders. *Psychiatr Serv.* 2017;68(11):1136-1143.	E2
28	Baxter JD, Clark RE, Samnaliev M, Leung GY, Hashemi L. Factors associated with Medicaid patients' access to buprenorphine treatment. *J Subst Abuse Treat.* 2011;41(1):88-96.	E3
29	Andrilla CHA, Moore TE, Patterson DG. Overcoming Barriers to Prescribing Buprenorphine for the Treatment of Opioid Use Disorder: Recommendations from Rural Physicians. *The Journal of rural health : official journal of the American Rural Health Association and the National Rural Health Care Association.* 2019;35(1):113-121.	E4
30	Brigham GS, Amass L, Winhusen T, Harrer JM, Pelt A. Using buprenorphine short-term taper to facilitate early treatment engagement. *J Subst Abuse Treat.*	E4

#	Citation	Exclude reason
	2007;32(4):349-356.	
31	CADTH. Programs for the Reduction or Discontinuation of Opioids or Opioid Substitution Therapy: A Review of the Clinical Effectiveness. 2018.	E4
32	Chai P, Ben-Ghaly L, Tseng E, Gilbert M, Boyer E. Illuminating the darknet: An assessment of opioid users" online interactions regarding naloxone and naltrexone. *Journal of Medical Toxicology.* 2018;14(1):14.	E4
33	Gonzalez KF, Meyers S, Portelli-Gupta J, et al. Undergraduate-level health coaches as volunteers to assist with office-based opioid treatment with buprenorphine. *Am J Addict.* 2017;26(3):285-286.	E4
34	Hatcher AE, Mendoza S, Hansen H. At the Expense of a Life: Race, Class, and the Meaning of Buprenorphine in Pharmaceuticalized "Care". *Subst Use Misuse.* 2018;53(2):301-310.	E4
35	Knudsen HK, Ducharme LJ, Roman PM, Link T. Buprenorphine diffusion: The attitudes of substance abuse treatment counselors. *J Subst Abuse Treat.* 2005;29(2):95-106.	E4
36	Knudsen HK, Studts JL. Perceived Impacts of the Affordable Care Act: Perspectives of Buprenorphine Prescribers. *J Psychoactive Drugs.* 2017;49(2):111-121.	E4
37	Lin LA, Lofwall MR, Walsh SL, Gordon AJ, Knudsen HK. Perceptions and practices addressing diversion among US buprenorphine prescribers. *Drug Alcohol Depend.* 2018;186:147-153.	E4
38	Matusow H, Dickman SL, Rich JD, et al. Medication assisted treatment in US drug courts: results from a nationwide survey of availability, barriers and attitudes. *J Subst Abuse Treat.* 2013;44(5):473-480.	E4
39	Muthulingam D, Bia J, Madden LM, Farnum SO, Barry DT, Altice FL. Using nominal group technique to identify barriers, facilitators, and preferences among patients seeking treatment for opioid use disorder: A needs assessment for decision making support. *J Subst Abuse Treat.* 2019;100:18-28.	E4
40	Roman PM, Abraham AJ, Knudsen HK. Using medication-assisted treatment for substance use disorders: evidence of barriers and facilitators of implementation. *Addict Behav.* 2011;36(6):584-589.	E4
41	Suzuki J, Ellison TV, Connery HS, Surber C, Renner JA. Training in Buprenorphine and Office-Based Opioid Treatment: A Survey of Psychiatry Residency Training Programs. *Acad Psychiatry.* 2016;40(3):498-502.	E4
42	Suzuki J, Connery HS, Ellison TV, Renner JA. Preliminary survey of office-based opioid treatment practices and attitudes among psychiatrists never receiving buprenorphine training to those who received training during residency. *Am J Addict*. 2014;23(6):618-622.	E4
43	Thornton JD, Lyvers E, Scott VGG, Dwibedi N. Pharmacists' readiness to provide naloxone in community pharmacies in West Virginia. *J Am Pharm Assoc (2003).* 2017;57(2S):S12-S18.e14.	E4
44	Weiss L, Netherland J, Egan JE, et al. Integration of buprenorphine/naloxone treatment into HIV clinical care: lessons from the BHIVES collaborative. *Journal of Acquired Immune Deficiency Syndromes.* 2011;56(Suppl 1):S68-75.	E4
45	Cohen, S. A. (2015). "Office-based treatment of opioid dependence: Mental health services & best practice guidelines for buprenorphine-assisted treatment." Dissertation Abstracts International: Section B: The Sciences and Engineering **76**(2-B(E)): No Pagination Specified.	E4
46	Auriacombe M, Fatseas M, Dubernet J, Daulouede JP, Tignol J. French field	E5

#	Citation	Exclude reason
	experience with buprenorphine. *Am J Addict.* 2004;13(Suppl 1):S17-28.	
47	Bojko MJ, Mazhnaya A, Makarenko I, et al. "Bureaucracy & Beliefs": Assessing the barriers to accessing opioid substitution therapy by people who inject drugs in Ukraine. *Drugs: Education, Prevention & Policy.* 2015;22(3):255-262.	E5
48	Daulouede JP, Caer Y, Galland P, et al. Preference for buprenorphine/naloxone and buprenorphine among patients receiving buprenorphine maintenance therapy in France: a prospective, multicenter study. *J Subst Abuse Treat.* 2010;38(1):83-89.	E5
49	Fatseas M, Auriacombe M. Why buprenorphine is so successful in treating opiate addiction in France. *Curr Psychiatry Rep.* 2007;9(5):358-364.	E5
50	Holliday S, Magin P, Oldmeadow C, et al. An examination of the influences on new South Wales general practitioners regarding the provision of opioid substitution therapy. *Drug and Alcohol Review.* 2013;32(5):495-503.	E5
51	Kouyoumdjian FG, Patel A, To MJ, Kiefer L, Regenstreif L. Physician prescribing of opioid agonist treatments in provincial correctional facilities in Ontario, Canada: A survey. *PLoS ONE.* 2018;13(2):e0192431.	E5
52	Kumar S, Gupte HA, Isaakidis P, Mishra JK, Munjattu JF. "They don't like us....": Barriers to antiretroviral and opioid substitution therapy among homeless HIV positive people who inject drugs in Delhi: A mixed method study. *PLoS ONE.* 2018;13(8):e0203262.	E5
53	Sharma Haase K, Kunoe N, Opheim A, et al. Interest in Extended Release Naltrexone among Opioid Users. *Eur Addict Res.* 2016;22(6):301-305.	E5
54	Alford DP, LaBelle CT, Kretsch N, et al. Collaborative care of opioid-addicted patients in primary care using buprenorphine: five-year experience. *Arch Intern Med.* 2011;171(5):425-431.	E6
55	Bahji A, Bajaj N. Opioids on trial: A systematic review of interventions for the treatment and prevention of opioid overdose. *Canadian Journal of Addiction.* 2018;9(1):26-33.	E6
56	Campbell CI, Parthasarathy S, Young-Wolff KC, Satre DD. Buprenorphine Treatment and Patient Use of Health Services after the Affordable Care Act in an Integrated Health Care System. *J Psychoactive Drugs.* 2017;49(2):160-168.	E6
57	Hassamal S, Goldenberg M, Ishak W, Haglund M, Miotto K, Danovitch I. Overcoming Barriers to Initiating Medication-assisted Treatment for Heroin Use Disorder in a General Medical Hospital: A Case Report and Narrative Literature Review. *J Psychiatr Pract.* 2017;23(3):221-229.	E6
58	Jones CW, Christman Z, Smith CM, et al. Comparison between buprenorphine provider availability and opioid deaths among US counties. *J Subst Abuse Treat.* 2018;93:19-25.	E6
59	Polydorou S, Ross S, Coleman P, et al. Integrating Buprenorphine Into an Opioid Treatment Program: Tailoring Care for Patients With Opioid Use Disorders. *Psychiatr Serv.* 2017;68(3):295-298.	E6
60	Reif S, Horgan CM, Hodgkin D, Matteucci AM, Creedon TB, Stewart MT. Access to Addiction Pharmacotherapy in Private Health Plans. *J Subst Abuse Treat.* 2016;66:23-29.	E6
61	Patients more likely to engage in treatment at 30 days when given buprenorphine in the ED, referred for follow-up. *ED Manag.* 2015;27(8):92-95.	E7
62	Alexandridis AA. Longitudinal cohort studies of addiction treatment initiation and opioid overdose prevention efforts in North Carolina. *Dissertation Abstracts International: Section B: The Sciences and Engineering.* 2019;80(1-B(E)):No	E7

#	Citation	Exclude reason
	Pagination Specified.	
63	Alim T, Richardson F, Settles-Reaves B, et al. Buprenorphine integrated care delivery project: Correlates of mental health screening and primary care outcomes. *Neuropsychopharmacology.* 2017;43(Suppl 1):S256-S257.	E7
64	Andraka-Christou BT. Social and legal perspectives on underuse of medication-assisted treatment for opioid dependence. *Dissertation Abstracts International Section A: Humanities and Social Sciences.* 2017;78(2-A(E)):No Pagination Specified.	E7
65	Azores-Gococo NM, Fridberg DJ. Harm-reduction strategies for injection drug use. *Psychiatric Annals.* 2017;47(1):45-48.	E7
66	Balouch H, Noott A. The therapeutic alliance between pharmacist and services users accessing substitute treatment for opiate addiction-keys to successful engagement and outcomes. *International Journal of Pharmacy Practice.* 2013;2:125-126.	E7
67	Bartholow LAM, Pope J. Use of Buprenorphine to Treat Opioid Use Disorder. *J Psychosoc Nurs Ment Health Serv.* 2018;56(11):9-12.	E7
68	Barthwell AG, Young JM, Barnes MC, Kulkarni SR. What's in a number? Recommending practicality in the DATA 2000 patient limits. *J Opioid Manag.* 2016;12(4):243-250.	E7
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APPENDIX D. EVIDENCE TABLES

DATA ABSTRACTION OF INCLUDED PRIMARY STUDIES

Data Abstraction of Observational Studies

Author Year N	Study Design	Geographic Area	Population	Setting	Type of MAT examined (buprenorphine, extended-release naltrexone, or both)	Patient, provider, and systems-levels barriers and facilitators to use of MAT for OUD
Aletraris 2016[1] N=725	Survey	National	Counselors	Substance abuse disorder treatment centers	Buprenorphine	**KQ1:** **Provider facilitators:** Multivariate analysis indicated regional differences, and that medication-specific training (b=.251, SE=.037, P<.001), adaptability (b=.131, SE=.062, P<.05), and educational attainment (b=.362, SE=.148, p<.05) were positively related with perceptions of acceptability of buprenorphine, even after controlling for organizational characteristics. Counselors' reported awareness of buprenorphine's effectiveness was not significantly related to its acceptability. **Provider barriers:** Adherence to a 12-step orientation was negatively associated with acceptability (b=-.170, SE=.047, P<.001).
Andraka-Christou 2018[2] N=20	Semi-structured interviews	No limit to geographic area; 4 states represented (Indiana, Florida, Wisconsin, Illinois)	Physicians (mix of specialty, including addiction medicine and primary care)	Office-based practice	Both	**KQ1:** **Provider barriers to addiction treatment:** 1. Limited addiction education 2. Perception of patients with addiction as "difficult"; time and staff limitations 3. Financial or insurance-related barriers 4. Stigma of addiction 5. Misconceptions about MAT **Provider barriers to buprenorphine prescription:** 1. Regulatory barriers 2. Concerns of illicit activity and legal liability 3. Barriers imposed by the criminal justice system **Provider barriers to extended-release naltrexone**:

Author Year N	Study Design	Geographic Area	Population	Setting	Type of MAT examined (buprenorphine, extended-release naltrexone, or both)	Patient, provider, and systems-levels barriers and facilitators to use of MAT for OUD
						1. Lack of medication awareness 2. Patient fear or lack of interest in the medication 3. Limited access to medically-supervised opioid detoxification **Provider facilitators:** 1. Expanded education opportunities 2. Insurance reform 3. Collaboration with other behavioral health professionals **4.** Changes to buprenorphine regulations
Andrilla 2018[3] N=1,221	Survey	National	Physicians with a rural practice	Variety of settings within rural areas	Buprenorphine	**KQ2:** **Provider barriers:** Physicians in the Pacific Census Division reported lacking confidence in their ability to manage OUD at nearly 3 times the rate of physicians elsewhere (22.0% vs 7.7%, p<0.001). Physicians in the East and West South Census Divisions reported higher rates of concern about attracting drug users to their practice than other physicians (42.7% vs 27.8% respectively, p=0.001).
Andrilla 2017[4] N=1,124	Survey	National	Physicians with a rural practice		Buprenorphine	**KQ1:** **Provider barriers:** 1. Physicians provided with a list of possible barriers and option to fill in one or more, endorsed barriers in this order: 2. Diversion or misuse of medication concerns (48%) 3. Lack of available mental health or psychosocial support services (44%) 4. Time constraints (40%) 5. Lack of specialty backup for complex problems (32%) 6. Attention of drug users to practice (31%) 7. Financial/Reimbursement concerns (29%) 8. Resistance from practice partner (14%) 9. DEA intrusion (14%) 10. Lack of confidence in managing OUD (10%) 11. Lack of patient need (2.4%)

Author Year N	Study Design	Geographic Area	Population	Setting	Type of MAT examined (buprenorphine, extended-release naltrexone, or both)	Patient, provider, and systems-levels barriers and facilitators to use of MAT for OUD
						Among a subset of providers that listed additional barriers, common barriers were administrative/infrastructure issues; regulatory hurdles; difficult patients; and stigma.
Burns 2016[5] N=45 states	Survey	National	State Medicaid and substance abuse treatment officials	State Medicaid departments	Buprenorphine	**KQ1:** **System facilitators:** States increasingly covered buprenorphine over time. **System barriers:** Requirement of prior authorization, copayments, and concurrent counseling. **KQ2:** No regional pattern among states with prior authorization requirements or lack thereof.
Cicero 2018[6] N=303	Survey	National	Patients with OUD	OUD treatment centers	Buprenorphine	**KQ1:** **Patient barriers:** 1. High out-of-pocket costs of buprenorphine 2. Lack of access to prescribing physician **Patient facilitators:** Most (81%) patients with a history of buprenorphine diversion reported having access to a prescribing physician would encourage them to get a prescription, and 43% of all patients reported that they would use buprenorphine more often if it was easier to find and more accessible by prescription or other sources. **KQ2:** **Patient barriers**: The same barriers were reported by patients who had used diverted buprenorphine (33%) and those that didn't (38%).
DeFlavio 2015[7] N=108	Survey	Vermont and New Hampshire	Family physicians in rural states	Family Medicine	Buprenorphine	**KQ1:** **Provider barriers**: Most providers said cost was a barrier to treatment (89%). Providers also cited logistic barriers such as inadequately trained staff (88%), insufficient time (80%), inadequate office space (49%), and cumbersome regulations (37%). Most commonly cited barriers in open-ended

Author Year N	Study Design	Geographic Area	Population	Setting	Type of MAT examined (buprenorphine, extended-release naltrexone, or both)	Patient, provider, and systems-levels barriers and facilitators to use of MAT for OUD
						responses were lack of knowledge, time, or interest; mistrust; and difficulty treating patients with addiction.
Fox 2015a[8] N=102	Survey	New York City	Syringe exchange participants with history of opioid use and using buprenorphine either prescribed or non-prescribed	Community-based harm reduction agency	Buprenorphine	**KQ1:** **Patient barriers:** 1. Did not know where to get buprenorphine treatment (50%) 2. Could not pay (33%) 3. Did not have transportation (28%) 4. Treated poorly by treatment center staff (14%) 5. Did not want to be seen at treatment center (14%) 6. Did not trust treating physician (9%) 7. Did not have child care (6%) **KQ2:** Those who used buprenorphine illicitly were significantly more likely to report not knowing where to get buprenorphine treatment than those who did not use buprenorphine illicitly (64% vs 36%, p<.01).
Fox 2015b[9] B=21	Semi-structured interviews	New York City	Formerly incarcerated individuals with OUD	Addiction treatment settings	Buprenorphine	**KQ1:** **Patient barriers:** 1. Difficulty with re-entry including family stress, impact of incarceration on relationships, homelessness/unemployment 2. Stigma including a belief in personal responsibility to quit opioids rather than use MAT, fear of dependency, fear of withdrawal **3.** Lack of education on buprenorphine **Patient facilitators:** **1.** Acceptability of buprenorphine after relapse
Hewell 2017b[10] N=11	Interviews	Alaska	OUD patients impacted by MAT	Private counseling and substance abuse center	Buprenorphine	**KQ1:** **Patient barriers:** 1. Social stigma including negative public belief about addiction 2. Lack of support/understanding from providers

Author Year N	Study Design	Geographic Area	Population	Setting	Type of MAT examined (buprenorphine, extended-release naltrexone, or both)	Patient, provider, and systems-levels barriers and facilitators to use of MAT for OUD
						3. Lack of resources (health literacy, access/availability, financial) **Patient facilitators:** 1. Support from family, support groups, and health professionals **2.** Initial highly structured treatment program that gradually becomes more flexible
Huhn 2017[11] N=558	Survey	National	AMA and ASAM members (physicians, sample from listservs, not regionally specific)	Variable	Buprenorphine	**KQ1:** **Provider barriers:** 1. Not having time for additional patients (19.2%) **2.** Not knowing how to get the waiver (14.0%)
Huskamp 2018[12] N=100 plans	Cross-sectional study (database)	National	Marketplace health plans	NA	Both	**KQ1:** **System barriers/facilitators:** Most insurance plans cover buprenorphine (86%) but few cover naltrexone (11% for implantable, 26% for injectable). There are some restrictions in place before patients can receive MAT (43% of plans covering buprenorphine/naloxone require prior authorization, up to 5% require stepped therapy depending on drug). Oral versions of drugs are more likely to be covered than injectable (86.1% vs 10.6% for buprenorphine)
Hutchinson 2014[13] N=92	Interviews	Rural Washington	Physicians	Variable (GP/ Specialty)	Buprenorphine	**KQ1:** **Provider barriers:** 1. Lack of mental health and psychosocial support (64%) 2. Time constraints (54%) 3. Lack of specialty back-up (45%) 4. Lack of confidence in ability to manage opioid addiction (41%) 5. Resistance from practice partners (42%) 6. Lack of institutional support (36%)

Author Year N	Study Design	Geographic Area	Population	Setting	Type of MAT examined (buprenorphine, extended-release naltrexone, or both)	Patient, provider, and systems-levels barriers and facilitators to use of MAT for OUD
						Few cited financial issues (28%) or lack of patient need as barriers. **Provider facilitators:** Local telemedicine access to specialists or follow-up course/site visits after training to help with implementation.
Jones 2019[14] N=4,225	Survey	National	Clinicians with DATA waiver	Variable (office-based, hospital or health system, addiction medicine)	Buprenorphine	**KQ1:** **Provider barriers:** Clinicians cited the most common primary barrier to prescribing buprenorphine or prescribing to the authorized limit as: 1. Lack of patient demand (19.4%) 2. Time constraints in practice (14.6%) 3. Insurance reimbursement, prior authorization, or other insurance requirements (13.2%) Less frequently reported barriers include: 1. Getting practice started/no current practice site 2. Concern about buprenorphine misuse or diversion 3. Federal or state regulations related to buprenorphine 4. Do not want to be inundated with requests for buprenorphine 5. Lack of confidence managing patients with opioid use disorder 6. Lack of access to psychiatric services 7. Concerns over DEA intrusion 8. Prefer non-buprenorphine treatment options 9. Lack of access to addiction specialists for consolation 10. Need supervisory physician/protocol for NP/PA **Provider facilitators:** Clinicians cited the most endorsed facilitators for buprenorphine prescribing as: 1. Increased patient demand (22.2%) 2. Institutional support for buprenorphine treatment (12.5%)

Author Year N	Study Design	Geographic Area	Population	Setting	Type of MAT examined (buprenorphine, extended-release naltrexone, or both)	Patient, provider, and systems-levels barriers and facilitators to use of MAT for OUD
						3. Increased reimbursement (12.2%) Less frequently reported facilitators include: 1. Integrated system with direct access to addiction specialists and behavioral health providers 2. Easier system for referral to psychosocial or other behavioral health providers 3. Addiction medicine mentor 4. More time with patients 5. Improved guidance on clinical practice standards 6. Additional in-person or online education on addiction treatment **KQ2:** Clinician characteristics associated with greater odds of prescribing buprenorphine since obtaining a DATA 2000 waiver were: 1. Practicing in the Midwest compared to the South (aOR = 1.35; 95% CI = 1.03–1.78) 2. Practicing in a specialty substance abuse treatment facility (aOR = 1.91, 95% CI = 1.16-3.13), or an opioid treatment program (aOR = 1.85, 95% CI = 1.14-2.99) compared to an office-based solo practice 3. Interacting with PCSS-MAT (aOR = 1.32, 95% CI = 1.10–1.59) 4. Being listed on the SAMHSA Provider Locator (aOR = 2.13, 95% CI = 1.79–2.54) 5. Co-prescribing or encouraging patients to obtain naloxone (aOR = 1.56, 95% CI = 1.28–1.90) Clinician characteristics associated with lower odds of prescribing buprenorphine since obtaining a DATA waiver were: 1. Practicing in a hospital or health system (aOR = 0.62, 95% CI = 0.45–0.86)

Author Year N	Study Design	Geographic Area	Population	Setting	Type of MAT examined (buprenorphine, extended-release naltrexone, or both)	Patient, provider, and systems-levels barriers and facilitators to use of MAT for OUD
						2. Practicing in a clinic setting, including federally qualified health centers (aOR = 0.69, 95% CI = 0.49– 0.96) 3. Practicing in an ED (aOR = 0.51, 95% CI = 0.29–0.90) 4. Practicing in other practice settings (aOR = 0.35, 95% CI = 0.19–0.61)
Kermack 2017[15] N=72	Survey	New York City	Buprenorphine providers, especially those serving uninsured or Medicaid patients	Variable, most in hospital or community general practices in urban areas	Buprenorphine	**KQ1:** **Provider barriers:** Three statements were endorsed as barriers by 50% or more of respondents: 1. Medication prior authorization requirements (78%) 2. Inadequate clinical space, time, and support staff (52%) 3. Inadequate availability of psychiatric services for patients with co-occurring psychiatric problems (50%) Barriers identified by substantial minorities include: 1. Concerns about adequate reimbursement for care (42%) 2. The (then) 100-patient prescriber limit (41%) 3. Access to psychosocial counseling (38%) 4. Buprenorphine diversion (38%) A recent state requirement to check a New York state prescription monitoring database and inadequate access to addiction specialist consultation were the least likely to be labeled as practice barriers.
Knudsen 2019[16] N=160	Survey	Florida, Ohio, Wisconsin	Administrators	Substance Use Disorder treatment programs	Both	**KQ1:** **System facilitators:** Adopters of each of the 5 pharmacotherapies reported significantly greater physician outreach than organizations that did not provide these medications. Organizations providing buprenorphine-naloxone and generic buprenorphine reported significantly greater resources dedicated to physician recruitment than organizations not offering these medications.
Lagisetty 2019[17] N=1369	Survey	National	Prescribing Physicians	Office-based setting	Buprenorphine	**KQ2:** **Factors associated with prescription:** Non-white patients were less likely to receive buprenorphine at their visits than

Author Year N	Study Design	Geographic Area	Population	Setting	Type of MAT examined (buprenorphine, extended-release naltrexone, or both)	Patient, provider, and systems-levels barriers and facilitators to use of MAT for OUD
						white patients (Black: aOR: 0.23; 95% CI .13-.44; Other: aOR: 0.27; 95% CI .08-.90). Those aged 30-50 were more likely to receive a prescription than those <30 (aOR: 1.68 CI 1.33-2.12). Those who self-pay were more likely to receive a prescription than those with private insurance (aOR: 12.27 CI 6.86-21.91).
Molfenter 2019[18] N=18	Interviews	Ohio	County board members	Alcohol, Drug Abuse and Mental Health Services (ADAMHS) county boards	Buprenorphine	**KQ1:** **System barriers:** 1. Payment environment 2. Anti-pharmacotherapy attitudes for SUD providers 3. Diversion concerns 4. Physician prescribing capacity. Payment environment and anti-pharmacotherapy attitudes diminished as barriers over time (from 2012/13 to 2015) as more grants were available to fund MAT for patients and perceptions around the efficacy of MAT changed as providers gained experience with it.
Molfenter 2015[19] N=54	Longitudinal interviews	Ohio	County board members and addiction treatment center providers	Alcohol, Drug Abuse and Mental Health Services (ADAMHS) county boards and treatment centers	Buprenorphine	**KQ1:** **Providers barriers:** 1. Negative attitudes toward use of medication 2. Lack of awareness/understanding of buprenorphine 3. Limited physician availability/capacity 4. Insufficient resources (funding) 5. Diversion concerns **Providers facilitators:** 1. Provider knowledge of buprenorphine 2. Good working relationship with criminal justice system (they refer patients to addiction treatment) 3. Available funding **KQ2:** Counties with low buprenorphine adoption reported that negative attitudes towards buprenorphine was a major barrier. Counties with high buprenorphine adoption reported good funding but limited physician availability.

Author Year N	Study Design	Geographic Area	Population	Setting	Type of MAT examined (buprenorphine, extended-release naltrexone, or both)	Patient, provider, and systems-levels barriers and facilitators to use of MAT for OUD
Monico 2017[20] N=20	Semi-structured interviews	Delaware	Patients	Treatment program	Buprenorphine	**KQ1:** **Patient barriers:** Patients experience multiple barriers related to accessing treatment such as: 1. Having to go to clinic multiple times before gaining access to buprenorphine 2. Having to pay out of pocket for buprenorphine or needing prior authorization 3. Limited physician capacity for new patients 4. "First fail" policy requiring that patients first fail at drug-free treatment before receiving MAT 5. Fear of stigma from families, workplaces and criminal justice system. **Patient facilitators:** A facilitator was talking with other SUD patients who had positive experiences with buprenorphine.
Murphy 2014[21] N=4,030	Retrospective cohort study (database)	Washington, Northern Idaho	Patients with OUD	Regional non-profit integrated health system	Buprenorphine	**KQ1:** Those more likely to receive buprenorphine: 1. Living in a metropolitan area (OR: 1.62; CI: 1.17-2.24) 2. Point of service insurance plan (compared to Medicare) (OR: 2.63; 1.17-5.93) 3. Comorbid drug-induced mental disorder (OR 3.21; CI: 2.61-3.95) 4. Chronic pain diagnosis (OR: 1.82; CI: 1.37-2.4) Those less likely to receive buprenorphine: 1. Older patients (OR = 0.98; CI: .97-.99) 2. Co-occurring alcohol diagnosis (OR: .48, CI: .38-.60) 3. Co-occurring non-opioid drug-dependency (OR: .02, CI: .01-.03) Other variables were not significant.

Author Year N	Study Design	Geographic Area	Population	Setting	Type of MAT examined (buprenorphine, extended-release naltrexone, or both)	Patient, provider, and systems-levels barriers and facilitators to use of MAT for OUD
						KQ2: A 1% increase in the number of providers with DATA waivers in a patient's area increased the odds of receiving buprenorphine by 15% (OR: 1.15, 1-1.32)
Parran 2017[22] N=294	Interviews	Ohio	DATA-waivered physicians	Office-based	Buprenorphine	**KQ1:** **Physician barriers:** Nearly half (47.3%) of survey respondents did not accept insurance for buprenorphine.
Reif 2017[23] N=22,874	Longitudinal survey	National	Senior health plan executives	Commercial health plans	Buprenorphine	**KQ1:** **System barriers/facilitators:** Opioid Treatment Programs (OTP) were a covered service for 64.5% of all health plans in 2003, 69.0% of all health plans in 2010, and 97.0% of all health plans in 2014. BUP was covered under pharmacy benefit by 70.0% of all health plans in 2003 and 100% of all health plans in 2010 (question not asked in 2014). Prior authorization requirements for BUP prescription from 7.9% in 2003 to 38.9% in 2010.
Simon 2017[24] N=100	Database (EMR) review	Boston, MA	Patients	Office-based buprenorphine treatment program (Adult Medicine Clinic, Harborview Medical Center)	Buprenorphine	**KQ1:** Examined the patient dropout rate between intake and induction (60% dropout within 90 days); median time to induction was 18 days. **Patient barriers:** In final model controlling for the maximum number of variables, those with recent polysubstance use (OR 0.15, CI 0.04-0.53); prior methadone treatment history (OR 0.05, CI 0.01-0.36); prior BUP treatment (OR 0.60, CI 0.01-0.47); and other prior treatment (OR 0.19, CI 0.04-0.98) were less likely to reach induction. Sex, age, race, psychiatric comorbidity, recent homelessness, employment status, and currently partnered were not associated with failure to reach induction.
Streisel 2018[25] N=959	Survey	Not reported	Treatment specialists and community-	Community corrections agencies	Buprenorphine	**KQ1:** **Provider barriers/facilitators:** Factors that were significantly related to the intent to refer clients to buprenorphine or

Author Year N	Study Design	Geographic Area	Population	Setting	Type of MAT examined (buprenorphine, extended-release naltrexone, or both)	Patient, provider, and systems-levels barriers and facilitators to use of MAT for OUD
			corrections officers			methadone were dependent on the respondents' work setting, perception of buprenorphine or methadone as a substitute addiction, how much training they felt they received, and their education level. Respondents were more likely to refer their clients to MAT if they did not view the treatment as a substitute addiction, compared to if they did. Education level (Master's degree or higher vs Bachelor's degree or less) was slightly more influential for buprenorphine referral than methadone. There was a 57% increase in how likely the respondent was to refer an individual to buprenorphine if the respondent felt they had been trained on buprenorphine treatment (chi square = 159.81, alpha = .00). **KQ2:** A higher percentage of those in treatment-based settings would refer their clients to buprenorphine versus methadone (77% vs 71%). A lower percentage of respondents in correctional-based settings would refer clients to BUP versus methadone (38% vs 46%).
Wen 2017[26] N=50 states	Database (Medicaid coverage of MAT)	National	Medicaid expansion states vs non-expansion states	NA	Buprenorphine	**KQ1:** **System facilitators:** State implementation of Medicaid expansion in 2014 was associated with a 70% increase in Medicaid-covered BUP prescriptions and a 50% increase in BUP spending. These increases are strongly associated with an increase in the availability of DATA-waived physicians.

QUALITY ASSESSMENT OF INCLUDED PRIMARY STUDIES

Quality Assessment of Observational Studies

Author Year	Were the sampling methods appropriate for capturing the desired population and response rates high? (Yes/No and rationale)	Were the survey questions, interview questions, or variables appropriate for capturing desired information? (Yes/No and rationale)	Was the population well-defined? (Yes/No and rationale)	Was the setting well-defined? (Yes/No and rationale)	Were the barriers and/or facilitators well-defined? (Yes/No and rationale)	Was a statistical analysis method used and was the analysis appropriate? (Yes/No and rationale)	Was a formal process used for recording, transcribing, and coding themes from interviews and was it appropriate? (Yes/No and rationale)	Overall rating (Met criteria; Did not meet criteria)
Aletraris 2016[1]	Yes; a nationally representative sample of counselors, response rate was 66%	Yes, although there were 7 response options given for each question and it is unlikely participants could distinguish between the middle options	Yes; descriptive characteristics of sample given	Yes; substance abuse treatment centers	Yes; although acceptability is just a proxy for adoption	Yes; regression analysis	NA	Met criteria
Andraka-Christou[2] 2018	Yes; purposive sampling by referral and networking at addiction-based medical conferences and included physicians with wide ranges of experiences	Yes; 5 categories of questions and these seemed appropriate	Yes; descriptive characteristics of sample given	Yes; office-based practice	Yes; detailed explanations of barriers/facilitators given	NA	Yes; 18/20 questions transcribed and coded, for others detailed notes were taken. Qualitative thematic analysis conducted	Met criteria
Andrilla 2018[3]	Yes; surveyed all rural physicians with waivers to prescribe buprenorphine; 60% response rate	Yes; list of barriers was reasonable and gave providers an option to list another	Yes; descriptive characteristics of sample given	Yes; survey among rural providers and areas of practice were described	Yes; but not a lot of detail provided	NA	NA	Met criteria

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Andrilla 2017[4]	Yes; surveyed all rural physicians with waivers to prescribe buprenorphine; 60% response rate	Yes; list of barriers was reasonable and gave providers an option to list another	Yes; descriptive characteristics of sample given	Yes; survey among rural providers and areas of practice were described	Yes; but not a lot of detail provided	NA	NA	Met criteria
Burns 2016[5]	Yes; contacting Medicaid officials is appropriate for answering study questions; 86% response rate.	Yes; survey items well described	Yes; Medicaid officials/substance abuse treatment officials	NA	Yes; Medicaid coverage policies	NA	NA	Met criteria
Cicero 2018[6]	No; recruiting OUD patients from larger SKIP study was appropriate but low response rate (46%)	Yes; survey asked about difficulty in obtaining buprenorphine prescriptions and what might affect their interest/usage	Yes; descriptive characteristics of sample given	Yes; patients selected from OUD treatment centers	Yes; 2 major barriers well-described	NA	NA	Did not meet criteria, survey response rate was low
DeFlavio 2015[7]	No; sampling of physician members of American Academy of	No; not clear what questions/statements were, although some are described in results	No; limited descriptive data on participants	Yes; those practicing family medicine in New	Yes; well described	NA, stat analyses used but not relevant to	Yes, inductive analysis technique for open-ended responses	Did not meet criteria; low estimated response rate, limited

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	Family Physicians (AAFP) was appropriate but low (15%) estimated response rate.			Hampshire and Vermont		study questions		information on survey questions, and limited information on participants
Fox 2015a[8]	Yes; all clients receiving office-based services at harm reduction survey notified; unclear what % participated	Yes; comprehensive survey questions	Yes; participants well described	Yes; mission and scope of harm reduction agency described	Yes; although only a narrow selection of barriers available	Yes; used stat analysis to compare those w/ vs w/out illicit buprenorphine use	NA	Met criteria
Fox 2015b[9]	Yes; convenience sample of people with variable experience with buprenorphine, although authors do not report how many declined participation	Yes; interview guide asking about a range of factors affecting interest/adoption of buprenorphine	Yes; descriptive characteristics of participants given	Yes; referred by federally-qualified health center with an office-based buprenorphine program	Yes; very well described	NA	Yes; formal process for transcribing and coding interviews	Met criteria
Hewell 2017b[10]	Yes; snowballing recruitment to	Yes; patients asked about what barriers they experienced	No; not clear what patients' OUD status was at time	Yes; conducted at a private	Yes; well described	NA	Yes; interviews transcribed and	Did not meet criteria, limited information on

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	identify participants but unclear what % participated.		of interviews, other details like race, SES, not provided	counseling center			themes were formally coded	study participants
Huhn 2017[11]	No; survey among members of American Medical Association and American Society of Addiction Medicine, 2% response rate to emailed survey link so there's a risk that those who responded were not representative	Yes; questions well described	Yes; descriptive characteristics provided	Yes; practice setting of participating providers described	Yes; although list of barriers was somewhat limited	NA, statistical methods used but not relevant to study questions	NA	Did not meet criteria, very low response rate
Huskamp 2018[12]	Yes; randomly selected 1 silver plan from urban and rural area in each state	Yes; measures were appropriate to address study questions	Yes; population=health insurance plans on Marketplace	Yes; each state represented	Yes; coverage of MAT is the barrier	Yes; statistical methods used to compare different formulations of the same drug	NA	Met criteria

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Hutchinson 2014[13]	Yes; sampled all providers who took buprenorphine training in a rural area; 77% response rate	Yes; provided a list of barriers and option to discuss others	Yes; descriptive characteristics provided	Yes; mixed practice settings in rural WA	Yes; list of barriers provided although these are only briefly described	No; but small sample sizes for comparison	NA	Met criteria
Jones 2019[14]	No; all clinicians who received DATA waiver in 2017 or those that increased patient limit were invited, low response rate (32%)	Yes; survey questions provided and appropriate	Yes; descriptive characteristics provided	Yes; detailed information on practice setting of included ppts	Yes; well described	Yes, used data analysis for subgroups	NA	Met criteria
Kermack 2017[15]	Yes; convenience sample + referrals + those attending NY Society of Addiction Medicine conference, 55% response rate	Yes; survey questions provided and were appropriate	Yes; detailed provider demographics provided	Yes; detailed information on practice setting of included participants	Yes; well described	NA	NA	Met criteria

Author Year	Were the sampling methods appropriate for capturing the desired population and response rates high? (Yes/No and rationale)	Were the survey questions, interview questions, or variables appropriate for capturing desired information? (Yes/No and rationale)	Was the population well-defined? (Yes/No and rationale)	Was the setting well-defined? (Yes/No and rationale)	Were the barriers and/or facilitators well-defined? (Yes/No and rationale)	Was a statistical analysis method used and was the analysis appropriate? (Yes/No and rationale)	Was a formal process used for recording, transcribing, and coding themes from interviews and was it appropriate? (Yes/No and rationale)	Overall rating (Met criteria; Did not meet criteria)
Knudsen 2019[16]	No; purposive sampling of 4 states based on variability in opioid overdoses, OUD prescriptions, ACA Medicaid expansion, rural/urban representation, low response rate (36%)	Yes; survey items well described	No; not clear who filled out survey	No; did not provide descriptive characteristics such as rural/urban breakdown, practice setting, *etc*	Yes; table 3 has overview of organizational resource needs and physician recruitment practices by the type of pharmacotherapy adoption	Yes; statistical analysis used	NA	Did not meet criteria; low response rates, lack of information on participants and settings assessed.
Lagisetty 2019[17]	No; no response rate reported and unclear how patient data was collected	No; unclear what the survey items were	No; no descriptive characteristics provided	Yes; office-based settings	Yes; patient factors well described	Yes; statistical analysis used	NA	Did not meet criteria; research letter is missing critical information on survey design and execution.
Molfenter 2019[18]	Yes; surveyed representative sample of county boards	Yes; questions provided and were appropriate	Yes; highest ranking member of county boards interviewed, and descriptive statistics provided	Yes; Ohio county boards and their jurisdiction	Yes; well described	NA	Yes; formal process for coding interviews	Met criteria
Molfenter 2015[27]	Yes; surveyed representative sample of county boards	Yes; general categories of questions for semi-	Yes; descriptive statistics provided	Yes; Ohio county boards and their jurisdiction as	Yes; well described	NA	Yes; formal process for transcribing and	Met criteria

Author Year	Were the sampling methods appropriate for capturing the desired population and response rates high? (Yes/No and rationale)	Were the survey questions, interview questions, or variables appropriate for capturing desired information? (Yes/No and rationale)	Was the population well-defined? (Yes/No and rationale)	Was the setting well-defined? (Yes/No and rationale)	Were the barriers and/or facilitators well-defined? (Yes/No and rationale)	Was a statistical analysis method used and was the analysis appropriate? (Yes/No and rationale)	Was a formal process used for recording, transcribing, and coding themes from interviews and was it appropriate? (Yes/No and rationale)	Overall rating (Met criteria; Did not meet criteria)
	and providers (between 44-55% of counties represented; no one refused to participate in interviews)	structured interviews provided		well as treatment centers			coding interviews	
Monico 2017[20]	Yes; structured sampling plan, 8 patients refused to be interviewed primarily due to transportation issues	Yes; interview guide provided	Yes; descriptive statistics provided	Yes; single treatment program	Yes; well described	NA	Yes; formal process for transcribing and coding interviews	Met criteria
Murphy 2014[21]	Yes; analyzed all data from patients with opioid dependence in a given period of time	Yes; comprehensive set of variables collected	Yes; inclusion criteria were clear and descriptive statistics provided	Yes; patients receiving care from Group Health	Yes; variables well described	Yes; statistical analyses conducted	NA	Met criteria
Parran 2017[22]	Yes; surveyed physicians on SAMHSA's Center for Substance Abuse and Treatment	Yes; asked about office practices re: buprenorphine prescription	No; only practice area provided (not age, sex, # of years practiced, *etc*)	No; no information on practice setting other than geographic	Yes; although it only provides the % of providers that accept insurance	Yes; statistical analyses conducted	NA	Did not meet criteria; lack of information on practice setting

Author Year	Were the sampling methods appropriate for capturing the desired population and response rates high? (Yes/No and rationale)	Were the survey questions, interview questions, or variables appropriate for capturing desired information? (Yes/No and rationale)	Was the population well-defined? (Yes/No and rationale)	Was the setting well-defined? (Yes/No and rationale)	Were the barriers and/or facilitators well-defined? (Yes/No and rationale)	Was a statistical analysis method used and was the analysis appropriate? (Yes/No and rationale)	Was a formal process used for recording, transcribing, and coding themes from interviews and was it appropriate? (Yes/No and rationale)	Overall rating (Met criteria; Did not meet criteria)
	buprenorphine provider list, 70% response rate			location & specialty				
Reif 2017[23]	Yes; purposive sampling plan and response rates between 79% to 89% depending on year	Yes; brief overview of categories of questions	No; no detailed information on characteristics of respondents or health plans	**NA**	Yes; coverage of MAT is the barrier	NA	NA	Did not meet criteria; study authors did not report detailed information of respondents and only reported limited information on health plans
Simon 2017[24]	Yes; first 100 consecutive patients seeking treatment from clinic	Yes; demographics, intake, and other treatment factors extracted	Yes; descriptive characteristics provided	Yes; clinic well described	Yes; well described	Yes; models conducted	NA	Met criteria
Streisel 2018[25]	No; sampled all sites participating in trial but unclear who was sampled and what response rate was.	Yes; detailed information on what survey items were made into variables	No; no detailed description of included population	No; correctional facilities part of trial, although limited additional information provided	Yes; individual and employment-related factors related to referrals	Yes; statistical analyses conducted	NA	Did not meet criteria; lack of information of both respondents and correctional facilities surveyed

Author Year	Were the sampling methods appropriate for capturing the desired population and response rates high? (Yes/No and rationale)	Were the survey questions, interview questions, or variables appropriate for capturing desired information? (Yes/No and rationale)	Was the population well-defined? (Yes/No and rationale)	Was the setting well-defined? (Yes/No and rationale)	Were the barriers and/or facilitators well-defined? (Yes/No and rationale)	Was a statistical analysis method used and was the analysis appropriate? (Yes/No and rationale)	Was a formal process used for recording, transcribing, and coding themes from interviews and was it appropriate? (Yes/No and rationale)	Overall rating (Met criteria; Did not meet criteria)
Wen 2017[26]	Yes; Medicaid database appropriate for study questions, all 50 states (excluding DC) were included	Yes; coverage and spending variables appropriate	Yes; Medicaid expansion vs non-expansion states	NA	Yes; coverage and spending on MAT is theoretical barrier	Yes; stat analysis used to compare Medicaid expansion vs non-expansion states	NA	Met criteria

APPENDIX E. PEER REVIEW DISPOSITION

Comment #	Reviewer #	Comment	Author Response
Are the objectives, scope, and methods for this review clearly described?			
1	2	Yes	None
2	3	Yes	None
3	4	Yes	None
Is there any indication of bias in our synthesis of the evidence?			
4	2	No	None
5	3	No	None
6	4	No	None
Are there any published or unpublished studies that we may have overlooked?			
7	2	Yes - Restricting to studies published since 2014 may have resulted in missing some important studies. It was also unclear to me what study designs were eligible--it looks like KQ 1 focused mainly on survey studies but not sure if qualitative studies were included; KQ 2 seemed to focus mostly on studies that evaluated associations between use versus nonuse of medications for OUD.	Given VHA policy and federal legislative changes as well as changes in public perceptions of and response to the evolving opioid crisis over the past 5 years, we do not agree that inclusion of earlier studies (pre-2014) would have fundamentally changed our findings or conclusions. Rather, our intent was to provide VHA clinicians, researchers, and policy-makers the most current and relevant synthesis of evidence on MAT barriers and facilitators to inform policy development, program planning, and OUD research. In the methods section, we have expanded discussion of our rationale for focusing on studies published since 2014 as follows: “Due to the large volume of studies we identified in our search, need to accommodate a compressed rapid review timeline, and goal of providing VHA clinicians, researchers, and policy-makers with the most current and relevant synthesis of evidence on OUD medication barriers and facilitators, we limited selection of studies to those published since 2014. Limiting our study selection in this way allowed us to prioritize evidence synthesis of barriers and facilitators in the context of several recent VHA changes including the addition of extended-release naltrexone to the VHA formulary in 2014 and updated VA guidelines recommending office-based treatment in 2015, as well as changes in federal legislation including the 2016 CARA Act aimed at expanding OUD medication prescribing.” We included both quantitative and qualitative studies, which we trying to highlight by revising the section describing study

			eligibility, “We included studies of all types (quantitative and qualitative) of adults eligible for OUD treatment (excluding pregnant women) in the US.” We did not pre-specify the types of studies that we would include for KQ1 or KQ2, and agree that certain study designs were more commonly used to address each KQ.
8	3	No	None
5	4	One additional study to consider: Finlay, Andrea K., et al. "Barriers and Facilitators to Implementation of Pharmacotherapy for Opioid Use Disorders in VHA Residential Treatment Programs." *Journal of studies on alcohol and drugs* 79.6 (2018): 909-917.	We excluded this study for the reason of “ineligible intervention.” The study looked at barriers for a range of OUD medications- including methadone- and did not separate findings by medication.
6	4	Background - In paragraph 5, you might consider adding literature addressing patient preferences for office based OUD treatment. https://www.ncbi.nlm.nih.gov/pubmed/21170143	We have added the following sentence to this section, “Office-based care may be viewed as more patient-centered and assessible and preferred by some patients compared to OTPs.” We used this study citation – thank you.
7	4	KQ3 - I believe there are other VA studies addressing patient characteristics associated with receiving buprenorphine: See: Finlay, Andrea K., et al. "Receipt of pharmacotherapy for opioid use disorder by justice-involved US Veterans Health Administration patients." *Drug and alcohol dependence* 160 (2016): 222-226.	We excluded this study at the abstract level. After reviewing full text, we would exclude this study for the reason of “ineligible intervention.” Similar to the Finlay 2018 article (comment #5), this study looked at barriers for a range of OUD medications, including methadone, and did not separate findings by medication.
Additional suggestions or comments can be provided below. If applicable, please indicate the page and line numbers from the draft report.			
8	2	The term "medication-assisted treatment" has fallen out of favor as it is a misnomer (medications do not "assist" treatment, they are the main treatment), implying that medications play a secondary role (we do not refer to medications for HTN as "medication-assisted treatment"). If you want to keep using the term since it is still widely used I would at a minimum add a sentence or two to the Intro noting the issues with the term. Alternatively, you could refer to "medications for addiction treatment" (still MAT) or just "medications for opioid use disorder".	Thank you. We have revised the report to discuss use of the term “medication-assisted treatment” and why it has fallen out of favor. Specifically, in the Background section we state, “Of note, the term medication-assisted treatment (MAT) has been commonly used to describe these medications but is no longer favored given that medication is considered an option for first-line treatment for OUD (rather than an adjunctive treatment). Guidelines from the Veteran’s Administration/Department of Defense (VA/DoD) recommend offering patients with OUD treatment with medication.” We changed the report throughout to refer to medications for opioid use disorder rather than MAT.

9	2	In the Background (line 44)--buprenorphine doesn't "partially" activate opioid receptors and have a lower risk of adverse events--it basically functions as an opioid agonist at lower doses but effects plateau at higher doses (including respiratory depressant effects). Also my understanding is the lower overdose risk of buprenorphine is largely theoretical (though likely true).	We have revised this language as follows, “Buprenorphine is referred to as a “partial opioid agonist” because it does not act on opioid receptors in the same way as full agonists like methadone. Specifically, it binds tightly to the mu opioid receptor (which is responsible for euphoria effects but also harmful effects such as respiratory depression) but does not activate this receptor as much as full agonists like methadone. It also has a ceiling effect, meaning that the receptor is not more activated with more exposure to the drug, and it is therefore thought to have a lower risk of overdose.”
10	2	Might also note that buprenorphine used for OUD is higher dose than other formulations (e.g., transdermal) used/approved for chronic pain.	We have revised the background on buprenorphine as follows, “Buprenorphine used for OUD treatment is a higher dose than buprenorphine formulations approved to treat chronic pain and is typically co-formulated with naloxone, which helps deter misuse by causing opioid withdrawal if the medication is crushed and injected or snorted instead of being used under the tongue as prescribed.”
11	2	Trials of oral naltrexone actually show similar efficacy to methadone/buprenorphine--the problem is adherence in non-trial settings (also the need to withdraw opioids and many of the studies were done in people getting out of prison or in Russia where opioid agonists/partial agonists are not available).	Thank you for the clarification. We have revised the discussion of naltrexone as follows, “Naltrexone is an “opioid antagonist,” meaning that it blocks opioid receptor activity. Naltrexone is available in an injectable form and oral form, although treatment retention and adherence may be lower with the oral form and it is not as commonly used.”
12	2	I don't think that office-based treatment is necessarily a lower level of care. The level of care in office-based treatment can vary widely and in some cases can be higher level of care than an OTP (e.g., in a lot of OTPs patients are not even seen by the prescriber during most visits). Anyway it would be more accurate to note that the level of care in office-based settings is variable. Also might not that there are a number of models of care in office-based settings as well as health systems that coordinate office-based care with OTPs (e.g., Hub and Spoke, etc).	We have revised the description of office-based treatment as follows, “Intensity of care delivered in office-based settings varies by practice structure and the scope of available psychosocial services.” We also added, “…in the “hub and spoke” model developed in Vermont, OTPs are connected with office-based care settings and patients are triaged to the level of care that best meets their needs.”
13	2	It is unclear throughout the report whether patients have OUD due to illicit opioids or prescription opioids or both. This is a potentially important distinction that should also be addressed in KQ 2 as this could impact barriers/facilitators.	We have information about opioid use history to Table 1 for KQ1 and added a comment to the limitations section as follows, “Most studies were also of patients with a history of injection drug use, rather than prescription drug use, and OUD medication barriers and facilitators may be different in these 2 patient populations.”
14	2	The rationale for restricting to 2014 and on seems a bit weak--it would be stronger if you could tie the date to an event (e.g., an event shown in the Figure 2 timeline).	Please see the response to comment #7 above.

15	2	The quality criteria feel rather ad hoc and don't clearly distinguish between survey studies and qualitative studies which have quite different methods. Some of the criteria seem more related to understanding applicability than internal bias per se (e.g., pouplation descriptions, setting descriptions) and some of the criteria seem quite subjective and difficult to operationalize. Also is reference 20 correct?	Overall, due to our rapid timeline, we purposefully streamlined our quality assessment methods. This streamlining was operationalized by creating a single tool that would be applicable to multiple study designs and that took a categorical approach to classifying studies as "met minimum criteria" or "did not meet minimum criteria." Then, we informally commented on the status of additional study features. As we state in the report, "Our use of a streamlined approach to assessing study quality means that we could not definitively determine which studies were the highest quality studies. However, given our studies reported similar themes, identifying the highest quality studies would have been unlikely to change our conclusions." Regarding your comment about distinguishing between survey and qualitative studies- we did have criteria in the tool that were specific to quantitative vs qualitative studies. Specifically, the prompt "was a statistical analysis method used and was the analysis appropriate?" applied to quantitative studies and the prompt "was a formal process used for recording, transcribing, and coding themes from interviews and was it appropriate?" applied to qualitative studies. Regarding your comment that the tool applied more to applicability than internal bias- we agree that some of our tool's criteria relate to applicability; however, some criteria relate to internal validity (e.g., the prompt "were the sampling methods appropriate for capturing the desired population and response rates high?" assesses selection bias, and prompts "were the survey questions, interview questions, or variables appropriate for capturing desired information?" and "were the barriers and/or facilitators well-defined?" assesses bias from measurement of outcomes. Finally, reference #20 was erroneously included, so we have removed it from the report.
16	2	It isn't clear to me how the SOE was graded and whether the AHRQ methods really apply to these types of studies. I am not sure how you assess precision or consistency, for example, from studies that use different study design methods (qualitative vs survey), techniques and survey questions (e.g., open-ended versus directed) to elicit info about barriers/facilitators. Anyway I am not sure that grading SOE for these types of studies/data are	While we agree that AHRQ's strength of evidence (SOE) tool was designed to evaluate studies of interventions, we felt the principles could still be applied to this body of evidence of non-intervention studies. We added a sentence in the "strength of evidence" section to make this point. We have removed the description of the optional domain related to "confounding that would decrease the observed

		needed. The synthesis methods describe a very qualitative method for identifying a barrier (if at least 1 patient describes it as an inhibitor or facilitator). Also you aren't talking about "effects" in the way we normally think of them. Anyway I am not sure that the SOE concept is particularly useful for this kind of review.	effect." We did not evaluate this domain as it was not applicable. In our methods, we describe that we rated SOE informally. On p. 13 where we note our overall confidence in the findings, we have added our reason for rating studies as consistent- "most studies discussed similar barriers and facilitators." We also added a description of how we rated precision- "results were…precise (studies had appropriate sample sizes based on study design)."
17	2	The review uses a framework of stigma/logistics/treatment experiences and beliefs/knowledge to describe/organize results but it isn't quite clear how this was generated. Was this a priori or was it based on the Results of the studies?	This framework was developed based on the results of the studies. In the synthesis of data section, we note that "we used content analysis of barriers and facilitators in prioritized studies using coding based on an iterative process without pre-defined categories…As we reviewed studies, we grouped content into existing categories or created a new category."
18	2	KQ 2--the results are supposed to be about how barriers and facilitators vary by patient/provider/setting characteristics, but the results are largely about predictors of receipt or non-receipt of meds which don't seem to me to be quite the same thing. If there are no studies that attempt to address the KQ directly that is fine and would just say so, then can note that you looked at the predictor studies as an indirect way of identifying potential barriers/facilitators.	We agree and have added language to KQ2 in the patient and provider section to clarify that these results provide indirect evidence regarding OUD medication barriers and facilitators.
19	2	As mentioned above, describing whether studies were of patients with OUD due to illicit or prescription opioids should be addressed in KQ 2.	Please see the response to comment #13 above.
20	3	I found one typo, lol! Page 28. 'Additionally comparisons of MAT use among different VHA facilitates could help..." Change 'facilitates' to 'facilities.' That's it. I wish I had more brilliant comment--but mostly learned a ton from reading this.	Thank you. We corrected this typo.
21	3	I found it helpful that patient-reported stigma was characterized/broken down into--social, internalized, medication-specific. I found the section on provider stigma (page 17) to be a little less well characterized. The first paragraph of this section noted 4 barriers--2 that seemed associated with stigma: 'lack of desire to be associated with MAT' and 'individual beliefs and attitudes including negative views of patients with OUD'. The other two barriers listed in the opening paragraph were: 'lack of	Thank you for noticing this gap, which was unintentional. We have added a paragraph describing provider-identified barriers related to the role of stigma in OUD prescribing.

		training..' and 'logistic barriers'. These latter two barriers were given a full paragraph of explanation (page 17)--but the first two--associated with stigma--really weren't mentioned again. Table 4 outlines it better--indicating themes of social stigma, medication specific, and individual ideas about patients with OUD--but this wasn't as clear from the text.	
22	4	Researchers are moving away from the language of “medication assisted treatment,” as medication is increasingly seen as first-line treatment for OUD. Authors might consider saying medications for opioid use disorder instead.	We agree and have revised the report accordingly. Please also see our response to comment #8.
23	4	I’m not sure I would call the findings “themes and subthemes.” This has a bit of a different connotation in qualitative research. It seems to me that what you have identified are types or categories of barriers and facilitators, and you are reporting on the frequency of the mention of these types/categories of barriers and facilitators in the literature.	We have revised the report accordingly and no longer use the terms themes and subthemes. We changed our descriptions to categories and subcategories.
24	4	In some places in the text particular barriers/facilitators that were only mentioned in one study seem to be presented with equal weight to those listed in many studies. The tables and figures do a good job differentiating, but a few parts of the text could be altered to clarify (e.g. executive summary listing provider facilitators).	We have made revisions throughout the Results section to highlight which barriers and facilitators were most common.
25	4	Executive Summary - I find it somewhat odd that “patient interest” is listed as a facilitator for providers—although I know this is an issue with the literature, and not the writers of this report. I find it hard to imagine that “patient interest” would be mentioned as an incentive for providers to prescribe a medication for another chronic disease, like diabetes. Perhaps address in the discussion. Another potential point for discussion: linkages to psychosocial support is listed as a facilitator for providers, but there really isn’t good evidence that this is needed for OUD medication to be effective.	We added more explanation of this finding in the Results section, “In a survey of clinicians obtaining an initial buprenorphine waiver or an increase in authorized patient limit, lack of patient demand for treatment was cited as the primary barrier to prescribing. It is unclear whether this lack of demand is based on provider perception, which could indicate a knowledge gap, beliefs that patients with OUD do not need (and are therefore not requesting) buprenorphine, or other subjective or objective factors.” In the Discussion section, we also added the following, “reinforcing with providers that office-based treatment with buprenorphine is an option for first-line treatment and does not require psychosocial supports other than those provided in the context of medication management may reduce providers concerns about lack of access to mental health services. A 2019 consensus report from the National Academies of Sciences, Engineering, and Medicine states, “Lack of availability or utilization of behavioral interventions is not a

			sufficient justification to withhold medications to treat opioid use disorder."
26	4	Executive Summary - In paragraph 2, you might mention that OUD is not just "effective" but considered first-line treatment, and that there is insufficient evidence for alternative treatments (like psychosocial treatment alone), thus, failing to provide medication for OUD is not providing evidenced based care.	We revised language in the Executive Summary and Background. In the Background, we state the following, "Of note, the term medication-assisted treatment (MAT) has been commonly used to describe these medications but is no longer favored given that medication is considered an option for first-line treatment for OUD (rather than an adjunctive treatment). Guidelines from the Veteran's Administration/Department of Defense (VA/DoD) recommend offering patients with OUD treatment with medication. These guidelines state that while patients receiving methadone should be offered individual counseling and/or contingency management (rewards to reinforce positive behaviors), there is insufficient evidence to recommend for or against any specific psychosocial intervention in addition to office-based medical management with buprenorphine."
27	4	Executive Summary - In paragraph 3, can you clarify that the studies you selected were " 26 non-VHA" studies? I got a bit confused by the wording here.	We revised this sentence for clarity as follows, "We included 26 studies in non-VA settings and among those, prioritized evidence synthesis of 16 studies with the most relevance to VHA."
28	4	Executive Summary - Figure 1: Heading says barriers and facilitators, but where are the facilitators? This is a really helpful figure!	Thank you. We have corrected the figure title.
29	4	Background - On page 8, second paragraph, the description seems overly detailed for an introduction—the reader almost thinks you are already describing your findings. You might consider cutting this down a bit.	Our intent was to provide sufficient background to interpret the findings in context, but we agree that this paragraph may be overly detailed. We have revised the text and moved it to the Discussion section.
30	4	Background - Last paragraph, I'm not sure it's necessary or important to emphasize the potential to address confounding here 1) because this would be true of all studies conducted within VA, not just OUD treatment and 2) there are lots of other confounders that pop up for VA studies that are less of an issue in other studies.	We have removed this text.
31	4	Literature Overview - I disagree with the decision to exclude previously incarcerated individuals, unless you are talking specifically about patients who are in the process of leaving prison/jail. Would you exclude those with a history of	Neither of the 2 studies that were referenced in this section were excluded, but rather we did not prioritize them as most relevant to VHA. However, we appreciate your point and agree with erring on the side of being more inclusive of studies that describe the patient perspective. We have therefore incorporated the study by Fox et al into our prioritized evidence synthesis. Streisel et al discusses beliefs

		incarceration from studies of heart disease, and if so, why? Consider: Black men have a 1/3 lifetime risk of incarceration.	about medications for OUD from the viewpoint of correctional facility staff. Although important, given the aim of this review to inform VHA stakeholder we did not prioritize evidence synthesis of this study.
32	4	Literature Overview - Page 13—in the paragraph beginning "three of the prioritized studies" I would just say "used qualitative methods." -- interviews are qual. Methods.	We made this change.
33	4	Literature Overview - Last paragraph, qualitative methods cannot be used to address magnitude, size or severity. You might say findings are suggestive but require verification with quantitative studies.	We have revised the language as follows, "Although results were generally consistent (most studies discussed similar barriers and facilitators) and precise (studies had appropriate sample sizes based on study design), the studies are indirect (not in the VHA setting) and due to the nature of qualitative methods prohibit conclusions regarding the magnitude of effects for a given barrier or facilitator (do not tell us the size or severity of a barrier or facilitator, just how commonly it was referenced)."
34	4	KQ1 - Stigma: is shame related to treatment or OUD diagnosis, or both?	We clarified that the study we cite describes shame "related to having an addiction and seeking treatment."
35	4	KQ1 - Studies where patients were currently engaged in treatment—were they questioned about barriers they had experienced in the past?	Yes, we added the following clarifying language throughout the report when these studies are discussed to indicate whether they refer to past or present treatment.
36	4	KQ1 - Great table.	Thank you.
37	4	KQ2 - Although I really like the paragraph about "concerns about bup. Diversion" it seems to be overly detailed for where it is in the text. Consider cutting down a bit and/or addressing some of these points in the discussion instead.	We have revised this paragraph and moved most of the text to the Discussion section.
38	4	KQ2 - Table 4: change the language "misconception" to "perception"—although I agree with you, this is interpreting rather than just presenting data.	We have changed "misconception" to "perception."
39	4	KQ2 - Interesting that there seems to be some cross-over between knowledge and logistics (e.g., concern for diversion, not knowing how to obtain a waiver, inability to refer to psychosocial supports…). Potentially address in discussion.	We expanded text in the discussion section to highlight this cross-over as follows, "The barriers discussed above can overlap and mutually reinforce each other, but given that, it is also plausible that efforts to reduce one barrier may lead to improvements in others. For example, addressing a knowledge gap by providing buprenorphine waiver training also addresses a logistical gap."

40	4	KQ3 - Paragraph 3—cut “(presumably because OUD treatment was court-mandated).” Justice-involved patients are often less-likely to get treatment while incarcerated/on community supervision. Lots of barriers to justice-involved populations getting treatment. https://www.healthaffairs.org/doi/abs/10.1377/hlthaff.2017.0890	We have removed this text.

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