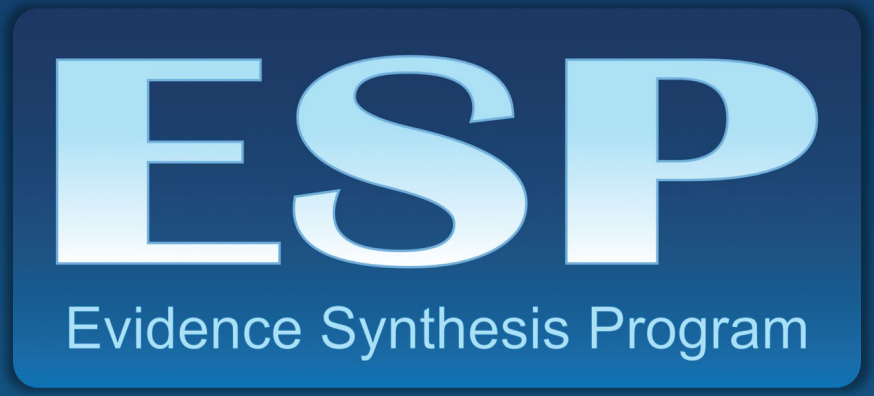


Evidence Brief: Barriers and Facilitators to Use of Medication for Opioid Use Disorder

Kate Mackey, MD, MPP
Stephanie Veazie, MPH
Kim Peterson, MS

ESP Coordinating Center
Portland VA Medical Center

August 2019

Presentation Outline

ESP
Evidence Synthesis Program

- Background on ESP & Evidence Synthesis Products
- Background on Opioid SOTA
- Overview of Topic
- Findings from August 2019 ESP Rapid Review
- Discussion and Questions

Acknowledgements

ESP
Evidence Synthesis Program

Co-Authors

Johanna Anderson, MPH

Donald Bourne, MPH

Operational Partners

Operational partners are system-level stakeholders who have requested the report to inform decision-making. They recommend TEP members; assure VA relevance; help develop and approve final project scope and timeframe for completion; provide feedback on draft report; and provide consultation on strategies for report dissemination.

Karen Drexler, MD
Director
National Mental Health Program – Substance Use Disorders

Ellen Edens, MD, MPH, MA
Director
VA Interprofessional Advanced Fellowship in Addiction Treatment

VA | U.S. Department of Veterans Affairs
Veterans Health Administration
Health Services Research & Development Service

Disclosure

ESP
Evidence Synthesis Program

This report is based on research conducted by the Evidence Synthesis Program (ESP) Coordinating Center located at the **Portland VA Medical Center, Portland, OR**, funded by the Department of Veterans Affairs, Veterans Health Administration, Health Services Research and Development.

The findings and conclusions in this document are those of the author(s) who are responsible for its contents; the findings and conclusions do not necessarily represent the views of the Department of Veterans Affairs or the United States government. Therefore, no statement in this article should be construed as an official position of the Department of Veterans Affairs.

No investigators have any affiliations or financial involvement (*eg*, employment, consultancies, honoraria, stock ownership or options, expert testimony, grants or patents received or pending, or royalties) that conflict with material presented in the report.

Who We Are

ESP
Evidence Synthesis Program

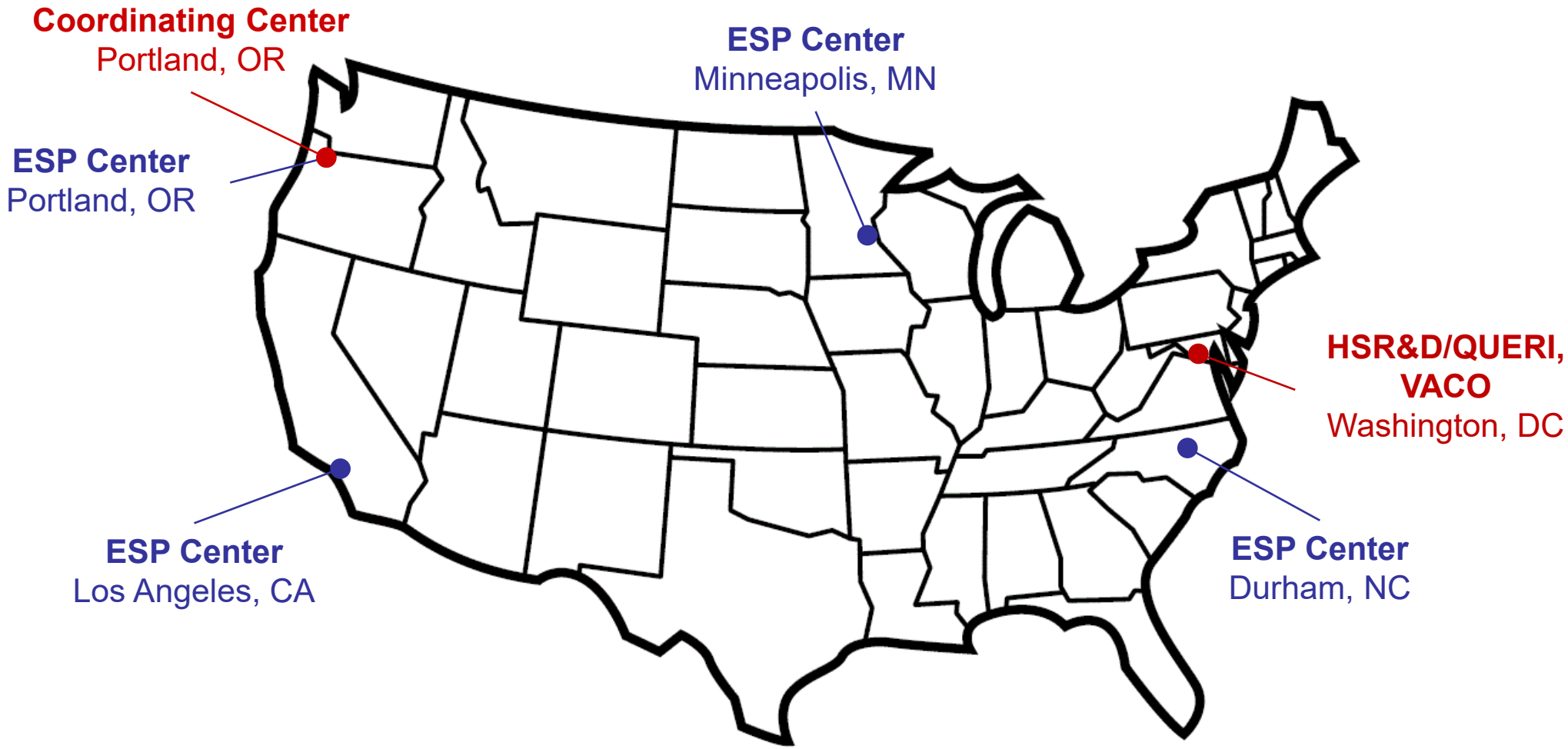
Mission: To make high-quality evidence synthesis available to clinicians, managers, and policymakers as they work to improve the health and healthcare of Veterans.

"ESP reports are a terrific resource to inform policy decisions. They are methodologically rigorous and available [upon] request."

https://www.hsrd.research.va.gov/publications/esp/

ESP Center Locations

ESP
Evidence Synthesis Program



Our Reports Help VA With

ESP
Evidence Synthesis Program

VA
U.S. Department of Veterans Affairs
Veterans Health Administration
Health Services Research & Development Service

Range of Products for Different Needs

ESP
Evidence Synthesis Program

	Speed (product within 4 months)	Fully follows all SR steps	Critical appraisal of evidence	External peer review
Systematic review		✓	✓	✓
Scoping review	*			*
Evidence map			*	✓
Rapid evidence brief	✓		✓	✓
Evidence assist	✓		✓	
Evidence compendium	✓			
Evidence inventory	✓			

* Possible on a case-by-case basis

VA | U.S. Department of Veterans Affairs
Veterans Health Administration
Health Services Research & Development Service

ESP Products' Key Characteristics

ESP
Evidence Synthesis Program

Standard Systematic Review (9-12 months)
Comprehensive synthesis using the most methodologically rigorous process. Reviews several broad, overarching key questions.

Scoping Review (4-12 months)
Descriptive overview that identifies gaps and overlap in key concepts and highlights specific and/or unique features of interest.

Evidence Map (9-12 months)
User-friendly visual figure or graph and interpretive summary of a broad research field that provides quick access to questions and answers that previous research has addressed and identifies gaps that are important for VHA.

Rapid Evidence Brief (2-4 months)
Detailed report that generally follows, but streamlines, accepted systematic review methods and PRISMA reporting guidelines.

Evidence Assist™ (1-4 months)
Consultative memorandum with flexible format.

Evidence Compendium (1-2 months)
Brief summary of key features, data abstraction, and bibliography, organized by key features (*eg*, key question, study design, population, *etc*).

Evidence Inventory (1-4 weeks)
Bibliography organized by key features (*eg*, key question, study design, population, *etc*).

VA | U.S. Department of Veterans Affairs
Veterans Health Administration
Health Services Research & Development Service

Opioid SOTA Background & Goals

ESP
Evidence Synthesis Program

- **Background:** In September 2019, VA HSR&D will hold a State of the Art Conference (SOTA) on *Effective Management of Pain and Addiction: Strategies to Improve Opioid Safety*

- **Goals:**
  - Assess current VA burden and clinical practice
  - Review state of the evidence and relevance to VA population
  - Where evidence is sufficient, define consensus
  - Where evidence is conflicting or limited, define research agenda
  - Make practice or policy recommendations where consensus exists but is at odds with practice

Opioid SOTA Background & Goals

ESP
Evidence Synthesis Program

- **Background:** In September 2019, VA HSR&D will hold a State of the Art Conference (SOTA) on *Effective Management of Pain and Addiction: Strategies to Improve Opioid Safety*

- **Goals:**
  - Assess current VA burden and clinical practice
  - Review state of the evidence and relevance to VA population
  - Where evidence is sufficient, define consensus
  - Where evidence is conflicting or limited, define research agenda
  - Make practice or policy recommendations where consensus exists but is at odds with practice

Opioid SOTA Workgroups

ESP
Evidence Synthesis Program

Workgroup 1:	Managing Opioid Use Disorder
Workgroup 2:	Long-term Opioid Therapy and Tapering
Workgroup 3:	Managing Co-Occurring Pain and Substance Use Disorders

The Problem: OUD Medications are Underused

ESP
Evidence Synthesis Program

More Veterans with OUD

Than Veterans with OUD on Medication Treatment

Only 39% of Veterans with diagnosed OUD on medication at the end of the 2nd quarter of 2019

VA Mental Health Information System, Measure Components Summary BETA.

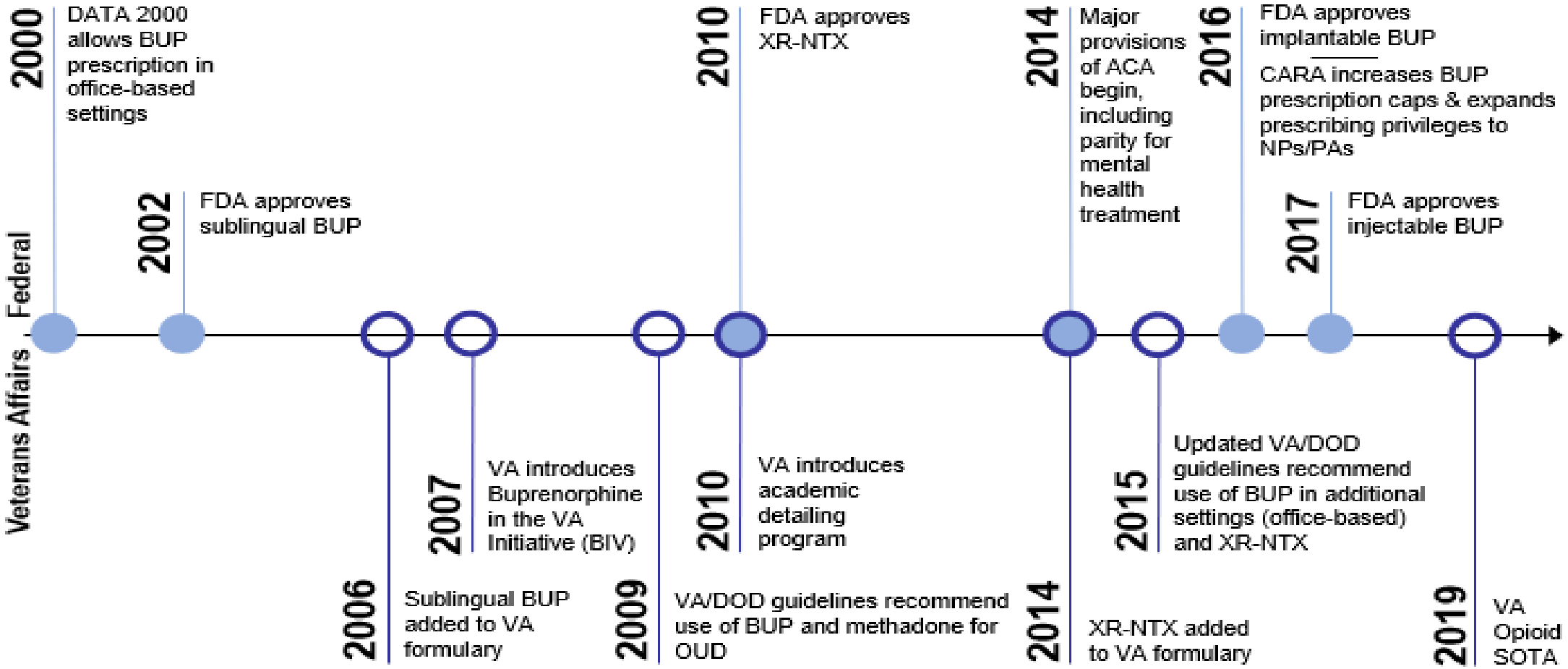
OUD Medications

ESP
Evidence Synthesis Program

Medication	Opioid receptor activity	Other characteristics
Methadone	Full activation ("full opioid agonist")	• Only prescribed in the setting of specialized Opioid Treatment Programs subject to extensive federal regulation
Buprenorphine/ naloxone	Partial activation ("partial opioid agonist")	• May be prescribed in non-specialized settings • Providers must complete 8 hour training and apply for SAMHSA waiver and updated DEA registration • Subject to prescribing caps
Naltrexone	Blocks the effects of opioids ("opioid antagonist")	• May be prescribed in any setting • Not subject to specific regulations

VA | U.S. Department of Veterans Affairs
Veterans Health Administration
Health Services Research & Development Service

Timeline of Federal and VHA Changes Affecting OUD Treatment



Prior VHA research

ESP
Evidence Synthesis Program

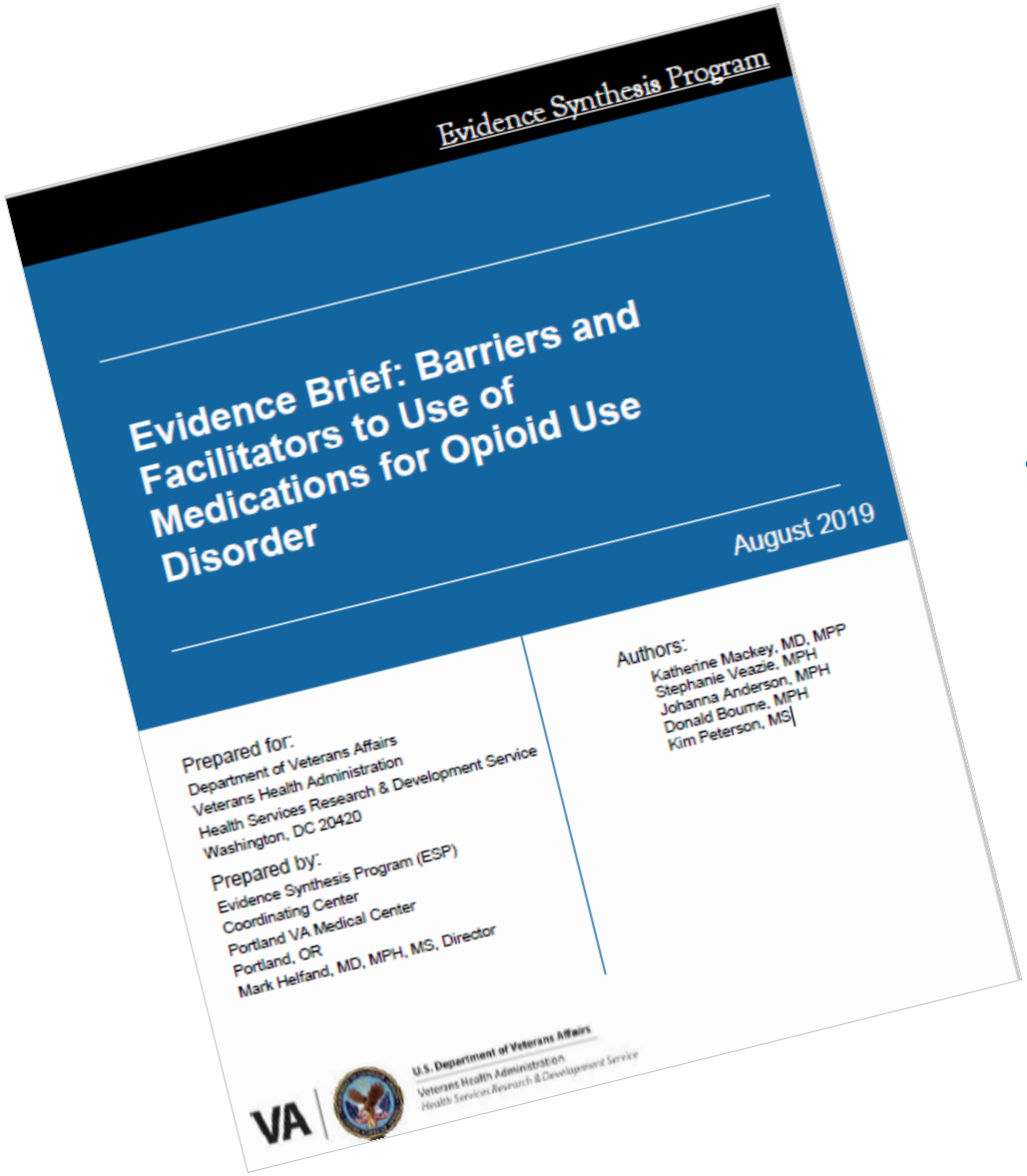
2011 VHA qualitative found that **provider barriers** to prescribing buprenorphine included:

- Lack of education regarding buprenorphine treatment
- Negative perceptions of patients with OUD
- Perceived lack of resources
- Thought that OUD care was best delivered outside the VA

Gordon AJ, Kavanagh G, Krumm M, et al. Facilitators and barriers in implementing buprenorphine in the veterans health administration. Psychol Addict Behav. 2011;25(2):215-224.

Evidence Brief:

ESP
Evidence Synthesis Program



Full-length report available on ESP website:
http://www.hsrd.research.va.gov/publications/esp/reports.cfm

ESP Review Key Questions

ESP
Evidence Synthesis Program

Key Question 1: What are the patient, provider, and systems-level barriers and facilitators to use of buprenorphine and extended-release naltrexone for OUD?

Key Question 2: Do these barriers and facilitators vary by patient characteristics, provider characteristics, or setting?

Eligibility Criteria

ESP
Evidence Synthesis Program

Population:	Adults with OUD (excluding pregnant women)
Study Design:	Any (qualitative or quantitative) study with a specific aim of identifying barriers and facilitators or factors associated with OUD medication use
Outcomes:	Any factor endorsed by at least 1 participant in the study that either inhibited or helped them adopt medication treatment (or would do so)

Evidence Brief Methods

ESP
Evidence Synthesis Program

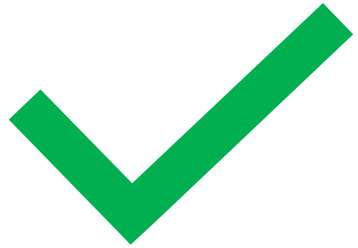
- **Search:** MEDLINE, PsycINFO, Cochrane databases and other sources (inception through March 2019) and consulted with experts
- **Study selection:** Based on eligibility criteria
- **Data abstraction:** Study characteristics and results
- **Critical appraisal:** Use of standardized tools
- **Quality control:** Assessments first completed by one reviewer and checked by at least one additional reviewer. Disagreements resolved by consensus.
- **Peer Review:** Topic and methodological experts commented, responses are publicly available

VA | U.S. Department of Veterans Affairs
Veterans Health Administration
Health Services Research & Development Service

Categorial Approach to Quality Assessment

ESP
Evidence Synthesis Program

1) Sampling methods
2) Adequacy of survey or interview questions in capturing the desired information
3) Population descriptions
4) Setting descriptions
5) Barrier/facilitator detection methods
6) Whether appropriate statistical analyses were conducted (quantitative studies)
7) Whether the study used a formal process for recording, transcribing, and coding themes from interviews or open-ended responses (qualitative studies)

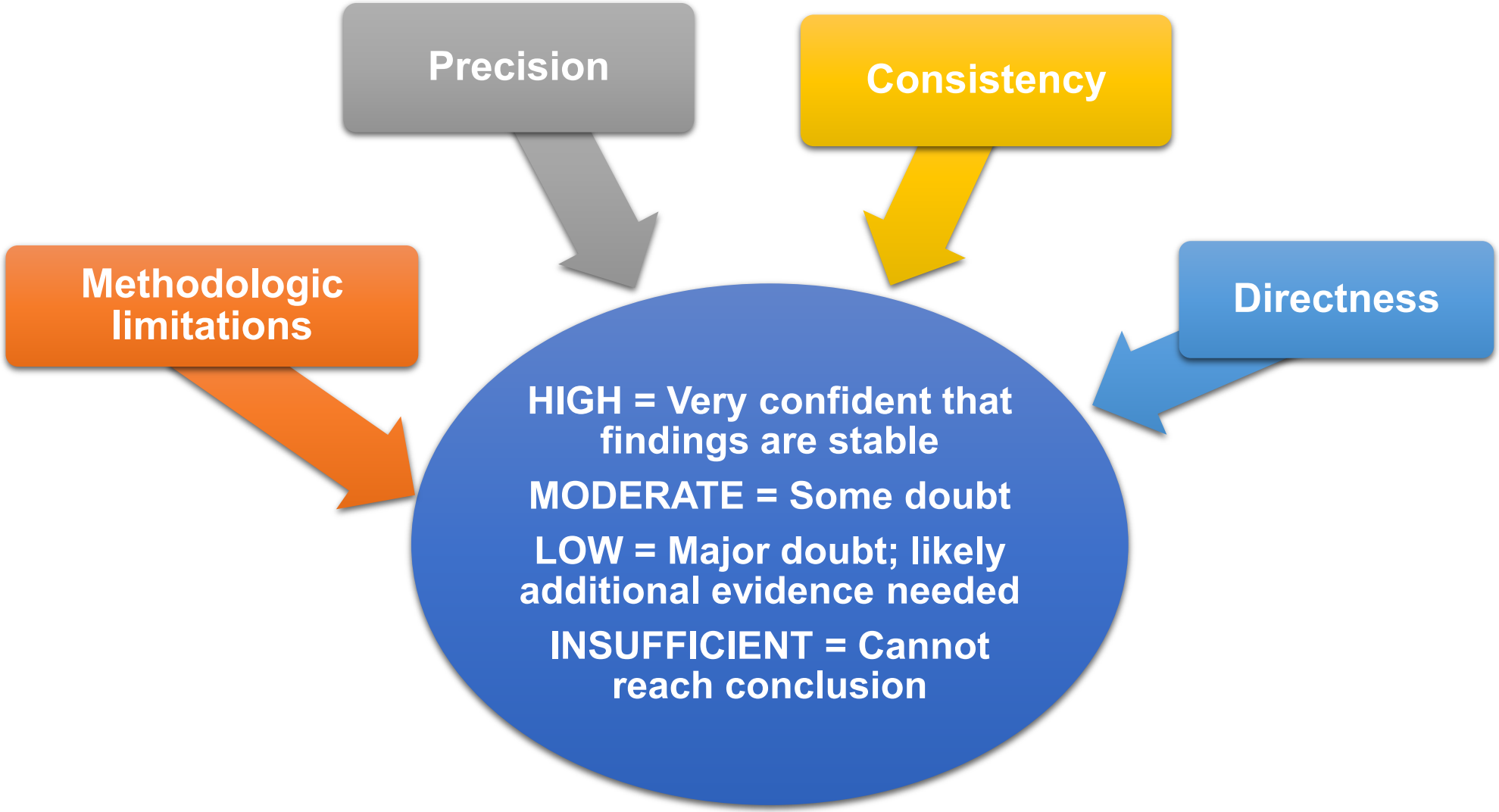


Met minimum quality criteria

Did NOT

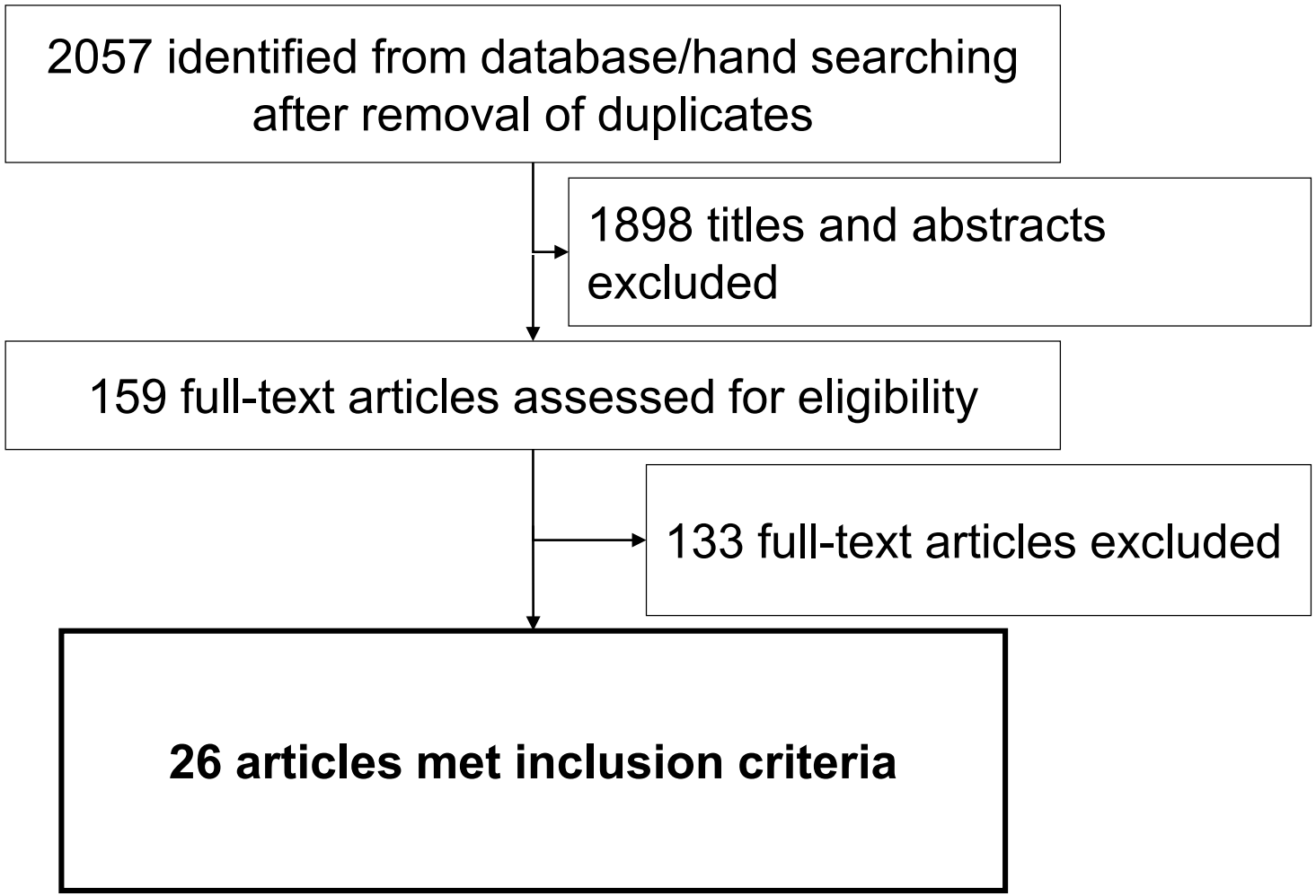
VA | U.S. Department of Veterans Affairs
Veterans Health Administration
Health Services Research & Development Service

Criteria for Assessing the Strength of a Body of Evidence



*Based on the AHRQ Methods Guide for Comparative Effectiveness Reviews

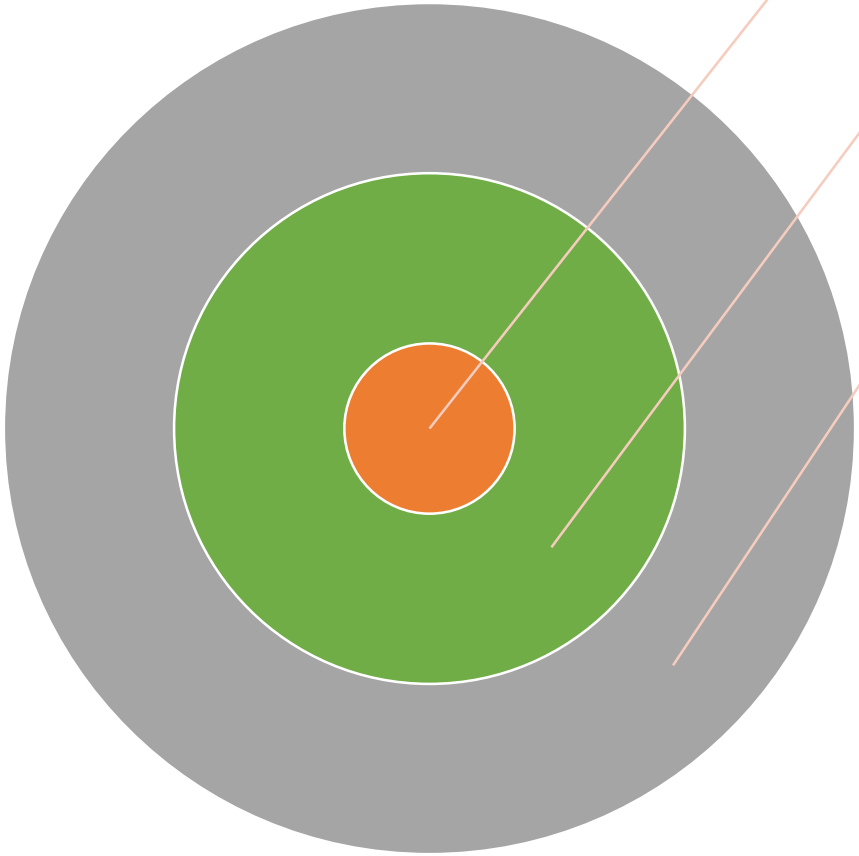
Study Selection



Excluded **(n=133)**
- Ineligible population (n=9)
- Ineligible intervention (n=19)
- Ineligible comparator (n=1)
- Ineligible outcome (n=17)
- Ineligible setting (n=8)
- Ineligible study design (n=7)
- Ineligible publication type (n=42)
- Published pre-2014 (n=28)
- Unable to locate full text (n=2)

Prioritization of Evidence

ESP
Evidence Synthesis Program



VHA settings

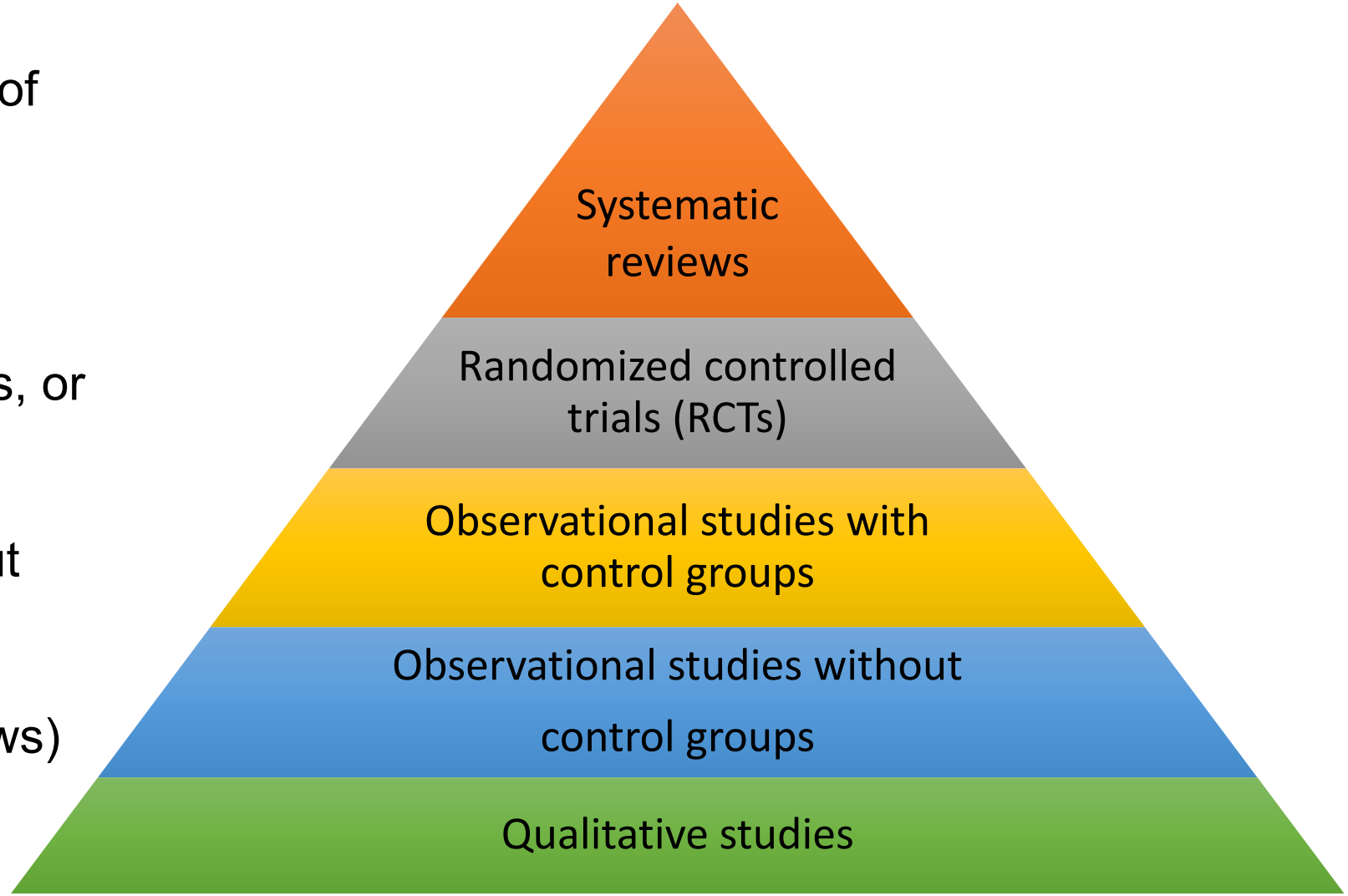
Non-VHA but with sufficiently described populations and interventions

All other studies

16 Prioritized Studies

ESP
Evidence Synthesis Program

- 11 prioritized studies met all of our minimum quality criteria
- No studies in VHA settings
- No systematic reviews, RCTs, or controlled studies
- Observational studies without control groups (retrospective chart or database review) or qualitative (surveys, interviews)



ESP Review Objectives

ESP
Evidence Synthesis Program

Key Question 1: What are the patient, provider, and systems-level barriers and facilitators to use of buprenorphine and extended-release naltrexone for OUD?

Key Question 2: Do these barriers and facilitators vary by patient characteristics, provider characteristics, or setting?

4 Main Categories of Barriers

ESP
Evidence Synthesis Program

Based on analysis of 16 prioritized studies:

- Coded based on iterative process
- No pre-defined categories

Studies of **Patient**-Identified Barriers

ESP
Evidence Synthesis Program

Author, Year Study Size	Study Design	Population & Setting	Stigma	Treatment Experiences & Beliefs	Knowledge	Logistics
Cicero, 2018 N = 303	Survey	Adults with substance use disorder and variable buprenorphine use at treatment centers (national sample); unclear opioid use history	✓			✓
Fox, 2015 N = 21	Interviews	Former inmates with OUD recruited from addiction treatment centers in New York City; 100% history of heroin use	✓	✓		
Fox, 2015 N = 102	Survey	Adults in syringe exchange program with variable buprenorphine use at harm reduction agency in New York City; 98% history of heroin use	✓	✓	✓	✓
Hewell, 2017 N = 11	Focus groups and interviews	Adults with OUD and variable buprenorphine use in Fairbanks, Alaska; unclear opioid use history	✓	✓	✓	✓
Monico, 2017 N = 20	Interviews	Adults receiving daily buprenorphine within an OTP in Delaware; 75% history of prescription opioid use and 25% heroin use	✓			✓

For citations see full report on ESP website: http://www.hsrd.research.va.gov/publications/esp/reports.cfm

VA
U.S. Department of Veterans Affairs
Veterans Health Administration
Health Services Research & Development Service

Patient-Identified Barriers & Facilitators

ESP
Evidence Synthesis Program

Category (n)	Barrier sub-categories (n)	Facilitator Sub-categories (n)
Stigma (5)	• Social stigma (4) • Self or internalized stigma (1) • Stigma specific to buprenorphine use (3)	• Positive social support from peers and family (3)
Treatment experiences & beliefs (4)	• Use of illicit buprenorphine (negative) (1) • Negative experience with prior treatment (1) • Rigid treatment structure (1) • Belief that individual traits like willpower and readiness for change are more important than treatment (1)	• Use of illicit buprenorphine (positive) (3) • Support from treatment providers (1) • Rigid treatment structure (1) • Helps prevent re-incarceration (1)
Knowledge (2)	• Lack of knowledge about where to get treatment (1) • Low health literacy (1)	None
Logistics (4)	• Out-of-pocket costs, including “cash-only” providers (4) • Challenges finding a provider, long wait time (3) • Need to “first fail” abstinence-based treatment (1) • Transportation and childcare barriers (1)	None

(n = studies reporting)

For citations see full report on ESP website: http://www.hsrd.research.va.gov/publications/esp/reports.cfm

VA | U.S. Department of Veterans Affairs
Veterans Health Administration
Health Services Research & Development Service

Studies of **Provider**-Identified Barriers

ESP
Evidence Synthesis Program

Author, Year Study Size	Study Design	Population & Setting	Stigma	Treatment Experiences & Beliefs	Knowledge	Logistics
Andrilla, 2017 N = 1,124	Survey	Rurally located US physicians on the DEA list	✓		✓	✓
Andraka-Christou, 2018 N = 20	Interviews	20 US-licensed physicians in 4 states	✓	✓	✓	✓
DeFlavio, 2015 N = 108	Survey	Family physicians in VT or NH, 10% buprenorphine prescribers	✓	✓	✓	✓
Hutchinson, 2014 N = 92	Interviews	Physicians trained to prescribe buprenorphine in Washington			✓	✓
Huhn, 2017 N = 558	Survey	US physicians (87% with buprenorphine waiver) on the American Society for Addiction Medicine and American Medical Association Listervs	✓	✓	✓	✓
Jones, 2019 N = 4,225	Survey	US clinicians obtaining an initial buprenorphine waiver or an increase in authorized patient limit				✓
Kermack, 2017 N = 72	Survey	New York City public sector buprenorphine prescribers serving Medicaid and uninsured patient populations				✓

For citations see full report on ESP website: http://www.hsrd.research.va.gov/publications/esp/reports.cfm

VA | U.S. Department of Veterans Affairs
Veterans Health Administration
Health Services Research & Development Service

Provider-Identified Barriers & Facilitators

ESP
Evidence Synthesis Program

Category (n)	Barrier sub-categories (n)	Facilitator Sub-categories (n)
Stigma (5)	• Social stigma (4) • Perception of patients with OUD (2) • Stigma specific to buprenorphine use (3)	None
Treatment experiences & beliefs (4)	• Perception of lack of patient need or demand for buprenorphine(2) • Lack of interest in prescribing (1)	• Recognizing patient need/demand for buprenorphine (2)
Knowledge (2)	• Lack of training on OUD or OUD medications or lack of confidence in ability to treat OUD (3) • Perception that OUD medications are not effective (2) • Perception that patients do not need OUD medications(1) • Not knowing how to obtain waiver (1)	• Mentoring (2) • Access to education and training (1)
Logistics (4)	• Time constraints (7) • Low insurance reimbursement or need for prior authorizations (6) • Inability to refer to psychosocial supports, lack of referral/collaboration with addiction specialist (5) • Concerns about diversion (5) • Lack of practice partner and/or institutional support (3) • Lack of staff resources or space (3) • Cumbersome regulatory requirements (3)	• Information about/ability to refer to specialty care (2) • Presence of peer and institutional support (2)

(n = studies reporting)

For citations see full report on ESP website: http://www.hsrd.research.va.gov/publications/esp/reports.cfm

VA
U.S. Department of Veterans Affairs
Veterans Health Administration
Health Services Research & Development Service

Systems-Level Barriers & Facilitators

ESP
Evidence Synthesis Program

- We did not identify studies of systems-level barriers with applicability to VHA settings

- Many of the logistics barriers and facilitators identified by patients and providers have direct linkages to systems

ESP Review Objectives

ESP
Evidence Synthesis Program

Key Question 1: What are the patient, provider, and systems-level barriers and facilitators to use of buprenorphine and extended-release naltrexone for OUD?

Key Question 2: Do these barriers and facilitators vary by patient characteristics, provider characteristics, or setting?

Patient Characteristics Associated with Receiving Buprenorphine

ESP
Evidence Synthesis Program

Author, Year Study Design, Study Size	Population and setting
Lagisetty 2019 Survey, N=1,369	Adults receiving buprenorphine in outpatient-based settings (not limited to patients with OUD)
Murphy, 2014 Retrospective Cohort Study, N = 4,030	Adults with OUD enrolled at Group Health in Washington
Simon, 2017 Database (EMR) Review, N = 100	Adults with OUD starting buprenorphine treatment at an adult primary care clinic Harborview Medical Center in Washington

Main findings:

Adults in the **age range 30-50**, **white patients**, and those who **self-pay** or are **employed** are more likely to be prescribed buprenorphine that those who are on the extremes of age and non-white.

For citations see full report on ESP website: http://www.hsrd.research.va.gov/publications/esp/reports.cfm

Provider Characteristics Associated with Prescribing Buprenorphine

ESP
Evidence Synthesis Program

Author, Year Study Design, Study Size	Population and setting
Andrilla, 2018 Survey with closed and open-ended questions N = 1,221	Rurally located US physicians on the DEA list
Hutchinson, 2014 Semi-structured interviews using 10-minute questionnaire N = 92	Physicians trained to prescribe buprenorphine in Washington
Jones, 2019 Survey with close-ended questions N = 4,225	US clinicians obtaining an initial buprenorphine waiver or an increase in authorized patient limit

Main findings:

- Prescribing behavior reflects barriers and/or facilitators (*ie* lack of institutional support is associated with a lower likelihood that providers will prescribe)
- Barriers and facilitators may vary by region
- When providers engage in OUD training and/or are using other OUD best practices (such as co-prescribing naloxone) they are more likely to prescribe buprenorphine

For citations see full report on ESP website: http://www.hsrd.research.va.gov/publications/esp/reports.cfm

VA | U.S. Department of Veterans Affairs
Veterans Health Administration
Health Services Research & Development Service

Discussion

ESP
Evidence Synthesis Program

- We identified **4 main barriers** – stigma, logistics, treatment experiences and beliefs, and knowledge gaps

- Common facilitators of OUD medication use for both patients and providers include support from peers, which highlights the **potential for community** to overcome some of the perceived barriers to OUD medication use

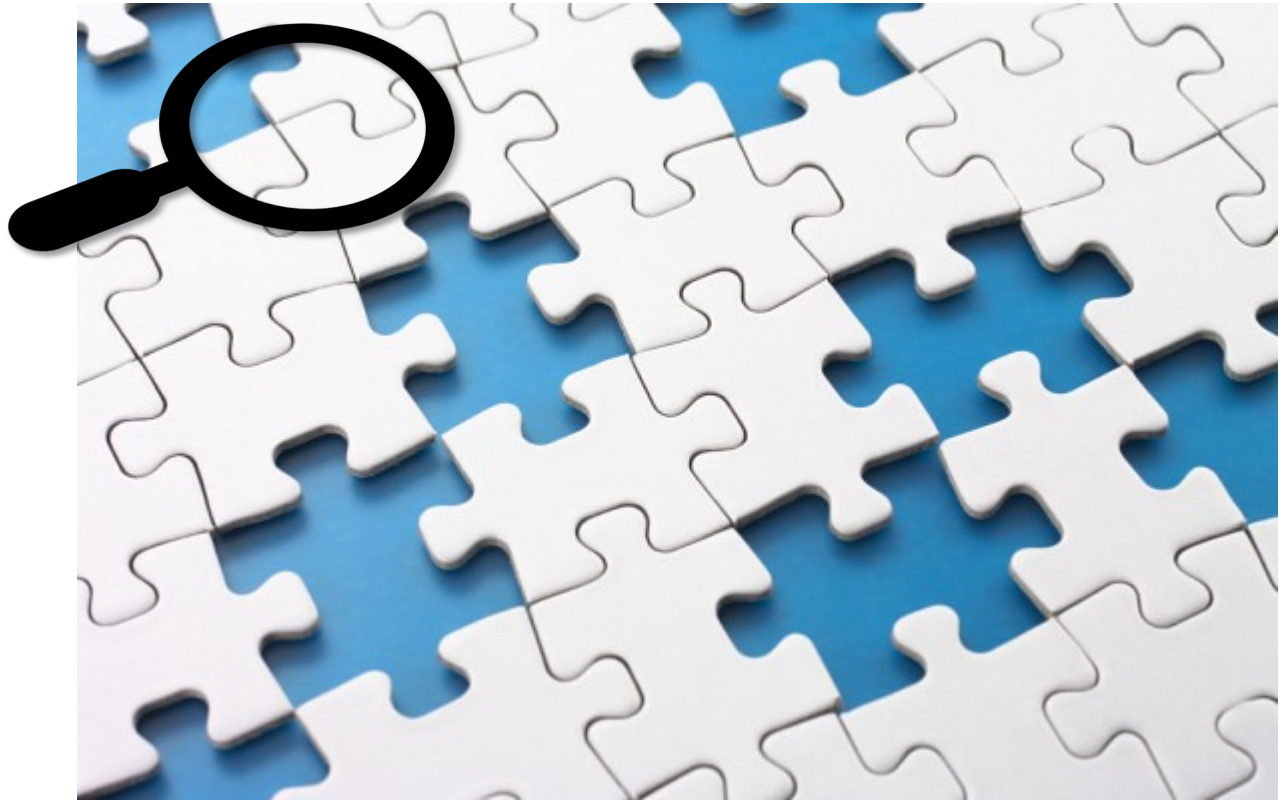
- Although most studies met our minimum quality criteria and findings were consistent across studies, **we have low confidence in the results and applicability to VHA populations**, as there were no studies in VHA settings and some surveys had methodologic limitations

Likely overlapping and mutually reinforcing

Evidence Gaps: Future Research

ESP
Evidence Synthesis Program

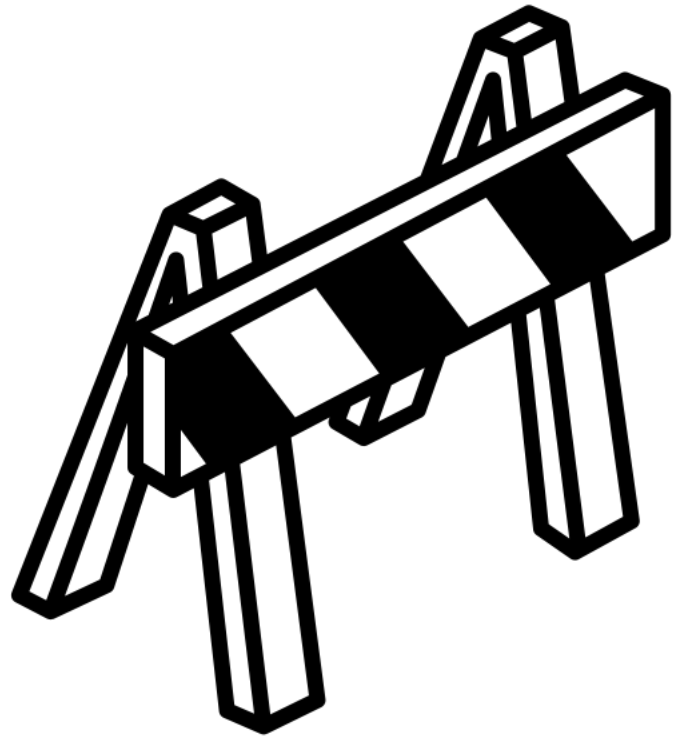
- VHA-specific rates of OUD medication use and how utilization varies by patient and provider characteristics and setting
- Relative importance of barriers and facilitators in the VHA setting
- Barriers and facilitators to use of extended-release naltrexone



Limitations

ESP
Evidence Synthesis Program

- Studies were not ideally designed to answer our study questions; no studies in Veterans
- Several survey studies had low (3-46%) response rates and provided limited information on the patients and settings being assessed
- Rapid reviews streamline systematic review methods which can result in missing eligible studies or study data.



Barrier by Andy Ivandikov from the Noun Project

Conclusions

ESP
Evidence Synthesis Program

- Stigma, logistics, treatment experiences and beliefs, and knowledge of OUD medications were identified by patients and providers as barriers to use of OUD medications.
- Support from peers, family, and treatment providers was the most common facilitator for patients. One factor did not stand out as being most important among providers.
- No studies directly evaluated whether barriers and facilitators vary by patient or provider characteristics or setting.
- More research is needed regarding VHA specific barriers and facilitators and regarding naltrexone, which was discussed in 1 provider study and no patient studies.

Questions?

ESP
Evidence Synthesis Program

If you have further questions, please feel free to contact:

Kate Mackey, MD, MPP
katherine.mackey@va.gov

Full-length report and cyberseminar available on ESP website:

http://www.hsrd.research.va.gov/publications/esp/

VA
U.S. Department of Veterans Affairs
Veterans Health Administration
Health Services Research & Development Service