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Hepatitis C cascade of care in the direct-acting antivirals era: a meta-analysis

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Appendix

Appendix Table 1: Strategy for literature search

MEDLINE
1. exp Hepatitis C/
2. exp Hepatitis C, Chronic/

3. exp Hepacivirus/
4. chronic viral hepatitis.mp.
5. ("hepatitis C" or HCV or CHC).mp.
6. or/1-5
7. exp Mass Screening/
8. exp Point-of-Care Testing/
9. (screen* or test*).mp.
10. exp Hepatitis C Antibodies/
11. Hepatitis C Antibody Positive.mp.
12. Anti-HCV*.mp.
13. or/7-12
14. exp Awareness/
15. exp Knowledge/
16. exp Comprehension/
17. exp Health Knowledge, Attitudes, Practice/
18. exp Education/
19. (awareness or knowledge or understanding or comprehension).mp.
20. (education or educate or teach or training or program).mp.
21. or/14-20
22. exp Primary Health Care/
23. exp "Continuity of Patient Care"/
24. exp Ambulatory Care/
25. exp "Referral and Consultation"/
26. exp Retention in Care/
27. exp Counseling/
28. exp "Treatment Adherence and Compliance"/
29. liver disease assess*.mp.
30. (care* or link* or refer* or retention or retain* or counseling or adherence or adhere or compliance or comply or follow-up or engagement).mp.
31. or/22-30
32. exp Diagnosis/

33. exp RNA/
34. exp Viral Load/
35. (diagnos* or RNA or "viral load" or "PCR positive" or "HCV PCR" or "Nucleic Acid Testing").mp.
36. or/32-35
37. exp Liver Cirrhosis/
38. (cirrhosis or fibrosis or biopsy or elastograph* or fibroscan or Staging or FIB-4 or APRI or Genotyping).mp.
39. or/37-38
40. exp Antiviral Agents/
41. ("direct acting antiviral" or DAA).mp.
42. exp Medication Therapy Management/
43. exp Drug Therapy/
44. exp Therapeutics/
45. (Therap* or treat* or regimen or prescription* or uptake or initiation or intervention).mp.
46. or/40-45
47. exp Sustained Virologic Response/
48. ("sustained virologic response" or SVR).mp.
49. exp Treatment Outcome/
50. ("treatment success" or "treatment outcome" or cure or suppression).mp.
51. or/47-50
52. 6 and (13 or 21 or 31 or 36 or 39 or 46 or 51)
53. limit 52 to (human and english language and yr="2014 -Current")

EMBASE

1. exp Hepatitis C/
2. exp Hepatitis C, Chrinic/.
3. exp hepacivirus/
4. chronic viral hepatitis.mp.
5. (“hepatitis C” or HCV or CHC).mp.
6. or/1-5
7. exp Mass Screening/
8. exp Point-of-Care Testing/
9. (screen* or test*).mp.

10. exp Hepatitis C Antibodies/
11. Hepatitis C Antibody Positive.mp.
12. Anti-HCV*.mp.
13. or/7-12
14. exp Awareness/
15. exp knowledge/
16. exy Comprehension/
17. exp Health Knowledge, Attitudes, Practice/
18. exp Education/
19. (awareness or knowledge or understanding or comprehension).mp.
20. (education or educate or teach or training or program).mp.
21. Or/14-20
22. Exp Primary Health Care/
23. Exp “Continuity of Patient Care”/
24. Exp Ambulatory Care/
25. Exp “Referral and Consultation”/
26. Exp Retention in Care/
27. Exp Counseling/
28. Exp “Treatment Adherence and Compliance”/
29. Liver disease assess*.mp.
30. (care* or link* or refer* or retention or retain* or counseling or adherence or adhere or compliance or comply or follow-up or engagement).mp.
31. Or/22-30
32. Exp diagnosis/
33. Exp RNA
34. Exp Viral Load/
35. (diagnos* or RNA or “viral load” or PCR positive” or “Nucleic Acid Testing”).mp.
36. Or/32-35
37. Exp Liver Cirrhosis/
38. (cirrhosis or fibrosis or biopsy or elastography* or fibroscan or Staging or FIB-4 or APRI or Genotyping).mp.
39. Or/37-38

40. Exp Antiviral Agents/
41. (direct acting antiviral" or DAA).mp.
42. Exp Medication Therapy Management/
43. Exp Drug Therapy/
44. Exp Therapeutics/
45. (Therap* or treat* or regimen or prescription* or uptake or initiation or intervention).mp.
46. Or/40-45
47. Exp Sustained Virologic Resposne/
48. ("sustained virologic response" or SVR).mp.
49. Exp Treatment Outcome/
50. ("treatment success" or "treatment outcome" or cure or suppression).mp.
51. Or/47-50
52. 6 and (13 or 21 or 31 or 36 or 39 or 46 or 51)
53. Limit 52 to (human and English language and yr="2014 -Current")

Cochrane library

1. MeSH descriptor: [Hepatitis C] explode all trees
2. MeSH descriptor: [Hepatitis C, Chronic] explode all trees
3. MeSH descriptor: [Hepacivirus] explode all trees
4. (chronic viral hepatitis):ti,ab,tw
5. ("hepatitis C" or HCV or CHC):ti,ab,tw
6. #1 or #2 or #3 or #4 or #5
7. MeSH descriptor: [Mass Screening] explode all trees
8. MeSH descriptor: [Point-of-Care Testing] explode all trees
9. (screen* or test*):ti,ab,tw
10. MeSH descriptor: [Hepatitis C Antibodies] explaode all trees
11. (Hepatitis C Antibody Positive):ti,ab,tx
12. (Anti-HCV*):ti,ab,tw
13. #7 or #8 or #9 or #10 or #11 or #12
14. MeSH descriptor: [Awareness] explode all trees
15. MeSH descriptor: [Knowledge] explode all trees
16. MeSH descriptor: [Comprehension] explode all trees

17. MeSH descriptor: [Health Knowledge, Attitudes, Practice] explode all trees
18. MeSH descriptor: [Education] explode all trees
19. (awareness or knowledge or understanding or comprehension):ti,ab,tw
20. (education or educate or teach or training or program):iw,ab,tw
21. #14 or #15 or #16 or #17 or #18 or #19 or #20
22. MeSH descriptor: [Primary Health Care] explode all trees
23. MeSH descriptor: [Continuity of Patient Care] explode all trees
24. MeSH descriptor: [Ambulatory Care] explode all trees
25. MeSH descriptor: [Referral and Consultation] explode all trees
26. MeSH descriptor: [Retention in Care] explode all trees
27. MeSH descriptor: [Counseling] explode all trees
28. MeSH descriptor: [Treatment Adherence and Compliance] explode all trees
29. (liver disease assess*):ti,ab,tw
30. (care* or link* or refer* or retention or retain* or counseling or adherene or adhere or compliance or comply or follow-up or engagement):ti,ab,tw
31. #22 or #23 or #24 or #25 or #26 or #27 or #28 or #29 or #30
32. MeSH descriptor: [Diagnosis] explode all trees
33. MeSH descriptor: [RNA] explode all trees
34. MeSH descriptor: [Viral Load] explode all trees
35. (diagnosis* or RNA or “viral load” or “PCR positive” or “HCV PCR” or “Nucleic Acid Testing”):ti,ab,tw
36. #32 or #33 or #34 or #35
37. MeSH descriptor: [Liver Cirrhosis] explode all trees
38. (cirrhosis or fibrosis or biopsy or elastography* or fibroscan or Staging or FIB-4 or APRI or Genotyping):ti,ab,tw
39. #37 or #38
40. MeSH descriptor: [Antiviral Agents] explode all trees
41. (“direct acting antiviral” or DAA): ti,ab,tw
42. MeSH descriptor: [Medication Therapy management] explode all trees
43. MeSH descriptor: [Drug Therapy] explode all trees
44. MeSH descriptor: [Therapeutics] explode all trees
45. (Therap* or treat* or regimen or prescription* or uptake or initiation or intervention):ti,ab,tw
46. #40 or #41 or #42 or #43 or #44 or #45

47. MeSH descriptor: [Sustained Virologic Response] explode all trees
48. (“sustained virologic response” or SVR):ti,ab,tw
49. MeSH descriptor: [Treatment Outcome] explode all trees
50. (“treatment success” or “treatment outcome” or cure or suppression):ti,ab,tw
51. #47 or #48 or #49 or #50
52. #6 and (#13 or #21 or #31 or #36 or #39 or #46 or #51)
53. 52 with Publication year from 2014 to 2021, in Trials

CINAHL

1. MH Hepatitis C OR MH Hepatitis C, Chronic OR MH Hepacivirus
2. TI chronic viral hepatitis OR AB chronic viral hepatitis OR TI hepatitis c OR AB hepatitis c OR TI HCV OR AB HCV OR TI CHC OR AB CHC
3. S1 OR S2
4. MH Mass Screening OR MH Point-of-Care Testing
5. TI screen* OR AB screen* OR TI test* OR AB test*
6. MH Hepatitis C Antibodies OR TI Hepatitis C Antibody Positive OR AB Hepatitis C Antibody Positive OR TI Anti-HCV* OR AB Anti-HCV
7. S4 OR S5 OR S6
8. MH Awareness OR MH Knowledge OR MH Comprehension OR MH Health Knowledge, Attitudes, Practice OR MH Education
9. TI (awareness or knowledge or understanding or comprehension) OR AB (awareness or knowledge or understanding or comprehension)
10. TI (education or educate or teach or training or program) OR AB (education or teach or training or progra
11. S8 OR S9 OR S10
12. MH Primary Health Care OR MH Continuity of Patient Care OR MH Ambulatory Care OR MH (Referral and consultation) OR MH Retention in Care OR MH Counseling AND MH (Treatment Adherence and Compliance)
13. TI liver disease assess* OR AB liver disease assess*
14. TI (care* or link* or refer* or retention or retain* or counseling or adherence or adhere or compliance or comply or follow-up engagement) OR AB (care* or link* or refer* or retention or retain* or counseling or adherence or adhere or compliance or comply or follow-up or engagement)
15. S12 OR S13 OR S14

16. MH Diagnosis OR MH RNA OR Viral Load
17. TI (diagnos* or RNA or “viral load” or “PCR positive” or “HCV PCR” or “Nucleic Acid Testing”) OR AB (diagnos* or RNA or “viral load” or “PCR positive” or “HCV PCR” or “Nucleic Acid Testing)
18. S16 OR S17
19. MG Liver Cirrhosis
20. TI (cirrhosis or fibrosis or biopsy or elastography* or fibroscan or Staging or FIB-4 or APRI or Genotyping) OR AB (cirrhosis or fibrosis or biopsy or elastography* or fibroscan or Staging or FIB-4 or APRI or Genotyping)
21. S19 OR S20
22. MH Antiviral Agents
23. TI (“direct acting antiviral” or DAA) OR AB (“direct acting antiviral” or DAA)
24. MH Medication Therapy management OR MH Drug Therapy OR MH Therapeutics
25. TI (Therap* or treat* or regimen or prescription* or uptake or initiation or intervention) OR AB (Therap* or treat* or regimen or prescription* or uptake or initiation or intervention)
26. S22 OR S23 OR S24 OR S25
27. TI (“sustained virologic response” OR SVR (“sustained virologic response” or SVR)
28. TI (“treatment success” or “treatment outcome” or cure or suppression) OR AB (“treatment success” or “treatment outcome” or cure suppression)
29. S27 OR S28
30. S7 OR S11 OR S15 OR S18 OR S21 OR S26 OR S29
31. S3 AND S30
32. S3 AND S30 Limiters- Published Date: 20140101-20210331; English Language; Human

PsycINFO

1. Hepatitis C.mp.
2. Chronic viral hepatitis.mp.
3. (hepacivirus HCV or CHC).mp.
4. Or/1-3
5. Exp Screening/
6. Exp Testing/
7. (screen* or test*).mp.
8. Hepatitis C Antibodies.mp.

9. Anti-HCV*.mp.
10. Or/5-9
11. Exp Awareness/
12. Exp Comprehension/
13. Exp Education/
14. (awareness or knowledge or understanding or comprehension).mp.
15. (education or educate or teach or training or program).mp.
16. 0r/11-15
17. Exp Primary Health Care/
18. Exp Outpatient Treatment/
19. Exp Retention/
20. Exp Counseling/
21. Exp Treatment Compliance/
22. (care* or link* or reger* or retention or retain* or counseling or adherence or adhere or compliance or comply or follow-up or engagement).mp.
23. Liver disease assess*.mp.
24. Or/17-23
25. Exp Diagnosis/
26. (diagnos* or RNA or “viral load” or “PCR positive” or “HCV PCR” or “Nucleic Acid Testing”).mp.
27. Or/25-26
28. Exp “Cirrhosis (Liver)”/
29. Exp Liver Disorders/
30. (cirrhosis or fibrosis or biopsy or elastography* or fibroscan or Staging or FIB-4 or APRI or Genotyping).mp.
31. Or/28-30
32. Exp Antiviral Drugs/
33. (“direct acting antiviral” or DAA).mp.
34. Exp Drug Therapy/
35. Exp Drug Treatment/
36. (Therap* or treat* or regimen or prescription* or uptake or initiation or intervention).mp.
37. Or/32-36
38. (“sustained virologic response” or SVR).mp.

39. Exp Treatment Outcomes/
40. (“treatment success” or “treatment outcome” or cure or suppression).mp.
41. Or/38-40
42. 4 and (10 or 16 or 24 or 27 or 31 or 37 or 41)
43. Limit 42 to (human and English language and yr=”2014 -Current”)

Appendix Table 2: Characteristics and results of included studies

Author, year	Location	Study design	Setting; population	Eligible population	Intervention for screening	Intervention for linkage to care	Outcomes
Abe et al., 2019[1]	Dallas, Texas, U.S.	Interventional	County Jail; Incarcerated individuals	4,089	Routine opt-out HCV screening and confirmatory HCV RNA testing with assistance of a nurse navigator	N/A	• Proportion of individuals with positive HCV antibody tests • Proportion of individuals with positive HCV RNA tests
Adamson et al., 2020[2]	New Haven, Connecticut, U.S.	Observational (retrospective)	1 integrated clinic (HCV clinic) and 1 nonintegrated clinic; Adults (age not specified) visiting a primary care practice within one	8,405	N/A	N/A	• Proportion of individuals linked to first appointment • Proportion of individuals with

			year from study initiation				treatment initiation • Proportion of individuals with treatment completion • Proportion of individuals achieving SVR
Adekunle et al., 2020[3]	Atlanta, Georgia, U.S.	Observational (retrospective)	VAHCS; Veterans (≥ 18 years old) with HIV/HCV coinfection	250	N/A	N/A	• Proportion of individuals successfully contacted • Proportion of individuals linked to first appointment • Proportion of individuals with treatment completion

							• Proportion of individuals achieving SVR
Adland et al., 2018[4]	Southeast UK	Observational (retrospective)	Large tertiary referral teaching hospital; All individuals screened for HCV infection	19,283	N/A	N/A	• Proportion of individuals with positive HCV antibody tests • Proportion of individuals with positive HCV RNA tests • Proportion of individuals linked to first appointment • Proportion of individuals with treatment initiation

							• Proportion of individuals achieving SVR
Akyar et al., 2016[5]	New Jersey, U.S.	Interventional	Psychiatric facility with opioid detoxification program; Young PWID (17-35 years old)	861	N/A	Follow-up visits before discharge to counsel individuals about HCV disease and link them to care. Appointments to HCV care were coordinated before discharge.	• Proportion of individuals with positive HCV antibody tests • Proportion of individuals with positive HCV RNA tests • Proportion of individuals linked to first appointment • Proportion of individuals with

							treatment initiation • Proportion of individuals achieving SVR
Anderson et al., 2017[6]	Oakland, California, U.S. and Birmingham, Alabama, U.S.	Interventional	2 urban EDs: Highland Hospital (HH) and University of Alabama at Birmingham (UAB); Baby Boomers and PWID	55,335	Triage-based opt-out HCV screening in target populations by triage nurses	Follow-up with HCV treatment provider arranged by EP for individuals with positive HCV antibody tests, otherwise by LTCC if chronically infected (HH). Follow-up with HCV treatment provider arranged by LTCC only if chronically infected (UAB).	• Proportion of individuals screened for HCV • Proportion of individuals with positive HCV antibody tests • Proportion of individuals with positive HCV RNA tests • Proportion of individuals

							linked to a first appointment • Proportion of individuals with treatment initiation • Proportion of individuals achieving SVR
Arnold et al., 2018[7]	Maryland, U.S.	Interventional	Outpatient urban behavioral health clinic; African American adults with serious mental illness	170	Opt-in HCV screening facilitated by a registered nurse and delivered within the mental health system (intervention known as STIRR-IT: Screening, Testing, Risk-Reduction, Integrated treatment, collocating	Referral to an ID clinic by an experienced nurse practitioner	• Proportion of individuals with positive HCV antibody tests • Proportion of individuals successfully contacted • Proportion of individuals with

					HCV screening with mental health services)		treatment initiation • Proportion of individuals achieving SVR
Bajis et al., 2019[8]	Sydney, Australia	Interventional	Homelessness service center in an inner-city; People experiencing homelessness	202	Opt-in HCV screening with fingerstick capillary whole blood-sample collection for point of care HCV RNA testing	Schedule of follow-up appointments for individuals with positive HCV RNA tests by general practitioner or nurse. Remuneration with AUS $20 voucher at follow-up.	• Proportion of individuals with positive HCV RNA tests • Proportion of individuals linked to a first appointment • Proportion of individuals with treatment initiation • Proportion of individuals achieving SVR

Bakhai et al., 2019[9]	New York, U.S.	Interventional	Safety-net internal medicine clinic; Baby boomers	1,291	Integration of an HCV screening tool in the EHR. Opt-in HCV screening (then switched to opt-out) screening by the nursing staff to target population (offering was fully integrated in the nurse workflow prior to physician evaluation). Physician, nursing and affected individuals' education about HCV screening. Physician reminders with HCV screening posters. Refresher training and	Individuals with confirmed HCV infection were referred to a hepatology clinic. Reschedule of appointment if first appointment was missed.	• Proportion of individuals with positive HCV antibody tests • Proportion of individuals with positive HCV RNA tests • Proportion of individuals successfully contacted • Proportion of individuals linked to first appointment

					education to new interns about EHR record workflow for HCV screening.		
Bartholomew et al., 2020[10]	Miami, Florida, U.S.	Interventional	Syringe Service Programs; PWID	1,059	Opt-out /HCV screening at enrollment and bundled HIV/HCV antibody fingerstick point-of-care testing	N/A	• Proportion of individuals screened for HCV
Benitez et al., 2020[11]	Los Angeles, California, U.S.	Interventional	Local network of health centers; People experiencing homelessness who were baby boomers and with HCV risk factors	6,767	Opt-in HCV screening with reflex HCV RNA testing	All individuals who tested positive for HCV were contacted via phone by a care coordinator within 72 h to return for a follow-up medical. Two letters were sent to individuals who were not reachable via phone. Visits to nearby shelters by care	• Proportion of individuals screened for HCV • Proportion of individuals with positive HCV antibody tests • Proportion of

						coordinator for individuals unreachable by phone or letters.	individuals with positive HCV RNA tests • Proportion of individuals linked to first appointment • Proportion of individuals with treatment initiation • Proportion of individuals with treatment completion • Proportion of individuals reaching SVR
Blackwell et al., 2020[12]	Birmingham, Alabama, U.S.	Interventional	ED, academic tertiary care medical center;	53,297	Opt-out HCV screening by a nursing staff.	LTCC contacted individuals with confirmed HCV	• Proportion of individuals

			All individuals > 17 years old		Reflex HCV viral load for individuals with positive HCV antibody tests.	infection, via telephone. LTCC coordinated follow-up with HCV specialty clinics or PCP. LTCC followed individuals for a six-month period after HCV diagnosis to assess for linkage to care.	with positive HCV antibody tests • Proportion of individuals with positive HCV RNA tests • Proportion of individuals linked to first appointment
Boodram et al., 2020[13]	Chicago, Illinois, U.S.	Interventional	Community health centers; Vulnerable populations with HCV infection, including baby boomers and PWID.	181	N/A	Development of individualized strategies for building organizational infrastructure to provide health care or support services. Case management services that provided intensive follow-up to address barriers to linkage to care.	• Proportion of individuals linked to first appointment Proportion of individuals with treatment initiation

						Follow-up conducted through phone calls and in-person visits depending on each individual's barriers. Case managers accompanied individuals with HCV infection to provider appointments.	• Proportion of individuals with treatment completion • Proportion of individuals achieving SVR
Bourgi et al., 2016[14]	Detroit, Michigan, U.S.	Observational (retrospective)	Internal medicine clinic; Baby boomers	40,561	N/A	N/A	• Proportion of individuals screened for HCV • Proportion of individuals positive HCV antibody tests • Proportion of individuals

							with positive HCV RNA tests • Proportion of individuals linked to first appointment • Proportion of individuals with treatment initiation • Proportion of individuals with treatment completion
Broad et al., 2020[15]	Toronto, Ontario, Canada	RCT	3 HCV Program sites; Adults ≥ 18 years old and PWID	380	Point-of-care HCV antibody testing using peer outreach workers. $20 honorarium.	N/A	• Proportion of individuals screened for HCV • Proportion of

							individuals with positive HCV antibody tests • Proportion of individuals with positive HCV RNA tests • Proportion of individuals linked to a first appointment
Burrell et al., 2018[16]	Central Appalachian region, U.S.	Interventional	3 local urgent care clinics; Individuals with risk factors for HCV infection based on CDC guidelines	6,509	Incorporation of a BPA in the EHR identifying eligible individuals. Opt-out HCV screening. Reflex quantitative HCV RNA tests for individuals with positive	Patient navigators (PN) contacted individuals via phone. PN linked individuals to their appropriate care needs. Transport assistance and coordination with follow-up clinic schedulers.	• Proportion of individuals screened for HCV • Proportion of individuals with positive HCV antibody tests

					HCV antibody tests.		• Proportion of individuals with positive HCV RNA tests • Proportion of individuals linked to a first appointment
Burton et al., 2019[17]	Southeastern U.S.	Interventional	SUD program at a VA Medical Center; All Veterans with active SUD	597	Opt-in HCV screening in an integrated residential SUD program with HCV treatment clinics.	Referral to the ID clinic via consult while still in residential SUD program	• Proportion of individuals screened for HCV • Proportion of individuals with positive HCV viral load tests • Proportion of individuals linked to a first appointment

							• Proportion of individuals with treatment initiation • Proportion of individuals with treatment completion • Proportion of individuals achieving SVR
Calner et al., 2019[18]	Boston, Massachusetts, U.S.	Interventional	Boston Medical Center (all settings: outpatient, inpatient and ED); Individuals with risk factors (baby boomers or PWID)	28,435	Utilization of a multi-purpose BPA (except in the inpatient setting) that fired to alert providers about eligible individuals. Opt-out HCV screening for individuals captured in the ED undergoing	Augmented linkage support services through a data analyst and public health navigators. Navigators contacted individuals with positive HCV RNA tests.	• Proportion of individuals screened for HCV • Proportion of individuals with positive HCV antibody tests

					phlebotomy for any reason. Hospital-wide reflex testing for HCV RNA and genotyping.		• Proportion of individuals with positive HCV RNA tests • Proportion of individuals linked to a first appointment • Proportion of individuals with treatment initiation • Proportion of individuals with treatment completion • Proportion of individuals achieving SVR

Castrejon et al., 2017[19]	Sourhtern California, U.S.	Interventional	Outpatient primary care clinics of UCLA healthcare system; Baby boomers	19,606	Incorporation of a CDS tool in the her reminding health staff of HCV screening in eligible individuals.	Introduction of a HCV care coordinator to facilitate follow-up and linkage to care via phone	• Proportion of individuals screened for HCV • Proportion of individuals with positive HCV antibody tests • Proportion of individuals with positive HCV RNA tests • Proportion of individuals linked to a first appointment
Citarella et al., 2020[20]	Campania region, Italy	Observational (retrospective)	Outpatient general practices of the National	3,210	N/A	N/A	• Proportion of individuals

			Health Services; Adults ≥ 18 years old with known diagnosis of HCV infection or with risk factors for HCV infection				linked to a first appointment
Connoley et al., 2020[21]	London, England, UK	Interventional	All-male short-stay local prison; Newly incarcerated individuals	12,964	Phase 1 (Dec 2015 – Feb 2017: offering of dried blood spot testing at health evaluation occurring within 72 hours of entering prison. Phase 2 (March 2017 – May 2018): components of phase 1 + additional training of prison healthcare on delivering opt-out testing +	Phase 1: referral of HCV RNA cases to a CNS then review of cases by a MDT to decide on treatment initiation. Phase 2: direct referral to MDT.	• Proportion of individuals screened for HCV • Proportion of individuals with positive HCV antibody tests • Proportion of individuals with positive HCV RNA tests • Proportion of

					engaging prisoners outside their cell during other activities to reduce prisoner non-attendance + developing a wait-list to enable tracking prisoners who missed testing		individuals linked to a first appointment • Proportion of individuals with treatment initiation
Cowan et al., 2020[22]	New York City, New York, U.S.	Interventional	Urban ED; All adults ≥ 18 years old	40,282	Nontargeted opt-in HCV screening. Inclusion of a mandatory field for HCV testing assessment in the EHR. Reflex viral load for positive HCV antibody tests. Contact of individuals who initially declined testing or who had a life-threatening	Offering of follow-up with the Hepatology clinic located close to the hospital	• Proportion of individuals screened for HCV • Proportion of individuals with positive HCV antibody tests • Proportion of individuals with positive

					emergency by a trained HE, by phone or telegram, to re-engage them in the healthcare system.		HCV RNA tests • Proportion of individuals successfully contacted • Proportion of individuals linked to a first appointment • Proportion of individuals with treatment initiation • Proportion of individuals achieving SVR
Crowley et al., 2019[23]	Dublin, Ireland	Interventional	Urban male prison; Incarcerated individuals	425	Opt-in and peer-supported (trained prison-based health volunteers) HCV screening.	N/A	• Proportion of individuals screened for HCV

					Reflex HCV RNA and genotype testing for all positive HCV antibody tests.		• Proportion of individuals with positive HCV antibody tests • Proportion of individuals with positive HCV RNA tests • Proportion of individuals linked to a first appointment • Proportion of individuals with treatment initiation • Proportion of individuals with treatment completion

							• Proportion of individuals reaching SVR
Desai et al., 2020[24]	Dallas County, Texas, U.S.	RCT	A publicly funded integrated health system including 12 primary care clinics and specialty clinics; Baby boomers with at least 1 primary care visit within 5 years before RCT and no previous HCV screening	12,386	"Inreach" screening alone, defined as a visit-based HCV screening assisted by an EHR BPA + primary care provider and/or patient education **vs** "Inreach + Outreach" screening. "Outreach" screening consisted of a mailed low literacy letter in English and Spanish describing the risk of HCV infection, benefits and risks of HCV	N/A	• Proportion of individuals screened for HCV • Proportion of individuals with positive HCV antibody tests • Proportion of individuals with positive HCV RNA tests • Proportion of individuals linked to a first appointment

					screening, and a phone number to "schedule" the HCV antibody test.		• Proportion of individuals with treatment initiation
Dupont et al., 2020[25]	Atlanta, Georgia, U.S.	Observational (retrospective)	Urban safety-net health system comprised of a Primary Care Center at the main hospital and satellite clinics; Newly screened individuals with positive HCV antibody test	7,137	N/A	N/A	• Proportion of individuals with of positive antibody test • Proportion of individuals with positive HCV RNA • Proportion of individuals linked to a first appointment • Proportion of individuals with

							treatment initiation • Proportion of individuals reaching SVR
Ford et al., 2017[26]	New York City, New York, U.S.	Interventional	4 community-based organizations: 2 organizations with on-site outpatient clinical care, harm reduction and social services and 2 organizations with harm reduction and syringe exchange programs with off-site medical care; Vulnerable populations, including	388	N/A	Patient navigation program: PNs supported individuals through medical evaluation, follow-up appointment accompaniment, preparation for DAA treatment and treatment adherence	• Proportion of individuals linked to a first appointment • Proportion of individuals with treatment initiation • Proportion of individuals with treatment completion • Proportion of individuals reaching SVR

			PWID, people who experience homelessnes s, people with mental health disorders and people with HIV coinfection				
Galbraith et al., 2020[27]	Birmingham, Alabama; Oakland, California; Boston, Massachuset ts; and Baltimore, Maryland; U.S.	Intervention al	Four urban academic EDs; All adults ≥ 18 years old	43,507	Opt-out universal HCV screening, nurse-driven, using electronic EHR prompts	A dedicated LTCC delivered positive test results and facilitated referral to HCV infection care	• Proportion of individuals screened for HCV • Proportion of individuals with positive HCV antibody tests • Proportion of individuals with positive HCV RNA tests

Geboy et al., 2019[28]	Washington D.C.; Northern Virginia; Southern Maryland; Baltimore, Maryland; U.S.	Interventional	Primary care outpatient clinics of a large healthcare network; Baby boomers	80,556	Incorporation of a CDS tool in the EHR identifying individuals eligible for HCV screening. Automatic printing of a CDC HCV screening handout to encourage testing and provide educational support (as part of the CDS tool).	N/A	• Proportion of individuals screened for HCV • Proportion of individuals with positive HCV antibody tests • Proportion of individuals with positive HCV RNA tests • Proportion of individuals successfully contacted • Proportion of individuals linked to a first appointment

							• Proportion of individuals with treatment initiation • Proportion of individuals with treatment completion • Proportion of individuals reaching SVR
Hachey et al., 2020[29]	Western U.S.	Observational (retrospective)	Eight rural clinics of the FQHCs; Individuals with HCV diagnosis and aware of their infection	389	N/A	N/A	• Proportion of individuals with positive HCV viral load tests • Proportion of individuals with treatment initiation

							• Proportion of individuals achieving SVR
Hoenigl et al., 2019[30]	San Diego, California, U.S.	Interventional	Two academic EDs; Baby boomers	905	Opt-out HCV screening	Case manager disclosed HCV diagnosis and assisted with linkage to care	• Proportion of individuals screened for HCV • Proportion of individuals with positive HCV antibody tests • Proportion of individuals with positive HCV RNA tests • Proportion of individuals linked to a first appointment

Hunt et al., 2021[31]	Chicago, Illinois, U.S.	Interventional	Urban community safety-net teaching hospital; 2 cohorts: baby boomers and all adults ≥ 18 years old	21,018	Expansion of available HCV screening program in 3 stages: Oct-Dec 2014 = targeted screening based on birth and risk factors, Dec 2014 – Aug 2016 = introduction of reflex HCV RNA test, Sep 2016 – Aug 2020= universal screening only for individuals admitted to the ED	PN notified testing results to individuals, provided linkage-to-care services and addressed barriers to care: schedule of appointment for elastography and ID clinic, reschedule of appointments, arrangement of transportation if needed	• Proportion of individuals screened for HCV • Proportion of individuals with positive HCV antibody tests • Proportion of individuals with positive HCV RNA tests • Proportion of individuals successfully contacted • Proportion of individuals linked to a first appointment

Im et al., 2021[32]	Chicago, Illinois, U.S.	Observational (retrospective)	Large, urban and tertiary university hospital; Adults ≥ 18 years old with positive HCV antibody tests during 3 years before study start	1,570	N/A	N/A	• Proportion of individuals with positive HCV RNA tests • Proportion of individuals linked to a first appointment • Proportion of individuals with treatment initiation
Irvin et al., 2020[33]	Baltimore, Maryland, U.S.	Interventional	Primary care sites; Baby boomers	3,250	Modification of EHR clinic systems to allow for alerts to recommend HCV testing based on target population	Modification of EHR clinic systems to allow for alerts to flag individuals with positive HCV antibody or RNA tests not linked to care or who	• Proportion of individuals screened for HCV • Proportion of individuals

						dropped out of care. Transformation of clinical sites into HCV centers, led by an experienced HCV nurse practitioner.	with positive HCV antibody tests • Proportion of individuals with positive HCV RNA tests • Proportion of individuals successfully contacted • Proportion of individuals linked to a first appointment • Proportion of individuals with treatment initiation • Proportion of individuals with

							treatment completion • Proportion of individuals achieving SVR
Jain et al., 2019[34]	Dallas County, Texas, U.S.	Interventional	12 primary care clinics in one health care system located in one county; Baby boomers with an outpatient visit with no prior HCV antibody, HCV RNA, or genotype testing	34,093	Patient and provider education. For patients, CDC flyers on HCV screening guidelines for Baby boomers were placed in waiting rooms. For physicians, a one-time in-person didact was performed at each clinic.	Algorithm driven BPA was implemented in primary care clinics and HCV clinic capacity was increased to link those who screened positive to treatment.	• Proportion of individuals screened for HCV Prevalence of positive antibody test • Proportion of individuals with positive HCV antibody tests • Proportion of individuals with positive HCV RNA tests

							• Proportion of individuals linked to first appointment
Jonas et al., 2016[35]	Mid Atlantic, U.S.	Intervention	Integrated health care system; Baby boomers eligible for HCV Ab screening without documentation in the EMR of prior HCV testing	11,200	An algorithm driven BPA in the EHR.	The testing pathway includes HCV antibody (Ab), automatic HCV RNA for Ab-positive patients, coinfection and liver health tests, vibration-controlled transient elastography (VCTE), and a physician referral. This protocol granted approval for a nonphysician support staff member (at MAPMG, the HCV care coordinator), to execute a physician order if upstream HCV RNA tests return positive results.	• Proportion of individuals with positive HCV antibody tests • Proportion of individuals with positive HCV RNA tests • Proportion of individuals successfully contacted •

Kemppinen et al., 2020[36]	Southern Karelia Region, Finland	Interventional	Region with largest prevalence of HCV; All HCV-antigen positive persons	539	N/A	National registry data was used to identify individuals. Those whose HCV RNA status was unknown were contacted by either telephone, letter or social media. Newspaper announcements and posters on addiction service sites invited individuals to be tested for HCV. For those with no contact information, relevant treatment services were used to reach them or to have the request forwarded to them. Contacted individuals were invited to visit the clinic and educated on disease and	• Proportion of individuals with positive HCV RNA tests • Proportion of individuals successfully contacted • Proportion of individuals with treatment initiation • Proportion of individuals achieving SVR

						national treatment policies. Information about those who could not be reached was provided to the local health center nearest to the individuals last know residence instructing them to test the individual for HCV if they visited the center. All health service providers in the region were notified about and enrolled in the program and trained.	
Kim et al., 2019[37]	San Francisco, California, U.S.	Observational (retrospective)	12 adult primary care clinics within a large city's department of public health; Baby boomers	34,810	N/A	N/A	• Proportion of individuals screened for HCV • Proportion of individuals with positive

							HCV antibody tests • Proportion of individuals with positive HCV RNA tests • Proportion of individuals with treatment initiation • Proportion of individuals achieving SVR
Kronfli et al., 2019[38]	Montréal, Quebec, Canada	Observational (retrospective)	Areas largest provincial prison; Male prisoners aged >18 who requested testing	4,931	N/A	N/A	• Proportion of individuals screened for HCV • Proportion of individuals with positive HCV

							antibody tests • Proportion of individuals with positive HCV RNA tests • Proportion of individuals linked to first appointment • Proportion of individuals with treatment initiation • Proportion of individuals achieving SVR
Lee et al., 2020[39]	Alabama, U.S.	Interventional	Community clinics and outreach venues across one U.S. state;	8,947	Opt-out HCV point-of-care (POC) testing or HCV screening	Linkage coordinator attempted to establish contact with all HCV-antibody–positive	• Proportion of individuals screened for HCV

			High-Risk Alabamians		prompts in the EHR.	individuals who underwent POC testing, and all HCV-viremic individuals who underwent EMR-based reflex testing. By means of phone calls and in person, the linkage coordinator delivered HCV confirmatory PCR test results, obtained further risk information, and assisted with linkage to substance use counselling, when applicable, and to an HCV treatment center.	• Proportion of individuals with positive HCV antibody tests • Proportion of individuals linked to first appointment
Lions et al., 2020[40]	France	Interventional	HIV-outpatient clinic; Individuals aged ≥18 who were HIV-infected	898	In the screening phase, according to French guidelines, HCV serology was performed	The therapeutic component of the program included information and a treatment proposal for all patients with positive HCV-RNA quantification.	• Proportion of individuals screened for HCV • Proportion of

					for patients with a previous negative result for more than 12 months prior or an unavailable test. In cases of positive serology, HCV RNA was quantified. For cured HCV patients after HCV treatment, HCV RNA was systematically controlled if the previous HCV RNA quantification was over 6 months or in case of HCV reinfection risk factors. For patients who spontaneously cleared HCV infection, HCV		individuals with positive HCV antibody tests • Proportion of individuals with positive HCV RNA tests • Proportion of individuals with treatment initiation • Proportion of individuals achieving SVR

					RNA was performed if the precedent test occurred more than 12 months prior.		
Ma et al., 2019[41]	St Louis, Missouri, U.S.	Observational (retrospective)	University infectious disease clinic; Individuals aged ≥18 who were HIV-infected with active chronic HCV infection and ≥1 follow-up visits	1,949	N/A	N/A	• Proportion of individuals screened for HCV • Proportion of individuals with positive HCV antibody tests • Proportion of individuals with positive HCV RNA tests • Proportion of individuals linked to first appointment

							• Proportion of individuals with treatment initiation • Proportion of individuals with treatment completion • Proportion of individuals achieving SVR
Messina et al., 2020[42]	Italy	Interventional	Substance use disorder facilities; Individuals who use drugs	593	A diagnostic protocol for HCV infection among patients in the facility	A fast path to accessing the infectious disease unit where DAAs were started the day of first visit and a protocol for follow-up during and after DAA treatment was followed.	• Proportion of individuals screened for HCV • Proportion of individuals with positive HCV antibody tests

							• Proportion of individuals with HCV RNA testing • Proportion of individuals with treatment initiation
Miller et al., 2020[43]	Atlanta, Georgia, U.S.	Observational (retrospective)	Urban health system EHR; Living individuals tested for or identified with HCV infection	72,745	N/A	N/A	• Proportion of individuals with positive HCV antibody tests • Proportion of individuals with positive HCV RNA tests • Proportion of individuals linked to first appointment

							• Proportion of individuals with treatment initiation • Proportion of individuals achieving SVR
Morey et al., 2019[44]	UK	Interventional	Two large male prisons; Incarcerated individuals	4,280	Individuals were offered dry blood spot testing at prison reception with confirmatory HCV RNA testing. Positive antibody tests with negative RNA tests were confirmed with venous blood testing. Those with negative tests were informed by letter.	Individuals with positive HCV RNA tests were recalled within 10 days for venous samples to measure HCV viral load and genotype. All confirmed as HCV RNA positive were referred for treatment with counselling and offered an assessment from the weekly on-site clinics with viral hepatitis nurse specialist. Telemedicine with	• Proportion of individuals screened for HCV • Proportion of individuals with positive HCV antibody tests • Proportion of individuals with positive HCV RNA tests

						hepatology consultant determined treatment. A multi-disciplinary team met and reviewed each case. Those with short sentences precluding commencement of treatment in prison were provided written information with details on community HCV treatment.	• Proportion of individuals linked to first appointment • Proportion of individuals with treatment initiation • Proportion of individuals with treatment completion • Proportion of individuals achieving SVR
Morris et al., 2020[45]	Queensland, Australia	Observational (prospective)	Community-based health service (a not-for-profit alcohol and other drug health service);	476	N/A	N/A	• Proportion of individuals with treatment initiation

			PWID with confirmed HCV diagnosis				• Proportion of individuals with treatment completion • Proportion of individuals achieving SVR
Noska et al., 2017[46]	U.S.	Observational (retrospective)	VHA's Corporate Data Warehouse and HCV Clinical Case Registry data; Veterans in VHA care experiencing homelessness and not experiencing homelessness	5,667,452	N/A	N/A	• Proportion of individuals with positive HCV antibody tests • Proportion of individuals with treatment initiation • Proportion of individuals achieving SVR

O'Connell et al., 2016[47]	Dublin, Ireland	Interventional	Urban emergency department; Individuals aged ≥18 with the capacity to consent were included	8,839	Opt-out testing of all individuals with blood samples drawn as part of routine clinical care at no additional cost. Posters and leaflets informing individuals of opt-out testing were provided. Individuals with positive antibody tests were contacted 3 working days after the ED visit.	Linkage to care where necessary was coordinated by the study team	• Proportion of individuals screened for HCV • Proportion of individuals with positive HCV antibody tests • Proportion of individuals with positive HCV RNA tests
Page et al., 2017[48]	New Mexico, U.S.	Observational (retrospective)	Academic health science center prenatal care clinic; Pregnant women who had a self-	190	N/A	N/A	• Proportion of individuals screened for HCV • Proportion of individuals

			reported history of opioid use, were on opioid agonist pharmacotherapy and/or who had drug screens that were positive for opioids, and were aged ≥18				with positive HCV antibody tests • Proportion of individuals with positive HCV RNA tests
Ponziani et al., 2021[49]	Rome, Italy	Interventional	Large tertiary care center; Individuals tested for HCV antibodies during routine pre-operative assessment	12,246	N/A	All HCV antibody positive individuals identified in routine pre-operative assessment but without documented HCV RNA test results were identified then by telephone and email contacts were recalled for further diagnostic tests (i.e., HCV-RNA) or treatment.	• Proportion of individuals with positive HCV antibody tests • Proportion of individuals with positive HCV RNA tests • Proportion of individuals

							successfully contacted • Proportion of individuals with treatment initiation
Rizk et al., 2019[50]	New Haven, Connecticut, U.S.	Interventional	Academically affiliated, hospital-based HIV specialty clinic; Individuals aged ≥18 with documented HIV infection and chronic HCV (reactive HCV antibody with detectable HCV RNA) with no previous DAA treatment	173	Clinic protocol was for all patients to receive HCV antibody testing after enrollment and to conduct confirmatory testing of those who test antibody positive.	Multidisciplinary team that focused on the onsite management of HCV care composed of 3 specially-trained physicians, 1 physician assistant, 1 nurse, 1-2 pharmacists and data managers. Each team member had specific roles in the process and all met regularly to review progress. Standardized screening, referral, and treatment algorithms were	• Proportion of individuals linked to first appointment • Proportion of individuals with treatment initiation Proportion of individuals with treatment completion • Proportion of individuals

						adopted. Uniform EPIC templates were created for initial and follow-up evaluations that contained all pertinent HCV-specific information. Enhanced outreach via phone calls were made to untreated patients. Some patients' adherence was tracked using an ingestible sensor pill.	achieving SVR
Rodriguez-Watson et al., 2021[51]	Mid-Atlantic U.S.	Interventional	Integrated health care system; Baby boomers	506,070	Automated screening alerts for individuals as they are registered for appointments	Care pathway was initiated by a unique pathway laboratory code that first initiated an HCV antibody testing order the led to reflex laboratory orders for positive HCV antibody results and subsequent	• Proportion of individuals screened for HCV • Proportion of individuals with positive HCV

						orders for a care coordinator who facilitated diagnosis communication and engagement in follow-up care.	antibody tests • Proportion of individuals with positive HCV RNA tests • Proportion of individuals successfully contacted
Rosecrans et al., 2020[52]	Baltimore, Maryland, U.S.	Interventional	Two free large city health department community sexual health clinics; Patients accessing care at a community sexual health clinic	560	N/A	All HCV RNA positive individuals were contacted by the study case manager who performed needs assessments and linked individual to resources (insurance, primary care, substance use disorder treatment, transportation and housing) and linked individual to HCV care under a clinician at the	• Proportion of individuals screened for HCV • Proportion of individuals with positive HCV antibody tests • Proportion of individuals with positive

						health department. Clinician educated individual on HCV. Individuals who could not be contacted were referred to a linkage to care team for field outreach. A specialty pharmacy processed prior authorization approvals for HCV prescriptions. Those not meeting prior authorization criteria were assisted with applications for free medication through pharmaceutical assistance programs. Individuals receiving HCV treatment met monthly with a nurse for	HCV RNA tests • Proportion of individuals linked to first appointment • Proportion of individuals with treatment initiation • Proportion of individuals achieving SVR

						adherence counseling and blood work and were given a treatment calendar.	
Ryan et al., 2021[53]	Madrid, Spain	Interventional	Encampment where 90% of illicit drugs in the region are sold; Individuals aged >18 who use drugs and entered the encampment from the outside	529	Mobile unit went to the shantytown and collected fingerstick blood samples. This service was offered to everyone entering the encampment.	Those with positive HCV RNA tests were contacted and referred to specialized health centers. A patient navigator accompanied the individual to the hospital appointment where they were prescribed HCV therapy.	• Proportion of individuals with positive HCV antibody tests • Proportion of individuals with positive HCV RNA tests • Proportion of individuals successfully contacted • Proportion of individuals linked to

							first appointment • Proportion of individuals with treatment initiation • Proportion of individuals achieving SVR
Saab et al., 2019[54]	Los Angeles, California, U.S.	Interventional	Large university hospital healthcare system; Individuals who had previously used injection drugs and who were screened for HCV	17,512	N/A	Coordinators recommended confirmatory HCV RNA testing w/genotype assessment to patients' providers and offered to facilitate clinic appointment.	• Proportion of individuals with positive HCV antibody tests • Proportion of individuals linked to first appointment
Schechter-Perkins et al., 2018[55]	Boston, Massachusetts, U.S.	Interventional	Emergency department in New England's	12,852	A nontargeted, opt-out ED HCV screening (linkage-to-care	Physicians provided preliminary antibody screening	• Proportion of individuals

			largest safety net hospital; All patients who presented to the ED and underwent phlebotomy, at least 13 years old who did not have a prior complete HCV panel result in the EHR.		[LTC] program) Best Practice Advisory (BPA) alerted providers (nurse, nurse practitioner, physician, physician's assistant) when any phlebotomy order was entered into the EHR that the patient was eligible for HCV screening. ED providers followed a script in which they were conducting the medical history. BPA generated order labels. Nurses, residents and faculty were trained for the study. Onsite	results when available to patients still in the ED. Experienced patient care navigators were hired by the infectious disease program and extensively trained. The linkage navigators contacted and gave patients a CDC fact sheet about HCV. When patients had already left the ED, then program staff contacted the patient with results via telephone. Public health navigators attempted to contact all patients to give them positive test results and to link them to a treating provider at the	with positive HCV antibody tests • Proportion of individuals with positive HCV RNA tests • Proportion of individuals successfully contacted • Proportion of individuals linked to first appointment

					pathway was developed to provide antibody screening with reflex testing for HCV RNA and to genotype those specimens identified as being HCV antibody seropositive.	medical center. Hospitalized patients were contacted during their admission. Navigators attempted to reach patients 4 times by telephone, after which they attempted to contact patients via their emergency contact phone number and/or their primary care provider, and simultaneously sent a certified letter to the patient's listed address. When the navigator successfully contacted a patient (s)he provided test results and scheduled a first visit appointment with either a	

						physician or nurse practitioner in general internal medicine, gastroenterology, infectious disease, or addiction services, according to an algorithm developed with outpatient clinicians. The navigators repeated their outreach attempts for patients who missed their first appointment.	
Scott et al., 2021[56]	Washington, U.S.	Observational (prospective)	Three community health centers, three large multi-clinic health care systems, and an HCV patient education and advocacy group; Baby	232,214	Establishment of a population-based public health and health care collaboration dedicated to HCV testing and treatment; Identification and hepatitis C testing of	Development of a data system to integrate laboratory and clinical data into public health surveillance records; Monitored patients along the care cascade and provide case management to	• Proportion of individuals screened for HCV • Proportion of individuals with positive HCV

			boomers or those with a HCV related diagnosis code, positive HCV laboratory test, or prescribed a medication for HCV residing in one highly populated county and having at least one visit to a participating primary care or liver specialty clinic during the project period		eligible patients in accordance with CDC guidelines; EHR modification that flagged patients needing HCV testing; Posting of CDC-produced posters in clinic waiting rooms to inform patients about hepatitis C screening for baby boomers; Provision of cards at check-in to remind baby boomers to ask their provider about HCV testing.	promote linkage to medical care and curative therapy when indicated; Enhanced HCV treatment capacity among PCPs; and Educational interventions for providers including online CE, presentations by specialists, teleconferences, and shadowing opportunities; medical and financial navigation services; and public awareness campaign on HCV and promoting screening	antibody tests • Proportion of individuals with positive HCV RNA tests • Proportion of individuals with treatment initiation • Proportion of individuals with treatment completion • Proportion of individuals achieving SVR
Sherbuk et al., 2019[57]	Virginia, U.S.	Interventional	University ID HCV clinic; Individuals aged ≥18 referred to	824	N/A	Nurse coordinator scheduled appointments, rescheduled missed	• Proportion of individuals linked to

			the HCV clinic			appointments, attempted multiple contacts by phone when needed, provided face-to-face and telephone-based education and counseling, ensured required paperwork was completed for medication approval, completed required financial screening, prior authorization and patient assistance program paperwork. A pharmacy-based team assisted with prior authorizations and provided telephone counseling related to HCV medications.	first appointment • Proportion of individuals with treatment initiation • Proportion of individuals with treatment completion • Proportion of individuals achieving SVR

Simoncini et al., 2019[58]	Pennsylvania, U.S.	Interventional	University trauma surgery center; Trauma surgery patients	1,470	Patients were screened for HCV antibody as part of the initial trauma laboratory order set and the tests were automatically ordered.	A nurse navigator contacted patients about returning for confirmatory testing if they were discharged prior to the testing and contacted them to discuss results; patients were educated about HCV; a nurse navigator linked or re-engaged those with chronic HCV in care. The navigator made three attempts to reach the patient by phone and if unsuccessful, a certified letter was sent.	• Proportion of individuals screened for HCV • Proportion of individuals with positive HCV antibody tests • Proportion of individuals with positive HCV RNA tests • Proportion of individuals successfully contacted • Proportion of individuals linked to first appointment

							• Proportion of individuals with treatment initiation
Tapp et al., 2020[59]	North Carolina, U.S.	Observational (retrospective)	12 practices, including 5 in a non-profit, vertically integrated healthcare system; Baby boomers attending outpatient visit with no previous HCV diagnosis or positive HCV antibody test.	120,054	EHR alert for HCV screening test requiring an order for an HCV test and results to be entered to be deactivated. Educational program for providers on HCV, HCV screening recommendations, linkage to care, and the alert.	Linkage to care for this study is defined as the completion of a first medical visit after diagnosis into primary or specialty care.	• Proportion of individuals with positive HCV antibody tests • Proportion of individuals with positive HCV RNA tests • Proportion of individuals linked to first appointment
Traeger et al., 2020[60]	Victoria, Australia	Observational (retrospective)	18 services participating in national sentinel surveillance	113,832	N/A	N/A	• Proportion of individuals

			system[a]; PWID				tested for HCV • Proportion of individuals with positive HCV antibody tests • Proportion of individuals with positive HCV RNA tests • Proportion of individuals linked to first appointment • Proportion of individuals with treatment initiation • Proportion of individuals

							achieving SVR
Turner et al., 2019[61]	Texas, U.S.	Interventional	5 federally qualified health centers in Veterans Health Administration (VHA) and 1 family medicine residency program serving low-income communities in diverse locations with largely Hispanic population; Baby boomers who had never been tested for HCV	27,700	Either an electronic BPA or trained clinic staff reviewed medical records and identified individuals eligible for HCV antibody testing and then appended the order and diagnosis code for clinician approval. Posters and fliers in clinic about HCV screening and opt-out option.	Care navigator supported individuals in applying for Medicaid and if denied in applying to a pharmaceutical company prescription assistance program and facilitated DAA receipt and adherence to treatment, office visits and testing. Staff used an interactive mobile application on HCV that addressed concerns of those newly diagnosed. PCP received training on HCV and DAA management and	• Proportion of individuals screened for HCV • Proportion of individuals with positive HCV antibody tests • Proportion of individuals with positive HCV RNA tests • Proportion of individuals with treatment initiation • Proportion of individuals

						treatment. PCP could access weekly specialist teleconsultation hour for reviewing uninsured patients. Study paid for labs and imaging tests.	with treatment completion • Proportion of individuals achieving SVR
White et al., 2016[62]	California, U.S.	Observational (retrospective)	Single-center urban ED; Baby boomers or those reporting history of injection drug use and not known to have HCV	26,639	Opt-out screening integrated into ED triage process with prompts in the EHR and conducted by a trained triage nurse who completed a series of screening questions and offered screening for HIV, HCV or both depending on the responses. For individuals who consented to screening the	Program coordinator contacted those not informed before discharge and made arrangements for confirmatory testing in primary care and linkage to care at the centers HCV clinic, or ED clerk made HCV clinic appointment for HCV positive individuals. For those not contacted, an automatic flag was placed in the ED's EHR.	• Proportion of individuals screened for HCV • Proportion of individuals with positive HCV antibody tests • Proportion of individuals with positive HCV RNA tests • Proportion of individuals linked to

					triage nurse electronically ordered the test. Physician trained in the process could see the order in the HER and then could order HCV test as part of a hepatitis panel or as a rapid HCV AB test.		first appointment
Yang et al., 2021[63]	Chapel Hill, North Carolina, U.S.	Interventional	Academic, pharmacy-based collaborative, gastroenterology clinic; Individuals aged ≥18 receiving HCV treatment who had treatment barriers or who missed an	116	N/A	Primarily phone calls supported by electronic medical record system messaging and e-mails from a nurse care coordinator (NCC). The primary nurse interventions (defined by the initial reason the patient was referred to the NCC) included resolving missing	

			appointment that was not rescheduled indicating they had been lost to follow up.			labs, missed appointments, HCC surveillance, transportation coordination, and financial assistance. Supplemental interventions included transportation coordination, financial assistance, labs scheduled, or HCC surveillance appointment scheduled.	
Younossi et al., 2016[64]	U.S.	Interventional	5 gastroenterology centers; Individuals who were baby boomers with no documented history of HCV screening	2,000	Universal screening was implemented for all eligible individuals who completed the consent process. Sites conducted HCV Ab rapid testing using blood samples. Ab-positive	HCV RNA positive individuals were counseled and educated on HCV and an appointment within the site practice or the geographical area was established. The appointment was recorded, but attendance was	• Proportion of individuals with positive HCV antibody tests • Proportion of individuals with positive

					individuals who consented had confirmatory test ordered and results were collected.	not confirmed or tracked.	HCV RNA tests
Zuckerman et al., 2018[65]	Nashville, Tennessee, U.S.	Observational (prospective)	Infectious disease clinic at a university medical center; Individuals with chronic HCV newly referred to clinic	187	N/A	N/A	• Proportion of individuals linked to first appointment • Proportion of individuals with treatment initiation • Proportion of individuals with treatment completion • Proportion of individuals achieving SVR

Abbreviations: AB = antibody; BPA = Best practice alert; baby boomers = individuals born between 1946 and 1964; CDC = Centers for Disease Control and Prevention; CDS = Clinical decision support; CNS = Clinical nurse specialist; DAA = direct acting antivirals; ED = emergency department; EHR = electronic health records; FQHCs = Federally Qualified Health Centers; GPs = General practitioners; HCC = hepatocellular carcinoma; HCV = hepatitis C virus; HE = health educator; HH = Highland Hospital; HIV = human immunodeficiency virus; HRQL = health related quality of life; ID = infectious disease; LTCC = Linkage to care coordinator; MDT = Multidisciplinary team (comprising viral hepatology consultants, pharmacists and nurses); N/A = Not applicable; PCP = Primary care provider; PN = Patient navigator; PWID = people who inject drugs; RCT = Randomized controlled trial; SUD = substance use disorder; SVR = sustained virologic response; UAB = University of Alabama at Birmingham; UCLA = University of California, Los Angeles; UK = United Kingdom; U.S.= United States of America; U.S. VHA = United States Veterans Health Administration; VA = Veteran Affairs; VAHCS = Veteran Affairs Health Care System.

[a] Australian Collaboration for Coordinated Enhanced Sentinel Surveillance of Bloodborne Viruses and Sexually Transmitted Infections (ACCESS) sentinel surveillance system

Definitions of outcomes:

Proportion of individuals screened for HCV = # of individuals with HCV testing / # of eligible individuals for HCV screening

Proportion of individuals with positive HCV antibody tests = # of individuals with positive antibody test / # of individuals screened

Proportion of individuals with positive HCV RNA tests = # of individuals with positive HCV RNA results / # individuals with positive HCV antibody tests

Proportion of individuals successfully contacted = # individuals contacted / # individuals with positive HCV RNA tests

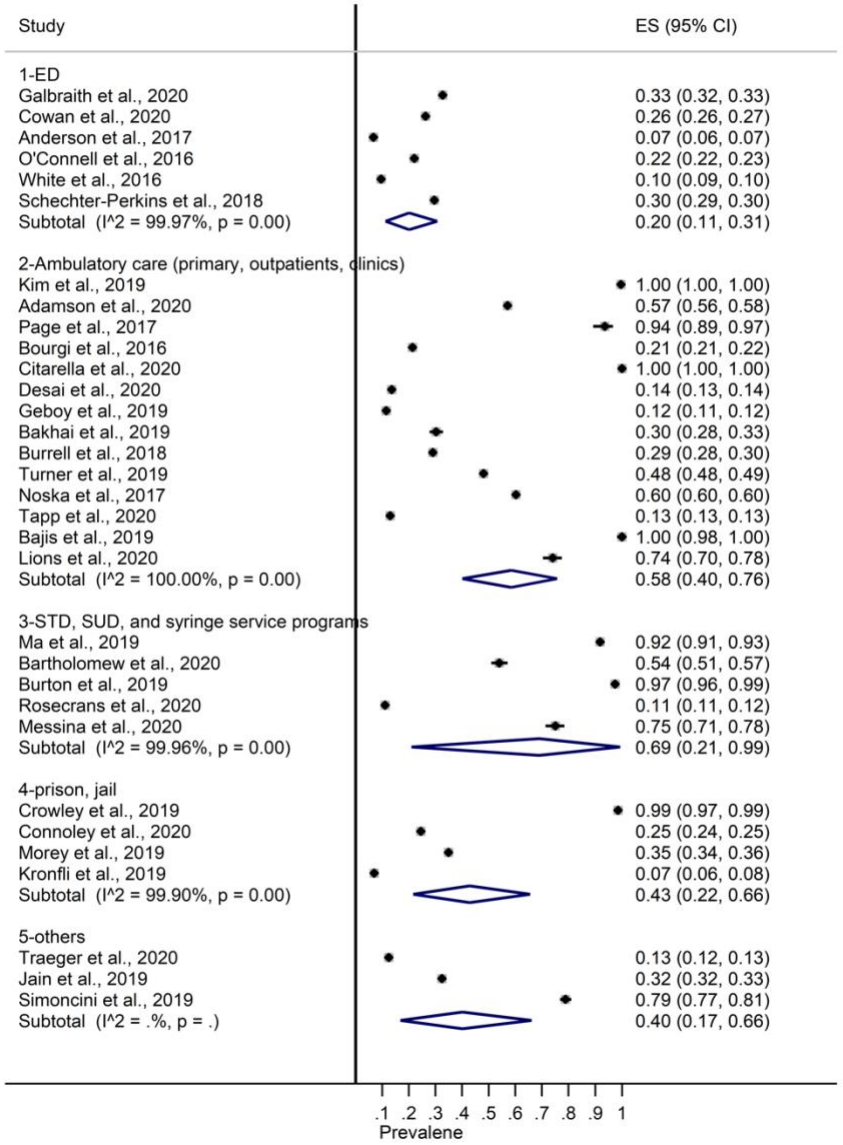
Proportion of individuals linked to first appointment = # of individuals attending first appointment at HCV clinic / # of individuals with positive HCV RNA tests

Proportion of individuals with treatment initiation = # of individuals who initiated DAA treatment / # of individuals with positive HCV RNA tests

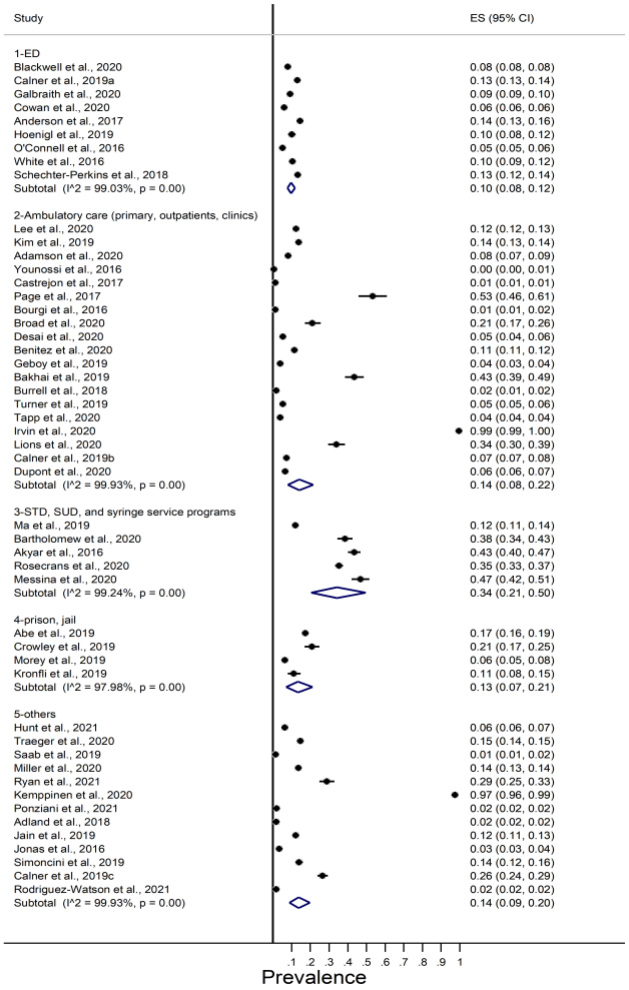
Proportion of individuals with treatment completion = # of individuals who completed DAA treatment / # of individuals with positive HCV RNA tests

Proportion of individuals achieving SVR = # of individuals with confirmed SVR / of individuals with positive HCV RNA tests

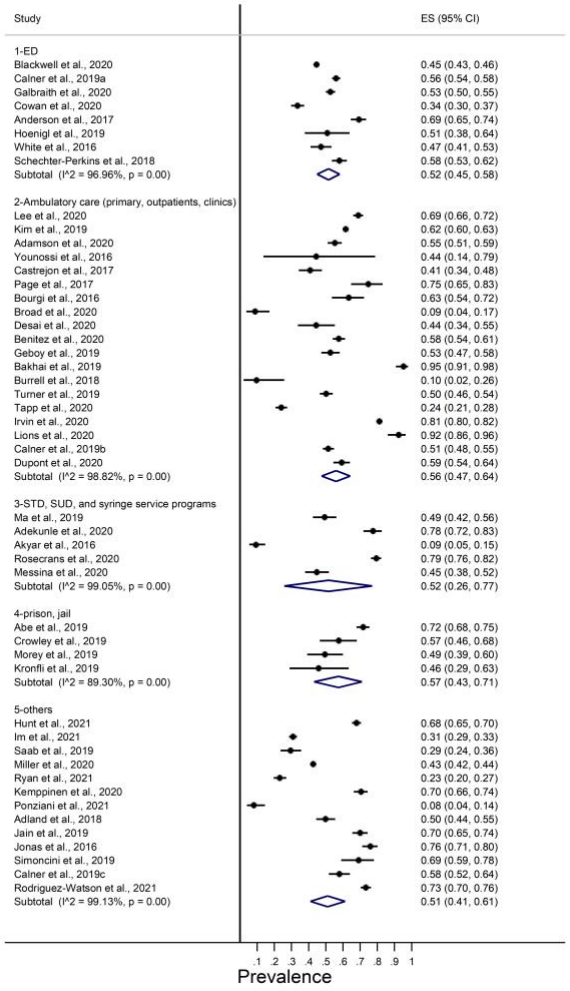
A.


Study
ES (95% CI)
1-ED
Galbraith et al., 2020 0.33 (0.32, 0.33)
Cowan et al., 2020 0.26 (0.26, 0.27)
Anderson et al., 2017 0.07 (0.06, 0.07)
O'Connell et al., 2016 0.22 (0.22, 0.23)
White et al., 2016 0.10 (0.09, 0.10)
Schechter-Perkins et al., 2018 0.30 (0.29, 0.30)
Subtotal (I^2 = 99.97%, p = 0.00) 0.20 (0.11, 0.31)
2-Ambulatory care (primary, outpatients, clinics)
Kim et al., 2019 1.00 (1.00, 1.00)
Adamson et al., 2020 0.57 (0.56, 0.58)
Page et al., 2017 0.94 (0.89, 0.97)
Bourgi et al., 2016 0.21 (0.21, 0.22)
Citarella et al., 2020 1.00 (1.00, 1.00)
Desai et al., 2020 0.14 (0.13, 0.14)
Geboy et al., 2019 0.12 (0.11, 0.12)
Bakhai et al., 2019 0.30 (0.28, 0.33)
Burrell et al., 2018 0.29 (0.28, 0.30)
Turner et al., 2019 0.48 (0.48, 0.49)
Noska et al., 2017 0.60 (0.60, 0.60)
Tapp et al., 2020 0.13 (0.13, 0.13)
Bajis et al., 2019 1.00 (0.98, 1.00)
Lions et al., 2020 0.74 (0.70, 0.78)
Subtotal (I^2 = 100.00%, p = 0.00) 0.58 (0.40, 0.76)
3-STD, SUD, and syringe service programs
Ma et al., 2019 0.92 (0.91, 0.93)
Bartholomew et al., 2020 0.54 (0.51, 0.57)
Burton et al., 2019 0.97 (0.96, 0.99)
Rosecrans et al., 2020 0.11 (0.11, 0.12)
Messina et al., 2020 0.75 (0.71, 0.78)
Subtotal (I^2 = 99.96%, p = 0.00) 0.69 (0.21, 0.99)
4-prison, jail
Crowley et al., 2019 0.99 (0.97, 0.99)
Connoley et al., 2020 0.25 (0.24, 0.25)
Morey et al., 2019 0.35 (0.34, 0.36)
Kronfli et al., 2019 0.07 (0.06, 0.08)
Subtotal (I^2 = 99.90%, p = 0.00) 0.43 (0.22, 0.66)
5-others
Traeger et al., 2020 0.13 (0.12, 0.13)
Jain et al., 2019 0.32 (0.32, 0.33)
Simoncini et al., 2019 0.79 (0.77, 0.81)
Subtotal (I^2 = .%, p = .) 0.40 (0.17, 0.66)
.1 .2 .3 .4 .5 .6 .7 .8 .9 1
Prevalene

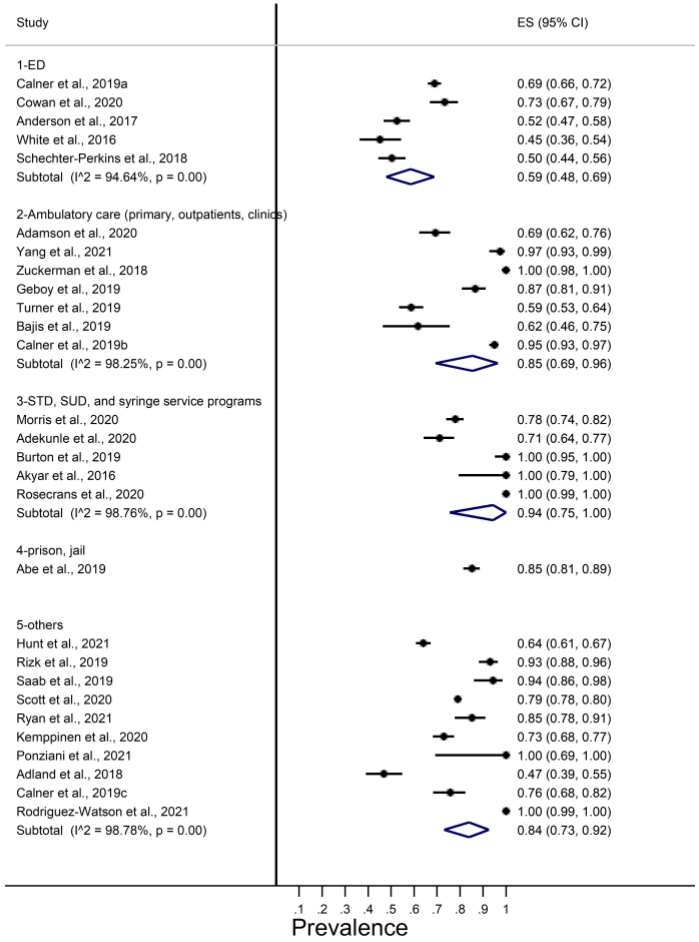
B.


Study
ES (95% CI)
1-ED
Blackwell et al., 2020 0.08 (0.08, 0.08)
Calner et al., 2019a 0.13 (0.13, 0.14)
Galbraith et al., 2020 0.09 (0.09, 0.10)
Cowan et al., 2020 0.06 (0.06, 0.06)
Anderson et al., 2017 0.14 (0.13, 0.16)
Hoenigl et al., 2019 0.10 (0.08, 0.12)
O'Connell et al., 2016 0.05 (0.05, 0.06)
White et al., 2016 0.10 (0.09, 0.12)
Schechter-Perkins et al., 2018 0.13 (0.12, 0.14)
Subtotal (I^2 = 99.03%, p = 0.00) 0.10 (0.08, 0.12)
2-Ambulatory care (primary, outpatients, clinics)
Lee et al., 2020 0.12 (0.12, 0.13)
Kim et al., 2019 0.14 (0.13, 0.14)
Adamson et al., 2020 0.08 (0.07, 0.09)
Younossi et al., 2016 0.00 (0.00, 0.01)
Castrejon et al., 2017 0.01 (0.01, 0.01)
Page et al., 2017 0.53 (0.46, 0.61)
Bourgi et al., 2016 0.01 (0.01, 0.02)
Broad et al., 2020 0.21 (0.17, 0.26)
Desai et al., 2020 0.05 (0.04, 0.06)
Benitez et al., 2020 0.11 (0.11, 0.12)
Geboy et al., 2019 0.04 (0.03, 0.04)
Bakhai et al., 2019 0.43 (0.39, 0.49)
Burrell et al., 2018 0.02 (0.01, 0.02)
Turner et al., 2019 0.05 (0.05, 0.06)
Tapp et al., 2020 0.04 (0.04, 0.04)
Irvin et al., 2020 0.99 (0.99, 1.00)
Lions et al., 2020 0.34 (0.30, 0.39)
Calner et al., 2019b 0.07 (0.07, 0.08)
Dupont et al., 2020 0.06 (0.06, 0.07)
Subtotal (I^2 = 99.93%, p = 0.00) 0.14 (0.08, 0.22)
3-STD, SUD, and syringe service programs
Ma et al., 2019 0.12 (0.11, 0.14)
Bartholomew et al., 2020 0.38 (0.34, 0.43)
Akyar et al., 2016 0.43 (0.40, 0.47)
Rosecrans et al., 2020 0.35 (0.33, 0.37)
Messina et al., 2020 0.47 (0.42, 0.51)
Subtotal (I^2 = 99.24%, p = 0.00) 0.34 (0.21, 0.50)
4-prison, jail
Abe et al., 2019 0.17 (0.16, 0.19)
Crowley et al., 2019 0.21 (0.17, 0.25)
Morey et al., 2019 0.06 (0.05, 0.08)
Kronfli et al., 2019 0.11 (0.08, 0.15)
Subtotal (I^2 = 97.98%, p = 0.00) 0.13 (0.07, 0.21)
5-others
Hunt et al., 2021 0.06 (0.06, 0.07)
Traeger et al., 2020 0.15 (0.14, 0.15)
Saab et al., 2019 0.01 (0.01, 0.02)
Miller et al., 2020 0.14 (0.13, 0.14)
Ryan et al., 2021 0.29 (0.25, 0.33)
Kemppinen et al., 2020 0.97 (0.96, 0.99)
Ponziani et al., 2021 0.02 (0.02, 0.02)
Adland et al., 2018 0.02 (0.02, 0.02)
Jain et al., 2019 0.12 (0.11, 0.13)
Jonas et al., 2016 0.03 (0.03, 0.04)
Simoncini et al., 2019 0.14 (0.12, 0.16)
Calner et al., 2019c 0.26 (0.24, 0.29)
Rodriguez-Watson et al., 2021 0.02 (0.02, 0.02)
Subtotal (I^2 = 99.93%, p = 0.00) 0.14 (0.09, 0.20)
.1 .2 .3 .4 .5 .6 .7 .8 .9 1
Prevalence

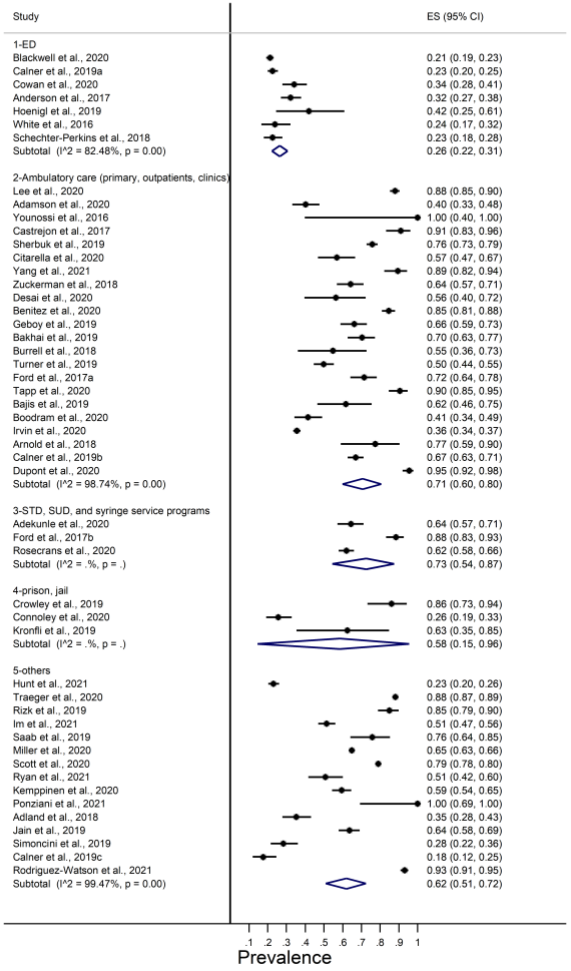
C.


Study
ES (95% CI)
1-ED
Blackwell et al., 2020 0.45 (0.43, 0.46)
Calner et al., 2019a 0.56 (0.54, 0.58)
Galbraith et al., 2020 0.53 (0.50, 0.55)
Cowan et al., 2020 0.34 (0.30, 0.37)
Anderson et al., 2017 0.69 (0.65, 0.74)
Hoenigl et al., 2019 0.51 (0.38, 0.64)
White et al., 2016 0.47 (0.41, 0.53)
Schechter-Perkins et al., 2018 0.58 (0.53, 0.62)
Subtotal (I^2 = 96.96%, p = 0.00) 0.52 (0.45, 0.58)
2-Ambulatory care (primary, outpatients, clinics)
Lee et al., 2020 0.69 (0.66, 0.72)
Kim et al., 2019 0.62 (0.60, 0.63)
Adamson et al., 2020 0.55 (0.51, 0.59)
Younossi et al., 2016 0.44 (0.14, 0.79)
Castrejon et al., 2017 0.41 (0.34, 0.48)
Page et al., 2017 0.75 (0.65, 0.83)
Bourgi et al., 2016 0.63 (0.54, 0.72)
Broad et al., 2020 0.09 (0.04, 0.17)
Desai et al., 2020 0.44 (0.34, 0.55)
Benitez et al., 2020 0.58 (0.54, 0.61)
Geboy et al., 2019 0.53 (0.47, 0.58)
Bakhai et al., 2019 0.95 (0.91, 0.98)
Burrell et al., 2018 0.10 (0.02, 0.26)
Turner et al., 2019 0.50 (0.46, 0.54)
Tapp et al., 2020 0.24 (0.21, 0.28)
Irvin et al., 2020 0.81 (0.80, 0.82)
Lions et al., 2020 0.92 (0.86, 0.96)
Calner et al., 2019b 0.51 (0.48, 0.55)
Dupont et al., 2020 0.59 (0.54, 0.64)
Subtotal (I^2 = 98.82%, p = 0.00) 0.56 (0.47, 0.64)
3-STD, SUD, and syringe service programs
Ma et al., 2019 0.49 (0.42, 0.56)
Adekunle et al., 2020 0.78 (0.72, 0.83)
Akyar et al., 2016 0.09 (0.05, 0.15)
Rosecrans et al., 2020 0.79 (0.76, 0.82)
Messina et al., 2020 0.45 (0.38, 0.52)
Subtotal (I^2 = 99.05%, p = 0.00) 0.52 (0.26, 0.77)
4-prison, jail
Abe et al., 2019 0.72 (0.68, 0.75)
Crowley et al., 2019 0.57 (0.46, 0.68)
Morey et al., 2019 0.49 (0.39, 0.60)
Kronfli et al., 2019 0.46 (0.29, 0.63)
Subtotal (I^2 = 89.30%, p = 0.00) 0.57 (0.43, 0.71)
5-others
Hunt et al., 2021 0.68 (0.65, 0.70)
Im et al., 2021 0.31 (0.29, 0.33)
Saab et al., 2019 0.29 (0.24, 0.36)
Miller et al., 2020 0.43 (0.42, 0.44)
Ryan et al., 2021 0.23 (0.20, 0.27)
Kemppinen et al., 2020 0.70 (0.66, 0.74)
Ponziani et al., 2021 0.08 (0.04, 0.14)
Adland et al., 2018 0.50 (0.44, 0.55)
Jain et al., 2019 0.70 (0.65, 0.74)
Jonas et al., 2016 0.76 (0.71, 0.80)
Simoncini et al., 2019 0.69 (0.59, 0.78)
Calner et al., 2019c 0.58 (0.52, 0.64)
Rodriguez-Watson et al., 2021 0.73 (0.70, 0.76)
Subtotal (I^2 = 99.13%, p = 0.00) 0.51 (0.41, 0.61)
.1 .2 .3 .4 .5 .6 .7 .8 .9 1
Prevalence

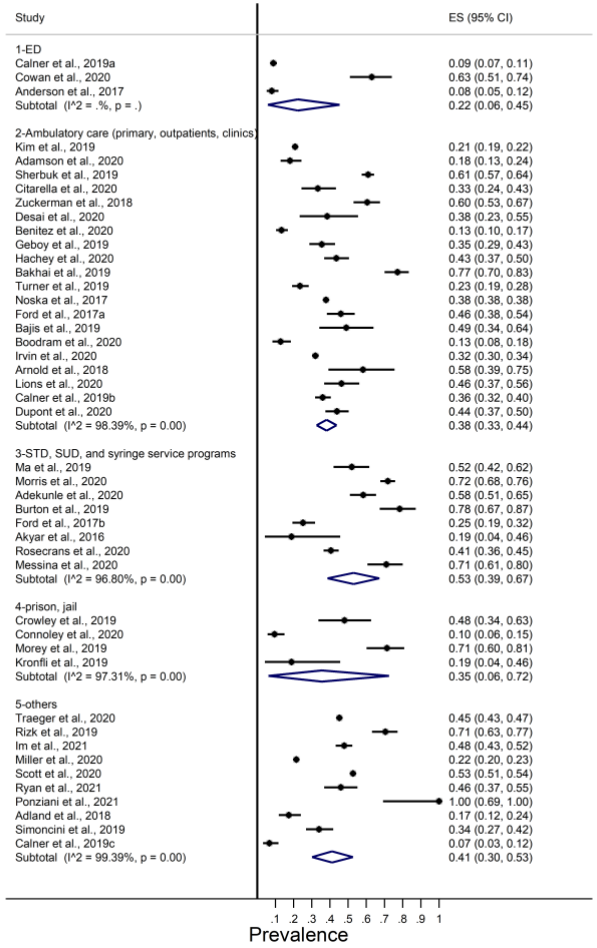
D.


Study
ES (95% CI)
1-ED
Calner et al., 2019a
0.69 (0.66, 0.72)
Cowan et al., 2020
0.73 (0.67, 0.79)
Anderson et al., 2017
0.52 (0.47, 0.58)
White et al., 2016
0.45 (0.36, 0.54)
Schechter-Perkins et al., 2018
0.50 (0.44, 0.56)
Subtotal (I^2 = 94.64%, p = 0.00)
0.59 (0.48, 0.69)
2-Ambulatory care (primary, outpatients, clinics)
Adamson et al., 2020
0.69 (0.62, 0.76)
Yang et al., 2021
0.97 (0.93, 0.99)
Zuckerman et al., 2018
1.00 (0.98, 1.00)
Geboy et al., 2019
0.87 (0.81, 0.91)
Turner et al., 2019
0.59 (0.53, 0.64)
Bajis et al., 2019
0.62 (0.46, 0.75)
Calner et al., 2019b
0.95 (0.93, 0.97)
Subtotal (I^2 = 98.25%, p = 0.00)
0.85 (0.69, 0.96)
3-STD, SUD, and syringe service programs
Morris et al., 2020
0.78 (0.74, 0.82)
Adekunle et al., 2020
0.71 (0.64, 0.77)
Burton et al., 2019
1.00 (0.95, 1.00)
Akyar et al., 2016
1.00 (0.79, 1.00)
Rosecrans et al., 2020
1.00 (0.99, 1.00)
Subtotal (I^2 = 98.76%, p = 0.00)
0.94 (0.75, 1.00)
4-prison, jail
Abe et al., 2019
0.85 (0.81, 0.89)
5-others
Hunt et al., 2021
0.64 (0.61, 0.67)
Rizk et al., 2019
0.93 (0.88, 0.96)
Saab et al., 2019
0.94 (0.86, 0.98)
Scott et al., 2020
0.79 (0.78, 0.80)
Ryan et al., 2021
0.85 (0.78, 0.91)
Kemppinen et al., 2020
0.73 (0.68, 0.77)
Ponziani et al., 2021
1.00 (0.69, 1.00)
Adland et al., 2018
0.47 (0.39, 0.55)
Calner et al., 2019c
0.76 (0.68, 0.82)
Rodriguez-Watson et al., 2021
1.00 (0.99, 1.00)
Subtotal (I^2 = 98.78%, p = 0.00)
0.84 (0.73, 0.92)
.1 .2 .3 .4 .5 .6 .7 .8 .9 1
Prevalence

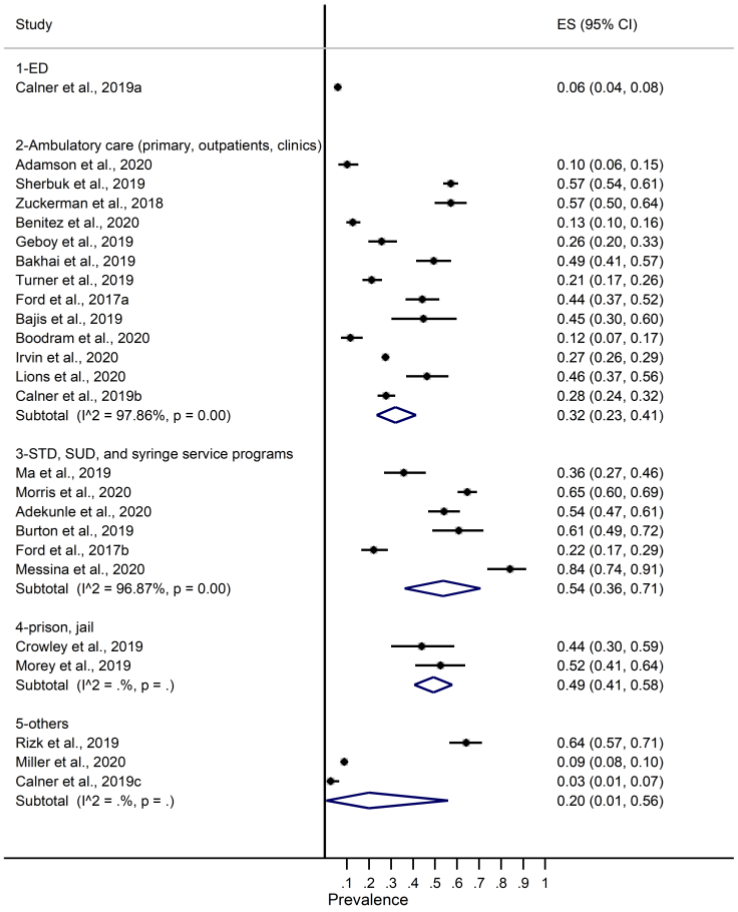
E.


Study
ES (95% CI)
1-ED
Blackwell et al., 2020 0.21 (0.19, 0.23)
Calner et al., 2019a 0.23 (0.20, 0.25)
Cowan et al., 2020 0.34 (0.28, 0.41)
Anderson et al., 2017 0.32 (0.27, 0.38)
Hoenigl et al., 2019 0.42 (0.25, 0.61)
White et al., 2016 0.24 (0.17, 0.32)
Schechter-Perkins et al., 2018 0.23 (0.18, 0.28)
Subtotal (I^2 = 82.48%, p = 0.00) 0.26 (0.22, 0.31)
2-Ambulatory care (primary, outpatients, clinics)
Lee et al., 2020 0.88 (0.85, 0.90)
Adamson et al., 2020 0.40 (0.33, 0.48)
Younossi et al., 2016 1.00 (0.40, 1.00)
Castrejon et al., 2017 0.91 (0.83, 0.96)
Sherbuk et al., 2019 0.76 (0.73, 0.79)
Citarella et al., 2020 0.57 (0.47, 0.67)
Yang et al., 2021 0.89 (0.82, 0.94)
Zuckerman et al., 2018 0.64 (0.57, 0.71)
Desai et al., 2020 0.56 (0.40, 0.72)
Benitez et al., 2020 0.85 (0.81, 0.88)
Geboy et al., 2019 0.66 (0.59, 0.73)
Bakhai et al., 2019 0.70 (0.63, 0.77)
Burrell et al., 2018 0.55 (0.36, 0.73)
Turner et al., 2019 0.50 (0.44, 0.55)
Ford et al., 2017a 0.72 (0.64, 0.78)
Tapp et al., 2020 0.90 (0.85, 0.95)
Bajis et al., 2019 0.62 (0.46, 0.75)
Boodram et al., 2020 0.41 (0.34, 0.49)
Irvin et al., 2020 0.36 (0.34, 0.37)
Arnold et al., 2018 0.77 (0.59, 0.90)
Calner et al., 2019b 0.67 (0.63, 0.71)
Dupont et al., 2020 0.95 (0.92, 0.98)
Subtotal (I^2 = 98.74%, p = 0.00) 0.71 (0.60, 0.80)
3-STD, SUD, and syringe service programs
Adekunle et al., 2020 0.64 (0.57, 0.71)
Ford et al., 2017b 0.88 (0.83, 0.93)
Rosecrans et al., 2020 0.62 (0.58, 0.66)
Subtotal (I^2 = .%, p = .) 0.73 (0.54, 0.87)
4-prison, jail
Crowley et al., 2019 0.86 (0.73, 0.94)
Connoley et al., 2020 0.26 (0.19, 0.33)
Kronfli et al., 2019 0.63 (0.35, 0.85)
Subtotal (I^2 = .%, p = .) 0.58 (0.15, 0.96)
5-others
Hunt et al., 2021 0.23 (0.20, 0.26)
Traeger et al., 2020 0.88 (0.87, 0.89)
Rizk et al., 2019 0.85 (0.79, 0.90)
Im et al., 2021 0.51 (0.47, 0.56)
Saab et al., 2019 0.76 (0.64, 0.85)
Miller et al., 2020 0.65 (0.63, 0.66)
Scott et al., 2020 0.79 (0.78, 0.80)
Ryan et al., 2021 0.51 (0.42, 0.60)
Kemppinen et al., 2020 0.59 (0.54, 0.65)
Ponziani et al., 2021 1.00 (0.69, 1.00)
Adland et al., 2018 0.35 (0.28, 0.43)
Jain et al., 2019 0.64 (0.58, 0.69)
Simoncini et al., 2019 0.28 (0.22, 0.36)
Calner et al., 2019c 0.18 (0.12, 0.25)
Rodriguez-Watson et al., 2021 0.93 (0.91, 0.95)
Subtotal (I^2 = 99.47%, p = 0.00) 0.62 (0.51, 0.72)
.1 .2 .3 .4 .5 .6 .7 .8 .9 1
Prevalence

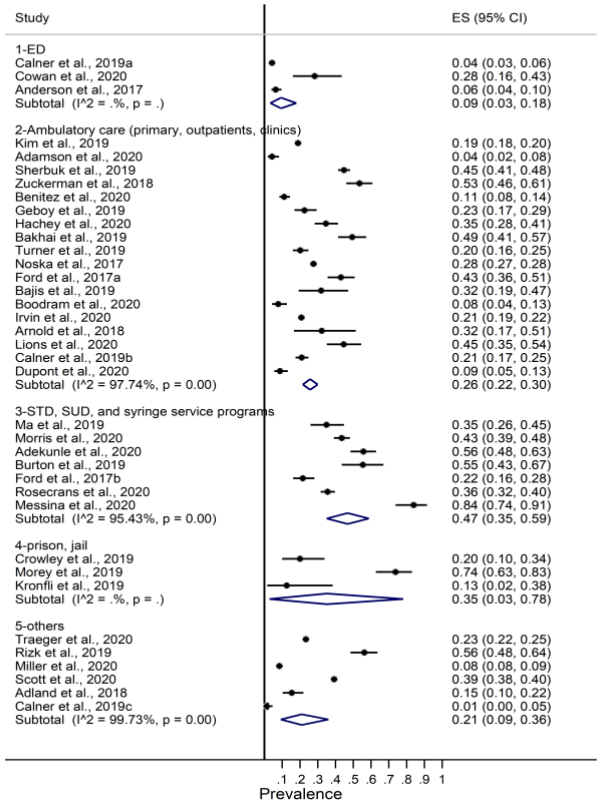
F.


Study
ES (95% CI)
1-ED
Calner et al., 2019a 0.09 (0.07, 0.11)
Cowan et al., 2020 0.63 (0.51, 0.74)
Anderson et al., 2017 0.08 (0.05, 0.12)
Subtotal (I^2 = .%, p = .) 0.22 (0.06, 0.45)
2-Ambulatory care (primary, outpatients, clinics)
Kim et al., 2019 0.21 (0.19, 0.22)
Adamson et al., 2020 0.18 (0.13, 0.24)
Sherbuk et al., 2019 0.61 (0.57, 0.64)
Citarella et al., 2020 0.33 (0.24, 0.43)
Zuckerman et al., 2018 0.60 (0.53, 0.67)
Desai et al., 2020 0.38 (0.23, 0.55)
Benitez et al., 2020 0.13 (0.10, 0.17)
Geboy et al., 2019 0.35 (0.29, 0.43)
Hachey et al., 2020 0.43 (0.37, 0.50)
Bakhai et al., 2019 0.77 (0.70, 0.83)
Turner et al., 2019 0.23 (0.19, 0.28)
Noska et al., 2017 0.38 (0.38, 0.38)
Ford et al., 2017a 0.46 (0.38, 0.54)
Bajis et al., 2019 0.49 (0.34, 0.64)
Boodram et al., 2020 0.13 (0.08, 0.18)
Irvin et al., 2020 0.32 (0.30, 0.34)
Arnold et al., 2018 0.58 (0.39, 0.75)
Lions et al., 2020 0.46 (0.37, 0.56)
Calner et al., 2019b 0.36 (0.32, 0.40)
Dupont et al., 2020 0.44 (0.37, 0.50)
Subtotal (I^2 = 98.39%, p = 0.00) 0.38 (0.33, 0.44)
3-STD, SUD, and syringe service programs
Ma et al., 2019 0.52 (0.42, 0.62)
Morris et al., 2020 0.72 (0.68, 0.76)
Adekunle et al., 2020 0.58 (0.51, 0.65)
Burton et al., 2019 0.78 (0.67, 0.87)
Ford et al., 2017b 0.25 (0.19, 0.32)
Akyar et al., 2016 0.19 (0.04, 0.46)
Rosecrans et al., 2020 0.41 (0.36, 0.45)
Messina et al., 2020 0.71 (0.61, 0.80)
Subtotal (I^2 = 96.80%, p = 0.00) 0.53 (0.39, 0.67)
4-prison, jail
Crowley et al., 2019 0.48 (0.34, 0.63)
Connoley et al., 2020 0.10 (0.06, 0.15)
Morey et al., 2019 0.71 (0.60, 0.81)
Kronfli et al., 2019 0.19 (0.04, 0.46)
Subtotal (I^2 = 97.31%, p = 0.00) 0.35 (0.06, 0.72)
5-others
Traeger et al., 2020 0.45 (0.43, 0.47)
Rizk et al., 2019 0.71 (0.63, 0.77)
Im et al., 2021 0.48 (0.43, 0.52)
Miller et al., 2020 0.22 (0.20, 0.23)
Scott et al., 2020 0.53 (0.51, 0.54)
Ryan et al., 2021 0.46 (0.37, 0.55)
Ponziani et al., 2021 1.00 (0.69, 1.00)
Adland et al., 2018 0.17 (0.12, 0.24)
Simoncini et al., 2019 0.34 (0.27, 0.42)
Calner et al., 2019c 0.07 (0.03, 0.12)
Subtotal (I^2 = 99.39%, p = 0.00) 0.41 (0.30, 0.53)
.1 .2 .3 .4 .5 .6 .7 .8 .9 1
Prevalence

G.

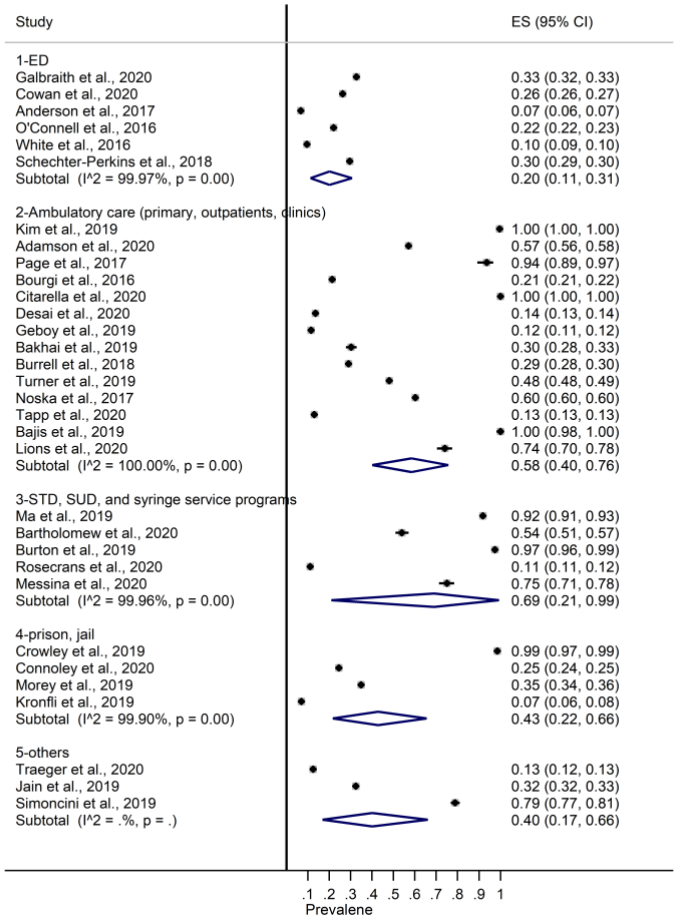

Study
ES (95% CI)
1-ED
Calner et al., 2019a
0.06 (0.04, 0.08)
2-Ambulatory care (primary, outpatients, clinics)
Adamson et al., 2020
0.10 (0.06, 0.15)
Sherbuk et al., 2019
0.57 (0.54, 0.61)
Zuckerman et al., 2018
0.57 (0.50, 0.64)
Benitez et al., 2020
0.13 (0.10, 0.16)
Geboy et al., 2019
0.26 (0.20, 0.33)
Bakhai et al., 2019
0.49 (0.41, 0.57)
Turner et al., 2019
0.21 (0.17, 0.26)
Ford et al., 2017a
0.44 (0.37, 0.52)
Bajis et al., 2019
0.45 (0.30, 0.60)
Boodram et al., 2020
0.12 (0.07, 0.17)
Irvin et al., 2020
0.27 (0.26, 0.29)
Lions et al., 2020
0.46 (0.37, 0.56)
Calner et al., 2019b
0.28 (0.24, 0.32)
Subtotal (I^2 = 97.86%, p = 0.00)
0.32 (0.23, 0.41)
3-STD, SUD, and syringe service programs
Ma et al., 2019
0.36 (0.27, 0.46)
Morris et al., 2020
0.65 (0.60, 0.69)
Adekunle et al., 2020
0.54 (0.47, 0.61)
Burton et al., 2019
0.61 (0.49, 0.72)
Ford et al., 2017b
0.22 (0.17, 0.29)
Messina et al., 2020
0.84 (0.74, 0.91)
Subtotal (I^2 = 96.87%, p = 0.00)
0.54 (0.36, 0.71)
4-prison, jail
Crowley et al., 2019
0.44 (0.30, 0.59)
Morey et al., 2019
0.52 (0.41, 0.64)
Subtotal (I^2 = .%, p = .)
0.49 (0.41, 0.58)
5-others
Rizk et al., 2019
0.64 (0.57, 0.71)
Miller et al., 2020
0.09 (0.08, 0.10)
Calner et al., 2019c
0.03 (0.01, 0.07)
Subtotal (I^2 = .%, p = .)
0.20 (0.01, 0.56)
.1 .2 .3 .4 .5 .6 .7 .8 .9 1
Prevalence

H.

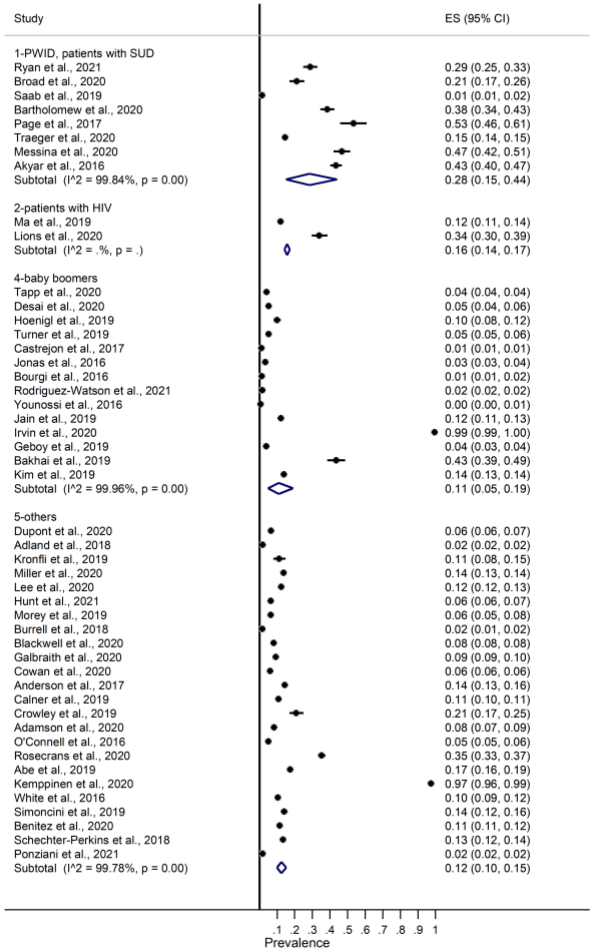


Appendix Figure 1, A-H. Outcomes rates at each step of the HCV cascade of care (Steps 1-8), stratified by healthcare setting

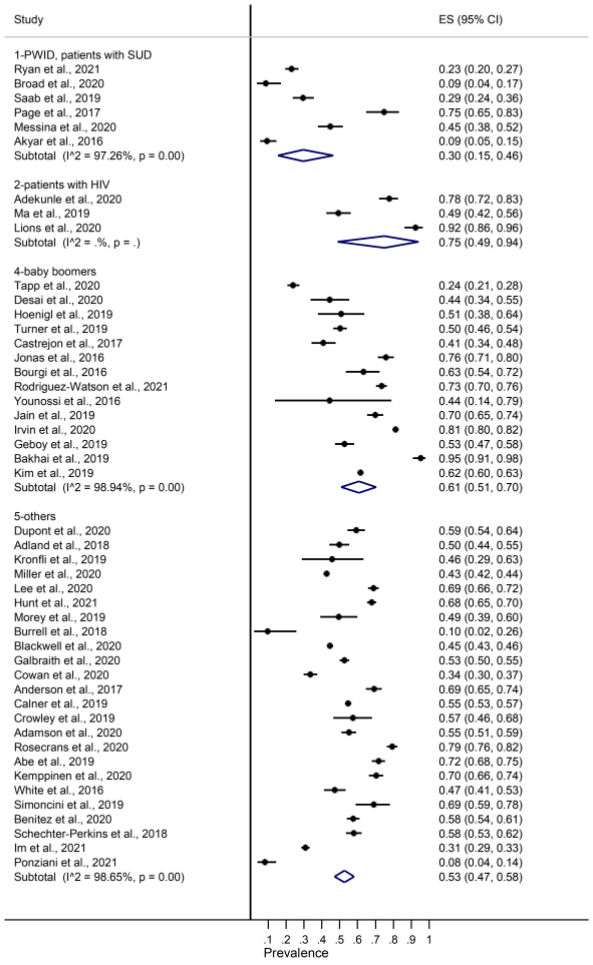
A.


Study
ES (95% CI)
1-ED
Galbraith et al., 2020
0.33 (0.32, 0.33)
Cowan et al., 2020
0.26 (0.26, 0.27)
Anderson et al., 2017
0.07 (0.06, 0.07)
O'Connell et al., 2016
0.22 (0.22, 0.23)
White et al., 2016
0.10 (0.09, 0.10)
Schechter-Perkins et al., 2018
0.30 (0.29, 0.30)
Subtotal (I^2 = 99.97%, p = 0.00)
0.20 (0.11, 0.31)
2-Ambulatory care (primary, outpatients, clinics)
Kim et al., 2019
1.00 (1.00, 1.00)
Adamson et al., 2020
0.57 (0.56, 0.58)
Page et al., 2017
0.94 (0.89, 0.97)
Bourgi et al., 2016
0.21 (0.21, 0.22)
Citarella et al., 2020
1.00 (1.00, 1.00)
Desai et al., 2020
0.14 (0.13, 0.14)
Geboy et al., 2019
0.12 (0.11, 0.12)
Bakhai et al., 2019
0.30 (0.28, 0.33)
Burrell et al., 2018
0.29 (0.28, 0.30)
Turner et al., 2019
0.48 (0.48, 0.49)
Noska et al., 2017
0.60 (0.60, 0.60)
Tapp et al., 2020
0.13 (0.13, 0.13)
Bajis et al., 2019
1.00 (0.98, 1.00)
Lions et al., 2020
0.74 (0.70, 0.78)
Subtotal (I^2 = 100.00%, p = 0.00)
0.58 (0.40, 0.76)
3-STD, SUD, and syringe service programs
Ma et al., 2019
0.92 (0.91, 0.93)
Bartholomew et al., 2020
0.54 (0.51, 0.57)
Burton et al., 2019
0.97 (0.96, 0.99)
Rosecrans et al., 2020
0.11 (0.11, 0.12)
Messina et al., 2020
0.75 (0.71, 0.78)
Subtotal (I^2 = 99.96%, p = 0.00)
0.69 (0.21, 0.99)
4-prison, jail
Crowley et al., 2019
0.99 (0.97, 0.99)
Connoley et al., 2020
0.25 (0.24, 0.25)
Morey et al., 2019
0.35 (0.34, 0.36)
Kronfli et al., 2019
0.07 (0.06, 0.08)
Subtotal (I^2 = 99.90%, p = 0.00)
0.43 (0.22, 0.66)
5-others
Traeger et al., 2020
0.13 (0.12, 0.13)
Jain et al., 2019
0.32 (0.32, 0.33)
Simoncini et al., 2019
0.79 (0.77, 0.81)
Subtotal (I^2 = .%, p = .)
0.40 (0.17, 0.66)
.1 .2 .3 .4 .5 .6 .7 .8 .9 1
Prevalene

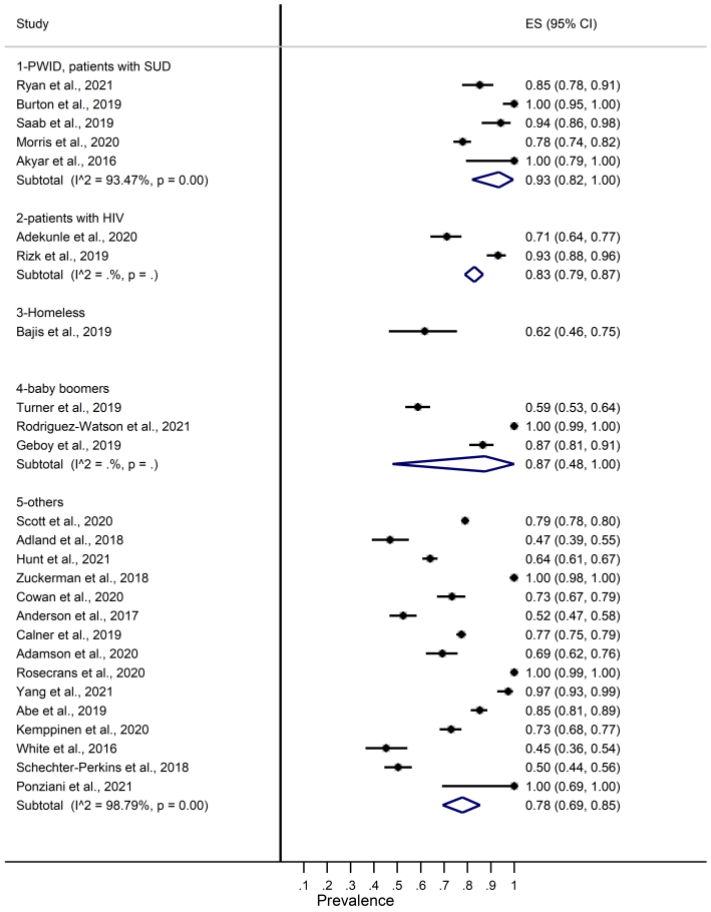
B.


Study
ES (95% CI)
1-PWID, patients with SUD
Ryan et al., 2021 0.29 (0.25, 0.33)
Broad et al., 2020 0.21 (0.17, 0.26)
Saab et al., 2019 0.01 (0.01, 0.02)
Bartholomew et al., 2020 0.38 (0.34, 0.43)
Page et al., 2017 0.53 (0.46, 0.61)
Traeger et al., 2020 0.15 (0.14, 0.15)
Messina et al., 2020 0.47 (0.42, 0.51)
Akyar et al., 2016 0.43 (0.40, 0.47)
Subtotal (I^2 = 99.84%, p = 0.00) 0.28 (0.15, 0.44)
2-patients with HIV
Ma et al., 2019 0.12 (0.11, 0.14)
Lions et al., 2020 0.34 (0.30, 0.39)
Subtotal (I^2 = .%, p = .) 0.16 (0.14, 0.17)
4-baby boomers
Tapp et al., 2020 0.04 (0.04, 0.04)
Desai et al., 2020 0.05 (0.04, 0.06)
Hoenigl et al., 2019 0.10 (0.08, 0.12)
Turner et al., 2019 0.05 (0.05, 0.06)
Castrejon et al., 2017 0.01 (0.01, 0.01)
Jonas et al., 2016 0.03 (0.03, 0.04)
Bourgi et al., 2016 0.01 (0.01, 0.02)
Rodriguez-Watson et al., 2021 0.02 (0.02, 0.02)
Younossi et al., 2016 0.00 (0.00, 0.01)
Jain et al., 2019 0.12 (0.11, 0.13)
Irvin et al., 2020 0.99 (0.99, 1.00)
Geboy et al., 2019 0.04 (0.03, 0.04)
Bakhai et al., 2019 0.43 (0.39, 0.49)
Kim et al., 2019 0.14 (0.13, 0.14)
Subtotal (I^2 = 99.96%, p = 0.00) 0.11 (0.05, 0.19)
5-others
Dupont et al., 2020 0.06 (0.06, 0.07)
Adland et al., 2018 0.02 (0.02, 0.02)
Kronfli et al., 2019 0.11 (0.08, 0.15)
Miller et al., 2020 0.14 (0.13, 0.14)
Lee et al., 2020 0.12 (0.12, 0.13)
Hunt et al., 2021 0.06 (0.06, 0.07)
Morey et al., 2019 0.06 (0.05, 0.08)
Burrell et al., 2018 0.02 (0.01, 0.02)
Blackwell et al., 2020 0.08 (0.08, 0.08)
Galbraith et al., 2020 0.09 (0.09, 0.10)
Cowan et al., 2020 0.06 (0.06, 0.06)
Anderson et al., 2017 0.14 (0.13, 0.16)
Calner et al., 2019 0.11 (0.10, 0.11)
Crowley et al., 2019 0.21 (0.17, 0.25)
Adamson et al., 2020 0.08 (0.07, 0.09)
O'Connell et al., 2016 0.05 (0.05, 0.06)
Rosecrans et al., 2020 0.35 (0.33, 0.37)
Abe et al., 2019 0.17 (0.16, 0.19)
Kemppinen et al., 2020 0.97 (0.96, 0.99)
White et al., 2016 0.10 (0.09, 0.12)
Simoncini et al., 2019 0.14 (0.12, 0.16)
Benitez et al., 2020 0.11 (0.11, 0.12)
Schechter-Perkins et al., 2018 0.13 (0.12, 0.14)
Ponziani et al., 2021 0.02 (0.02, 0.02)
Subtotal (I^2 = 99.78%, p = 0.00) 0.12 (0.10, 0.15)
.1 .2 .3 .4 .5 .6 .7 .8 .9 1
Prevalence

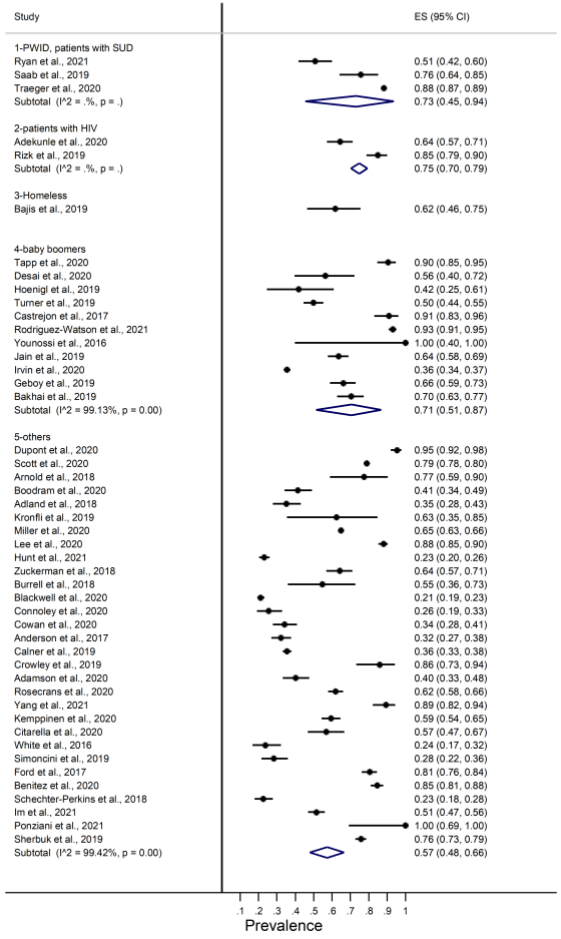
C.


Study
ES (95% CI)
1-PWID, patients with SUD
Ryan et al., 2021 0.23 (0.20, 0.27)
Broad et al., 2020 0.09 (0.04, 0.17)
Saab et al., 2019 0.29 (0.24, 0.36)
Page et al., 2017 0.75 (0.65, 0.83)
Messina et al., 2020 0.45 (0.38, 0.52)
Akyar et al., 2016 0.09 (0.05, 0.15)
Subtotal (I^2 = 97.26%, p = 0.00) 0.30 (0.15, 0.46)
2-patients with HIV
Adekunle et al., 2020 0.78 (0.72, 0.83)
Ma et al., 2019 0.49 (0.42, 0.56)
Lions et al., 2020 0.92 (0.86, 0.96)
Subtotal (I^2 = .%, p = .) 0.75 (0.49, 0.94)
4-baby boomers
Tapp et al., 2020 0.24 (0.21, 0.28)
Desai et al., 2020 0.44 (0.34, 0.55)
Hoenigl et al., 2019 0.51 (0.38, 0.64)
Turner et al., 2019 0.50 (0.46, 0.54)
Castrejon et al., 2017 0.41 (0.34, 0.48)
Jonas et al., 2016 0.76 (0.71, 0.80)
Bourgi et al., 2016 0.63 (0.54, 0.72)
Rodriguez-Watson et al., 2021 0.73 (0.70, 0.76)
Younossi et al., 2016 0.44 (0.14, 0.79)
Jain et al., 2019 0.70 (0.65, 0.74)
Irvin et al., 2020 0.81 (0.80, 0.82)
Geboy et al., 2019 0.53 (0.47, 0.58)
Bakhai et al., 2019 0.95 (0.91, 0.98)
Kim et al., 2019 0.62 (0.60, 0.63)
Subtotal (I^2 = 98.94%, p = 0.00) 0.61 (0.51, 0.70)
5-others
Dupont et al., 2020 0.59 (0.54, 0.64)
Adland et al., 2018 0.50 (0.44, 0.55)
Kronfli et al., 2019 0.46 (0.29, 0.63)
Miller et al., 2020 0.43 (0.42, 0.44)
Lee et al., 2020 0.69 (0.66, 0.72)
Hunt et al., 2021 0.68 (0.65, 0.70)
Morey et al., 2019 0.49 (0.39, 0.60)
Burrell et al., 2018 0.10 (0.02, 0.26)
Blackwell et al., 2020 0.45 (0.43, 0.46)
Galbraith et al., 2020 0.53 (0.50, 0.55)
Cowan et al., 2020 0.34 (0.30, 0.37)
Anderson et al., 2017 0.69 (0.65, 0.74)
Calner et al., 2019 0.55 (0.53, 0.57)
Crowley et al., 2019 0.57 (0.46, 0.68)
Adamson et al., 2020 0.55 (0.51, 0.59)
Rosecrans et al., 2020 0.79 (0.76, 0.82)
Abe et al., 2019 0.72 (0.68, 0.75)
Kemppinen et al., 2020 0.70 (0.66, 0.74)
White et al., 2016 0.47 (0.41, 0.53)
Simoncini et al., 2019 0.69 (0.59, 0.78)
Benitez et al., 2020 0.58 (0.54, 0.61)
Schechter-Perkins et al., 2018 0.58 (0.53, 0.62)
Im et al., 2021 0.31 (0.29, 0.33)
Ponziani et al., 2021 0.08 (0.04, 0.14)
Subtotal (I^2 = 98.65%, p = 0.00) 0.53 (0.47, 0.58)
.1 .2 .3 .4 .5 .6 .7 .8 .9 1
Prevalence

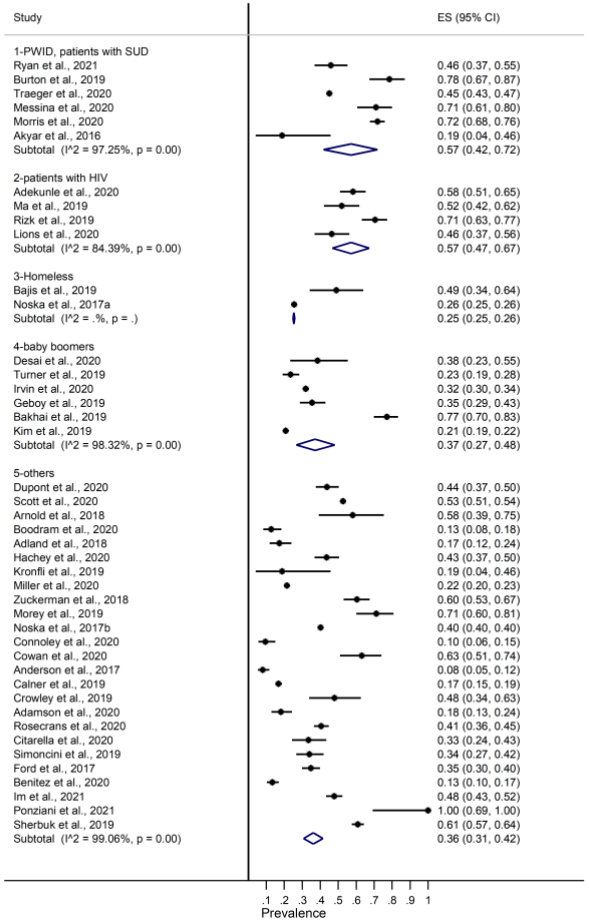
D.


Study
ES (95% CI)
1-PWID, patients with SUD
Ryan et al., 2021 0.85 (0.78, 0.91)
Burton et al., 2019 1.00 (0.95, 1.00)
Saab et al., 2019 0.94 (0.86, 0.98)
Morris et al., 2020 0.78 (0.74, 0.82)
Akyar et al., 2016 1.00 (0.79, 1.00)
Subtotal (I^2 = 93.47%, p = 0.00) 0.93 (0.82, 1.00)
2-patients with HIV
Adekunle et al., 2020 0.71 (0.64, 0.77)
Rizk et al., 2019 0.93 (0.88, 0.96)
Subtotal (I^2 = .%, p = .) 0.83 (0.79, 0.87)
3-Homeless
Bajis et al., 2019 0.62 (0.46, 0.75)
4-baby boomers
Turner et al., 2019 0.59 (0.53, 0.64)
Rodriguez-Watson et al., 2021 1.00 (0.99, 1.00)
Geboy et al., 2019 0.87 (0.81, 0.91)
Subtotal (I^2 = .%, p = .) 0.87 (0.48, 1.00)
5-others
Scott et al., 2020 0.79 (0.78, 0.80)
Adland et al., 2018 0.47 (0.39, 0.55)
Hunt et al., 2021 0.64 (0.61, 0.67)
Zuckerman et al., 2018 1.00 (0.98, 1.00)
Cowan et al., 2020 0.73 (0.67, 0.79)
Anderson et al., 2017 0.52 (0.47, 0.58)
Calner et al., 2019 0.77 (0.75, 0.79)
Adamson et al., 2020 0.69 (0.62, 0.76)
Rosecrans et al., 2020 1.00 (0.99, 1.00)
Yang et al., 2021 0.97 (0.93, 0.99)
Abe et al., 2019 0.85 (0.81, 0.89)
Kemppinen et al., 2020 0.73 (0.68, 0.77)
White et al., 2016 0.45 (0.36, 0.54)
Schechter-Perkins et al., 2018 0.50 (0.44, 0.56)
Ponziani et al., 2021 1.00 (0.69, 1.00)
Subtotal (I^2 = 98.79%, p = 0.00) 0.78 (0.69, 0.85)
.1 .2 .3 .4 .5 .6 .7 .8 .9 1
Prevalence

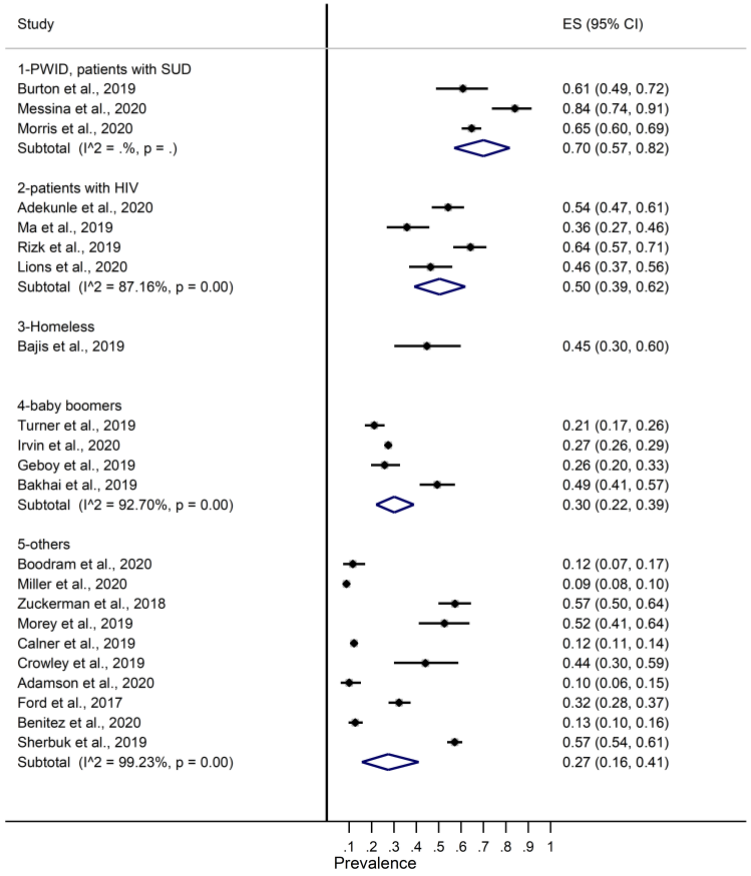
E.


Study
ES (95% CI)
1-PWID, patients with SUD
Ryan et al., 2021 0.51 (0.42, 0.60)
Saab et al., 2019 0.76 (0.64, 0.85)
Traeger et al., 2020 0.88 (0.87, 0.89)
Subtotal (I^2 = .%, p = .) 0.73 (0.45, 0.94)
2-patients with HIV
Adekunle et al., 2020 0.64 (0.57, 0.71)
Rizk et al., 2019 0.85 (0.79, 0.90)
Subtotal (I^2 = .%, p = .) 0.75 (0.70, 0.79)
3-Homeless
Bajis et al., 2019 0.62 (0.46, 0.75)
4-baby boomers
Tapp et al., 2020 0.90 (0.85, 0.95)
Desai et al., 2020 0.56 (0.40, 0.72)
Hoenigl et al., 2019 0.42 (0.25, 0.61)
Turner et al., 2019 0.50 (0.44, 0.55)
Castrejon et al., 2017 0.91 (0.83, 0.96)
Rodriguez-Watson et al., 2021 0.93 (0.91, 0.95)
Younossi et al., 2016 1.00 (0.40, 1.00)
Jain et al., 2019 0.64 (0.58, 0.69)
Irvin et al., 2020 0.36 (0.34, 0.37)
Geboy et al., 2019 0.66 (0.59, 0.73)
Bakhai et al., 2019 0.70 (0.63, 0.77)
Subtotal (I^2 = 99.13%, p = 0.00) 0.71 (0.51, 0.87)
5-others
Dupont et al., 2020 0.95 (0.92, 0.98)
Scott et al., 2020 0.79 (0.78, 0.80)
Arnold et al., 2018 0.77 (0.59, 0.90)
Boodram et al., 2020 0.41 (0.34, 0.49)
Adland et al., 2018 0.35 (0.28, 0.43)
Kronfli et al., 2019 0.63 (0.35, 0.85)
Miller et al., 2020 0.65 (0.63, 0.66)
Lee et al., 2020 0.88 (0.85, 0.90)
Hunt et al., 2021 0.23 (0.20, 0.26)
Zuckerman et al., 2018 0.64 (0.57, 0.71)
Burrell et al., 2018 0.55 (0.36, 0.73)
Blackwell et al., 2020 0.21 (0.19, 0.23)
Connoley et al., 2020 0.26 (0.19, 0.33)
Cowan et al., 2020 0.34 (0.28, 0.41)
Anderson et al., 2017 0.32 (0.27, 0.38)
Calner et al., 2019 0.36 (0.33, 0.38)
Crowley et al., 2019 0.86 (0.73, 0.94)
Adamson et al., 2020 0.40 (0.33, 0.48)
Rosecrans et al., 2020 0.62 (0.58, 0.66)
Yang et al., 2021 0.89 (0.82, 0.94)
Kemppinen et al., 2020 0.59 (0.54, 0.65)
Citarella et al., 2020 0.57 (0.47, 0.67)
White et al., 2016 0.24 (0.17, 0.32)
Simoncini et al., 2019 0.28 (0.22, 0.36)
Ford et al., 2017 0.81 (0.76, 0.84)
Benitez et al., 2020 0.85 (0.81, 0.88)
Schechter-Perkins et al., 2018 0.23 (0.18, 0.28)
Im et al., 2021 0.51 (0.47, 0.56)
Ponziani et al., 2021 1.00 (0.69, 1.00)
Sherbuk et al., 2019 0.76 (0.73, 0.79)
Subtotal (I^2 = 99.42%, p = 0.00) 0.57 (0.48, 0.66)
.1 .2 .3 .4 .5 .6 .7 .8 .9 1
Prevalence

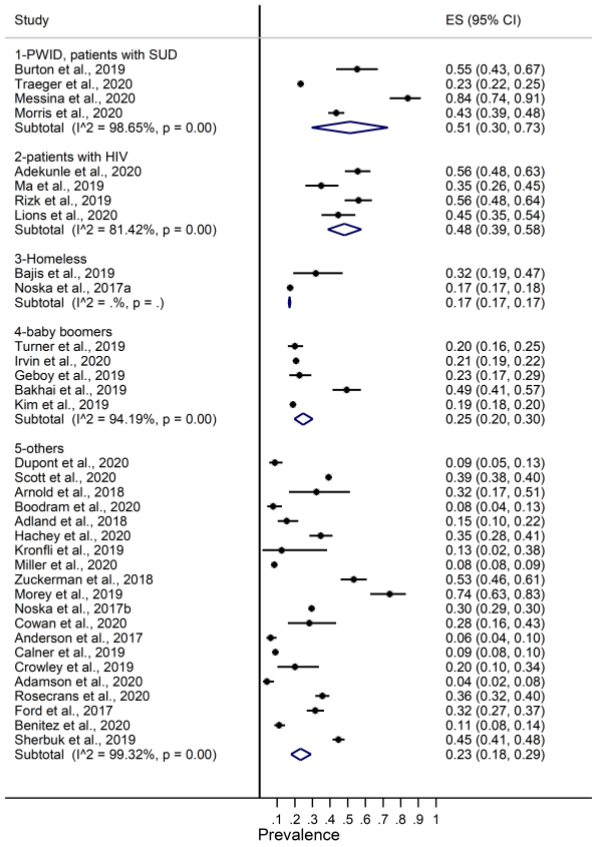
F.


Study
ES (95% CI)
1-PWID, patients with SUD
Ryan et al., 2021 0.46 (0.37, 0.55)
Burton et al., 2019 0.78 (0.67, 0.87)
Traeger et al., 2020 0.45 (0.43, 0.47)
Messina et al., 2020 0.71 (0.61, 0.80)
Morris et al., 2020 0.72 (0.68, 0.76)
Akyar et al., 2016 0.19 (0.04, 0.46)
Subtotal (I^2 = 97.25%, p = 0.00) 0.57 (0.42, 0.72)
2-patients with HIV
Adekunle et al., 2020 0.58 (0.51, 0.65)
Ma et al., 2019 0.52 (0.42, 0.62)
Rizk et al., 2019 0.71 (0.63, 0.77)
Lions et al., 2020 0.46 (0.37, 0.56)
Subtotal (I^2 = 84.39%, p = 0.00) 0.57 (0.47, 0.67)
3-Homeless
Bajis et al., 2019 0.49 (0.34, 0.64)
Noska et al., 2017a 0.26 (0.25, 0.26)
Subtotal (I^2 = .%, p = .) 0.25 (0.25, 0.26)
4-baby boomers
Desai et al., 2020 0.38 (0.23, 0.55)
Turner et al., 2019 0.23 (0.19, 0.28)
Irvin et al., 2020 0.32 (0.30, 0.34)
Geboy et al., 2019 0.35 (0.29, 0.43)
Bakhai et al., 2019 0.77 (0.70, 0.83)
Kim et al., 2019 0.21 (0.19, 0.22)
Subtotal (I^2 = 98.32%, p = 0.00) 0.37 (0.27, 0.48)
5-others
Dupont et al., 2020 0.44 (0.37, 0.50)
Scott et al., 2020 0.53 (0.51, 0.54)
Arnold et al., 2018 0.58 (0.39, 0.75)
Boodram et al., 2020 0.13 (0.08, 0.18)
Adland et al., 2018 0.17 (0.12, 0.24)
Hachey et al., 2020 0.43 (0.37, 0.50)
Kronfli et al., 2019 0.19 (0.04, 0.46)
Miller et al., 2020 0.22 (0.20, 0.23)
Zuckerman et al., 2018 0.60 (0.53, 0.67)
Morey et al., 2019 0.71 (0.60, 0.81)
Noska et al., 2017b 0.40 (0.40, 0.40)
Connoley et al., 2020 0.10 (0.06, 0.15)
Cowan et al., 2020 0.63 (0.51, 0.74)
Anderson et al., 2017 0.08 (0.05, 0.12)
Calner et al., 2019 0.17 (0.15, 0.19)
Crowley et al., 2019 0.48 (0.34, 0.63)
Adamson et al., 2020 0.18 (0.13, 0.24)
Rosecrans et al., 2020 0.41 (0.36, 0.45)
Citarella et al., 2020 0.33 (0.24, 0.43)
Simoncini et al., 2019 0.34 (0.27, 0.42)
Ford et al., 2017 0.35 (0.30, 0.40)
Benitez et al., 2020 0.13 (0.10, 0.17)
Im et al., 2021 0.48 (0.43, 0.52)
Ponziani et al., 2021 1.00 (0.69, 1.00)
Sherbuk et al., 2019 0.61 (0.57, 0.64)
Subtotal (I^2 = 99.06%, p = 0.00) 0.36 (0.31, 0.42)
.1 .2 .3 .4 .5 .6 .7 .8 .9 1
Prevalence

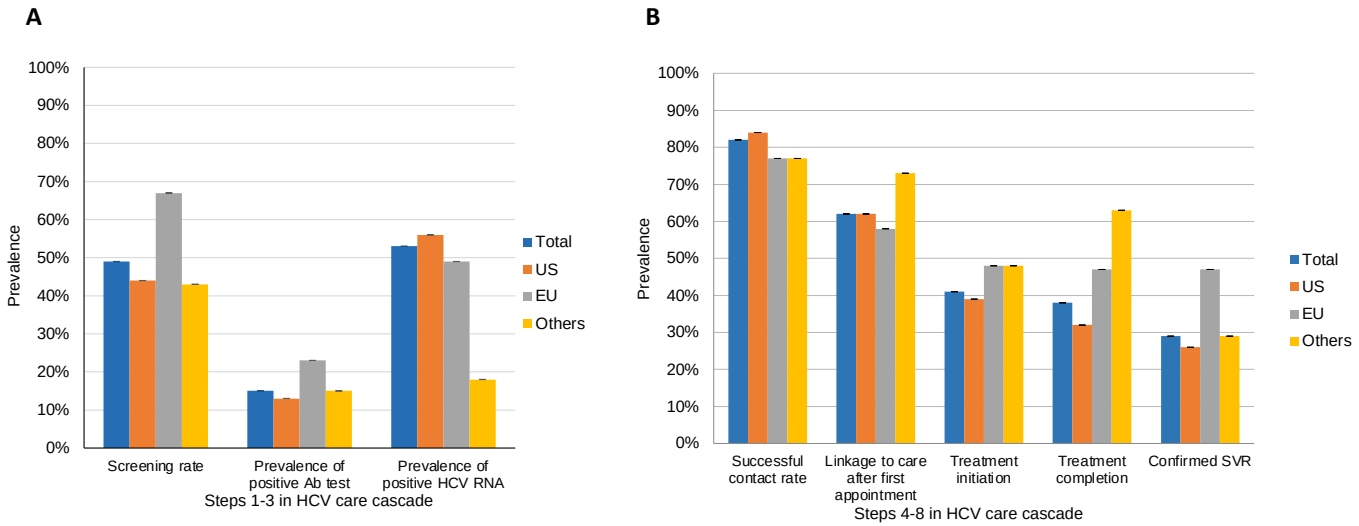
G.


Study
ES (95% CI)
1-PWID, patients with SUD
Burton et al., 2019
0.61 (0.49, 0.72)
Messina et al., 2020
0.84 (0.74, 0.91)
Morris et al., 2020
0.65 (0.60, 0.69)
Subtotal (I^2 = .%, p = .)
0.70 (0.57, 0.82)
2-patients with HIV
Adekunle et al., 2020
0.54 (0.47, 0.61)
Ma et al., 2019
0.36 (0.27, 0.46)
Rizk et al., 2019
0.64 (0.57, 0.71)
Lions et al., 2020
0.46 (0.37, 0.56)
Subtotal (I^2 = 87.16%, p = 0.00)
0.50 (0.39, 0.62)
3-Homeless
Bajis et al., 2019
0.45 (0.30, 0.60)
4-baby boomers
Turner et al., 2019
0.21 (0.17, 0.26)
Irvin et al., 2020
0.27 (0.26, 0.29)
Geboy et al., 2019
0.26 (0.20, 0.33)
Bakhai et al., 2019
0.49 (0.41, 0.57)
Subtotal (I^2 = 92.70%, p = 0.00)
0.30 (0.22, 0.39)
5-others
Boodram et al., 2020
0.12 (0.07, 0.17)
Miller et al., 2020
0.09 (0.08, 0.10)
Zuckerman et al., 2018
0.57 (0.50, 0.64)
Morey et al., 2019
0.52 (0.41, 0.64)
Calner et al., 2019
0.12 (0.11, 0.14)
Crowley et al., 2019
0.44 (0.30, 0.59)
Adamson et al., 2020
0.10 (0.06, 0.15)
Ford et al., 2017
0.32 (0.28, 0.37)
Benitez et al., 2020
0.13 (0.10, 0.16)
Sherbuk et al., 2019
0.57 (0.54, 0.61)
Subtotal (I^2 = 99.23%, p = 0.00)
0.27 (0.16, 0.41)
.1 .2 .3 .4 .5 .6 .7 .8 .9 1
Prevalence

H.



Appendix Figure 2, A-H. Outcomes rates at each step of the HCV cascade of care (Steps 1-8)**,** stratified by key populations.



	Step 1	Step 2	Step 3
	# of studies (participants)	# of studies (participants)	# of studies (participants)
Total	32 (6,396,187)	48 (508,412)	47 (42,163)
US	22 (6,215,745)	36 (449,212)	37 (40,037)
EU	7 (61,477)	9 (44,240)	8 (2,011)
Others (Austalia and Canada)	3 (118,965)	3 (14,960)	2 (115)

	Step 4	Step 5	Step 6	Step 7	Step 8
	# of studies (participants)	# of studies (participants)	# of studies (participants)	# of studies (participants)	# of studies (participants)
Total	26 (16,069)	47 (31,842)	42 (205,163)	22 (12,762)	34 (204,015)
US	5 (758)	37 (27,082)	29 (200,014)	16 (11,924)	25 (199,286)
EU	2 (367)	7 (984)	9 (897)	4 (315)	5 (477)
Others (Australia and Canada)	1 (47)	3 (3,776)	4 (4,252)	2 (523)	4 (4,252)

Appendix Figure 3: HCV treatment cascade by country (A) Steps 1–3 and (B) Steps 4–8

(A) Steps 1–3. Among individuals who were eligible for HCV screening, we calculated the proportion of individuals who were screened (Step 1). Among screened individuals, we calculated the proportion of individuals with positive antibody (Ab) test results (Step 2), and among individuals with positive Ab test results, we calculated the proportion of individuals with positive HCV RNA test results (Step 3). (B) Steps 4–8. Using the pooled estimates of the eight steps and the numbers of participants from Steps 1–3, we calculated the proportion of HCV-infected individuals completing each HCV cascade step by dividing the number of individuals who completed each step (Steps 4–8) by the number of individuals with positive HCV RNA test results.

Abbreviations: EU, Europe; U.S., United States; SVR, sustained virologic response.

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