**SUPPLEMENTARY TABLE 1. Chain of indirect evidence**

|  |  |  |
| --- | --- | --- |
| How would universal screening for hepatitis C affect the number (and composition) of people who screen positive for HCV infection? | How many additional persons would be linked to care? | Do desirable treatment effects outweigh undesirable effects? |
| K.Q.1.a. What is the prevalence of HCV infection in the United States?In the general population?By risk groups? | K.Q.2.a. What is the diagnostic accuracy of HCV antibody testing?\*K.Q.2.b. What are harms of hepatitis C screening?†K.Q.2.c. What proportion of people who screen positive for HCV infection are linked to care?§¶ | K.Q.3.a. What is the effect of DAA treatment on HCV viral load?\*K.Q.3.b. What is the effect of DAA treatment on morbidity (including cirrhosis and hepatocellular carcinoma)?\*K.Q.3.c. What is the effect of DAA treatment on mortality (HCV‑specific and all‑cause)?\*K.Q.3.d. What are the adverse effects of DAA treatment?\* |

**Abbreviations:** HCV = hepatitis C virus; DAA = direct acting antiviral.

\* Previously well‑described and therefore not included in this review.

† U.S. and non‑U.S. studies included.

§ U.S. studies only included.

¶ For all adult review only.**SUPPLEMENTARY TABLE 2. Search strategy for all adult literature review**

|  |
| --- |
| **Search Query:** Does universal screening for hepatitis C virus infection among adults aged 18 years and older, compared to risk‑based screening, reduce morbidity and mortality? |
| **Database** | **Strategy** | **Run Date** | **Records** |
| **Medline (OVID)****1946–** | (exp Hepatitis C/ AND \*Mass Screening/) OR ((Hepatitis C ADJ5 screen\*) OR (hepC ADJ5 screen\*) OR (HCV ADJ5 screen\*) OR (Hepatitis C ADJ5 test\*) OR (hepC ADJ5 test\*) OR (HCV ADJ5 test\*)).ti,ab. OR (\*hepatitis C/ AND (screen\* OR test\*).ti)Limit 2010– ; English | 8/6/2018 | 3310 |
| **Embase (OVID)****1996–** | (exp Hepatitis C/ AND \*Mass Screening/) OR ((Hepatitis C ADJ5 screen\*) OR (hepC ADJ5 screen\*) OR (HCV ADJ5 screen\*) OR (Hepatitis C ADJ5 test\*) OR (hepC ADJ5 test\*) OR (HCV ADJ5 test\*)).ti,ab. OR (\*hepatitis C/ AND (screen\* OR test\*).ti)Limit 2010– ; English; Exclude Medline Journals | 8/6/2018 | 559 - 161 duplicates = 398 unique items |
| **CINAHL (EBSCO)** | ((MH “Hepatitis C”+) AND (MM “Mass Screening”)) OR ((“Hepatitis C” N5 screen\*) OR (hepC N5 screen\*) OR (HCV N5 screen\*) OR (“Hepatitis C” N5 test\*) OR (hepC N5 test\*) OR (HCV N5 test\*)) OR ((MM “hepatitis C”) AND (TI (screen\* OR test\*)))Limit 2010– ; exclude Medline records ; English | 8/6/2018 | 210 - 128 duplicates = 82 unique items |
| **Scopus** | TITLE-ABS-KEY((“Hepatitis C” W/5 screen\*) OR (hepC W/5 screen\*) OR (HCV W/5 screen\*) OR (“Hepatitis C” W/5 test\*) OR (hepC W/5 test\*) OR (HCV W/5 test\*)) AND NOT INDEX(medline)Limit 2010– ; English | 8/6/2018 | 1769 - 846 duplicates = 923 unique items |
| **Cochrane Library** | ((“Hepatitis C” NEAR/5 screen\*) OR (hepC NEAR/5 screen\*) OR (HCV NEAR/5 screen\*) OR (“Hepatitis C” NEAR/5 test\*) OR (hepC NEAR/5 test\*) OR (HCV NEAR/5 test\*)):ti,abLimit 2010– ; English | 8/6/2018 | 250 - 96 duplicates = 154 unique items |

**SUPPLEMENTARY TABLE 3. Search strategy for pregnant women literature review**

|  |
| --- |
| **Search Query:** Does universal screening for hepatitis C virus infection among pregnant women, compared to risk‑based screening, reduce morbidity and mortality among mothers and their children? |
| **Database** | **Strategy** | **Run Date** | **Records** |
| **Medline (OVID)****1946–** | Hepatitis C OR hepC OR HCVANDPregnanc\* OR pregnant OR maternalANDScreen\* OR test\*Limit 1998– ; | 7/2/2018 | 592 |
| **Embase (OVID)****1947–** | Hepatitis C OR hepC OR HCVANDPregnanc\* OR pregnant OR maternalANDScreen\* OR test\*Limit 1998– ; | 7/2/2018 | 1226 - 464 duplicates = 762 unique items |
| **CINAHL (EBSCO)** | “Hepatitis C” OR hepC OR HCVANDPregnanc\* OR pregnant OR maternalANDScreen\* OR test\*Limit 1998– ; exclude Medline records | 7/2/2018 | 38 - 19 duplicates = 19 unique items |
| **Scopus** | TITLE-ABS-KEY((“Hepatitis C” OR hepC OR HCV) AND (Pregnanc\* OR pregnant OR maternal) AND (Screen\* OR test\*)) AND NOT INDEX(medline) | 7/2/2018 | 333 - 216 duplicates = 117 unique items |
| **Cochrane Library** | ((“Hepatitis C” OR hepC OR HCV) AND (Pregnanc\* OR pregnant OR maternal) AND (Screen\* OR test\*)):ti,ab | 7/2/2018 | 23 - 13 duplicates = 10 unique items |

**SUPPLEMENTARY TABLE 4. Search strategy for supplementary all adult literature review**

|  |
| --- |
| **Search Query:** Does universal screening for hepatitis C virus infection among adults aged 18 years and older, compared to risk‑based screening, reduce morbidity and mortality? |
| **Database** | **Strategy** | **Records for run date 8/6/2018** | **Records for run date 11/15/2019** |
| **Medline (OVID)****1946–** | (exp Hepatitis C/ AND \*Mass Screening/) OR ((Hepatitis C ADJ5 screen\*) OR (hepC ADJ5 screen\*) OR (HCV ADJ5 screen\*) OR (Hepatitis C ADJ5 test\*) OR (hepC ADJ5 test\*) OR (HCV ADJ5 test\*)).ti,ab. OR (\*hepatitis C/ AND (screen\* OR test\*).ti)Limit 2010– ; EnglishUpdate: (201808\* OR 201809\* OR 201810\* OR 201811\* OR 201812\* OR 2019\*).dt | 3310 | 682 |
| **Embase (OVID)****1996–** | (exp Hepatitis C/ AND \*Mass Screening/) OR ((Hepatitis C ADJ5 screen\*) OR (hepC ADJ5 screen\*) OR (HCV ADJ5 screen\*) OR (Hepatitis C ADJ5 test\*) OR (hepC ADJ5 test\*) OR (HCV ADJ5 test\*)).ti,ab. OR (\*hepatitis C/ AND (screen\* OR test\*).ti)Limit 2010– ; English; Exclude Medline JournalsUpdate: (201808\* OR 201809\* OR 201810\* OR 201811\* OR 201812\* OR 2019\*).dc | 559 - 561 duplicates = 398 unique items | 247 - 51 duplicates = 196 unique items |
| **CINAHL (EBSCO)** | ((MH “Hepatitis C”+) AND (MM “Mass Screening”)) OR ((“Hepatitis C” N5 screen\*) OR (hepC N5 screen\*) OR (HCV N5 screen\*) OR (“Hepatitis C” N5 test\*) OR (hepC N5 test\*) OR (HCV N5 test\*)) OR ((MM “hepatitis C”) AND (TI (screen\* OR test\*)))Limit 2010– ; exclude Medline records ; EnglishUpdate: August 2018–current | 210 - 128 duplicates = 82 unique items | 105 - 59 duplicates = 46 unique items |
| **Scopus** | TITLE-ABS-KEY((“Hepatitis C” W/5 screen\*) OR (hepC W/5 screen\*) OR (HCV W/5 screen\*) OR (“Hepatitis C” W/5 test\*) OR (hepC W/5 test\*) OR (HCV W/5 test\*)) AND NOT INDEX(medline)Limit 2010– ; EnglishUpdate: August 2018–current | 1769 - 846 duplicates = 923 unique items | 193 - 129 duplicates = 64 unique items |
| **Cochrane Library** | ((“Hepatitis C” NEAR/5 screen\*) OR (hepC NEAR/5 screen\*) OR (HCV NEAR/5 screen\*) OR (“Hepatitis C” NEAR/5 test\*) OR (hepC NEAR/5 test\*) OR (HCV NEAR/5 test\*)):ti,ab Limit 2010– ; EnglishUpdate: August 2018–current | 250 - 96 duplicates = 154 unique items | 61 - 11 duplicates = 50 unique items |

**SUPPLEMENTARY TABLE 5. Search strategy for supplementary pregnant women literature review**

|  |
| --- |
| **Search Query:** Does universal screening for hepatitis C virus infection among pregnant women, compared to risk‑based screening, reduce morbidity and mortality among mothers and their children? |
| **Database** | **Strategy** | **Records for run date 7/2/2018** | **Records for run date** **10/29/2019** |
| **Medline (OVID)****1946–** | Hepatitis C OR hepC OR HCVANDPregnanc\* OR pregnant OR maternalANDScreen\* OR test\*Limit 1998– ; (201807\* OR 201808\* OR 201809\* OR 201810\* OR 201811\* OR 201812\* OR 2019\*).dt | 592 | 69 |
| **Embase (OVID)****1947–** | Hepatitis C OR hepC OR HCVANDPregnanc\* OR pregnant OR maternalANDScreen\* OR test\*Limit 1998– ; (201807\* OR 201808\* OR 201809\* OR 201810\* OR 201811\* OR 201812\* OR 2019\*).dc | 1226 - 466 duplicates = 762 unique items | 155 - 47 duplicates = 108 unique items |
| **CINAHL (EBSCO)** | “Hepatitis C” OR hepC OR HCVANDPregnanc\* OR pregnant OR maternalANDScreen\* OR test\*Limit 1998– ; exclude Medline records | 38 - 19 duplicates = 19 unique items | 12 - 8 duplicates = 4 unique items |
| **Scopus** | TITLE-ABS-KEY ((“Hepatitis C” OR hepC OR HCV) AND (Pregnanc\* OR pregnant OR maternal) AND (Screen\* OR test\*)) AND NOT INDEX (medline) | 333 - 216 duplicates = 117 unique items | 21 - 17 duplicates = 4 unique items |
| **Cochrane Library** | ((“Hepatitis C” OR hepC OR HCV) AND (Pregnanc\* OR pregnant OR maternal) AND (Screen\* OR test\*)):ti,ab | 23 - 13 duplicates = 10 unique items | 12 - 2 duplicates = 10 unique items |

**SUPPLEMENTARY TABLE 6. Hepatitis C prevalence and linkage‑to‑care, general population**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Author, publication year** | **Years of study;****design** | **Description** | **Setting** | **Anti-HCV tested** | **Anti-HCV positivity** | **RNA positivity** | **Follow-up appt. arranged** | **Attended follow-up appt.** | **Treated** | **Achieved SVR** |
| Abara (*1*), 2019 | 2010–2017; Retrospective | Screening among deceased organ donors | Organ Procurement and Transplantation Network |  | 3,725/70,414 (5.3%) | 1,306/2,378\* (54.9%) |  |  |  |  |
| Dodd (*2*), 2016 | 2011–2012; Surveillance | Routine testing of donated blood supply | American Red Cross; Blood Systems, Inc.; and New York Blood Center supply | All samples tested | 2,968/14,786,584 (0.02%)† |  |  |  |  |  |
| Dong (*3*), 2017 | 2016; Pilot | Pharmacists training to provide HCV point-of-care rapid testing | Community pharmacy, Mission Wellness Pharmacy, San Francisco, California |  | 1/83 (1.2%) |  |  |  |  |  |
| Hofmeister (*4*, *5*), 2018§ | 2013–2016; Epidemiologic study |  | NHANES data and data for populations not represented in NHANES |  | 4,101,200/244,869,800 (1.7%) | 2,266,700/4,088,173 (55.5%)¶ |  |  |  |  |
| Kim (*6*), 2019 | 2016–2018; Retrospective | Examining screening rates | Women of reproductive age at safety net hospital in San Francisco | 7,406/19,121 (38.7%) | 206/7,406 (2.8%) | 105/168 (62.5%) |  |  | 41 | 34/41 (82.9%) |
| Klevens (*7*), 2016\*\* | 2010–2013; Cross-sectional | Laboratory data analysis | Quest Diagnostics laboratory data |  | 352,646/5,651,742 (6.2%) | 292,681/352,646 (83.0%) |  |  |  |  |
| Kugelmas (*8*), 2017 | 2015–2016; Prospective | Direct store advertising | 45 Walgreen pharmacies in 9 major metropolitan areas |  | 103/1,296 (7.9%) |  |  |  |  |  |
| Saab (*9*), 2019 | 2018; Retrospective | Results of hospital screenings for HCV | University of California, Los Angeles Health Care System |  | 238/17,512 (1.4%) | 70/190 (36.8%) | 53/70 (75.7%) |  |  |  |
| Viner (*10*), 2015†† | 2010–2013; Epidemiologic |  | Surveillance data from Philadelphia Department of Public Health  |  | 13,596/1,584,848 (0.9%) | 6,383/13,596 (47.0%)§§ |  |  |  |  |

**Abbreviations:** anti-HCV = hepatitis C virus antibody; HCV = hepatitis C virus; RNA = ribonucleic acid; SVR = sustained virologic response; NHANES = National Health and Nutrition Examination Survey.

\* Number testing anti-HCV positive during time period.

† RNA positive.

§ Includes incarcerated.

¶ From Rosenberg et al. (*5*).

\*\* Both anti-HCV and RNA testing.

†† Population estimates used 2010 census data for Philadelphia County, estimated 47,207 with HCV.

§§ Among those with anti-HCV positivity.**SUPPLEMENTARY TABLE 7. Hepatitis C prevalence and linkage‑to‑care, emergency departments**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Author, publication year** | **Years of study;****design** | **Description** | **Setting** | **Anti-HCV tested** | **Anti-HCV positivity** | **RNA positivity** | **Follow-up appt. arranged** | **Attended follow-up appt.** | **Treated** | **Achieved SVR** |
| Allison (*11*), 2016 | 2014–2015; Cross-sectional | Interview and screening | Birth cohort patients presenting to large public urban ED, Bellevue Hospital Center, New York City | 383/915 (41.9%) | 28/383 (7.3%) | 19/21 (90.5%) | 21/19 (>100.0%) | 4/19 (21.1%) | 1/4 (25.0%) |  |
| Anderson (*12*), 2017\* | 2014–2015; Multicenter retrospective cohort | Triage-based screening strategy | Birth cohort and IDU patients presenting to 2 urban EDs: public ED, Highland Hospital, Oakland, California and academic ED, University of Alabama at Birmingham | /55,335 | 532 | 301/435 (69.2%) | 158/301 (52.5%) | 97/158 (61.4%) | 24/97 (24.7%) | 19/24 (79.2%) |
| Anderson (*13*), 2016 | 2015; Prospective observational pilot | Screening initiative, provider training | IDU patients presenting to publicly-funded urban ED, Alameda Health System, Highland Hospital, Oakland, California | 155/14,253 (1.1%) | 40/155 (25.8%) | 22/32 (68.8%) | 19/22 (86.4%) | 3/19 (15.8%) | 1/3 (33.3%) |  |
| Cowan (*14*), 2018 | 2012–2013; Randomized controlled trial | Bundled HIV/HCV screening | Inner city medical center, Jacobi Medical Center, Bronx, New York | 187/234 (79.9%) | 1/187 (0.5%) |  |  |  |  |  |
| Donnelly (*15*), 2016† | 2013–2015; Geospatial analysis | Opt-out screening | Urban emergency department, University of Alabama, Birmingham, Alabama |  | 1,014/8,742 (11.6%) |  |  |  |  |  |
| Franco (*16*), 2016 | 2013–2014; Retrospective cohort | Opt-out screening, LTC coordinator | Birth cohort patients at academic tertiary care center, University of Alabama at Birmingham |  | 473/4,371 (10.8%) | 332/402 (82.6%) | 148/332 (44.6%) | 117/148 (79.1%) |  |  |
| Hoenig (*17*), 2019 | 2017–2018; Pilot study | Opt-out screening program | Birth cohort patients at 2 academic centers in San Diego, California |  | 90/905 (9.9%) | 31/61 (50.8%) |  | 13/31 (41.9%) |  |  |
| Hsieh (*18*), 2016 | 2013; Seroprevalence study | Excess blood tested for HCV | Urban emergency department, Johns Hopkins Hospital, Baltimore, Maryland | 4,713/8,582 (54.9%) | 652/4,713 (13.8%) | 87/100 (87.0%) |  |  |  |  |
| Hsieh (*19*), 2018 | 2015–2016; Retrospective cohort | Opt-out screening | Johns Hopkins | 299/5,039 (5.9%) | 6/299 (2.0%) |  |  |  |  |  |
| Kang (*20*), 2018 | 2016; Retrospective cohort study | Opt-out screening | Birth cohort patients, large ED in New Jersey | 2,928/14,000 (20.9%) | 192/2,928 (6.6%) | 71/167 (42.5%) |  |  |  |  |
| Merchant (*21*), 2015 | 2010–2012; Randomized controlled trial |  | Drug misusing patients at two urban EDs affiliated with medical school in New England, Miriam Hospital and Rhode Island Hospital |  | 5/346 (1.4%) |  |  |  |  |  |
| Merchant (*22*), 2014 | 2011–2012; Randomized controlled trial |  | Patients reporting drug use in 2 urban EDs, Miriam Hospital and Rhode Island Hospital | 256/470 (54.5%) | 7/256 (2.7%) |  |  |  |  |  |
| Privette (*23*), 2018§ | 2016–2017; Prospective | Screening initiative | Participants were Level A and Level B trauma activations, South Carolina |  | 70/1,217 (5.8%) | 45¶/70 (64.3%) | 40/46 (87.0%) | 10/27 (37.0%) |  |  |
| Schechter-Perkins (*24*), 2018 | 2016–2017; Retrospective | EMR prompt, opt-out screening | Urban safety net hospital ED, Boston Medical Center, Massachusetts | 3,808/19,905 (19.1%) | 504/3,808 (13.2%) | 292/493 (59.2%) | 102/292 (34.9%) | 66/102 (64.7%) |  |  |
| Simoncini (*25*), 2019 | 2016–2017 | Prospective screening of trauma patients with consent | Level 1 trauma center. Philadelphia, Pennsylvania | 1,160/1,470 (78.9%) | 162/1,160 (14.0%) | 67/97 (69.1%) | 46/67 (68.7%) | 55/162 (34.0%) |  |  |
| Torian (*26*), 2018 | 2015; Cross-sectional blinded serosurvey | Excess blood tested for HCV | Large academic tertiary care hospital in poorest county urban county in United States, Bronx, New York | 4,989/16,340 (30.5%) | 372/4,989 (7.5%) | 167/314 (53.2%) |  |  |  |  |
| Ullo (*27*), 2019 | 2018; Retrospective | Screening initiative | Birth cohort patients with ED visits at urban tertiary care hospital in New Jersey | 1,007/3023 (33.3%) | 112/1,007 (11.1%) | 28/38 (73.6%) |  |  |  |  |
| White (*28*), 2016 | 2014–2015; Retrospective cohort | Timestamp analysis | Urban teaching hospital, Highland Hospital, Oakland, California | 2,864/69,639 (4.1%) | 272/2,864 (9.5%) |  |  |  |  |  |
| White (*29*), 2018 | 2016–2017; Before-after comparative effectiveness cohort | Screening intervention, EMR prompt | Urban inner-city hospital with high number of low-income and minority patients, Highland Hospital, Oakland, California | 2,968/20,975 (14.2%) | 153/2,968 (5.2%) |  |  |  |  |  |
| 6,972/19,887 (35.1%) | 525/6,972 (7.5%) |  |  |  |  |  |

**Abbreviations:** anti-HCV = hepatitis C virus antibody; HCV = hepatitis C virus; RNA = ribonucleic acid; SVR = sustained virologic response; ED = emergency department; IDU = injection drug use; LTC = linkage to care; EMR = electronic medical record.

\* Partial overlap with Anderson 2016 (*13*) and Franco 2016 (*16*).

† 78.8% of tests among birth cohort patients.

§ 16 false-positives.

¶ True positives less 9 without confirmatory viral load.**SUPPLEMENTARY TABLE 8. Hepatitis C prevalence and linkage‑to‑care, birth cohort**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Author, publication year** | **Years of study;****design** | **Description** | **Setting** | **Anti-HCV tested** | **Anti-HCV positivity** | **RNA positivity** | **Follow-up appt. arranged** | **Attended follow-up appt.** | **Treated** | **Achieved SVR** |
| Armstrong (*30*), 2019 | 2015–2017; Retrospective | Examining effects of e-clinical decision support tool | Urban health system Cook County Health, Illinois | 15,630 | 844/15,630 (5.4%) | 347/605 (57.4%) | 198/347 (57.1%) |  | 68 |  |
| Bakhai (*31*), 2019\* | 2015–2017; Prospective | Screening initiative | Academic internal medicine residency program, Buffalo, New York | 391/1,291 (30.3%) | 170/391 (43.5%) | 162/170 (95.3%) | 114/162 (70.4%) |  |  |  |
| Bourgi (*32*), 2016 | 2014–2015; Retrospective cohort | EMR prompt | 21 internal medicine clinics at large integrated health system, Henry Ford Health System, Southeast Michigan | 8,657/40,561 (21.3%) | 109/8,657 (1.3%) | 65/69 (94.2%) |  | 51 | 30 completed |  |
| Brady (*33*), 2018 | 2012–2015; Retrospective | Birth-Cohort Evaluation to Advance Screening and Testing of Hepatitis C (BEST-C) | 3 medical centers |  | 130 | 75/118 (63.6%) |  | 73/75 (97.3%) | 21/73 (28.8%) | 14/21 (66.7%) |
| Castrejon (*34*), 2017 | Pre: 2014–2015; Post: 2015–2016; Interrupted time series | EMR prompt, care coordinator | Outpatient clinic within large, complex health system with broad catchment area in Southern California, University of California at Los Angeles |  | 190/5,676 (3.3%) | 40/73 (54.8%) |  | 35/40 (87.5%) |  |  |
|  | 240/13,930 (1.7%) | 49/124 (39.5%) |  | 46/49 (93.9%) |  |  |
| Cole (*35*), 2019 | 2013–2015; Retrospective | Assessment of screening and prevalence | 22 primary care practices in Washington, Wyoming, Alaska, Montana, Idaho | 3,516/32,139 (10.9%) | 565/3,516 (16.1%) |  |  |  |  |  |
| Cornett (*36*), 2018 | 2016; Retrospective cohort | Opt-out screening, EMR prompt | Large emergency department in tertiary care hospital serving socio-economically diverse patient population, Rutgers, New Jersey |  | 192/2,928 (6.6%) | 71/167 (42.5%) |  |  |  |  |
| De la Torre (*37*), 2019 | 2016–2017; Retrospective | Screening initiative | Birth cohort and immigrants from countries with endemic HCV | 10,726 | 855/10,726 (8.0%) | 646†/855 (75.6%) | 436 |  | 109§ |  |
| Deerin (*38*), 2018 | 2014; Pilot study | Surveillance | Washington, D.C. | 196 | 58/196 (29.6%) | 29/31 (93.5%) |  |  |  |  |
| Federman (*39*), 2017 | 2013–2014; Cluster randomized controlled trial | EMR prompt and provider training | Academically-affiliated primary care practices of Mount Sinai Healthcare in NYC and Long Island | 2,995/14,825 (20.2%) | 27/8,713 (0.3%) |  |  |  |  |  |
| 198/10,795 (1.8%) | 6/5,438 (0.1%) |  |  |  |  |  |
| Fitch (*40*), 2017 | 2014–2015; Data reported in a letter to the editor | Screening reminder, EMR prompt | 2 hospital-based primary care clinics at Wake Forest, North Carolina | 854/4,355 (19.6%) | 59/480 (12.3%) |  |  |  |  |  |
| 1,220/4,994 (24.4%) |  |  |  |  |  |  |
| 1,700/5,578 (30.5%) | 218/1,220 (17.9%) |  |  |  |  |  |
| Geboy (*41*), 2019 | 2015–2016; Prospective | Clinical decision support prompt | Largest distributed care delivery network in Maryland and Washington, D.C. region, MedStar Health | 9,304/80,556 (11.6%) | 353/9,304 (3.8%) | 186/311 (59.8%) | 161/186 (86.6%) | 123/161 (76.4%) | 48/123 (39.0%) | 42/48 (87.5%) |
| Goel (*42*), 2017 | 2013–2015; Prospective, stepwise, interventional | HCV screening and LTC initiative, EMR prompt, provider training, data feedback, patient navigator | Two primary care practices affiliated with tertiary care hospital and liver transplant center, Mount Sinai Hospital, New York City | 4,419/14,642¶ (30.2%) | 147/4,419 (3.3%) | 84/134 (62.7%) |  | 60/84 (71.4%) | 32/60 (53.3%) initiated; 6 completed | 6/6 (100.0%) |
| Golden (*43*), 2017 | 2011–2015; Time series | EMR orders | 3 primary care clinic serving low-income patients, Harborview Medical Center, Seattle, Washington | 681/3,773 (18.0%) | 135/681 (19.8%) | 97/134 (72.4%) |  |  |  |  |
| 1,185/3,336 (35.5%) | 123/1,185 (10.4%) | 85/122 (69.7%) |  |  |  |  |
| Hossain (*44*), 2017\*\* | 2013–2015; Cross-sectional | Screening intervention | Outpatient gastroenterology and hepatology clinics, Brooklyn Methodist Hospital, Brooklyn, New York | 245/423 (57.9%) | 5/245 (2.0%) | 2/5 (40.0%) |  |  |  |  |
| Isho (*45*), 2017 | Pilot | Screening and education intervention | Community pharmacy with large urban health center, University of Illinois Hospital and Health Sciences System, Chicago, Illinois | 16/50 (32.0%) | 0/16 (0.0%) |  |  |  |  |  |
| Jain (*46*), 2019†† | 2013–2017; Retrospective | Screening intervention | Safety net hospital, Parkland Health System, Dallas, Texas | 9,354/62,331 (15.0%) | 1,542/9,354 (16.5%) | 723/968 (74.7%) | 373/723 (51.6%)§§ |  |  |  |
| Jonas (*47*), 2016 | 2014–2015; Prospective | Screening and LTC initiative, EMR prompt, care coordinator | Kaiser Permanente Mid-Atlantic States (Maryland, Virginia, and DC) |  | 365/11,200 (3.3%) | 277/365 (75.9%) |  |  |  |  |
| Kim (*48*), 2019 | 2014–2017; Retrospective | Examining cascade of care | Primary care clinics in San Francisco, California | 33,213/34,810 (95.4%) | 4,587/33,213 (13.8%) | 2,827/4,587 (61.6%)¶¶ |  |  |  | 634/900 (90.6%) |
| Konerman (*49*), 2017 | Interrupted time series | EMR prompt | 13 primary care clinic locations within 30‑mile radius of Ann Arbor, Michigan | 1,705/22,488 (7.6%) | 36/1,705 (2.1%) | 23/31 (74.2%) |  |  |  |  |
| 19,847/27,789 (71.4%) | 178/19,847 (0.9%) | 56\*\*\*/168 (33.3%) | 53/53 (100.0%) | 46/53 (86.8%) | 20/36 initiated; 9 completed | 9 |
| Laufer (*50*), 2015 | 2011–2014; Retrospective case control | Quality improvement initiative, screening intervention | Military retirees presenting to internal medicine clinic |  | 5/221 (2.3%) | 4/5 (80.0%) |  |  |  |  |
|  | 10/478 (2.1%) | 2/10 (20.0%) |  |  |  |  |
| MacLean (*51*), 2018 | 2013–2016; Retrospective cohort | EMR prompt | Primary care at academic medical center serving urban and rural population, University of Vermont Medical Center | 9,302/25,071 (37.1%) | 319/9,302 (3.4%) |  |  | 164/182 (90.1%) |  |  |
| Madhani (*52*), 2017 | 2013–2016; Retrospective chart review | Screening intervention, conferences, reminders, posters | Primary care at academic continuity practice, Waterbury, Connecticut | 13/200 (6.5%) | 0/13 (0.0%) |  |  |  |  |  |
| 13/100 (13.0%) | 1/13 (7.7%) |  |  |  |  |  |
| Rowan (*53*), 2019††† | 2013–2014; Prospective | Screening initiative | 2 urban community health centers near Denver, Colorado | 3,126/3,940 (79.3%) | 329/3,126 (10.5%) | 289/421 (68.6%) | 137/289 (47.4%) |  | 80 | 65/80 (81.2%)§§§ |
| Sears (*54*), 2013 | 2010–2011; Feasibility pilot study |  | Patients with and without risk factors scheduled for an outpatient colonoscopy with Scott & White Healthcare in Temple, Texas | 346/483 (71.6%) | 4/346 (1.2%) | 1/4 (25.0%) |  | 1/1 (100.0%) |  |  |
| Shahnazarian (*55*), 2015¶¶¶ | 2013–2015; Retrospective | EMR prompt | New York Methodist Hospital primary care and outpatient clinics and inpatients, Brooklyn, New York | 9,551/15,965 (59.8%) | 335/9,551 (3.5%) |  |  |  |  |  |
| Sidlow (*56*), 2015 | 2014; Retrospective cohort | EMR prompt | Primary care clinics of North Bronx Healthcare Network | 851/7,764 (11.0%) | 21/851 (2.5%) |  |  |  |  |  |
| 3,012/6,577 (45.8%) | 26/3,012 (0.9%) |  |  |  |  |  |
| Turner (*57*), 2015 | 2012–2014; Prospective cohort | Promotora (community health worker) assist with LTC | Inpatients at hospital serving high indigent and Hispanic population, University Hospital in San Antonio | 4,582/5,087 (90.1%) | 316/4,582 (6.9%) | 175/287 (61.0%) |  | 65/175 (37.1%) | 14/65 (21.5%) |  |
| Yartel (*58*), 2018 | 2012–2014; Three randomized controlled trials | Trial 1) Repeated mailings, outreach | Primary care clinics part of academic medical centers: Trial 1) Henry Ford, Michigan [9 clinics] | 805/2,993 (26.9%) | 8/805 (1.0%) |  |  |  |  |  |
| 84/5,999 (1.4%) | 2/84 (2.4%) |  |  |  |  |  |
| Trial 2) EMR prompt | Trial 2) Mt. Sinai, New York [10 clinics] | 757/8,928 (30.9%) | 27/2,757 (1.0%) |  |  |  |  |  |
|  |  | 197/5,547 (3.6%) | 6/197 (3.0%) |  |  |  |  |  |
| Trial 3) Direct patient solicitation | Trial 3) University of Alabama, Birmingham, Alabama [4 clinics]) | 2,763/4,307 (63.5%) | 34/2,736 (1.2%) |  |  |  |  |  |
| 92/4,566 (2.0%) | 5/92 (5.4%) |  |  |  |  |  |
| Yeboah-Korang (*59*), 2018 | 2010–2015; Retrospective | Medical record review | North Shore University Health System, Illinois | 11,976/106,753 (11.2%) | 670/11,976 (5.6%) |  |  |  |  |  |
| Younossi (*60*), 2016 | 2014–2015; Prospective | Pilot screening program | Five gastroenterology centers close to large metropolitan areas on East Coast |  | 10/2,000 (0.5%) | 4/9 (44.4%) | 4/4 (100.0%) |  |  |  |

**Abbreviations:** anti-HCV = hepatitis C virus antibody; HCV = hepatitis C virus; RNA = ribonucleic acid; SVR = sustained virologic response; EMR = electronic medical record; LTC = linkage to care.

\* Numbers did not reconcile.

† Not RNA-negative or expired.

§ Of those linked.

¶ Of 14,642, 5,541 previously screened and therefore 9,101 eligible.

\*\* Extended birth cohort members, age 40-75 years.

†† Pre- and post- combined.

§§ Not defined.

¶¶ Among anti-HCV positives; 1,484 had RNA testing without anti-HCV testing.

\*\*\* 3 not confirmed on subsequent testing.

††† Includes 92 persons not tested but self-reporting anti-HCV positivity.

§§§ 15 without SVR includes 13 followed for less than 12 weeks and 2 who did not return for testing.

¶¶¶ From supplement.**SUPPLEMENTARY TABLE 9. Hepatitis C prevalence and linkage‑to‑care, others/multiple**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Author, publication year** | **Years of study;****design** | **Description** | **Setting** | **Anti-HCV tested** | **Anti-HCV positivity** | **RNA positivity** | **Follow-up appt. arranged** | **Attended follow-up appt.** | **Treated** | **Achieved SVR** |
| Arnold (*61*), 2018 | Prospective | Mixed-methods | African American adults with serious mental illness, Mid-Atlantic | /170 | 31/170 (18.2%) |  | 24 |  | 18/24 (75.0%) |  |
| Burrell (*62*), 2018 | 2017–2018; Retrospective | EMR protocol | Persons at risk for HCV in urgent care settings, Appalachia | 1,895/6,509 (29.1%) | 31/1,895 (1.6%) |  | 100.0% |  |  |  |
| Calner (*63*), 2019 | 2016–2018; Observational cohort | Screening and treatment initiative | Potentially at‑risk persons at safety net, urban, academic facility, Boston Medical Center | 28,435/1,150,000 (2.5%) | 3,047/28,435 (10.7%) | 1,637/2,991 (54.7%) |  | 582 | 275 initiated; 199 completed | 147/199 (73.9%) |
| Campbell (*64*), 2018 | 2015–2016; Prospective pilot study | Screening offered during outpatient endoscopy | Patients with risk factors presenting for outpatient endoscopy at an urban safety net hospital, Highland Hospital, Oakland California | 318/596 (53.4%) | 14/318 (4.4%) | 6/11 (54.5%) |  | 6/6 (100%) |  |  |
| Coyle (*65*), 2019 | 2012–2016; Retrospective | Testing and LTC initiative | Others at potential risk at 5 federally-qualified health centers, Philadelphia, Pennsylvania | 14,790 /25,853 (57.2%) | 1,323/14,790 (8.9%) | 885/1,272 (69.6%) | 732/885 (82.7%) | 614/732 (83.9%) | 133/614 (21.7%) initiated;106/614 (17.3%) completed | 71/106 (67.0%)\* |
| De la Torre (*66*), 2017 | 2016; Descriptive | Audio Computer-assisted screening interview (Audio-CASI) Risk assessment kiosk, patient navigator, and EMR prompt | Academic charity care internal medicine clinic and urban federally-qualified health center (FQHC) | 254/1,932 (13.2%) | 24/254 (9.4%) | 16/24 (66.7%) |  |  |  |  |
|  | 671/8,481 (7.9%) | 221/269 (82.2%) |  |  |  |  |
| Duinnick (*67*), 2019 | 2012–2016; Retrospective | EMR review | Patients diagnosed with hepatocellular carcinoma at Grady Memorial Hospital, Atlanta, Georgia |  | 102/134 (76.1%) |  |  |  |  |  |
| Falade-Nwulia (*68*), 2016 | 2014; Prospective | Promotional fliers | Six senior centers, Baltimore, Maryland |  | 14/149 (9.4%) | 12/14 (85.7%) | 3/12 (25.0%) |  |  |  |
| Fill (*69*), 2018 | 2016; Prospective and nested case-control | Routine opt-out and opt-in HCV testing | Health department screening program in STI, family planning clinics, and addiction treatment facilities, Eastern Tennessee |  | 397/4,753 (8.4%) | 294/397 (74.1%) |  |  |  |  |
| Ford (*70*), 2018 | 2012–2013; Prospective | Check HepC Program, screening and LTC initiative, targeted outreach and patient navigators | 12 federally-qualified health centers, SEPs, New York City |  | 880/4,751 (18.5%) | 512/678 (75.5%) |  | 435/512 (85.0%) | 14 initiated; 6 completed | 6/6 (100.0%) |
| Gade (*71*), 2018 | Retrospective observational |  | Adults with congenital heart disease who underwent cardiac surgery before 1992, Greenville Hospital System, Greenville, South Carolina | 116/188 (61.7%) | 12/116 (10.3%) | 11/12 (91.7%) | 11/11 (100.0%) | 11/11 (100.0%) | 5/11 (45.5%) | 5/5 (100.0%) |
| Irvin (*72*), 2016 | 2014–2015; Cross-sectional | Community-academic partnership to promote testing | Testing efforts were pursued through advertising at community block parties, intersections frequented by PWID, shelters, etc. at 35 locations in Baltimore City |  | 49/325 (15.1%) |  |  |  |  |  |
| Lier (*73*), 2019† | 2016–2018; Retrospective | Determining HCV prevalence | Birth cohort and IDU at suburban medical center |  | 1,017/27,119 (3.8%) | 437/929 (47.0%) | 153 |  | 53 |  |
| McClure (*74*), 2019§ | 2011–2015; Retrospective | Examining the relationship between illicit drug use and HCV | Others at risk (Note: lab results from people with both urine screen and HCV results) |  | 4,628/18,410 (25.1%) |  |  |  |  |  |
| Mera (*75*), 2016 | 2012–2015 | EMR prompt, provider training, ECHO clinics, registry, outreach | Cherokee Nation Health Services | 16,772/92,012 (18.2%) | 715/16,772 (4.3%) | 388/488 (79.5%) |  |  | 223/388 (57.5%) initiated;201/388 (51.8%) completed | 180/201 (89.6%) |
| Morano (*76*), 2014 | 2012–2013; | Mobile medical clinic | Mobile medical clinic clients in poor city, New Haven, Connecticut | 438/1,345 (32.6%) | 27/438 (6.2%) | 27/27 (100.0%) |  | 9/17 (52.9%) |  |  |
| Morse (*77*), 2017 | 2012–2014; Prospective | Collaborative community post-incarceration program | Women recently released from incarceration | 60/87 (69.0%) | 12/60 (20.0%) |  |  |  |  |  |
| Patil (*78*), 2016 | 2014–2015; Numbers reported via journal commentary | Screening initiative | 94 local health units targeting IDUs and birth cohort patients in Arkansas |  | 325/3,544 (9.2%) |  |  |  |  |  |
| Ramirez (*79*), 2016¶ | 2012–2014; Retrospective | HepTLC initiative | At-risk population, 206 testing sites in 17 states |  | 7,580/57,570 (13.2%) | 3,449/4,765 (72.4%) | 2,624/3,449 (76.1%) | 1,509/2,624 (57.5%) |  |  |
| Robinson (*80*), 2018\*\* | 2014–2015; Retrospective | Evaluation for patients with cirrhosis | Patients with cirrhosis at an urban safety net hospital, California |  | 47/157 (29.9%) |  |  |  |  |  |
| Takeuchi (*81*), 2015 | 2010–2013; Retrospective | Screening those with risk factors | Hawaii's health department; community health sites |  | 508/8,588 (5.9%) |  |  |  |  |  |
| Trooskin (*82*), 2015 | 2012–2014; Prospective | Screening and LTC initiative, patient navigators | Mobile medical unit, Philadelphia, Pennsylvania |  | 52††/1,301 (4.0%) | 36/42 (85.7%) | 23/36 (63.9%) | 21/23 (91.3%) | 12 |  |
| Zaller (*83*), 2016 | 2010–2014; Pilot study | Screening and LTC initiative | Persons on probation or parole, Providence and Pawtucket, Rhode Island |  | 12/130 (9.2%) | 2/4 (50.0%) | 2/2 (100.0%) | 0/2 (0.0%) |  |  |

**Abbreviations:** anti-HCV = hepatitis C virus antibody; HCV = hepatitis C virus; RNA = ribonucleic acid; SVR = sustained virologic response; EMR = electronic medical record; STI = sexually transmitted infection; SEP = syringe exchange program; IDU = injection drug use; ECHO = Extension for Community Healthcare Outcomes; HepTLC = Hepatitis Testing and Linkage to Care initiative.

\* 77 assessed for SVR.

† LTC definition not provided.

§ Results include persons with urine screen.

¶ An additional 7,146 RNA tests conducted without prior anti-HCV testing.

\*\* 47 with chronic HCV infection.

†† 4 persons previously engaged in care.**SUPPLEMENTARY TABLE 10. Hepatitis C prevalence and linkage‑to‑care, persons who use drugs**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Author, publication year** | **Years of study;****design** | **Description** | **Setting** | **Anti-HCV tested** | **Anti-HCV positivity** | **RNA positivity** | **Follow-up appt. arranged** | **Attended follow-up appt.** | **Treated** | **Achieved SVR** |
| Aronson (*84*), 2017 | 2016; Feasibility pilot study | Tablet computer based educational intervention | SEP clients, Bronx, New York | 10/10 (100.0%) | 2/10 (20.0%) |  |  |  |  |  |
| Burton (*85*), 2019 | 2014–2018; Retrospective | Screening intervention | G.V. (Sonny) Montgomery Veteran’s Administration residential substance use disorder treatment center, Southeastern United States | 582/597 (97.5%) | 74/582 (12.7%) | 74/74 (100.0%) | 74/74 (100.0%) |  | 51/67 (76.1%) initiated | 41/51 (80.4%) |
| Des Jarlais (*86*), 2018 | 2011–2015; Cross-sectional | Geographic hotspot identification | NYC drug detoxification and methadone maintenance programs, Mount Sinai, Beth Israel |  | 493/910 (54.2%) |  |  |  |  |  |
| Des Jarlais (*87*), 2019 | 2016–2018; Prospective | Examining outcomes among PWID in drug treatment | Drug treatment programs at Mount Sinai Beth Israel, New York City | 134 | 79/134 (59.0%) |  |  |  |  |  |
| Jordan (*88*), 2015 | 2010–2013; Cross-sectional | Survey | Detoxification program or MMT program, New York City |  | 536/826 (64.9%) |  |  |  |  |  |
| Neaigus (*89*), 2017 | 2012; Cross-sectional |  | National HIV Behavioral Surveillance System, New York City | 483/525 (92.0%) | 324/483 (67.1%) |  |  |  |  |  |
| Quinn (*90*), 2019 | 2014–2016 | Risk knowledge scale | Young opioid users in New York City |  | 105/539 (19.5%) |  |  |  |  |  |
| Stockman (*91*), 2014 | 2012–2013; Pilot study | Rapid point-of-care screening initiative | 4 community-based organizations for PWUD in Wisconsin |  | 246/1,255 (19.6%) | 128/183 (69.9%) |  |  |  |  |
| Talal (*92*), 2017 | 2012–2013; Prospective | Assess HCV core antigen | Opioid agonist therapy program, West Harlem, New York |  | 65/109 (59.6%) | 48\*/65 (73.8%) |  |  |  |  |
| Tsui (*93*), 2019 | 2015; Cross-sectional |  | National HIV Behavior Surveillance System, Seattle metropolitan area | 513/535 (95.9%) | 338/513 (65.9%) |  |  |  |  |  |
| Zibbell (*94*), 2014 | 2012; Cross-sectional | Screening initiative | PWID recruited from a community-based AIDS organization, residing in Cortland County (rural), New York | 100/123 (81.3%) | 34/100 (34%) |  |  |  |  |  |

**Abbreviations:** anti-HCV = hepatitis C virus antibody; HCV = hepatitis C virus; RNA = ribonucleic acid; SVR = sustained virologic response; SEP = syringe exchange program; PWID = persons who inject drugs; MMT = methadone maintenance treatment; PWUD = persons who use drugs.

\* 1 with negative anti-HCV.**SUPPLEMENTARY TABLE 11. Hepatitis C prevalence and linkage‑to‑care, persons with HIV or sexual risk**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Author, publication year** | **Years of study;****design** | **Description** | **Setting** | **Anti-HCV tested** | **Anti-HCV positivity** | **RNA positivity** | **Follow-up appt. arranged** | **Attended follow-up appt.** | **Treated** | **Achieved SVR** |
| Falade-Nwulia (*95*), 2016 | 2013–2014; Cross-sectional | Care coordinator | 2 STI clinics, Baltimore City Health Department | 2,681/6,290 (42.6%) | 189/2,681 (7.0%) | 155/185 (83.8%) | 132/155 (85.2%) | 81/132 (61.4%) |  |  |
| Feldman (*96*), 2017 | 2014–2015; Cross-sectional | Free screening | Community health center, STI clinic Miami, Florida |  | 21\*/357 (5.9%) |  |  |  |  |  |
| Jewett (*97*), 2013 | 2012; Cross-sectional | Staff training | STI and HIV testing facility, Denver Metro Health Clinic | 876/926 (94.6%) | 33/876 (3.8%) | 21/32 (65.6%) |  |  |  |  |
| Kalichman (*98*), 2015 | 2012–2014; Cross-sectional | Screened as part of study | Receiving ART in Atlanta, Georgia |  | 131/678 (19.3%) |  |  |  |  |  |
| Moss (*99*), 2014 | 2011–2012; Retrospective | No-cost, opt-in testing | AIDS community-based organization catering to minority MSM, Miami, Florida | 326/2,988 (10.9%) | 4/326 (1.2%) |  |  |  |  |  |
| Radwan (*100*), 2019† | 2014–2015; Retrospective cohort study | HIV infected patients screened for HCV | 12 sites of HIV research network (3 regions of U.S.) | 22,632/29,071 (77.9%) | 7,447/22,632 (32.9%) | 4,305/7,047 (61.1%) |  |  | 387 | 277/291§ (95.2%) |
| Raymond (*101*), 2012 | 2011; Cross-sectional |  | National HIV Behavioral Surveillance System, San Francisco, California |  | 21/466 (4.5%) |  |  |  |  |  |
| Tieu (*102*), 2018 | 2010–2013; Cross-sectional |  | MSM residing in New York City |  | 29/1,028 (2.8%) | 12/29 (41.4%) |  |  |  |  |

**Abbreviations:** anti-HCV = hepatitis C virus antibody; HCV = hepatitis C virus; RNA = ribonucleic acid; SVR = sustained virologic response; STI = sexually‑transmitted infection; ART = antiretroviral therapy; MSM = men who have sex with men.

\* Confirmed by RNA testing.

† 2,179 at sites with prescription data.

§ Tested for SVR.**SUPPLEMENTARY TABLE 12. Hepatitis C prevalence and linkage‑to‑care, immigrants**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Author, publication year** | **Years of study;****design** | **Description** | **Setting** | **Anti-HCV tested** | **Anti-HCV positivity** | **RNA positivity** | **Follow-up appt. arranged** | **Attended follow-up appt.** | **Treated** | **Achieved SVR** |
| Ma (*103*), 2015 | 2010–2011; Prospective | HCV educational program | 7 Vietnamese community organizations, Pennsylvania and New Jersey | 255/309 (82.5%) | 19/255 (7.5%) |  |  |  |  |  |
| Saab (*104*), 2018 | Cross-sectional | Screening opportunity | 7 houses of worship with large numbers of Egyptian immigrants in Southern California |  | 11/326 (3.4%) | 9/11 (81.8%) |  |  |  |  |
| Strong (*105*), 2015 | 2011; Cross-sectional | Free testing was offered | Vietnamese health fair in the Baltimore-Washington metropolitan area |  | 29/617 (4.7%) |  |  |  |  |  |

**Abbreviations:** anti-HCV = hepatitis C virus antibody; HCV = hepatitis C virus; RNA = ribonucleic acid; SVR = sustained virologic response.**SUPPLEMENTARY TABLE 13**. **Hepatitis C prevalence among pregnant women**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Author, publication year** | **Years of study;****design**  | **Description** | **Setting** | **Anti-HCV tested** | **Anti‑HCV positivity** | **RNA positivity** |
| Bell (*106*), 2019 | 2013–2018; Retrospective cohort | Analysis of infants with neonatal abstinence syndrome | Tertiary care center in Southern Maine | 536/769 (69.7%) | 257/536 (48.0%) |  |
| Berkley (*107*), 2008 | 2000–2006; Retrospective | Comparison of HCV-infected and uninfected pregnancies | Hospital drug dependence and treatment program, Milagro Clinic, University of New Mexico | 300/351 (85.5%) | 159/300 (53.0%) | 16/26 (61.5%) |
| Boudova (*108*), 2018 | 2016; Retrospective | Secondary data analysis using EMR | University of Maryland Medical Center, Baltimore | 100/1,426 (7.0%) | 10/100 (10.0%) |  |
| Brogly (*109*), 2018 | 2015–2016; Prospective cohort | Project RESPECT (Recovery-Empowerment-Social Services-Prenatal Care-Education-Community-Treatment) | Obstetrics addiction recovery clinic at urban safety net hospital, Boston, Massachusetts |  | 80/113 (70.8%) |  |
| Chappell (*110*), 2018 | 2006–2014; Retrospective cohort | Infant records linked to HCV‑infected mothers, billing codes | Large tertiary care referral hospital, Magee Women’s Hospital, University of Pittsburgh Medical Center |  | 1,043/87,924 (1.2%) |  |
| Ellington (*111*), 2015 | 2002–2010; Data analysis | Hospital discharge data | Nationwide Inpatient Sample (HCUP) |  | 70,367/41,479,358\* (0.2%) |  |
| Epstein (*112*), 2018 | 2006–2015; Cohort | Project RESPECT (Recovery-Empowerment-Social Services-Prenatal Care-Education-Community-Treatment) | Women with diagnosis of opioid use disorder, Boston Medical Center, Boston, Massachusetts | 744/879 (84.6%) | 510/744 (68.6%) | 261/369 (70.7%) |
| Gowda (*113*), 2018† | 2012–2015; Data analysis | Surveillance and birth certificate data match | Ohio |  | 2,151/140,127 (1.5%) |  |
| Jessop (*114*), 2005 | 2000–2001; Chart abstraction | Chart abstraction | Probability sample of Philadelphia births | 27/550 (4.9%) | 3/27 (11.1%) |  |
| Ko (*115*), 2019 | 2000–2015; Data analysis | Delivery hospitalizations | Nationwide Inpatient Sample (HCUP) |  | 11,615/2,860,110 (0.4%) |  |
| Koneru (*116*), 2016 | 2011–2014; Data analysis | Birth certificate data | Kentucky and United States |  | KY: 1.6%US: 0.3% |  |
| Krans (*117*), 2016 | 2009–2012; Retrospective cohort | EMR data abstraction | Women on opioid maintenance therapy, large tertiary care referral hospital in metropolitan area, Magee Women’s Hospital, University of Pittsburgh Medical Center | 611§/791 (77.2%) | 369/611 (60.4%) |  |
| Kuncio (*118*), 2016 | 2011–2013; Data analysis | Surveillance and birth certificate data match | Philadelphia residents |  | 568/55,623 (1.0%) |  |
| Lazenby (*119*), 2019 | 2013–2016; Retrospective | Chart review | Academic obstetric clinic, Medical University of South Carolina | 123/16,918 (0.7%) | 38/123 (30.9%) |  |
| Ly (*120*), 2017 | 2011–2014; Data analysis | Quest Diagnostics Health Trends national database | Nationwide laboratory data |  | 4,232/581,255 (0.7%) |  |
| McDowell (*121*), 2019 | 2015–2018; Retrospective cohort | Study of women with antenatal exposure to buprenorphine | Maternal opioid use disorder recovery program, Indiana University School of Medicine |  | 103¶/266 (38.7%) |  |
| Nolen (*122*), 2019 | 2013–2016; Retrospective analysis | EMR data abstraction | Obstetrics clinic and Alaska Native Tribal Health System referral hospital, Alaska | 1,356/2,856 (47.5%) | 62/1,356 (4.6%) | 38/62 (61.3%) |
| Nolen (*123*), 2019 | 2003–2015; Data analysis | Birth certificate and Indian Health Service data | American Indian and Alaska native women |  | AI/AN: 398/33,434 (1.19%)Non‑AI/AN: 11,660/3,266,257 (0.36%)IHS: 216/23,374 (0.92%) |  |
| Page (*124*), 2017 | Secondary analysis of laboratory results | Two prospective cohort studies | Prenatal clinic for women with substance use, Milagro Clinic, University of New Mexico | 178/190 (93.7%) | 95/178 (53.3%) | 71/92 (77.2%) |
| Patrick (*125*), 2017 | 2009–2014; Data analysis | Birth certificate data | Tennessee and United States |  | TN: 10.1 per 1,000 live birthsUS: 3.4 per 1,000 live births |  |
| Salemi (*126*), 2017 | 1998–2011; Retrospective, cross-sectional analysis | Delivery hospitalization | Nationwide Inpatient Sample (HCUP) |  | 62,629/52,807,699 (0.1%) |  |
| Salihu (*127*), 2012 | 1998–2007; Population-based retrospective cohort | Surveillance-hospital discharge data linked to birth records | All Florida singleton live births |  | 1,023/1,700,734 (0.1%) |  |
| Schillie (*128*), 2018 | 2011–2016; Data analysis | Birth certificate and commercial laboratory data | United States | 13.4% | 14,417/3,823,723 (0.38%) |  |
| Snodgrass (*129*), 2018 | 2015; Surveillance and birth certificate data match | Surveillance and birth certificate data match | Oregon  |  | 294/44,712 (0.7%) |  |
| Waruingi (*130*), 2015 | 2012; Prospective observational study | Comparison of risk-based vs. universal screening | Metro Health Medical Center, Case Western Reserve University; Cleveland, Ohio | 220/419 (47.7%) | 7/220 (3.2%) |  |
| Watts (*131*), 2017 | 2011–2015; Data analysis | Surveillance data linked to Medicaid data | Wisconsin Medicaid recipients |  | 608/146,267 (0.4%) |  |

**Abbreviations:** anti-HCV = hepatitis C virus antibody; HCV = hepatitis C virus; RNA = ribonucleic acid; EMR = electronic medical records; HCUP = healthcare cost and utilization project; AI/AN = American Indian/Alaska Native; HIS = Indian Health Service.

\* Number of hospital admissions

† RNA positivity reported in study but not included as surveillance data may under-represent RNA negative results.

§ HCV screening defined as documentation of anti-HCV test or prior discussion regarding known HCV diagnosis.

¶ All with HCV RNA positivity.References

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