

Appendix 1

Pregnancy Identification Algorithm

We used the following procedure to identify unique pregnancies in Oregon Medicaid, Emergency Medicaid and Emergency Medicaid Plus claims data from January 1, 2003 through October 1, 2015.

1. Limit sample to women ages 12-51 at the time of the claim
2. Identify pregnancy-related claims using *International Classification of Diseases, Ninth Revision ±ICD-9* and *Current Procedural Terminology ±CPT*
3. Score claims using ICD-9 diagnosis, *Current Procedure Terminology ±CPT* and ICD-9 procedure codes that could occur only at the end of a pregnancy episode and indicate the outcome type ±e.g. spontaneous abortion versus live birth. We refer to these as “outcome codes”. Use the following hierarchy for dating each potential day that marks the end of a pregnancy episode:
 - a. a day is coded with a score of “10” if there are any claims with an ICD-9 procedure outcome code on that day
 - b. a day is coded with a score of “10” if there are claims with outcome codes from at least two different categories ±ICD-9 diagnosis, CPT or ICD-9 procedures on that day
 - c. a day is coded with a score of “5” if there are only claims with outcome codes from either the ICD-9 diagnosis or the CPT category, but there are four or more such claims on that day
 - d. a day is coded with a score of “1” if there are only claims with outcome codes from either the ICD-9 diagnosis or the CPT category, and there are three or fewer such claims on that day
 - e. Hierarchically favoring higher scores, establish dates for end of pregnancy episodes with a score of 10, then a score of 5, then a score of 1.
 - f. Use the identified dates generated with ±e to group claims by pregnancy episode.
 - i. Estimate gestational age using a previously published algorithm based on national median gestational age by outcome type:¹
 1. Ectopic pregnancy = 8 weeks
 2. Spontaneous abortion = 10 weeks
 3. Therapeutic abortion = 10 weeks
 4. Preterm birth = 34 weeks
 5. Stillbirth = 28 weeks
 6. Full-term birth = 40 weeks

Swartz JJ, Hainmueller J, Lawrence J, Rodriguez MI. Expanding prenatal care to unauthorized immigrant women and the effects on infant health. *Obstet Gynecol* 2017; 130.

The authors provided this information as a supplement to their article.

©2017 American College of Obstetricians and Gynecologists.

7. Preterm birth = 34 weeks
 8. Unknown abortion = 10 weeks
 9. Early Loss unknown type = 10 weeks
 10. Trophoblastic pregnancy = 8 weeks
- g. Subtract gestational age from outcome date to group claims as relating to a single pregnancy episode if they fall within the date range. Include claims falling in a pre-specified time period after the claim as follow up or postpartum care
1. Ectopic pregnancy = 4 weeks
 2. Spontaneous abortion = 4 weeks
 3. Therapeutic abortion = 4 weeks
 4. Preterm birth = 8 weeks
 5. Stillbirth = 8 weeks
 6. Full-term birth = 8 weeks
 7. Preterm birth = 8 weeks
 8. Unknown abortion = 4 weeks
 9. Early Loss unknown type = 4 weeks
 10. Trophoblastic pregnancy = 4 weeks
- h. Initially, exclude days with pregnancy outcomes that would have overlapping time windows for the pregnancy episodes.
- i. After the first, non-overlapping classification, search among the remaining days with outcome code claims for scores of 10 and then scores of 5. Designate additional pregnancy episode outcomes if they are separated from preceding or subsequent outcomes by a minimum number of weeks based on biological feasibility.
1. Ectopic pregnancy = 4 week prior, 4 weeks following
 2. Spontaneous abortion = 4 week prior, 4 weeks following
 3. Therapeutic abortion = 4 week prior, 4 weeks following
 4. Preterm birth = 20 weeks prior, 8 weeks following
 5. Stillbirth = 20 weeks prior, 8 weeks following
 6. Full-term birth = 20 weeks prior, 8 weeks following
 7. Preterm birth = 20 weeks prior, 8 weeks following

Swartz JJ, Hainmueller J, Lawrence J, Rodriguez MI. Expanding prenatal care to unauthorized immigrant women and the effects on infant health. *Obstet Gynecol* 2017; 130.

The authors provided this information as a supplement to their article.

©2017 American College of Obstetricians and Gynecologists.

8. Unknown abortion = 4 week prior, 4 weeks following
9. Early Loss unknown type = 4 week prior, 4 weeks following
10. Trophoblastic pregnancy = 4 week prior, 4 weeks following

Overall of 586,060 days that had one or more outcome codes, 98.5% of days ended up being associated with a pregnancy episode. Of the 577,459 days associated with a pregnancy episode, about 99.3% were identified in the first non-overlapping classification.

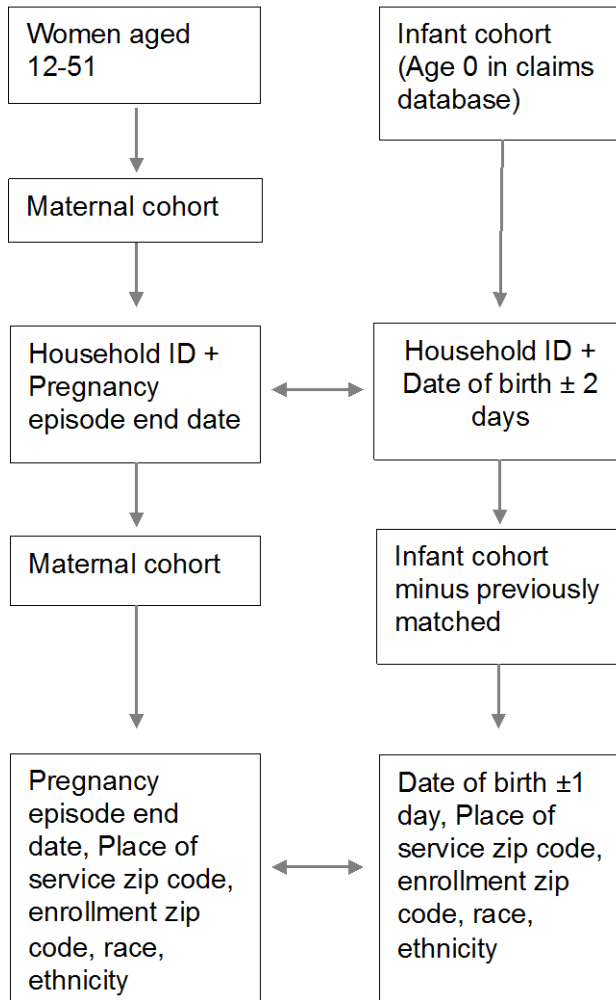
Appendix 2

Greedy matching algorithm for women and infants

The following procedure was used to match pregnancies to infants in the claims data.

1. Identify pregnancy outcomes that would result in a live birth among women in the claims data aged 12-51 \pm as detailed above.
2. Identify claimants aged 0 in the claims database.
3. Use three variables to find a first set of matches: scrambled Household ID, the date of the birth based on the end of the pregnancy period, and the infant date of birth.
 - a. Date of birth must match the estimated date of the pregnancy outcome ± 2 days
4. For pregnancies that remain unmatched, search for a matching infant among the remaining cohort using the a matching date ± 2 days for the estimated date of the birth based on the end of the pregnancy and the infant date of birth, enrollment zip code of the claimants \pm mother and infant, service zip codes of the claimants \pm mother and infant, race and ethnicity \pm mother and infant.
5. In the matched data we then dropped multiple birth.
6. The final match rate was 77% overall including 83% for pregnancies under Emergency Medicaid, 82% for pregnancies under Emergency Medicaid Plus, and 76% for pregnancies under Medicaid. The match rate was fairly stable over the years with a minimum match rate of 74% and a maximum match rate of 81% and a standard deviation of the match rate across years of 0.02. This temporal stability pattern was roughly similar for all three insurance groups.

Appendix 3.



1

Swartz JJ, Hainmueller J, Lawrence J, Rodriguez MI. Expanding prenatal care to unauthorized immigrant women and the effects on infant health. *Obstet Gynecol* 2017; 130.

The authors provided this information as a supplement to their article.

©2017 American College of Obstetricians and Gynecologists.

Appendix 4: Start Date of Emergency Medicaid Plus by County

County:	Start Date:
Deschutes	4/1/08
Multnomah	4/1/08
Jackson	10/1/09
Benton	10/1/09
Clackamas	10/1/09
Hood River	10/1/09
Lane	1/1/11
Wasco	7/1/11
Columbia	7/1/11
Crook	7/1/11
Union	7/1/11
Jefferson	7/1/11
Morrow	7/1/11
Douglas	7/1/11
Umatilla	4/1/12
Gilliam	10/1/13
Wheeler	10/1/13
Curry	10/1/13
Klamath	10/1/13
Grant	10/1/13
Clatsop	10/1/13
Lake	10/1/13
Polk	10/1/13
Sherman	10/1/13
Marion	10/1/13
Coos	10/1/13
Washington	10/1/13
Tillamook	10/1/13
Malheur	10/1/13
Yamhill	10/1/13
Wallowa	10/1/13
Baker	10/1/13
Josephine	10/1/13
Lincoln*	10/1/13
Linn	10/1/13
Harney	10/1/13

Source: Administrative records and personal communication with the Oregon Health Authority.

*Lincoln county initially participated in the Emergency Medicaid Plus program from October to December 2009 but then ended its participation until October 2013.

Swartz JJ, Hainmueller J, Lawrence J, Rodriguez MI. Expanding prenatal care to unauthorized immigrant women and the effects on infant health. *Obstet Gynecol* 2017; 130.

The authors provided this information as a supplement to their article.

©2017 American College of Obstetricians and Gynecologists.

Description of Appendixes 5-8

Measures

We examined outcomes related to utilization of health services for mothers and infants, as well as health outcomes related to mothers and infants. We used ICD-9, CPT and National Drug Codes ±NDC.

Appendix 5. Codes for Outcome Measures for Immigrant Women

Measure	ICD-9	CPT	NDC#
Number of prenatal visits*	V22.x, V23.x		
Preterm delivery ⁺	644.21		
Tdap vaccine		90715, 90658, 90654, 90667, 90661, 90630, 90662, 90688, 90656, 90673, 90686, 90471, 90472	
Rhogam administration		G8809, G8810, J2788, J2790, J2791, J2792, 90384, 90385, 90386	0562780501, 0562780508, 0562780525, 0562780601, 0562780605, 0562780625, 4420630001, 4420630010
Oral glucose tolerance testing		82947, 82950, 82951, 82952	

National Drug Codes

* Visits were defined as claims from distinct days of service as multiple claims were often associated with a single visit including primary, secondary and tertiary diagnosis codes associated with the claim.

⁺ Preterm birth was identified using both maternal and infant ICD-9 codes.

Swartz JJ, Hainmueller J, Lawrence J, Rodriguez MI. Expanding prenatal care to unauthorized immigrant women and the effects on infant health. *Obstet Gynecol* 2017; 130.

The authors provided this information as a supplement to their article.

©2017 American College of Obstetricians and Gynecologists.

Appendix 6. Codes for Outcome Measures for Infants

Measure	ICD-9 codes
Number of Well-child visits*	V20.x
Preterm delivery ⁺	765.x, 774.2x, 776.x
Low birthweight [±]	764.x and 765.x

* Visits were defined as claims from distinct days of service as multiple claims were often associated with a single visit including primary, secondary and tertiary diagnosis codes associated with the claim.

⁺ Preterm birth was identified using both maternal and infant ICD-9 codes.

[±] Coding sections that indicate weight listed with the fifth digit used for weight category.

Screening and vaccines were identified using a comprehensive vaccine list from the Centers for Disease Control and Prevention, a Preventive Medicine Coding Fact Sheet from the American Academy of Pediatrics, and a manual search.^{2,3} The list included the following components:

Swartz JJ, Hainmueller J, Lawrence J, Rodriguez MI. Expanding prenatal care to unauthorized immigrant women and the effects on infant health. *Obstet Gynecol* 2017; 130.

The authors provided this information as a supplement to their article.

©2017 American College of Obstetricians and Gynecologists.

Appendix 7. Codes for Screenings for Infants

Screenings	CPT
Vision screening	99173, 99174
Hearing screening	92551, 92552, 92567
Developmental Screening	96110
Lead screening	83655

Swartz JJ, Hainmueller J, Lawrence J, Rodriguez MI. Expanding prenatal care to unauthorized immigrant women and the effects on infant health. *Obstet Gynecol* 2017; 130.

The authors provided this information as a supplement to their article.

©2017 American College of Obstetricians and Gynecologists.

Appendix 8. Codes for Vaccines

Vaccine	CPT
Immune globulin ±IG, human, for intramuscular use	90281
Immune globulin ±IGIV, human, for intravenous use	90283
Botulinum antitoxin, equine, any route	90287
Cytomegalovirus immune globulin ±CMV-IGIV, human, for intravenous use	90291
Diphtheria antitoxin, equine, any route	90296
Hepatitis B immune globulin ±HBIG, human, for intramuscular use	90371
Rabies immune globulin ±RIG, human, for intramuscular and/or subcutaneous use	90375
Rabies immune globulin, heat-treated ±RIG-HT, human, for intramuscular and/or subcutaneous use	90376
Respiratory syncytial virus immune globulin ±RSV-IgIM, for intramuscular use, 50 mg, each	90378
Respiratory syncytial virus immune globulin ±RSV-IGIV, human, for intravenous use	90379
Tetanus immune globulin ±TIG, human, for intramuscular use	90389
Vaccinia immune globulin, human, for intramuscular use	90393
Varicella-zoster immune globulin, human, for intramuscular use	90396
H1N1 immunization administration ±intramuscular, intranasal, including counseling when performed	90470
Adenovirus vaccine, type 4, live, for oral use	90476
Adenovirus vaccine, type 7, live, for oral use	90477
Anthrax vaccine, for subcutaneous use	90581
Bacillus Calmette-Guerin vaccine ±BCG for tuberculosis, live, for percutaneous use	90585
Meningococcal recombinant protein and outer membrane vesicle vaccine, serogroup B, 2 dose schedule, for intramuscular	90620
Meningococcal recombinant lipoprotein vaccine, serogroup B, 3 dose schedule, for intramuscular use	90621

Swartz JJ, Hainmueller J, Lawrence J, Rodriguez MI. Expanding prenatal care to unauthorized immigrant women and the effects on infant health. *Obstet Gynecol* 2017; 130.

The authors provided this information as a supplement to their article.

©2017 American College of Obstetricians and Gynecologists.

Cholera vaccine live, adult dosage, 1 dose schedule, for oral use	90625
Influenza virus vaccine, quadrivalent ±IIV4, split virus, preservative free, for intradermal use	90630
Hepatitis A vaccine, adult dosage, for intramuscular use	90632
Hepatitis A vaccine, pediatric/adolescent dosage-2 dose schedule, for intramuscular use	90633
Hepatitis A vaccine, pediatric/adolescent dosage-3 dose schedule, for intramuscular use	90634
Hepatitis A and hepatitis B ±HepA-HepB, adult dosage, for intramuscular use	90636
Meningococcal conjugate vaccine, serogroups C & Y and Hemophilus influenza B vaccine ±MenCY-Hib	90644
Haemophilus influenza b vaccine ±Hib, HbOC conjugate ±4 dose schedule, for intramuscular use	90645
Haemophilus influenza b vaccine ±Hib, PRP-D conjugate, for booster use only, intramuscular use	90646
Haemophilus influenza b vaccine ±Hib, PRP-OMP conjugate ±3 dose schedule, for intramuscular use	90647
Haemophilus influenza b vaccine ±Hib, PRP-T conjugate ±4 dose schedule, for intramuscular use	90648
Human Papilloma virus ±HPV vaccine, types 6, 11, 16, 18 ±quadrivalent 3 dose schedule, for intramuscular use	90649
Human Papilloma virus ±HPV vaccine, types 16, 18, bivalent, 3 dose schedule, for intramuscular use	90650
Human Papillomavirus vaccine types 6, 11, 16, 18, 31, 33, 45, 52, 58, nonavalent ±HPV	90651
Influenza virus vaccine, inactivated, subunit, adjuvanted for IM us	90653
Influenza virus vaccine, split virus, preservative free, for intradermal use	90654
Influenza virus vaccine, trivalent, split virus, preservative free, for children 6-35 months of age, for intramuscular use	90655
Influenza virus vaccine, trivalent, split virus, preservative free, for use in individuals 3 years of age and above, for intramuscular use	90656
Influenza virus vaccine, trivalent, split virus, for children 6-35 months of age, for intramuscular use	90657

Swartz JJ, Hainmueller J, Lawrence J, Rodriguez MI. Expanding prenatal care to unauthorized immigrant women and the effects on infant health. *Obstet Gynecol* 2017; 130.

The authors provided this information as a supplement to their article.

©2017 American College of Obstetricians and Gynecologists.

Influenza virus vaccine, trivalent, split virus, for use in individuals 3 years of age and above, for intramuscular use	90658
Influenza virus vaccine, whole virus, for intramuscular or jet injection use	90659
Influenza virus vaccine, trivalent, live, for intranasal use	90660
Influenza virus vaccine, derived from cell cultures, subunit, preservative and antibiotic free, for intramuscular use	90661
Influenza virus vaccine, split virus, preservative free, enhanced immunogenicity via increased antigen content, for intramuscular use	90662
Influenza virus vaccine, pandemic formulation, H1N1	90663
Influenza virus vaccine, pandemic formulation, live, for intranasal use	90664
Lyme disease vaccine, adult dosage, for intramuscular use	90665
Influenza virus vaccine, pandemic formulation, split-virus, preservative free, for intramuscular use	90666
Influenza virus vaccine, pandemic formulation, split-virus, for intramuscular use	90668
Pneumococcal conjugate vaccine, polyvalent, for children under five years, for intramuscular use	90669
Pneumococcal conjugate vaccine, 13 valent, for intramuscular use	90670
Influenza virus vaccine, quadrivalent \pm LAIV, live, intranasal use	90672
Influenza virus vaccine, trivalent, derived from recombinant DNA \pm RIV3, hemagglutinin \pm HA protein only, preservative and antibiotic free, for intramuscular use	90673
Influenza virus vaccine, quadrivalent \pm ccIIV4, derived from cell cultures, subunit, preservative and antibiotic free, 0.5 mL dosage, for intramuscular use	90674
Rabies vaccine, for intramuscular use	90675
Rabies vaccine, for intramuscular use	90675
Rabies vaccine, for intramuscular use	90675
Rabies vaccine, for intradermal use	90676
Rotavirus vaccine, pentavalent, 3 dose schedule, live, for oral use	90680
Rotavirus vaccine, human, attenuated, 2 dose schedule, live, for oral use	90681

Swartz JJ, Hainmueller J, Lawrence J, Rodriguez MI. Expanding prenatal care to unauthorized immigrant women and the effects on infant health. *Obstet Gynecol* 2017; 130.

The authors provided this information as a supplement to their article.

©2017 American College of Obstetricians and Gynecologists.

Influenza virus vaccine, quadrivalent, split virus, preservative free, when administered to children 6-35 months of age, for intramuscular use	90685
Influenza virus vaccine, quadrivalent, split virus, preservative free, when administered to individuals 3 years of age and older, for intramuscular use	90686
Influenza virus vaccine, quadrivalent, split virus, when administered to children 6-35 months of age, for intramuscular use	90687
Influenza virus vaccine, quadrivalent, split virus, when administered to individuals 3 years of age and older, for intramuscular use	90688
Typhoid vaccine, live, oral	90690
Typhoid vaccine, Vi capsular polysaccharide ±ViCPs, for intramuscular use	90691
Typhoid vaccine, heat- and phenol-inactivated ±H-P, for subcutaneous or intradermal use	90692
Typhoid vaccine, acetone-killed, dried ±AKD, for subcutaneous use ±U.S. military	90693
Diphtheria, tetanus toxoids, acellular pertussis vaccine and poliovirus vaccine, inactivated ±DTaP-IPV, when administered to children 4 years through 6 years of age, for intramuscular use	90696
Diphtheria, tetanus toxoids, acellular pertussis vaccine, inactivated poliovirus vaccine, Haemophilus influenzae type b PRP-OMP conjugate vaccine, and hepatitis B vaccine ±DTaP-IPV-Hib-HepB, for intramuscular use	90697
Diphtheria, tetanus toxoids, and acellular pertussis vaccine, haemophilus influenza Type B, and poliovirus vaccine, inactivated ±DTaP - Hib - IPV, for intramuscular use	90698
Diphtheria, tetanus toxoids, and acellular pertussis vaccine ±DTaP, for use in individuals younger than seven years, for intramuscular use	90700
Diphtheria, tetanus toxoids, and acellular pertussis vaccine ±DTaP, for use in individuals younger than seven years, for intramuscular use	90700
Diphtheria, tetanus toxoids, and whole cell pertussis vaccine ±DTP, for intramuscular use	90701
Diphtheria and tetanus toxoids ±DT adsorbed for use in individuals younger than seven years, for intramuscular use	90702
Tetanus toxoid adsorbed, for intramuscular use	90703

Swartz JJ, Hainmueller J, Lawrence J, Rodriguez MI. Expanding prenatal care to unauthorized immigrant women and the effects on infant health. *Obstet Gynecol* 2017; 130.

The authors provided this information as a supplement to their article.

©2017 American College of Obstetricians and Gynecologists.

Mumps virus vaccine, live, for subcutaneous use	90704
Measles virus vaccine, live, for subcutaneous use	90705
Rubella virus vaccine, live, for subcutaneous use	90706
Measles, mumps and rubella virus vaccine ±MMR, live, for subcutaneous use	90707
Measles and rubella virus vaccine, live, for subcutaneous use	90708
Measles, mumps, rubella, and varicella vaccine ±MMRV, live, for subcutaneous use	90710
Poliovirus vaccine, ±any type±s ±OPV, live, for oral use	90712
Poliovirus vaccine, inactivated, ±IPV, for subcutaneous or intramuscular use	90713
Tetanus and Diphtheria, adsorbed	90714
Typhoid vaccine	90714
Tetanus and diphtheria toxoids ±Td adsorbed, preservative free, for use in individuals seven years or older, for intramuscular use	90714
Tetanus, diphtheria toxoids and acellular pertussis vaccine ±Tdap, for use in individuals 7 years or older, for intramuscular use	90715
Varicella virus vaccine, live, for subcutaneous use	90716
Yellow fever vaccine, live, for subcutaneous use	90717
Tetanus and diphtheria toxoids ±Td adsorbed for use in individuals seven years or older, for intramuscular use	90718
Diphtheria, tetanus toxoids, and whole cell pertussis vaccine and Hemophilus influenza B vaccine ±DTP-Hib, for intramuscular use	90720
Diphtheria, tetanus toxoids, and acellular pertussis vaccine and Hemophilus influenza B vaccine ±DTaP-Hib, for intramuscular use	90721
Diphtheria, tetanus toxoids, acellular pertussis vaccine, Hepatitis B, and poliovirus vaccine, inactivated ±DTaP-HepB-IPV, for intramuscular use	90723
Influenza virus vaccine	90724
Cholera vaccine for injectable use	90725
Rabies vaccine	90726
Plague vaccine, for intramuscular use	90727
BCG vaccine	90728
Hepatitis A vaccine	90730

Swartz JJ, Hainmueller J, Lawrence J, Rodriguez MI. Expanding prenatal care to unauthorized immigrant women and the effects on infant health. *Obstet Gynecol* 2017; 130.

The authors provided this information as a supplement to their article.

©2017 American College of Obstetricians and Gynecologists.

Hepatitis B vaccine	90731
Pneumococcal polysaccharide vaccine, 23-valent, adult or immunosuppressed patient dosage, for use in individuals 2 years or older, for subcutaneous or intramuscular use	90732
Meningococcal polysaccharide vaccine \pm any group \pm s, for subcutaneous use	90733
Meningococcal conjugate vaccine, serogroups A, C, Y and W-135 \pm tetravalent, for intramuscular use	90734
Meningococcal conjugate vaccine, serogroups A, C, Y and W-135 \pm tetravalent, for intramuscular use	90734
Japanese encephalitis virus vaccine, for subcutaneous use	90735
Zoster \pm shingles vaccine, live, for subcutaneous injection	90736
Hemophilus influenza B	90737
Japanese encephalitis virus vaccine, inactivated, for intramuscular use	90738
Hepatitis B, adult dosage \pm 2 dose schedule, for intramuscular use	90739
Hepatitis B vaccine, dialysis or immunosuppressed patient dosage \pm 3 dose schedule, for intramuscular use	90740
Immunization, passive; immune serum globulin, human \pm ISG	90741
Hepatitis B vaccine, adolescent \pm 2 dose schedule, for intramuscular use	90743
Hepatitis B vaccine, pediatric/adolescent dosage \pm 3 dose schedule, for intramuscular use	90744
Hepatitis B vaccine, adolescent/high risk infant dosage, for intramuscular use	90745
Hepatitis B vaccine, adult dosage, for intramuscular use	90746
Hepatitis B vaccine, dialysis or immunosuppressed patient dosage \pm 4 dose schedule, for intramuscular use	90747
Hepatitis B and Hemophilus influenza b vaccine \pm HepB-Hib, for intramuscular use	90748

Modified from Centers for Disease Control and Prevention. CPT codes mapped to CVX codes. Available at: <https://www2a.cdc.gov/vaccines/iis/iisstandards/vaccines.asp?rpt=cpt>. Retrieved March 1, 2017.

Swartz JJ, Hainmueller J, Lawrence J, Rodriguez MI. Expanding prenatal care to unauthorized immigrant women and the effects on infant health. *Obstet Gynecol* 2017; 130.

The authors provided this information as a supplement to their article.

©2017 American College of Obstetricians and Gynecologists.

Appendix 9. Descriptive Statistics for Covariates by Insurance Group

Insurance:	Emergency		
	Emergency Medicaid (EM)	Medicaid Plus Prenatal (EMP)	Medicaid
Year of pregnancy	2007.09 (2.87)	2012.07 (2.18)	2009.35 (3.67)
Age at delivery (years, 12-50)	26.97 (5.80)	28.75 (5.94)	25.35 (5.57)
Gravidity (count)	1.40 (0.68)	1.82 (0.95)	1.60 (0.98)
Ethnicity: Hispanic (0/1)	0.80 (0.40)	0.77 (0.42)	0.13 (0.33)
Ethnicity: Not Hispanic (0/1)	0.08 (0.27)	0.23 (0.42)	0.80 (0.40)
Ethnicity: Unknown (0/1)	0.12 (0.32)	0.00 (0.03)	0.07 (0.26)
Race: White (0/1)	0.15 (0.36)	0.23 (0.42)	0.74 (0.44)
Race: Asian or Pacific islander (0/1)	0.03 (0.16)	0.06 (0.23)	0.02 (0.14)
Race: Black (0/1)	0.00 (0.07)	0.01 (0.12)	0.04 (0.19)
Race: Hispanic (0/1)	0.06 (0.23)	0.00 (0.00)	0.00 (0.06)
Race: American Indian (0/1)	0.00 (0.04)	0.00 (0.04)	0.02 (0.15)
Race: Other (0/1)	0.76 (0.43)	0.69 (0.46)	0.17 (0.38)

Swartz JJ, Hainmueller J, Lawrence J, Rodriguez MI. Expanding prenatal care to unauthorized immigrant women and the effects on infant health. *Obstet Gynecol* 2017; 130.

The authors provided this information as a supplement to their article.

©2017 American College of Obstetricians and Gynecologists.

EM- Emergency Medicaid. EMP- Emergency Medicaid Plus Prenatal. Gravidity is defined as the number of pregnancies identified between 2003-2015. Columns 2-4 show means with standard deviations in parentheses. N = 35182 for EM- N = 12510 for EMP- N= 166054 for Medicaid

Swartz JJ, Hainmueller J, Lawrence J, Rodriguez MI. Expanding prenatal care to unauthorized immigrant women and the effects on infant health. *Obstet Gynecol* 2017; 130.

The authors provided this information as a supplement to their article.

©2017 American College of Obstetricians and Gynecologists.

Appendix 10. Effect of Emergency Medicaid Plus Prenatal on Mortality of Infants

Outcome:	DID Model Effect 95 % CI	Triple DID Model Effect 95 % CI
Death in first 365 days (per 1,000)	-1.01 [-1.42; -0.60]	-1.40 [-1.99; -0.82]
Death in first 730 days (per 1,000)	-1.19 [-1.66; -0.73]	-1.43 [-2.10; -0.77]
Death in first 1095 days (per 1,000)	-1.06 [-1.63; -0.48]	-1.32 [-1.90; -0.73]

Effect estimates from difference-in-differences model \pm DID and triple differences model \pm Triple DID model with robust 95% confidence intervals \pm clustered by county in parentheses. Low birth weight- 2499 g or less- very low birth weight- 1500 g and less- extremely low birth weight- 1000 g or less. Emergency room visits include urgent care. All models include county fixed effects, month fixed effects, county specific time-trends, and covariates \pm age polynomial, race fixed effects, ethnicity fixed effects, and no. of pregnancy fixed effects. N = 47692 for DID models and N=213746 for Triple DID models.

Appendix 11. Check for Compositional Shifts: Effect of Emergency Medicaid Plus Prenatal on Covariates

Outcome:	DID Model Effect 95 % CI	Triple DID Model Effect 95 % CI
Age at delivery (years, 12-50)	-0.06 [-0.30; 0.17]	0.41 [0.25; 0.58]
Gravidity (count)	0.00 [-0.04; 0.04]	0.03 [-0.04; 0.10]
Ethnicity: Hispanic (0/1)	-0.02 [-0.03; 0.00]	-0.02 [-0.05; 0.01]
Ethnicity: Not Hispanic (0/1)	0.01 [-0.00; 0.03]	0.00 [-0.02; 0.03]
Ethnicity: Unknown (0/1)	0.00 [-0.00; 0.01]	0.01 [-0.00; 0.03]
Race: White (0/1)	0.02 [0.00; 0.03]	0.09 [0.03; 0.15]
Race: Asian or Pacific islander (0/1)	-0.00 [-0.01; 0.00]	0.02 [0.01; 0.02]
Race: Black (0/1)	-0.00 [-0.00; 0.00]	-0.03 [-0.05; -0.00]
Race: Hispanic (0/1)	0.00 [-0.00; 0.01]	-0.04 [-0.06; -0.03]
Race: American Indian (0/1)	0.00 [-0.00; 0.00]	0.00 [-0.00; 0.01]
Race: Other (0/1)	-0.02 [-0.03; -0.00]	-0.03 [-0.07; -0.00]

Effect estimates from difference-in-differences model \pm DID and triple differences model \pm Triple DID model with robust 95% confidence intervals \pm clustered by county in parentheses. All models include county fixed effects, month fixed effects, and county specific time- trends. Gravidity is defined as the number of pregnancies identified between 2003-2015. N = 47692 for DID models and N=213746 for Triple DID models.

Swartz JJ, Hainmueller J, Lawrence J, Rodriguez MI. Expanding prenatal care to unauthorized immigrant women and the effects on infant health. *Obstet Gynecol* 2017; 130.

The authors provided this information as a supplement to their article.

©2017 American College of Obstetricians and Gynecologists.

Appendix 12. Fisher Exact Test for Effect of EMP on Infant Mortality ±365 Days

Period:	Pre		Post		Total	
Alive at 365 days	34522	99.89%	13125	99.96%	47647	99.91%
Dead at 365 days	37	0.11%	5	0.04%	42	0.09%
Total	34559	100.00%	13130	100.00%	47689	100.00%
Fisher's exact pval:	0.024					

Swartz JJ, Hainmueller J, Lawrence J, Rodriguez MI. Expanding prenatal care to unauthorized immigrant women and the effects on infant health. *Obstet Gynecol* 2017; 130.

The authors provided this information as a supplement to their article.

©2017 American College of Obstetricians and Gynecologists.

Appendix 13. Fisher Exact Test for Effect of EMP on Infant Mortality \pm 730 Days

Period:	Pre		Post		Total	
Alive at 730 days	34519	99.88%	13124	99.95%	47643	99.90%
Dead at 730 days	40	0.12%	6	0.05%	46	0.10%
Total	34559	100.00%	13130	100.00%	47689	100.00%
Fisher's exact pval:	0.031					

Swartz JJ, Hainmueller J, Lawrence J, Rodriguez MI. Expanding prenatal care to unauthorized immigrant women and the effects on infant health. *Obstet Gynecol* 2017; 130.

The authors provided this information as a supplement to their article.

©2017 American College of Obstetricians and Gynecologists.

Appendix 14. Fisher Exact Test for Effect of EMP on Infant Mortality ±1095 Days

Period:	Pre		Post		Total	
Alive at 1095 days	34517	99.88%	13122	99.94%	47639	99.90%
Dead at 1095 days	42	0.12%	8	0.06%	50	0.10%
Total	34559	100.00%	13130	100.00%	47689	100.00%
Fisher's exact pval:	0.080					

Swartz JJ, Hainmueller J, Lawrence J, Rodriguez MI. Expanding prenatal care to unauthorized immigrant women and the effects on infant health. *Obstet Gynecol* 2017; 130.

The authors provided this information as a supplement to their article.

©2017 American College of Obstetricians and Gynecologists.

Appendix 15. Fisher Exact Test for Infant Mortality Pre vs Post EMP on Medicaid Sample ±365

Days

Period:	Pre		Post		Total	
Alive at 365 days	102365	99.89%	63467	99.83%	165832	99.87%
Dead at 365 days	109	0.11%	110	0.17%	219	0.13%
Total	102474	100.00%	63577	100.00%	166051	100.00%
Fisher's exact pval:	0.000					

Swartz JJ, Hainmueller J, Lawrence J, Rodriguez MI. Expanding prenatal care to unauthorized immigrant women and the effects on infant health. *Obstet Gynecol* 2017; 130.

The authors provided this information as a supplement to their article.

©2017 American College of Obstetricians and Gynecologists.

Appendix 16. Fisher Exact Test for Infant Mortality Pre vs Post EMP on Medicaid Sample ±730

Days

Period:	Pre		Post		Total	
Alive at 730 days	102354	99.88%	63459	99.81%	165813	99.86%
Dead at 730 days	120	0.12%	118	0.19%	238	0.14%
Total	102474	100.00%	63577	100.00%	166051	100.00%
Fisher's exact pval:	0.000					

Swartz JJ, Hainmueller J, Lawrence J, Rodriguez MI. Expanding prenatal care to unauthorized immigrant women and the effects on infant health. *Obstet Gynecol* 2017; 130.

The authors provided this information as a supplement to their article.

©2017 American College of Obstetricians and Gynecologists.

Appendix 17. Fisher Exact Test for Infant Mortality Pre vs Post EMP on Medicaid Sample ±1095 Days

Period:	Pre		Post		Total	
Alive at 1095 days	102343	99.87%	63457	99.81%	165800	99.85%
Dead at 1095 days	131	0.13%	120	0.19%	251	0.15%
Total	102474	100.00%	63577	100.00%	166051	100.00%
Fisher's exact pval:	0.002					

Swartz JJ, Hainmueller J, Lawrence J, Rodriguez MI. Expanding prenatal care to unauthorized immigrant women and the effects on infant health. *Obstet Gynecol* 2017; 130.

The authors provided this information as a supplement to their article.

©2017 American College of Obstetricians and Gynecologists.

References

1. Hornbrook, M. C. *et al.* Development of an Algorithm to Identify Pregnancy Episodes in an Integrated Health Care Delivery System. *Health Serv. Res.* **42**, 908–927 ±2007.
2. Bright Future and Preventive Medicine Coding Fact Sheet. Available at: <https://www.aap.org/en-us/professional-resources/practice-transformation/getting-paid/Coding-at-the-AAP/Pages/Bright-Futures-and-Preventive-Medicine-Coding-Fact-Sheet.aspx>. ±Accessed: 1st March 2017

Swartz JJ, Hainmueller J, Lawrence J, Rodriguez MI. Expanding prenatal care to unauthorized immigrant women and the effects on infant health. *Obstet Gynecol* 2017; 130.

The authors provided this information as a supplement to their article.

©2017 American College of Obstetricians and Gynecologists.