# Supplemental Tables

**Supplemental Table 1. Visits and antibiotic prescriptions for acute respiratory illnesses by age category and diagnosis, MarketScan Commercial Dataset, 2011 and 2018**

| Diagnosis | 2011 | | | 2018 | | | Comparison of 2011 versus 2018 | | |
|---|---|---|---|---|---|---|---|---|---|
| | No. visits per 1000 enrollees (%)[A] | No. visits with antibiotic prescriptions per 1000 enrollees[B] (%) | Percent of visits with antibiotic prescription (99.99% CI)[C] | No. visits per 1000 enrollees (%)[A] | No. visits with antibiotic prescriptions per 1000 enrollees[B] (%) | Percent of visits with antibiotic prescription (99.99% CI)[C] | p-value for chi-square tests for proportion of visits with antibiotic prescription[D] | Prevalence rate ratio for no. visits per 1000 enrollees (99.99% CI)[E] | Prevalence rate ratio for no. visits with antibiotic prescriptions per 1000 enrollees (99.99% CI)[E] |
| **Children (0-17 years)[F]** | | | | | | | | | |
| **Total** | **1351 (100.0)** | **537 (100.0)** | **39.7 (39.7-39.8)** | **1214 (100.0)** | **427 (100.0)** | **35.2 (35.1-35.2)** | **<.0001** | **0.90 (0.90-0.90)** | **0.80 (0.79-0.80)** |
| **Antibiotics almost always indicated** | **33 (2.5)** | **18 (3.4)** | **54.9 (54.5-55.2)** | **28 (2.3)** | **16 (3.8)** | **57.8 (57.3-58.4)** | **<.0001** | **0.84 (0.82-0.85)** | **0.88 (0.87-0.90)** |
| Pneumonia | 33 (2.5) | 18 (3.4) | 54.9 (54.5-55.2) | 28 (2.3) | 16 (3.8) | 57.8 (57.3-58.4) | <.0001 | 0.84 (0.82-0.85) | 0.88 (0.87-0.90) |

|  | 2011 | | | 2018 | | | Comparison of 2011 versus 2018 | | |
|---|---|---|---|---|---|---|---|---|---|
| Diagnosis | No. visits per 1000 enrollees (%)[A] | No. visits with antibiotic prescriptions per 1000 enrollees[B] (%) | Percent of visits with antibiotic prescription (99.99% CI)[C] | No. visits per 1000 enrollees (%)[A] | No. visits with antibiotic prescriptions per 1000 enrollees[B] (%) | Percent of visits with antibiotic prescription (99.99% CI)[C] | p-value for chi-square tests for proportion of visits with antibiotic prescription[D] | Prevalence rate ratio for no. visits per 1000 enrollees (99.99% CI)[E] | Prevalence rate ratio for no. visits with antibiotic prescriptions per 1000 enrollees (99.99% CI)[E] |
| **Antibiotics sometimes indicated** | **687 (50.9)** | **407 (75.8)** | **59.2 (59.1-59.3)** | **600 (49.4)** | **351 (82.1)** | **58.4 (58.3-58.6)** | **<.0001** | **0.87 (0.87-0.88)** | **0.86 (0.86-0.87)** |
| Pharyngitis | 321 (23.8) | 152 (28.4) | 47.4 (47.3-47.5) | 302 (24.9) | 130 (30.5) | 43.2 (43.0-43.3) | <.0001 | 0.94 (0.94-0.94) | 0.86 (0.85-0.86) |
| Sinusitis | 124 (9.2) | 93 (17.4) | 75.3 (75.1-75.4) | 85 (7.0) | 66 (15.5) | 78.1 (77.8-78.3) | <.0001 | 0.68 (0.68-0.69) | 0.71 (0.70-0.71) |
| Acute otitis media | 241 (17.8) | 161 (30.0) | 66.7 (66.8-66.8) | 213 (17.6) | 154 (36.2) | 72.3 (72.1-72.5) | <.0001 | 0.89 (0.88-0.89) | 0.96 (0.95-0.97) |
| **Antibiotics almost never indicated** | **631 (46.7)** | **112 (20.8)** | **17.7 (17.7-17.8)** | **586 (48.3)** | **60 (14.1)** | **10.3 (10.2-10.3)** | **<.0001** | **0.93 (0.93-0.93)** | **0.54 (0.53-0.54)** |
| Asthma, allergy[G] | 164 (19.6) | 14 (2.6) | 5.2 (5.2-5.3) | 235 (19.4) | 5 (1.1) | 2.1 (2.0-2.1) | <.0001 | 0.89 (0.89-0.89) | 0.35 (0.34-0.36) |

| Diagnosis | 2011 | | | 2018 | | | Comparison of 2011 versus 2018 | | |
|---|---|---|---|---|---|---|---|---|---|
| | No. visits per 1000 enrollees (%)[A] | No. visits with antibiotic prescriptions per 1000 enrollees[B] (%) | Percent of visits with antibiotic prescription (99.99% CI)[C] | No. visits per 1000 enrollees (%)[A] | No. visits with antibiotic prescriptions per 1000 enrollees[B] (%) | Percent of visits with antibiotic prescription (99.99% CI)[C] | p-value for chi-square tests for proportion of visits with antibiotic prescription[D] | Prevalence rate ratio for no. visits per 1000 enrollees (99.99% CI)[E] | Prevalence rate ratio for no. visits with antibiotic prescriptions per 1000 enrollees (99.99% CI)[E] |
| Bronchitis, bronchiolitis[G] | 61 (4.5) | 34 (6.3) | 55.7 (55.4-56.0) | 35 (2.8) | 14 (3.3) | 41.1 (40.7-41.6) | <.0001 | 0.57 (0.56-0.57) | 0.42 (0.41-0.43) |
| Influenza | 17 (1.2) | 2 (0.4) | 11.3 (11.0-11.6) | 42 (3.5) | 2 (0.5) | 4.8 (4.6-5.0) | <.0001 | 2.51 (2.48-2.54) | 1.07 (1.01-1.12) |
| Non-suppurative otitis media | 63 (4.7) | 17 (3.1) | 26.5 (26.3-26.8) | 57 (4.7) | 16 (3.8) | 28.9 (28.6-29.3) | <.0001 | 0.90 (0.89-0.91) | 0.98 (0.96-1.00) |
| Viral upper respiratory infection | 226 (16.7) | 46 (8.5) | 20.2 (20.0-20.3) | 218 (17.9) | 23 (5.3) | 10.4 (10.3-10.5) | <.0001 | 0.96 (0.96-0.97) | 0.50 (0.49-0.51) |
| **Adults (18-64 years)[F]** | | | | | | | | | |
| **Total** | **659 (100)** | **257 (100)** | **39.1 (39.0-39.1)** | **624 (100)** | **230 (100)** | **36.8 (36.7-36.9)** | **<.0001** | **0.95 (0.95-0.95)** | **0.89 (0.89-0.90)** |
| **Antibiotics almost always indicated** | **17 (2.6)** | **6 (2.4)** | **37.2 (36.9-37.5)** | **17 (2.7)** | **7 (3.1)** | **42.9 (42.6-43.3)** | **<.0001** | **1.00 (0.99-1.01)** | **1.15 (1.14-1.17)** |

| Diagnosis | 2011 | | | 2018 | | | Comparison of 2011 versus 2018 | | |
|---|---|---|---|---|---|---|---|---|---|
| | No. visits per 1000 enrollees (%)[A] | No. visits with antibiotic prescriptions per 1000 enrollees[B] (%) | Percent of visits with antibiotic prescription (99.99% CI)[C] | No. visits per 1000 enrollees (%)[A] | No. visits with antibiotic prescriptions per 1000 enrollees[B] (%) | Percent of visits with antibiotic prescription (99.99% CI)[C] | p-value for chi-square tests for proportion of visits with antibiotic prescription[D] | Prevalence rate ratio for no. visits per 1000 enrollees (99.99% CI)[E] | Prevalence rate ratio for no. visits with antibiotic prescriptions per 1000 enrollees (99.99% CI)[E] |
| Pneumonia | 17 (2.6) | 6 (2.4) | 37.2 (36.9-37.5) | 17 (2.7) | 7 (3.1) | 42.9 (42.6-43.3) | <.0001 | 1.00 (0.99-1.01) | 1.15 (1.14-1.17) |
| **Antibiotics sometimes indicated** | **256 (38.9)** | **164 (63.7)** | **64.0 (63.9-64.0)** | **253 (40.6)** | **159 (69.1)** | **62.7 (62.6-62.8)** | **<.0001** | **0.99 (0.99-0.99)** | **0.97 (0.96-0.97)** |
| Acute exacerbation of COPD | 4 (0.7) | 1 (0.5) | 31.0 (30.4-31.5) | 4 (0.7) | 1 (0.6) | 31.4 (30.8-32.1) | 0.0349 | 1.01 (0.99-1.03) | 1.03 (0.99-1.06) |
| Pharyngitis | 77 (11.6) | 43 (16.9) | 56.7 (56.5-56.8) | 86 (13.8) | 43 (18.9) | 50.3 (50.1-50.5) | <.0001 | 1.12 (1.12-1.13) | 1.0 (0.99-1.0) |
| Sinusitis | 156 (23.7) | 106 (41.2) | 67.9 (67.8-68.0) | 143 (23.0) | 99 (43.1) | 69.1 (68.9-69.2) | <.0001 | 0.92 (0.92-0.92) | 0.94 (0.93-0.94) |
| Acute otitis media | 19 (3.0) | 13 (5.2) | 68.5 (68.3-68.8) | 19 (3.1) | 15 (6.5) | 77.6 (77.3-77.9) | <.0001 | 0.99 (0.98-1.0) | 1.12 (1.11-1.14) |

| | 2011 | | | 2018 | | | Comparison of 2011 versus 2018 | | |
|---|---|---|---|---|---|---|---|---|---|
| Diagnosis | No. visits per 1000 enrollees (%)[A] | No. visits with antibiotic prescriptions per 1000 enrollees[B] (%) | Percent of visits with antibiotic prescription (99.99% CI)[C] | No. visits per 1000 enrollees (%)[A] | No. visits with antibiotic prescriptions per 1000 enrollees[B] (%) | Percent of visits with antibiotic prescription (99.99% CI)[C] | p-value for chi-square tests for proportion of visits with antibiotic prescription[D] | Prevalence rate ratio for no. visits per 1000 enrollees (99.99% CI)[E] | Prevalence rate ratio for no. visits with antibiotic prescriptions per 1000 enrollees (99.99% CI)[E] |
| **Antibiotics almost never indicated** | **385 (58.5)** | **87 (33.9)** | **22.6 (22.5-22.6)** | **354 (56.8)** | **64 (27.8)** | **18.0 (18.0-18.1)** | **<.0001** | **0.92 (0.92-0.92)** | **0.73 (0.73-0.74)** |
| Asthma, allergy[G] | 232 (35.2) | 11 (4.1) | 4.5 (4.5-4.6) | 197 (31.6) | 6 (2.6) | 3.0 (3.0-3.1) | <.0001 | 0.85 (0.85-0.85) | 0.57 (0.56-0.58) |
| Bronchitis, bronchiolitis[G] | 53 (8.1) | 37 (14.4) | 69.9 (69.7-70.0) | 35 (5.7) | 23 (10.1) | 65.6 (65.4-65.9) | <.0001 | 0.66 (0.66-0.67) | 0.62 (0.62-0.63) |
| Influenza | 6 (0.9) | 1 (0.5) | 19.0 (18.6-19.4) | 20 (3.2) | 2 (0.9) | 10.3 (10.1-10.5) | <.0001 | 3.27 (3.23-3.31) | 1.77 (1.72-1.83) |
| Non-suppurative otitis media | 12 (1.9) | 3 (1.1) | 22.3 (22.0-22.6) | 12 (2.0) | 3 (1.3) | 24.4 (24.1-24.8) | <.0001 | 1.01 (1.00-1.02) | 1.11 (1.09-1.14) |
| Viral upper respiratory infection | 82 (12.4) | 36 (13.8) | 43.4 (43.3-43.6) | 90 (14.4) | 30 (12.9) | 33.1 (33.0-33.3) | <.0001 | 1.10 (1.09-1.10) | 0.84 (0.83-0.84) |

No. – Number; CI – Confidence interval; COPD – Chronic Obstructive Pulmonary Disease

**Supplemental Table 2. Visits and antibiotic prescriptions for acute respiratory illnesses by outpatient setting and antibiotic-indication tier, MarketScan Commercial Dataset, 2011 and 2018**

| Setting | 2011 | | 2018 | | Comparison of 2011 and 2018 | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| | No. visits per 1000 enrollees (%)[A] | No. visits with antibiotic prescriptions per 1000 enrollees[B] (%) | No. visits per 1000 enrollees (%)[A] | No. visits with antibiotic prescriptions per 1000 enrollees[B] (%) | p-value for chi-square tests for proportion of visits with antibiotic prescription[C] | Prevalence rate ratio for no. visits per 1000 enrollees (99.99% CI)[D] | Prevalence rate ratio for no. visits with antibiotic prescriptions per 1000 enrollees (99.99% CI)[D] |
| **All ARIs** | | | | | | | |
| Office | 723 (87.4) | 286 (87.6) | 614 (80.9) | 216 (78.6) | <.0001 | 0.85 (0.85-0.85) | 0.76 (0.76-0.76) |
| Outpatient hospital | 22 (2.6) | 6 (1.8) | 19 (2.6) | 4 (1.5) | <.0001 | 0.90 (0.89-0.90) | 0.72 (0.71-0.73) |
| Emergency department | 5 (0.6) | 2 (0.7) | 6 (0.8) | 2 (0.8) | <.0001 | 1.21 (1.19-1.23) | 0.91 (0.89-0.93) |
| Urgent care | 16 (1.9) | 10 (3.1) | 62 (8.2) | 35 (12.7) | <.0001 | 3.97 (3.95-4.00) | 3.52 (3.49-3.55) |
| Retail health | 0 (0.0) | 0 (0.0) | 2 (0.2) | 1 (0.3) | <.0001 | 272.21 (209.98-352.87) | 198.81 (145.57-271.53) |
| Multiple | 54 (6.5) | 21 (6.6) | 47 (6.2) | 16 (5.7) | <.0001 | 0.88 (0.87-0.88) | 0.73 (0.73-0.74) |
| Other[E] | 8 (1.0) | 1 (0.3) | 8 (1.0) | 1 (0.3) | <.0001 | 0.99 (0.98-1.00) | 1.15 (1.11-1.19) |
| **ARIs for which antibiotics are almost always indicated** | | | | | | | |
| Office | 12 (57.5) | 6 (64.1) | 10 (54.1) | 6 (60.9) | <.0001 | 0.87 (0.86-0.88) | 0.95 (0.94-0.97) |
| Outpatient hospital | 2 (7.5) | 0 (3.7) | 1 (6.7) | 0 (3.4) | <.0001 | 0.83 (0.80-0.85) | 0.92 (0.87-0.98) |
| Emergency department | 0 (0.9) | 0 (1.1) | 0 (1.5) | 0 (1.7) | <.0001 | 1.46 (1.36-1.56) | 1.62 (1.47-1.78) |

| Setting | 2011 | | 2018 | | Comparison of 2011 and 2018 | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| | No. visits per 1000 enrollees (%)[A] | No. visits with antibiotic prescriptions per 1000 enrollees[B] (%) | No. visits per 1000 enrollees (%)[A] | No. visits with antibiotic prescriptions per 1000 enrollees[B] (%) | p-value for chi-square tests for proportion of visits with antibiotic prescription[C] | Prevalence rate ratio for no. visits per 1000 enrollees (99.99% CI)[D] | Prevalence rate ratio for no. visits with antibiotic prescriptions per 1000 enrollees (99.99% CI)[D] |
| Urgent care | 0 (1.3) | 0 (2.1) | 1 (5.0) | 1 (8.0) | <.0001 | 3.50 (3.33-3.68) | 3.93 (3.71-4.17) |
| Retail health | 0 (0.0) | 0 (0.0) | 0 (0.1) | 0 (0.2) | 0.6257 | 291.98 (18.51-4605.71) | 260.92 (16.53-4119.31) |
| Multiple | 5 (23.2) | 3 (27.7) | 4 (22.4) | 2 (24.1) | 0.0062 | 0.89 (0.88-0.91) | 0.87 (0.85-0.89) |
| Other[E] | 2 (9.6) | 0 (1.3) | 2 (10.3) | 0 (1.7) | <.0001 | 0.99 (0.97-1.02) | 1.33 (1.21-1.46) |
| **ARIs for which antibiotics are sometimes indicated** | | | | | | | |
| Office | 310 (85.6) | 198 (88.5) | 260 (78.3) | 162 (80.1) | <.0001 | 0.84 (0.84-0.84) | 0.82 (0.82-0.82) |
| Outpatient hospital | 10 (2.8) | 4 (1.8) | 8 (2.5) | 3 (1.4) | <.0001 | 0.81 (0.80-0.82) | 0.73 (0.72-0.75) |
| Emergency department | 3 (0.8) | 2 (0.7) | 3 (0.8) | 1 (0.7) | <.0001 | 0.94 (0.92-0.96) | 0.86 (0.83-0.88) |
| Urgent Care | 10 (2.7) | 7 (3.1) | 36 (10.7) | 25 (12.4) | <.0001 | 3.69 (3.66-3.72) | 3.68 (3.65-3.72) |
| Retail health | 0 (0.0) | 0 (0.0) | 1 (0.4) | 1 (0.4) | 0.0114 | 233.97 (173.59-315.35) | 206.70 (147.33-290.00) |
| Multiple | 28 (7.7) | 13 (5.8) | 22 (6.7) | 10 (4.8) | <.0001 | 0.80 (0.80-0.81) | 0.74 (0.74-0.75) |
| Other[E] | 2 (0.4) | 0 (0.2) | 2 (0.7) | 1 (0.3) | <.0001 | 1.45 (1.41-1.48) | 1.25 (1.19-1.31) |
| **Antibiotic-inappropriate ARIs** | | | | | | | |
| Office | 401 (90.2) | 82 (88.0) | 343 (84.3) | 48 (76.5) | <.0001 | 0.85 (0.85-0.86) | 0.59 (0.59-0.59) |
| Outpatient hospital | 10 (2.2) | 2 (1.7) | 10 (2.4) | 1 (1.6) | <.0001 | 1.00 (0.99-1.01) | 0.64 (0.62-0.66) |

| Setting | 2011 | | 2018 | | Comparison of 2011 and 2018 | | |
|---|---|---|---|---|---|---|---|
| | No. visits per 1000 enrollees (%)[A] | No. visits with antibiotic prescriptions per 1000 enrollees[B] (%) | No. visits per 1000 enrollees (%)[A] | No. visits with antibiotic prescriptions per 1000 enrollees[B] (%) | p-value for chi-square tests for proportion of visits with antibiotic prescription[C] | Prevalence rate ratio for no. visits per 1000 enrollees (99.99% CI)[D] | Prevalence rate ratio for no. visits with antibiotic prescriptions per 1000 enrollees (99.99% CI)[D] |
| Emergency department | 2 (0.5) | 1 (0.6) | 3 (0.8) | 1 (0.9) | <.0001 | 1.53 (1.50-1.57) | 0.93 (0.89-0.98) |
| Urgent care | 6 (1.3) | 3 (3.2) | 26 (6.4) | 9 (14.4) | <.0001 | 4.47 (4.42-4.51) | 3.11 (3.06-3.15) |
| Retail health | 0 (0.0) | 0 (0.0) | 1 (0.2) | 0 (0.2) | <.0001 | 394.83 (231.13-674.47) | 145.50 (63.20-334.97) |
| Multiple | 21 (4.8) | 6 (6.4) | 21 (5.1) | 4 (6.1) | <.0001 | 0.97 (0.96-0.97) | 0.65 (0.64-0.66) |
| Other[E] | 4 (1.0) | 0 (0.2) | 4 (0.9) | 0 (0.3) | 0.055 | 0.82 (0.81-0.84) | 0.85 (0.79-0.92) |

No. – Number; CI – Confidence interval; COPD – Chronic Obstructive Pulmonary Disease

[A] No. visits per 1000 enrollees calculated as no. visits/average no. enrollees x 1000. Values of 0 indicate <500 visits per 1000 enrollees.Percents may not sum to 100 due to rounding.

[B] No. visits with antibiotic prescriptions per 1000 enrollees calculated as no. visits with an associated oral antibiotic prescription within a 4-day post-visit window/average no. enrollees x 1000. Percents may not sum to 100 due to rounding.

[C] P-value for chi-square test comparing percent of visits with an antibiotic dispensed or administered in 2011 versus 2018, alpha = 0.0001.

[D] Referent is 2011, therefore a prevalence rate ratio of 0.80 indicates that the rate in 2018 was 20% lower than the rate in 2011.

[E] Other includes telehealth, schools, homeless shelters, Indian Health Services facilities, Tribal facilities, correctional facilities, patient homes, group homes, assisted living facilities, worksites, mobile healthcare units, birthing centers, military treatment facilities, custodial care facilities, hospice, adult living facilities, intermediate care facilities, psychiatric facilities, mental health centers, substance abuse facilities, rehabilitation facilities, dialysis facilities, ambulatory surgery centers, skilled nursing homes, long-term care facilities, inpatient hospital (outpatient services only) and outpatient not elsewhere classified.

**Supplemental Table 3. Antibiotic prescriptions associated with visits for acute respiratory illnesses by antibiotic class, 2011 and 2018 MarketScan Commercial Database**

| Oral Antibiotic Class[A] | No. visits with antibiotic prescriptions per 1000 enrollees[B] (%) | | Prevalence rate ratio comparing no. visits with antibiotic prescriptions per 1000 enrollees in 2011 versus 2018 (99.99% CI)[C] |
|---|---|---|---|
| | 2011 | 2018 | |
| **All ages** | | | |
| Penicillins | 123 (37.9) | 134 (48.6) | 1.08 (1.08-1.09) |
| Macrolides | 119 (36.6) | 74 (26.8) | 0.62 (0.62-0.62) |
| Cephalosporins | 49 (15.0) | 38 (13.6) | 0.77 (0.77-0.77) |
| Fluoroquinolones | 19 (5.9) | 10 (3.5) | 0.49 (0.49-0.50) |
| Tetracyclines | 6 (1.8) | 14 (5.1) | 2.32 (2.29-2.34) |
| Sulfonamides | 6 (1.8) | 3 (1.1) | 0.50 (0.49-0.51) |
| Other and multiple antibiotics | 3 (1.0) | 4 (1.4) | 1.11 (1.09-1.13) |

[A] Excludes prescriptions with missing antibiotic class data. Other includes antibiotics classified in MarketScan as urinary anti-infectives, other antibiotics, and other anti-infectives.

[B] No. visits with antibiotic prescriptions per 1000 enrollees calculated as no. visits with an associated oral antibiotic prescription within a 4-day post-visit window/average no. enrollees x 1000. Percents may not sum to 100 due to rounding.

[C] Referent is 2011, therefore a prevalence rate ratio of 0.80 indicates that the rate in 2018 was 20% lower than the rate in 2011.

[D] MarketScan Commercial datasets contain data on individuals aged <65 years. Calculated based on median age during MarketScan enrollment in each year.

**Supplemental Table 4. Visits and antibiotic prescriptions for acute respiratory illnesses by region, MarketScan Commercial Dataset, 2011 and 2018**

| Region | Percent of visits with antibiotic prescription (99.99% CI)[A] | | Comparison of 2011 versus 2018 | | |
| --- | --- | --- | --- | --- | --- |
| | 2011 | 2018 | p-value for chi-square tests for proportion of visits with antibiotic prescription[B] | Prevalence rate ratio for no. visits per 1000 enrollees (99.99% CI)[C] | Prevalence rate ratio for no. visits with antibiotic prescriptions per 1000 enrollees (99.99% CI)[C] |
| Northeast | 37.1 (37.0-37.2) | 33.8 (33.7-33.9) | <0.0001 | 0.93 (0.92-0.93) | 0.84 (0.84-0.85) |
| Midwest | 40.7 (40.6-40.7) | 36.0 (35.9-36.1) | <0.0001 | 0.85 (0.85-0.86) | 0.76 (0.76-0.76) |
| South | 40.2 (40.1-40.2) | 38.4 (38.4-38.5) | <0.0001 | 0.95 (0.95-0.95) | 0.91 (0.91-0.91) |
| West | 36.6 (36.5-36.7) | 31.5 (31.3-31.6) | <0.0001 | 0.85 (0.85-0.86) | 0.73 (0.73-0.74) |

No. – Number; CI – Confidence interval; COPD – Chronic Obstructive Pulmonary Disease

[A] 99.99% CI estimated using a binomial distribution.

[B] P-value for chi-square test comparing percent of visits with an antibiotic dispensed or administered in 2011 versus 2018, alpha = 0.0001.

[C] Referent is 2011, therefore a prevalence rate ratio of 0.80 indicates that the rate in 2018 was 20% lower than the rate in 2011.