eTable 7. Joinpoint results by ICD-10 opioid type for the white population, 1999-2015

# White population by ICD-10 type, 1999-2015

## Average APC

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Race | Outcome | Time period | Average APC (95% CI) | *P* value |
| White | Heroin | 1999-2015 | 13.05 (10.20, 15.96) | < 0.001 |
| White | Methadone | 1999-2015 | 9.19 (6.62, 11.82) | < 0.001 |
| White | Natural | 1999-2015 | 8.90 (7.80, 10.01) | < 0.001 |
| White | Other | 1999-2015 | -0.23 (-0.81, 0.36) | = 0.42 |
| White | Synthetic | 1999-2015 | 17.06 (13.20, 21.06) | < 0.001 |

## Joinpoint Summary

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Race | Outcome | Time period | APC (95% CI) | *P* value |
| White | Heroin | 1999-2005 | 0.55 (-3.82, 5.12) | = 0.79 |
| White | Heroin | 2005-2010 | 12.38 (4.62, 20.70) | < .01 |
| White | Heroin | 2010-2015 | 30.88 (27.05, 34.82) | < 0.001 |
| White | Methadone | 1999-2003 | 42.72 (33.78, 52.26) | < 0.001 |
| White | Methadone | 2003-2006 | 21.39 (8.30, 36.05) | < .01 |
| White | Methadone | 2006-2015 | -6.42 (-7.40, -5.43) | < 0.001 |
| White | Natural | 1999-2010 | 12.81 (11.51, 14.12) | < 0.001 |
| White | Natural | 2010-2015 | 0.76 (-1.78, 3.37) | = 0.53 |
| White | Other | 1999-2015 | -0.23 (-0.81, 0.36) | = 0.42 |
| White | Synthetic | 1999-2006 | 17.68 (11.30, 24.44) | < 0.001 |
| White | Synthetic | 2006-2013 | 3.19 (-1.66, 8.28) | = 0.17 |
| White | Synthetic | 2013-2015 | 78.70 (50.42, 112.29) | < 0.001 |

## Joinpoint Model Estimates

### Estimates

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Outcome | Year (95% CI) | Intercept (SE) | Intercept *P* Value | Slope (SE) | Slope *P* Value | Change in Slope (SE) | Slope Change *P* Value |
| Heroin | 1999 (Starting year) | -11.38 (39.35) | = 0.78 | 0.01 (0.02) | = 0.79 | NA | NA |
| Heroin | 2005 (2001, 2008) | -234.28 (63.45) | < .01 | 0.12 (0.03) | < .01 | 0.11 (0.04) | < .05 |
| Heroin | 2010 (2008, 2012) | -540.58 (26.43) | < 0.001 | 0.27 (0.01) | < 0.001 | 0.15 (0.03) | < .01 |
| Methadone | 1999 (Starting year) | -712.28 (57.22) | < 0.001 | 0.36 (0.03) | < 0.001 | NA | NA |
| Methadone | 2003 (2001, 2005) | -387.96 (101.09) | < .01 | 0.19 (0.05) | < .01 | -0.16 (0.06) | < .05 |
| Methadone | 2006 (2005, 2008) | 133.87 (9.37) | < 0.001 | -0.07 (0.00) | < 0.001 | -0.26 (0.05) | < 0.001 |
| Natural | 1999 (Starting year) | -240.83 (10.67) | < 0.001 | 0.12 (0.01) | < 0.001 | NA | NA |
| Natural | 2010 (2007, 2011) | -13.79 (23.59) | = 0.57 | 0.01 (0.01) | = 0.53 | -0.11 (0.01) | < 0.001 |
| Other | 1999 (Starting year) | 4.56 (5.50) | = 0.42 | -0.00 (0.00) | = 0.42 | NA | NA |
| Synthetic | 1999 (Starting year) | -326.76 (49.42) | < 0.001 | 0.16 (0.02) | < 0.001 | NA | NA |
| Synthetic | 2006 (2003, 2010) | -63.07 (42.77) | = 0.17 | 0.03 (0.02) | = 0.17 | -0.13 (0.03) | < .01 |
| Synthetic | 2013 (2012, 2013) | -1168.50 (153.40) | < 0.001 | 0.58 (0.08) | < 0.001 | 0.55 (0.08) | < 0.001 |

### Summary

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Outcome | Obs. (N) | Parameters | Degrees of Freedom | Sum of squared errors | Mean squared error |
| Heroin | 17 | 6 | 11 | 179.43 | 16.31 |
| Methadone | 17 | 6 | 11 | 78.36 | 7.12 |
| Natural | 17 | 4 | 13 | 195.83 | 15.06 |
| Other | 17 | 2 | 15 | 104.10 | 6.94 |
| Synthetic | 17 | 6 | 11 | 178.63 | 16.24 |