**Appendix A**

**Table Supp1a. Interaction effects of supportive alcohol/pregnancy policies on birth outcomes and prenatal care utilization**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Low Birthweight** | |  | **Preterm Birth** | |  | **Any Prenatal Care** | |  | **Late Prenatal Care** | |  | **Inadequate Prenatal Care** | |
|  | **aOR** | **95% CI** |  | **aOR** | **95% CI** |  | **aOR** | **95% CI** |  | **aOR** | **95% CI** |  | **aOR** | **95% CI** |
| **MWS** | **1.09** | **1.05-1.12** |  | **1.05** | **1.02-1.09** |  | **0.71** | **0.64-0.79** |  | **1.21** | **1.14-1.29** |  | **1.29** | **1.18-1.41** |
| Education |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| HS Grad (reference) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Less than HS | **1.29** | **1.25-1.33** |  | **1.20** | **1.17-1.23** |  | **0.60** | **0.57-0.63** |  | **1.53** | **1.47-1.60** |  | **1.62** | **1.55-1.68** |
| More than HS | **0.77** | **0.76-0.79** |  | **0.86** | **0.85-0.87** |  | **1.58** | **1.46-1.70** |  | **0.70** | **0.68—0.72** |  | **0.70** | **0.68-0.72** |
| Other/Missing | **1.17** | **1.10-1.26** |  | **1.14** | **1.09-1.19** |  | **0.66** | **0.49-0.88** |  | 1.01 | 0.89-1.15 |  | 1.11 | 0.92-1.33 |
| Education\*MWS |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| HS Grad (reference) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Less than HS | **0.88** | **0.86-0.91** |  | **0.93** | **0.91-0.96** |  | **1.21** | **1.07-1.36** |  | **0.79** | **0.75-0.84** |  | **0.78** | **0.74-0.82** |
| More than HS | 1.03 | 0.99-1.06 |  | 1.01 | 0.99-1.02 |  | 0.93 | 0.77-1.11 |  | **1.08** | **1.03-1.13** |  | **1.08** | **1.01-1.16** |
| Other/Missing | 0.99 | 0.95-1.04 |  | 0.98 | 0.95-1.01 |  | 0.79 | 0.60-1.05 |  | 1.08 | 0.98-1.20 |  | 1.12 | 0.94-1.35 |
| Wald test of Education\*MWS | p<.001 |  |  | p<.001 |  |  | p<.01 |  |  | p<.001 |  |  | p<.001 |  |
| **RR\_DTx** | **1.05** | **1.01-1.09** |  | **1.06** | **1.01-1.11** |  | 0.94 | 0.72-1.22 |  | 1.05 | 0.95-1.16 |  | 0.98 | 0.87-1.11 |
| Education |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| HS Grad (reference) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Less than HS | **1.30** | **1.27-1.34** |  | **1.22** | **1.20-1.24** |  | **0.59** | **0.56-0.62** |  | **1.54** | **1.48-1.60** |  | **1.63** | **1.57-1.69** |
| More than HS | **0.77** | **0.76-0.78** |  | **0.85** | **0.84-0.86** |  | **1.58** | **1.47-1.70** |  | **0.70** | **0.68-0.72** |  | **0.69** | **0.67-0.72** |
| Other/Missing | **1.17** | **1.09-1.26** |  | **1.14** | **1.09-1.19** |  | **0.67** | **0.51-0.89** |  | 1.02 | 0.90-1.16 |  | 1.12 | 0.93-1.35 |
| Education\*RR\_DTx |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| HS Grad (reference) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Less than HS | **0.88** | **0.86-0.89** |  | **0.91** | **0.90-0.93** |  | **1.21** | **1.13-1.30** |  | **0.82** | **0.76-0.88** |  | **0.80** | **0.75-0.86** |
| More than HS | 1.02 | 0.99-1.05 |  | **1.02** | **1.00-1.04** |  | 0.94 | 0.80-1.09 |  | **1.07** | **1.03-1.12** |  | **1.08** | **1.04-1.13** |
| Other/Missing | 1.02 | 0.97-1.06 |  | 1.00 | 0.97-1.04 |  | **0.72** | **0.57-0.93** |  | 1.02 | 0.93-1.13 |  | 1.07 | 0.90-1.27 |
| Wald Test of Education\*RR\_DTx | p<.001 |  |  | p<.001 |  |  | p<.001 |  |  | p<.001 |  |  | p<.001 |  |
| **PTxP** | DNC | DNC |  | **1.09** | **1.04-1.14** |  | 0.99 | 0.81-1.21 |  | 1.07 | 0.93-1.23 |  | 1.05 | 0.88-1.26 |
| Education |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| HS Grad (reference) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Less than HS | DNC | DNC |  | **1.19** | **1.16-1.22** |  | **0.62** | **0.60-0.64** |  | **1.49** | **1.42-1.55** |  | **1.55** | **1.48-1.63** |
| More than HS | DNC | DNC |  | **0.86** | **0.85-0.86** |  | **1.52** | **1.39-1.65** |  | **0.72** | **0.70-0.74** |  | **0.72** | **0.70-0.74** |
| Other/Missing | DNC | DNC |  | **1.13** | **1.09-1.18** |  | **0.65** | **0.49-0.85** |  | 1.02 | 0.91-1.15 |  | 1.12 | 0.94-1.33 |
| Education\*PTxP |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| HS Grad (reference) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Less than HS | DNC | DNC |  | **0.95** | **0.93-0.98** |  | **1.15** | **1.04-1.27** |  | **0.82** | **0.76-0.88** |  | **0.83** | **0.77-0.89** |
| More than HS | DNC | DNC |  | 1.01 | 0.99-1.02 |  | 1.05 | 0.88-1.25 |  | 1.03 | 0.99-1.07 |  | 1.01 | 0.94-1.08 |
| Other/Missing | DNC | DNC |  | 1.01 | 0.98-1.03 |  | 0.79 | 0.63-1.00 |  | 1.06 | 0.95-1.18 |  | 1.12 | 0.94-1.32 |
| Wald Test of Education\*PTxP | p<.001 |  |  | p<.001 |  |  | p<.01 |  |  | p<.001 |  |  | p<.001 |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **PTxPWC** | 1.05 | 0.99-1.11 |  | 1.05 | 1.00-1.11 |  | 0.94 | 0.70-1.25 |  | 1.01 | 0.92-1.11 |  | 1.02 | 0.87-1.21 |
| Education |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| HS Grad (reference) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Less than HS | **1.26** | **1.21-1.30** |  | **1.19** | **1.16-1.21** |  | **0.63** | **0.60-0.66** |  | **1.45** | **1.36-1.54** |  | **1.52** | **1.43-1.61** |
| More than HS | **0.78** | **0.77-0.80** |  | **0.86** | **0.85-0.86** |  | **1.51** | **1.39-1.65** |  | **0.73** | **0.71-0.74** |  | **0.72** | **0.70-0.74** |
| Other/Missing | **1.17** | **1.10-1.25** |  | **1.13** | **1.08-1.18** |  | **0.64** | **0.48-0.84** |  | 1.03 | 0.92-1.16 |  | 1.13 | 0.96-1.34 |
| Education\*PTxPWC |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| HS Grad (reference) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Less than HS | **0.92** | **0.89-0.95** |  | **0.93** | **0.92-0.95** |  | **1.10** | **1.01-1.20** |  | 0.91 | 0.83-1.01 |  | 0.90 | 0.80-1.00 |
| More than HS | 1.01 | 0.97-1.06 |  | 1.02 | 0.98-1.05 |  | 1.10 | 0.97-1.26 |  | 0.99 | 0.91-1.08 |  | 1.00 | 0.90-1.11 |
| Other/Missing | 1.04 | 0.98-1.10 |  | 1.04 | 0.97-1.11 |  | 1.07 | 0.78-1.48 |  | **0.87** | **0.79-0.96** |  | 0.97 | 0.75-1.26 |
| Wald Test of Education\*PTxPWC | p<.001 |  |  | p<.001 |  |  | p<.001 |  |  | p<.001 |  |  | p<.01 |  |
| **PCP** | **1.11** | **1.04-1.19** |  | **1.12** | **1.06-1.19** |  | 0.92 | 0.76-1.10 |  | 0.97 | 0.88-1.08 |  | 0.93 | 0.85-1.03 |
| Education |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| HS Grad (reference) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Less than HS | **1.25** | **1.20-1.30** |  | **1.18** | **1.16-1.21** |  | **0.63** | **0.60-0.66** |  | **1.44** | **1.36-1.53** |  | **1.51** | **1.42-1.60** |
| More than HS | **0.79** | **0.77-0.80** |  | **0.86** | **0.85-0.86** |  | **1.52** | **1.39-1.66** |  | **0.73** | **0.71-0.74** |  | **0.72** | **0.70-0.74** |
| Other/Missing | **1.17** | **1.10-1.25** |  | **1.14** | **1.09-1.18** |  | **0.64** | **0.49-0.84** |  | 1.03 | 0.91-1.15 |  | 1.13 | 0.96-1.33 |
| Education\*PCP |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| HS Grad (reference) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Less than HS | **0.96** | **0.92-0.99** |  | **0.95** | **0.92-0.97** |  | 1.06 | 0.96-1.16 |  | **0.94** | **0.88-1.00** |  | 0.96 | 0.91-1.03 |
| More than HS | **0.96** | **0.92-1.00** |  | 1.00 | 0.99-1.02 |  | 1.04 | 0.90-1.21 |  | 0.96 | 0.89-1.04 |  | 0.95 | 0.87-1.05 |
| Other/Missing | 0.98 | 0.93-1.02 |  | 0.97 | 0.94-1.01 |  | 0.95 | 0.80-1.13 |  | 0.90 | 0.81-1.01 |  | 1.05 | 0.80-1.39 |
| Wald Test of Education\*PCP | p<.001 |  |  | p<.001 |  |  | p=n.s |  |  | p<.01 |  |  | p=n.s. |  |

All models test the interaction of maternal education on all eight policies separately and adjusted for state, year and state-specific time trends and adjusted for individual- and state-level covariates (including all other pregnancy-specific alcohol policies). Models also adjusted standard errors to reflect clustering at the state level. The Wald test uses the Chi-square distribution and tests the hypothesis that all coefficients in the interaction term are 0.

Bold indicates p<.05

DNC: One model predicting the effect of Priority Treatment for Pregnant Women Only policies on low birthweight did not converge with high school graduates as the reference group, but this model did converge with less than HS as the reference group.

aOR: Adjusted odds ratio

MWS=Mandatory Warning Signs; RR\_DTx=Reporting Requirements for Data and Treatment Purposes; PTxP=Priority Treatment for Pregnant Women Only; PTxPWC=Priority Treatment for Pregnant Women and Women with Children; PCP=Prohibitions on Criminal Prosecution

**Table Supp1b. Interaction effects of supportive alcohol/pregnancy policies on alcohol use**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Any Drinking** | |  | **Binge Drinking** | |  | **Heavy Drinking** | |  |
|  | **aOR** | **95% CI** |  | **aOR** | **95% CI** |  | **aOR** | **95% CI** |  |
| **MWS** | 1.10 | [0.81-1.50] |  | 0.53 | [0.28-1.01] |  | 0.80 | [0.33-1.91] |  |
| Education |  |  |  |  |  |  |  |  |  |
| HS Grad (reference) |  |  |  |  |  |  |  |  |  |
| Less than HS | **0.72** | **[0.60-0.85]** |  | 0.72 | [0.46-1.12] |  | 0.89 | [0.53-1.49] |  |
| More than HS | **1.65** | **[1.45-1.89]** |  | 1.30 | [0.78-2.16] |  | 1.46 | [0.94-2.26] |  |
| Education\*MWS |  |  |  |  |  |  |  |  |  |
| HS Grad (reference) |  |  |  |  |  |  |  |  |  |
| Less than HS | 1.01 | [0.82-1.24] |  | 1.00 | [0.64-1.55] |  | 0.78 | [0.40-1.52] |  |
| More than HS | **0.82** | **[0.67-0.99]** |  | 1.15 | [0.62-2.13] |  | 0.90 | [0.42-1.94] |  |
| Wald test of Education\*MWS | p=n.s. |  |  | p=n.s. |  |  | p=n.s. |  |  |
| **RR\_DTx** | 1.05 | [0.79-1.38] |  | 0.84 | [0.50-1.39] |  | **0.62** | **[0.40-0.97]** |  |
| Education |  |  |  |  |  |  |  |  |  |
| HS Grad (reference) |  |  |  |  |  |  |  |  |  |
| Less than HS | **0.69** | **[0.57-0.84]** |  | 0.63 | [0.37-1.07] |  | 0.71 | [0.44-1.15] |  |
| More than HS | **1.62** | **[1.40-1.87]** |  | 1.19 | [0.64-2.24] |  | 1.18 | [0.77-1.79] |  |
| Education\*RR\_DTx |  |  |  |  |  |  |  |  |  |
| HS Grad (reference) |  |  |  |  |  |  |  |  |  |
| Less than HS | 1.08 | [0.82-1.42] |  | 1.28 | [0.71-2.31] |  | 1.39 | [0.81-2.38] |  |
| More than HS | 0.89 | [0.67-1.16] |  | 1.33 | [0.63-2.78] |  | 1.58 | [0.83-2.99] |  |
| Wald Test of Education\*RR\_DTx | p=n.s. |  |  | p=n.s. |  |  | p=n.s. |  |  |
| **PTxP** | 0.93 | [0.69-1.24] |  | 0.84 | [0.53-1.35] |  | 1.13 | [0.72-1.78] |  |
| Education |  |  |  |  |  |  |  |  |  |
| HS Grad (reference) |  |  |  |  |  |  |  |  |  |
| Less than HS | **0.73** | **[0.62-0.86]** |  | 0.71 | [0.49-1.04] |  | 0.80 | [0.53-1.22] |  |
| More than HS | **1.53** | **[1.41-1.65]** |  | 1.41 | [0.97-2.05] |  | **1.48** | **[1.12-1.96]** |  |
| Education\*PTxP |  |  |  |  |  |  |  |  |  |
| HS Grad (reference) |  |  |  |  |  |  |  |  |  |
| Less than HS | 1.00 | [0.80-1.26] |  | 1.01 | [0.49-2.08] |  | 0.98 | [0.51-1.86] |  |
| More than HS | 1.01 | [0.87-1.16] |  | 0.89 | [0.53-1.49] |  | 0.76 | [0.53-1.09] |  |
| Wald Test of Education\*PTxP | p=n.s. |  |  | p=n.s. |  |  | p=n.s. |  |  |
| **PTxPWC** | **1.33** | **[1.10-1.60]** |  | 0.64 | [0.34-1.20] |  | **0.42** | **[0.20-0.89]** |  |
| Education |  |  |  |  |  |  |  |  |  |
| HS Grad (reference) |  |  |  |  |  |  |  |  |  |
| Less than HS | **0.73** | **[0.63-0.84]** |  | **0.70** | **[0.49-0.99]** |  | 0.80 | [0.56-1.13] |  |
| More than HS | **1.55** | **[1.43-1.68]** |  | 1.36 | [1.00-1.84] |  | **1.35** | **[1.06-1.72]** |  |
| Education\*PTxPWC |  |  |  |  |  |  |  |  |  |
| HS Grad (reference) |  |  |  |  |  |  |  |  |  |
| Less than HS | 0.95 | [0.67-1.33] |  | 1.39 | [0.63-3.07] |  | 1.22 | [0.30-4.95] |  |
| More than HS | 0.85 | [0.70-1.02] |  | 1.23 | [0.81-1.87] |  | 1.71 | [0.88-3.33] |  |
| Wald Test of Education\*PTxPWC | p=n.s. |  |  | p=n.s. |  |  | p=n.s. |  |  |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **PCP** | **0.62** | **[0.46-0.84]** |  | 1.10 | [0.57-2.13] |  | 1.10 | [0.63-1.92] |  |
| Education |  |  |  |  |  |  |  |  |  |
| HS Grad (reference) |  |  |  |  |  |  |  |  |  |
| Less than HS | **0.72** | **[0.63-0.84]** |  | 0.72 | [0.51-1.01] |  | 0.82 | [0.58-1.17] |  |
| More than HS | **1.51** | **[1.40-1.63]** |  | **1.38** | **[1.03-1.85]** |  | **1.43** | **[1.12-1.81]** |  |
| Education\*PCP |  |  |  |  |  |  |  |  |  |
| HS Grad (reference) |  |  |  |  |  |  |  |  |  |
| Less than HS | 1.01 | [0.51-2.01] |  | 0.89 | [0.39-2.03] |  | 0.56 | [0.17-1.79] |  |
| More than HS | **1.32** | **[1.12-1.55]** |  | 0.92 | [0.46-1.86] |  | 0.72 | [0.44-1.17] |  |
| Wald Test of Education\*PCP | p<.01 |  |  | p=n.s. |  |  | p=n.s. |  |  |

All models test the interaction of maternal education on all eight policies separately and adjusted for state, year and state-specific time trends and adjusted for individual- and state-level covariates (including all other pregnancy-specific alcohol policies). Models also adjusted standard errors to reflect clustering at the state level. The Wald test uses the Chi-square distribution and tests the hypothesis that all coefficients in the interaction term are 0.

Bold indicates p<.05

aOR: Adjusted odds ratio

MWS=Mandatory Warning Signs; RR\_DTx=Reporting Requirements for Data and Treatment Purposes; PTxP=Priority Treatment for Pregnant Women Only; PTxPWC=Priority Treatment for Pregnant Women and Women with Children; PCP=Prohibitions on Criminal Prosecution

**Table Supp1c. Interaction effects of punitive alcohol/pregnancy policies on birth outcomes and prenatal care utilization**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Low Birthweight** | |  | **Preterm Birth** | |  | **Any Prenatal Care** | |  | **Late Prenatal Care** | |  | **Inadequate Prenatal Care** | |
|  | **aOR** | **95% CI** |  | **aOR** | **95% CI** |  | **aOR** | **95% CI** |  | **aOR** | **95% CI** |  | **aOR** | **95% CI** |
| **CACN** | **1.09** | **1.05-1.13** |  | **1.10** | **1.06-1.14** |  | 0.92 | 0.80-1.05 |  | 0.97 | 0.92-1.04 |  | 1.08 | 1.00-1.17 |
| Education |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| HS Grad (reference) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Less than HS | **1.27** | **1.22-1.32** |  | **1.20** | **1.17-1.22** |  | **0.62** | **0.58-0.65** |  | **1.46** | **1.36-1.56** |  | **1.53** | **1.44-1.63** |
| More than HS | **0.78** | **0.77-0.80** |  | **0.85** | **0.85-0.86** |  | **1.59** | **1.50-1.68** |  | **0.71** | **0.69-0.73** |  | **0.71** | **0.69-0.73** |
| Other/Missing | **1.18** | **1.10-1.25** |  | **1.14** | **1.09-1.19** |  | **0.64** | **0.49-0.84** |  | 1.02 | 0.91-1.15 |  | 1.13 | 0.96-1.33 |
| Education\*CACN |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| HS Grad (reference) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Less than HS | **0.92** | **0.88-0.96** |  | **0.93** | **0.91-0.95** |  | **1.12** | **1.02-1.23** |  | 0.92 | 0.85-1.01 |  | 0.92 | 0.84-1.01 |
| More than HS | 0.99 | 0.96-1.03 |  | 1.01 | 0.99-1.04 |  | 0.88 | 0.74-1.05 |  | **1.08** | **1.03-1.13** |  | **1.07** | **1.01-1.14** |
| Other/Missing | 0.98 | 0.95-1.02 |  | 1.00 | 0.97-1.02 |  | 0.90 | 0.73-1.10 |  | 0.97 | 0.89-1.06 |  | 1.00 | 0.88-1.14 |
| Wald Test of Education\*CACN | p<.001 |  |  | p<.001 |  |  | p=n.s. |  |  | p<.01 |  |  | p=n.s. |  |
| **CC** | DNC | DNC |  | 1.03 | 0.91-1.17 |  | 0.82 | 0.47-1.45 |  | 1.10 | 0.93-1.30 |  | 0.87 | 0.61-1.25 |
| Education |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| HS Grad (reference) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Less than HS | DNC | DNC |  | **1.18** | **1.15-1.20** |  | **0.63** | **0.60-0.66** |  | **1.44** | **1.36-1.52** |  | **1.51** | **1.43-1.59** |
| More than HS | DNC | DNC |  | **0.86** | **0.85-0.86** |  | **1.53** | **1.40-1.66** |  | **0.72** | **0.71-0.74** |  | **0.72** | **0.70-0.74** |
| Other/Missing | DNC | DNC |  | **1.13** | **1.09-1.18** |  | **0.64** | **0.49-0.84** |  | 1.02 | 0.91-1.15 |  | 1.13 | 0.96-1.33 |
| Education\*CC |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| HS Grad (reference) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Less than HS | DNC | DNC |  | **0.93** | **0.90-0.97** |  | **1.17** | **1.00-1.37** |  | 0.96 | 0.76-1.20 |  | 0.98 | 0.75-1.29 |
| More than HS | DNC | DNC |  | **1.03** | **1.01-1.04** |  | 0.94 | 0.77-1.15 |  | **1.14** | **1.05-1.25** |  | **1.10** | **1.00-1.20** |
| Other/Missing | DNC | DNC |  | 0.98 | 0.93-1.02 |  | **0.85** | **0.73-0.99** |  | 1.04 | 0.97-1.12 |  | 0.98 | 0.81-1.19 |
| Wald Test of Education\*CC |  |  |  | p<.001 |  |  | p<.001 |  |  | p<.001 |  |  | p<.001 |  |
| **RR\_CPS** | 1.02 | 0.97-1.06 |  | 0.97 | 0.92-1.03 |  | 0.85 | 0.64-1.13 |  | 1.09 | 0.95-1.24 |  | 1.16 | 1.00-1.36 |
| Education |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| HS Grad (reference) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Less than HS | **1.27** | **1.23-1.31** |  | **1.19** | **1.17-1.22** |  | **0.62** | **0.59-0.64** |  | **1.48** | **1.42-1.55** |  | **1.55** | **1.47-1.63** |
| More than HS | **0.78** | **0.77-.0.79** |  | **0.85** | **0.85-0.86** |  | **1.50** | **1.36-1.66** |  | **0.71** | **0.70-0.73** |  | **0.71** | **0.69-0.74** |
| Other/Missing | **1.17** | **1.09-1.25** |  | **1.14** | **1.09-1.19** |  | **0.65** | **0.50-0.84** |  | 1.02 | 0.91-1.15 |  | 1.13 | 0.95-1.34 |
| Education\*RR\_CPS |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| HS Grad (reference) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Less than HS | **0.91** | **0.87-0.94** |  | **0.94** | **0.91-0.97** |  | **1.19** | **1.07-1.33** |  | **0.84** | **0.74-0.96** |  | **0.85** | **0.75-0.97** |
| More than HS | 1.02 | 0.97-1.07 |  | 1.02 | 1.00-1.03 |  | 1.10 | 0.95-1.29 |  | **1.06** | **1.03-1.09** |  | **1.04** | **1.00-1.09** |
| Other/Missing | 1.01 | 0.97-1.05 |  | 0.99 | 0.97-1.02 |  | 0.76 | 0.65-0.88 |  | 1.05 | 0.98-1.12 |  | 1.06 | 0.91-1.24 |
| Wald Test of Education\*RR\_CPS | p<.001 |  |  | p<.001 |  |  | p<.001 |  |  | p<.001 |  |  | p<.001 |  |

All models test the interaction of maternal education on all eight policies separately and adjusted for state, year and state-specific time trends and adjusted for individual- and state-level covariates (including all other pregnancy-specific alcohol policies). Models also adjusted standard errors to reflect clustering at the state level. The Wald test uses the Chi-square distribution and tests the hypothesis that all coefficients in the interaction term are 0.

Bold indicates p<.05

DNC: One model predicting the effect of Civil Commitment policies on low birthweight did not converge.

aOR: Adjusted odds ratio

CACN=Child Abuse/Neglect; CC=Civil Commitment; RR\_CPS=CPS Reporting Requirements

**Table Supp1d. Interaction effects of punitive alcohol/pregnancy policies on alcohol use**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Any Drinking** | |  | **Binge Drinking** | |  | **Heavy Drinking** | |  |
|  | **aOR** | **95% CI** |  | **aOR** | **95% CI** |  | **aOR** | **95% CI** |  |
| **CACN** | 1.11 | [0.86-1.43] |  | **0.59** | **[0.37-0.93]** |  | **0.54** | **[0.37-0.80]** |  |
| Education |  |  |  |  |  |  |  |  |  |
| HS Grad (reference) |  |  |  |  |  |  |  |  |  |
| Less than HS | **0.77** | **[0.64-0.92]** |  | 0.68 | [0.45-1.04] |  | 0.83 | [0.56-1.24] |  |
| More than HS | **1.55** | **[1.41-1.71]** |  | 1.29 | [0.90-1.85] |  | 1.32 | [1.00-1.75] |  |
| Education\*CACN |  |  |  |  |  |  |  |  |  |
| HS Grad (reference) |  |  |  |  |  |  |  |  |  |
| Less than HS | 0.77 | [0.60-1.00] |  | 1.22 | [0.73-2.03] |  | 0.89 | [0.49-1.61] |  |
| More than HS | 0.94 | [0.71-1.23] |  | 1.29 | [0.80-2.09] |  | 1.35 | [0.82-2.22] |  |
| Wald Test of Education\*CACN | p=n.s. |  |  | p=n.s. |  |  | p=n.s. |  |  |
| **CC** | 0.80 | [0.60-1.08] |  | 1.42 | [0.57-3.56] |  | 1.92 | [0.75-4.89] |  |
| Education |  |  |  |  |  |  |  |  |  |
| HS Grad (reference) |  |  |  |  |  |  |  |  |  |
| Less than HS | **0.73** | **[0.63-0.84]** |  | **0.71** | **[0.51-0.99]** |  | 0.80 | [0.57-1.12] |  |
| More than HS | **1.53** | **[1.42-1.65]** |  | **1.37** | **[1.02-1.84]** |  | **1.41** | **[1.11-1.79]** |  |
| Education\*CC |  |  |  |  |  |  |  |  |  |
| HS Grad (reference) |  |  |  |  |  |  |  |  |  |
| Less than HS | 0.88 | [0.48-1.61] |  | 1.27 | [0.34-4.54] |  | 1.51 | [0.45-5.04] |  |
| More than HS | 0.96 | [0.70-1.31] |  | 1.10 | [0.50-2.41] |  | 0.86 | [0.38-1.97] |  |
| Wald Test of Education\*CC | p=n.s. |  |  | p=n.s. |  |  | p=n.s. |  |  |
| **RR\_CPS** | 0.93 | [0.76-1.15] |  | 1.34 | [0.83-2.17] |  | 0.97 | [0.61-1.53] |  |
| Education |  |  |  |  |  |  |  |  |  |
| HS Grad (reference) |  |  |  |  |  |  |  |  |  |
| Less than HS | **0.71** | **[0.60-0.85]** |  | **0.64** | **[0.43-0.96]** |  | **0.68** | **[0.47-0.98]** |  |
| More than HS | **1.53** | **[1.39-1.67]** |  | 1.47 | [0.96-2.24] |  | **1.39** | **[1.01-1.90]** |  |
| Education\*RR\_CPS |  |  |  |  |  |  |  |  |  |
| HS Grad (reference) |  |  |  |  |  |  |  |  |  |
| Less than HS | 1.07 | [0.80-1.42] |  | 1.32 | [0.70-2.51] |  | 1.69 | [0.93-3.07] |  |
| More than HS | 1.01 | [0.87-1.18] |  | 0.81 | [0.48-1.37] |  | 1.07 | [0.69-1.67] |  |
| Wald Test of Education\*RR\_CPS | p=n.s. |  |  | p=n.s. |  |  | p=n.s. |  |  |

All models test the interaction of maternal education on all eight policies separately and adjusted for state, year and state-specific time trends and adjusted for individual- and state-level covariates (including all other pregnancy-specific alcohol policies). Models also adjusted standard errors to reflect clustering at the state level. The Wald test uses the Chi-square distribution and tests the hypothesis that all coefficients in the interaction term are 0.

aOR: Adjusted odds ratio

CACN=Child Abuse/Neglect; CC=Civil Commitment; RR\_CPS=CPS Reporting Requirements