# Supplementary materials

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#### Supplemental Table 1 (Primary outcome): Univariate regression model results of risk factors for death

|  |  |  |
| --- | --- | --- |
| **Variables** | **cOR (95% UCL - LCL)** | **Beta parameter estimate p value** |
| Demographic characteristics |  |  |
| Age in weeks at diagnosisa | 0.97 (0.95, 0.99)) | 0.01 |
| Sex (F)a | 0.99 (0.69, 1.44) | 0.97 |
| Month (restricted to seasons)  |  |  |
| reference = June |  |  |
| January  | 0.80 (0.27, 2.33) | 0.68 |
| February | 0.51 (0.16, 1.63) | 0.26 |
| March | 1.76 (0.70, 4.44) | 0.23 |
| April | 1.20 (0.46, 3.13) | 0.70 |
| May | 1.44 (0.53, 3.91) | 0.48 |
| July | 1.30 (0.44, 3.87) | 0.63 |
| August | 0.94 (0.33, 2.67) | 0.90 |
| September | 1.27 (0.51, 3.15) | 0.60 |
| October | 1.53 (0.62, 3.76) | 0.36 |
| November | 0.99 (0.38, 2.60) | 0.98 |
| December | 1.04 (0.38, 2.87) | 0.94 |
| Years (restrict to 12 month seasons)a |  |  |
| 2014 | 1.83 (0.86, 3.87) | 0.11 |
| 2015 | 1.73 (0.85, 3.56) | 0.13 |
| 2016 | 1.40 (0.67, 2.93) | 0.37 |
| Medical and social history |  |  |
| Child’s birthweighta | 0.86 (0.73, 1.02) | 0.09 |
| Breastfed (yes)a | 0.28 (0.11, 0.71) | 0.01 |
| Household employment statusa | 0.25 (0.16, 0.38) | <.0001 |
| Household electricity status (reference = None)a |  |  |
| Any | 0.47 (0.31, 0.72) | 0.00 |
| Household transportation status  |  |  |
| Bicycle | 1.24 (0.82, 1.89) | 0.31 |
| Motorcycle | 1.19 (0.61, 2.33) | 0.60 |
| Cara | 0.36 (0.18, 0.70) | 0.00 |
| Household electronics status |  |  |
| Computera | 0.32 (0.15, 0.70) | 0.00 |
| Telephonea | 2.33 (1.25, 4.33) | 0.01 |
| Televisiona | 0.29 (0.19, 0.43) | <.0001 |
| Radio | 0.78 (0.49, 1.24) | 0.30 |
| Household appliance status  |  |  |
| Refrigeratora | 0.41 (0.25, 0.67) | 0.00 |
| Clinical characteristics |  |  |
| Duration of symptom onset to IS date admission to treatment hospitala | 1.05 (1.02, 1.08) | 0.00 |
| Transferred hospitals |  | 0.87 |
| Method of IS diagnosis included:a |  |  |
| Clinical alone | 0.47 (0.25, 0.89) | 0.02 |
| Enema and/or US | 0.33 (0.18, 0.62) | 0.00 |
| Surgery | 3.43 (2.09, 5.62) | <.0001 |
| IS treatment (reference= US and/or enema) |  |  |
| Surgery | NED |  |
| Resectiona | 3.83 (2.51, 5.84) | <.0001 |

#### Abbreviations: NED = not enough data (complete or quasi-complete separation of datapoints); cOR = crude Odds Ratio; UCL = Upper Confidence Limit; LCL = Lower Confidence Limit; US = Ultrasound; IS = Intussusception

aVariable met inclusion criteria for the initial multivariable model

#### Supplemental Table 2 (Secondary outcome): Regression model results of risk factors for resection

|  |  |  |
| --- | --- | --- |
| **Variables** | **cOR (95% UCL - LCL)** | **Beta parameter estimate p value** |
| **Demographic characteristics** |  |  |
| Age in weeks at diagnosisa | 0.96 (0.95 ,0.98)  | <0.0001 |
| Sex (F)a | 1.33 (1.03, 1.72)  | 0.0288 |
| **Month (restricted to seasons) reference = June** |  |  |
|  |  |  |
| **January**  | 0.64 (0.32, 1.26)  | 0.1986 |
| **February** | 0.74 (0.38, 1.44)  | 0.3773 |
| **March** | 0.74 (0.38, 1.45)  | 0.3768 |
| **April** | 0.61 (0.32, 1.19)  | 0.1457 |
| **May** | 0.86 (0.42, 1.75)  | 0.6729 |
| **July** | 0.96 (0.44, 2.08)  | 0.9177 |
| **August** | 1.14 (0.57, 2.29)  | 0.7057 |
| **September** | 0.77 (0.41, 1.44)  | 0.4141 |
| **October** | 0.75 (0.40, 1.4)  | 0.3806 |
| **November** | 0.38 (0.19 ,0.73)  | 0.0036 |
| **December** | 1.11 (0.56, 2.19)  | 0.7637 |
| **Years (restrict to 12m seasons) Ref = 2013a** |  |  |
| **2014** | 1.75 (1.09, 2.79)  | 0.0195 |
| **2015** | 1.73 (1.11, 2.70)  | 0.0151 |
| **2016** | 1.56 (0.99, 2.43)  | 0.0643 |
| **Medical and social history** |  |  |
| Child’s birthweight | 0.97 (0.89, 1.05)  | 0.4128 |
| Breastfed (yes) | 0.69 (0.28, 1.74)  | 0.4347 |
| Household employment statusa | 0.43 (0.32, 0.57)  | <0.0001 |
| Household electricity status (reference = None)a |  |  |
| Any | 0.36 (0.26, 0.50)  | <.0001 |
| **Household transportation status**  |  |  |
| Bicyclea | 0.81 (0.62, 1.07)  | 0.1439 |
| Motorcyclea | 1.06 (0.67, 1.68)  | 0.8033 |
| Cara | 0.45 (0.32, 0.63)  | <.0001 |
| **Household electronics status** |  |  |
| Computera | 0.47 (0.32, 0.67)  | <0.0001 |
| Telephone | 1.22 (0.87, 1.70)  | 0.2573 |
| Televisiona | 0.34 (0.25, 0.45)  | <0.0001 |
| Radioa | 0.58 (0.42, 0.81)  | 0.0011 |
| **Household appliance status**  |  |  |
| Refrigeratora | 0.49 (0.37, 0.65)  | <0.0001 |
| **Clinical characteristics** |  |  |
| Duration of symptom onset to IS date admission to treatment hospitala | 1.02 (0.99, 1.04)  | 0.1886 |
| Transferred hospitals | 1.14 (0.80, 1.62)  | 0.4611 |
| **Method of IS diagnosis included:a** |  |  |
| Clinical alone | 1.35 (0.95, 1.91)  | 0.0975 |
| Enema and/or US | 0.32 (0.23, 0.46)  | <0.0001 |
| Surgery | 1.92 (1.46, 2.53)  | <0.0001 |
| **IS treatment (reference= US/enema)** |  |  |
| Surgery | NED  |  |

#### Abbreviations: NED = not enough data (complete or quasi-complete separation of datapoints); cOR = crude Odds Ratio; aOR = adjusted Odds Ratio; UCL = Upper Confidence Limit; LCL = Lower Confidence Limit; US = Ultrasound, IS = Intussusception

aVariable met inclusion criteria for the initial multivariable model