OUTPATIENT VISITS

m <- glm.nb(n ~ getty\_disaster\_20km \* getty, data = an\_dat)

> summary(m)

Call:

glm.nb(formula = n ~ getty\_disaster\_20km \* getty, data = an\_dat,

init.theta = 0.9279458831, link = log)

Deviance Residuals:

Min 1Q Median 3Q Max

-2.0803 -1.0305 -0.3005 0.3348 3.4930

Coefficients:

Estimate Std. Error z value Pr(>|z|)

(Intercept) 2.141577 0.001005 2131.315 < 2e-16 \*\*\*

getty\_disaster\_20km 0.013397 0.002341 5.722 1.05e-08 \*\*\*

getty -0.237857 0.012987 -18.315 < 2e-16 \*\*\*

getty\_disaster\_20km:getty 0.015696 0.031029 0.506 0.613

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for Negative Binomial(0.9279) family taken to be 1)

Null deviance: 1697279 on 1459422 degrees of freedom

Residual deviance: 1696871 on 1459419 degrees of freedom

AIC: 9334642

Number of Fisher Scoring iterations: 1

Theta: 0.92795

Std. Err.: 0.00124

2 x log-likelihood: -9334632.01200

> mn <- glm.nb(n ~ woolsey\_disaster\_20km \* woolsey, data = an\_dat)

> summary(mn)

Call:

glm.nb(formula = n ~ woolsey\_disaster\_20km \* woolsey, data = an\_dat,

init.theta = 0.9325615367, link = log)

Deviance Residuals:

Min 1Q Median 3Q Max

-2.2495 -1.0156 -0.2785 0.3637 3.5626

Coefficients:

Estimate Std. Error z value Pr(>|z|)

(Intercept) 2.1142781 0.0009652 2190.476 <2e-16 \*\*\*

woolsey\_disaster\_20km 0.2008730 0.0028319 70.933 <2e-16 \*\*\*

woolsey 0.3194828 0.0098291 32.504 <2e-16 \*\*\*

woolsey\_disaster\_20km:woolsey -0.0599753 0.0295023 -2.033 0.0421 \*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for Negative Binomial(0.9326) family taken to be 1)

Null deviance: 1703535 on 1459422 degrees of freedom

Residual deviance: 1697034 on 1459419 degrees of freedom

AIC: 9328565

Number of Fisher Scoring iterations: 1

Theta: 0.93256

Std. Err.: 0.00125

2 x log-likelihood: -9328555.45500

> mc <- glm.nb(n ~ getty\_disaster\_20km + getty, data = an\_dat)

> summary(mc)

Call:

glm.nb(formula = n ~ getty\_disaster\_20km + getty, data = an\_dat,

init.theta = 0.9279456948, link = log)

Deviance Residuals:

Min 1Q Median 3Q Max

-2.0804 -1.0305 -0.3004 0.3348 3.4930

Coefficients:

Estimate Std. Error z value Pr(>|z|)

(Intercept) 2.141560 0.001004 2132.413 < 2e-16 \*\*\*

getty\_disaster\_20km 0.013486 0.002335 5.776 7.63e-09 \*\*\*

getty -0.235094 0.011794 -19.933 < 2e-16 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for Negative Binomial(0.9279) family taken to be 1)

Null deviance: 1697279 on 1459422 degrees of freedom

Residual deviance: 1696871 on 1459420 degrees of freedom

AIC: 9334640

Number of Fisher Scoring iterations: 1

Theta: 0.92795

Std. Err.: 0.00124

2 x log-likelihood: -9334632.26800

> mnc <- glm.nb(n ~ woolsey\_disaster\_20km + woolsey, data = an\_dat)

> summary(mnc)

Call:

glm.nb(formula = n ~ woolsey\_disaster\_20km + woolsey, data = an\_dat,

init.theta = 0.9325583336, link = log)

Deviance Residuals:

Min 1Q Median 3Q Max

-2.2700 -1.0157 -0.2786 0.3636 3.5625

Coefficients:

Estimate Std. Error z value Pr(>|z|)

(Intercept) 2.1143411 0.0009647 2191.72 <2e-16 \*\*\*

woolsey\_disaster\_20km 0.2003314 0.0028188 71.07 <2e-16 \*\*\*

woolsey 0.3129748 0.0092678 33.77 <2e-16 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for Negative Binomial(0.9326) family taken to be 1)

Null deviance: 1703530 on 1459422 degrees of freedom

Residual deviance: 1697034 on 1459420 degrees of freedom

AIC: 9328568

Number of Fisher Scoring iterations: 1

Theta: 0.93256

Std. Err.: 0.00125

2 x log-likelihood: -9328559.53300

Warning messages:

1: package ‘ggplot2’ was built under R version 3.6.2

2: package ‘tibble’ was built under R version 3.6.2

3: package ‘tidyr’ was built under R version 3.6.2

4: package ‘dplyr’ was built under R version 3.6.2

5: package ‘MASS’ was built under R version 3.6.2

>

INPATIENT VISITS:

m <- glm.nb(n ~ getty\_disaster\_20km \* getty, data = an\_dat)

> summary(m)

Call:

glm.nb(formula = n ~ getty\_disaster\_20km \* getty, data = an\_dat,

init.theta = 0.1757253348, link = log)

Deviance Residuals:

Min 1Q Median 3Q Max

-0.5828 -0.5828 -0.5828 -0.5684 4.2909

Coefficients:

Estimate Std. Error z value Pr(>|z|)

(Intercept) -1.251072 0.002786 -449.125 <2e-16 \*\*\*

getty\_disaster\_20km -0.077370 0.006575 -11.767 <2e-16 \*\*\*

getty -0.368945 0.038420 -9.603 <2e-16 \*\*\*

getty\_disaster\_20km:getty -0.045213 0.094222 -0.480 0.631

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for Negative Binomial(0.1757) family taken to be 1)

Null deviance: 633935 on 1459422 degrees of freedom

Residual deviance: 633682 on 1459419 degrees of freedom

AIC: 1821467

Number of Fisher Scoring iterations: 1

Theta: 0.175725

Std. Err.: 0.000666

2 x log-likelihood: -1821456.985000

> mn <- glm.nb(n ~ woolsey\_disaster\_20km \* woolsey, data = an\_dat)

> summary(mn)

Call:

glm.nb(formula = n ~ woolsey\_disaster\_20km \* woolsey, data = an\_dat,

init.theta = 0.1769087063, link = log)

Deviance Residuals:

Min 1Q Median 3Q Max

-0.7948 -0.5764 -0.5764 -0.5764 4.2158

Coefficients:

Estimate Std. Error z value Pr(>|z|)

(Intercept) -1.288876 0.002692 -478.750 < 2e-16 \*\*\*

woolsey\_disaster\_20km 0.085007 0.007851 10.828 < 2e-16 \*\*\*

woolsey 0.793817 0.024674 32.172 < 2e-16 \*\*\*

woolsey\_disaster\_20km:woolsey 0.279759 0.072091 3.881 0.000104 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for Negative Binomial(0.1769) family taken to be 1)

Null deviance: 636016 on 1459422 degrees of freedom

Residual deviance: 634395 on 1459419 degrees of freedom

AIC: 1820103

Number of Fisher Scoring iterations: 1

Theta: 0.176909

Std. Err.: 0.000672

2 x log-likelihood: -1820093.492000

> mc <- glm.nb(n ~ getty\_disaster\_20km + getty, data = an\_dat)

> summary(mc)

Call:

glm.nb(formula = n ~ getty\_disaster\_20km + getty, data = an\_dat,

init.theta = 0.1757251869, link = log)

Deviance Residuals:

Min 1Q Median 3Q Max

-0.5828 -0.5828 -0.5828 -0.5684 4.2908

Coefficients:

Estimate Std. Error z value Pr(>|z|)

(Intercept) -1.251033 0.002784 -449.31 <2e-16 \*\*\*

getty\_disaster\_20km -0.077590 0.006559 -11.83 <2e-16 \*\*\*

getty -0.376461 0.035078 -10.73 <2e-16 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for Negative Binomial(0.1757) family taken to be 1)

Null deviance: 633935 on 1459422 degrees of freedom

Residual deviance: 633682 on 1459420 degrees of freedom

AIC: 1821465

Number of Fisher Scoring iterations: 1

Theta: 0.175725

Std. Err.: 0.000666

2 x log-likelihood: -1821457.215000

> mnc <- glm.nb(n ~ woolsey\_disaster\_20km + woolsey, data = an\_dat)

> summary(mnc)

Call:

glm.nb(formula = n ~ woolsey\_disaster\_20km + woolsey, data = an\_dat,

init.theta = 0.1768925953, link = log)

Deviance Residuals:

Min 1Q Median 3Q Max

-0.7498 -0.5764 -0.5764 -0.5764 4.2099

Coefficients:

Estimate Std. Error z value Pr(>|z|)

(Intercept) -1.289293 0.002691 -479.18 <2e-16 \*\*\*

woolsey\_disaster\_20km 0.088554 0.007802 11.35 <2e-16 \*\*\*

woolsey 0.829188 0.023165 35.80 <2e-16 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for Negative Binomial(0.1769) family taken to be 1)

Null deviance: 635988 on 1459422 degrees of freedom

Residual deviance: 634383 on 1459420 degrees of freedom

AIC: 1820117

Number of Fisher Scoring iterations: 1

Theta: 0.176893

Std. Err.: 0.000672

2 x log-likelihood: -1820109.246000

Warning messages:

1: package ‘ggplot2’ was built under R version 3.6.2

2: package ‘tibble’ was built under R version 3.6.2

3: package ‘tidyr’ was built under R version 3.6.2

4: package ‘dplyr’ was built under R version 3.6.2

5: package ‘MASS’ was built under R version 3.6.2

>

EMERGENCY VISITS

> m <- glm.nb(n ~ getty\_disaster\_20km \* getty, data = an\_dat)

> summary(m)

Call:

glm.nb(formula = n ~ getty\_disaster\_20km \* getty, data = an\_dat,

init.theta = 0.3229103058, link = log)

Deviance Residuals:

Min 1Q Median 3Q Max

-0.8053 -0.7872 -0.7872 0.3009 3.9612

Coefficients:

Estimate Std. Error z value Pr(>|z|)

(Intercept) -0.653863 0.002059 -317.514 <2e-16 \*\*\*

getty\_disaster\_20km 0.071559 0.004749 15.068 <2e-16 \*\*\*

getty 0.042680 0.026063 1.638 0.102

getty\_disaster\_20km:getty -0.072885 0.062370 -1.169 0.243

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for Negative Binomial(0.3229) family taken to be 1)

Null deviance: 961990 on 1459422 degrees of freedom

Residual deviance: 961761 on 1459419 degrees of freedom

AIC: 2760623

Number of Fisher Scoring iterations: 1

Theta: 0.322910

Std. Err.: 0.000968

2 x log-likelihood: -2760613.462000

> mn <- glm.nb(n ~ woolsey\_disaster\_20km \* woolsey, data = an\_dat)

> summary(mn)

Call:

glm.nb(formula = n ~ woolsey\_disaster\_20km \* woolsey, data = an\_dat,

init.theta = 0.3247386995, link = log)

Deviance Residuals:

Min 1Q Median 3Q Max

-1.027 -0.785 -0.785 0.271 3.991

Coefficients:

Estimate Std. Error z value Pr(>|z|)

(Intercept) -0.665522 0.001981 -335.971 < 2e-16 \*\*\*

woolsey\_disaster\_20km 0.140076 0.005727 24.459 < 2e-16 \*\*\*

woolsey 0.616240 0.018562 33.198 < 2e-16 \*\*\*

woolsey\_disaster\_20km:woolsey 0.189685 0.054161 3.502 0.000461 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for Negative Binomial(0.3247) family taken to be 1)

Null deviance: 964555 on 1459422 degrees of freedom

Residual deviance: 962422 on 1459419 degrees of freedom

AIC: 2758724

Number of Fisher Scoring iterations: 1

Theta: 0.324739

Std. Err.: 0.000976

2 x log-likelihood: -2758714.211000

> mc <- glm.nb(n ~ getty\_disaster\_20km + getty, data = an\_dat)

> summary(mc)

Call:

glm.nb(formula = n ~ getty\_disaster\_20km + getty, data = an\_dat,

init.theta = 0.3229090544, link = log)

Deviance Residuals:

Min 1Q Median 3Q Max

-0.8129 -0.7872 -0.7872 0.3011 3.9610

Coefficients:

Estimate Std. Error z value Pr(>|z|)

(Intercept) -0.653784 0.002058 -317.657 <2e-16 \*\*\*

getty\_disaster\_20km 0.071139 0.004735 15.023 <2e-16 \*\*\*

getty 0.030051 0.023679 1.269 0.204

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for Negative Binomial(0.3229) family taken to be 1)

Null deviance: 961988 on 1459422 degrees of freedom

Residual deviance: 961760 on 1459420 degrees of freedom

AIC: 2760623

Number of Fisher Scoring iterations: 1

Theta: 0.322909

Std. Err.: 0.000968

2 x log-likelihood: -2760614.822000

> mnc <- glm.nb(n ~ woolsey\_disaster\_20km + woolsey, data = an\_dat)

> summary(mnc)

Call:

glm.nb(formula = n ~ woolsey\_disaster\_20km + woolsey, data = an\_dat,

init.theta = 0.3247243001, link = log)

Deviance Residuals:

Min 1Q Median 3Q Max

-0.9853 -0.7850 -0.7850 0.2700 3.9911

Coefficients:

Estimate Std. Error z value Pr(>|z|)

(Intercept) -0.665786 0.001980 -336.30 <2e-16 \*\*\*

woolsey\_disaster\_20km 0.142287 0.005694 24.99 <2e-16 \*\*\*

woolsey 0.639601 0.017428 36.70 <2e-16 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for Negative Binomial(0.3247) family taken to be 1)

Null deviance: 964535 on 1459422 degrees of freedom

Residual deviance: 962415 on 1459420 degrees of freedom

AIC: 2758735

Number of Fisher Scoring iterations: 1

Theta: 0.324724

Std. Err.: 0.000976

2 x log-likelihood: -2758726.826000

Warning messages:

1: package ‘ggplot2’ was built under R version 3.6.2

2: package ‘tibble’ was built under R version 3.6.2

3: package ‘tidyr’ was built under R version 3.6.2

4: package ‘dplyr’ was built under R version 3.6.2

5: package ‘MASS’ was built under R version 3.6.2

>

INPATIENT CIRCULATORY

> m <- glm.nb(n ~ getty\_disaster\_20km \* getty, data = an\_dat)

> summary(m)

Call:

glm.nb(formula = n ~ getty\_disaster\_20km \* getty, data = an\_dat,

init.theta = 0.1694529358, link = log)

Deviance Residuals:

Min 1Q Median 3Q Max

-0.5577 -0.5577 -0.5577 -0.5529 4.4446

Coefficients:

Estimate Std. Error z value Pr(>|z|)

(Intercept) -1.367504 0.002881 -474.614 < 2e-16 \*\*\*

getty\_disaster\_20km -0.026184 0.006747 -3.881 0.000104 \*\*\*

getty -0.398753 0.040177 -9.925 < 2e-16 \*\*\*

getty\_disaster\_20km:getty 0.042434 0.095818 0.443 0.657868

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for Negative Binomial(0.1695) family taken to be 1)

Null deviance: 601187 on 1459422 degrees of freedom

Residual deviance: 601058 on 1459419 degrees of freedom

AIC: 1704159

Number of Fisher Scoring iterations: 1

Theta: 0.169453

Std. Err.: 0.000677

2 x log-likelihood: -1704149.411000

> mn <- glm.nb(n ~ woolsey\_disaster\_20km \* woolsey, data = an\_dat)

> summary(mn)

Call:

glm.nb(formula = n ~ woolsey\_disaster\_20km \* woolsey, data = an\_dat,

init.theta = 0.1707474408, link = log)

Deviance Residuals:

Min 1Q Median 3Q Max

-0.7765 -0.5527 -0.5527 -0.5527 4.3196

Coefficients:

Estimate Std. Error z value Pr(>|z|)

(Intercept) -1.398768 0.002781 -502.900 < 2e-16 \*\*\*

woolsey\_disaster\_20km 0.105750 0.008077 13.093 < 2e-16 \*\*\*

woolsey 0.778762 0.025380 30.685 < 2e-16 \*\*\*

woolsey\_disaster\_20km:woolsey 0.324430 0.073609 4.407 1.05e-05 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for Negative Binomial(0.1707) family taken to be 1)

Null deviance: 603389 on 1459422 degrees of freedom

Residual deviance: 601819 on 1459419 degrees of freedom

AIC: 1702723

Number of Fisher Scoring iterations: 1

Theta: 0.170747

Std. Err.: 0.000684

2 x log-likelihood: -1702713.034000

> mc <- glm.nb(n ~ getty\_disaster\_20km + getty, data = an\_dat)

> summary(mc)

Call:

glm.nb(formula = n ~ getty\_disaster\_20km + getty, data = an\_dat,

init.theta = 0.1694528027, link = log)

Deviance Residuals:

Min 1Q Median 3Q Max

-0.5577 -0.5577 -0.5577 -0.5529 4.4447

Coefficients:

Estimate Std. Error z value Pr(>|z|)

(Intercept) -1.36754 0.00288 -474.83 < 2e-16 \*\*\*

getty\_disaster\_20km -0.02597 0.00673 -3.86 0.000114 \*\*\*

getty -0.39129 0.03647 -10.73 < 2e-16 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for Negative Binomial(0.1695) family taken to be 1)

Null deviance: 601187 on 1459422 degrees of freedom

Residual deviance: 601058 on 1459420 degrees of freedom

AIC: 1704158

Number of Fisher Scoring iterations: 1

Theta: 0.169453

Std. Err.: 0.000677

2 x log-likelihood: -1704149.607000

> mnc <- glm.nb(n ~ woolsey\_disaster\_20km + woolsey, data = an\_dat)

> summary(mnc)

Call:

glm.nb(formula = n ~ woolsey\_disaster\_20km + woolsey, data = an\_dat,

init.theta = 0.1707252077, link = log)

Deviance Residuals:

Min 1Q Median 3Q Max

-0.7252 -0.5526 -0.5526 -0.5526 4.3126

Coefficients:

Estimate Std. Error z value Pr(>|z|)

(Intercept) -1.399267 0.002780 -503.35 <2e-16 \*\*\*

woolsey\_disaster\_20km 0.109964 0.008026 13.70 <2e-16 \*\*\*

woolsey 0.820809 0.023795 34.49 <2e-16 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for Negative Binomial(0.1707) family taken to be 1)

Null deviance: 603351 on 1459422 degrees of freedom

Residual deviance: 601802 on 1459420 degrees of freedom

AIC: 1702741

Number of Fisher Scoring iterations: 1

Theta: 0.170725

Std. Err.: 0.000684

2 x log-likelihood: -1702733.481000

Warning messages:

1: package ‘ggplot2’ was built under R version 3.6.2

2: package ‘tibble’ was built under R version 3.6.2

3: package ‘tidyr’ was built under R version 3.6.2

4: package ‘dplyr’ was built under R version 3.6.2

5: package ‘MASS’ was built under R version 3.6.2

>

EMERGENCY CIRCULATORY

> m <- glm.nb(n ~ getty\_disaster\_20km \* getty, data = an\_dat)

> summary(m)

Call:

glm.nb(formula = n ~ getty\_disaster\_20km \* getty, data = an\_dat,

init.theta = 0.2805470166, link = log)

Deviance Residuals:

Min 1Q Median 3Q Max

-0.7378 -0.7074 -0.7074 -0.7074 3.9453

Coefficients:

Estimate Std. Error z value Pr(>|z|)

(Intercept) -0.906618 0.002259 -401.338 < 2e-16 \*\*\*

getty\_disaster\_20km 0.129369 0.005159 25.078 < 2e-16 \*\*\*

getty -0.025098 0.028970 -0.866 0.38629

getty\_disaster\_20km:getty -0.193233 0.070083 -2.757 0.00583 \*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for Negative Binomial(0.2805) family taken to be 1)

Null deviance: 853844 on 1459422 degrees of freedom

Residual deviance: 853205 on 1459419 degrees of freedom

AIC: 2384309

Number of Fisher Scoring iterations: 1

Theta: 0.280547

Std. Err.: 0.000932

2 x log-likelihood: -2384299.485000

> mn <- glm.nb(n ~ woolsey\_disaster\_20km \* woolsey, data = an\_dat)

> summary(mn)

Call:

glm.nb(formula = n ~ woolsey\_disaster\_20km \* woolsey, data = an\_dat,

init.theta = 0.2820524158, link = log)

Deviance Residuals:

Min 1Q Median 3Q Max

-0.9229 -0.7067 -0.7067 -0.7067 3.9635

Coefficients:

Estimate Std. Error z value Pr(>|z|)

(Intercept) -0.912517 0.002171 -420.309 <2e-16 \*\*\*

woolsey\_disaster\_20km 0.178282 0.006228 28.627 <2e-16 \*\*\*

woolsey 0.642926 0.020128 31.941 <2e-16 \*\*\*

woolsey\_disaster\_20km:woolsey 0.085954 0.058967 1.458 0.145

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for Negative Binomial(0.2821) family taken to be 1)

Null deviance: 855961 on 1459422 degrees of freedom

Residual deviance: 853807 on 1459419 degrees of freedom

AIC: 2382798

Number of Fisher Scoring iterations: 1

Theta: 0.282052

Std. Err.: 0.000938

2 x log-likelihood: -2382788.470000

> mc <- glm.nb(n ~ getty\_disaster\_20km + getty, data = an\_dat)

> summary(mc)

Call:

glm.nb(formula = n ~ getty\_disaster\_20km + getty, data = an\_dat,

init.theta = 0.2805401034, link = log)

Deviance Residuals:

Min 1Q Median 3Q Max

-0.7376 -0.7074 -0.7074 -0.7074 3.9449

Coefficients:

Estimate Std. Error z value Pr(>|z|)

(Intercept) -0.906419 0.002258 -401.484 <2e-16 \*\*\*

getty\_disaster\_20km 0.128333 0.005145 24.945 <2e-16 \*\*\*

getty -0.057692 0.026373 -2.188 0.0287 \*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for Negative Binomial(0.2805) family taken to be 1)

Null deviance: 853834 on 1459422 degrees of freedom

Residual deviance: 853203 on 1459420 degrees of freedom

AIC: 2384315

Number of Fisher Scoring iterations: 1

Theta: 0.280540

Std. Err.: 0.000931

2 x log-likelihood: -2384307.038000

> mnc <- glm.nb(n ~ woolsey\_disaster\_20km + woolsey, data = an\_dat)

> summary(mnc)

Call:

glm.nb(formula = n ~ woolsey\_disaster\_20km + woolsey, data = an\_dat,

init.theta = 0.2820498508, link = log)

Deviance Residuals:

Min 1Q Median 3Q Max

-0.9051 -0.7066 -0.7066 -0.7066 3.9637

Coefficients:

Estimate Std. Error z value Pr(>|z|)

(Intercept) -0.912635 0.002170 -420.63 <2e-16 \*\*\*

woolsey\_disaster\_20km 0.179258 0.006193 28.95 <2e-16 \*\*\*

woolsey 0.653144 0.018915 34.53 <2e-16 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for Negative Binomial(0.282) family taken to be 1)

Null deviance: 855958 on 1459422 degrees of freedom

Residual deviance: 853805 on 1459420 degrees of freedom

AIC: 2382799

Number of Fisher Scoring iterations: 1

Theta: 0.282050

Std. Err.: 0.000938

2 x log-likelihood: -2382790.620000

Warning messages:

1: package ‘ggplot2’ was built under R version 3.6.2

2: package ‘tibble’ was built under R version 3.6.2

3: package ‘tidyr’ was built under R version 3.6.2

4: package ‘dplyr’ was built under R version 3.6.2

5: package ‘MASS’ was built under R version 3.6.2