```
> ONC<-read.csv("PANE_AcousticData.csv")</pre>
> m1<-gamm(data=ONC,dB~Covid+s(Month),family="quasipoisson")</pre>
 Maximum number of PQL iterations: 20
iteration 1
                                                                          Normal Q-Q Plot
iteration 2
                                                                                 marine Court Coo o o
> qqnorm(residuals(m1$gam))
> summary(m1$gam)
                                                          Sample Quantiles
Family: quasipoisson
Link function: log
Formula:
                                                             9.0-
dB \sim Covid + s(Month)
                                                                  0 0
Parametric coefficients:
                                                                   -2
                                                                                          2
             Estimate Std. Error t value Pr(>|t|)
                                                                          Theoretical Quantiles
(Intercept) 4.224673 0.003385 1248.21
                                             <2e-16 ***
            -0.113332 0.007985 -14.19
                                             <2e-16 ***
Covidyes
Signif. codes: 0 '*** 0.001 '** 0.01 '* 0.05 '.' 0.1 ' ' 1
Approximate significance of smooth terms:
           edf Ref.df
                           F p-value
s(Month) 6.028 6.028 11.18 6.66e-10 ***
Signif. codes: 0 '*** 0.001 '** 0.01 '* 0.05 '.' 0.1 ' ' 1
R-sq.(adj) = 0.738
  Scale est. = 0.054723 n = 103
> ((10^(exp(4.224673-0.113332)/10)-10^(exp(4.224673)/10))/10^(exp(4.224673)/10))*100
Γ17 -81.48024
```

## **Decrease by 81%**