lec11_q19

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Run a LR model comparasion test H0 : beta_1 = 0 Ha: beta_1 != 0

```
wrk <- read.csv('healthcare_worker.csv')
library(dplyr)
```

```
##
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:stats':
##
##     filter, lag
```

```
## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

```
library(car)
```

```
## Loading required package: carData
```

```
##
## Attaching package: 'car'
```

```
## The following object is masked from 'package:dplyr':
##
##     recode
```

```
wrk.fit <- glm(Hepatitis/Size ~ Occup.group, weights = Size, family = binomial(link = "logit"), data = wrk)
Anova(wrk.fit, test = "LR")
```

```
## Analysis of Deviance Table (Type II tests)
##
## Response: Hepatitis/Size
##           LR Chisq Df Pr(>Chisq)
## Occup.group    3.735  4     0.4431
```

```
data.frame(ORs = exp(wrk.fit$coefficients[-1]), Contact = c("Fluid", "Lab", "Non - patient Contact", "Patien
t contact"))
```

```
##                              ORs              Contact
## Occup.groupFluid contact       1.2084006              Fluid
## Occup.groupLab staff           2.4905660                Lab
## Occup.groupNo patient contact 2.8205128 Non - patient Contact
## Occup.groupPatient contact     0.7119741      Patient contact
```

The test statistic yields to do not reject H0, so we accept that occupational groups have no effect on hepatitis. From the ORs we see the odds of being hepatitis positive in the non-patient contact category is 2.82 times as high as the baseline level(exposure prone), which is the highest, and this is the opposite of my expectation..