

lec5_q18

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```
library(binom)
library(PropCIs)
```

settings

Define 'success' as HIV positive.

```
#Condom
w.v <- 15
n.v <- 24
#no condom
w.p <- 135
n.p <- 569
```

c.

```
(w.v * (n.p-w.p)) / (w.p * (n.v-w.v)) #Odds Ratio
```

```
## [1] 5.358025
```

The odds of having HIV positive in condom using group is 5.358 times as high as no condom group

```
orscoreci(x1=w.v, n1=n.v, x2=w.p, n2=n.p, conf.level = 0.95) #Score CI of odds ratio
```

```
##
##
##
## data:
##
## 95 percent confidence interval:
## 2.336496 12.274682
```

We expect 95% of all similarly constructed intervals to contain the odds of HIV positive in condom using group.

- d. From the result, using condom seems increase the chance of having HIV. This might be due to one of the 2 groups is too small in size comparing to another one.