Week 4 Coding Guide

PH241

### epi.2by2

* Summary measures for count data presented in a 2 by 2 table

library(epiR)  
epi.2by2(dat,   
 method = c("cohort.count", "cohort.time", "case.control", "cross.sectional"),   
 conf.level = 0.95,   
 units = 100,   
 outcome = c("as.columns","as.rows"))

* dat: an object of class table containing the individual cell frequencies.

diet

##   
## Alive Dead  
## Low-fat 186 136  
## other 119 59

epi.2by2(diet,   
 method = "cohort.count",   
 conf.level = 0.95,   
 units = 1,   
 outcome = "as.columns")

## Outcome + Outcome - Total Inc risk \* Odds  
## Exposed + 186 136 322 0.578 1.37  
## Exposed - 119 59 178 0.669 2.02  
## Total 305 195 500 0.610 1.56  
##   
## Point estimates and 95% CIs:  
## -------------------------------------------------------------------  
## Inc risk ratio 0.86 (0.75, 0.99)  
## Odds ratio 0.68 (0.46, 0.99)  
## Attrib risk \* -0.09 (-0.18, -0.00)  
## Attrib risk in population \* -0.06 (-0.14, 0.02)  
## Attrib fraction in exposed (%) -15.74 (-33.04, -0.68)  
## Attrib fraction in population (%) -9.60 (-19.35, -0.64)  
## -------------------------------------------------------------------  
## Test that OR = 1: chi2(1) = 3.981 Pr>chi2 = 0.05  
## Wald confidence limits  
## CI: confidence interval  
## \* Outcomes per population unit

birthwt <- data.frame("Low" = c(21054, 27126), "Normal" = c(14442, 3804294), row.names = c("Dead at Year 1","Alive at Year 1"))  
birthwt

## Low Normal  
## Dead at Year 1 21054 14442  
## Alive at Year 1 27126 3804294

epi.2by2(birthwt,   
 method = "cohort.count",   
 conf.level = 0.95,   
 units = 1,   
 outcome = "as.rows")

## Exposed + Exposed - Total  
## Outcome + 21054 14442 35496  
## Outcome - 27126 3804294 3831420  
## Total 48180 3818736 3866916  
##   
## Point estimates and 95% CIs:  
## -------------------------------------------------------------------  
## Inc risk ratio 115.55 (113.35, 117.78)  
## Odds ratio 204.45 (199.54, 209.49)  
## Attrib risk \* 0.43 (0.43, 0.44)  
## Attrib risk in population \* 0.01 (0.01, 0.01)  
## Attrib fraction in exposed (%) 99.13 (99.12, 99.15)  
## Attrib fraction in population (%) 58.80 (58.28, 59.31)  
## -------------------------------------------------------------------  
## Test that OR = 1: chi2(1) = 981742.864 Pr>chi2 = <0.001  
## Wald confidence limits  
## CI: confidence interval  
## \* Outcomes per population unit

* method: a character string indicating the study design on which the tabular data has been based.

cohort.count

case.control

Measures of association

RR

OR

Measures of effect in the exposed

ARisk

AFRisk

AFest

Measures of effect in the population

PARisk

PAFRisk

PAFest

chi-squared test

chisq.strata

chisq.crude

chisq.mh

Mantel-Haenszel (Woolf) test of homogeneity

RR.homog

OR.homog

* conf.level: magnitude of the returned confidence intervals. The default value is 0.95.
* units: multiplier for prevalence and incidence (risk or rate) estimates.
* outcome:

### chisq.test

### pschisq