

eTable

Standard Deviation Formulas for Crude Measures of Epidemiologic Effect

Reference: Rothman KJ: Epidemiology, An Introduction, 2nd Edition. Oxford University Press, New York, 2012., chapter 9, formulas 9-2 through 9-6.

Risk difference

a=exposed cases

b=unexposed cases

N₁=total exposed people

N₀=total unexposed people

$$SD(\widehat{RD}) = \sqrt{\frac{a(N_1 - a)}{N_1^3} + \frac{b(N_0 - b)}{N_0^3}}$$

Risk ratio (on log scale)

a=exposed cases

b=unexposed cases

N₁=total exposed people

N₀=total unexposed people

$$SD(\ln(\widehat{RR})) = \sqrt{\frac{1}{a} - \frac{1}{N_1} + \frac{1}{b} - \frac{1}{N_0}}$$

Incidence rate difference

a=exposed cases

b=unexposed cases

N₁=total exposed person-time

N₀=total unexposed person-time

$$SD(\widehat{IRD}) = \sqrt{\frac{a}{N_1^2} + \frac{b}{N_0^2}}$$

Incidence rate ratio (log scale)

a=exposed cases

b=unexposed cases

N₁=total exposed person-time

N₀=total unexposed person-time

$$SD(\ln(\widehat{IRR})) = \sqrt{\frac{1}{a} + \frac{1}{b}}$$

Odds ratio (case-control study, log scale)

a=exposed cases

b=unexposed cases

c=exposed controls

d=unexposed controls

$$SD(\ln(\widehat{OR})) = \sqrt{\frac{1}{a} + \frac{1}{b} + \frac{1}{c} + \frac{1}{d}}$$
