Let Y be the target variable describing the Covid contagion. Suppose to consider a binary explanatory variable $X = \{1, 0\}$, with value equal to 0 corresponding to "old people" and value equal to 1 corresponding to "young people".

Then:

- if $x = 1$ ("old people")
$$ODDS(x = 1) = \frac{\pi_1}{1 - \pi_1};$$
- if $x = 0$ ("young people")
$$ODDS(x = 0) = \frac{\pi_0}{1 - \pi_0}.$$

If we take the ratio between these two odds, we have:

$$ODDS - ratio = e^{\beta \cdot 1} / e^{\beta \cdot 0} = e^{\beta}.$$

If:

- ODDS-ratio$> c$, where $c = 1 \rightarrow$ the odds for the contagion of old people is c times larger than that associated to young people.
- ODDS-ratio$< c$, where $c = 1$, we compute 1/ODDS-ratio$= d \rightarrow$ the odds for the contagion of young people is d times larger than that associated to old people.