

Recovery time -	27d	27-29yo
	32d	50-59yo
	36d	>70yo-

$$\overline{R_0} = 3.28$$

BIRTH,  
MIGRATION  
DEATH (OTHER CAUSES)

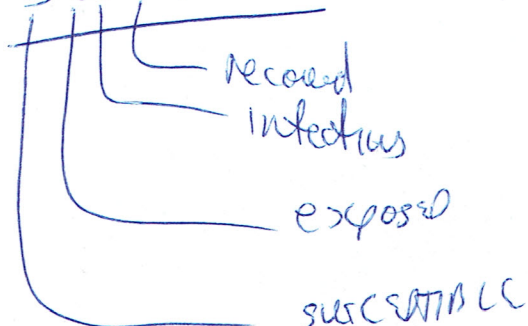
$$R_0 = 1 + K(\tau_E + \tau_I) + K^2 \tau_E \tau_I$$

$K$  = GROWTH RATE,

$\tau_E$  = EXPOSED - DURATION OF EXPOSED, ASYMPTOMATIC  
 & DOESN'T INFECT OTHERS

$\tau_I$  = ASYMPTOMATIC BUT INFECTIOUS

SEIR Model



SEIS Model

↳ no recovery - individuals become susceptible again

$\gamma$  = TRANSITION RATE i.e. from  $I \rightarrow R$   
 $1 - \gamma$  = MORTALITY

$D$  = DURATION OF INFECTION =  $\frac{1}{\gamma}$

$R_0$  = infection rate  
= Mortality rate

$2.35$   
 $\downarrow 1.05$  - travel restrictions

Covid 19  
Graphical

$3.61\%$

maybe down to

$0.8$  -  
 $0.9\%$  OF TOTAL  
CASES

2% population health  
Incubation time ~~2-7~~ days  
5

carriers

Gender

Age

mortality by country

Asymptomatic

time (days)

not infected  
infected  
recovery  
dead  
vaccinated

model

~~13034~~  
307037

proportion that  
isolate

$1.4 - 3.9$

$R_0 = \beta \times \gamma$   
 $\beta$  = contacts per unit time  
 $\gamma$  = mean infectious period

$$R_0 = \frac{\beta}{\gamma}$$

PROBABILITY  
IF INFECTION RATE IS 100%

MORTALITY 3.4%?