

Re-opening schools during COVID-19

Minimising Risk

Dr Jonathan Cohen

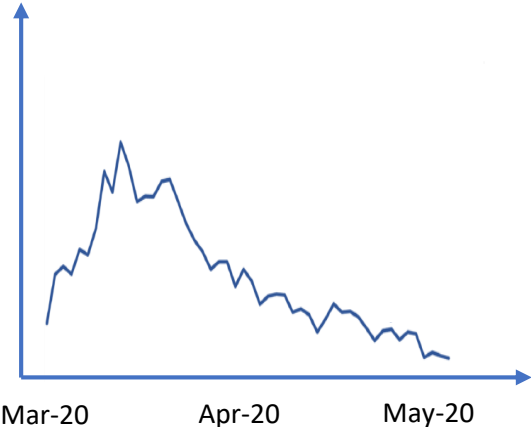
Consultant in Paediatric Infectious Diseases, UCLH

Senior Lecturer, UCL Great Ormond Street Institute of Child Health

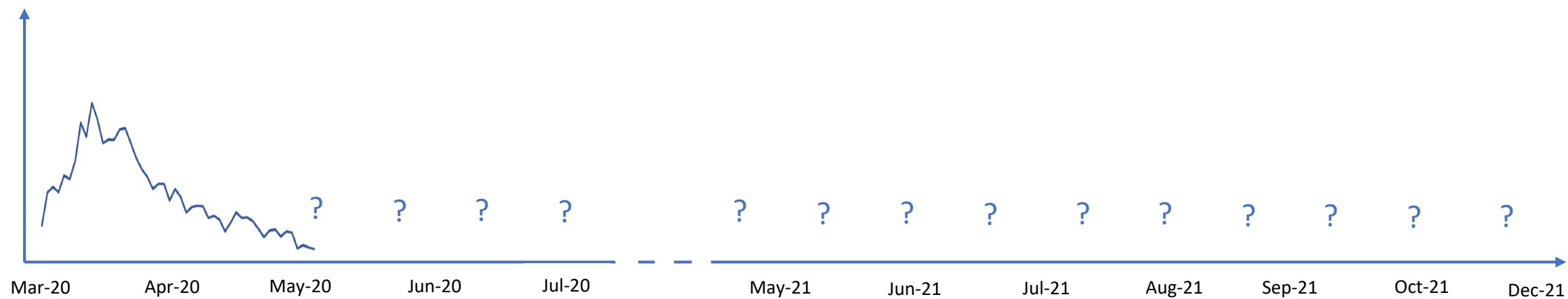
Overview

- How does COVID-19 affect children?
- What determines spread?
- Do children spread it?
- How can spread be reduced?

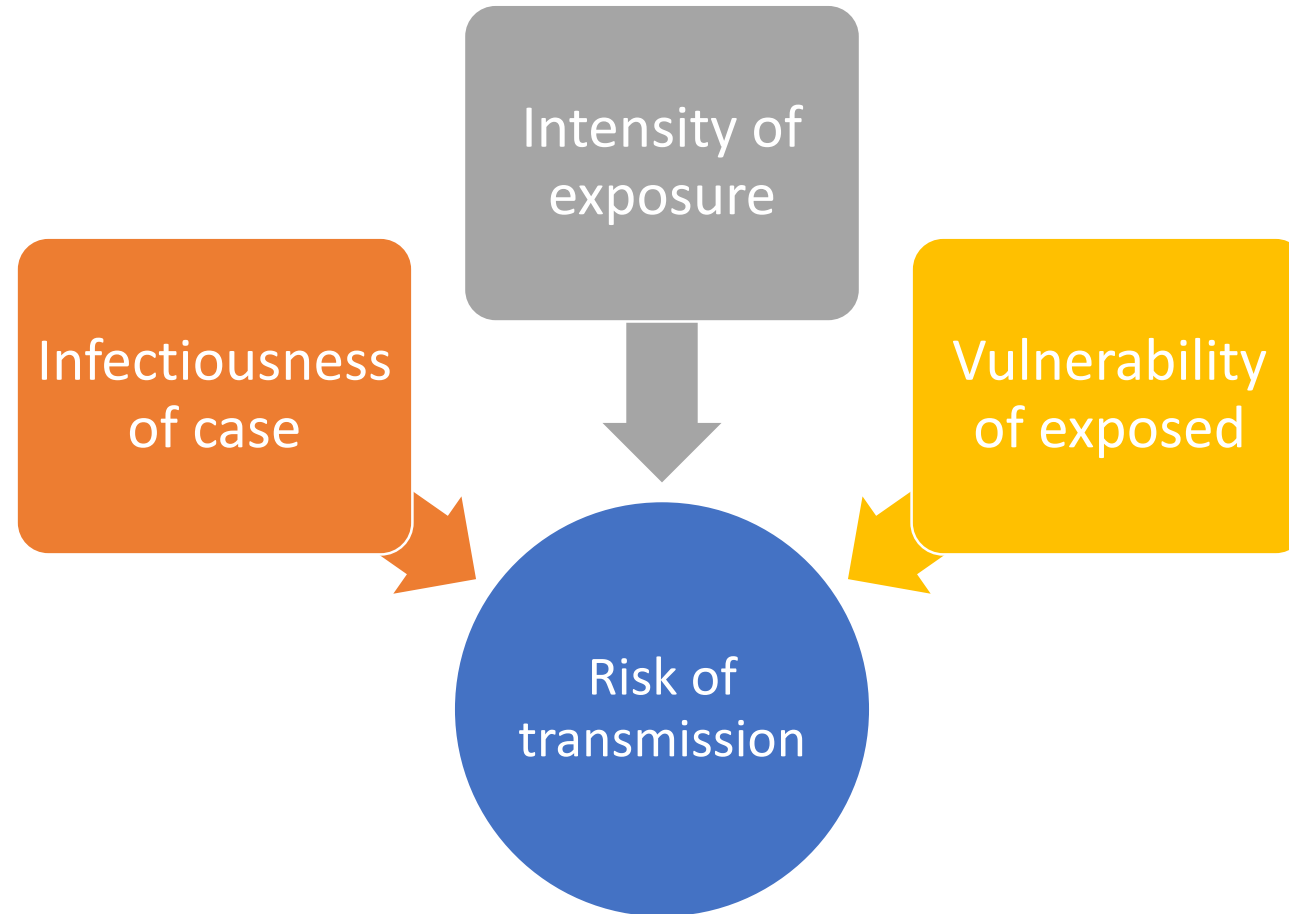
This is what we think about...



...but this is the reality



What determines spread?

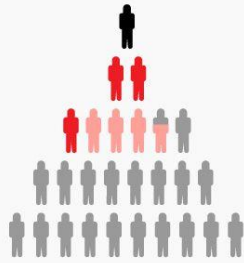


Minimising harm

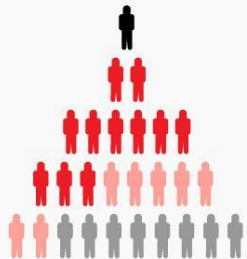


How contagious is a disease?

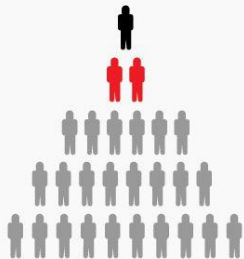
Scientists use "R naught," or R_0 , to estimate how many other people one sick person is likely to infect



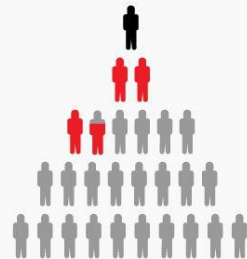
ZIKA
3-6.6



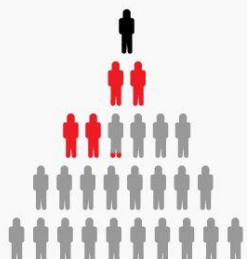
MEASLES
11-18



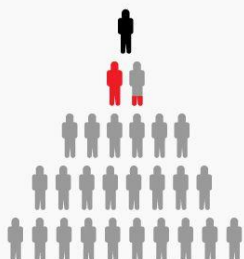
EBOLA
2



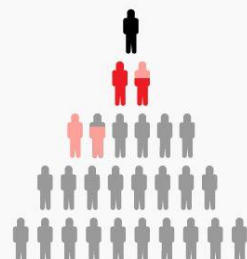
HIV
3.6-3.7



CHIKUNGUNYA
4.1



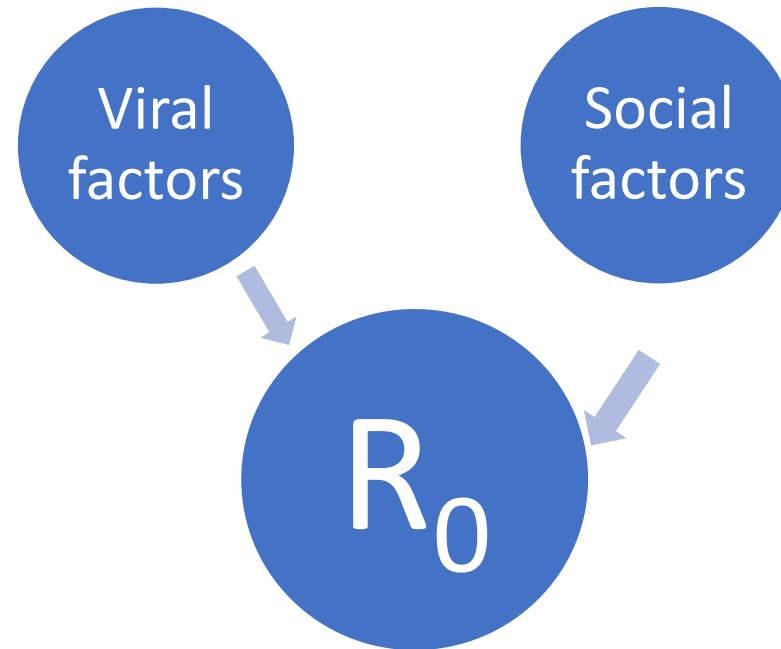
SEASONAL FLU
1.3



NOROVIRUS
1.6-3.7

These numbers assume nobody is behaving differently to normal

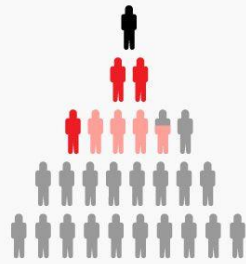
Infection control is about modifying social factors / protective barriers to reduce spread



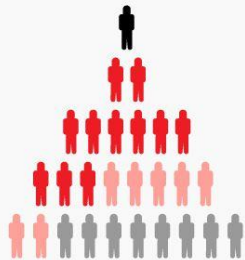
Decisions about social distancing are based on both the R_0 and the amount of infection

How contagious is a disease?

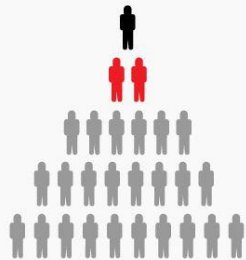
Scientists use "R naught," or R_0 , to estimate how many other people one sick person is likely to infect



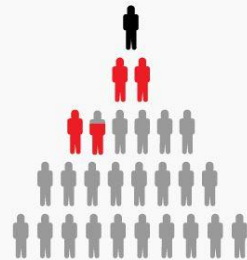
ZIKA
3-6.6



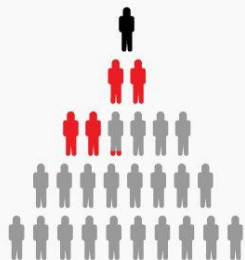
MEASLES
11-18



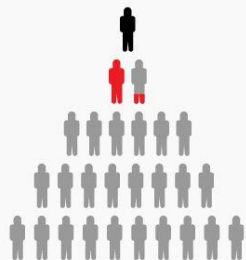
EBOLA
2



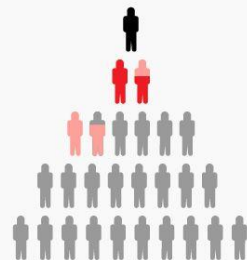
HIV
3.6-3.7



CHIKUNGUNYA
4.1



SEASONAL FLU
1.3



NOROVIRUS
1.6-3.7

NO SOCIAL DISTANCING MEASURES IN PLACE

DAY 1

1 Person

INFECTS

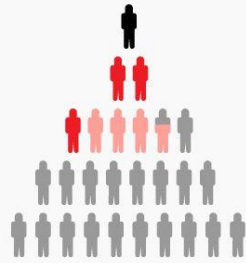
DAY 5

2.5 People
INFECTED

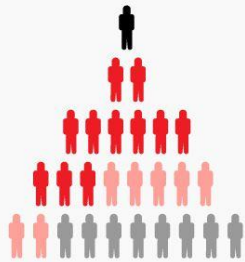
406 People
INFECTED
IN 30 DAYS

How contagious is a disease?

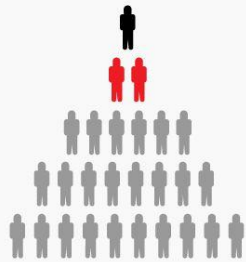
Scientists use "R naught," or R_0 , to estimate how many other people one sick person is likely to infect



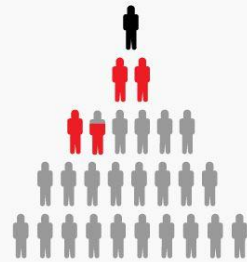
ZIKA
3-6.6



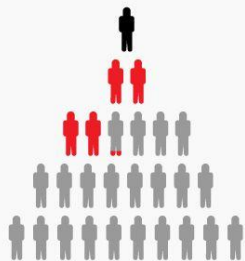
MEASLES
11-18



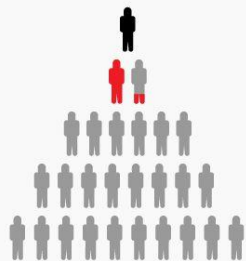
EBOLA
2



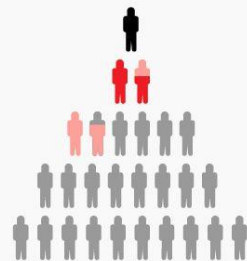
HIV
3.6-3.7



CHIKUNGUNYA
4.1



SEASONAL FLU
1.3



NOROVIRUS
1.6-3.7

REDUCING SOCIAL EXPOSURE BY 50%

DAY 1



1 Person

INFECTS

DAY 5



1.25 People
INFECTED

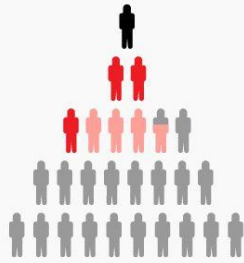
DAY 30



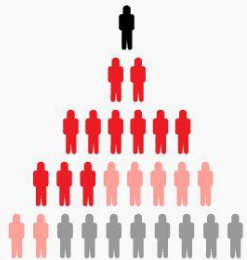
15 People
INFECTED

How contagious is a disease?

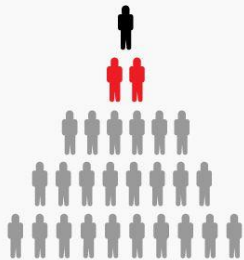
Scientists use "R naught," or R_0 , to estimate how many other people one sick person is likely to infect



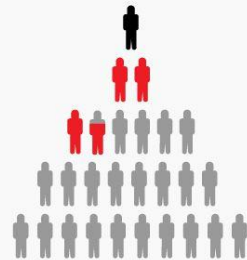
ZIKA
3-6.6



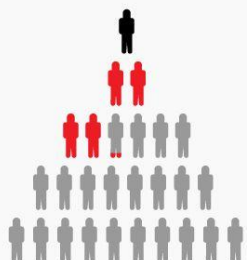
MEASLES
11-18



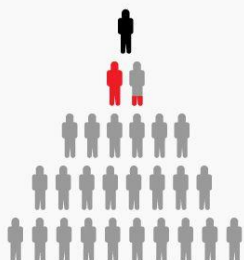
EBOLA
2



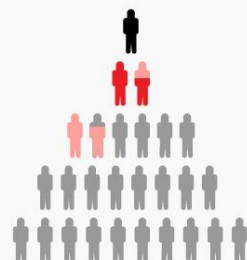
HIV
3.6-3.7



CHIKUNGUNYA
4.1



SEASONAL FLU
1.3



NOROVIRUS
1.6-3.7

REDUCING SOCIAL EXPOSURE BY 75%

DAY 1



1 Person

INFECTS

DAY 5



0.625 People
INFECTED

DAY 30



2.5 People
INFECTED

What measures can be put in place to keep the risk low?

What measures can be put in place to keep the risk low?

- Minimise risk of infected people attending school
 - Stay home if symptomatic
 - Keep bubble home if 1 is symptomatic
- Minimise asymptomatic spread
 - Minimise prolonged close contact
 - Social distancing where achievable to reduce further
 - Keeping surfaces clear
 - Hand washing and avoiding touching face
 - Personal hygiene around occasional sneeze or cough
 - Use bubbles to contain spread within a smaller unit – exponential benefit