WHAT IS R?

The reproductive number R describes the average number of individuals that a person infected with a particular pathogen infects. It depends on how that pathogen is transmitted as well as how often people come into contact with each other—factors that could vary depending on a pathogen's strain and on the time and location of an outbreak. Scientists typically distinguish between R0, the basic reproductive number that describes disease transmission at the very beginning of an outbreak in a fully susceptible population, and Re, the effective reproductive number that describes transmission once measures such as social distancing or vaccination campaigns have been introduced. Re is typically much lower than R0.

COVID-19 epidemic in Wuhan in early 2020
1.4–5.7

2014 **MERS** outbreak in Saudi Arabia
0.45–3.9

2014 **Ebola** outbreak in West Africa
1.5–2.5

2003 **SARS** epidemic in Hong Kong
1.7-3.6

1918 pandemic **influenza** outbreak in US and Europe
2.2–2.9

Measles outbreaks in the UK and US in the 20th century
12–18

0   1   10   100

R0 (log scale)