**How Viruses Spread**

### Basic Reproduction Number*

**$R_0 = 1$**

**Initial infection**

1 secondary infection is caused by the initial infection

The single secondary infection causes 1 more infection

Each additional infection causes 1 more subsequent infection

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**$R_0 = 3$**

**Initial infection**

3 infections are caused by the first infection

Each secondary infection causes 3 more infections

Each additional infection causes 3 subsequent infections

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*The basic reproduction number ($R_0$) describes how much a disease will spread without any intervention measures.

[https://wwwnc.cdc.gov/eid/article/26/7/20-0282_article](https://wwwnc.cdc.gov/eid/article/26/7/20-0282_article)