Calculate Case Fatality Rates and Attack Rates
Case Fatality Rate
Proportion of cases that resulted in death

- Can be as high as 33%-50% where medical treatment not available

- In developing countries, CFR can be less than 1%, when treatment is optimal

- If the CFR is > 10%
  - are there problems with case management?
    - review treatment routines
    - ensure adequate supplies
    - increase community's access to care (consider Temporary Treatment Centers)
Calculate Case Fatality Rate
Proportion of cases that resulted in death

- Number of Deaths \( \times 100 \)
  Number of Cases

Example:
100 cases in one week, 10 patients died

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\frac{10}{100} = 0.1
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0.1 \times 100 = 10
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CFR is 10%
Attack Rate

- Calculated by dividing the number of cases by the population at risk
- Expressed as a percentage
- Severely affected countries have reported national attack rates of > 1% of population
- ARs as high as 20% have been recorded in severe epidemics
Calculate Attack Rate

Attack rate = \frac{\text{number of cases}}{\text{population at risk}} \times 100

Example:
Village of 3,000 persons
15 cases of cholera

Attack rate = \frac{15}{3,000} \times 100 = 0.005 \times 100 = .5\%