

Inference card

Which comparison for which design, and the reporting sentence for each.

Comparison	Method	Reporting sentence
Two proportions	Difference in proportions with interval, chi square as support	Coverage was 63 percent against 61, a difference of 2 points, interval minus 8 to plus 12, on 175 and 180 women
Two means	Two sample comparison or a rank based test	Mean stay was 4.1 against 3.4 days, a difference of 0.7 days, interval 0.1 to 1.3, on 120 and 130 patients
Paired	Paired comparison	Across ten wards stay fell by a mean of 0.6 days, interval 0.2 to 1.0
Rates	Rate comparison with denominators	12.4 against 9.8 cases per thousand, ratio 1.27, interval 1.05 to 1.53

Three traps

- Pre specify the main comparison and label everything else exploratory.
- A complete count is not a sample. Describe the difference and judge its importance.
- Ask what size of difference would change a decision, and write it down first.

Based on the ERAS Africa Advanced Data Analysis Using Python course, 2026, WHO surveillance guidance, the EPHI public health emergency management guidelines, the STROBE statement and the pandas, SciPy and statsmodels documentation. Free to copy and adapt with attribution.