Common issues in tables and graphs

Checklist for tables
- Reduce precision to integer; (max 2 decimals). General rule for precision: usually a maximum of 2, and rarely more than 3 significant digits, regardless of source data precision. In many cases (eg percentages) integers suffice!
  - A significant digit is one that carries information; results are rounded to the nearest significant digit (in case of 5, to the nearest even digit).
  - This applies to all statistical parameters, eg mean, SD, median, min, max, percentiles etc; and all percentages.
  - Going to 3 significant digits might be required for some primary outcome (usually specific efficacy) measurement instruments, and in cases where results range between powers of ten (eg 0.50-9.00, or 35-128); and 2 significant digits would be enough for almost all other measures.
- alignment:
  - named categories, dates: left
  - numbers: right, and on decimal point (if applicable)
  - multiple entries in one cell: specific advice
- logical order of categories (rows) and results (columns)

Checklist for graphs
- general
  - increase resolution (minimum 300 dpi)
  - delete background color/shading
  - increase font size of tick labels, axis titles
  - avoid stacked bars, pies, 3-D depiction of 2-D data
  - use bar graphs only for results that are natural quantities (eg counts, percentages of a whole, but not for means and distributions)
  - depict low numbers of observations as individual symbols, not (only) as summary measure
  - depict as many summary measures as possible:
    eg. box plot better than mean ± error bar
- data depiction
  - increase thickness of data series
  - do not use dashed lines for data series: use greyscale tones instead (or color)
  - do not use patterns for shading: use greyscale tones instead (or color)
  - increase size of data symbols
  - change data symbols:
  - delete outline around bars
  - decrease thickness of error bars
  - delete horizontal whiskers on error bars
- axes
  - decrease thickness of axis lines and ticks
  - put y-axis title horizontal left aligned above y-axis, or centered above panel
  - scale: optimize scale for spread of data (i.e. try to prevent large areas of white space), but try to be consistent across figures
  - axis offset: if necessary, use offset to avoid axis lines superimposed on data
  - axis break: best avoided. Never use with bar graphs. If unavoidable, the break should be through the whole figure (e.g. no lines crossing the break) and clearly marked on the axis. Use a scale marker (eg, a small bar) if the scale differs before and after the break.
- matrix (multipanel) plot:

- o move panels very close together;
  - o For both the group of y-axes and also the group of x axes, strive to make the axis scale (numerical range, or categories) the same. If this is possible, the tick labels of the inner panels can be removed:
    - ▪ for panels in columns: delete x-axis title and tick labels (keep ticks) of all except bottom panel, and move panels very close together.
    - ▪ for panels in rows: delete all y-axis titles and tick labels, put y-axis title horizontal left aligned above y-axis, or centered above top panel
- In-figure legend:
  - o avoid if possible (alternatives: place in caption text, or use labels close to series) or place well out of the way of the data.
  - o If essential, and placed outside data frame, on top or below is better than to the right (graph will be downsized to fully fit on page).