

Guide to reading the NABCOP 2022 Annual Report

This document is for use alongside the NABCOP 2022 Annual Report, as a guide to understanding the report content. It covers:

- Layout of sections within the annual report.
- Interpreting figures within the annual report.

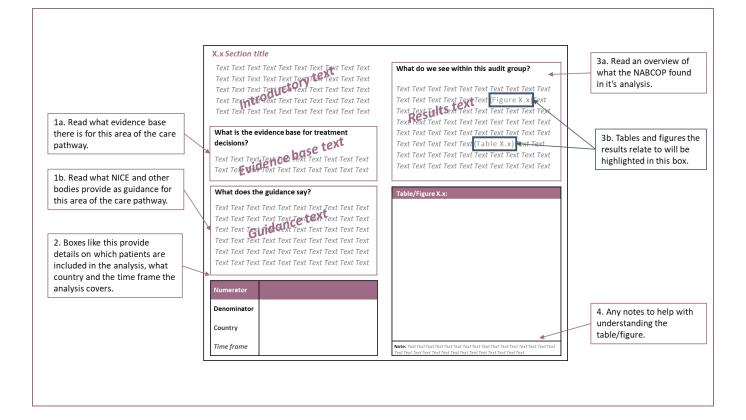
Layout of sections within the annual report

The NABCOP 2022 Annual Report chapters and sections include the following elements (the figure below is annotated with guidance):

 Boxes describing the relevant clinical guidance, where applicable, and the current research evidence (as per 1a and 1b in the figure below),

- Which patients are included in the numerator and denominator for the analysis, and whether they were diagnosed in England or Wales (2),
- The period of diagnosis for patients included (2),
- A box summarising what the NABCOP analysis found, along with relevant tables/figures (3a, 3b and 4),

The primary focus of analyses within the NABCOP 2022 Annual Report is women aged 70 years and older at diagnosis. In some sections, this is broken down further to look at women aged 70-79 years and women aged 80 years and over. This allows us to investigate age disparity further where possible. Comparison is then made with women aged 50-69 years. We also look at variation across NHS organisations.



Interpreting figures within the report

Connected scatter plots

These types of plots are used in Chapter 3 of the NABCOP 2022 Annual Report to show changes over time across the three age groups.

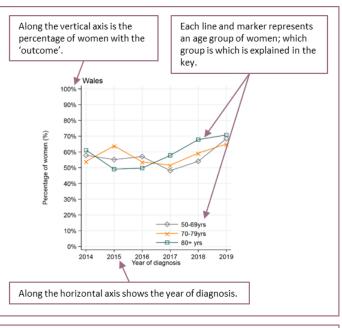
Funnel plots¹

These enable the user to assess variation in the results across NHS organisations.

Funnel plots are used to highlight variation in the rate of surgery across organisations and to assess whether this variation is larger than would be expected in any age group.

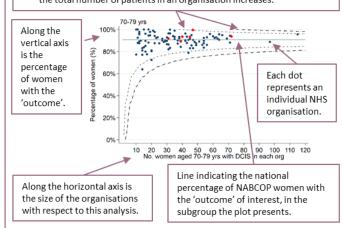
These types of plots are used in Chapter 3 of the NABCOP 2022 Annual Report to look at variation by NHS organisation. The NHS organisation-level data presented in these plots are published in the NHS Organisation Data Viewer; alongside the annual report.

The examples below are annotated with guidance on interpreting these figures.



The plot shows two funnels/sets of lines that fall either side of the NABCOP overall percentage:

- Inner lines show two standard deviations or 95% control limits.
- Outer lines represent three standard deviations or 99.8% control limits.
 The funnel shape is formed because the control limits get narrower as the total number of patients in an organisation increases.



¹ Funnel Plot Source: David Spiegelhalter, Medical Research Council Biostatistics Unit - https://www.ncbi.nlm.nih.gov/pubmed/15568194

Combined line & scatter plots

These are used to show variation for multiple 'outcomes' or age groups across NHS organisations.

For example the percentage of women having surgery, the percentage of women having a certain type of surgery and the percentage of women having a subsequent reoperation, for each NHS organisation.

These types of plots are used in Chapter 3 of the NABCOP 2022 Annual Report to look at variation by NHS organisation. The NHS organisation-level data presented in these plots are published in the NHS Organisation Data Viewer; alongside the annual report.

Scatter plots

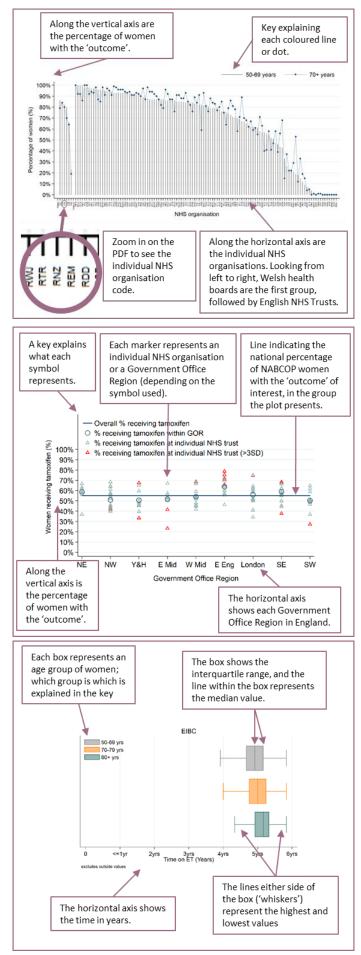
These are used to show variation across multiple groupings. For example within NHS organisations in each geographical region (such as Government Office Region) and then also across geographical regions.

These types of plots are used in Chapter 4 of the NABCOP 2022 Annual Report to look at variation in the prescribing of tamoxifen (endocrine treatment) and bisphosphonates in England.

Box & whisker plots

These types of plots are used in Chapter 4 of the NABCOP 2022 Annual Report to show differences in the length of endocrine therapy treatment prescribed in primary care across the three age groups.

Each box and whisker plot presents five pieces of information for each; the box shows the interquartile range, with the lower and upper quartiles being the left and right edges of the box and the median shown by the line in the middle of the box. The whiskers to each side of the box are then are drawn out to the lower and upper adjacent values (as defined by Tukey, 1977²). The plots do not show extremely small or large values.



² Tukey, John W. 1977. Exploratory Data Analysis, Reading, Mass.: Addison-Wesley.