

# **Clinical Outcomes Publication**

## Style Guide for National Clinical Audits



## Acknowledgements

The Healthcare Quality Improvement Partnership (HQIP) would like to thank the following for their valuable input in developing this Style Guide:



HQIP's Service User Network has about 40 patient and public representatives, including people from local and national clinical audit groups, service user and carer groups, and charities such as National Voices ([www.nationalvoices.org.uk](http://www.nationalvoices.org.uk)). SUN members work alongside HQIP helping develop PPI and quality improvement work, and also as an expert consultation group to HQIP.

More information about the Service User Network and membership can be found at [www.hqip.org.uk/involving-patients/service-user-network/](http://www.hqip.org.uk/involving-patients/service-user-network/)



The Royal College of Surgeons of England is a professional membership organisation and registered charity, representing surgeons in the UK and abroad to advance surgical standards and improve care for patients.

Designed by



[www.padcreative.co.uk](http://www.padcreative.co.uk)

## Contents

Acknowledgements	2
Why do we need a style guide?	4
Who and what is this guide for?	4
What is this guide not for?	4
How was this guide created?	4
Mandatory requirements for Clinical Outcomes Publication	5
General guidance	7
Designing your charts	7
Chart design check-list	8
Example charts	9
Pie chart	9
Bar chart	10
Comparative bar chart	11
Control limit chart	12
Funnel plot	13
Table	14

## Why do we need a style guide?

Clinical Outcomes Publication (COP) provides information about the results of medical treatments that can be used by patients, healthcare professionals, and hospitals to improve the safety and quality of care. COP also aims to help reassure patients that the standard of care is being monitored and improved, and help them to make informed decisions about their medical treatment. For this to happen, the information published must be easy to find, navigate around, and understand.

For COP to be as useful as possible, the information also needs to be accessible to a range of healthcare professionals. COP may be used by commissioners, chief executives, medical directors, healthcare managers and General Practitioners; to make recommendations or referrals on behalf of their patients. It is also important that the information is understood by the consultants whose data is being analysed, so that they can use it to review their practice and support their own revalidation.

We want to make sure that the information published is clear to the public and healthcare colleagues alike, to maximise its usefulness. Therefore this guide aims to bring together common sense principles to assist audits in publishing analysis that meets the needs of multiple audiences.

Differences between medical specialties, audits, and quality measures mean that it is not always appropriate to present analysis in exactly the same way. This guide is designed to help audits make information and results consistently understandable to patients, their carers and family, and the public.

## Who and what is this guide for?

This guide is aimed at the National Clinical Audits and specialist associations that come under the COP initiative, as well as any audit considering publishing its results. The purpose of this guide is to outline the mandatory requirements for presenting consultant outcomes and to offer more general guidance, which should be considered when designing websites, reports, supporting text, and graphs.

## What is this guide not for?

This guide is not a substitute for gaining input from patient representatives in the specialty area of the audit. Much of this guide offers general principles to steer an audit when presenting analysis, rather than outlining exactly how the analysis should look. More information about gaining patient and public involvement can be accessed and downloaded from [www.hqip.org.uk/involving-patients/](http://www.hqip.org.uk/involving-patients/)

## How was this guide created?

This guide was originally written in 2014 by HQIP using feedback from the following sources:

- A one month feedback consultation run by HQIP on behalf of NHS England, involving audit providers, specialist associations, the Royal College of Surgeons and members of the public
- Consultation with HQIP's Service User Network (SUN), including a consultation period focussed on presentation of analysis, and an interactive workshop
- The Royal College of Surgeons, who had input on a draft of this document



## Mandatory requirements for Clinical Outcomes Publication

These mandatory requirements must be adhered to by audits involved in the COP programme. If you have any queries or concerns about these requirements email [cop@hqip.org.uk](mailto:cop@hqip.org.uk).

Requirement	Rationale
<b>Patient Consultation</b>	
The design of the report/website must incorporate comprehensive and meaningful patient consultation. See above for more information on involving patients	<p>This style guide is not all encompassing, and is not a substitute for consultation with patients from each area of medicine involved in COP</p> <p>Where individual audit patient consultation results in recommendations differing from the mandatory requirements set out in this style guide, they should be discussed with HQIP</p>
<b>Search and Find</b>	
Results should be searchable by region, ideally the following: England: North East, North West, Yorkshire, East Midlands, West Midlands, East of England, South Central, South West, London, South East	This means that a patient can view all hospitals and consultants within their region without having to know the names of Trusts/hospitals and consultants beforehand
Where relevant Scotland, Wales and Northern Ireland should also be included. Variation from these set regions must be agreed with HQIP	
Results must be shown at both Trust/Hospital level and consultant-level	Where possible, all data should be displayed in the same website/report so that it is easy to find and digest. Analysis must be publicly available at both Trusts/Hospital and consultant-level (whether to report at Trust or Hospital level is a decision for each audit)
Consultants should be searchable by General Medical Council (GMC) code and name (including partial names)	A patient is more likely to search by a consultant's name, but healthcare professionals may wish to use GMC code. Where possible search functions should accommodate for minor misspellings of names (e.g. 'did you mean..?')
An option to 'view all' eligible Trusts/hospital and consultant names as an A-Z, with links to the relevant analysis	These means that patients can view a wide range of providers without having to know their names beforehand. This should be for all Trusts/Hospitals and consultants eligible for inclusion in COP, but may be grouped into countries and regions as appropriate
'Jump to' functionality	<p>PDFs: Should be made with the function to skip to content using the 'contents' at the beginning of the report. You can build this in by creating your document in Microsoft Word and clicking 'table of contents' in 'references' tab, or by using bookmarks or hyperlinks in Adobe Acrobat</p> <p>Websites: Should have a clear text menu allowing users to navigate directly to the content that interest them</p>
Make it clear where the analysis is	Make sure it's obvious where the actual analysis can be found on your website, so that users can skip straight to this if they want to. Ideally the search function should appear on the landing/home page. If it does not, a clear link to the analysis should be clear and prominent
<b>Plain English and explanations</b>	
All text appearing in print and online (including accompanying narratives and explanatory text) must be written clearly and avoid technical language. <a href="http://www.plainenglish.co.uk">www.plainenglish.co.uk</a> is a good source of free information and advice	Each audit collects different data, analyses it in different ways, and publishes different results. It is vital that these nuances are explained clearly to patients so that they can understand and get the most out of the information

Any explanatory text relating to chart interpretation should be displayed alongside the relevant chart	No matter how simple graphs are made, it may always be necessary to explain what the axes are, for example. If this information is given alongside or incorporated into the graphs, it will be easier to digest. If lengthy explanatory text is required, it may be necessary to make the graphs simpler
An executive summary of 600 words or less	This highlights key points for people who may not wish to read the full report/ all web pages. This does not have to summarise all individual consultant's analysis, but may highlight national results and/or trends over time
A glossary	The information we are trying to communicate is complicated and it may not be possible to convert all terminology into plain English. Where technical terms must be used, make sure they are explained in a concise glossary. The glossary should also include abbreviations and acronyms where these are used frequently and not always explained/expanded within the text  This could appear as a section within a PDF report or a website page, or words could be explained with <b>'call out'</b> boxes or, for websites, pop ups when words are hovered over
Contact details	Ensure that there are clear contacts details that can be used if someone using your report wants more information or has questions or comments

### Narrative

A guide to reading this report	Whether your report is a website or a PDF, include instructions on how patients can find the information that is relevant to them
Explanation and context	All analysis must be accompanied by a narrative that explains how the data were collected, how analysis was carried out, and the clinical context
Outlier policy	All analysis must be accompanied by an explanation of how statistical outliers are identified and managed
A Frequently Asked Questions section	This can cover the areas that do not feature in your supporting narrative. Questions may be easier to navigate around and digest than a lengthy narrative, and you can add to them based on feedback once your website has been published

### Accessibility

Do not use Flash and Java	Not everyone has access to an up to date computer or internet browser. Using Flash or Java may prevent some people from accessing the information you publish  If Flash or Java are used, a secondary non flash or java version must be provided, which displays if the user does not have these programmes installed
Ensure all content is accessible	Many healthcare professionals and members of the public will not have access to up to date software for viewing online reports and websites  For detailed guidance on making sure your web content is accessible to the public, please see the W3 Schools Web Content Accessibility Guidelines: <a href="http://www.w3.org/TR/WCAG10">www.w3.org/TR/WCAG10</a>  Consider making reports available in different languages and formats to make them accessible to a diverse population

### Sign off

Discuss presentation approach with HQIP as it is finalised to ensure compliance with this guide	This allows HQIP to ensure that the report meets the mandatory requirements set out here, as well as allowing appropriate communications arrangements to support the publication to be made by relevant stakeholders
Final versions of reports must be made available to HQIP for sign off at least 10 working days prior to publication	

## General guidance

Although not part of the mandatory requirements, you may wish to consider following the guidance outlined below when deciding upon how to present your analysis.

- **Keep it simple:** Avoid ‘flashy’ and busy displays, as this can be confusing and make it hard for people to find the information they need. It also means that internet pages can take a long time to load and are more likely to produce error messages
- **Font:** At least size 12 in an easy-to-read font such as Arial or Calibri. See the Royal National Institute for Blind People (RNIB) guidance on clear print for more information
- **Line spacing:** Make sure your text has enough space between the lines so that it is easy to read. This is referred to as ‘leading’ or ‘line-spacing’ depending on the programme you use
- **Paragraphs:** Avoid long paragraphs and break up text with headings where possible, so that people can skip to the sections that interest them
- **Pictures:** Can speak a thousand words. Make sure the images used are high enough quality resolution. For documents that may be printed (e.g. PDF reports) make sure they are in 300dpi at the size you want to print it and in CMYK colour format (unless for use in Word which only accepts RGB). For example, an image that is to be 10cm in print, needs to be 300dpi at 10cm or higher, if it was 300dpi at 2cm it would not be good enough quality. For websites, images can be of a lower resolution (72dpi)

### dpi

refers to dots per inch, which in print is the measure of printed image quality on the paper. In computers, dpi is a measure of the sharpness on a display screen

### RGB

refers to the three colours used on a computer display: red, green and blue

### CMYK

refers to the four inks used in colour printing: cyan, magenta, yellow, and key (black)

- **Colours:** Make sure your colour palette choices are complementary and give adequate contrast so that your different sections and points on graphs can be distinguished (even if printed in black and white). Colours should be in CMYK for PDF reports, and RGB for websites
- **Feedback:** As well as getting input from your patient representative(s), give the public a way of feeding back about your report/website so that you can improve next time. Something as simple as providing a telephone number, email and postal address works well. If referencing an email on a website, ensure the email is a ‘clickable’ link where possible
- **Website URLs:** If referencing another website or web page, make sure that it is hyperlinked to ‘open in new window/tab’ so that people can go directly to the content without automatically moving away from your site. If you are making a PDF make sure the full website address is included in bold so that people who have printed it out can tell that it is a web address
- **Bring in the professionals:** If budget permits, a professionally designed report or website will mean that your content is shown in the best possible way

## Designing your charts

Due to differences between medical specialties, data, and analysis methodologies involved in COP it may not be appropriate for all of the detailed information hosted on specialist association/audit provider websites to be presented in the same way (e.g. a funnel plot).

To make sure that patients do have a place where they can view all analysis in a uniform way, we are asking all audits to submit their COP analysis to NHS Choices as well as hosting it on their own websites. The format of presentation will be finalised in consultation with patients, audit providers, specialist associations and the Royal College of Surgeons, and will direct users to the more detailed audit/specialist association website for further detail. If you would like further information prior to the consultation, please contact [cop@hqip.org.uk](mailto:cop@hqip.org.uk).

HQIP has collected feedback on the graphical and tabular presentations of data from 2013 from the general public, the HQIP Service User Network (SUN), audit providers and specialist associations. Best practice examples of those chart types that have been approved by the HQIP Service User Network (SUN) are shown on pages 9-14. If you wish to use a chart type not included in the best practice examples, please discuss this with HQIP and your patient representative(s).



## Chart design check-list

- Make sure patients can tell what the graph shows, and doesn't show
- Keep it simple!
- Use familiar graph types (that people will have used in school) where possible
- Choose a chart type that doesn't need a lengthy explanation (it's hard to make these patient friendly, and not everyone will read them)
- Use bold, bright colours. Reports and web pages may be printed in black and white, so a black and white 'test print' should be carried out to make sure that different parts of each chart are still clear
- Use colours consistently; if a particular procedure is represented by a green bar in one chart, make sure it is colour coded green in all other charts
- Use bold, clear lines
- Give your chart a descriptive title, so that your audience can tell if it is of interest to them and have an idea of what it should tell them
- Clearly label different parts of the chart
- Ensure that all text on graphs (including labels) is in font size 12 or larger when the graph is viewed at 100% (if being viewed electronically)
- Clearly show the date range that you are looking at
- Use high resolution images (300 dpi or higher, at the size it is to be)
- Avoid abbreviations, acronyms and technical terms
- Where you need to use abbreviations, acronyms or technical terms, explain them alongside the graph where possible (possibly using 'pop' ups when a term is hovered over)
- Provide a tabular version of the results along with the chart if possible (see page 14)
- Design professionals may be able to assist data analysts to export data to an acceptable design format
- If possible, make a video presentation/ YouTube clip available to explain how to understand the graphs

## Example charts

### A note about these example charts

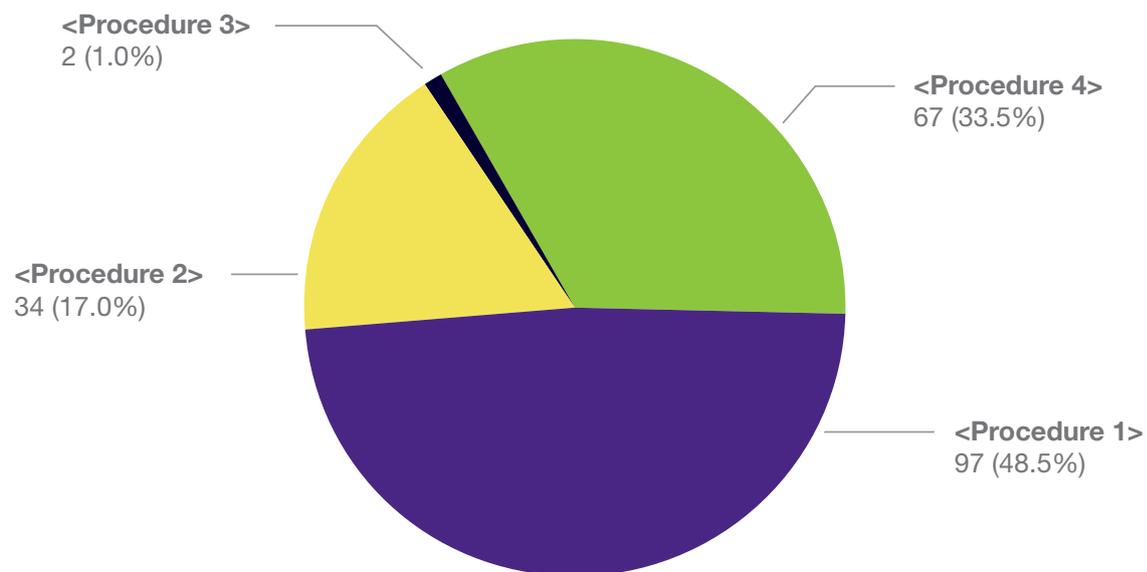
- All data is fictional and for representation only
- Wherever you see word enclosed in <these>, audit specific information (e.g. a procedure type or name) must be entered

## Pie Chart

### Number of procedures carried out by this consultant

1 April 2012 - 31 March 2013

Total procedures carried out = 200



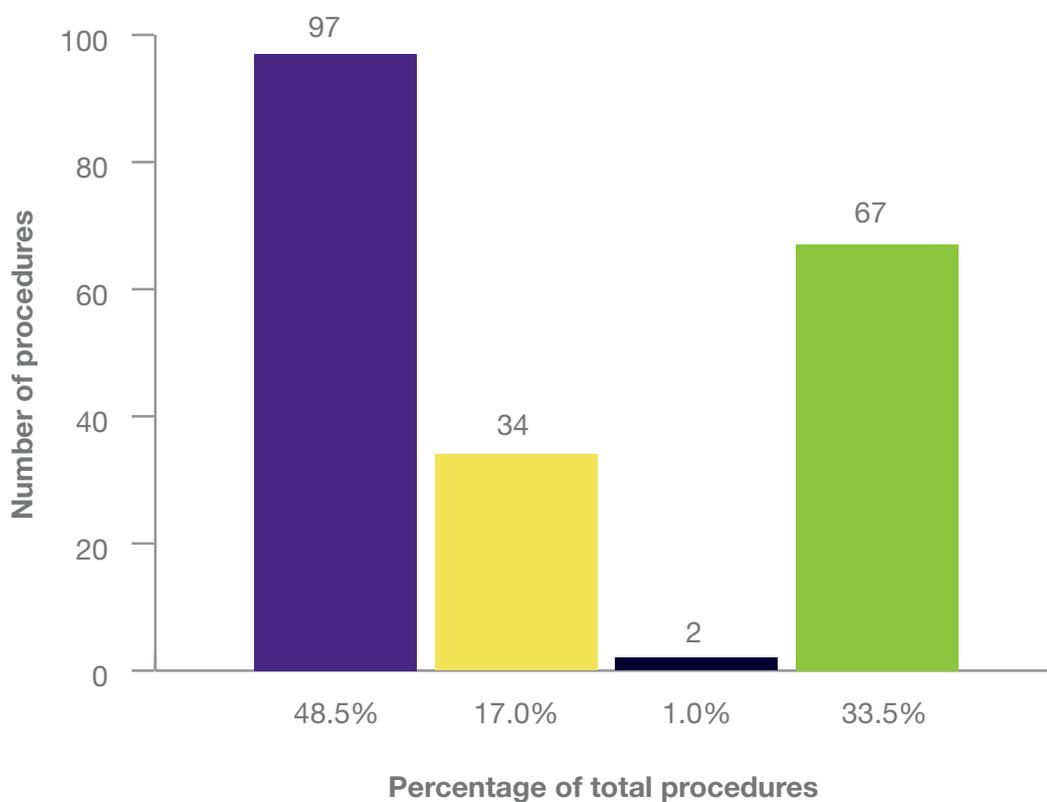
## Bar Chart

Fitting procedure names into the horizontal chart axis often means having to use acronyms or abbreviations. This is why the bars in the chart below are colour coded, with the full procedure names in the legend underneath.

### Number of procedures carried out by this consultant

1 April 2012 - 31 March 2013

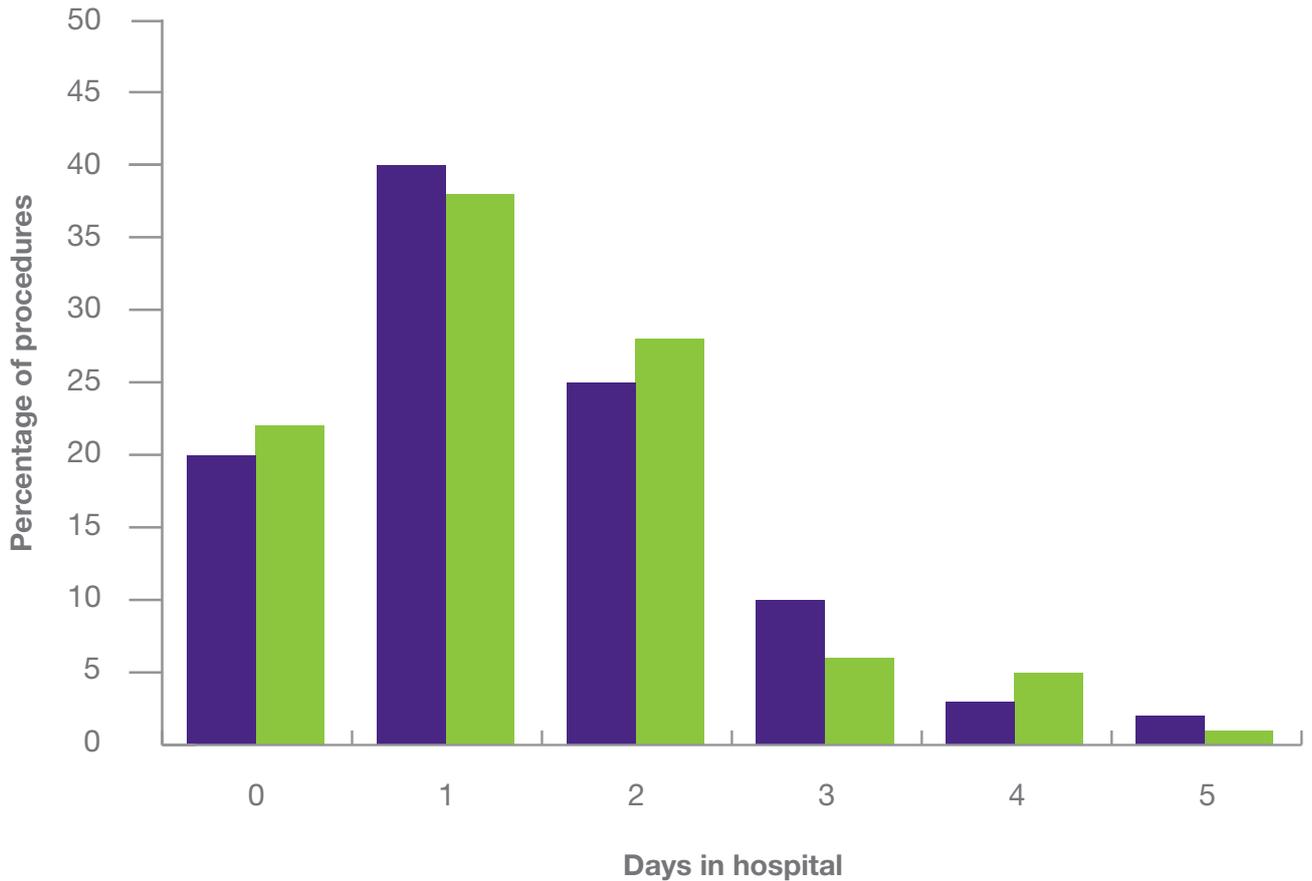
Total procedures carried out = 200



Comparative Bar Chart

**Comparison of days in hospital after <procedure>**

1 April 2012 - 31 March 2013



- Consultant (50 procedures with an average length of stay after procedure of <insert figure> days)
- National (1000 procedures with an average length of stay after procedure of <insert figure> days)

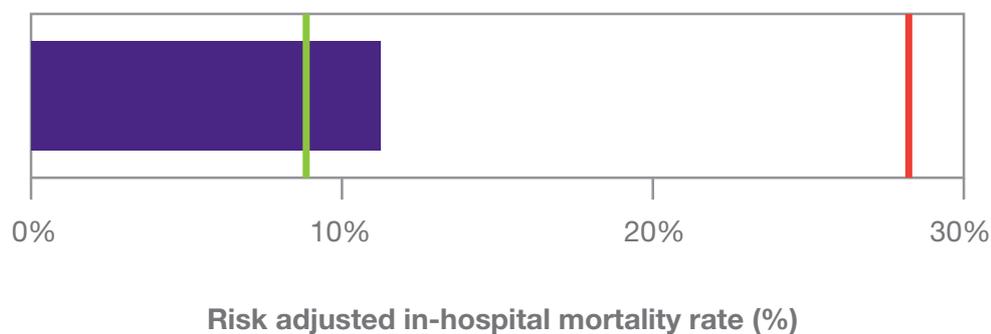
## Control Limit Chart

This type of chart is recommended when showing mortality outcomes with control limits.

### Consultant risk adjusted mortality rate 30 days after <procedure>

1 April 2012 - 31 March 2013

Number of procedures = 100



■ This consultant (12%) ■ National average (8%) ■ Control limit



**Risk adjusted mortality rate:** Is a calculation of the percentage of patients dying after a procedure that takes into account how ill patients are before treatment, and how difficult the treatment is to administer.

**Control limit:** The red 'control limit' line shows the highest risk adjusted mortality rate we would expect a consultant to have, based on the national average (green line). The red 'control limit' line acts as a guide to show the most a consultant's results would usually vary due to chance alone. Mortality rates appearing to the left of the red 'control limit' line are within the normal range.

## Funnel Plot

The HQIP Service User Network indicated that the Control Limit Chart, shown on page 12, is easier to understand than a funnel plot. However, we acknowledge that some specialties may find it difficult to move away from using funnel plots. Therefore we include a ‘best practice’ example of a funnel plot here.

### Consultant risk adjusted mortality rate 30 days after <procedure>

1 April 2012 - 31 March 2013



**Risk adjusted mortality rate:** Is a calculation of the percentage of patients dying after a procedure that takes into account how ill patients are before treatment, and how difficult the treatment is to administer.

**Control limit:** The red ‘control limit’ line shows the highest risk adjusted mortality rate we would expect a consultant to have, based on the national average (green line). The red ‘control limit’ line acts as a guide to show the most a consultant’s results would usually vary due to chance alone. Risk adjusted mortality rates appearing underneath the red ‘control limit’ line are within the normal range.

## Table

It is recommended that the figures behind each Trust/hospital or consultant level chart are provided underneath the chart in a table.

### Consultant risk adjusted mortality rate 1 year after <procedure>

1 April 2012 - 31 March 2013

	Number of procedures carried out	Risk adjusted in-hospital mortality rate	Control limit	National average
Consultant A	100	4.2%	7.2%	5.16%
Consultant B	150	6.1%	8.3%	
Consultant C	250	3.5%	9.2%	
Consultant D	175	8.9%	8.8%	
<b>Hospital X</b>	<b>675</b>	<b>5.7%</b>	<b>10.2%</b>	



**Risk adjusted mortality rate:** Is a calculation of the percentage of patients dying after a procedure that takes into account how ill patients are before treatment, and how difficult the treatment is to administer.

**Control limit:** The 'control limit' figure shows the highest risk adjusted mortality rate we would expect a consultant to have, based on the national average figure. The control limit acts as a guide to show the most a consultant's results would usually vary due to chance alone. Risk adjusted mortality rates that are less than the control limit figure are within the normal range.





Further information is available at: [www.hqip.org.uk](http://www.hqip.org.uk)

6th Floor, 45 Moorfields, London, EC2Y 9AE

T 020 7997 7370 F 0207 997 7398  
E [communications@hqip.org.uk](mailto:communications@hqip.org.uk)

[www.hqip.org.uk](http://www.hqip.org.uk)

Registered Office: 70 Wimpole Street, London W1G 8AX

Registration No. 6498947

Registered Charity Number: 1127049

© 2016 Healthcare Quality Improvement Partnership Ltd. (HQIP)

All rights reserved

April 2016