

NCAP

NATIONAL CARDIAC AUDIT PROGRAMME

NICOR

Transcatheter Aortic Valve Implantation (TAVI) Registry



Annual Report 2025
(2024/25)

BCIS





31 NHS TAVI hospitals in England, Wales and Northern Ireland

10,367 procedures in 2024/25, a 16% increase compared with 2023/24

23% of cases were performed urgently, slightly down from 26% in 2023/24

The proportion of women receiving TAVI remains lower than anticipated at 42%

95% of procedures are being undertaken with conscious sedation and using the transfemoral approach

Median length of stay (LOS) for elective cases remains at 2 days

1-2% complication rates (including death, stroke, access complications and moderate/severe aortic regurgitation) remain low

8% requirement for a pacemaker (whether before, during or after a procedure)



1. Every hospital performing TAVI procedures should improve data completeness across all variables, including complications. It is essential to include the TAVI device serial number.
2. Regions with lower rates of TAVI procedures should review their clinical pathways to ensure referral rates meet the requirements of the local population.
3. 1 in 40 patients are re-admitted with Heart Failure (HF) in the 12 months following TAVI. We need to better understand the drivers of HF admission and how it can be prevented.

This report presents selected key findings from the national audit of Transcatheter Aortic Valve Implantation (TAVI) procedures



The Transcatheter Aortic Valve Implantation (TAVI) audit is part of the National Cardiac Audit Programme (NCAP) which is run by the National Institute for Cardiovascular Outcomes Research (NICOR).

This report details activity for TAVI procedures for England & Wales and Northern Ireland (Scotland no longer participates within the UK audit). It covers both NHS hospitals and also private centres that have agreed data sharing with NICOR.

The key focus of the audit is quality assurance and improvement. The report summarises the number of patients being treated, where this treatment is delivered, the quality of the care and the outcomes for patients. Relevant national or international guidelines and standards are shown so that hospital performance can be benchmarked. Details around the quality improvement (QI) metrics can be found [here](#).

This report is of value to a wide range of stakeholders but importantly it allows patients and their relatives to better understand TAVI practice and its outcomes in the UK. **The slides in the report are interactive so you can select and explore the data that interest you.**

The latest data are for the 2024/25 financial year (April 2024 to March 2025), which are presented alongside trends for the last 10 years. All summary statistics are based on data that are self-reported by hospitals and unadjudicated unless otherwise stated.

The TAVI audit relies on the active contribution of all participating UK TAVI centres. Detailed information has been entered by hospitals, queried and cleaned before analysis is undertaken by the NICOR team. We are very grateful to all the staff at the contributing centres for their time in developing this audit.

We will continue to work closely with TAVI centres, patients and other stakeholders to improve the quality of audit data and how these are used to improve the delivery of high quality TAVI care in the UK.

NICOR TAVI audit team

Transcatheter Aortic Valve Implantation (TAVI) is a procedure provided by 31 NHS and ten private hospitals in England, Wales and Northern Ireland



NHS TAVI Centres in England,
Wales and Northern Ireland

31



Private TAVI Centres in England

10



NHS TAVI Centres in Scotland

3

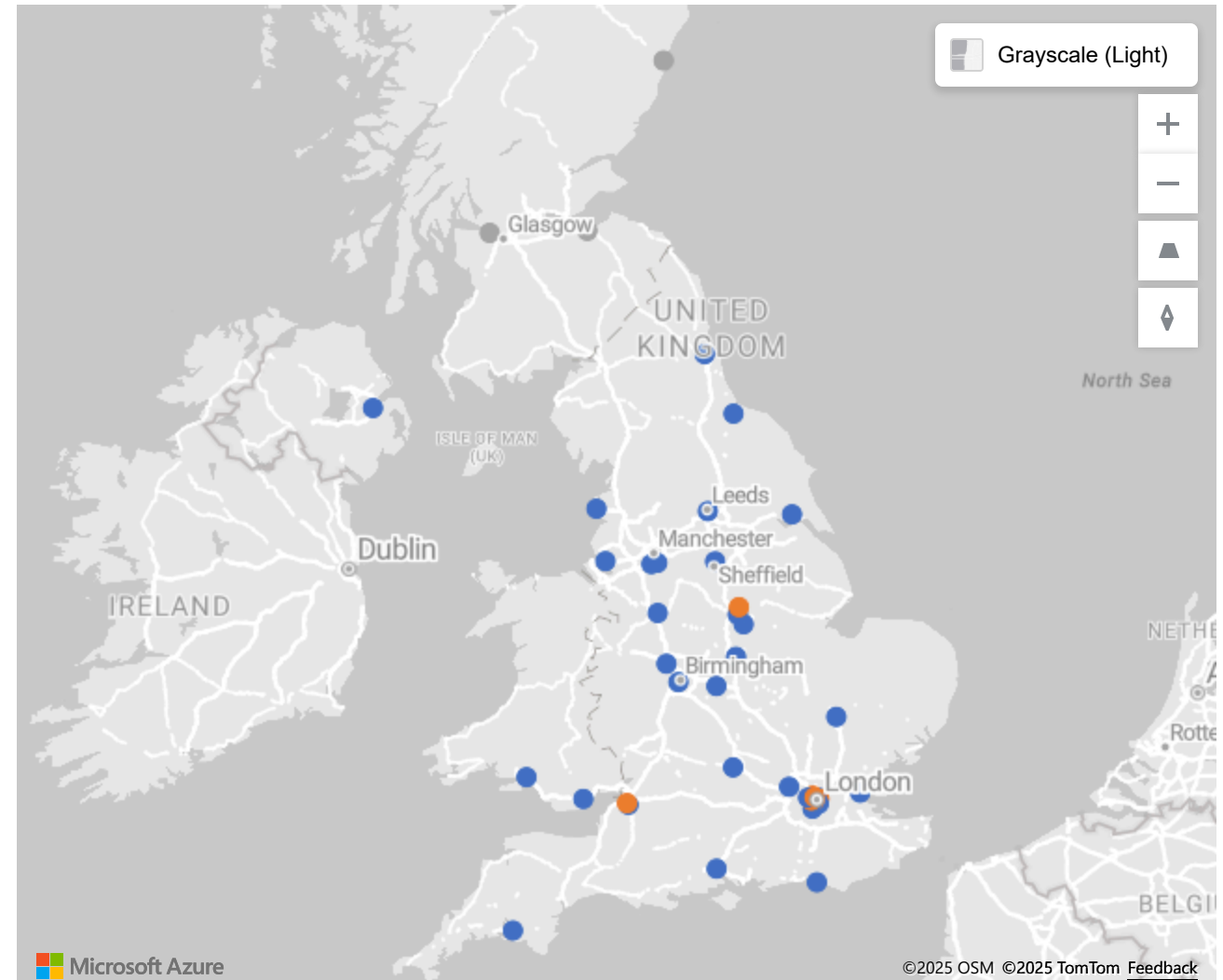


The audit summarises data from a total of 36 submitting hospitals, 31 NHS TAVI centres in England, Wales and Northern Ireland and from 5 of 10 private centres.

Data from Scotland are not included.

Two TAVI centres amalgamated in 2024, reducing the number of submitting NHS centres from 32 to 31.

TAVI centres in the UK



Microsoft Azure

©2025 OSM ©2025 TomTom Feedback

Overall data completeness remains very good though some hospitals need to improve their submissions to the audit



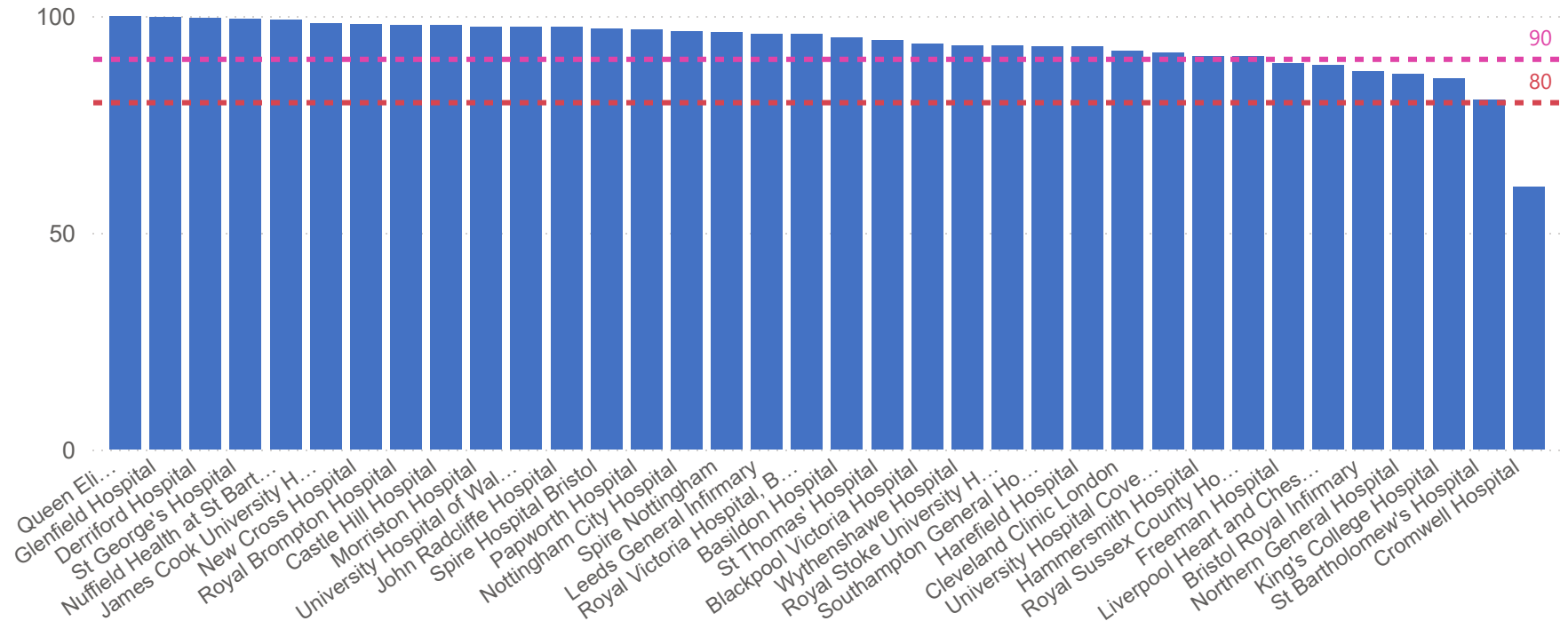
Hospitals continue to provide most of the data required for the audit with overall data completeness of 93% in 2024/25.

However, 5 NHS hospitals submitted less than 90% of the necessary data. These 5 centres undertook 1,827 cases or 18% of the national activity, a significant proportion.

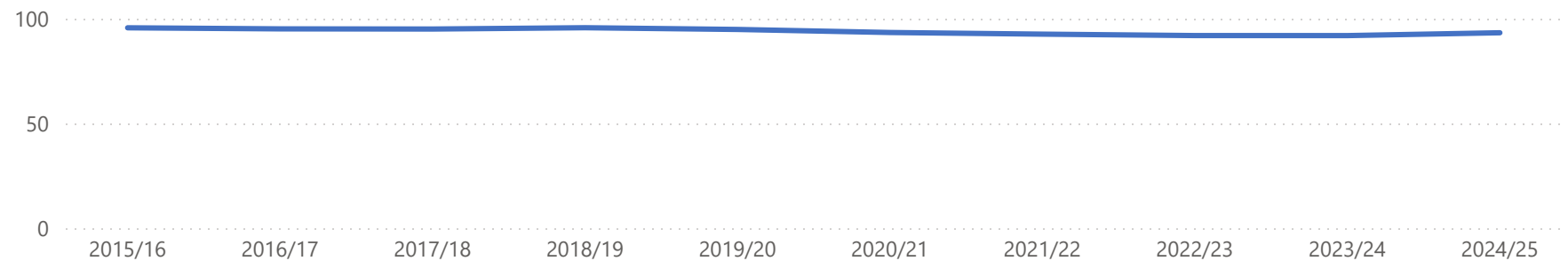
While there are many potential explanations for a lack of data completeness, data submission to the national audit is a requirement of NHS England commissioning and we will be contacting hospitals to discuss solutions to improve this.

Select a hospital below to see its data.

Percentage overall data completeness by hospital (2024/25)



Percentage overall data completeness



Select hospital

All

Data completeness is generally good across data fields but needs to be improved for a number of key areas, especially to assist benchmarking and risk adjustment



Percentage completeness of data variables in the TAVI audit (2024/25)

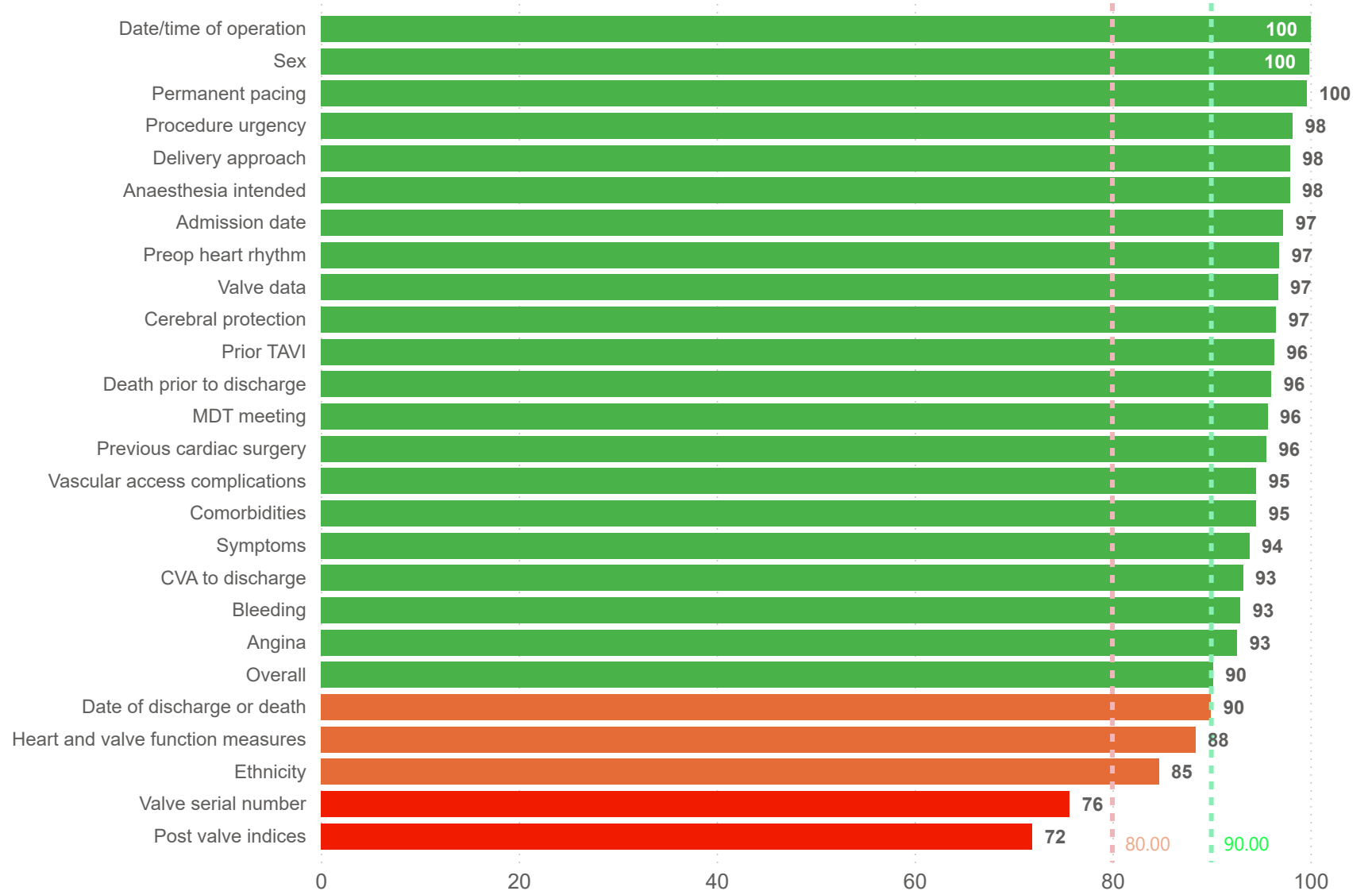
Overall data completeness across all the data fields required by the audit is 89%. This has improved from 85% in 2023/24.

There is significant variation in the level of completeness across each data field.

While the majority of data fields are completed well, some are not.

Reporting of valve serial numbers remains very low at 76%. This field is required for alignment with the Medical Devices Outcome Registry.

Select a hospital below to see its data.



Select hospital

All



Number of TAVI procedures

- All cases
- TAVI and isolated AVR procedures
- TAVI procedures by hospital
- TAVI procedures by ICB/HB
- TAVI procedures by cardiac network
- Urgency of cases by hospital
- TAVI patients by sex
- TAVI patients by age
- Age of TAVI patients by hospital
- TAVI procedures by age groups
- Urgent TAVI procedures by sex
- TAVI patients by ethnicity
- NYHA dyspnoea status
- Prior cardiac surgery
- Prior bioprosthetic valve
- Prior TAVI

Procedural approach

- Delivery approach
- Delivery approach other than perc TF
- Conscious sedation
- Cerebral protection

Length of stay

- LOS for elective cases
- LOS for elective cases by hospital
- Elective LOS distribution by hospital
- LOS for urgent cases
- LOS for urgent cases by hospital
- Urgent LOS distribution by hospital

Outcomes and complications

- In-hospital mortality
- 30-day mortality
- Mortality by hospital
- In-hospital stroke rates
- In-hospital stroke rates by hospital
- Major bleeding rates
- Major bleeding rates by hospital
- Major vascular access complications rate
- Major vascular access complications by hospital
- Implantation of PPM rates
- Implantation of PPM rates by hospital
- Aortic regurgitation rates
- Aortic regurgitation rates by hospital
- Readmission for heart failure rates

A growth in elective cases is largely driving the increase in the total number of TAVI procedures



The total number of TAVI procedures surpassed 10,000 in 2024/25. This total was 16% higher than in 2023/24, a rate of increase seen consistently since 2021/22.

Most of the growth comes from elective cases, rising from 5,997 to 7,445, a 24% increase.

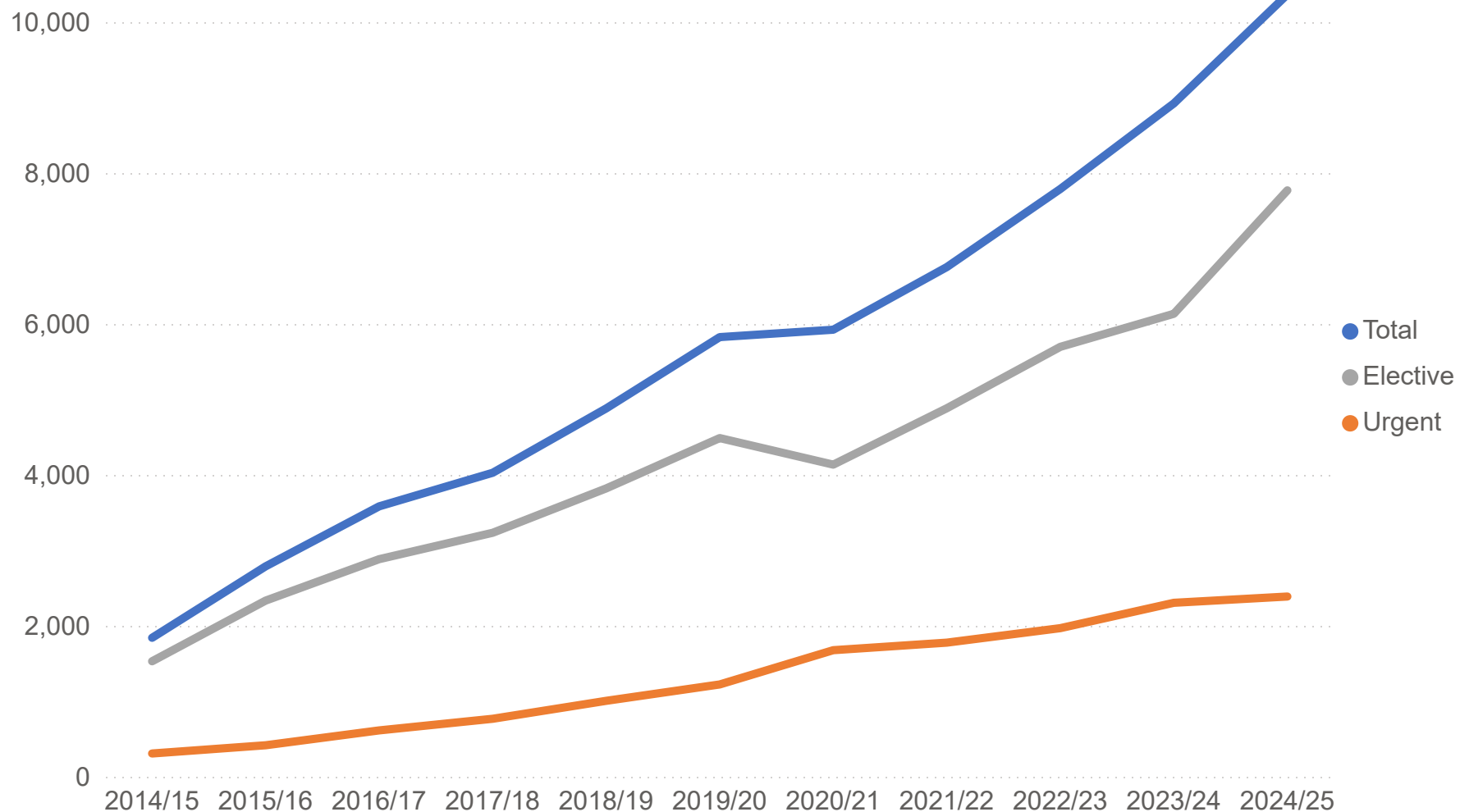
Urgent cases made up 23% of all activity in 2024/25, down from 26% in 2023/24.

Overall, there were 161 TAVI procedures per million population (pmp) across England, Wales and Northern Ireland in 2024/25, an increase from 141 pmp in 2022/23.

Note: The pmp rate has been calculated on mid-2022 ONS population estimates.

Note: Elective or urgent status is not recorded for 208 cases.

Total elective and urgent TAVI cases



While TAVI procedures continue to increase, the number of surgical AVR cases remains unchanged



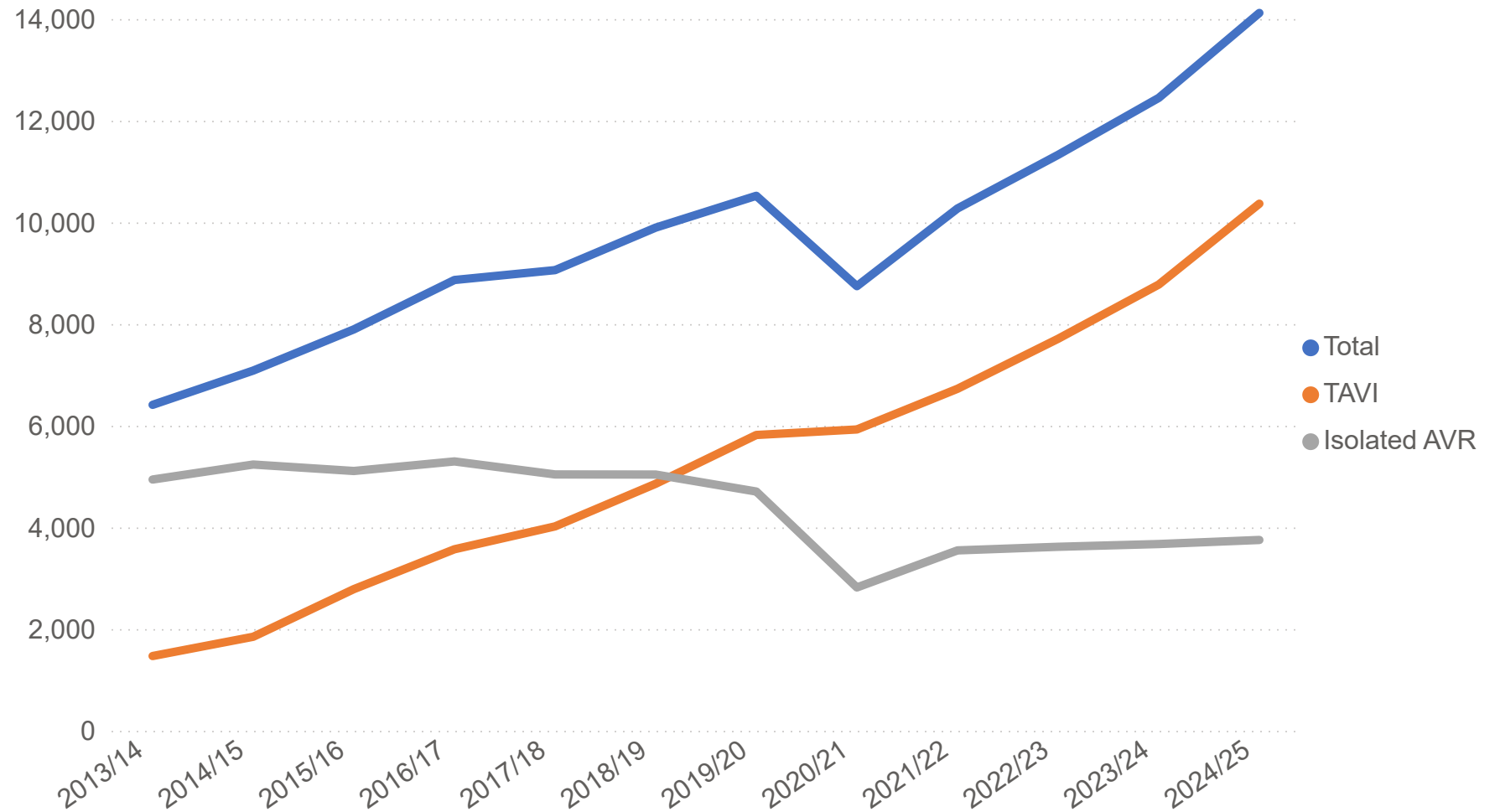
Surgical aortic valve cases by type of procedure

Patients with aortic stenosis, a narrowing of the valve through which blood passes from the major pump of the heart to the body, are treated by either:

- TAVI
- Surgical aortic valve replacement (AVR)

Isolated AVR procedures occur when only the aortic valve is replaced. In other patients, an additional surgical procedure such as coronary artery bypass grafting (CABG) may be needed.

Total numbers of valve procedures have increased from 12,448 in 2023/24 to 14,145 in 2024/25, almost all of which is a rise in TAVI procedures, with no major change in the number of surgical aortic valve procedures.



The average number of TAVI procedures per centre has increased



NHS hospitals undertook an average of 322 cases in 2024/25 which has increased from 247 in 2023/24.

14 UK hospitals performed more than 300 cases and only 4 NHS hospitals undertook fewer than 200 cases.

There has been an increase in TAVI activity across most UK hospitals but 5 hospitals had fewer case numbers.

Select a country/Cardiac Network and/or a hospital below to see specific data or hover over the graphs.

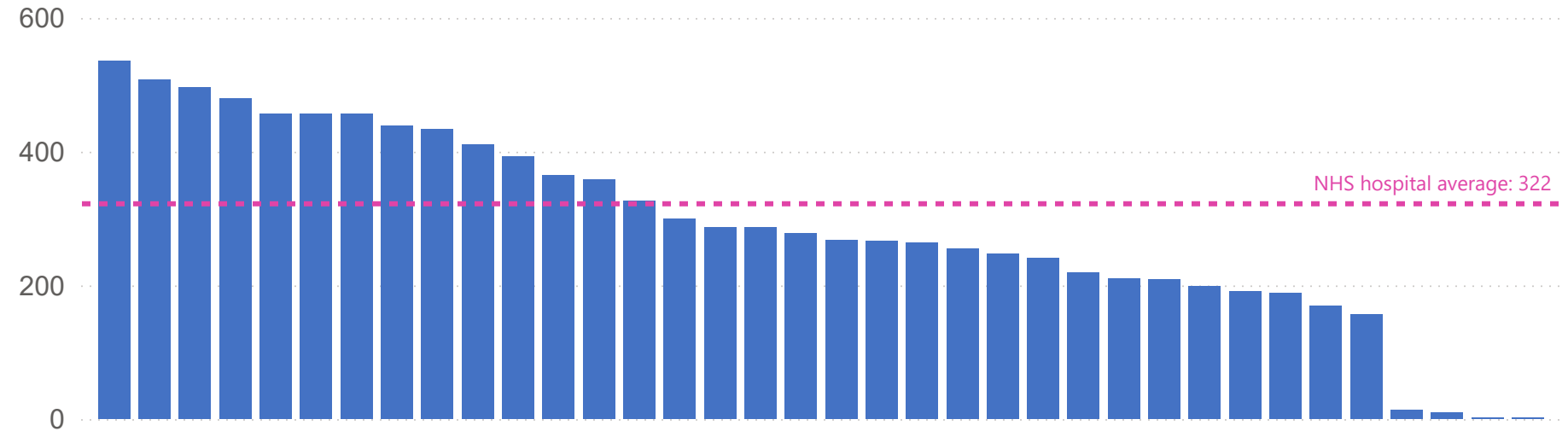
Select country/Cardiac Network

All

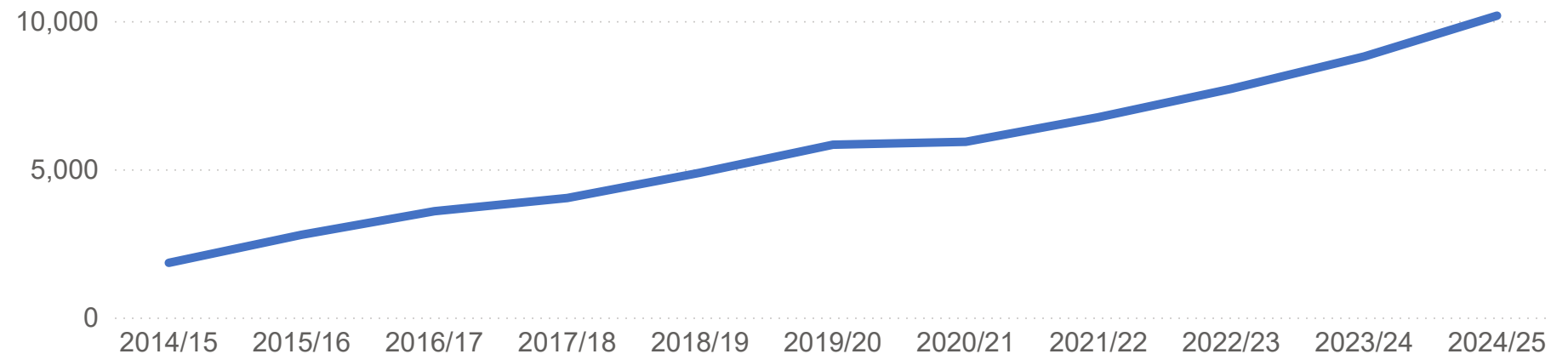
Select hospital

All

Total TAVI cases by hospital (2024/25)



Total TAVI cases



TAVI rates per million population vary considerably across Integrated Care Boards in England and Health Boards in Wales



The maps show the rate of TAVI procedures per million (ppm) population across the 42 Integrated Care Boards (ICBs) in England and 7 Health Boards (HBs) in Wales:

- Total TAVI procedures - from 78 ppm in North East London ICB to 296 ppm in Cornwall and the Isles of Scilly ICB
- Elective procedures - from 51 pmp in North East London ICB to 238 pmp in Hywel Dda University HB
- Urgent TAVI procedures - from 11 pmp in South Yorkshire ICB to 127 pmp in Powys Teaching HB.

When area populations are standardised by age distribution, the total rates vary from 95 pmp in Dorset ICB to 268 ppm in Cardiff University HB (with similar variations for elective and urgent cases). This suggests unequal access to TAVI as a treatment option across areas.

Select actual rate or age-standardised rate below, select an area on the map or hover over the graph to see specific data.

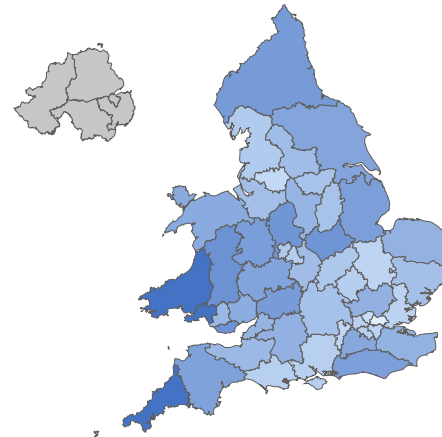
Note: Maps based on patient home location. Northern Ireland hospitals do not submit patient home postcode information. Private centres are excluded. Local rates based on mid-2022 population estimates. European standard population used for age-adjustment to facilitate international comparisons. Additional information on standardisation methodology is available [here](#).

Select rate

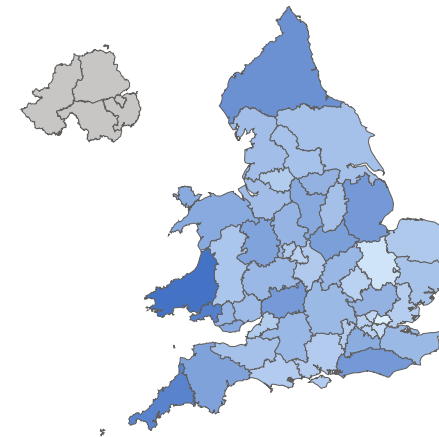
Age-standardised rate

Actual rate

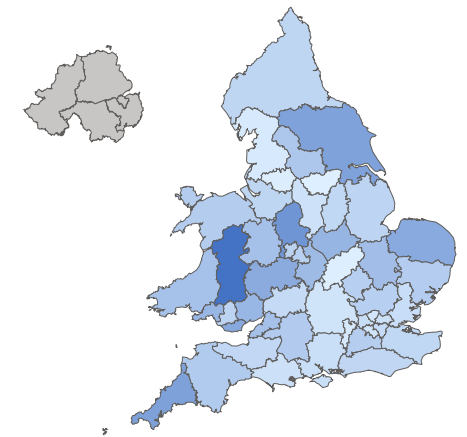
Total TAVI cases per million population by ICB/HB (2024/25)



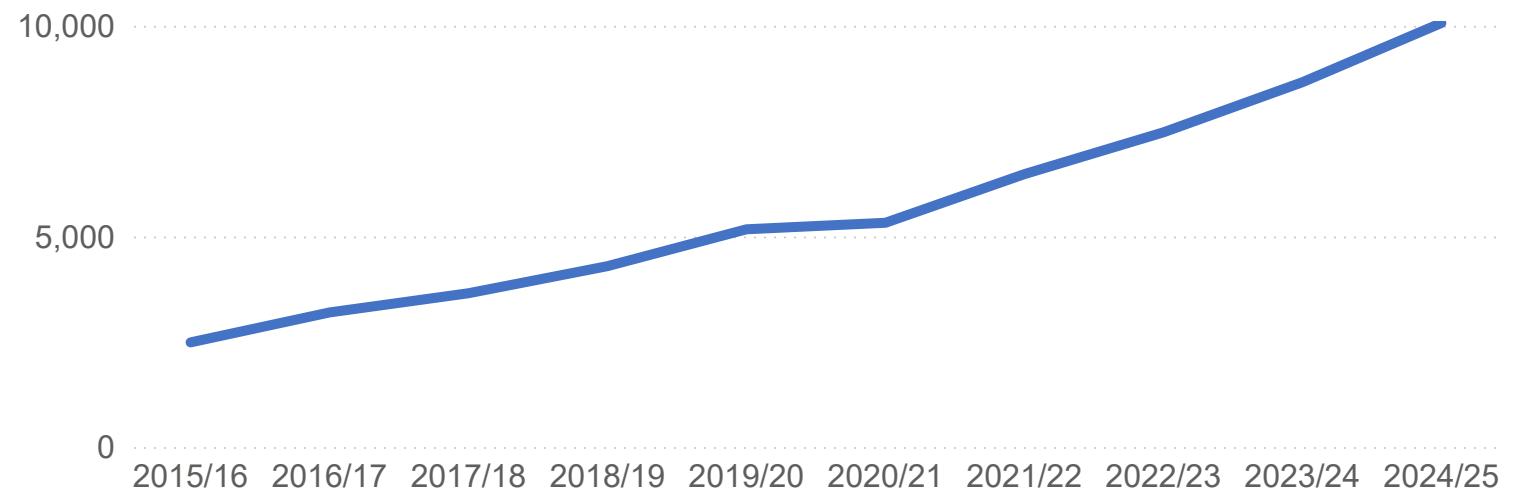
Elective TAVI cases per million population by ICB/HB (2024/25)



Urgent TAVI cases per million population by ICB/HB (2024/25)



Number of TAVI procedures



TAVI rates vary 4-fold by Cardiac Network



There was a wide variation in the rates of TAVI procedures per million (ppm) population across Cardiac Networks (CNs) in 2024/25:

- **Total procedures** - from 100 ppm in Northern Ireland to 288 ppm in North London CN.
- **Elective procedures** - from 50 ppm in Humber and North Yorkshire CN to 212 ppm in North London CN
- **Urgent procedures** - from 5 ppm in Greater Manchester CN to 74 ppm in West Midlands CN.

Age-standardised rates were lowest in West of England CN at 95 ppm and the highest were in North London at 474 ppm.

Select actual rate or age-standardised rate below, select an area on the map or hover over the graph to see specific data.

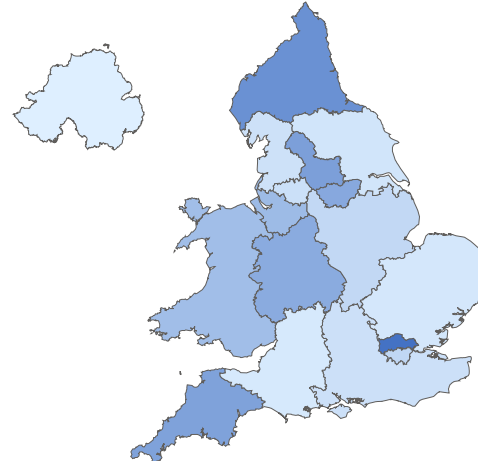
Note: Maps based on location of the hospital performing the procedure, not where the patient resides. Local rates are based on mid-2022 population estimates. Private

Select rate

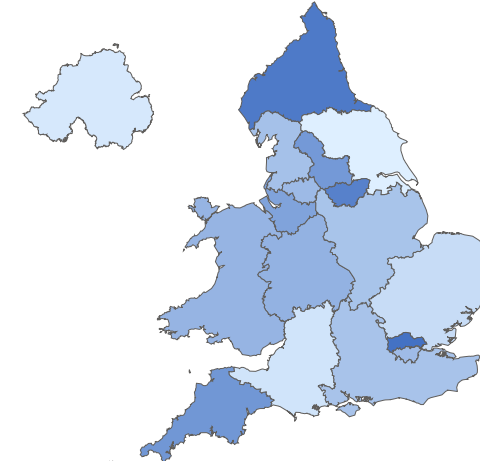
Age-standardised rate

Actual rate

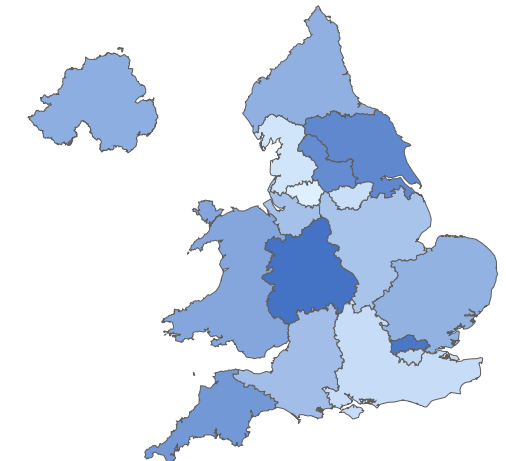
Total TAVI cases per million population by Cardiac Network (2024/25)



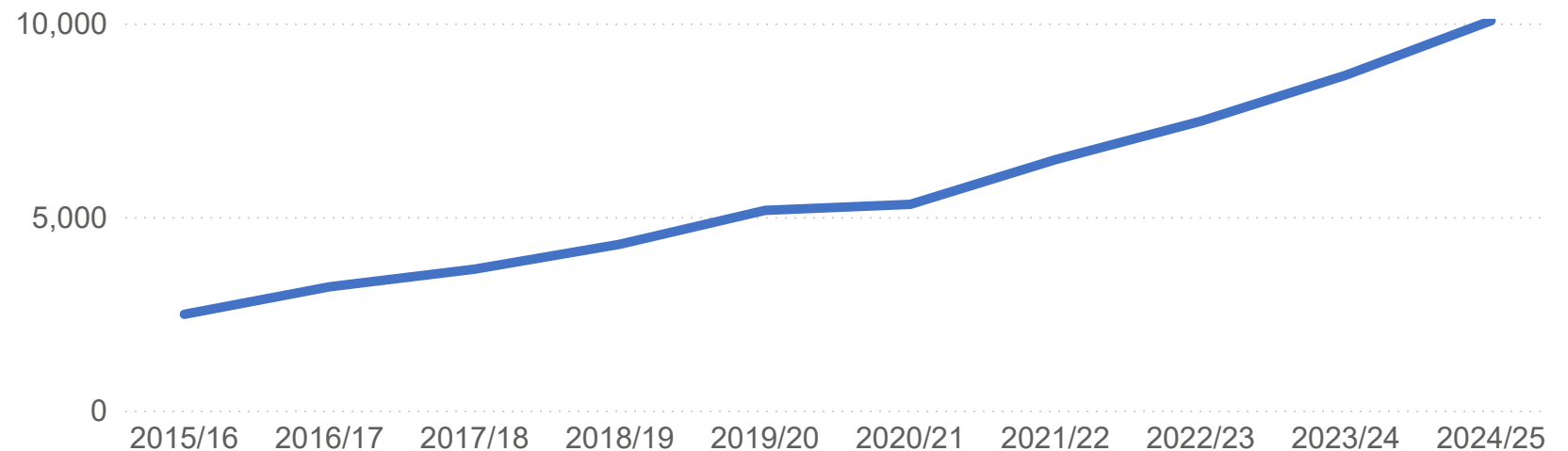
Total TAVI cases per million population by Cardiac Network (2024/25)



Total TAVI cases per million population by Cardiac Network (2024/25)



Number of TAVI procedures



The overall proportion of urgent TAVI cases remains at about 25%, but this varies by hospital, with the proportion of elective procedures increasing in many



Urgent TAVI procedures accounted for 23% of cases in 2024/25, a small reduction from 26% in 2023/24.

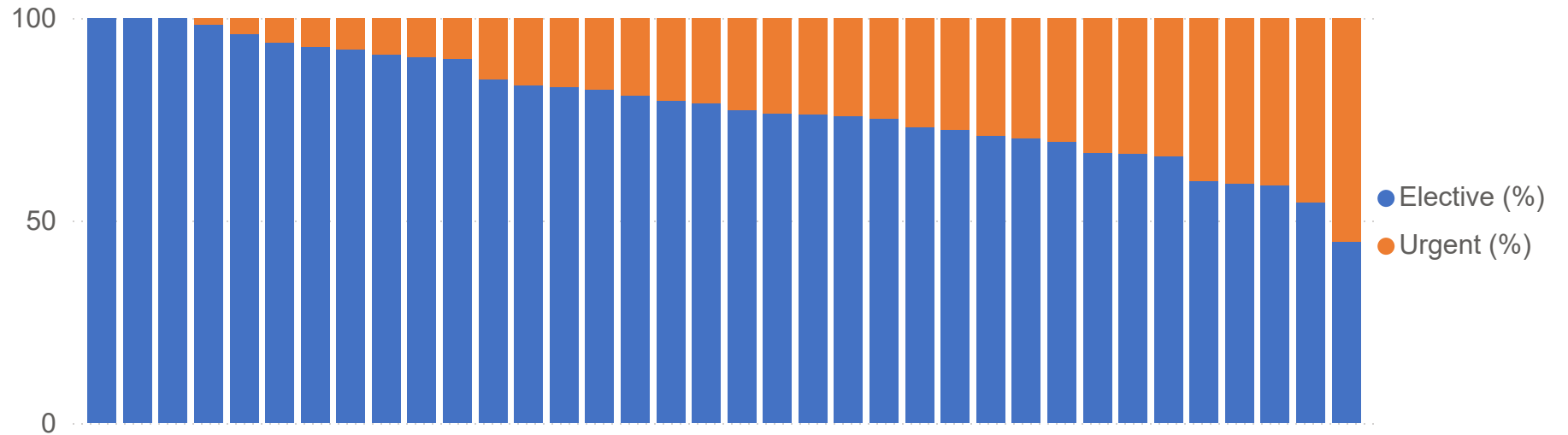
In 8 hospitals, more than 1 in 3 of the cases were urgent cases.

15 hospitals had fewer than 20% urgent cases in 2024/25, up from 7 hospitals in 2023/24.

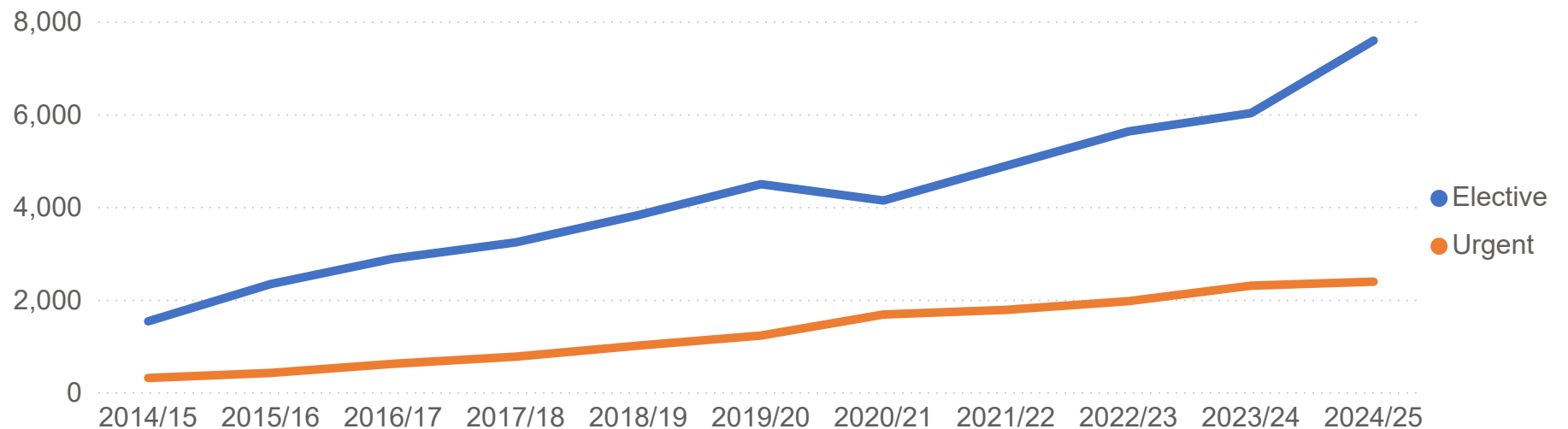
The NICOR audit data cannot be used to understand the underlying reasons for these variations in case mix.

Select a country/Cardiac Network or hospital below, or hover over the graphs to see specific data.

Percentage of TAVI procedures by urgency, by hospital (2024/25)



Number of TAVI cases by urgency



Select country/Cardiac Network

All

Select hospital

All



Fewer than 50% of TAVI patients are female and this is unchanged over time



Percentage of female TAVI patients

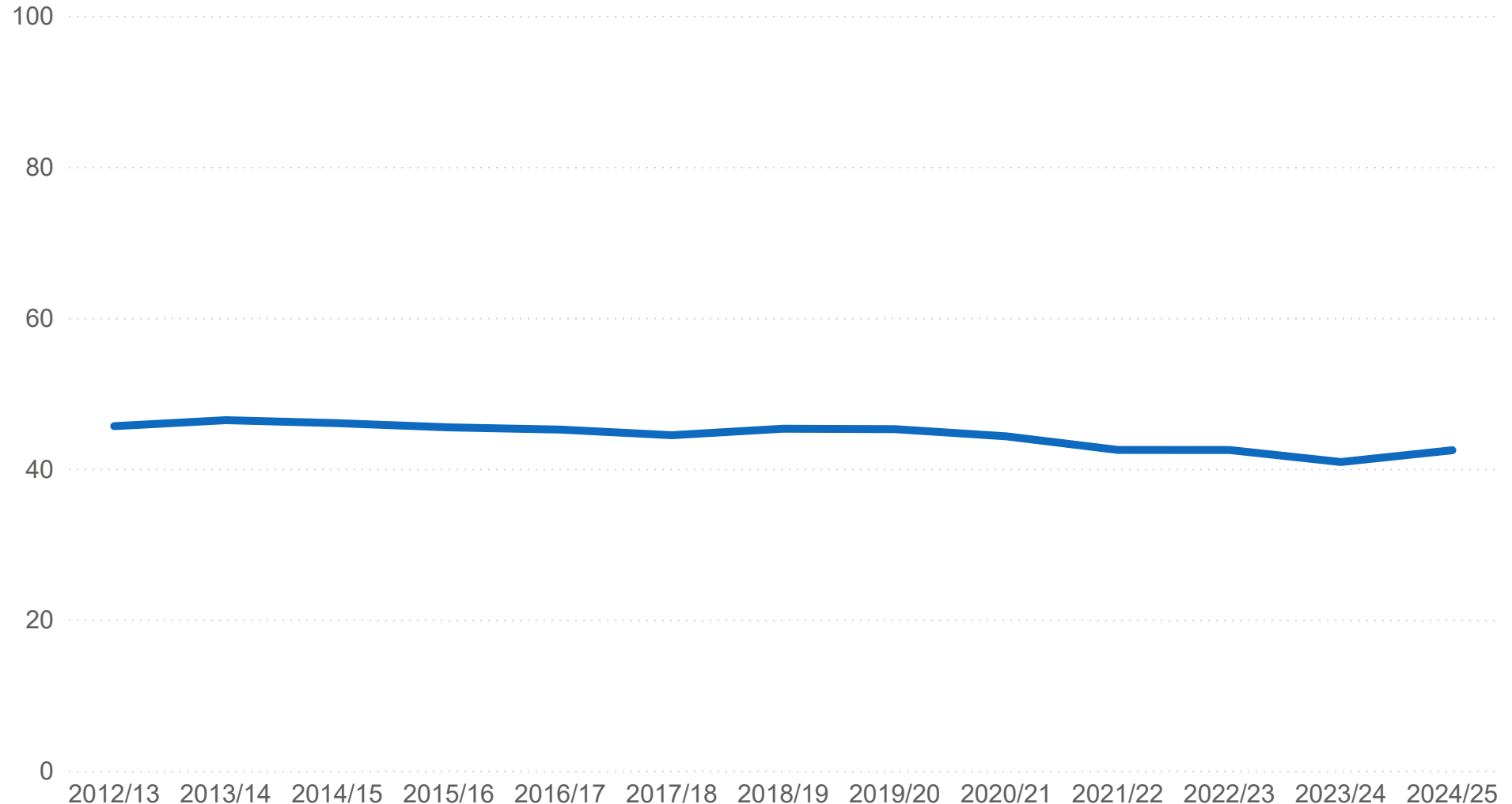
Female patients represented 42% of all patients treated by TAVI in 2024/25.

The proportion of female TAVI patients in the UK has not changed significantly over time.

The proportion of over-75s in the general population who are female is 57% (Census 2021).

These data suggest that there may be under-provision of TAVI treatment to female patients.

Further study is needed to confirm this, including for example, of the incidence, presentation and severity of aortic stenosis by sex, and age group.

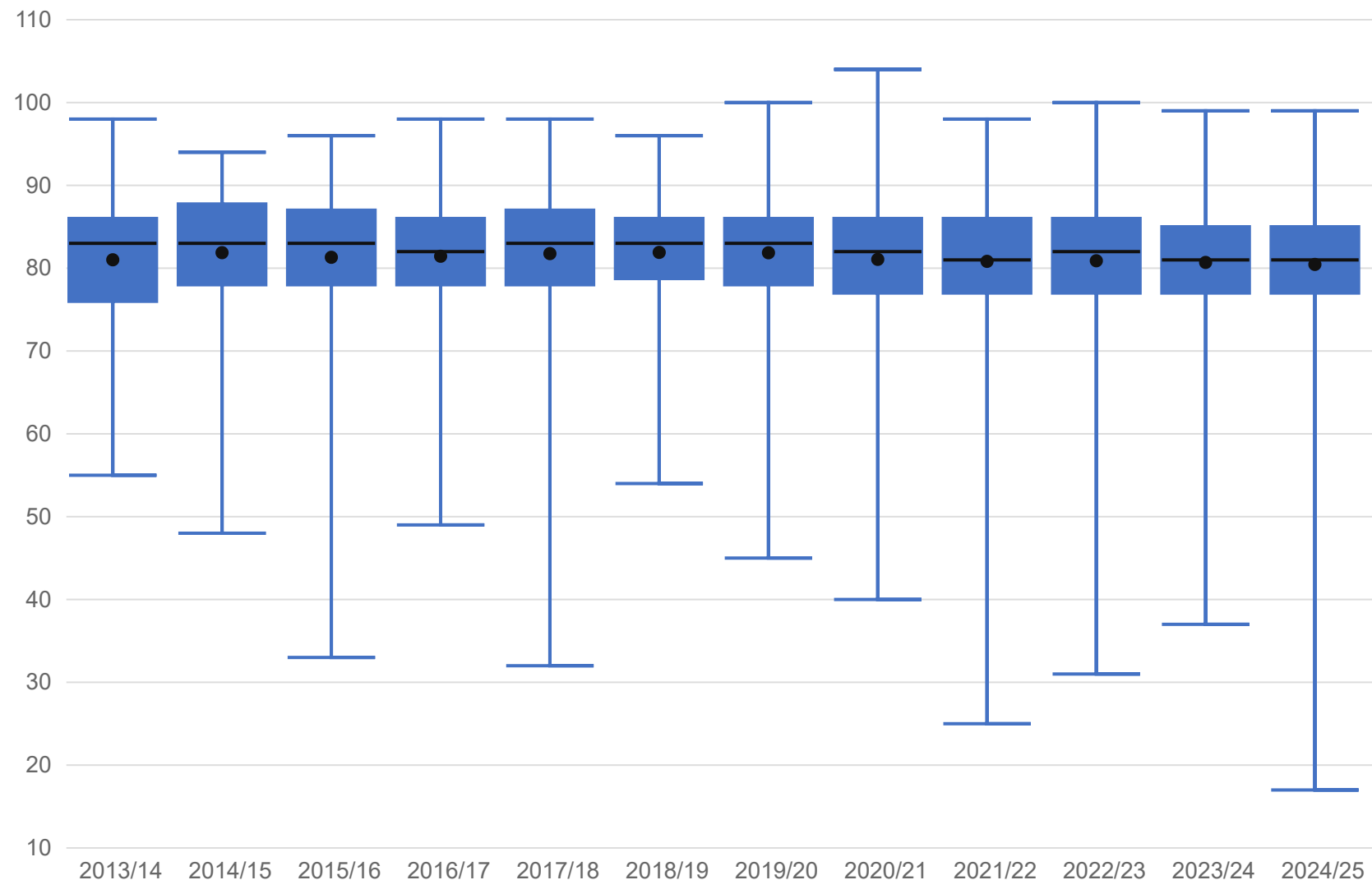


The average age of TAVI patients has not changed

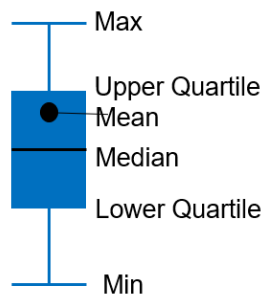


The median age of people undergoing TAVI in the UK has not changed significantly over the past decade.

Age of TAVI patients (years)



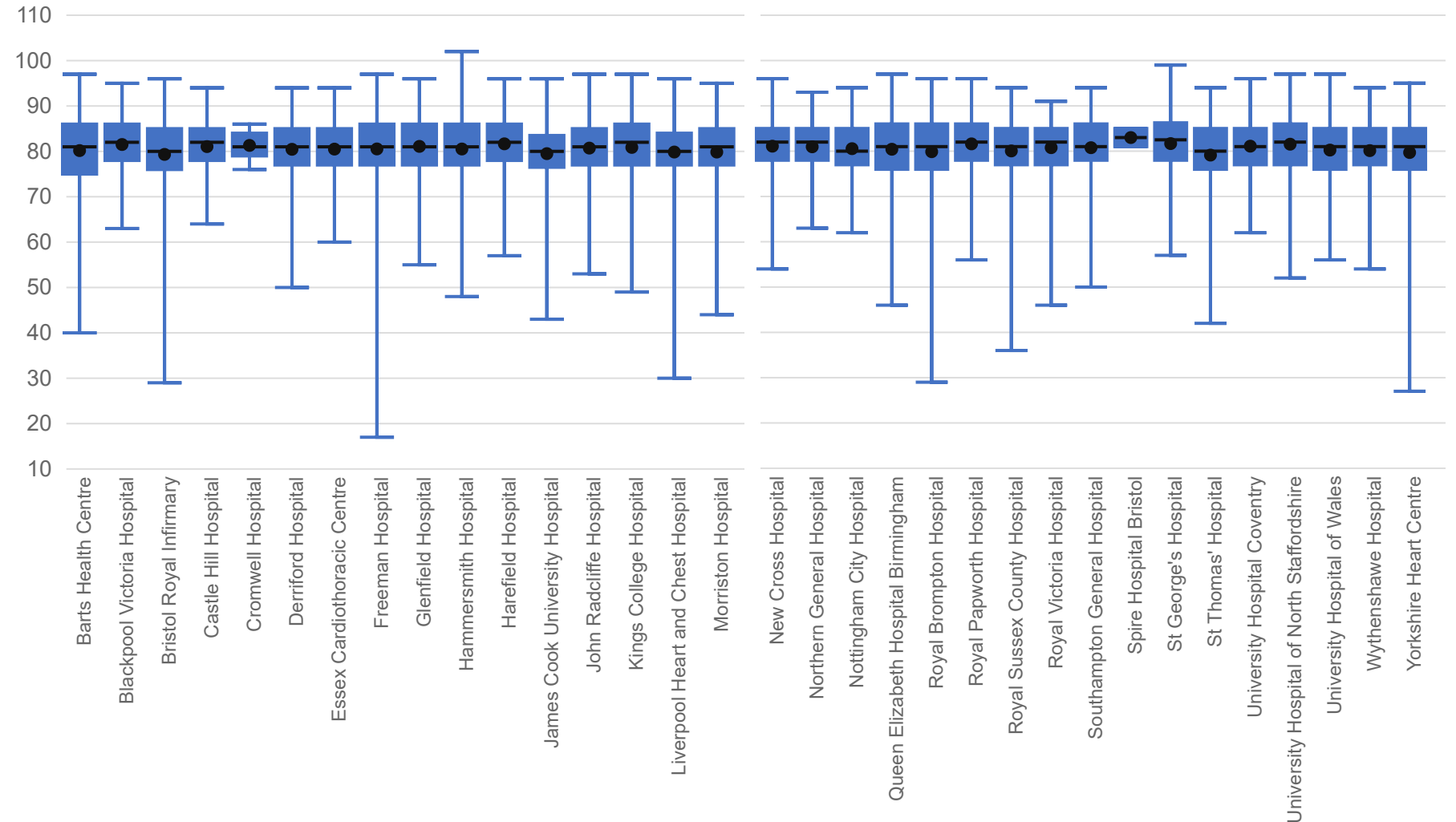
Key to reading the box and whisker chart



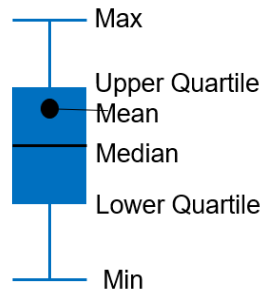
The median age of TAVI patients is consistent across hospitals



There is no significant variation in the median age of TAVI patients across NHS hospitals.



Key to reading the box and whisker chart



There has been a steady increase in the proportion of TAVI patients aged between 71 and 80



The proportion of TAVI patients aged 70 years or under has remained largely unchanged over time at around 7%.

There has been a steady increase over recent years in the proportion of TAVI patients aged between 71 and 80, with these now accounting for 38% of all cases in 2024/25.

Select a country/Cardiac Network and/or a hospital below to see specific data.

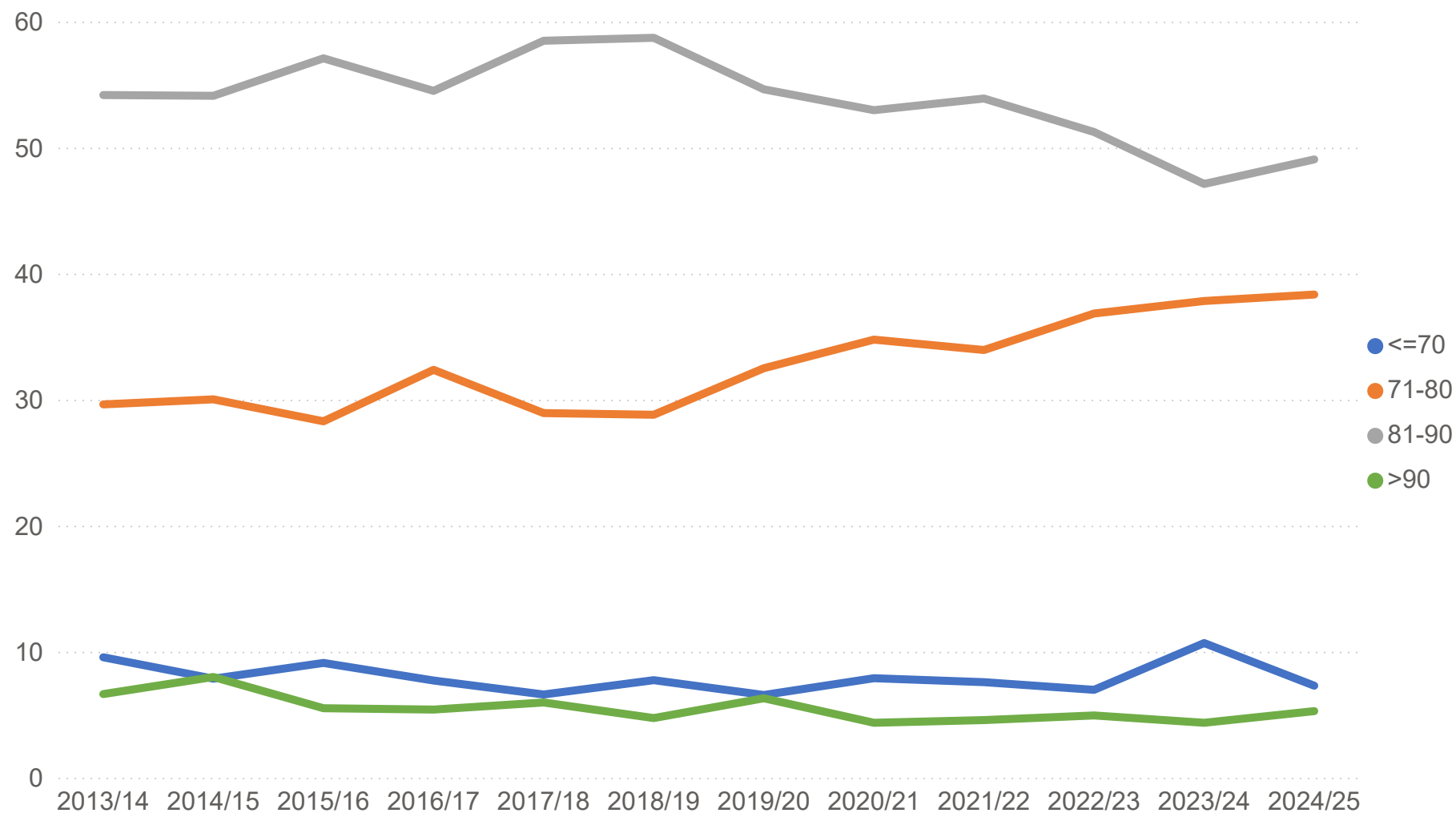
Select country/Cardiac Network

All

Select hospital

All

Percentage of TAVI cases by patient age group



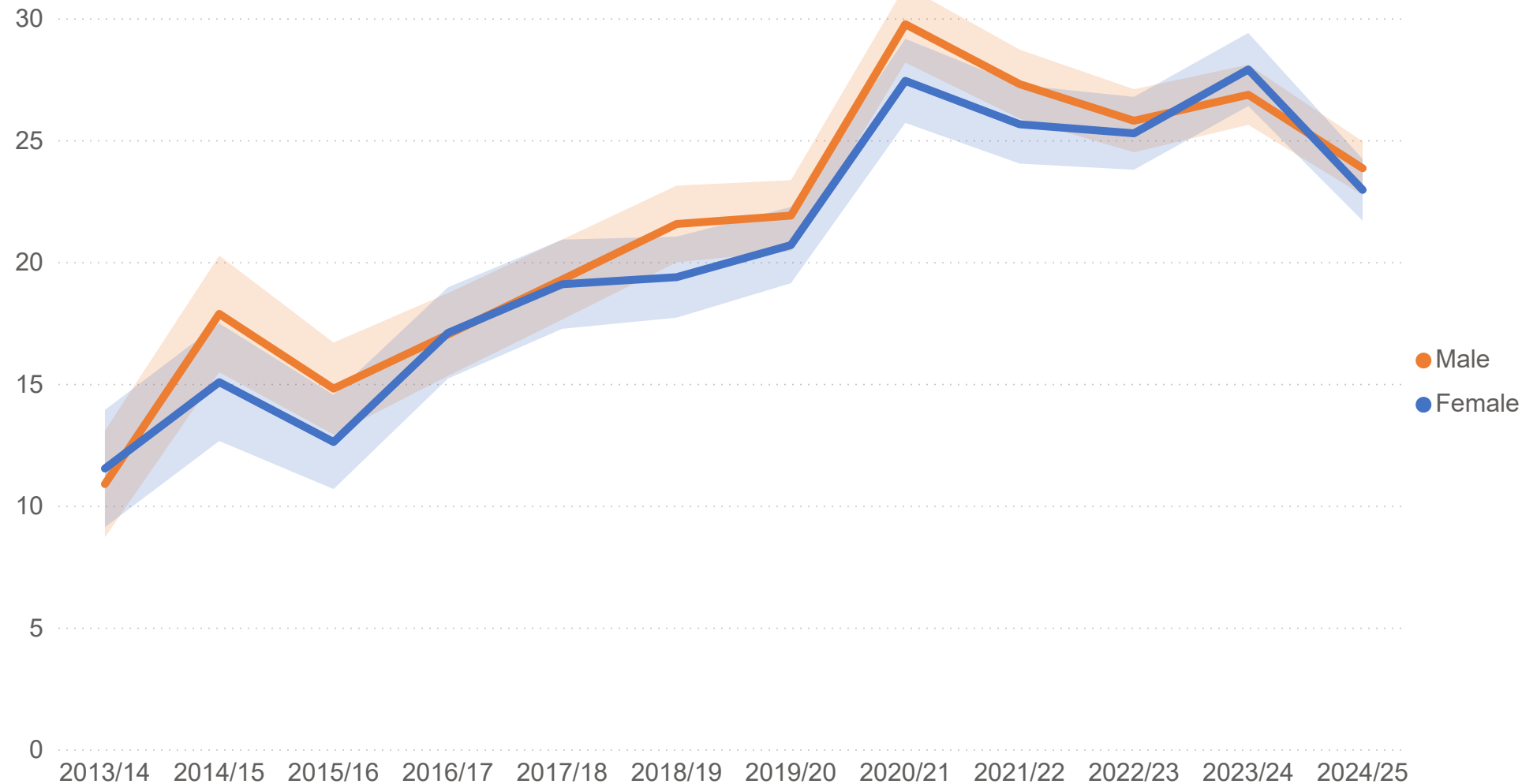
The proportion of patients treated urgently is the same for both sexes



Percentage of urgent cases by sex

The fall in the proportion of urgent cases is seen equally for male and female patients.

Note: The shaded areas in the graphic represent the 95% confidence interval around the mean line.



The ethnicity of TAVI patients is in line with the national population



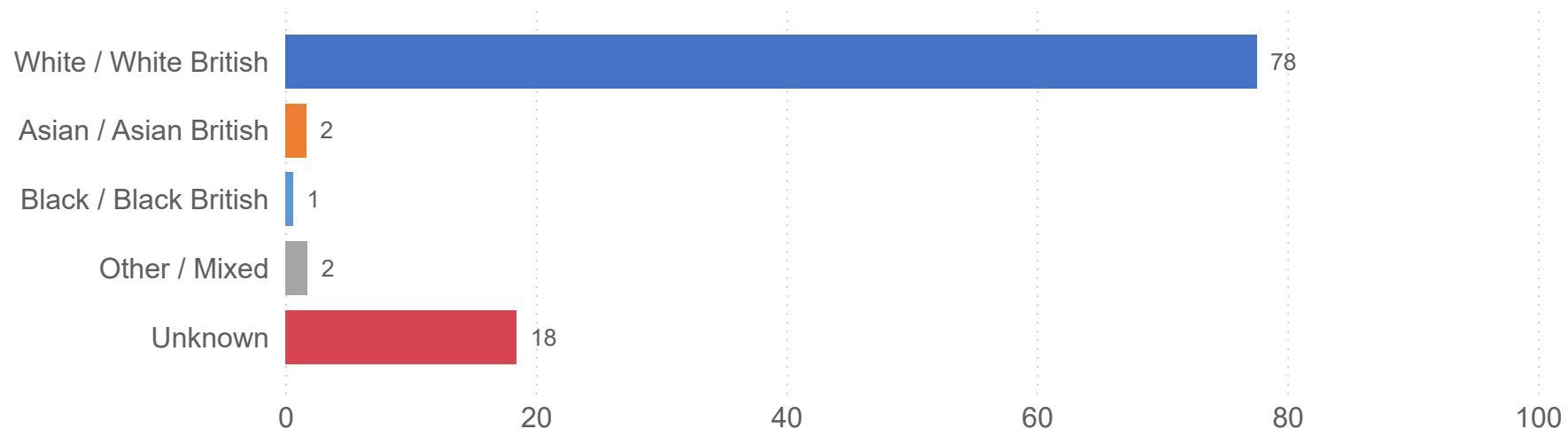
The breakdown of ethnicity amongst the 70-and-over age group within the 2021 Census is: ¹

- 95% White
- 3% Asian / Asian British
- 1% are Black / Black British
- 1% are Other / Mixed.

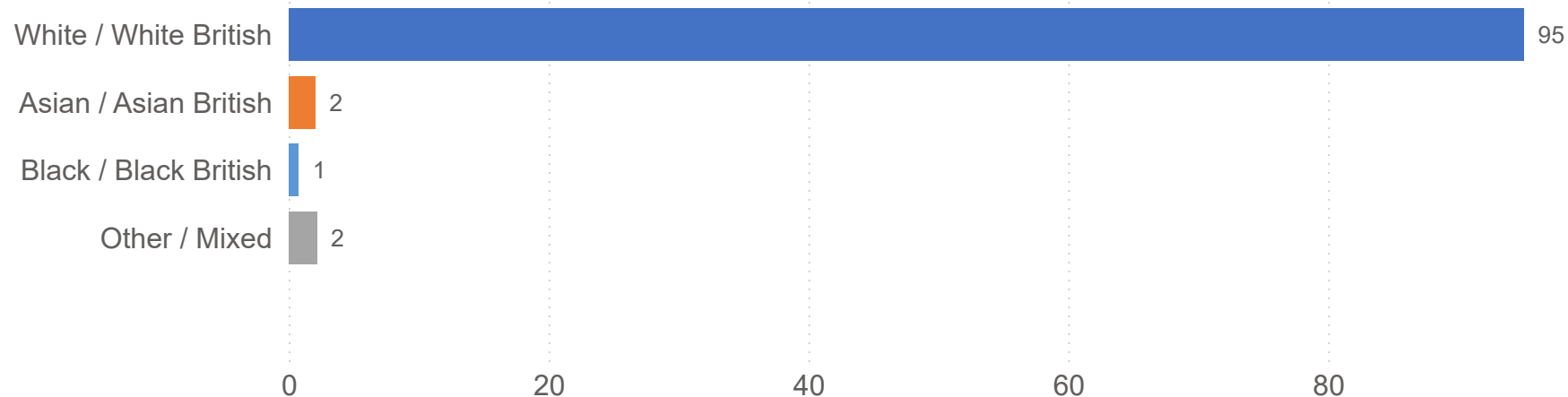
The ethnicity of TAVI patients is in line with this (though almost 20% of case submissions to the audit do not include ethnicity data).

All hospitals should provide complete data to the TAVI Registry.

Percentage of all TAVI cases by ethnicity (2024/25)



Percentage ethnicity of TAVI cases where ethnicity recorded (2024/25)



The majority of people treated by TAVI have significantly limiting breathlessness

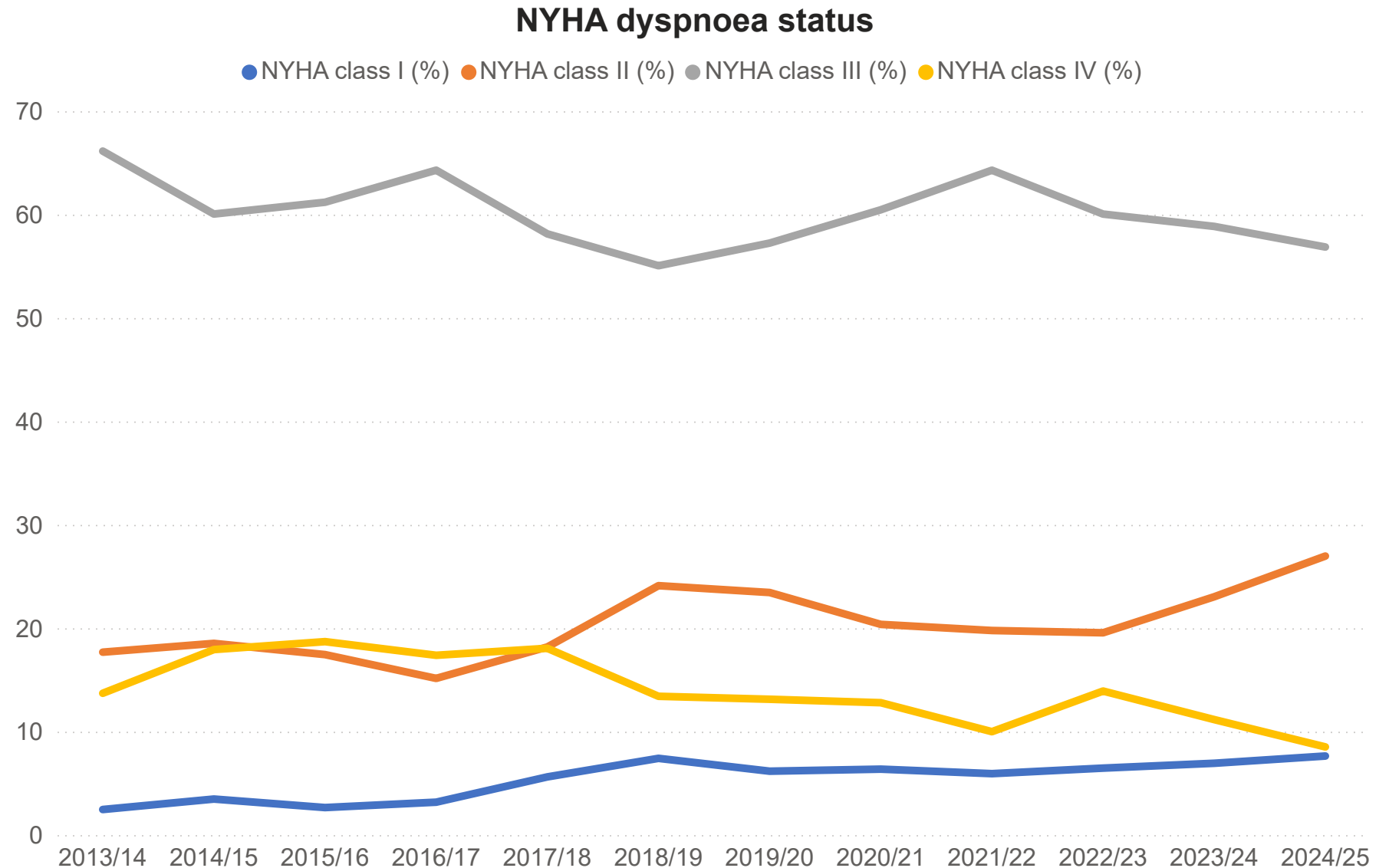


The TAVI registry collects information about the symptoms that people having TAVI are experiencing before treatment.

The New York Heart Association status is a way of reporting how severely breathlessness is limiting people. Class I is no limitation and Class IV is symptoms which are severely limiting or at rest.

More than 90% of people treated by TAVI have limiting symptoms and the proportion of people with no symptoms treated by TAVI remains low at below 10%.

There has been a gradual reduction in the proportion with very severe Class IV symptoms and a gradual increase in those with Class II symptoms. The proportion with significantly limiting Class III symptoms remains high at 57%.



The proportion of patients who had undergone cardiac surgery prior to their TAVI procedure continues to decline

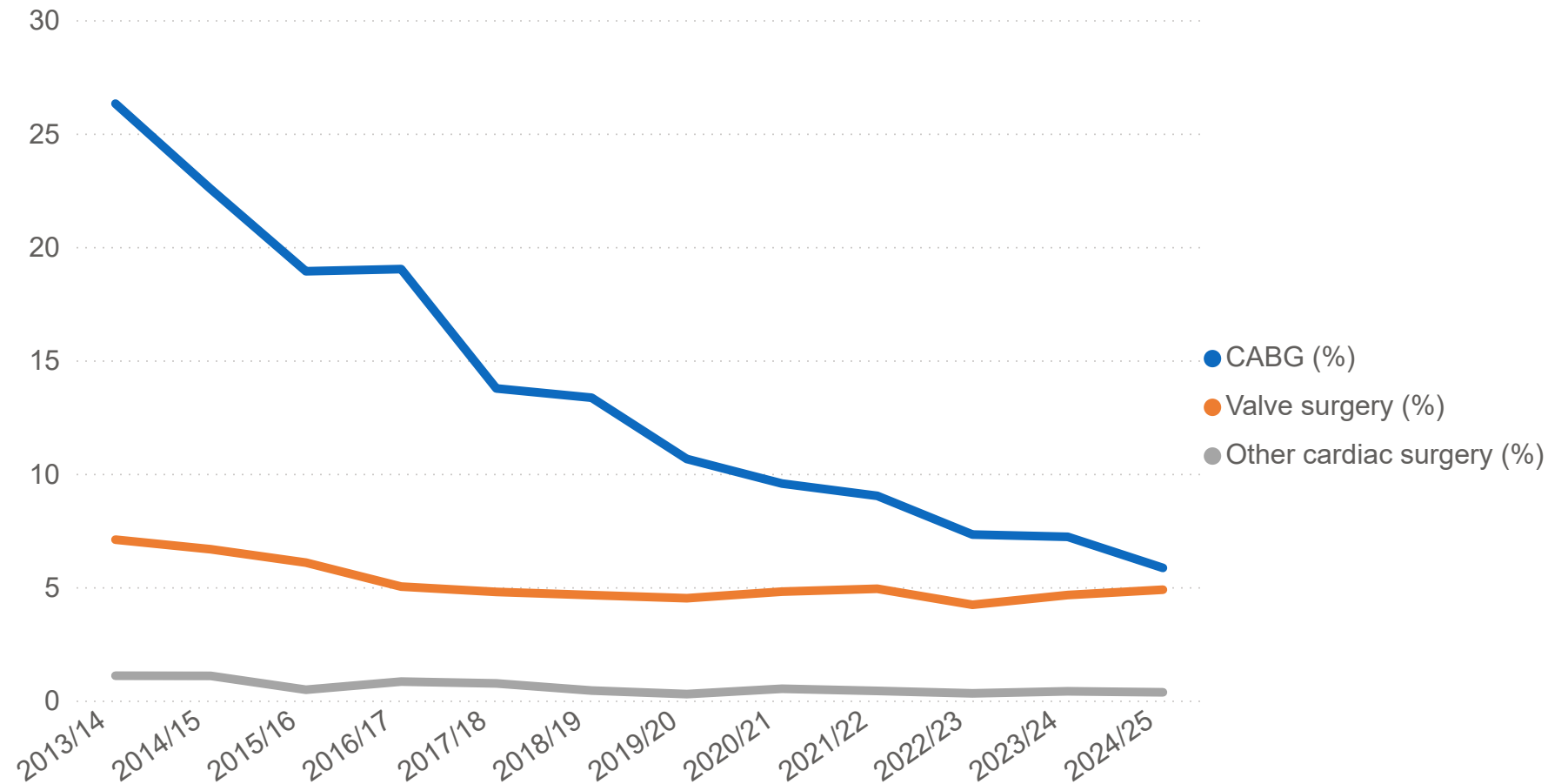


Proportionately fewer patients are undergoing cardiac surgery prior to being treated by TAVI, driven in part by the increase in the number of patients undergoing TAVI.

The proportion of patients who have previously had a coronary artery bypass graft (CABG) make up most of the TAVI patients with prior surgery (584 people in 2024/25).

The proportion of patients who have had prior valve surgery is largely unchanged.

Percentage of TAVI patients who have previously undergone cardiac surgery by type of procedure



Data Completeness
94.8%

→ [Contents page](#)

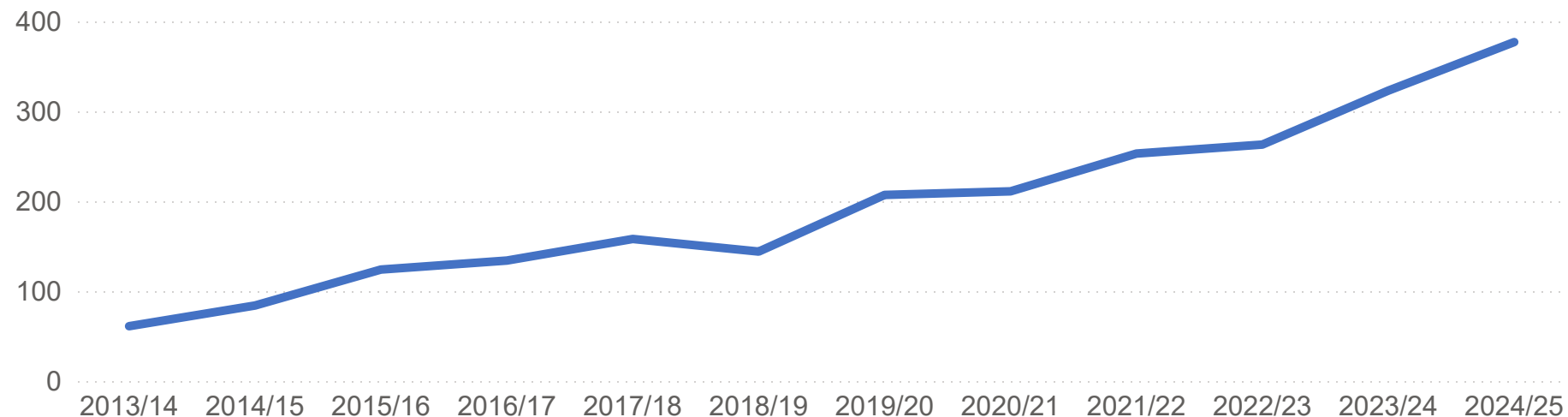
The number of people with a prior bioprosthetic valve undergoing TAVI has increased, while the proportion has not changed



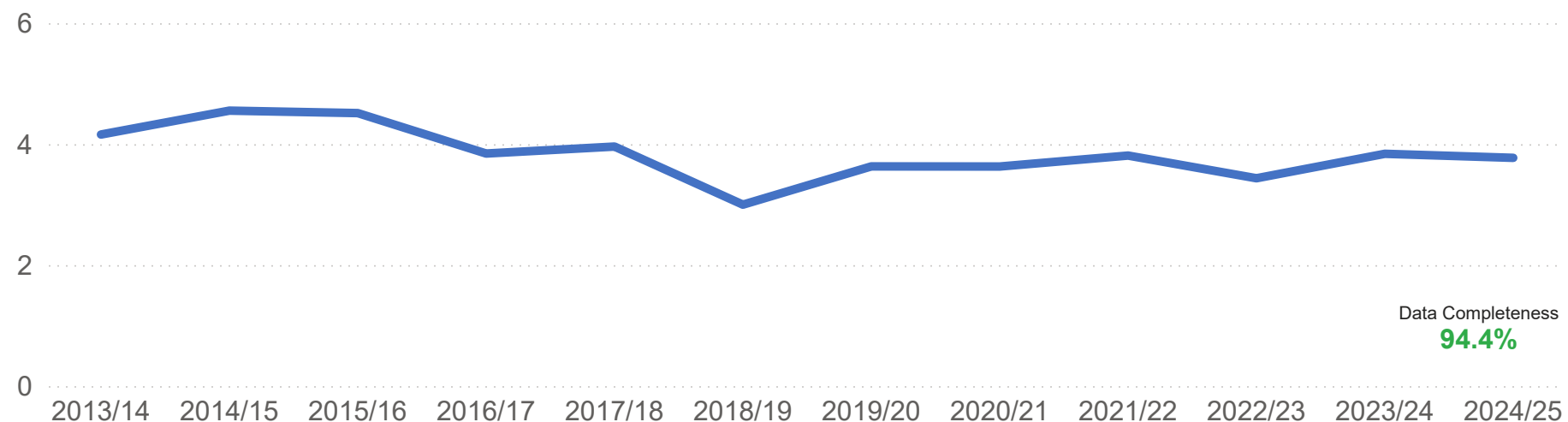
The proportion of TAVI patients who had previously had a surgical bioprosthetic aortic valve did not change significantly in 2024/25, remaining at about 4%.

The small number of these cases does continue to rise though, as part of the overall increase in the use of TAVI, with 377 people having undergone prior surgical aortic valve replacement in 2024/25.

Number of people undergoing TAVI with an aortic bioprosthetic valve



Percentage of people undergoing TAVI with an aortic bioprosthetic valve



Data Completeness
94.4%

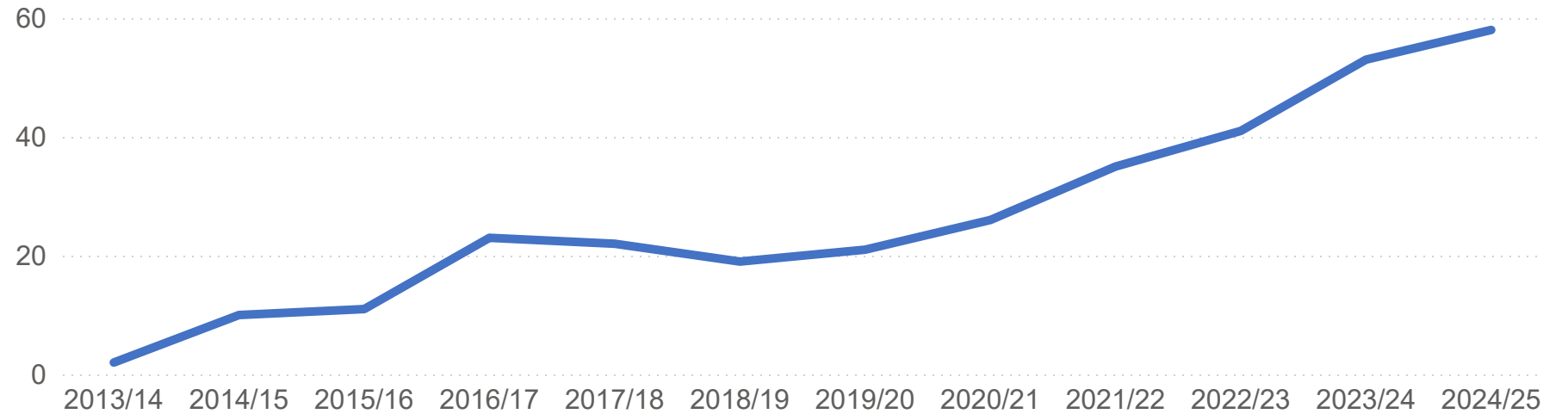
The number of people undergoing TAVI who have had a previous TAVI procedure remains small



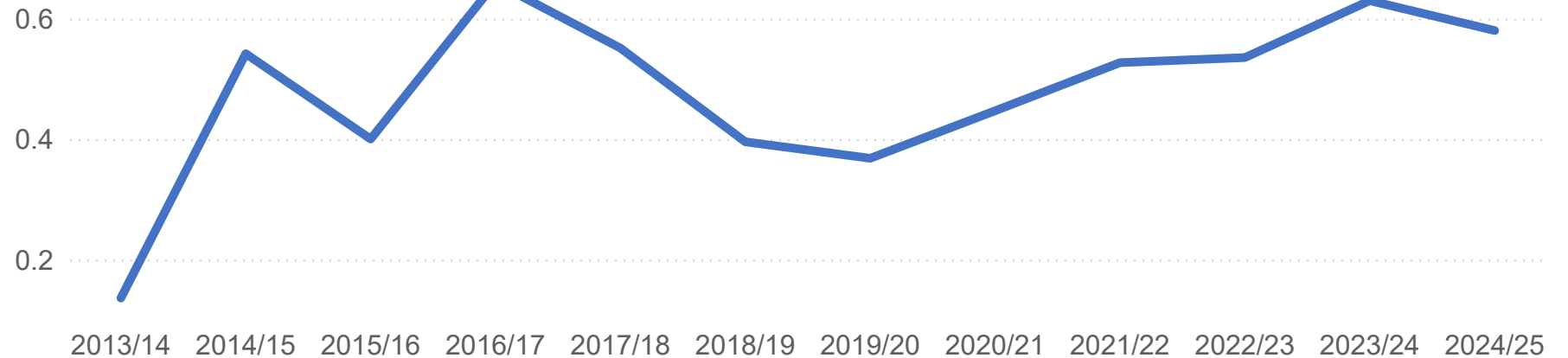
The number of patients undergoing TAVI who have previously had a TAVI has increased from 53 in 2023/24 to 58 in 2024/25. This represents less than 1% of cases undertaken.

The absolute number is likely to increase as the population of people with TAVI grows.

Number of TAVI patients who had previously undergone TAVI



Percentage of TAVI patients who had previously undergone TAVI



Almost all hospitals meet the target of using percutaneous transfemoral access in more than 90% of TAVI cases



The proportion of TAVI cases undertaken with the percutaneous transfemoral approach has continued to increase and was 97% in 2024/25.

Only 1 hospital performed fewer than the target 90% of cases using percutaneous transfemoral access, having had a predominant surgical transfemoral program until 2021/22. This hospital is now transitioning to a greater proportion of percutaneous transfemoral cases, though its surgical transfemoral rate remains higher than the national rate.

Select a country/Cardiac Network or hospital below or hover over the graphs to see specific data.

- Key:**
- TF (per) Percutaneous transfemoral access
 - SC/Ax Subclavian or axillary artery access
 - TF (surg) Surgical transfemoral access
 - TA Transapical access
 - Carotid Carotid artery access
 - Other Other methods of access

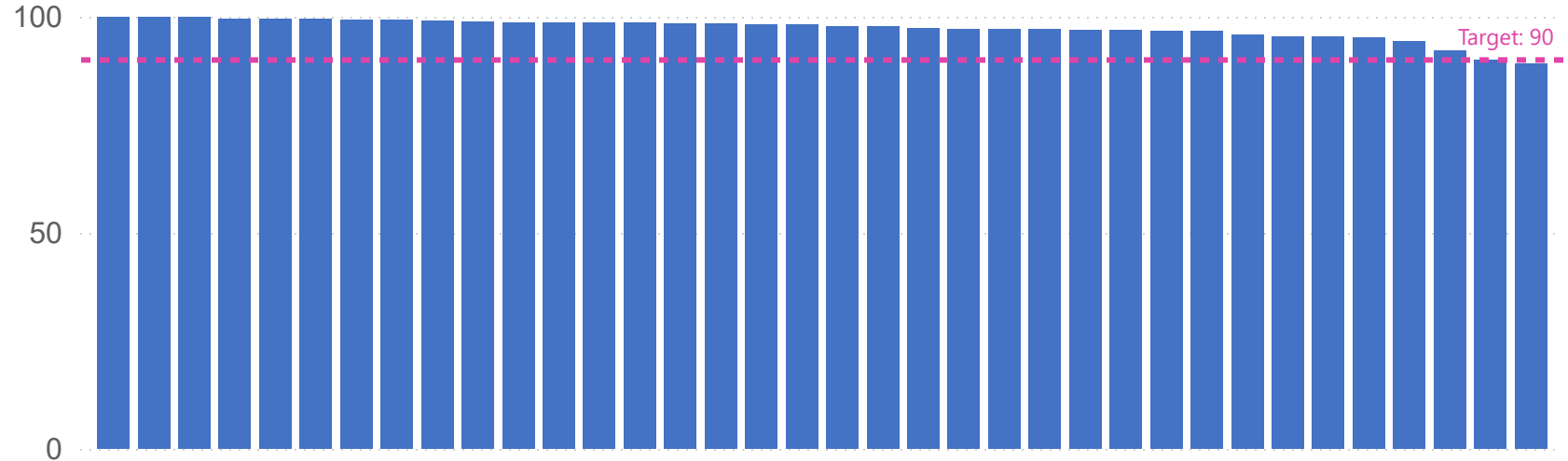
Select country/Cardiac Network

All

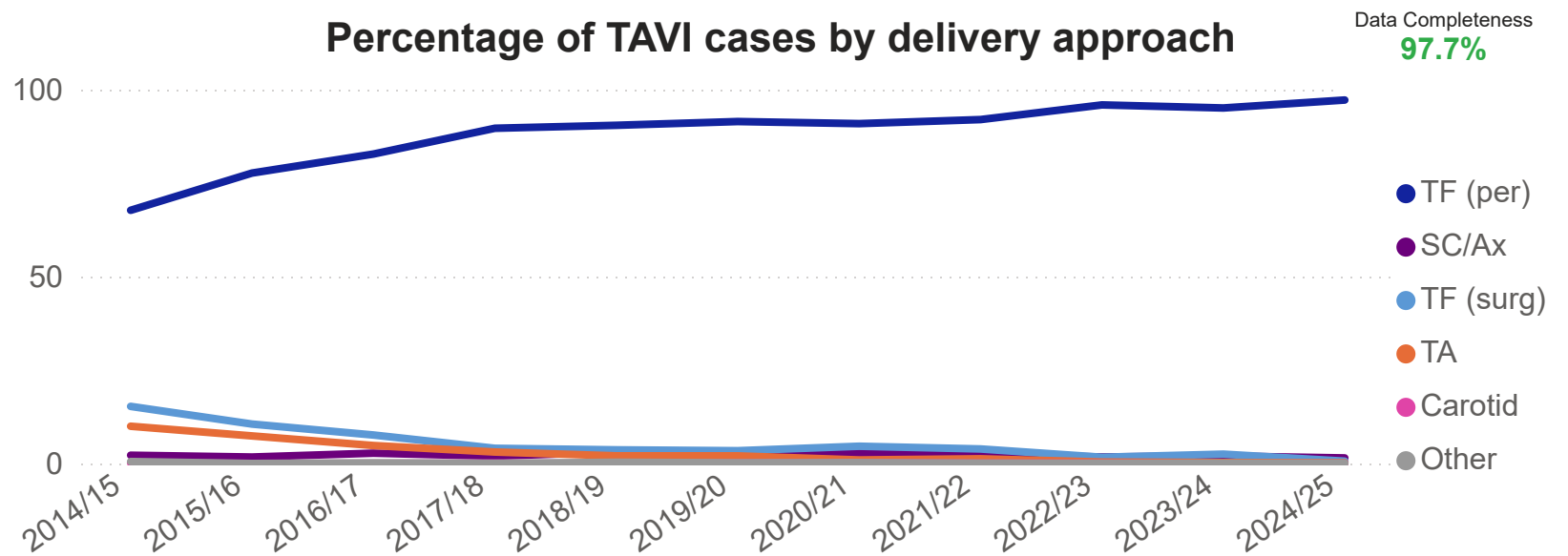
Select hospital

All

Percentage of TAVI cases using percutaneous transfemoral delivery



Percentage of TAVI cases by delivery approach



Data Completeness
97.7%



Subclavian, axillary and surgical transfemoral procedures have largely replaced the transapical approach as an alternative to percutaneous transfemoral access



The proportion of TAVI cases undertaken with an approach other than a percutaneous transfemoral approach (alternative access) has continued to fall as the use of transfemoral access has increased.

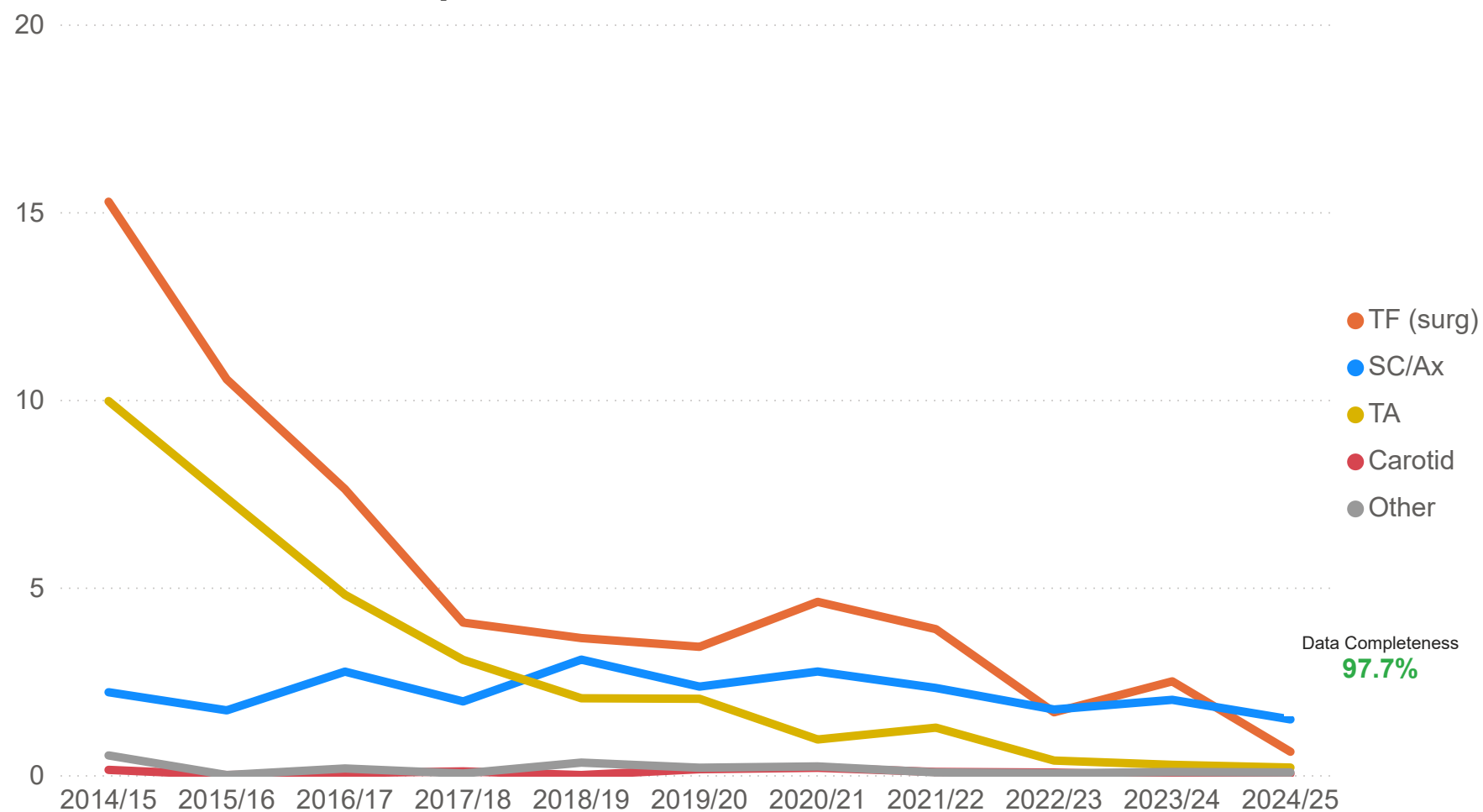
Alternative access is now used in 3% of TAVI cases.

The most frequently used alternative access approach is subclavian/axillary with 1.5% of cases using this approach.

The rates of other alternative access approaches remain low.

Key:
 SC/Ax Subclavian or axillary artery access
 TF (surg) Surgical transfemoral access
 TA Transapical access
 Carotid Carotid artery access
 Other Other methods of access

Percentage of TAVI cases performed using access other than the percutaneous transfemoral route



The number of hospitals using conscious sedation in more than 90% of TAVI procedures has increased



The proportion of TAVI cases undertaken with conscious sedation was 94% in 2024/25, the same for the previous 2 years.

Almost all centres surpass the target of using conscious sedation in more than 90% of their cases.

Select a country/Cardiac Network or hospital below or hover over the graphs to see specific data.

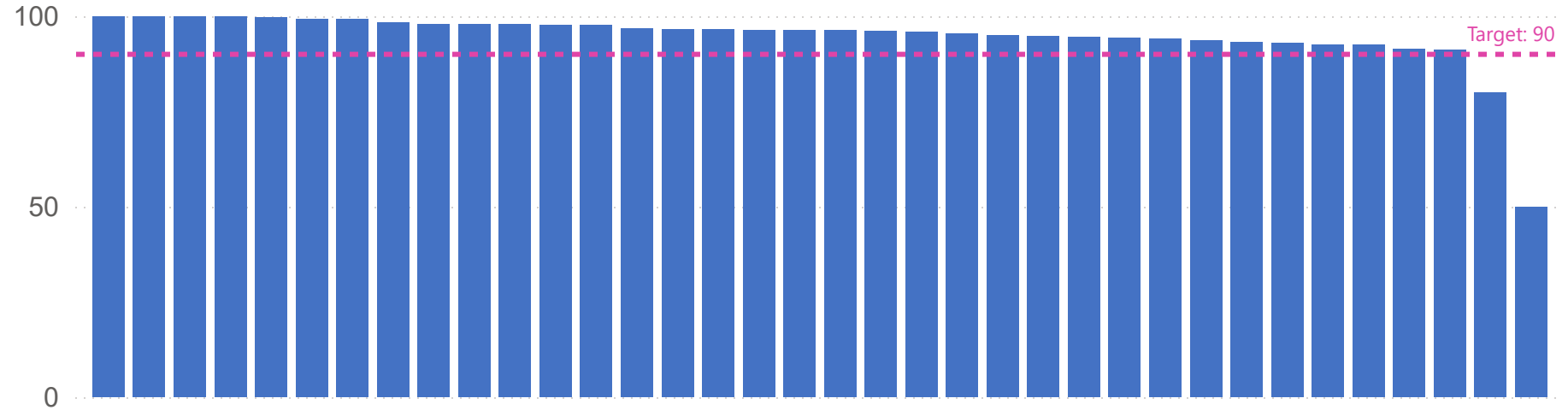
Select country/Cardiac Network

All

Select hospital

All

Percentage of TAVI procedures using conscious sedation by hospital (2024/25)



The proportion of cases where cerebral embolic protection is used has fallen



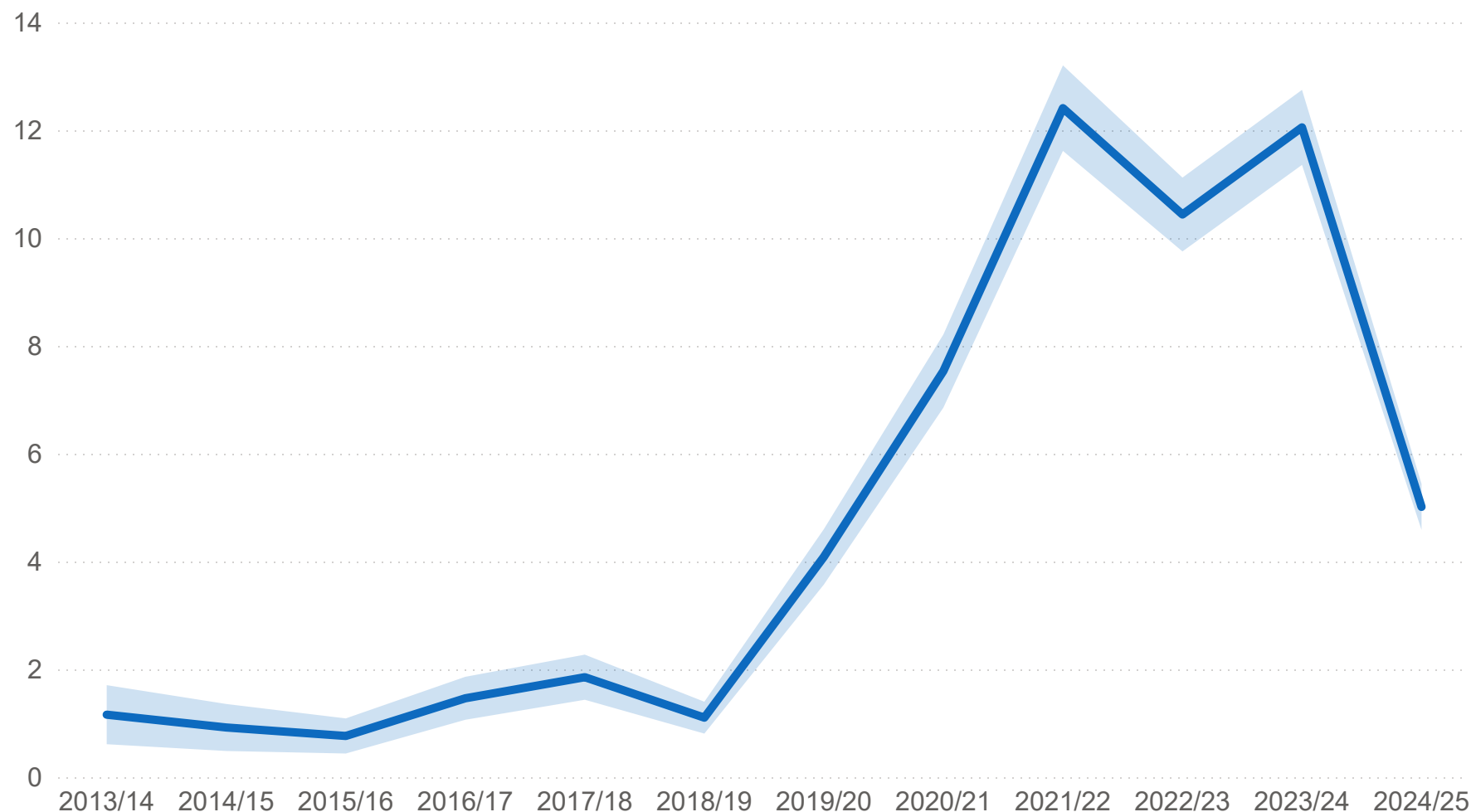
The vast majority of UK TAVI centres were using cerebral embolic protection in a national clinical trial, which completed recruitment in October 2024.*

Embolic protection use fell from over 8% in August 2024 to under 1% in November, following the end of the trial. The reduction in embolic protection use in 2024/25 reflects this.

Key:
Shaded areas represent the 95% confidence interval of the mean line

*Kharbanda RK, Kennedy J, Jamal Z et al. Routine cerebral embolic protection during transcatheter aortic-valve implantation. *N Engl J Med* 2025 Jun 26;392(24):2403-2412

Percentage of TAVI procedures where cerebral embolic protection was used



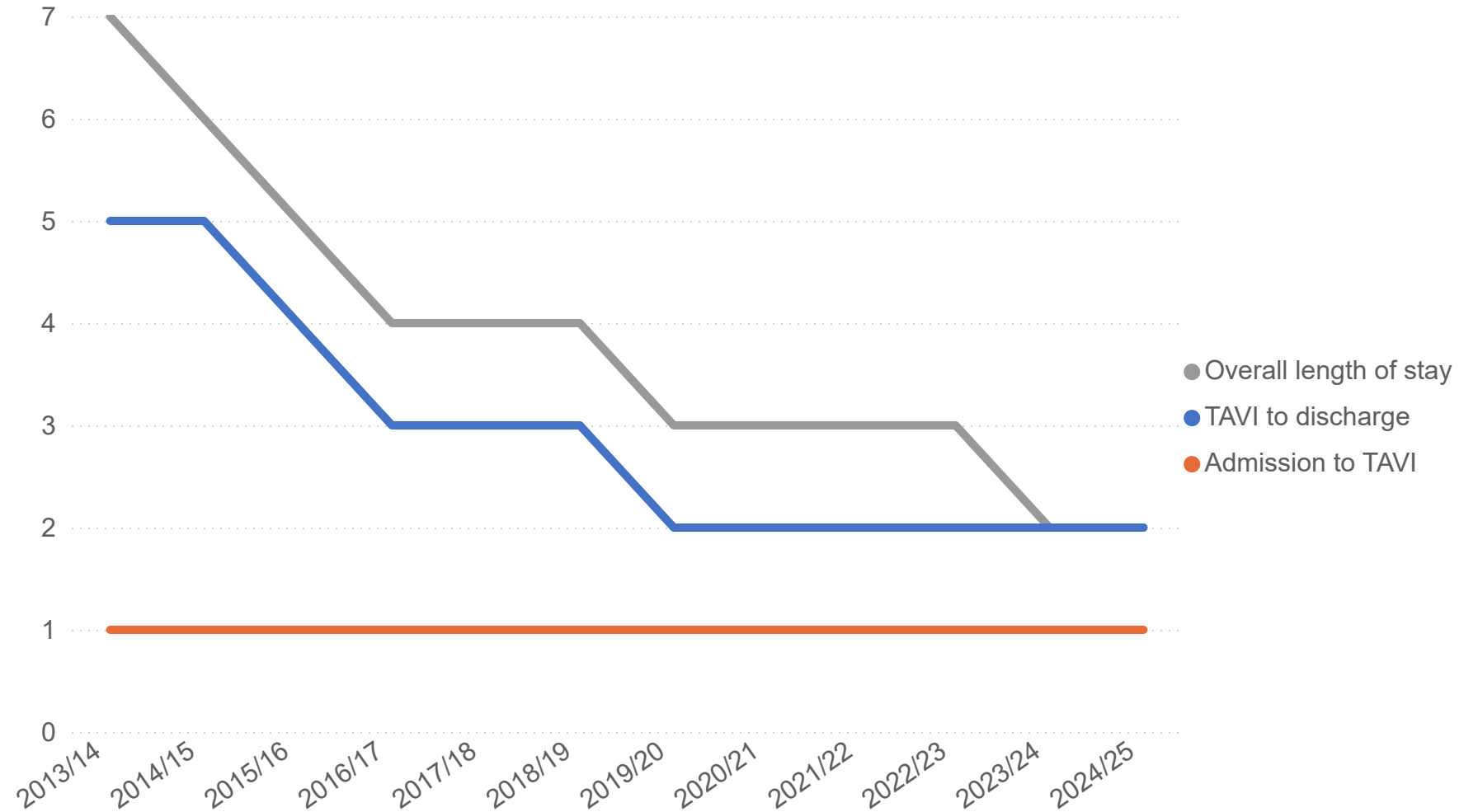
The median length of stay for elective TAVI patients remains at 2 days



Overall median length of stay (LOS) for elective TAVI patients remains at 2 days, encompassing 1 day prior to the procedure and 1 day after the procedure.

LOS reflects the number of nights spent in hospital (e.g. a patient admitted 1 day prior to the procedure and discharged the day after the procedure would have a length of stay of 2 days).

Median time (days) from admission to TAVI, TAVI to discharge and overall length of stay



Length of stay for elective procedures varies between hospitals



The median length of stay (LOS) for elective TAVI procedures varies between 1 day and 4 days across different hospitals.

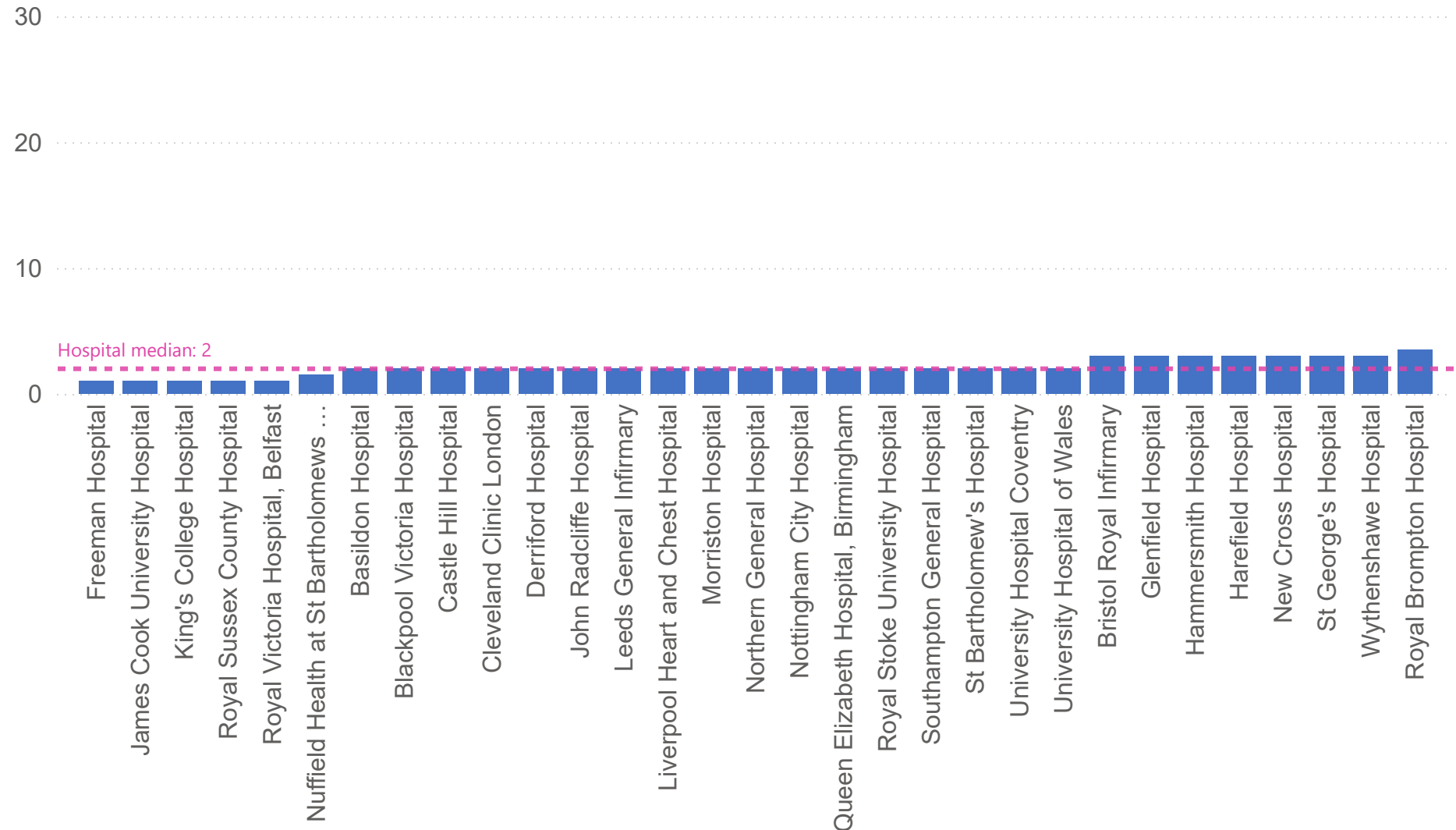
The dotted line shows the 2-day median LOS across all hospitals.

The number of centres with an LOS of 4 or more days has dropped from 6 in 2023/24 to 1 this year.

Note: The following hospitals provided insufficient data for this analysis:

- Royal Papworth Hospital
- Cromwell Hospital
- Spire Hospital Bristol
- Spire Hospital Nottingham

Length of stay (days) for elective TAVI procedures by hospital (2024/25)



Data Completeness **91.5%**



The proportion of patients discharged within 1 day has increased



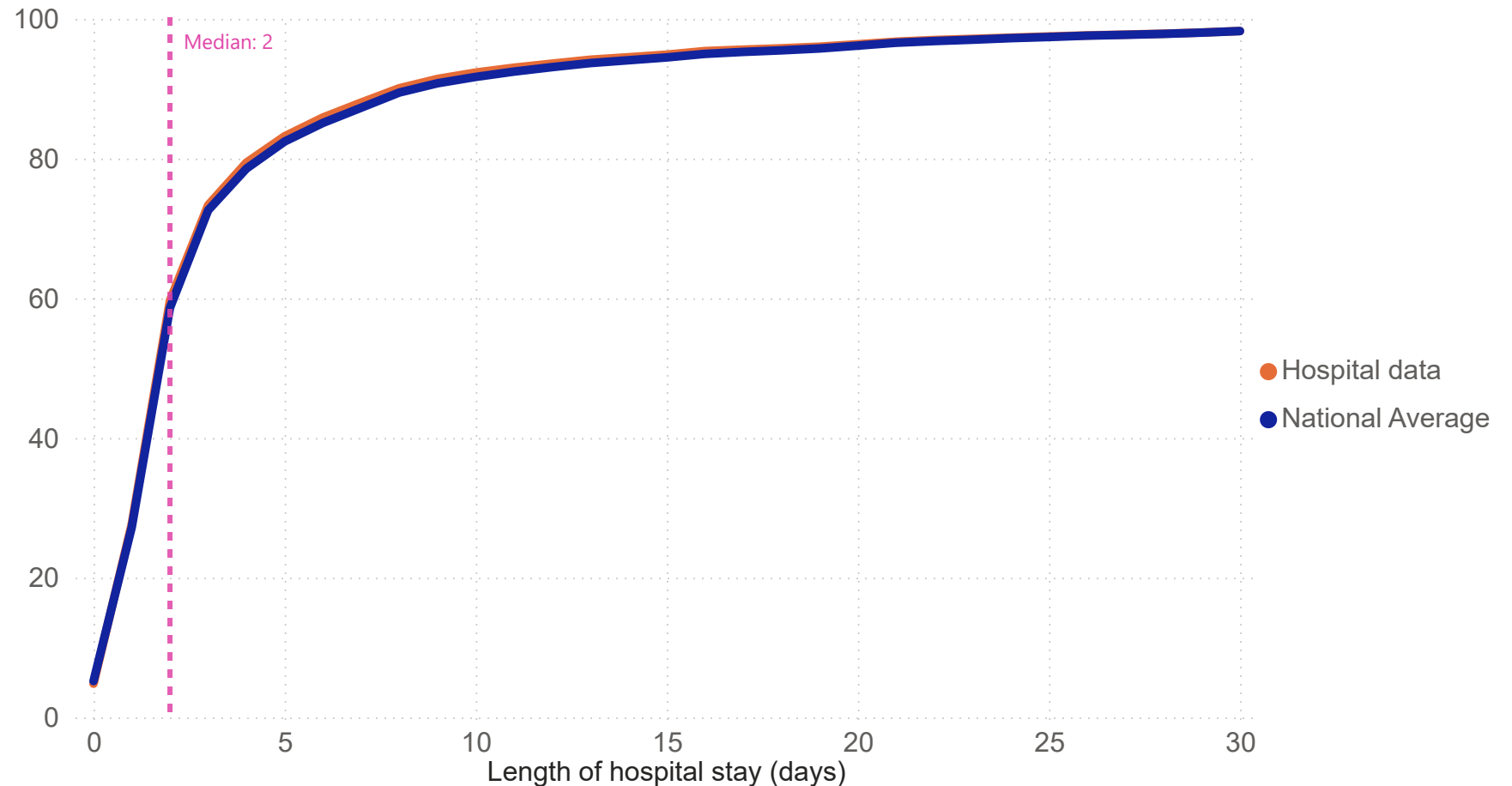
Most hospitals discharge the majority of people undergoing TAVI early after an elective procedure but there is significant variation in length of stay (LOS).

A '0' length of stay in hospital reflects patients who do not require an overnight stay (i.e. a same day admit-and-discharge programme). This proportion has increased from 2.9% in 2023/24 to 5.2% in 2024/25.

The proportion of patients discharged within 1 day has also increased from 22% in 2023/24 to 28% in 2024/25.

Note: Hospitals with data for fewer than 20 cases are excluded. Data completeness for this field is relatively low and should be taken into account when interpreting this information.

Cumulative percentage of elective TAVI patients with different length of stay (days)



Select hospital

All

Median length of stay for urgent cases remains at 14 days



The median length of stay (LOS) for urgent TAVI cases was 14 days in 2024/25 (unchanged from 2023/24).

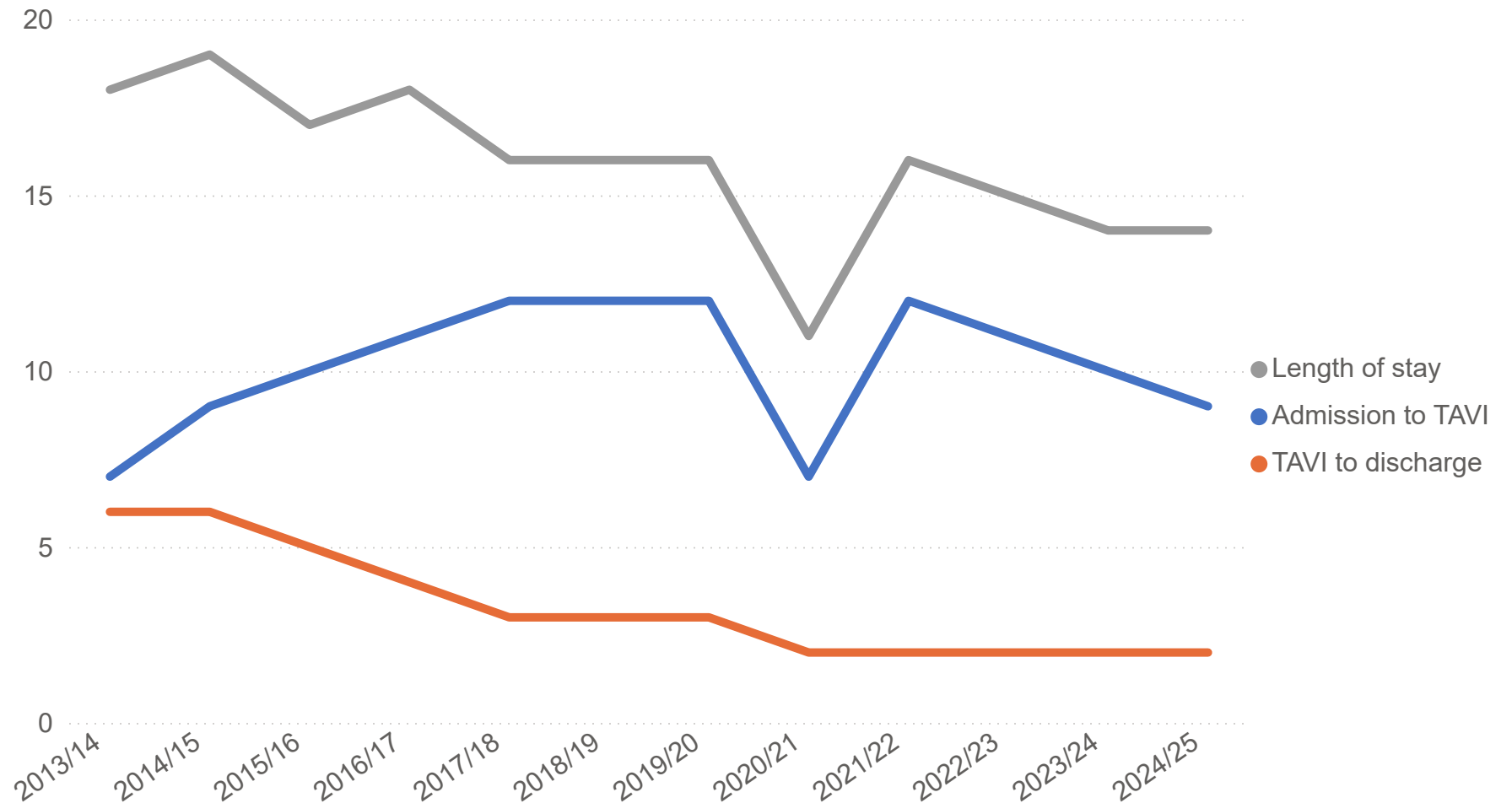
Patients now undergo their TAVI procedure more quickly after being admitted to hospital (within 9 days in 2024/25 compared to 12 days in 2021/22).

Following TAVI, the median time to discharge was 2 days.

During the COVID-19 pandemic, because of reductions in elective work, a higher proportion of patients were treated urgently. The median length of stay remains higher than during the COVID-19 pandemic.

Note: Data completeness for this field is relatively low and should be taken into account when interpreting this information.

Median time (days) for urgent cases from admission to TAVI, from TAVI to discharge and overall length of stay



There is a substantial variation between hospitals in length of stay for urgent TAVI



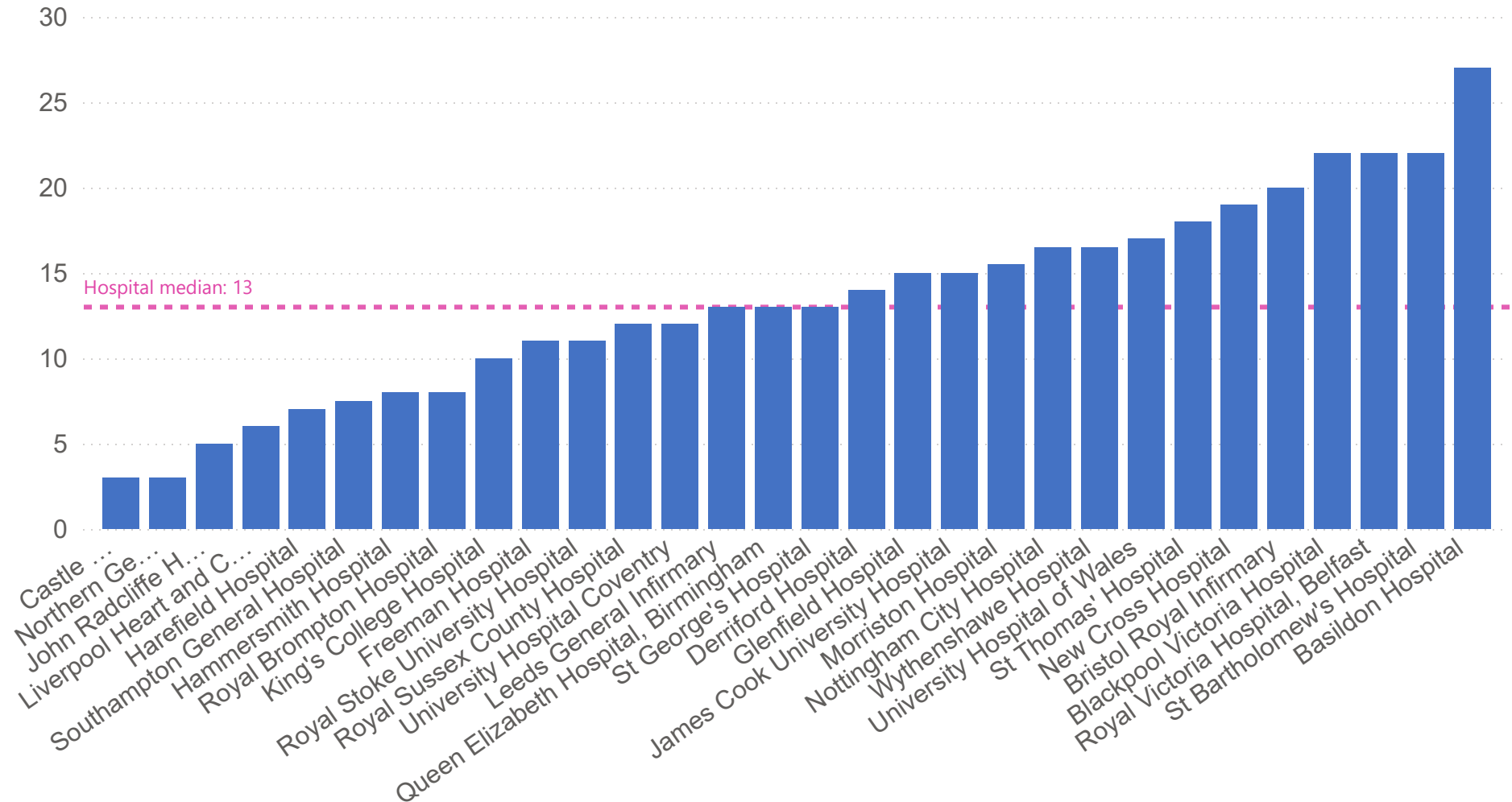
14 hospitals had a length of stay (LOS) of over 14 days for urgent cases in 2024/25.

The median LOS for urgent cases across all hospitals is 13 days with 8 centres achieving a LOS under 10 days.

The NICOR audit data cannot be used to understand the underlying reasons for these variations in practice.

Note: Data completeness for this field is relatively low and should be taken into account when interpreting this information. Data are only shown for NHS hospitals. Insufficient data for this analysis were provided by Royal Papworth Hospital.

Length of stay (days) for people undergoing urgent TAVI (2024/25)



Almost 25% of patients undergoing urgent TAVI are discharged within 5 days



50% of patients in urgent TAVI cases were in hospital for 13 days or more in 2024/25.

24% of urgent patients are discharged within 5 days of their TAVI procedure and 16% are still in hospital after 30 days.

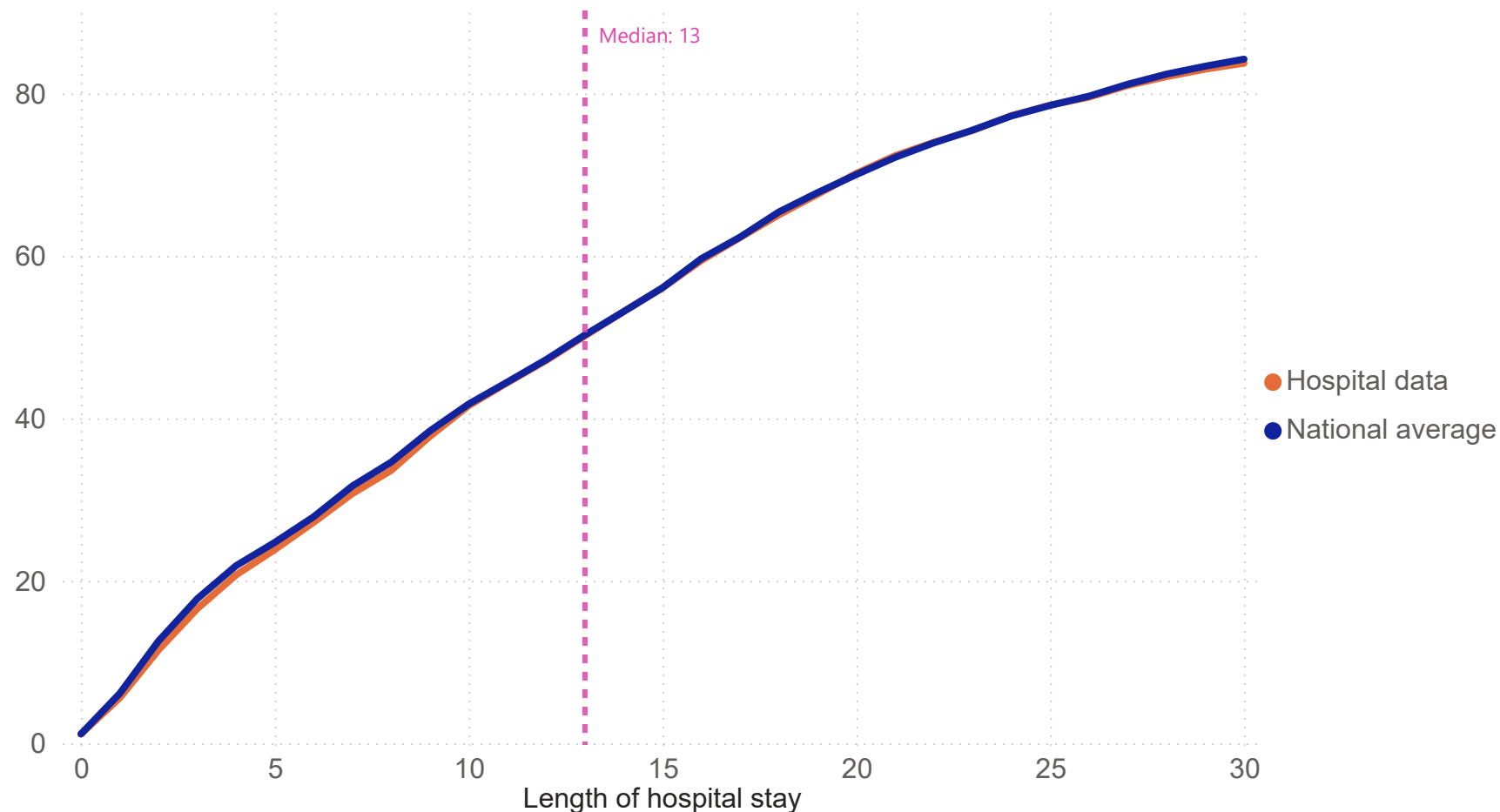
Select a hospital below to see its data.

Note: Hospitals with data for fewer than 20 cases are excluded. Data completeness for this field is relatively low and should be taken into account when interpreting this information. Data are only provided for NHS hospitals. Insufficient data are available from Royal Papworth Hospital.

Select hospital

All

Cumulative percentage of urgent TAVI patients with different length of stay (days)



Overall in-hospital mortality remains low though with a higher rate for urgent cases



The overall in-hospital mortality rate following TAVI procedures was 1% in 2024/25.

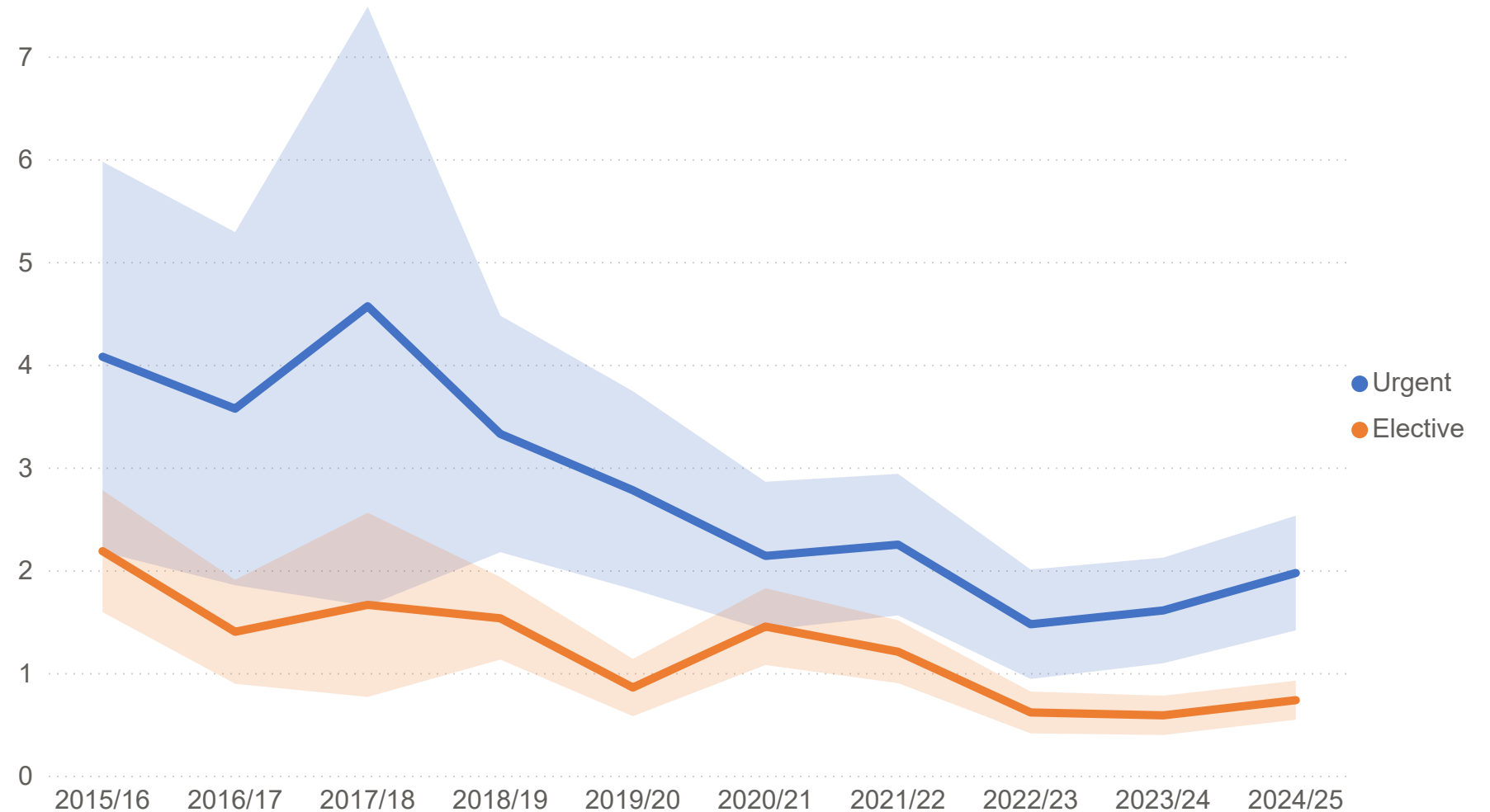
This comprised:

- 0.73% for elective cases
- 1.97% for urgent cases

The need for an urgent procedure is a well-recognised factor in contributing to a worse outcome and may reflect a number of important factors.

Note: In-hospital mortality is self-reported by hospitals. The shaded areas around the lines represent the 95% confidence interval of the mean.

In-hospital mortality (%) following TAVI procedure by urgency



The thirty-day mortality rate for elective cases continues to decrease but remains unchanged for urgent cases

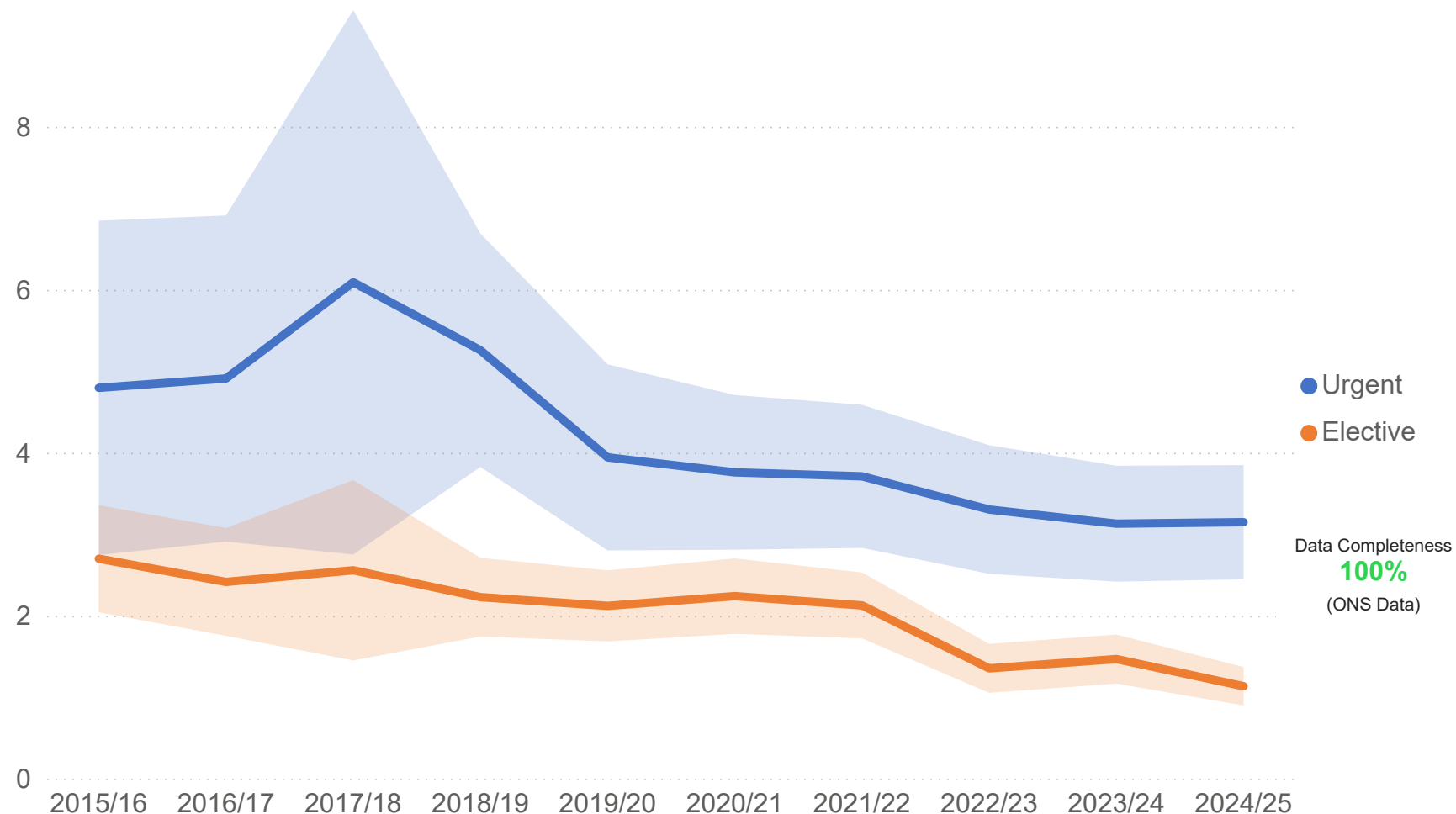


30-day mortality (%) following TAVI procedure by urgency

The overall 30-day mortality rate is 1.6%. This comprises a 1.1% rate for elective case and a 3.1% rate for urgent cases

This means that after discharge from hospital there are additional deaths of 0.4% for elective cases and 1.2% for urgent cases.

The reasons for these additional deaths are unknown but need to be explored.



Thirty-day mortality is not significantly different between hospitals



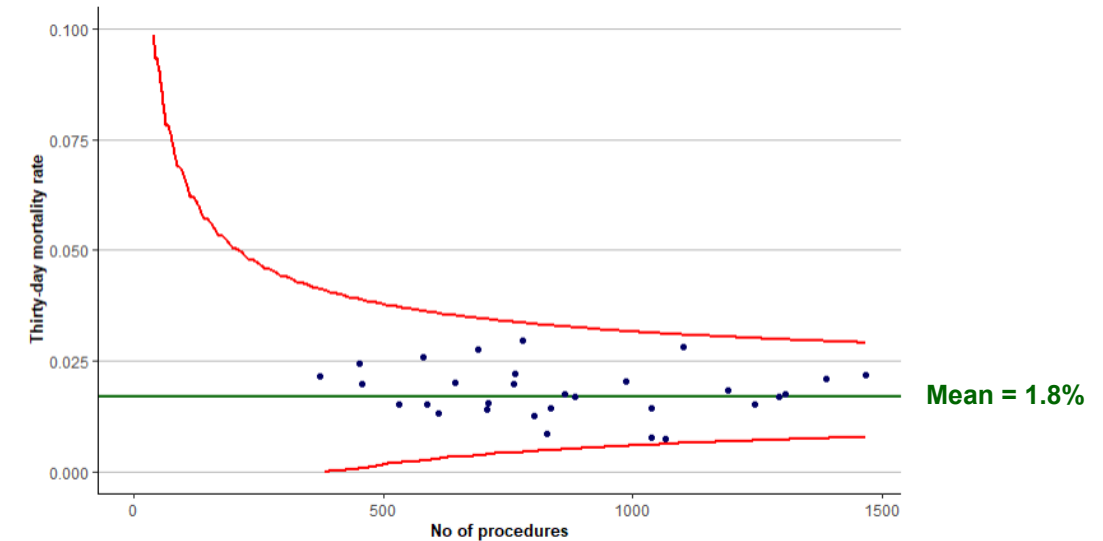
Funnel plots are a way of comparing institutional performance and identifying potential outliers in outcomes such as mortality¹. Unless risk-adjusted data are used, they do not take into account potential differences in the patient population. In this analysis, the green line is the average national mortality and the red line denotes what would be considered as outside expected limits. Any hospitals which lie outside of the red "alarm" line would indicate a difference in mortality from the national average (shown in green).

The funnel plots shown here for mortality are for the 2024/25 year (lower graph) and for the 3 years from April 2022 to March 2025 (upper graph). These data do not show any hospitals where the mortality rate is different from the national average.

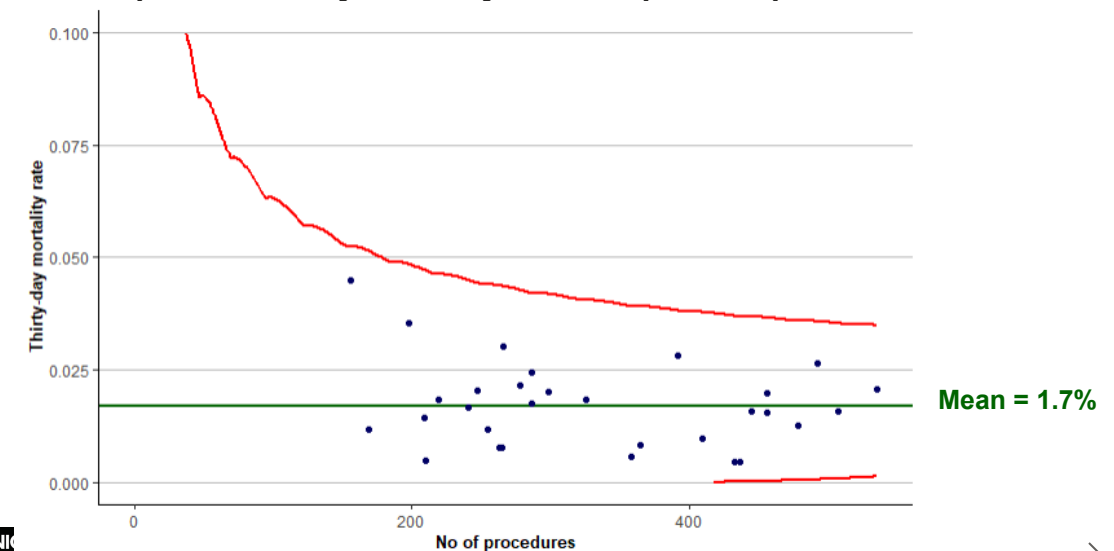
In the future we plan to show risk-adjusted mortality outcomes at a hospital level in line with the NICOR outlier policy.

¹Spiegelhalter (2005) Funnel plots for comparing institutional performance, *Statistics in Medicine* 24: 1185-1202.

Funnel plot for 30-day mortality over the period April 2022 - March 2025



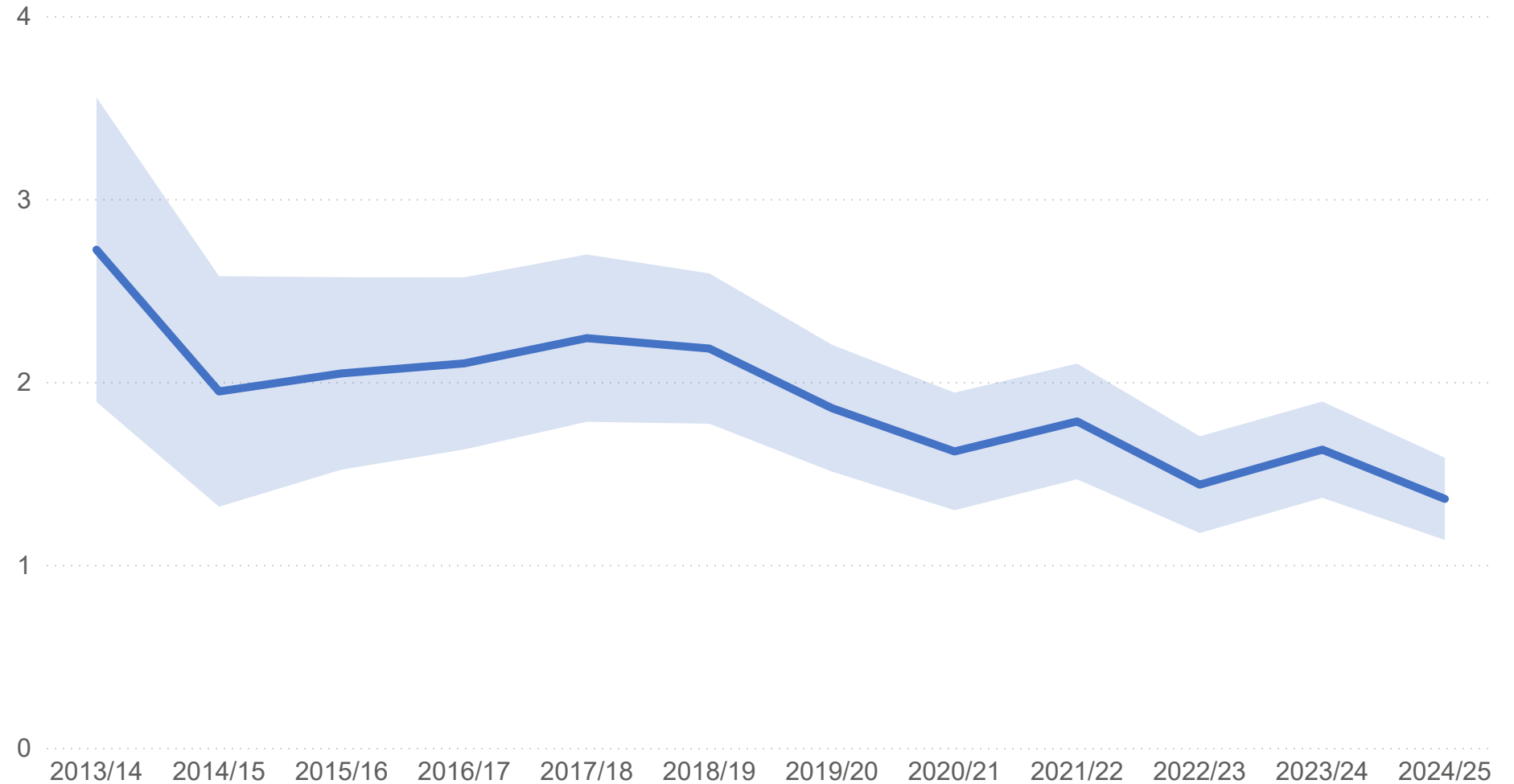
Funnel plot for 30-day mortality over the period April 2024 - March 2025



The rate of in-hospital stroke rate has been slowly falling to under 2%



Percentage of TAVI patients suffering in-hospital stroke



The incidence of stroke as a complication after a TAVI procedure was 1.4% in 2024/25 (essentially unchanged over the last few years).

In-hospital stroke rates are self-reported by hospitals.

Key:
Shaded areas represent the 95% confidence interval of the mean line.

Stroke rates following a TAVI procedure are low across hospitals



There is wide variation in stroke rate by hospital following a TAVI procedure, including any form of stroke occurring prior to discharge from hospital.

These data are self-reported, and differences in rates may reflect differences in patient populations between hospitals and differences in data completeness and quality.

All hospitals should provide complete and accurate data to the TAVI Registry (1 hospital completed this field for under 50% of cases).

Select a country/Cardiac Network below or hover over the graphs to see specific data.

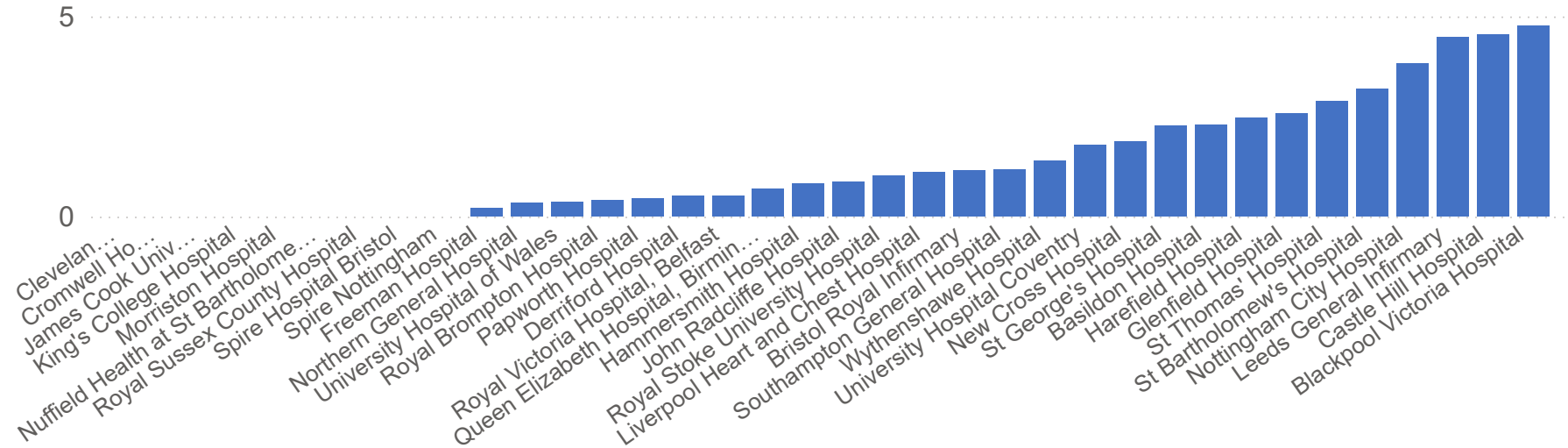
Select country/Cardiac Network ▼

All ▼

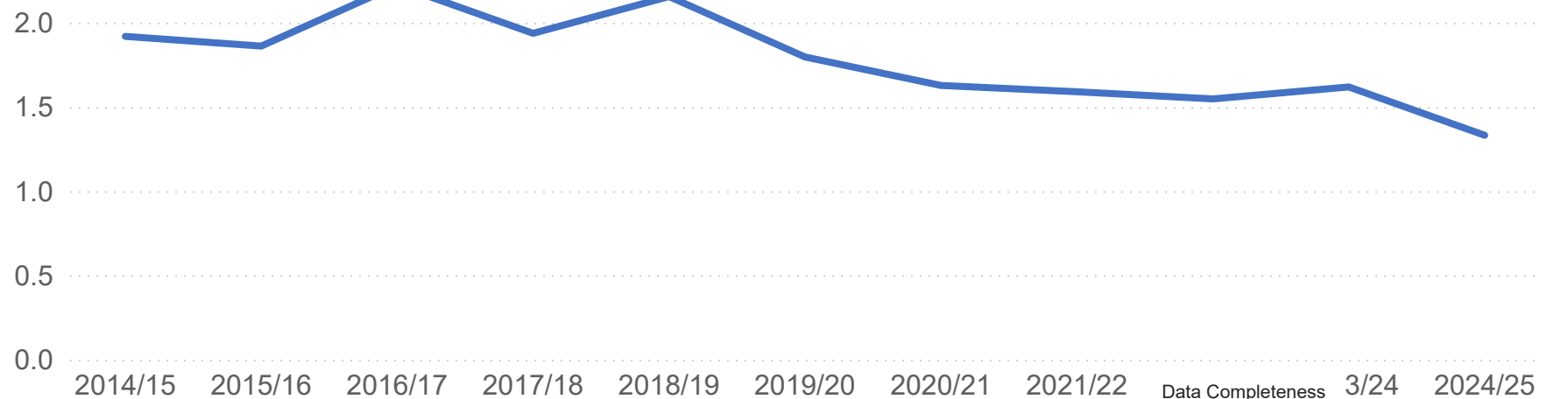
Select hospital ▼

All ▼

Percentage of TAVI patients suffering in-hospital stroke by hospital (2024/25)



Percentage of TAVI patients suffering in-hospital stroke



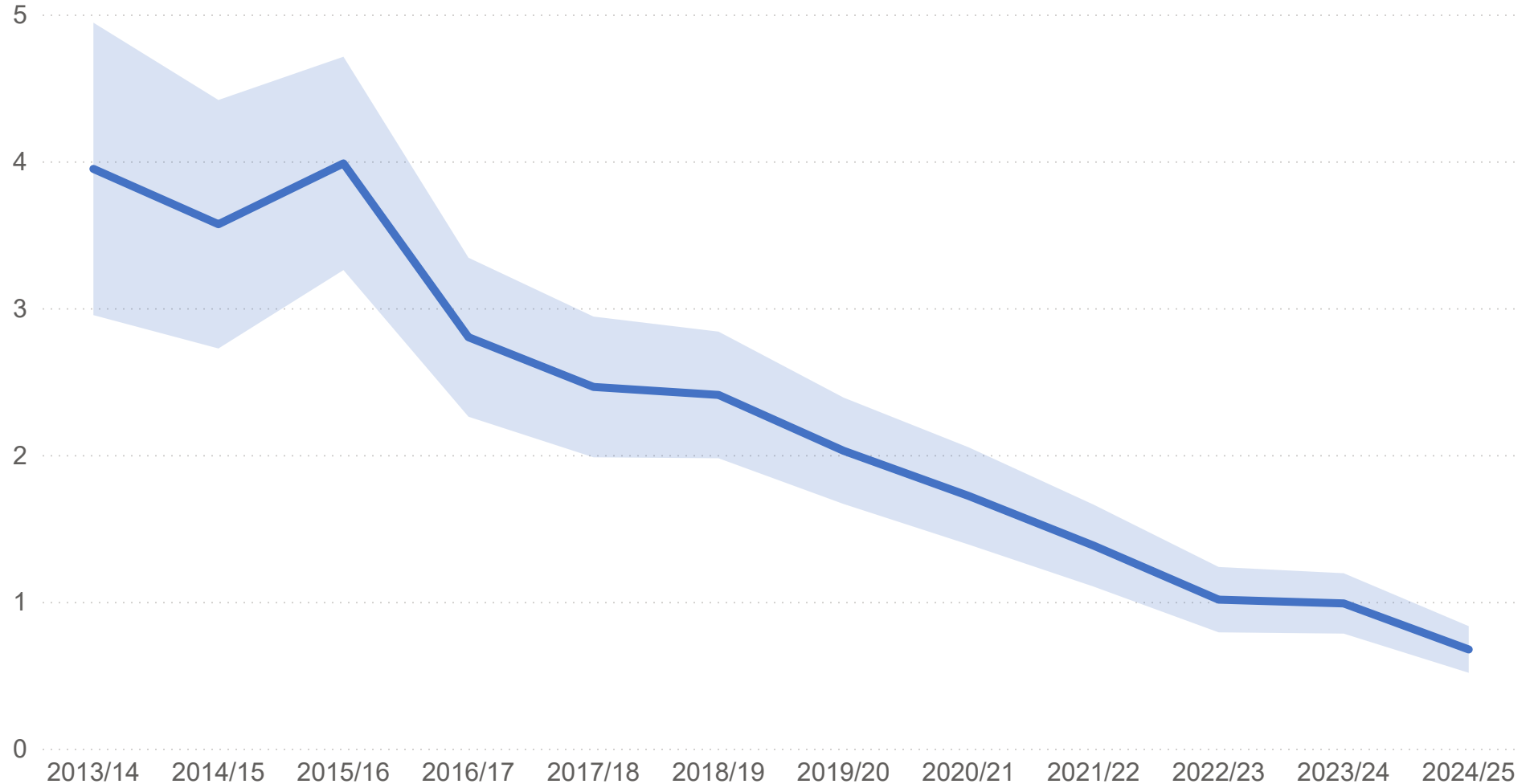
Data Completeness 3/24 **93.3%**

→ [Contents page](#)

Major bleeding rates following a TAVI procedure have fallen to below 1%



Percentage of TAVI patients suffering major bleeding



The rate of major bleeding occurring in hospital after a TAVI procedure was 0.7% in 2024/25.

This has fallen from 4% in 2013/14.

Key:
Shaded areas represent the 95% confidence interval of the mean line.

Major bleeding rates are low across hospitals



There is significant variation in the rates of major bleeding across hospitals.

Major bleeding is defined as BARC type 5, or type 3B or C, or 3A with a drop in the haemoglobin level of at least 3.0 g/dL or requiring transfusion of 2 or 3 units of whole blood/RBC.

These results are self-reported, and differences in rates may reflect differences in patient populations between centres and differences in data completeness and quality.

All hospitals should provide complete and accurate data to the TAVI registry, using this definition (2 hospitals submitted these data for under 50% of their cases).

Select a country/Cardiac Network below or hover over the graphs to see specific data.

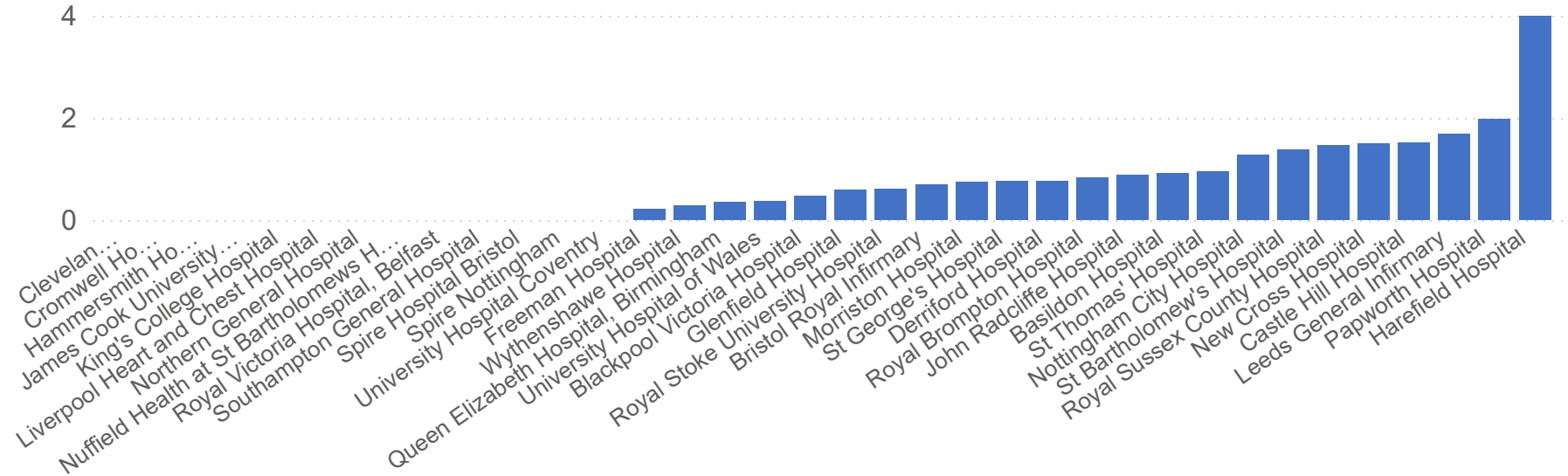
Select country/Cardiac Network

All

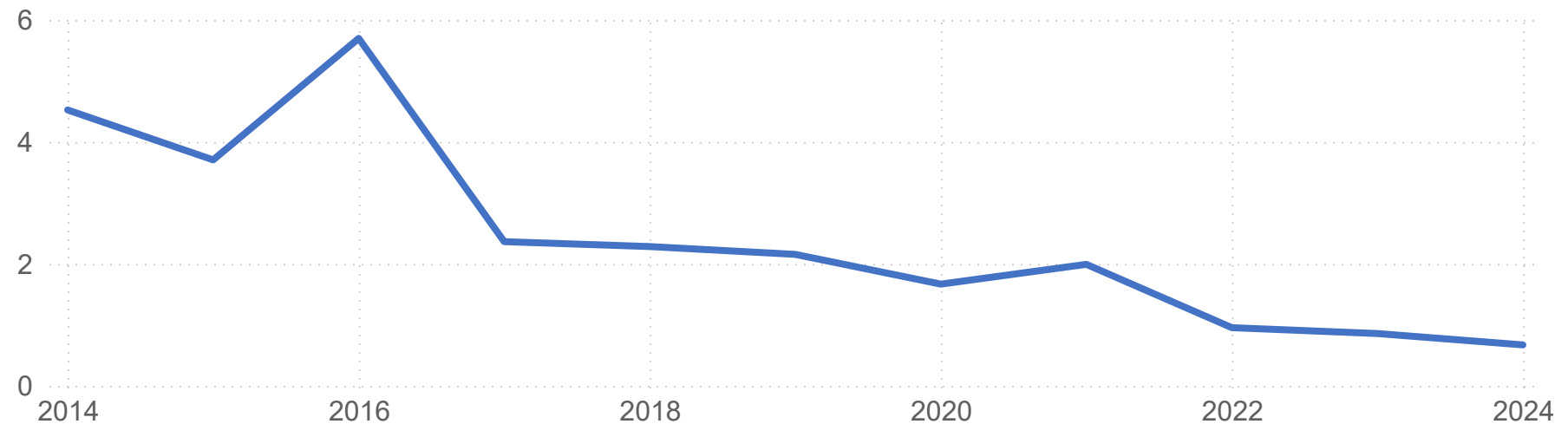
Select hospital

All

Percentage of TAVI patients suffering major bleeding by hospital (2024/25)



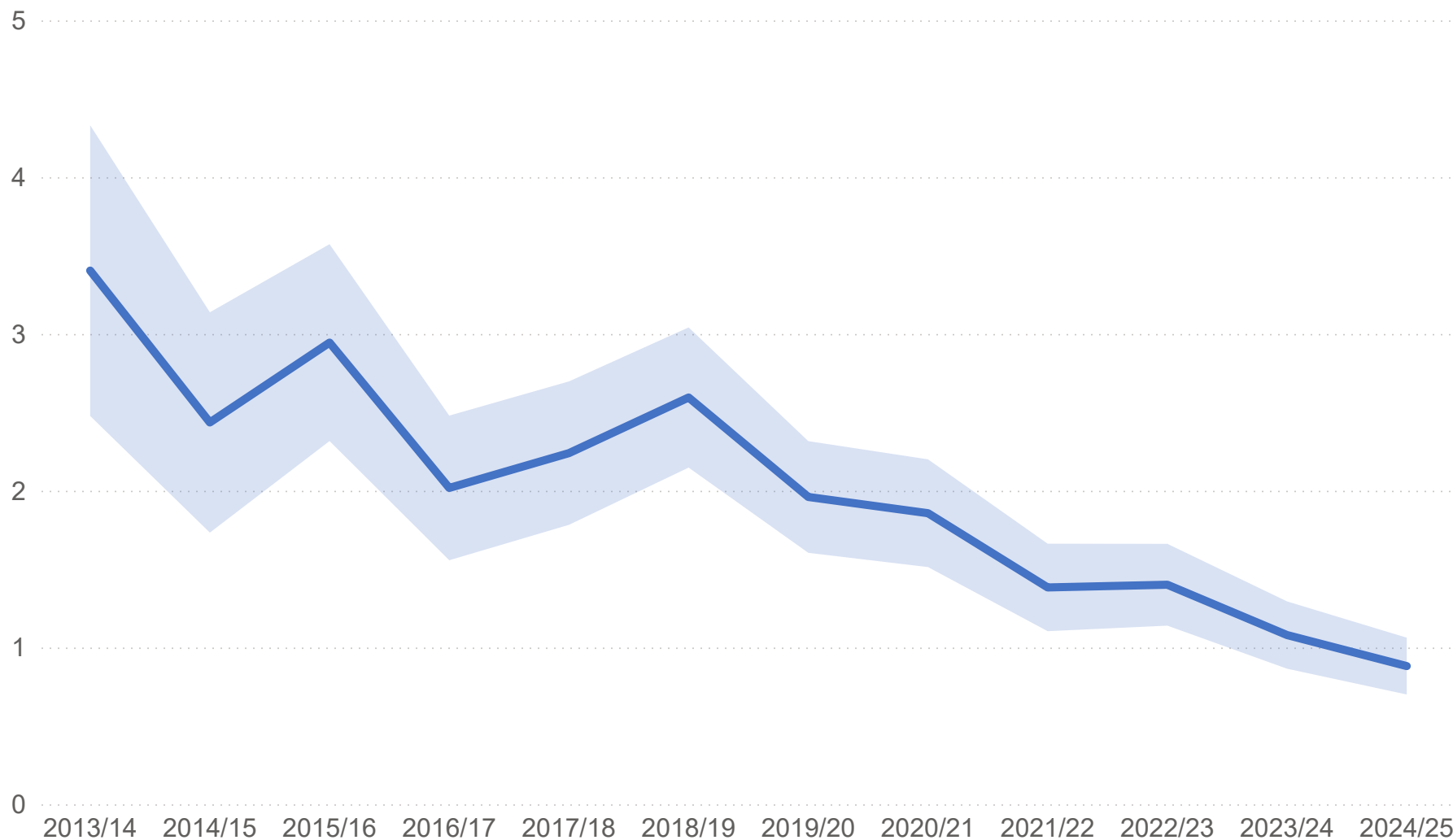
Percentage of TAVI patients suffering major bleeding



The major vascular access complication rate after a TAVI procedure continues to decline and is now under 1%



Percentage of TAVI patients suffering major vascular access complications



The rate of major vascular access complications occurring in hospital was 0.9% in 2024/25, continuing a drop in this figure over the last 10 years.

Key:
Shaded areas represent the 95% confidence interval of the mean line.

Note: Data completeness for this field is relatively low and should be taken into account when interpreting this information.

Major vascular access complications following a TAVI procedure are infrequent



There is significant variation across hospitals in the rate of major vascular complications (which include a variety of life-threatening or irreversible complications).

These data are self-reported, and differences in rates may reflect differences in patient populations between centres and differences in data completeness and quality.

All hospitals should provide complete and accurate data to the TAVI Registry (1 hospital completed this field in under 50% of cases).

Select a country/Cardiac Network below or hover over the graphs to see specific data.

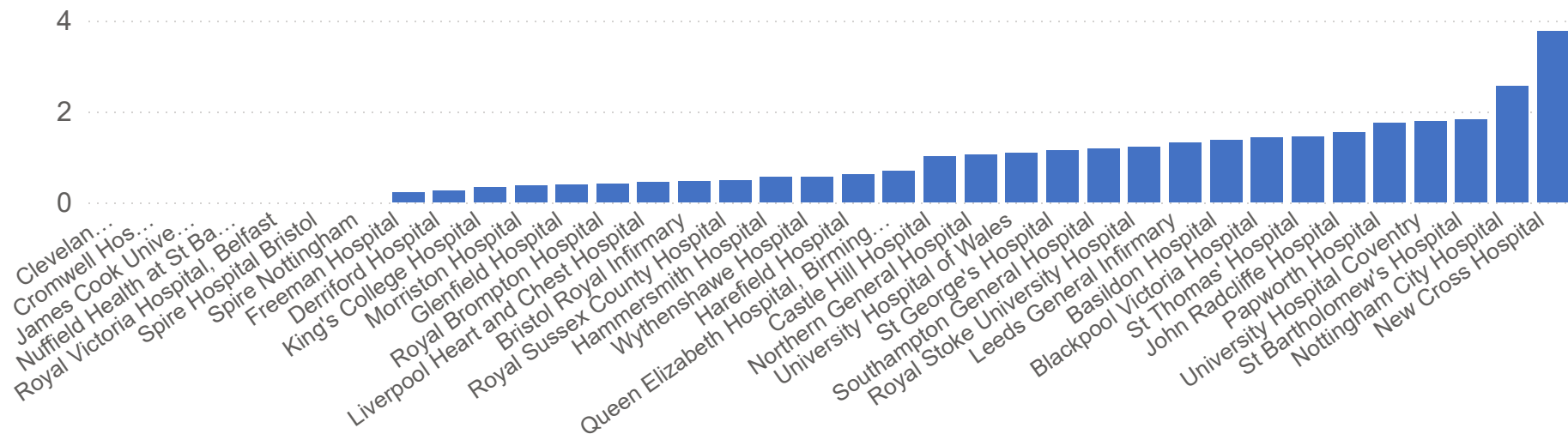
Select country/Cardiac Network ▼

All ▼

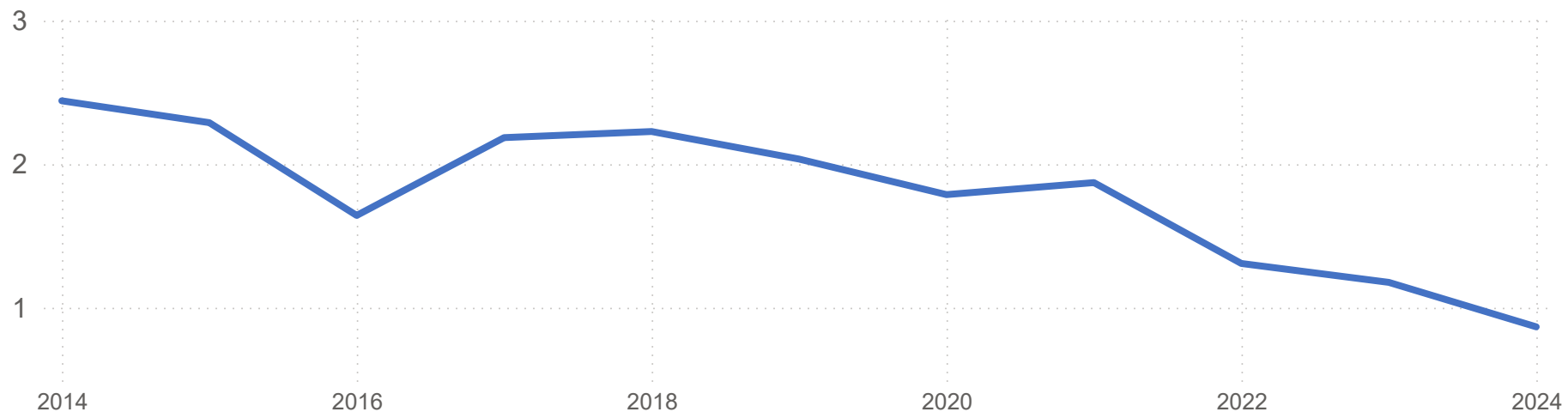
Select hospital ▼

All ▼

Percentage of TAVI patients suffering major vascular access complications by hospital (2024/25)



Percentage of TAVI patients suffering major vascular access complications



The proportions of patients requiring a permanent pacemaker rose slightly

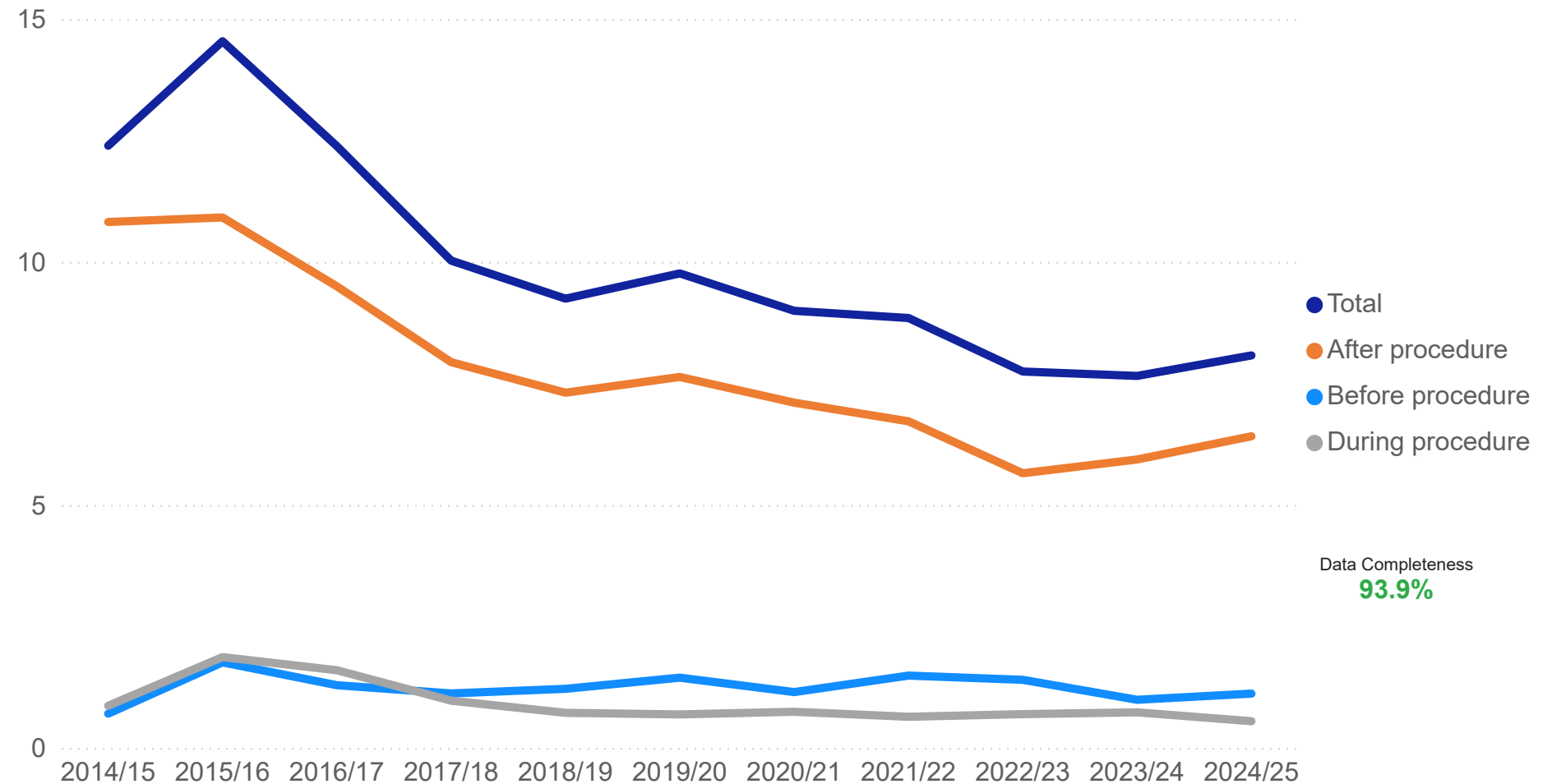


Percentage of TAVI patients requiring a permanent pacemaker (before, during and after a TAVI procedure)

In 2024/25, the proportion of patients treated with a permanent pacemaker (PPM) in relation to their TAVI treatment was 8.1%.

This comprised:

- 1.1% of people treated with a PPM prior to the TAVI procedure
- 0.6% receiving a PPM during the TAVI procedure
- 6.4% having a PPM inserted after the TAVI procedure.



Data Completeness
93.9%

The proportions of patients requiring a permanent pacemaker remain low



There is large variation between hospitals in the proportion of TAVI patients who require a pacemaker either before or after their TAVI procedure.

These data are self-reported, and differences in rates may reflect differences in patient populations or variations in clinical practice between centres, as well as differences in data completeness and quality.

All hospitals should provide complete and accurate data to the TAVI Registry (1 hospital completed this field in under 10% of cases).

Select a country/Cardiac Network below or hover over the graphs to see specific data.

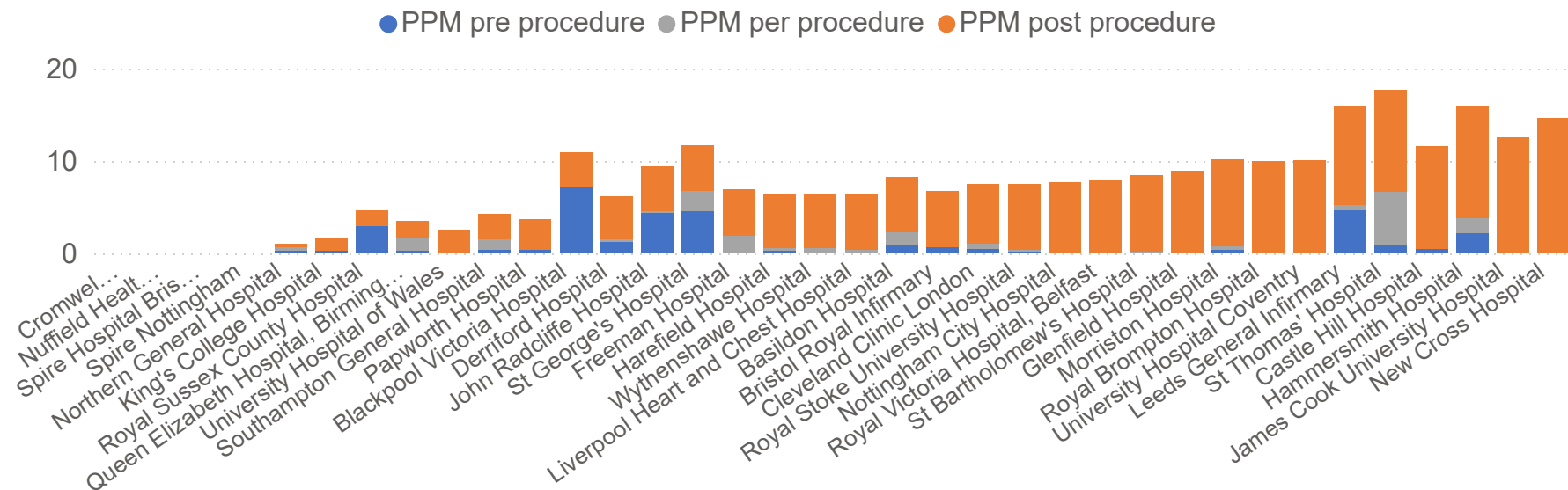
Select country/Cardiac Network

All

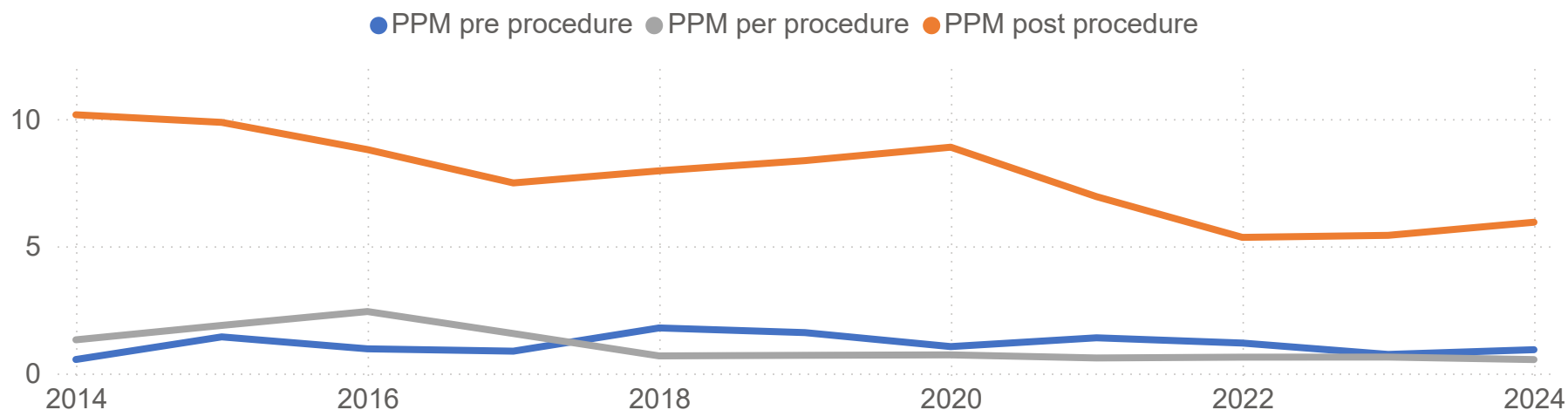
Select hospital

All

Permanent pacing (%) by hospital (2024/25)



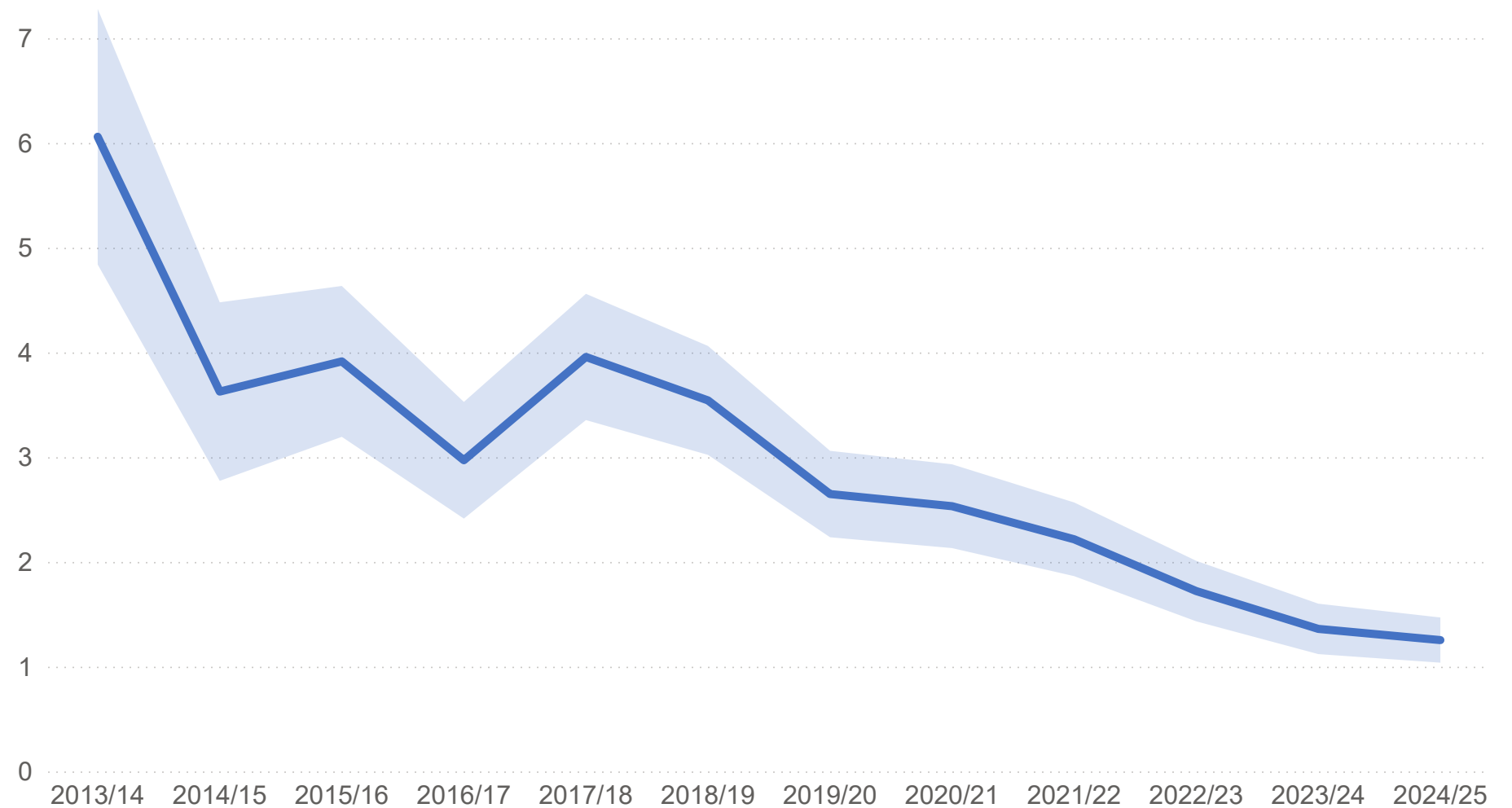
Permanent pacing requirements (%) over time



The rate of aortic regurgitation following a TAVI procedure continues to fall



Percentage of TAVI patients with moderate or severe aortic regurgitation



The proportion of TAVI patients with moderate to severe aortic regurgitation following the TAVI procedure fell to 1.3% in 2024/25.

Data completeness for this field is relatively low and should be taken into account when interpreting this information.

Key:
Shaded areas represent the 95% confidence interval of the mean line.

Aortic regurgitation rates are low across hospitals



Aortic regurgitation rates are generally low across hospitals following TAVI procedures.

These data are self-reported, and differences in rates may reflect differences in patient populations between centres and differences in data completeness and quality.

Data completeness for this field is relatively low and should be taken into account when interpreting this information. All hospitals should provide accurate and complete data to the TAVI registry (1 hospital submitted these data for under 50% of its cases).

Select a country/Cardiac Network below or hover over the graphs to see specific data.

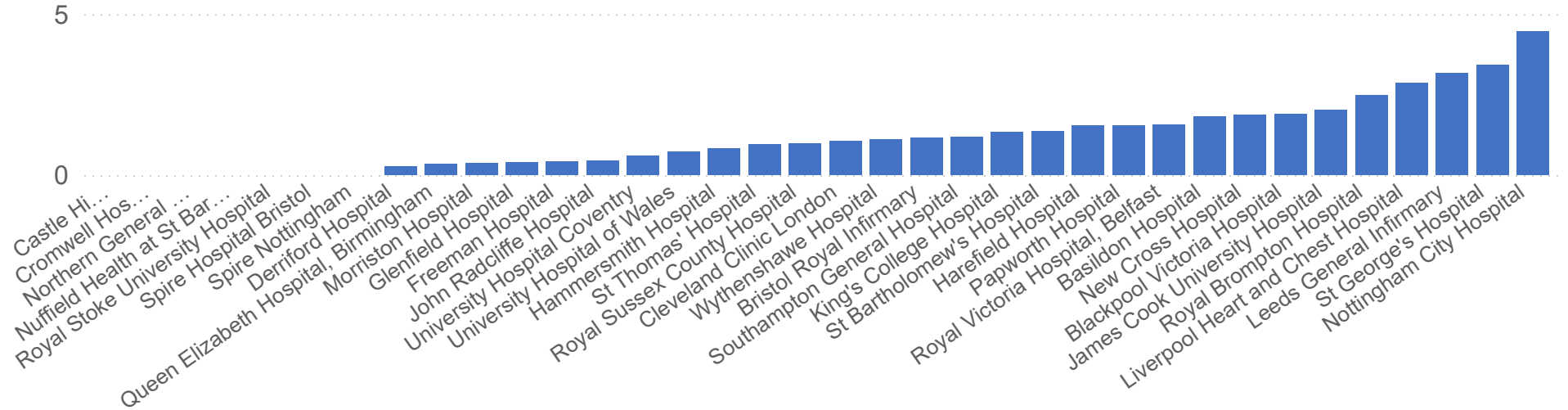
Select country/Cardiac Network

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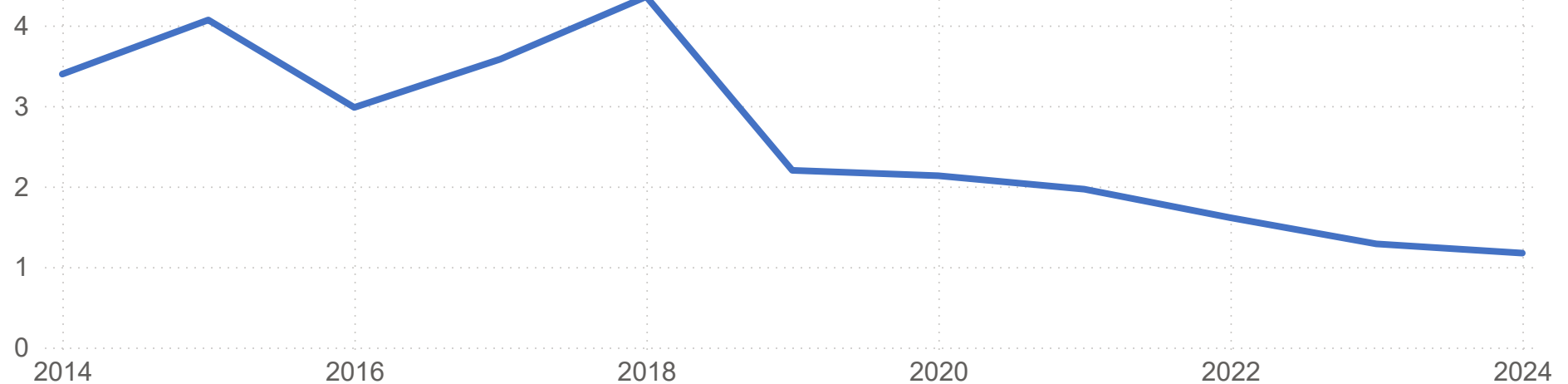
Select hospital

All

Moderate or severe aortic regurgitation (%) by hospital (2024/25)



Moderate or severe aortic regurgitation (%) over time



Only a small proportion of patients are readmitted to hospital with heart failure within 1 year of a TAVI procedure



2.4% of TAVI cases in 2022/23 (191 out 7,818) involved the patient being readmitted to hospital for heart failure within 1 year of the TAVI procedure.

This is a similar proportion to the previous 5 years.

Note: For this analysis, we identified patients who had an acute hospital admission recorded in the National Heart Failure Audit within 1 year of their TAVI.

Percentage of TAVI patients having a validated HF admission within 1 year

