



Scottish  
Ambulance  
Service  
University National NHS Board

**NHS**  
SCOTLAND

# NTG Annual Transport Data Report: 2022/23

Allan Jackson (consultant neonatologist)  
and Colin Devon (data analyst)  
ScotSTAR

# Method



Scottish  
Ambulance  
Service

University National NHS Board



- Email to transport service's medical and nursing leads requesting activity data and service information from 1<sup>st</sup> April 2022 to 31<sup>st</sup> March 2023
  - Requests before 2019/2020 covered first 6 months of calendar year only

# Reorganisations & additions for **2022/23** data



Scottish  
Ambulance  
Service  
University National NHS Board



- No service reorganisations for 2022/23
- Data collection unchanged from 2020/21

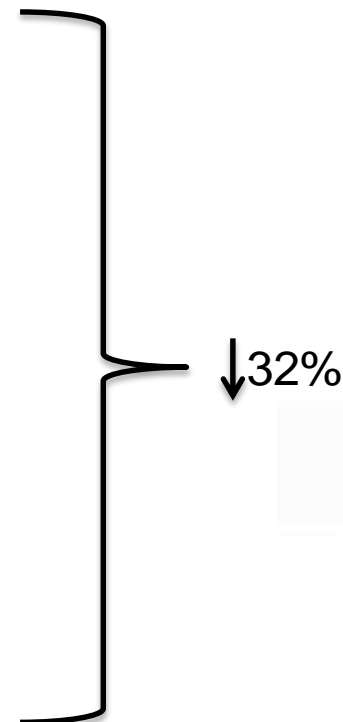
# Number of Services UK Neonatal Transport Services



Scottish  
Ambulance  
Service  
University National NHS Board



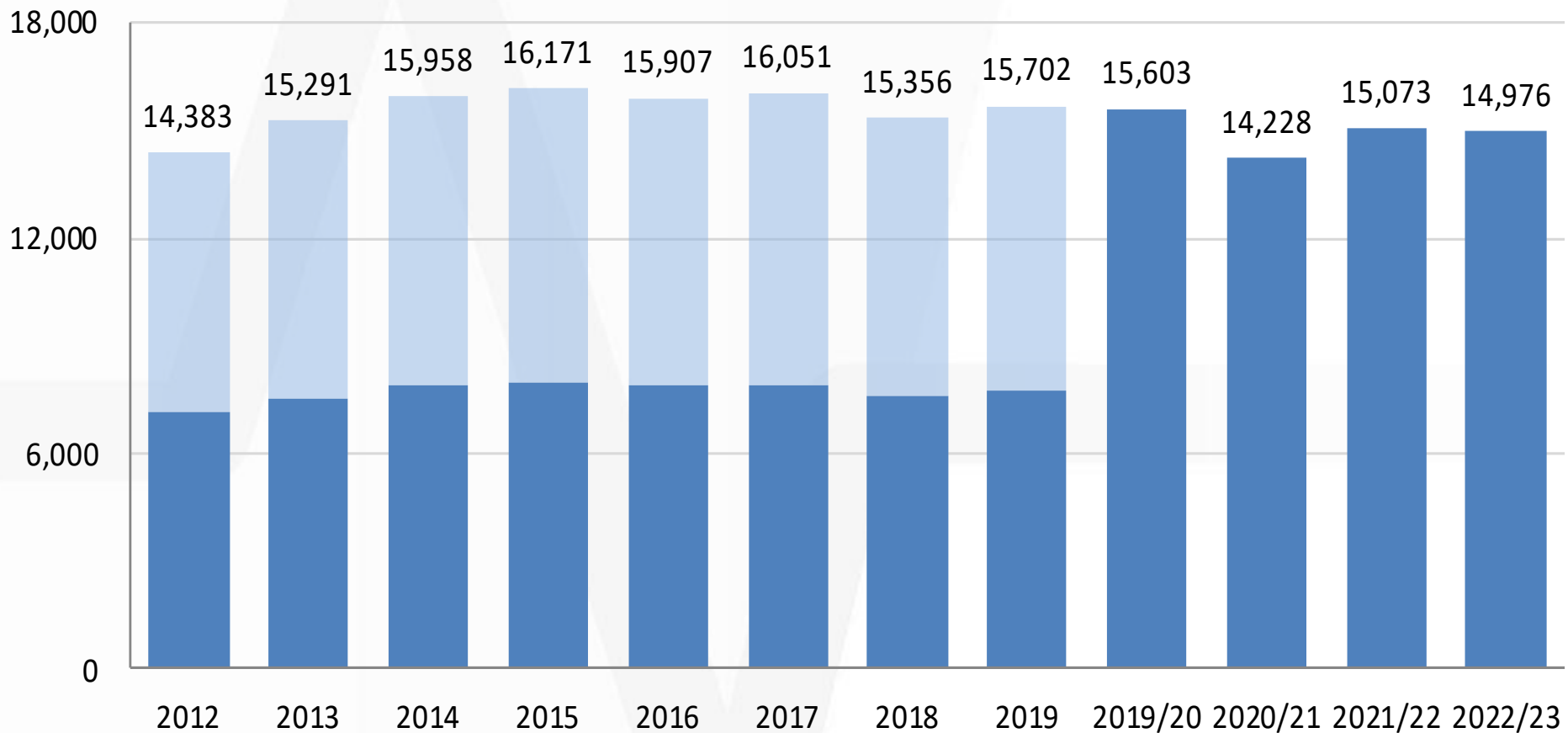
- 2012 – data from 22
- 2013 – data from 21
- 2014 – data from 19
- 2015 – data from 19
- 2016 – data from 18
- 2017 – data from 18
- 2018 onwards – data from 15



# All team annualised UK neonatal transport activity



Scottish  
Ambulance  
Service  
University National NHS Board



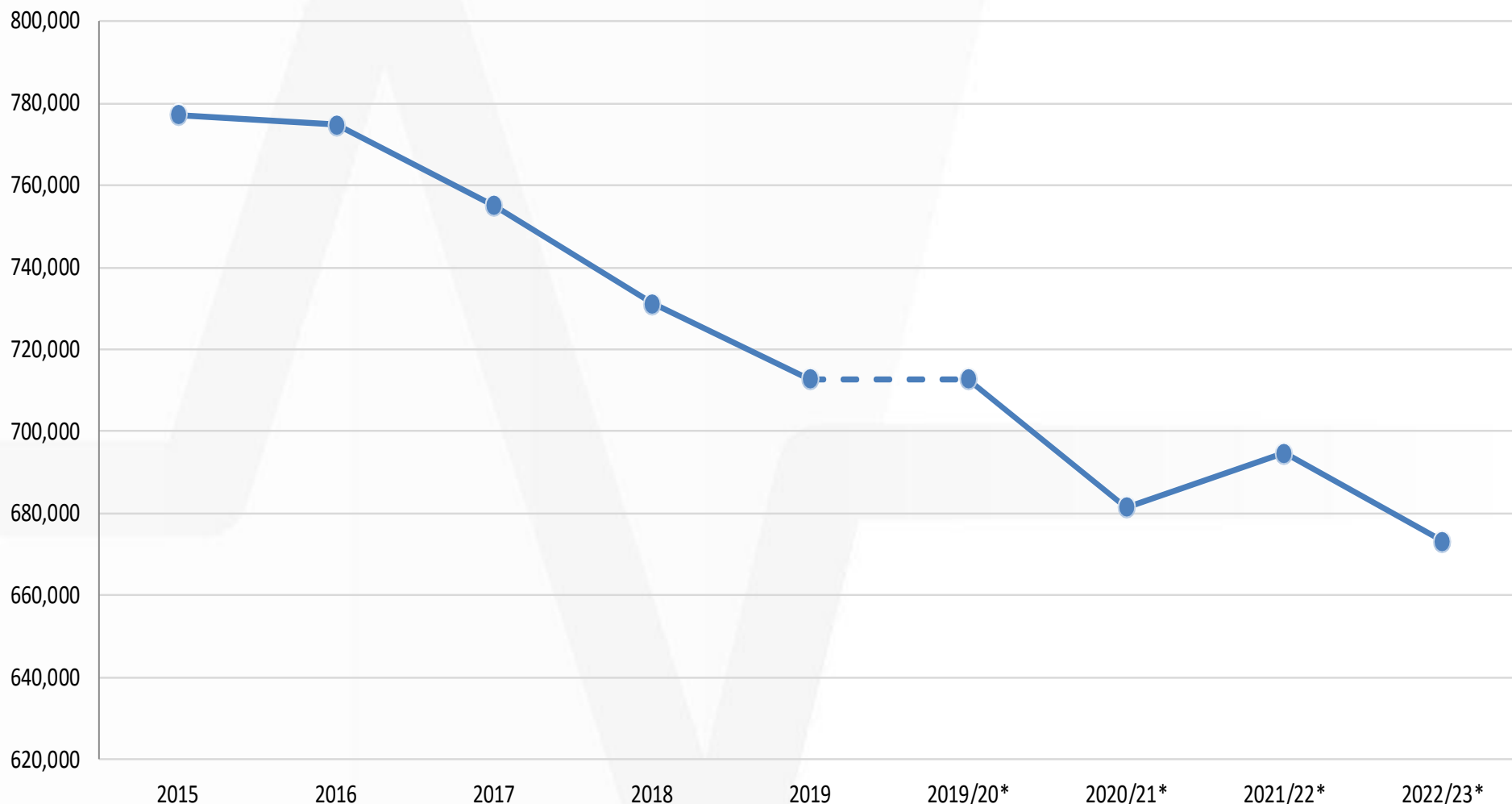
2019-20 onwards data 12-month collection period,  
prior to that 6 months used



# UK Yearly birth rate



Scottish  
Ambulance  
Service  
University National NHS Board



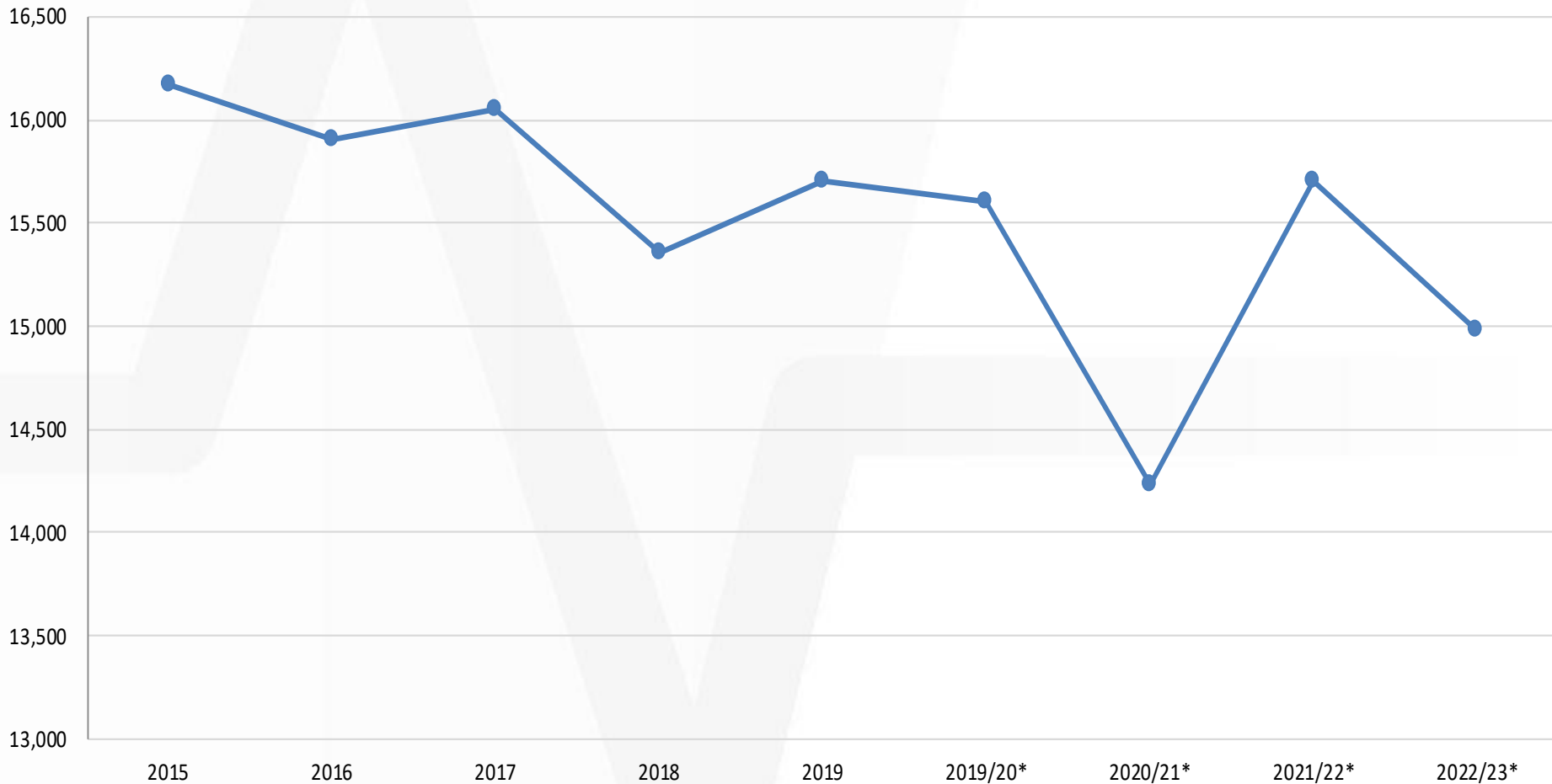
Birth data from relevant national bodies. The birth data is yearly so only for indication of possible change.  
2019/20 using 2019 figures, 2021/22 using 2021 figures etc.



# UK neonatal transport activity



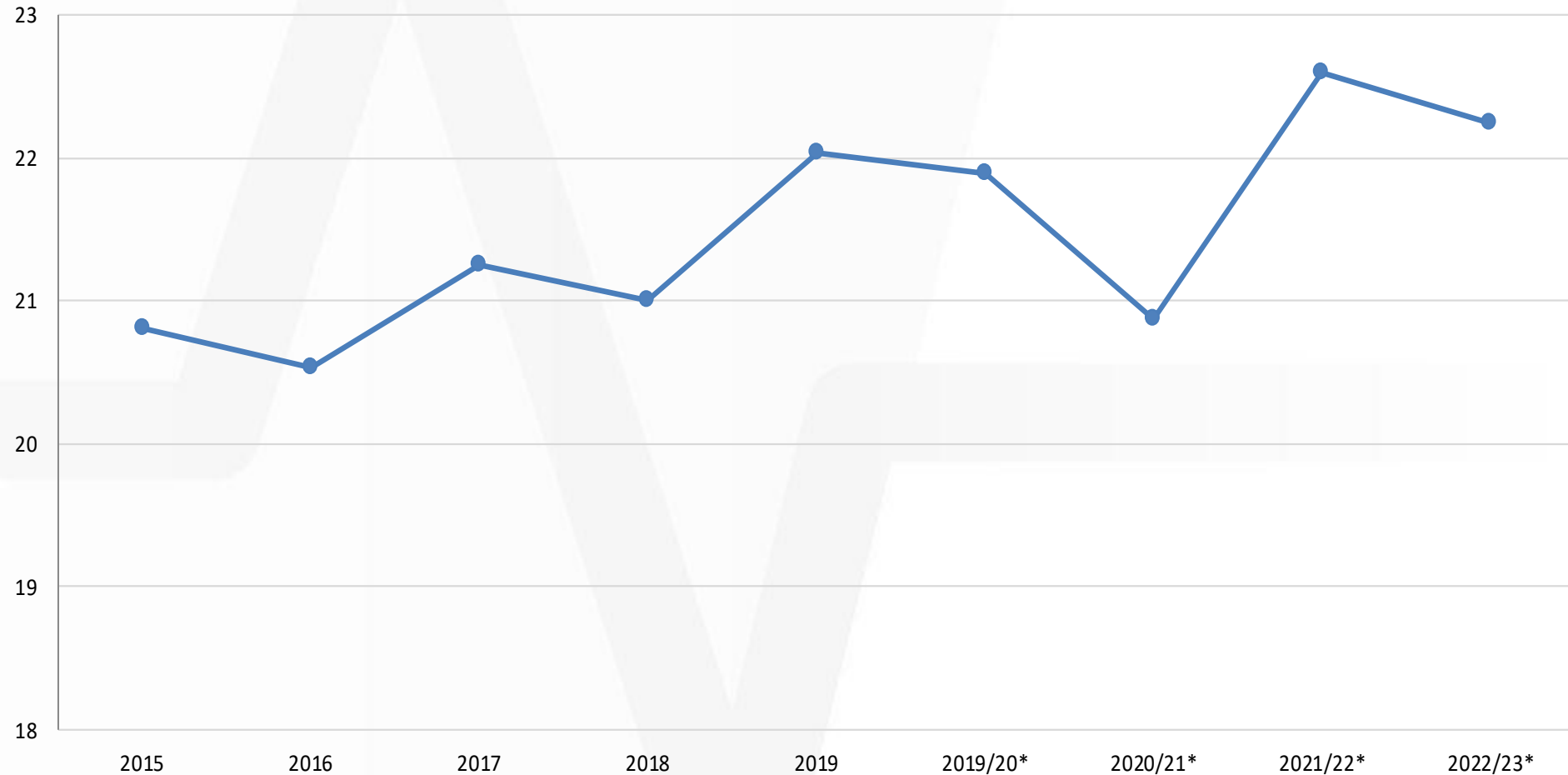
Scottish  
Ambulance  
Service  
University National NHS Board



# UK neonatal transport NTG transfers per 1,000 live births



Scottish  
Ambulance  
Service  
University National NHS Board



Birth data from relevant national bodies. The birth data is yearly so only for indication of possible change.  
2019/20 using 2019 figures, 2021/22 using 2021 figures etc.





# UK Summary Data 2012 to 2019 Adjusted



Scottish  
Ambulance  
Service  
University National NHS Board



	<b>Adjusted 2012- 2019 Ave</b>	<b>2019/20</b>	<b>2020/21</b>	<b>2021/22</b>	<b>2022/23</b>
<b>Total transfers</b>	<b>15,623</b>	<b>15,603</b>	<b>14,228</b>	<b>15,073</b>	<b>14,976</b>
Ventilated	3,962 (25.4%)	3,677 (23.6%)	3,217 (22.6%)	3,387 (22.5%)	3,409 (22.8%)
HFOV	70 (1.8%)	102 (2.8%)	112 (3.5%)	98 (2.9%)	113 (3.3%)
CPAP	1,514 (9.7%)	1,070 (6.9%)	871 (6.1%)	1,029 (6.8%)	969 (6.5%)
High-flow	1,194 (7.7%)	1,712 (11.0%)	1,663 (11.7%)	1,824 (12.1%)	2,054 (13.7%)
Cooling	538 (3.4%)	541 (3.5%)	502 (3.5%)	496 (3.3%)	437 (2.9%)
iNO	264 (1.7%)	293 (1.9%)	298 (2.1%)	292 (1.9%)	266 (1.8%)
Palliative	49 (0.3%)	62 (0.4%)	56 (0.4%)	53 (0.4%)	51 (0.3%)

2012-2019 data adjusted from 6 month to 12 months of data



Scottish  
Ambulance  
Service

University National NHS Board

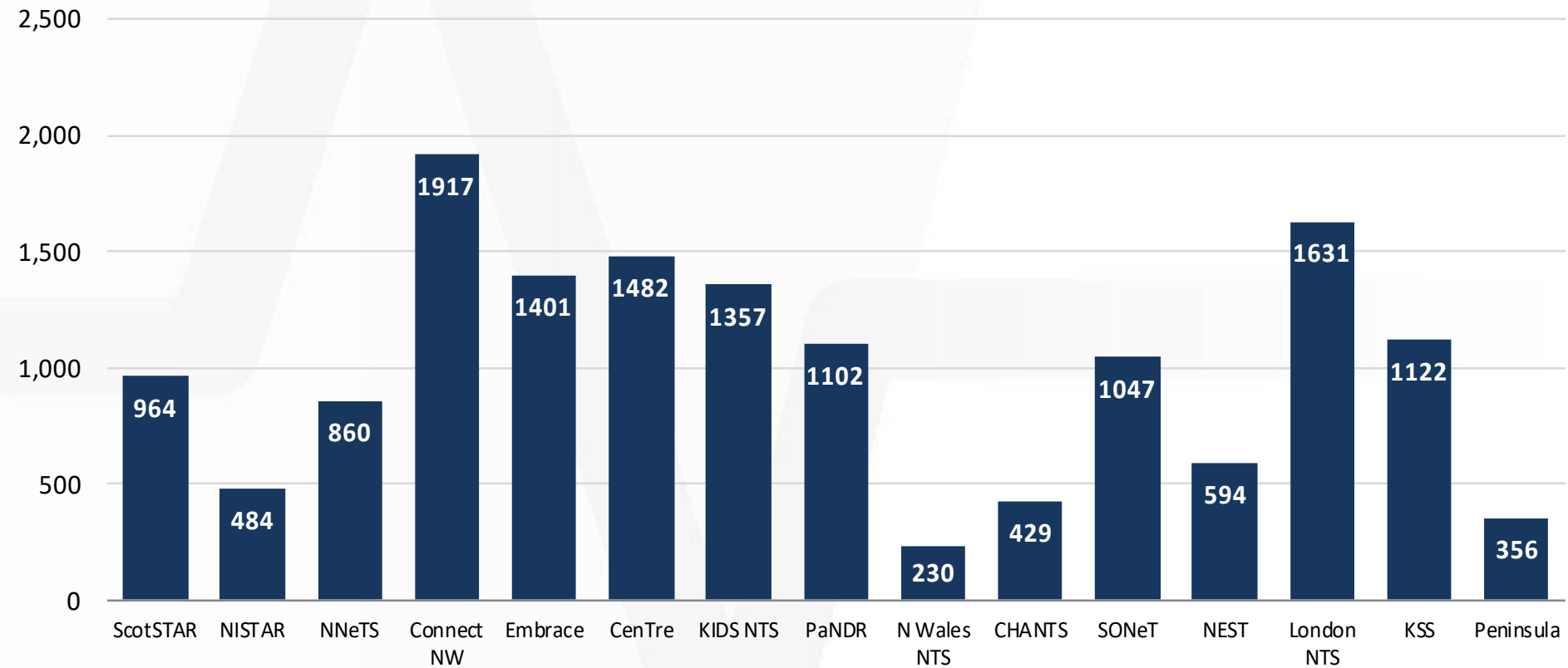


# Workload and trends in support

# Total Transfers by team Apr 2022 to Mar 2023



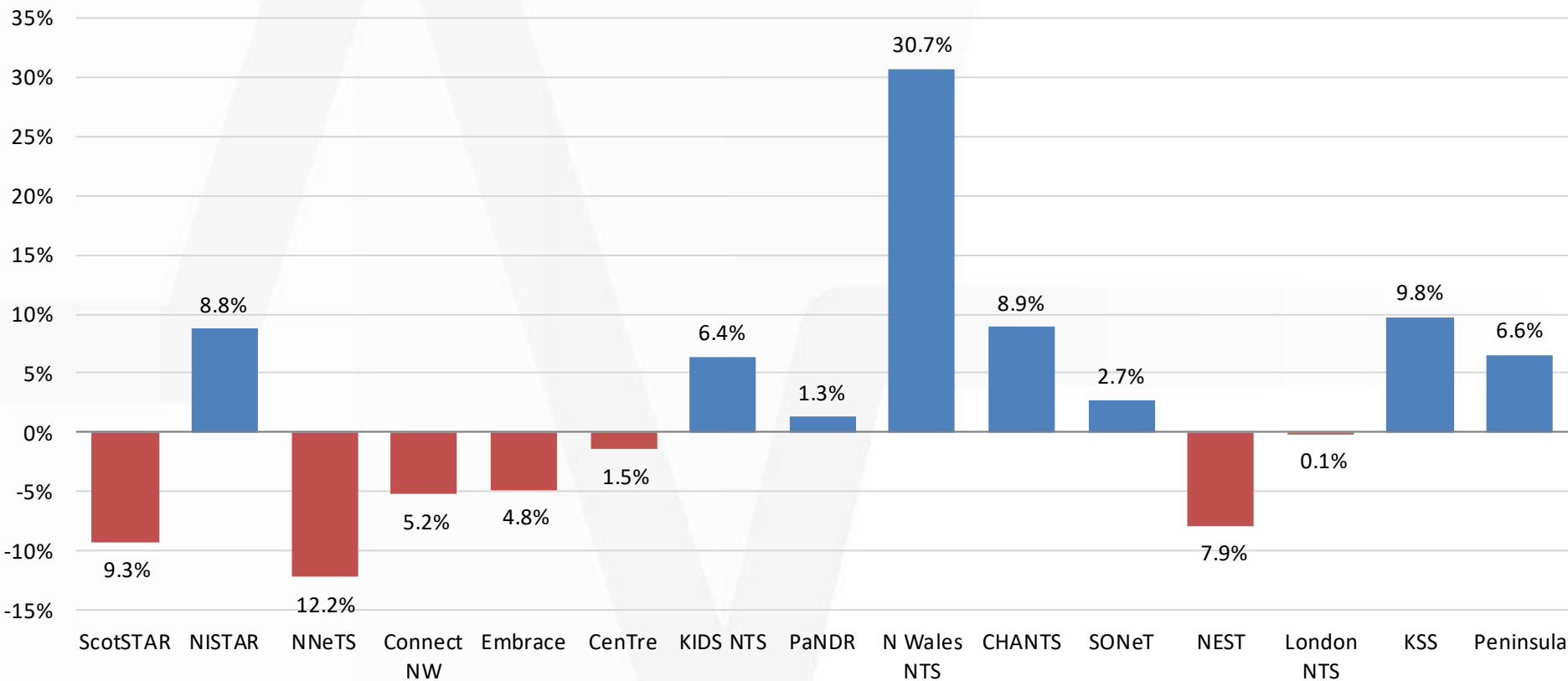
Scottish  
Ambulance  
Service  
University National NHS Board



# Changes in activity by team, 2021/22 v 2022/23



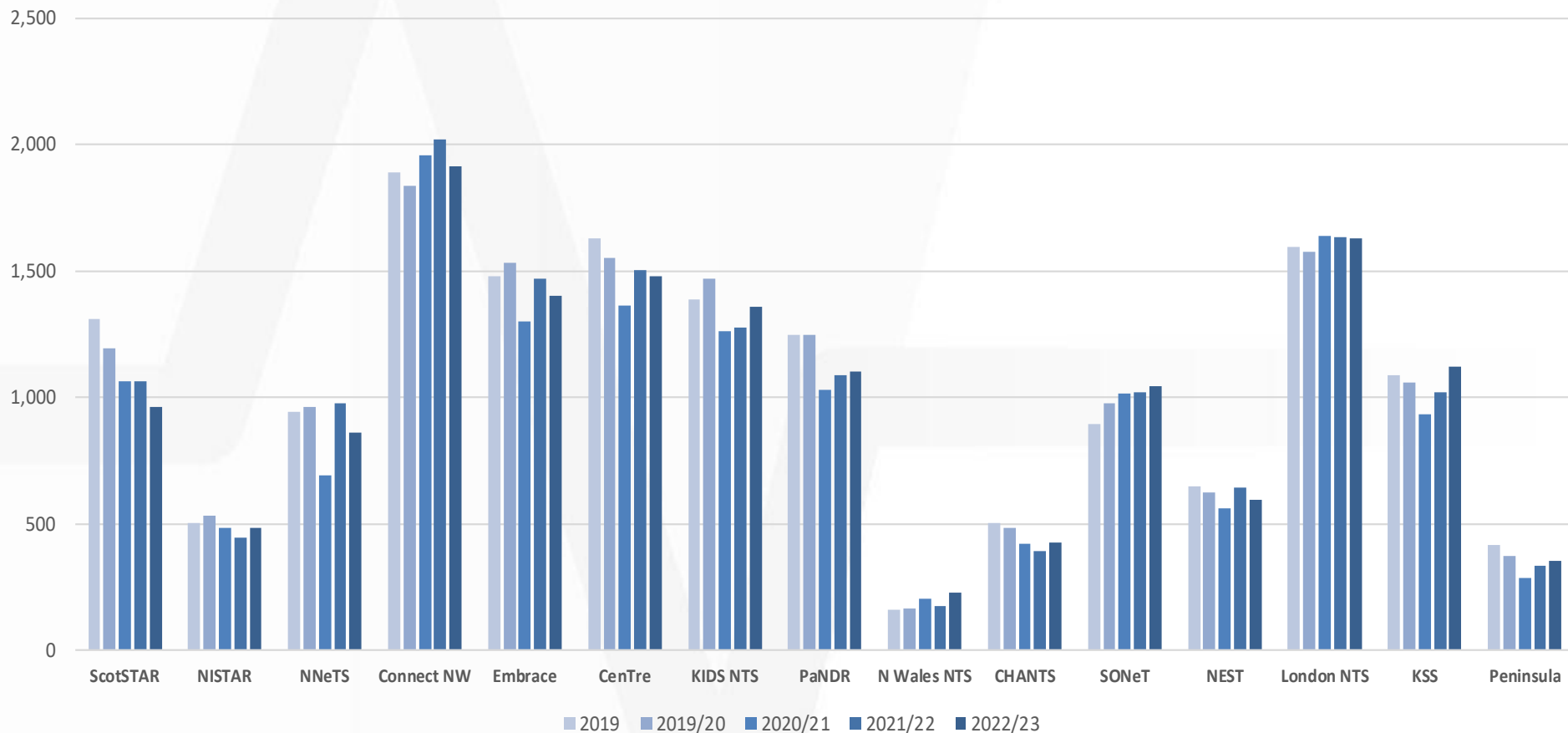
Scottish Ambulance Service  
University National NHS Board



# Trends in transfer number by team, 2019 to 2022/23



Scottish Ambulance Service  
University National NHS Board



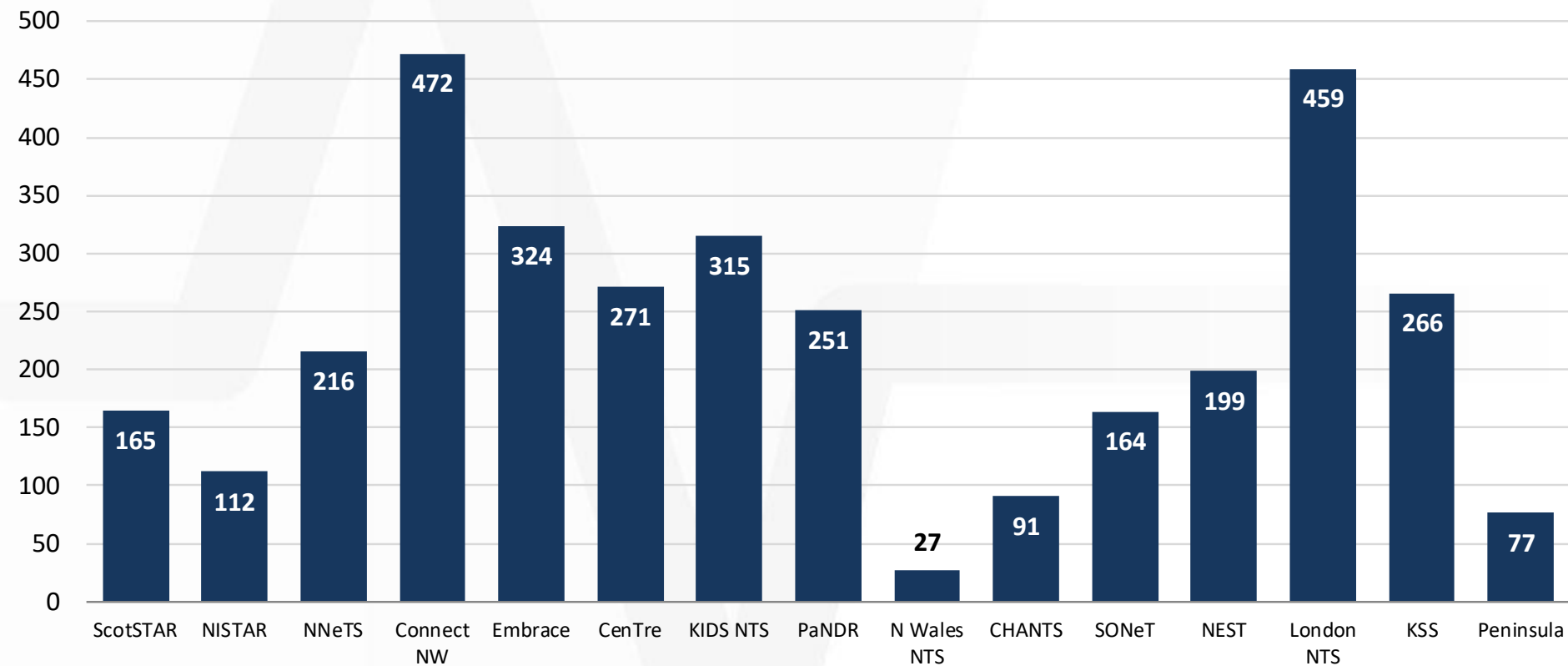
2019-20 onwards data 12-month collection period, prior to that 6 months used , adjusted for comparison



# Ventilated Transfers/team Apr 2022 to Mar 2023



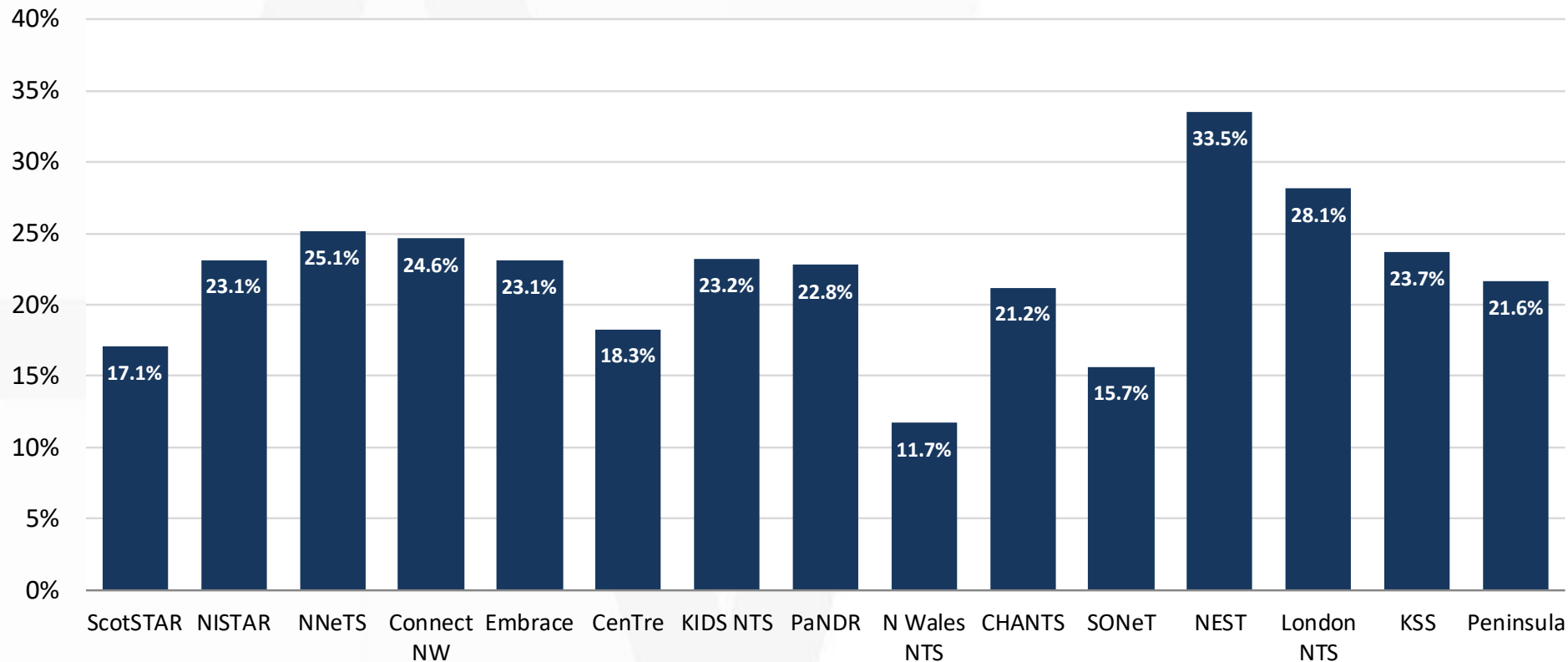
Scottish  
Ambulance  
Service  
University National NHS Board



# Ventilated Transfers as a percentage of total transfer, by team Apr 2022 to Mar 2023



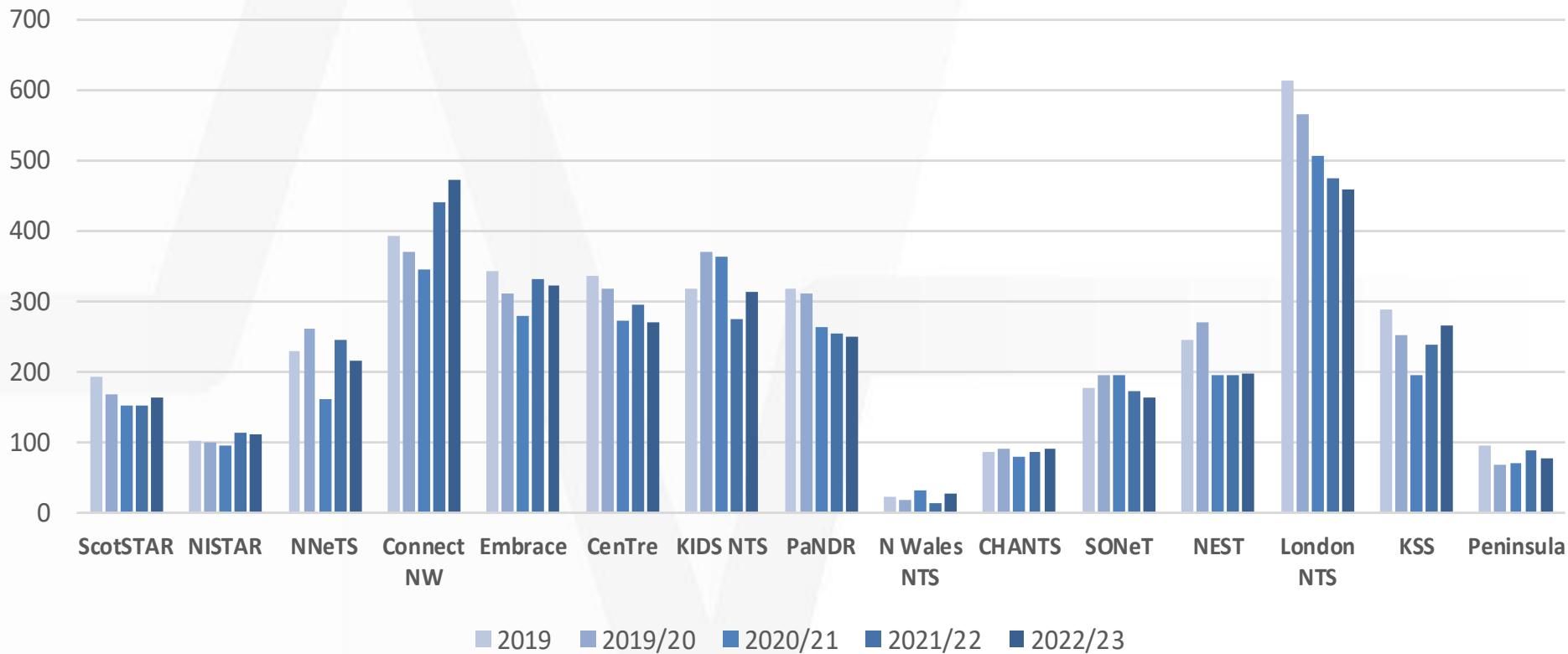
Scottish Ambulance Service  
University National NHS Board



# Trends in numbers of ventilated transfer by team 2019 to 2022/23



Scottish Ambulance Service  
University National NHS Board

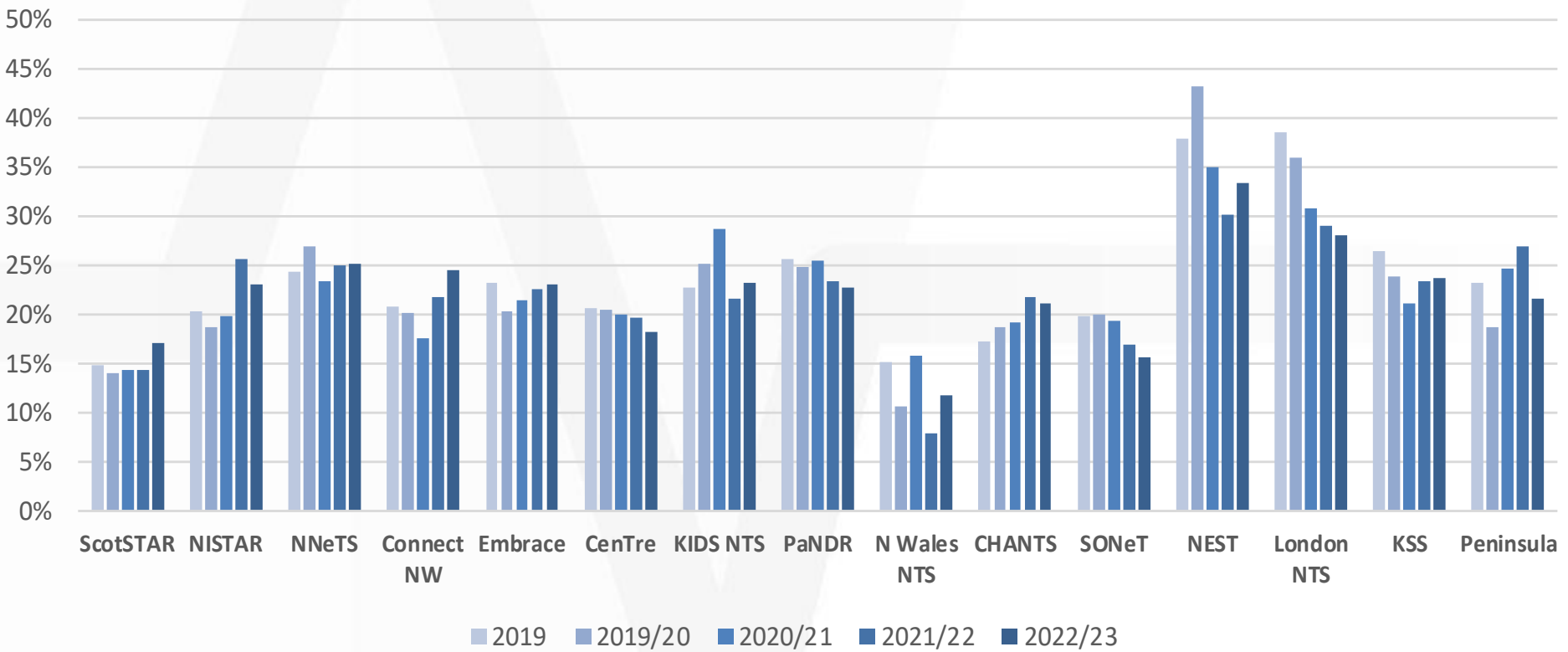




# Ventilated transfers as percentage of total transfers, by team 2019 to 2022/23



Scottish Ambulance Service  
University National NHS Board

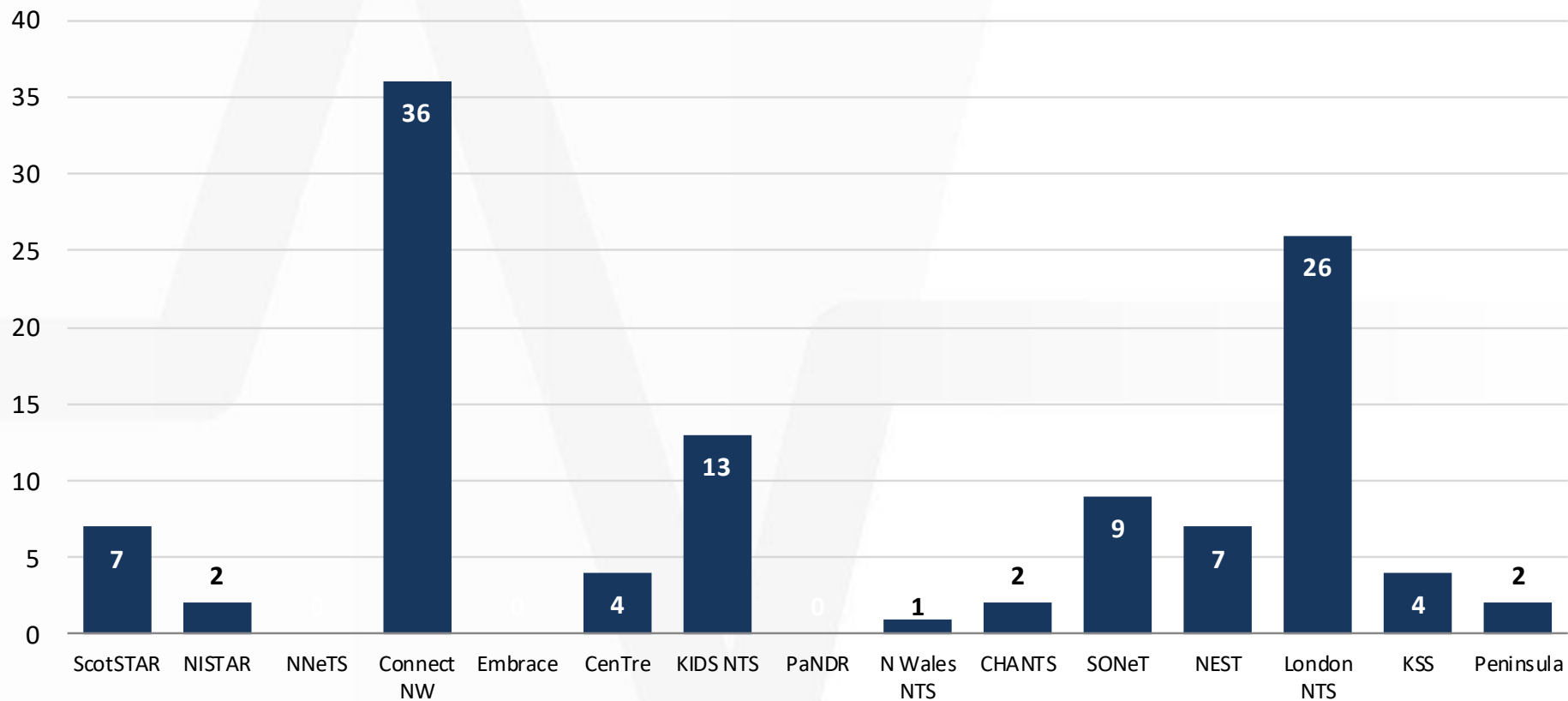


# HFOV Transfers by team

## Apr 2022 to Mar 2023



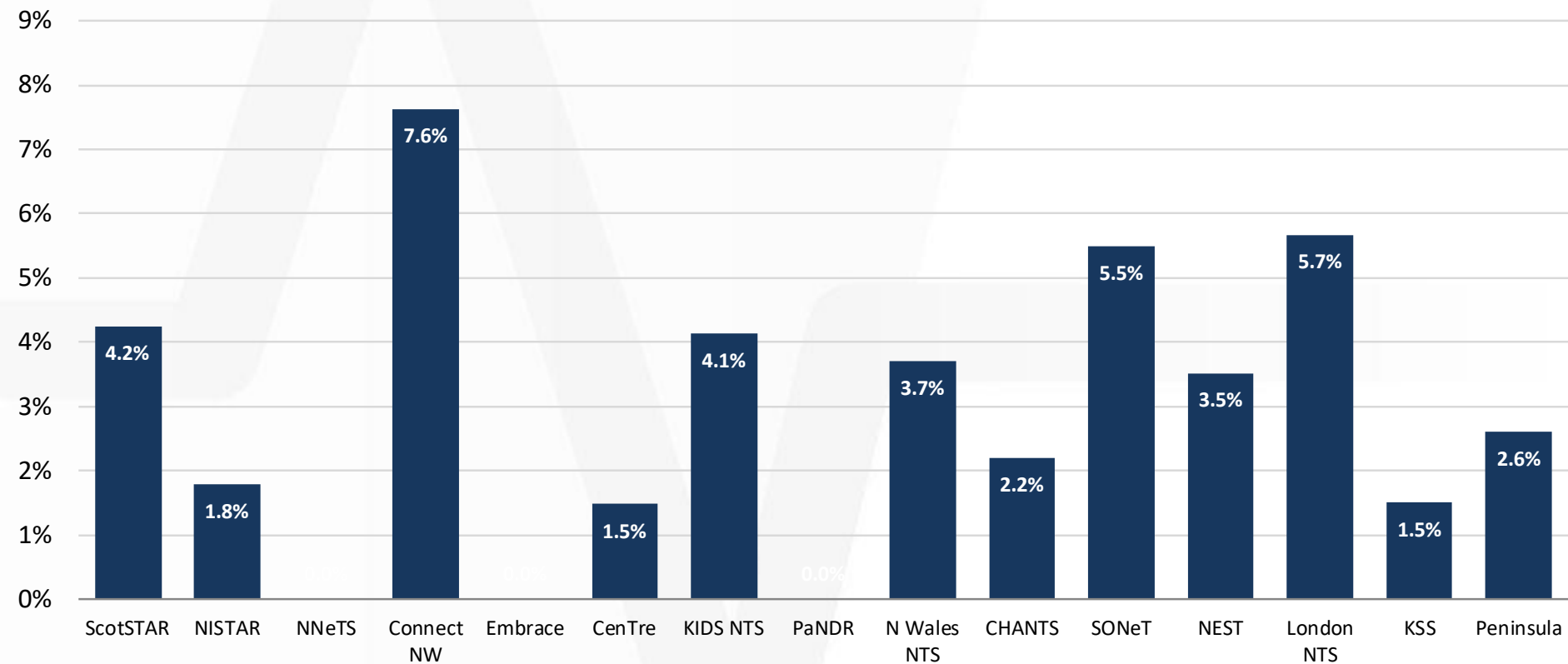
Scottish  
Ambulance  
Service  
University National NHS Board



# HFOV Transfers as a percentage of ventilated transfers, by team Apr 2022 to Mar 2023



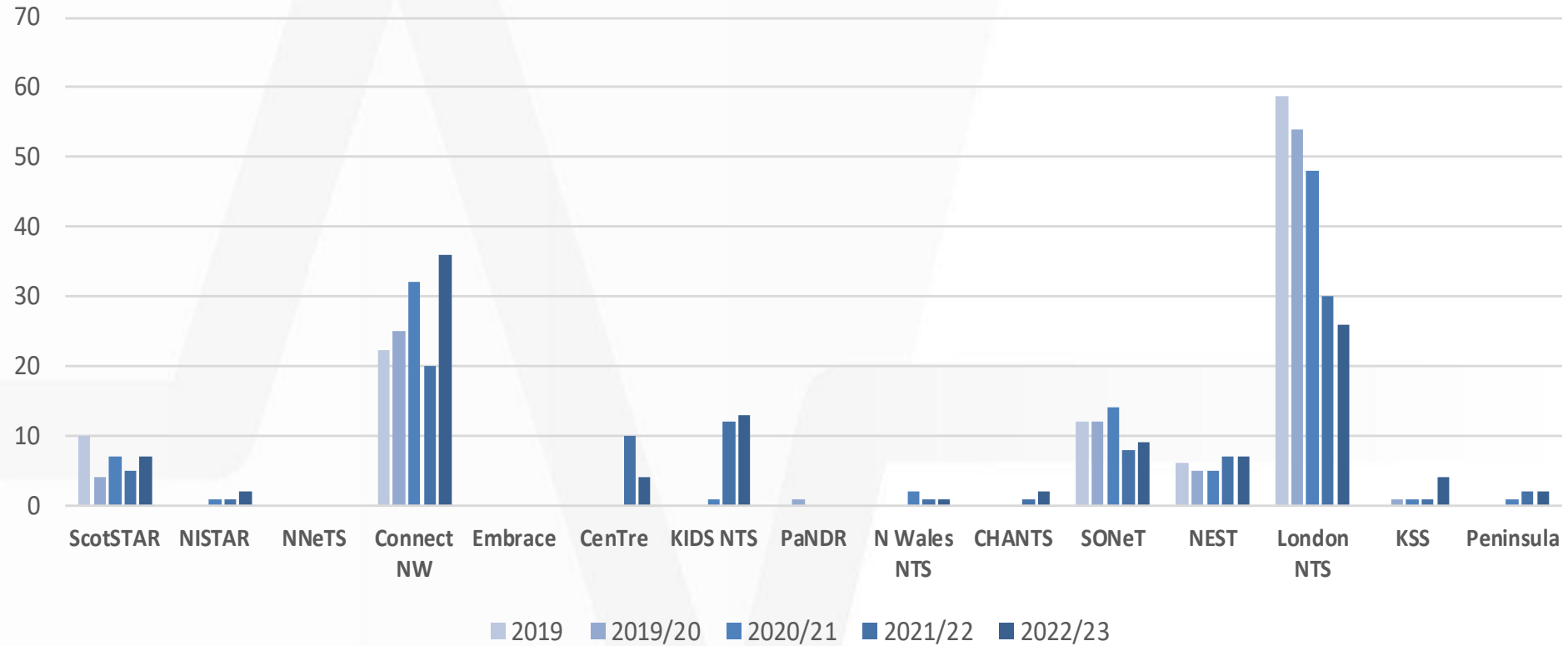
Scottish  
Ambulance  
Service  
University National NHS Board



# Trends in numbers on HF0V by team, 2019 to 2022/23



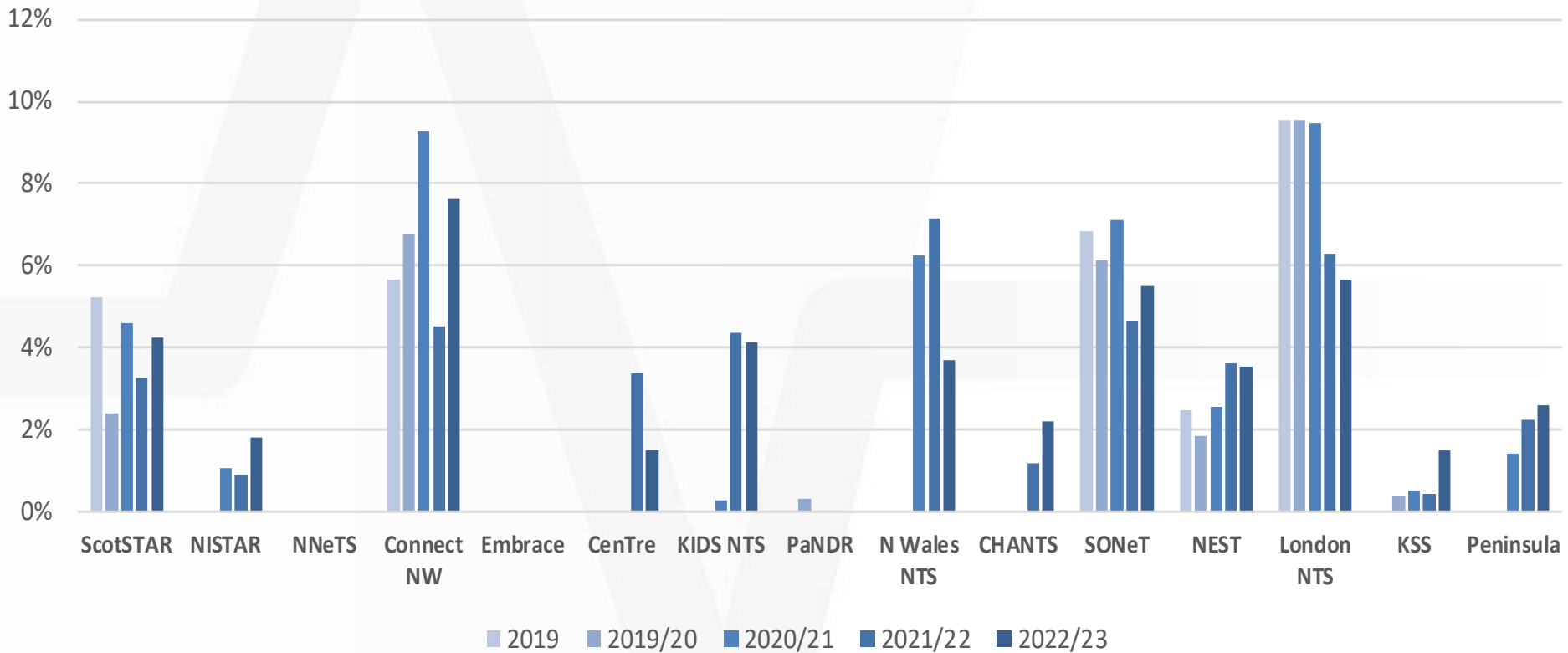
Scottish Ambulance Service  
University National NHS Board



# Trends in HFOV transfers as a percentage of ventilated transfers by team 2019 to 2022/23



Scottish Ambulance Service  
University National NHS Board

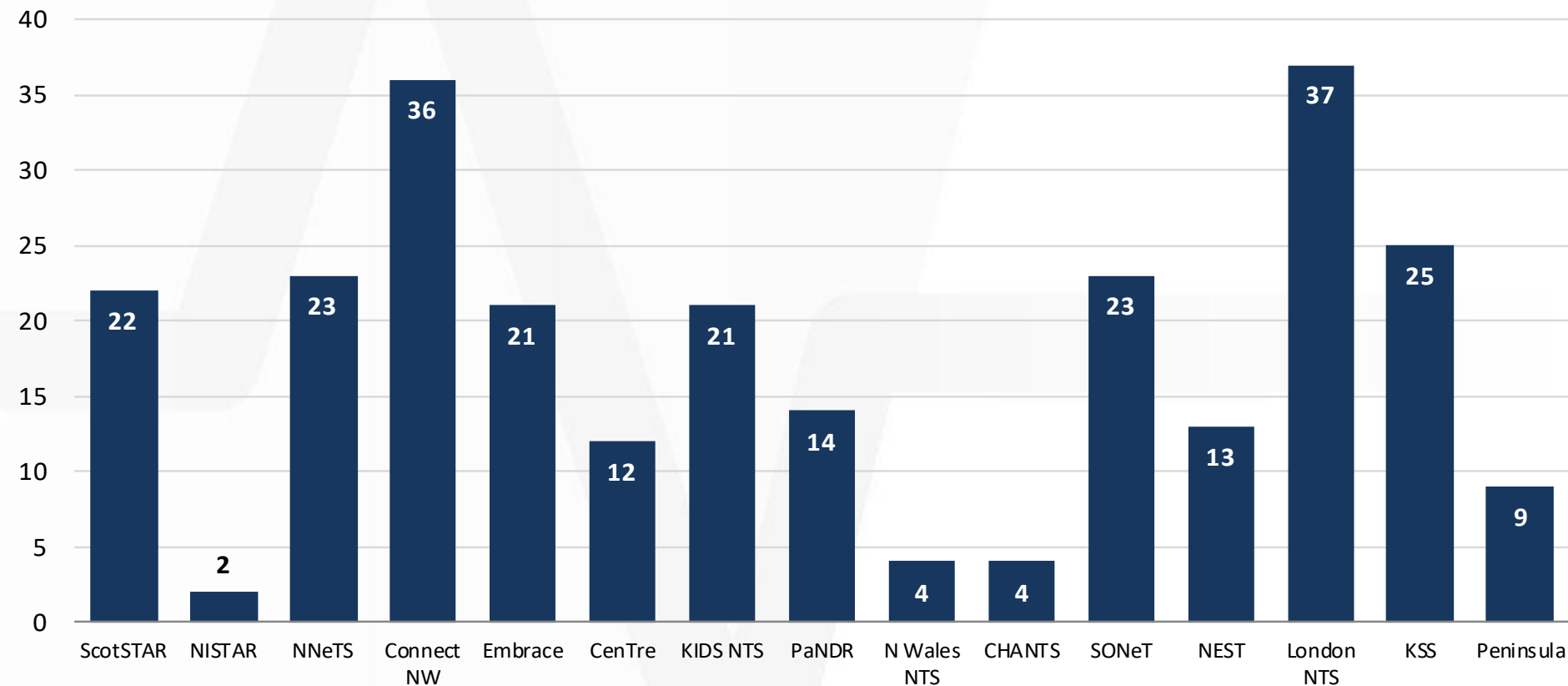


# Nitric Oxide Transfers by team

## Apr 2022 to Mar 2023



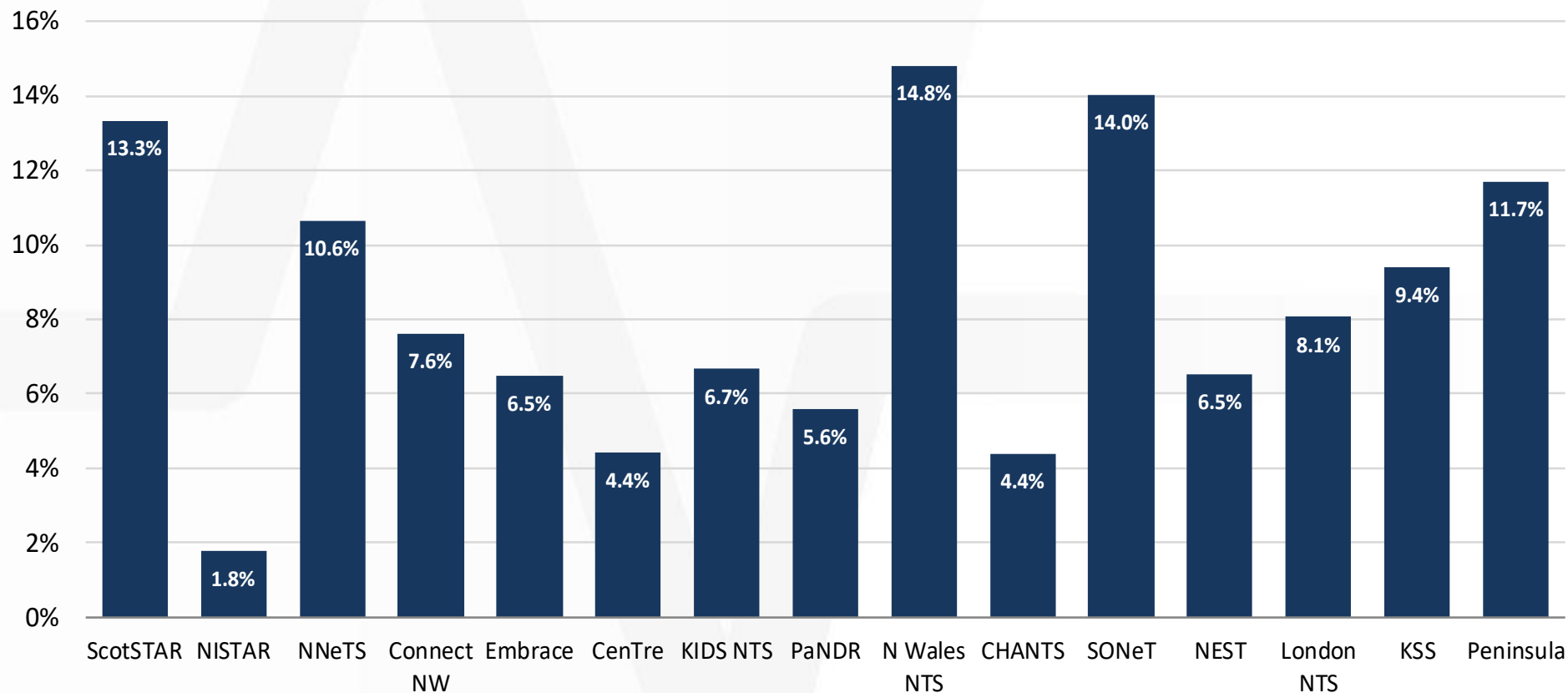
Scottish  
Ambulance  
Service  
University National NHS Board



# Nitric Oxide Transfers as a percentage of ventilated transfers, by team Apr 2022 to Mar 2023



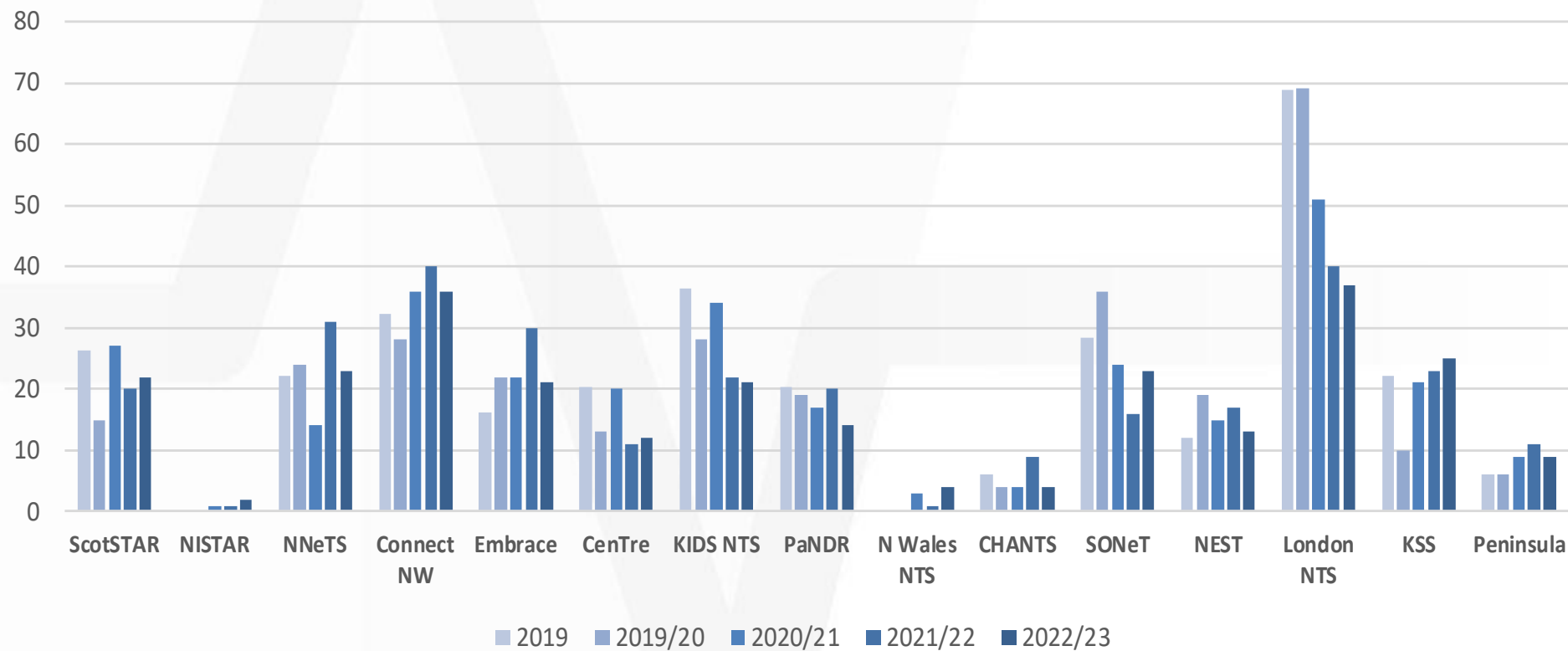
Scottish  
Ambulance  
Service  
University National NHS Board



# Trends in numbers on Nitric Oxide by team, 2019 to 2022/23



Scottish Ambulance Service  
University National NHS Board

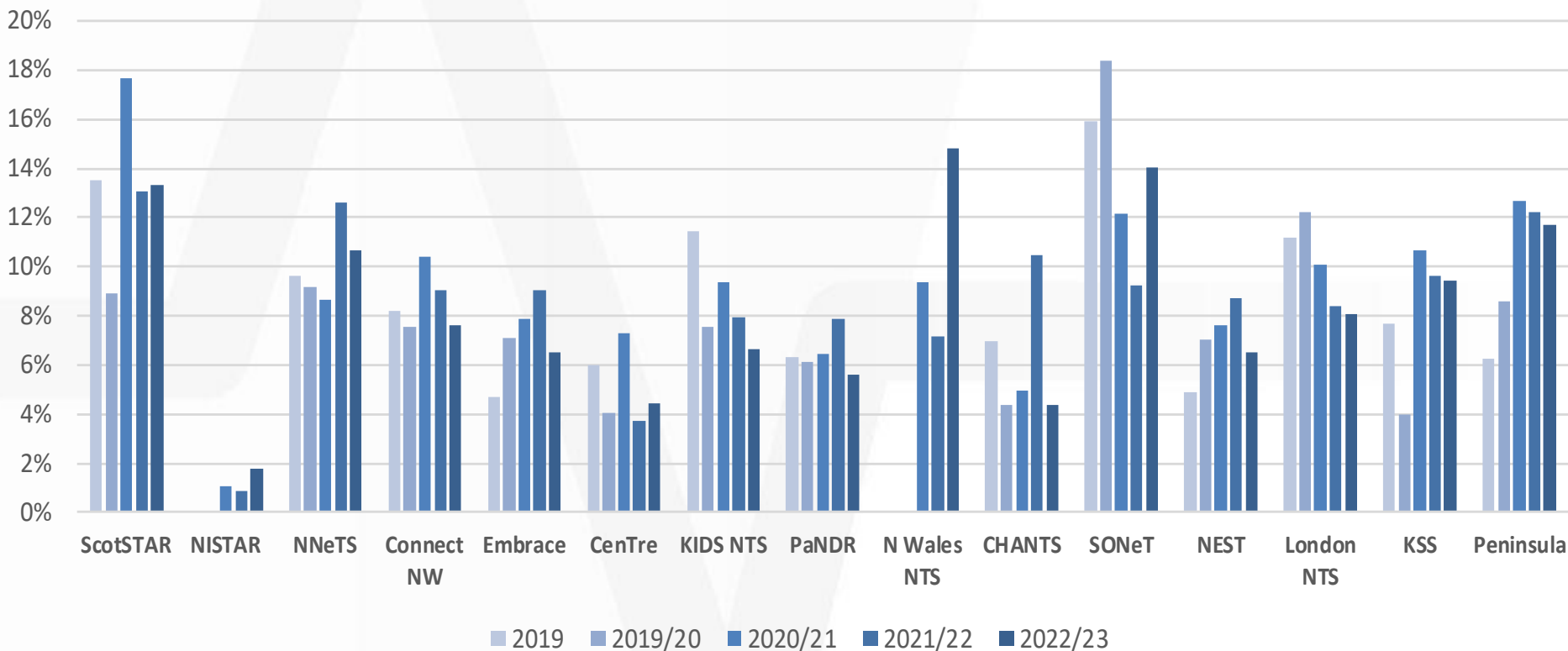




# Trends in Nitric Oxide transfers as a percentage of ventilated transfers by team 2019 to 2022/23



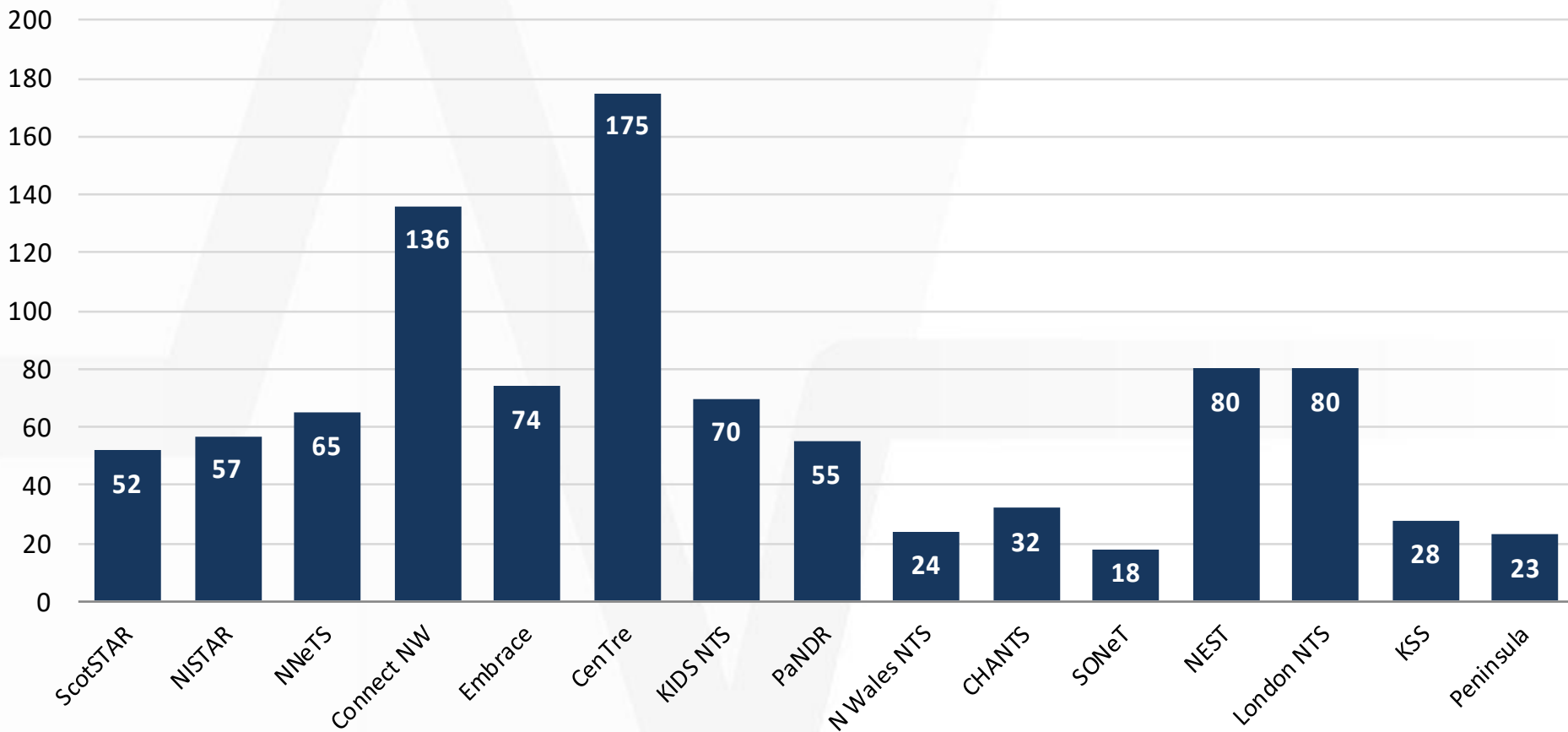
Scottish Ambulance Service  
University National NHS Board



# CPAP Transfers by team Apr 2022 to Mar 2023



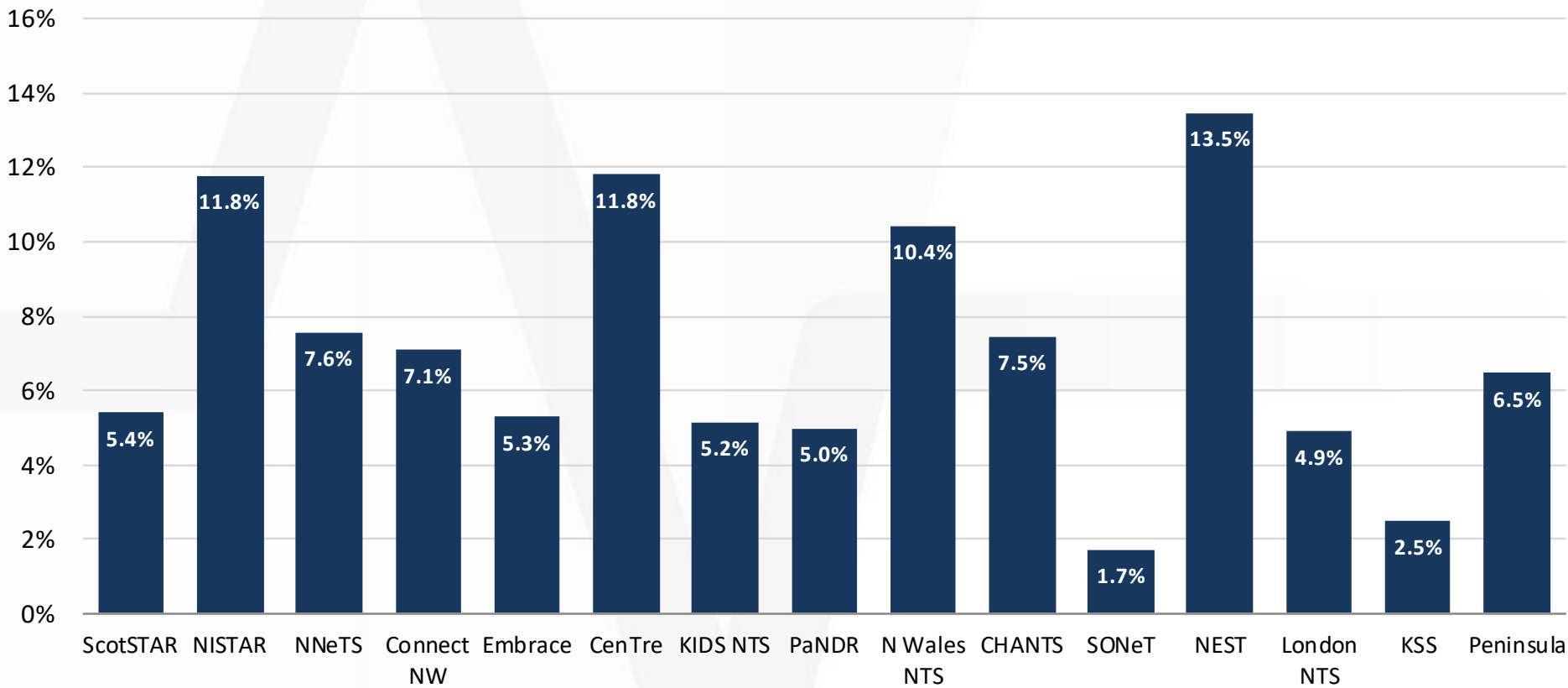
Scottish  
Ambulance  
Service  
University National NHS Board



# CPAP Transfers as a percentage of total transfers, by team Apr 2022 to Mar 2023



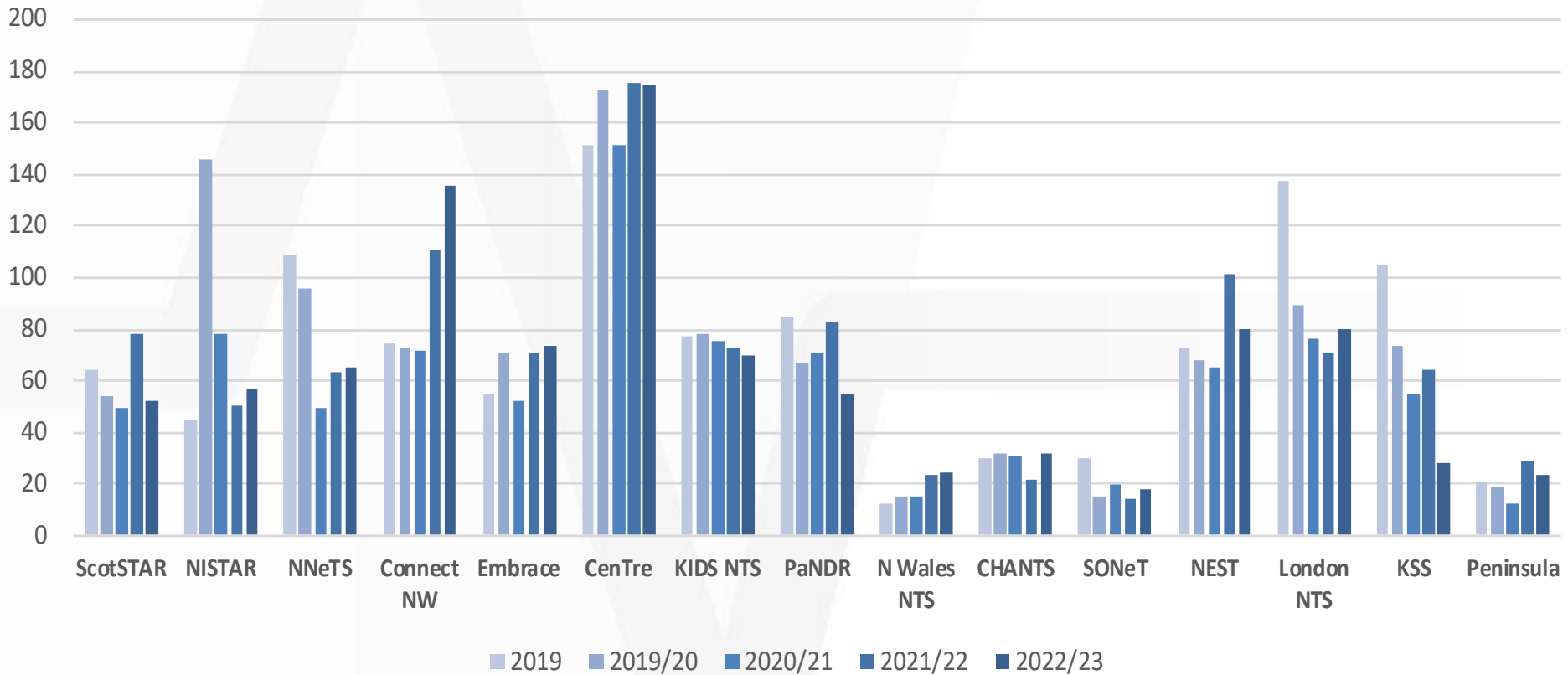
Scottish Ambulance Service  
University National NHS Board



# Trends in numbers on CPAP by team, 2019 to 2022/23



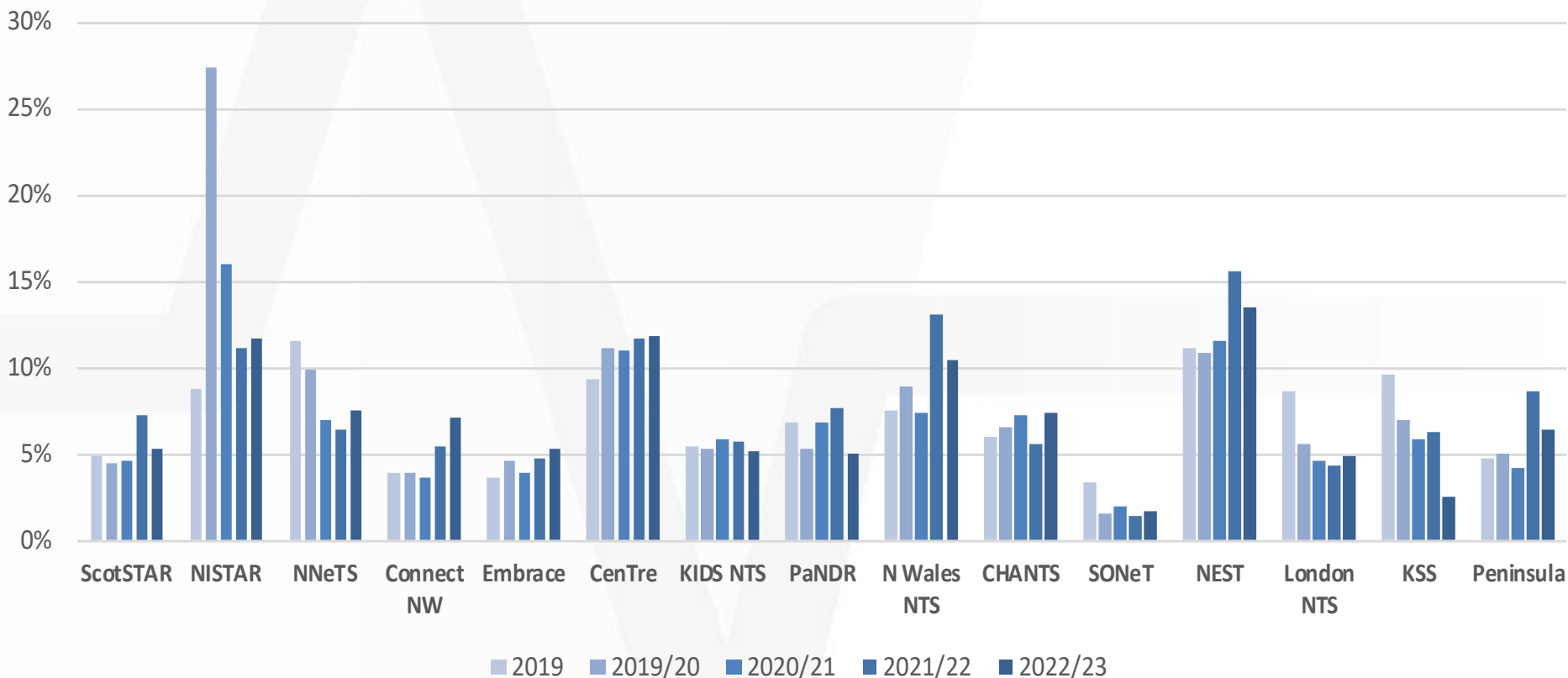
Scottish Ambulance Service  
University National NHS Board



# Trends in CPAP transfers as a percentage of total transfers by team 2019 to 2022/23



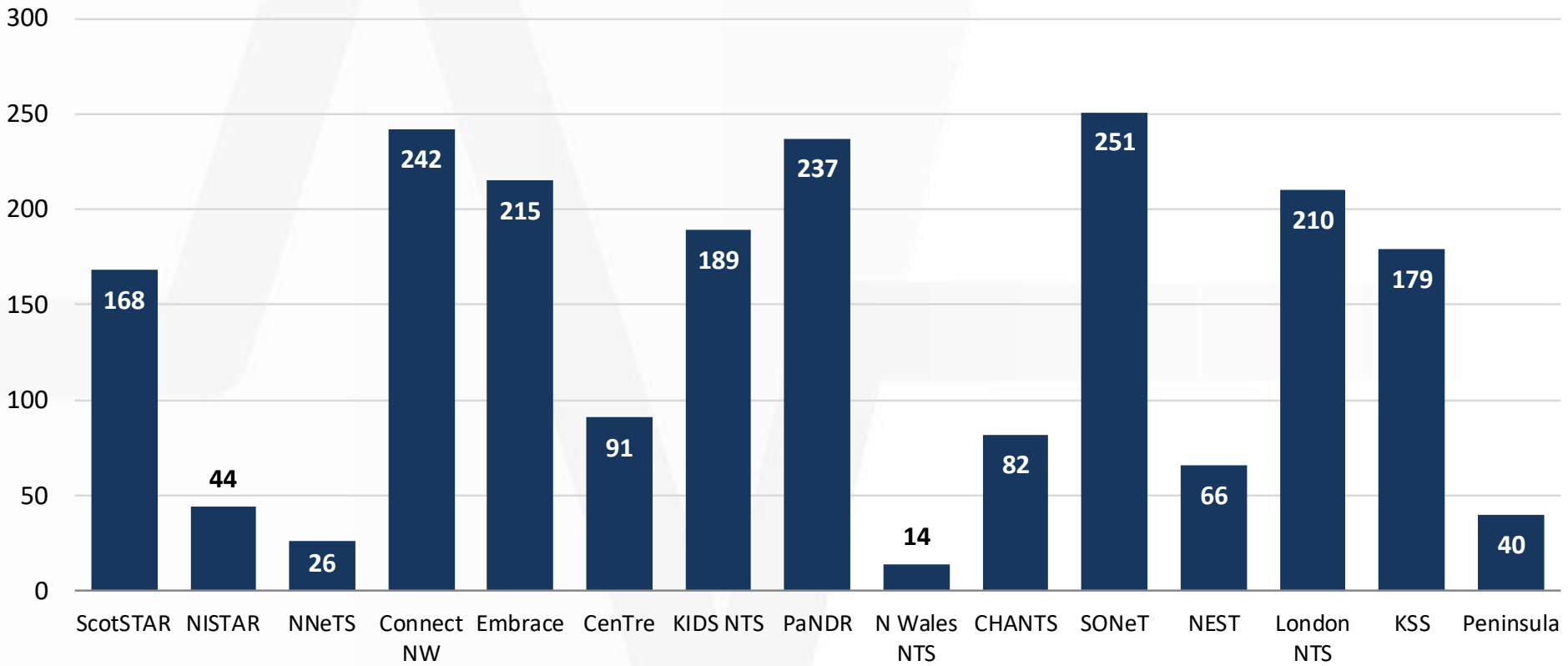
Scottish Ambulance Service  
University National NHS Board



# High-flow Transfers/team Apr 2022 to Mar 2023



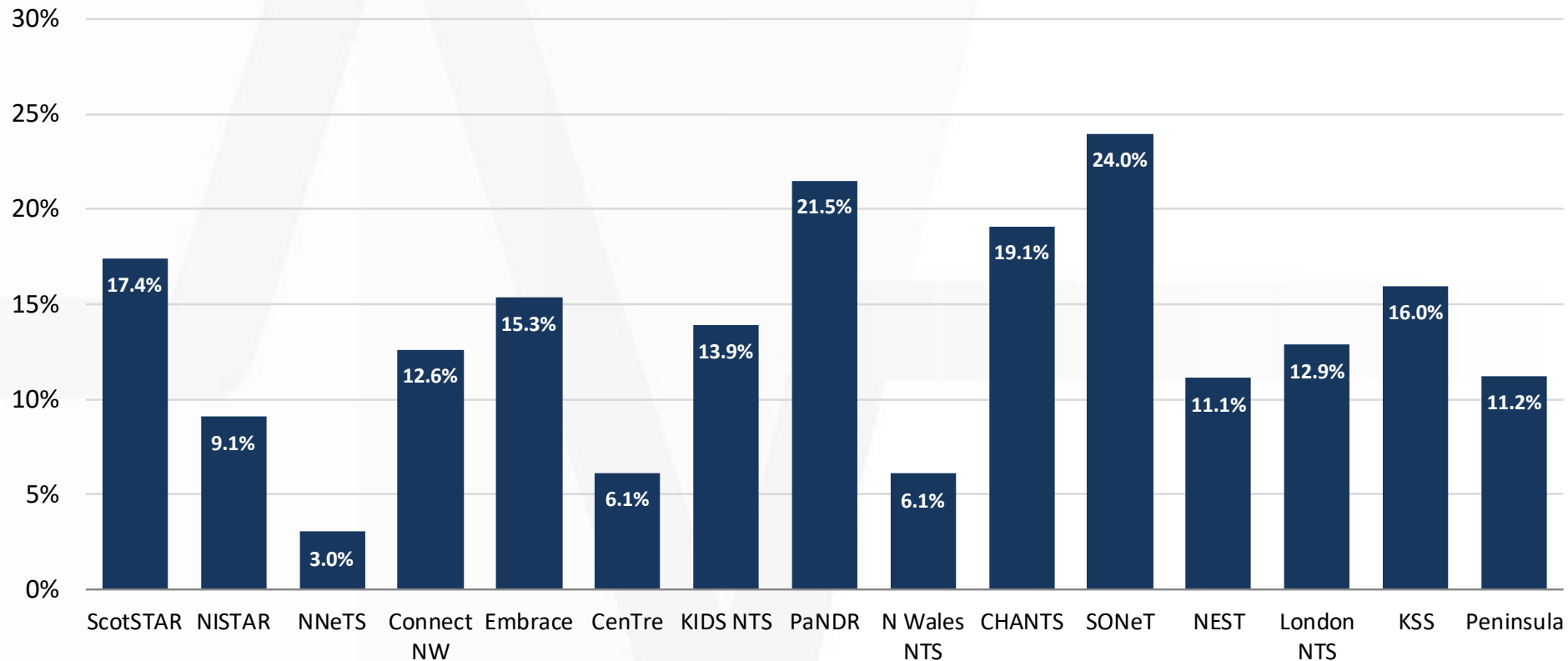
Scottish  
Ambulance  
Service  
University National NHS Board



# High-flow Transfers as a percentage of total transfers, by team Apr 2022 to Mar 2023



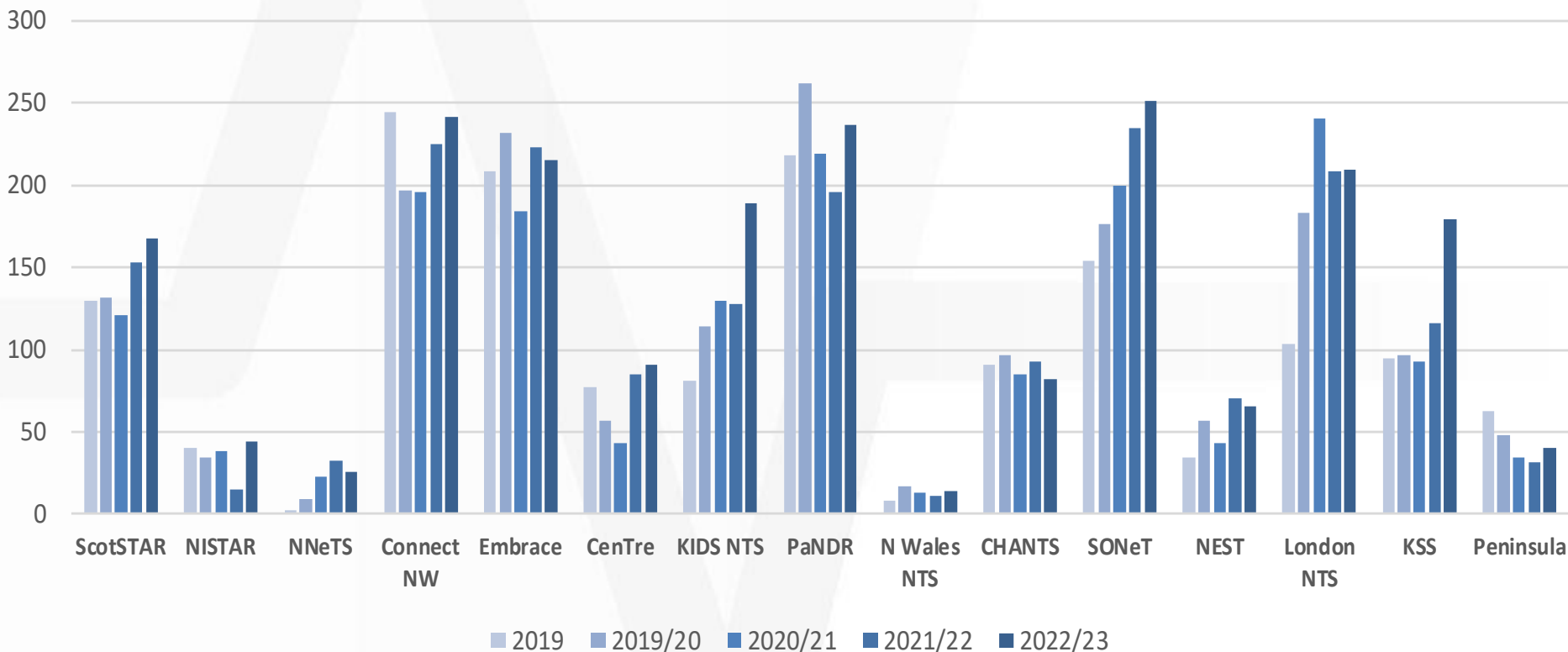
Scottish  
Ambulance  
Service  
University National NHS Board



# Trends in numbers on High-flow by team, 2019 to 2022/23



Scottish  
Ambulance  
Service  
University National NHS Board

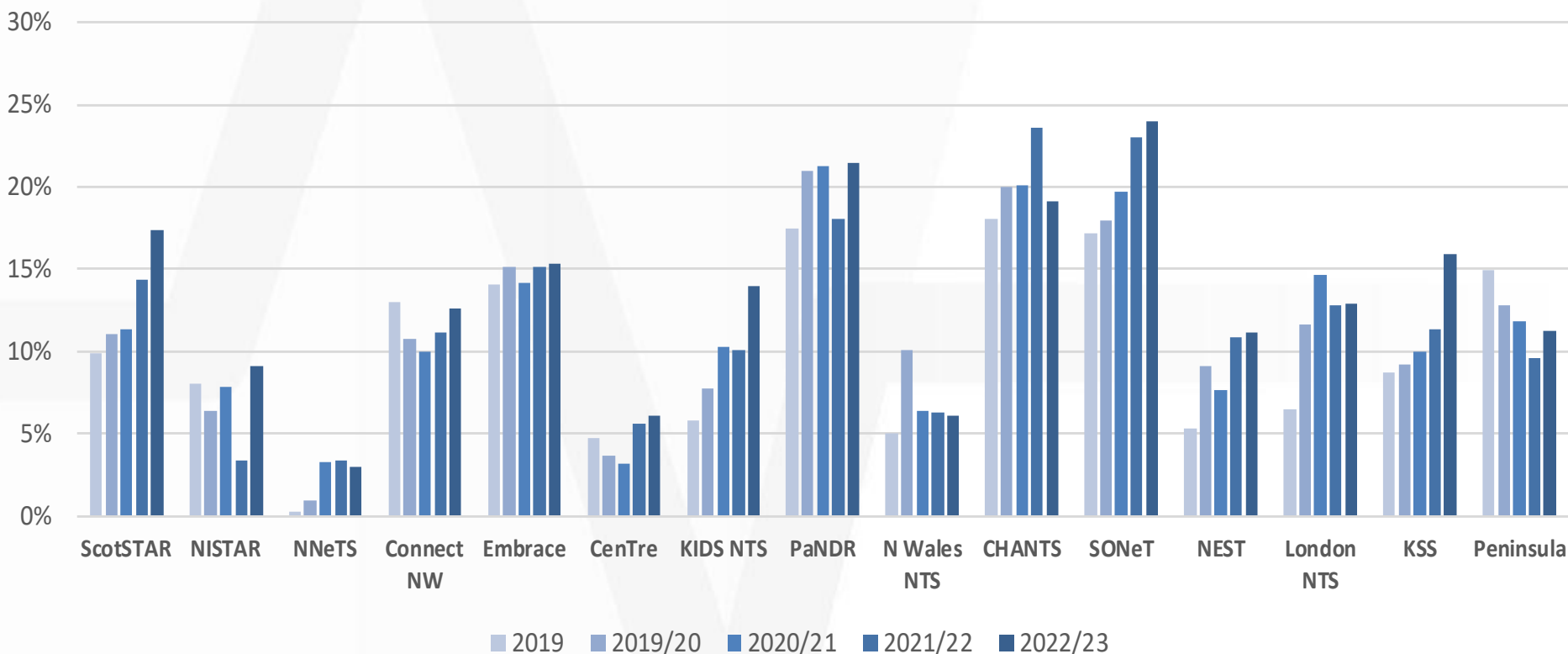




# Trends in High-flow transfers as a percentage of total transfers by team 2019 to 2022/23



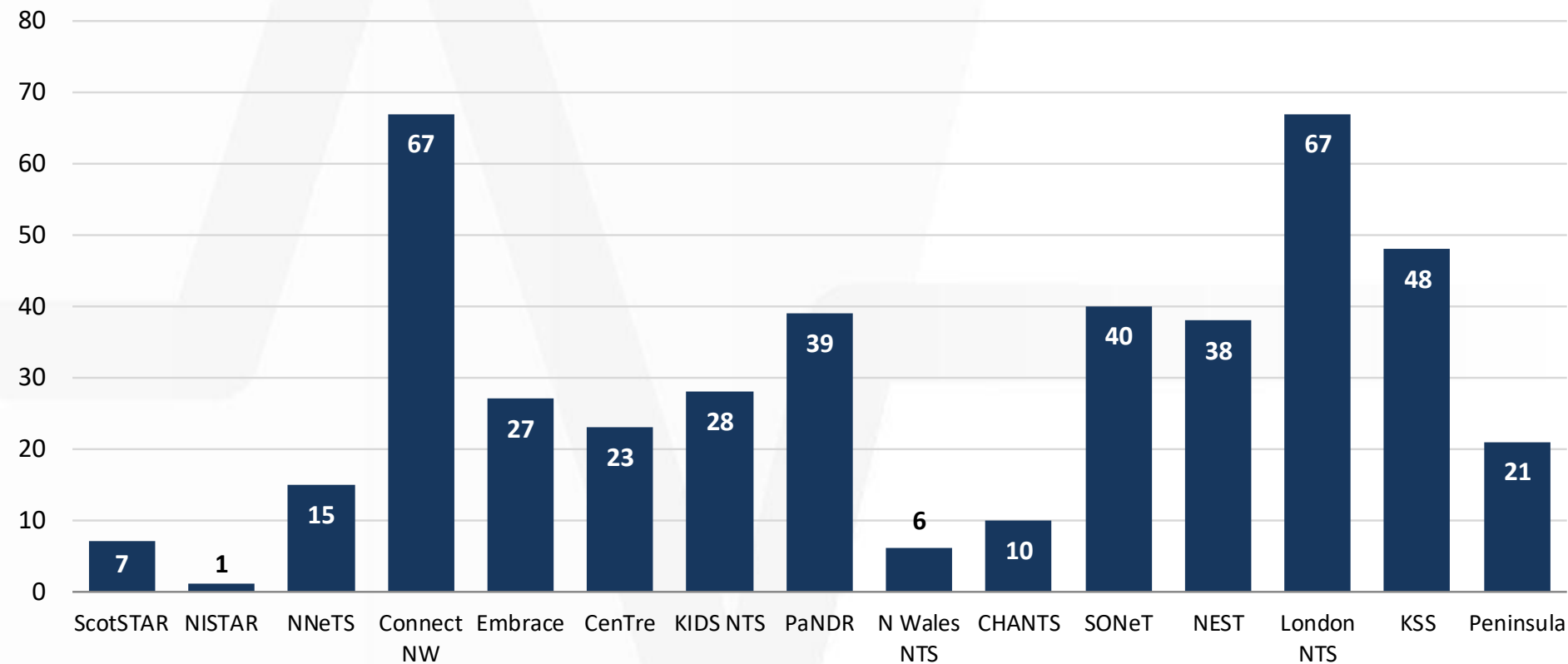
Scottish Ambulance Service  
University National NHS Board



# Cooling Transfers/team Apr 2022 to Mar 2023



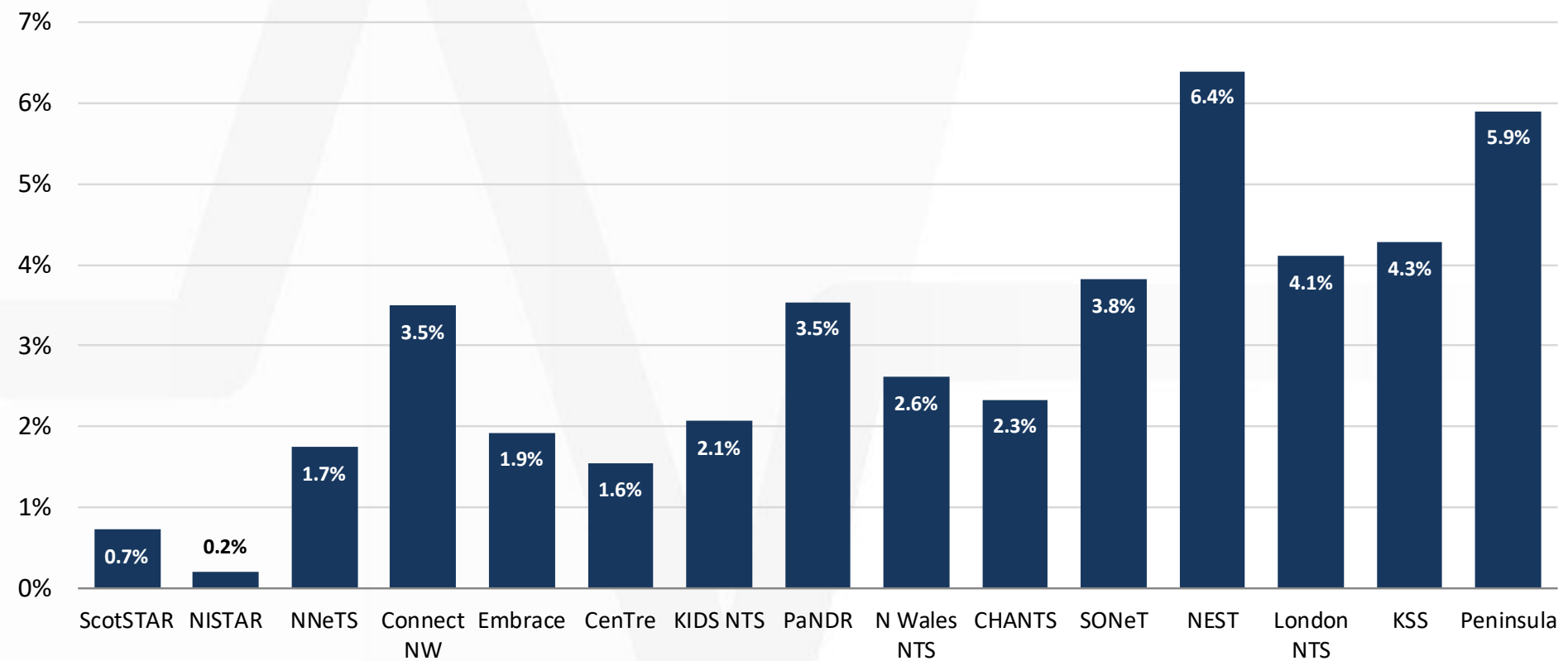
Scottish  
Ambulance  
Service  
University National NHS Board



# Cooling Transfers as a percentage of total transfers, by team Apr 2022 to Mar 2023



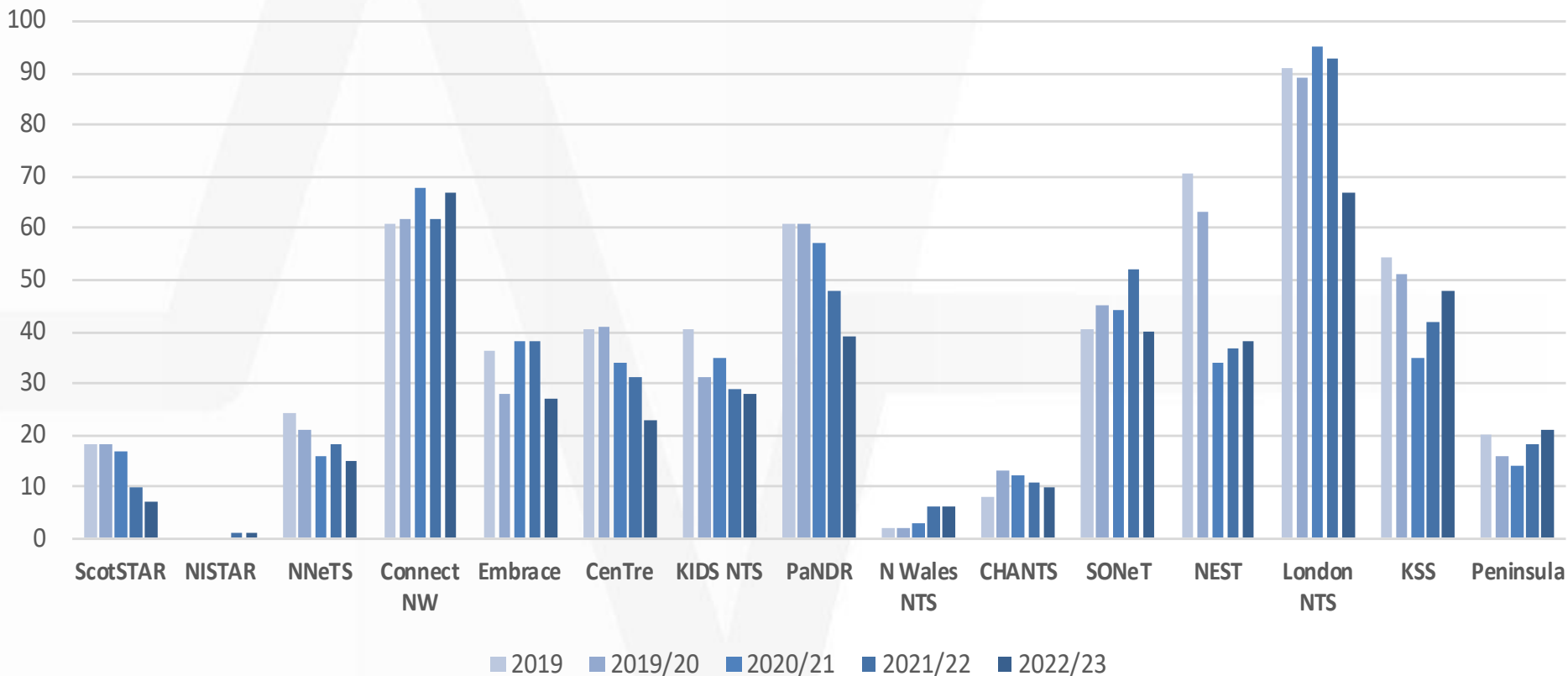
Scottish Ambulance Service  
University National NHS Board



# Trends in numbers cooled in transfer, by team, 2019 to 2022/23



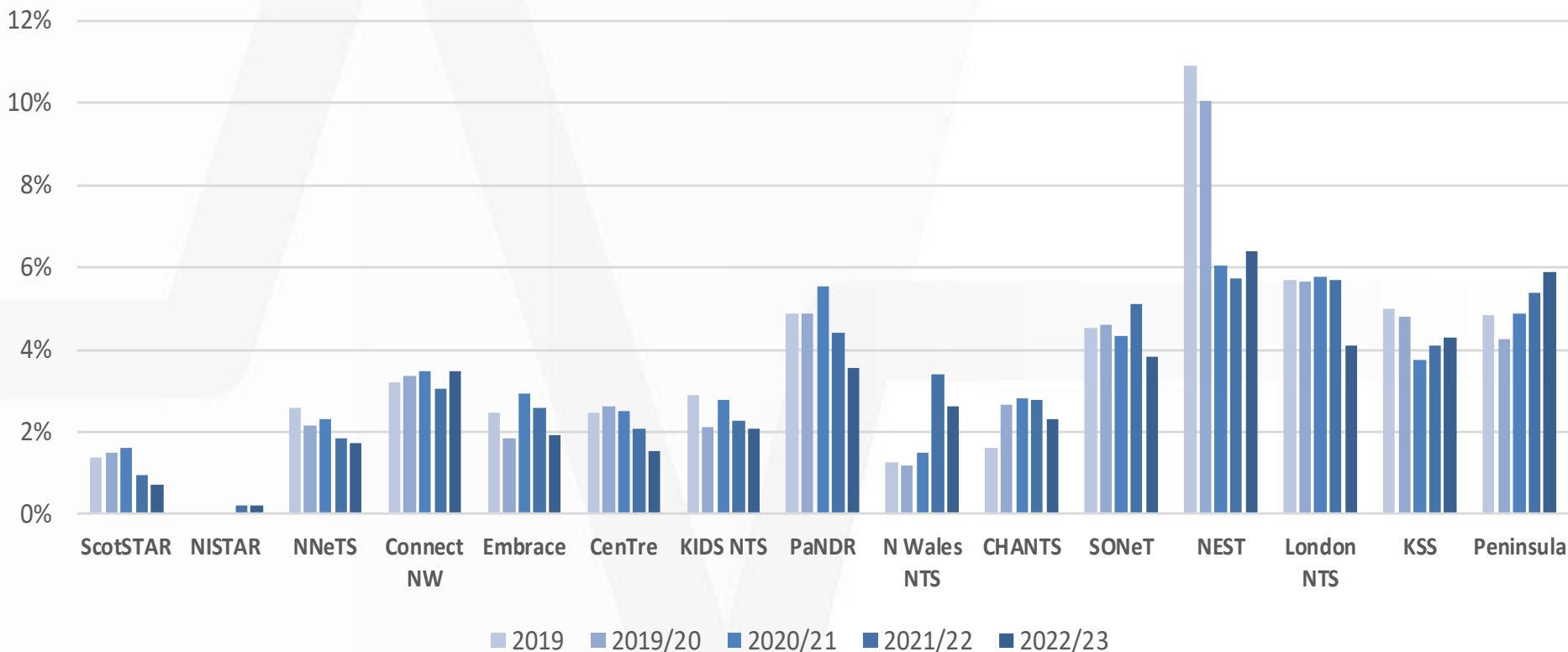
Scottish Ambulance Service  
University National NHS Board



# Trends in Cooling transfers as a percentage of total transfers by team 2019 to 2022/23



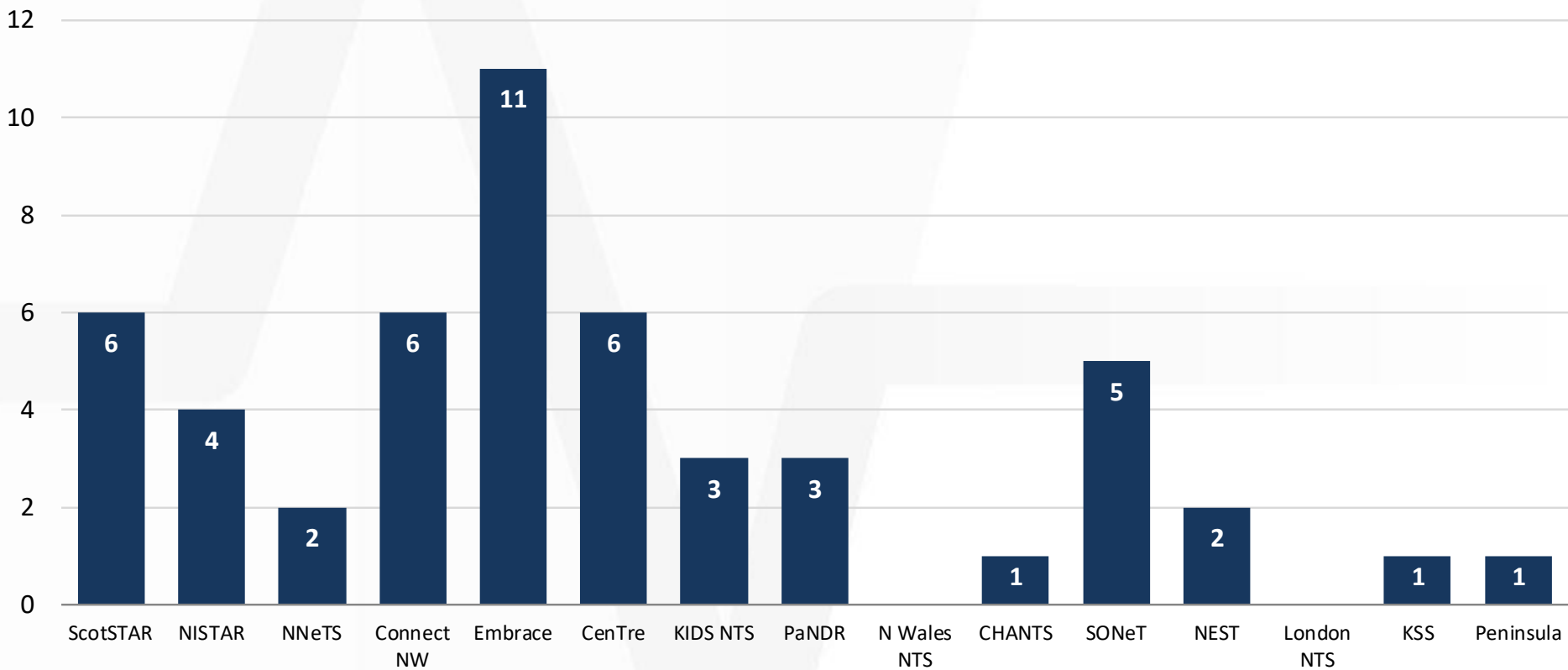
Scottish Ambulance Service  
University National NHS Board



# Transfers for Palliative care by team Apr 2022 to Mar 2023



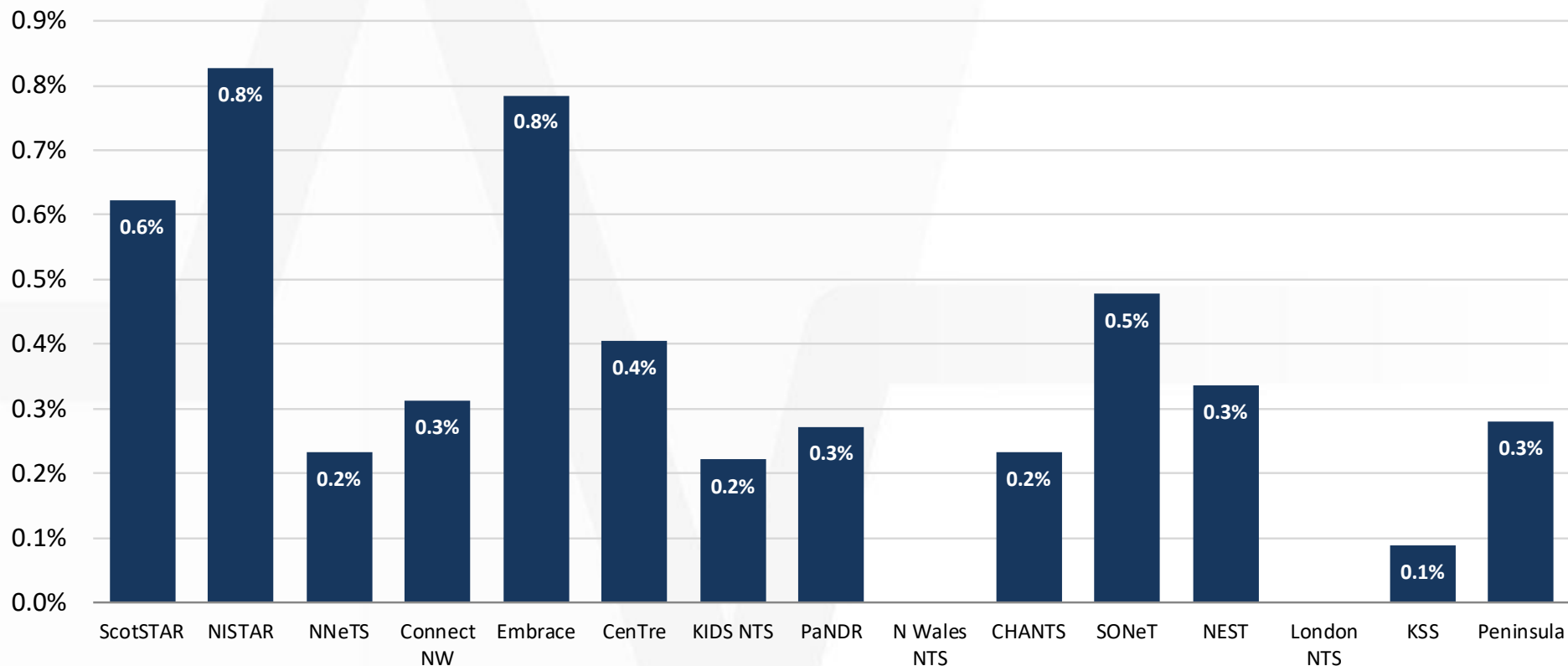
Scottish  
Ambulance  
Service  
University National NHS Board



# Transfers for Palliative care as a percentage of total transfers, by team Apr 2022 to Mar 2023



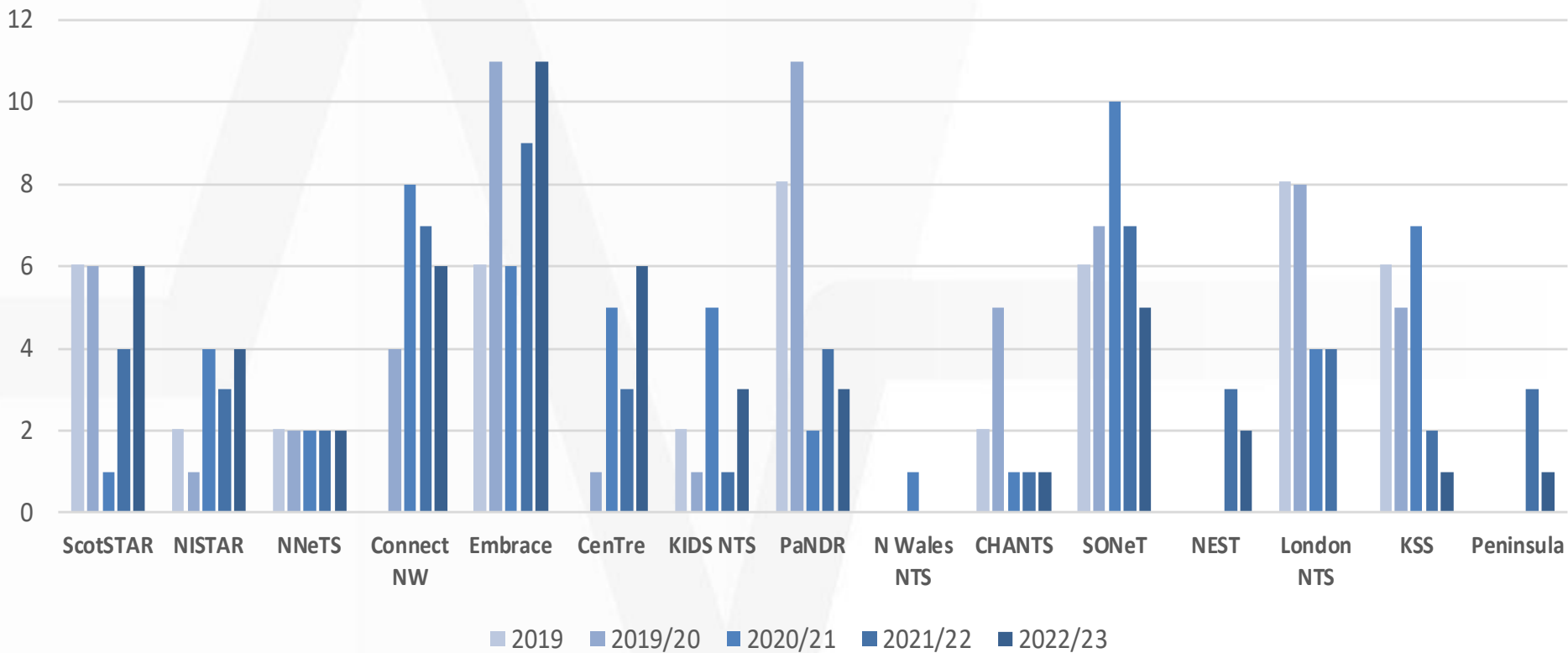
Scottish  
Ambulance  
Service  
University National NHS Board



# Trends in numbers of transfers for Palliative care by team, 2019 to 2022/23



Scottish Ambulance Service  
University National NHS Board

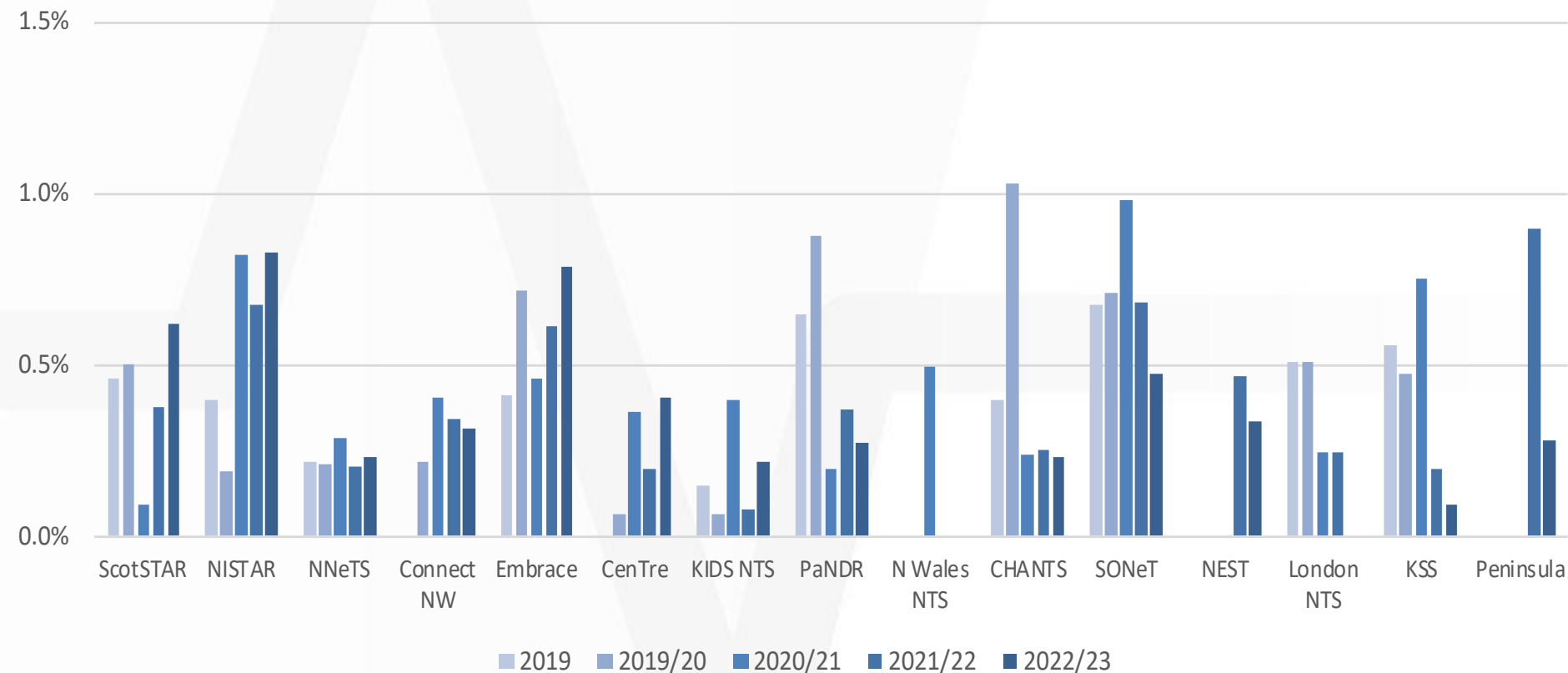




# Trends in Palliative transfers as a percentage of total transfers by team 2019 to 2022/23



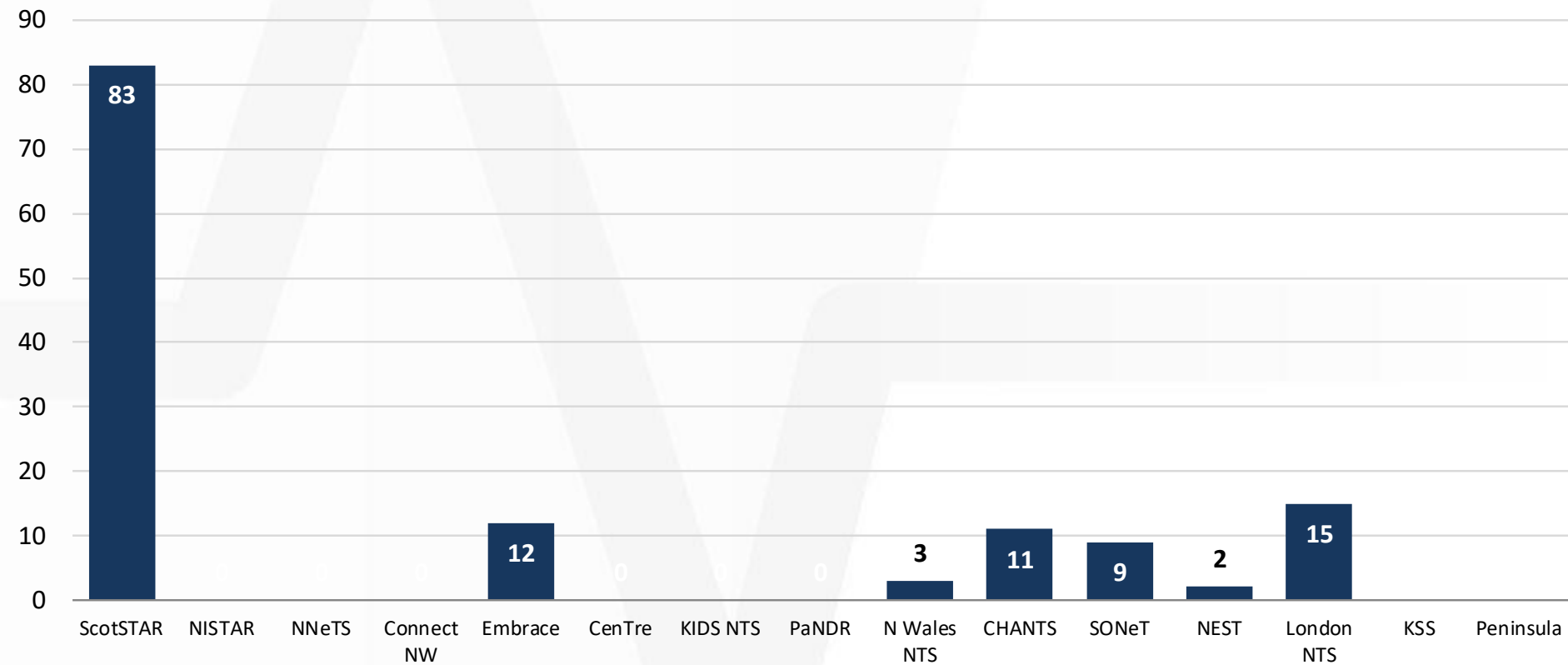
Scottish Ambulance Service  
University National NHS Board



# Air Transfers by team Apr 2022 to Mar 2023



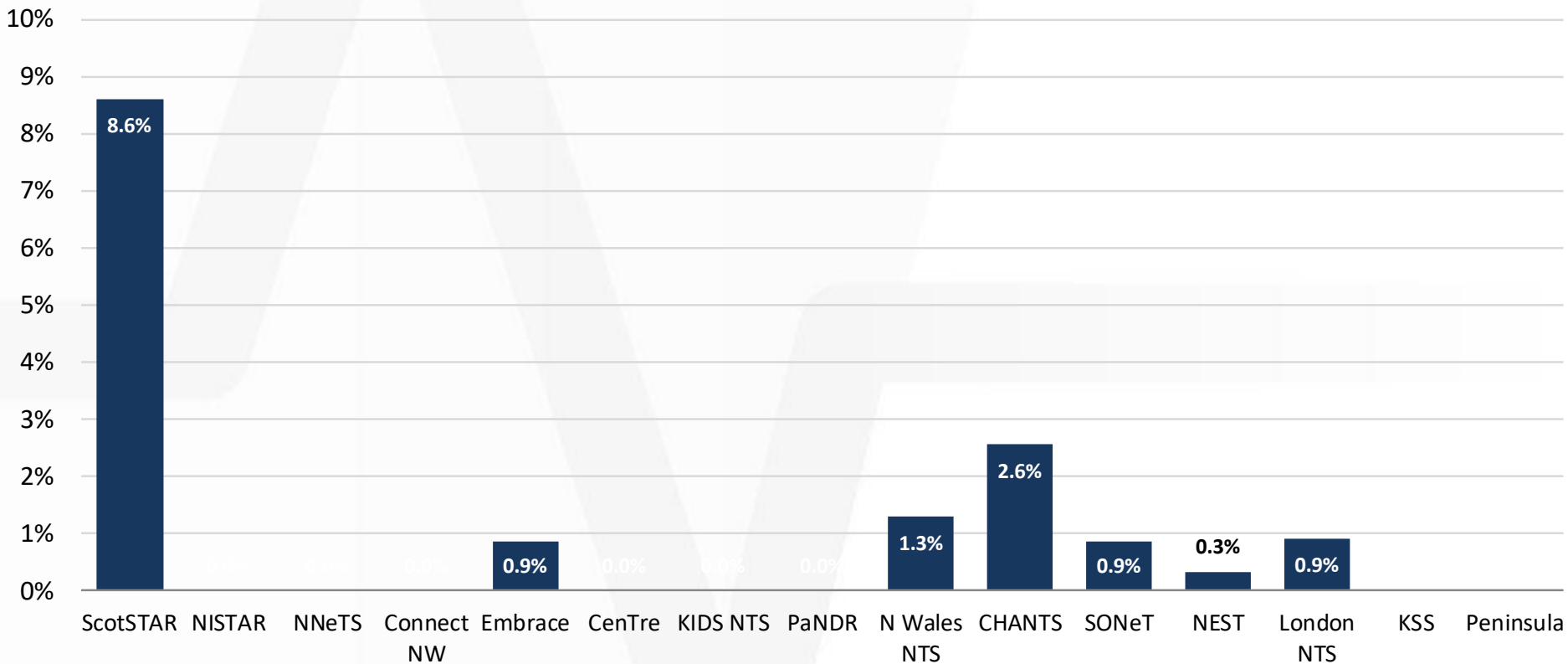
Scottish  
Ambulance  
Service  
University National NHS Board



# Air Transfers as a percentage of total transfers, by team Apr 2022 to Mar 2023



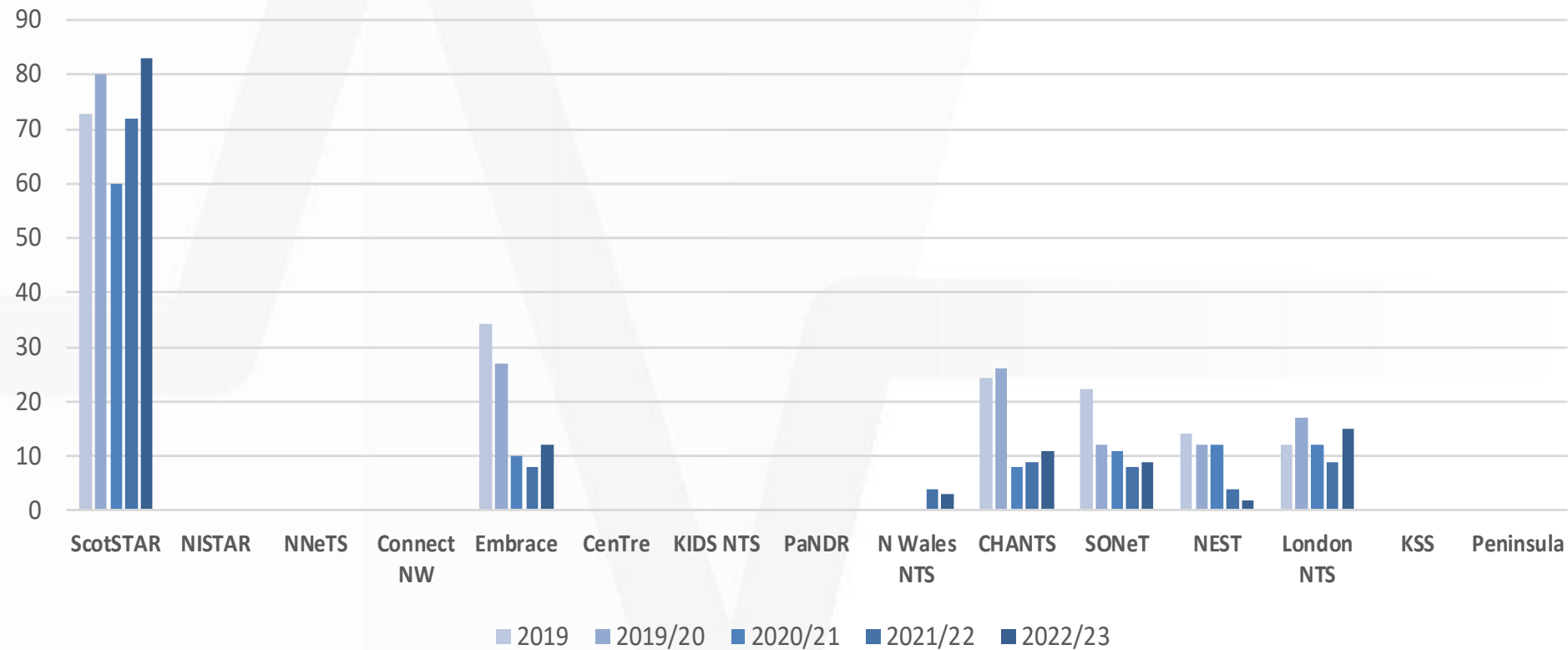
Scottish Ambulance Service  
University National NHS Board



# Trends in numbers on Air by team, 2019 to 2022/23



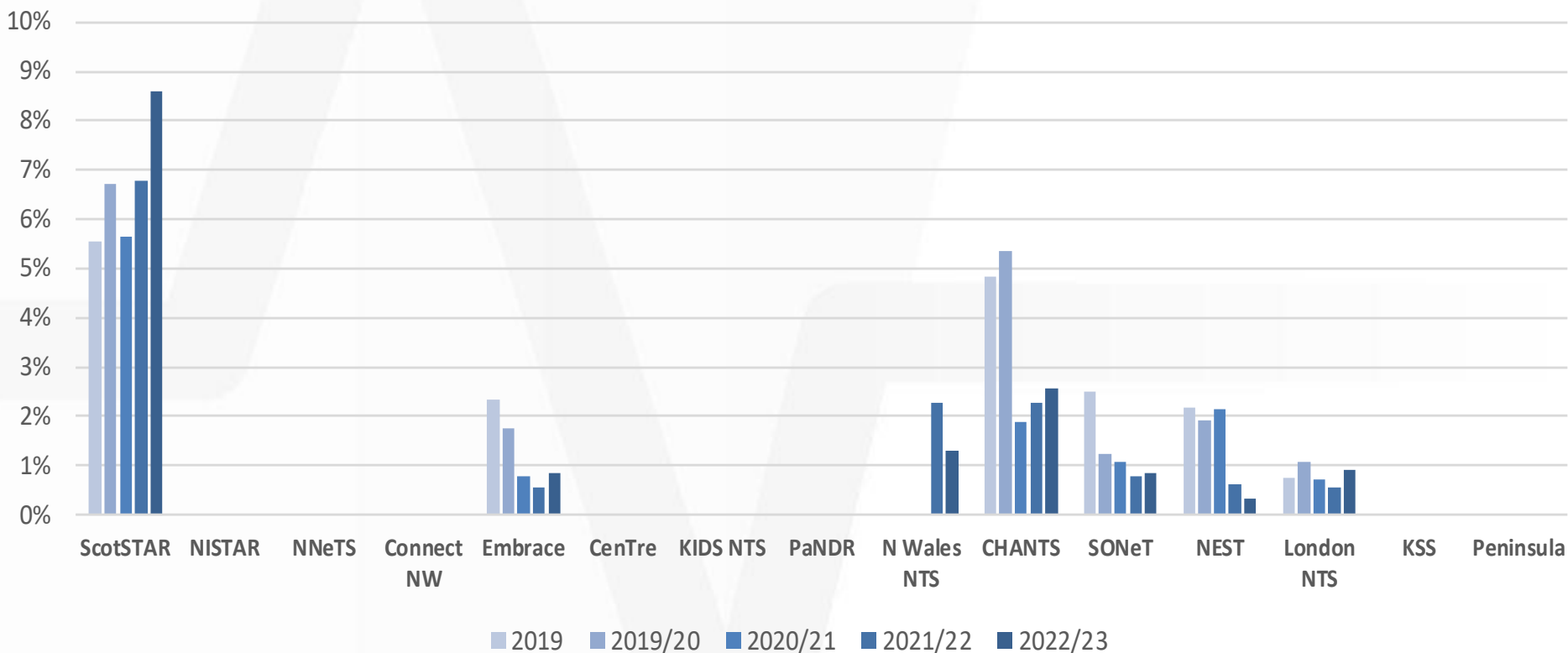
Scottish Ambulance Service  
University National NHS Board



# Trends in Air transfers as a percentage of total transfers by team 2019 to 2022/23



Scottish Ambulance Service  
University National NHS Board



# Newborn Preterm Infant Workload



Scottish  
Ambulance  
Service  
University National NHS Board

**NHS**  
SCOTLAND

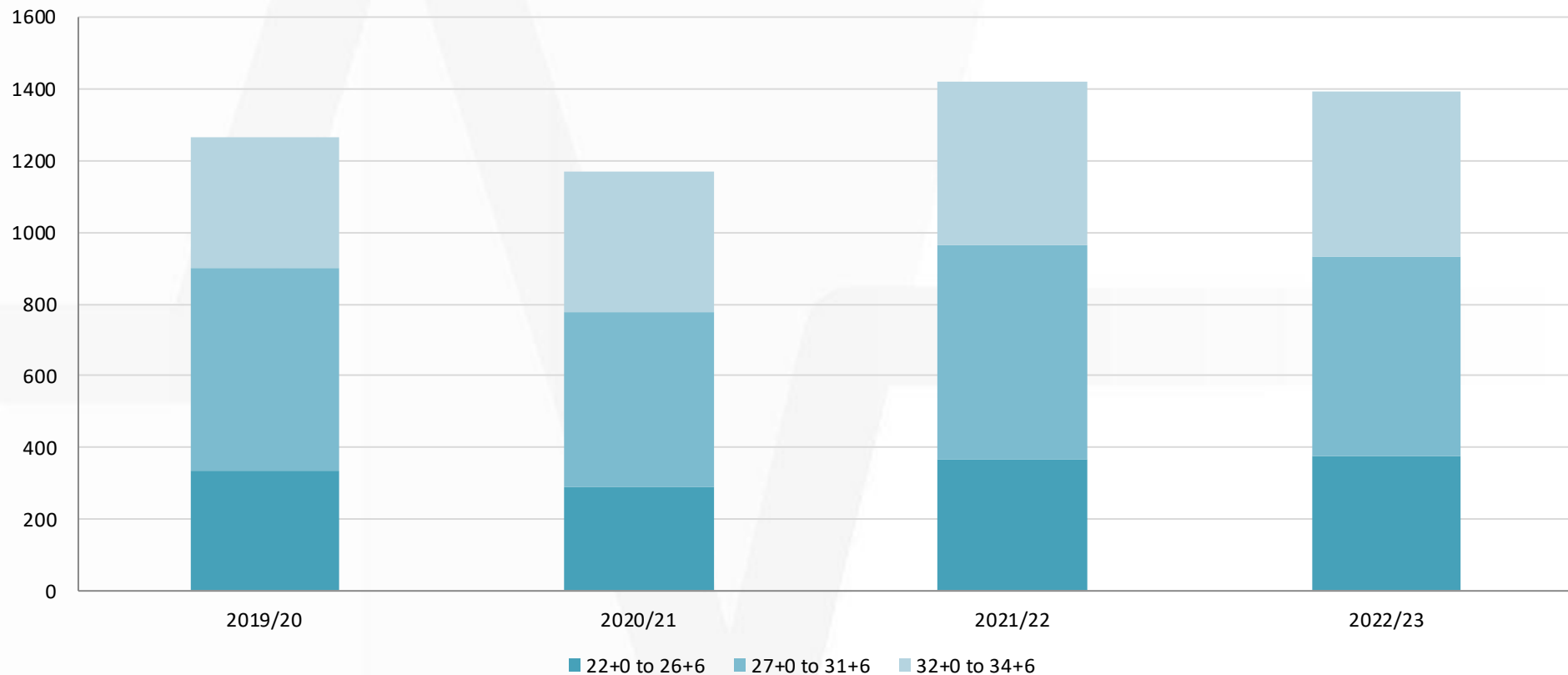
## Data on

- Transfer on first 3 days of life
  - 22<sup>+0</sup> weeks to 26<sup>+6</sup> weeks
  - 27<sup>+0</sup> weeks to 31<sup>+6</sup> weeks
  - 32<sup>+0</sup> weeks to 34<sup>+6</sup> weeks
- Operational reason for transfer
  - Uplift
  - Capacity
  - Repatriation

# Premature infants transferred on the first 3 days of life for **Uplift of care** 2019 /20 to 2022/23



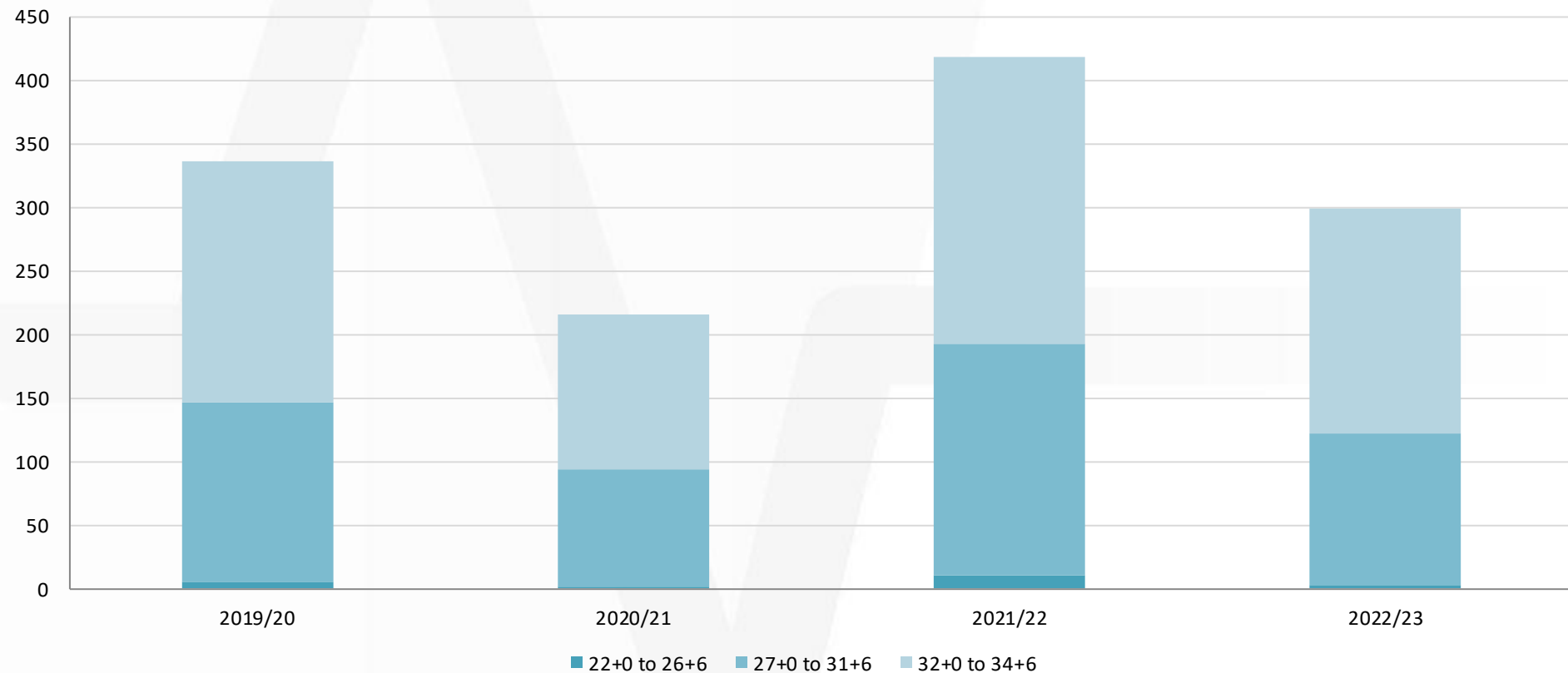
Scottish Ambulance Service  
University National NHS Board



# Premature infants transferred on the first 3 days of life for **Capacity** 2019/20 to 2022/23



Scottish  
Ambulance  
Service  
University National NHS Board

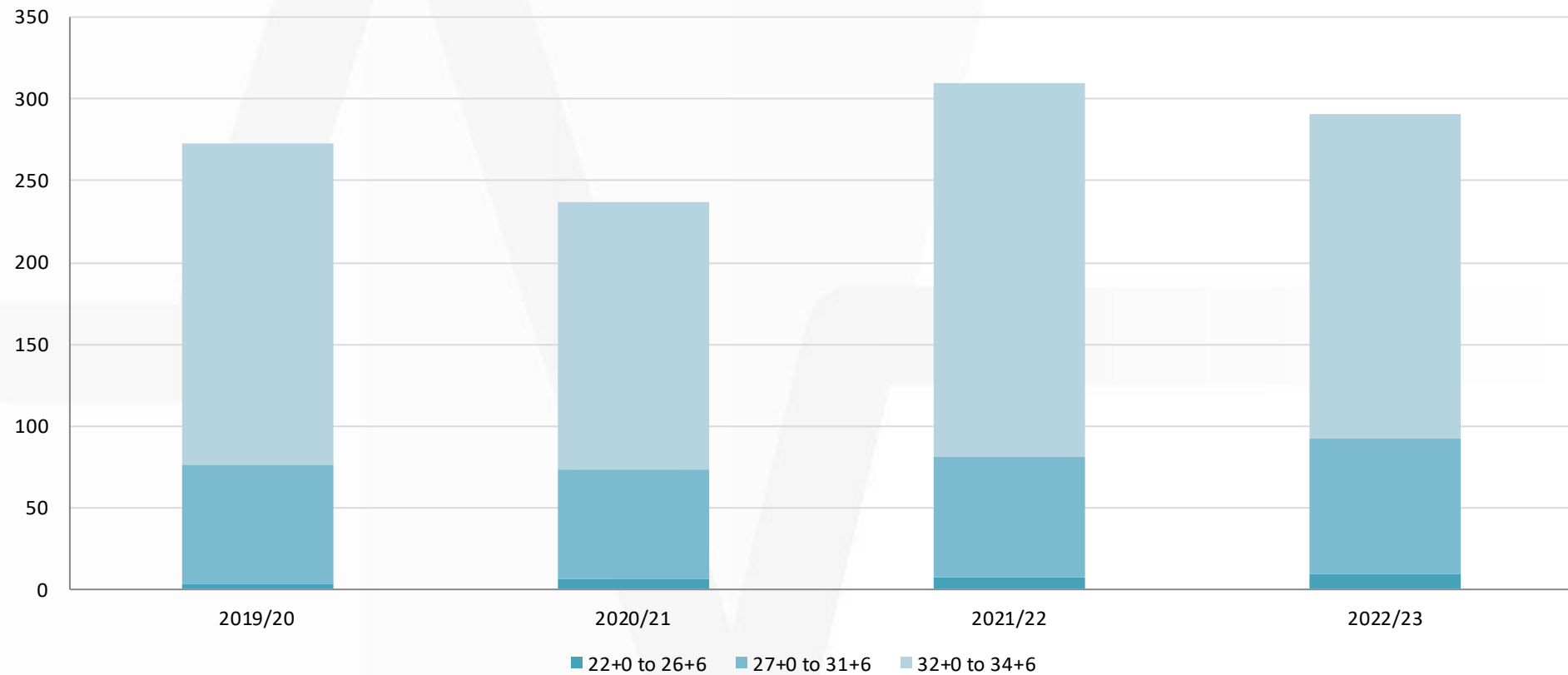




# Premature infants transferred on the first 3 days of life for **Repatriation** 2019/20 to 2022/23



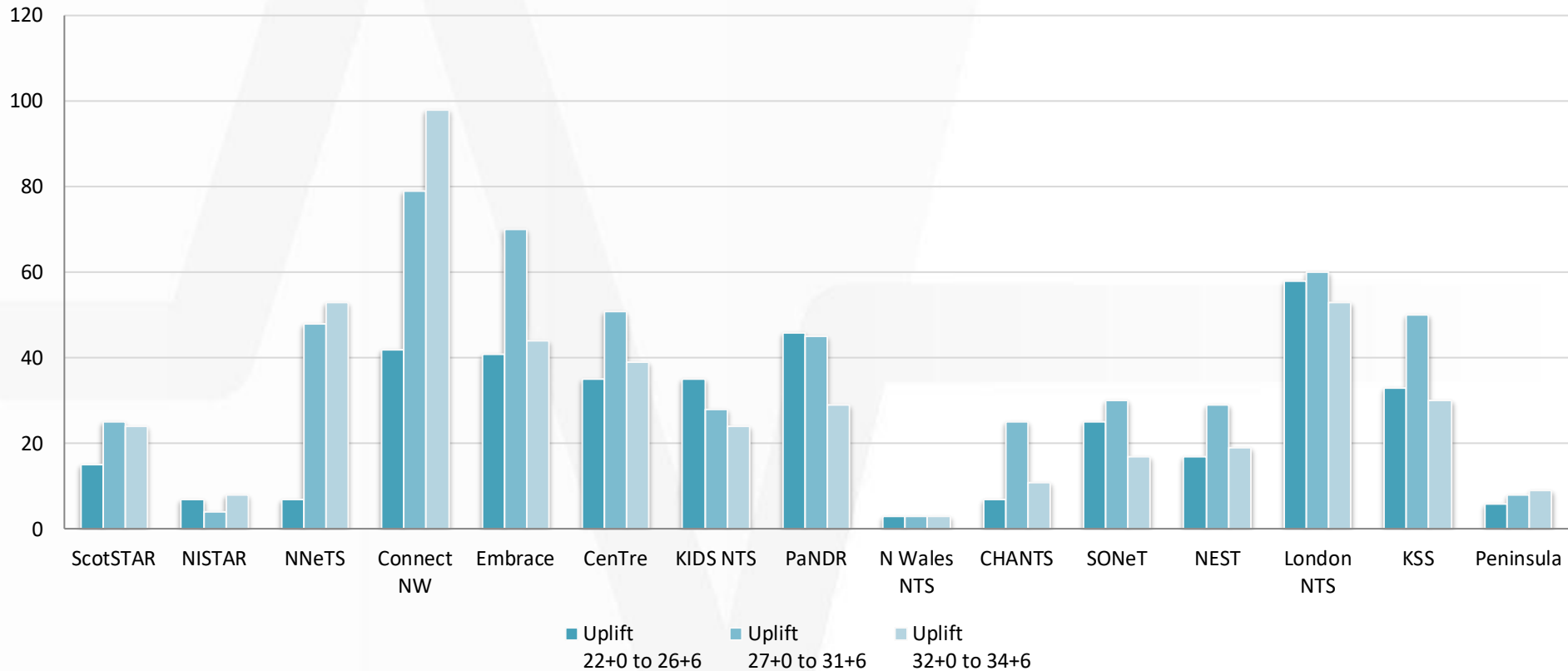
Scottish  
Ambulance  
Service  
University National NHS Board



# 2022/23 Uplift transfers by team, 1<sup>st</sup> 3 days of life, 22-31<sup>+6</sup> week infants



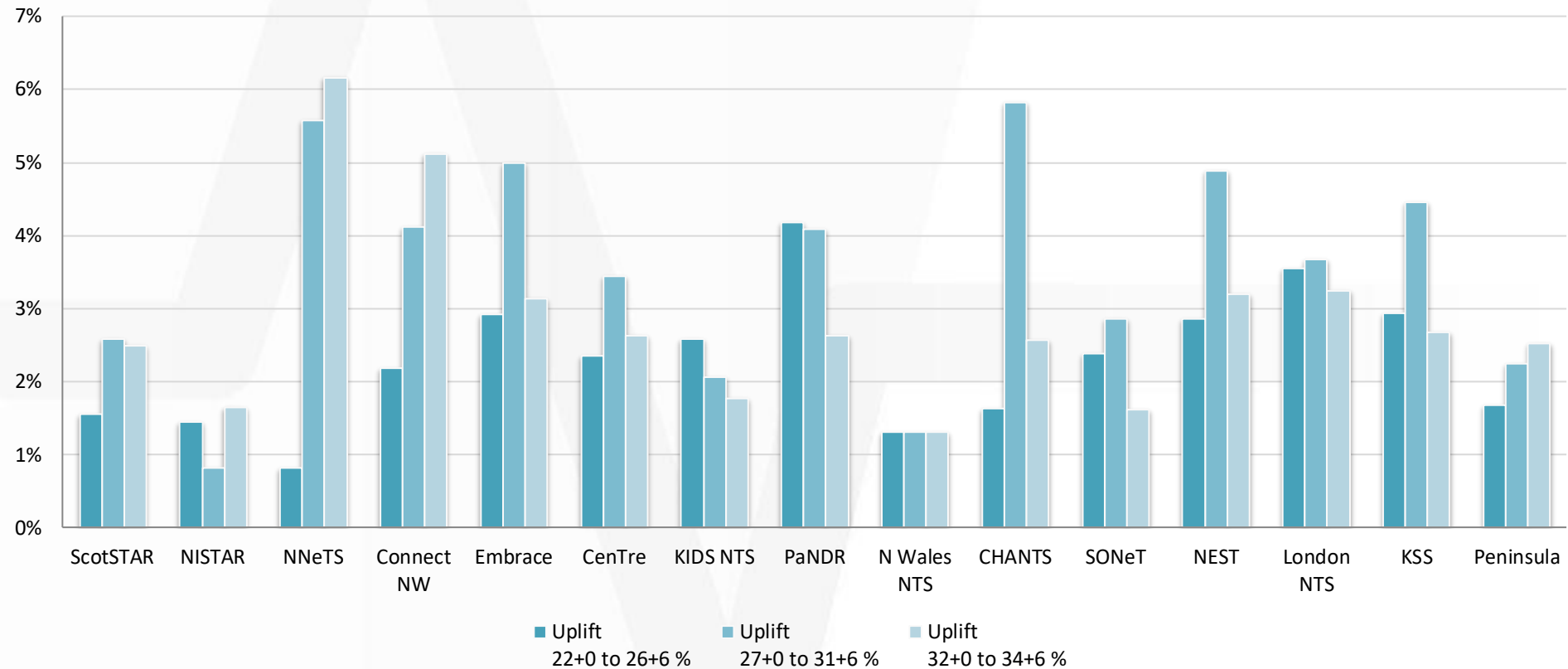
Scottish Ambulance Service  
University National NHS Board



# 2022/23 Uplift transfers by Team as a percentage of total transfers 1<sup>st</sup> 3 days of life, 22-31<sup>+6</sup> weeks



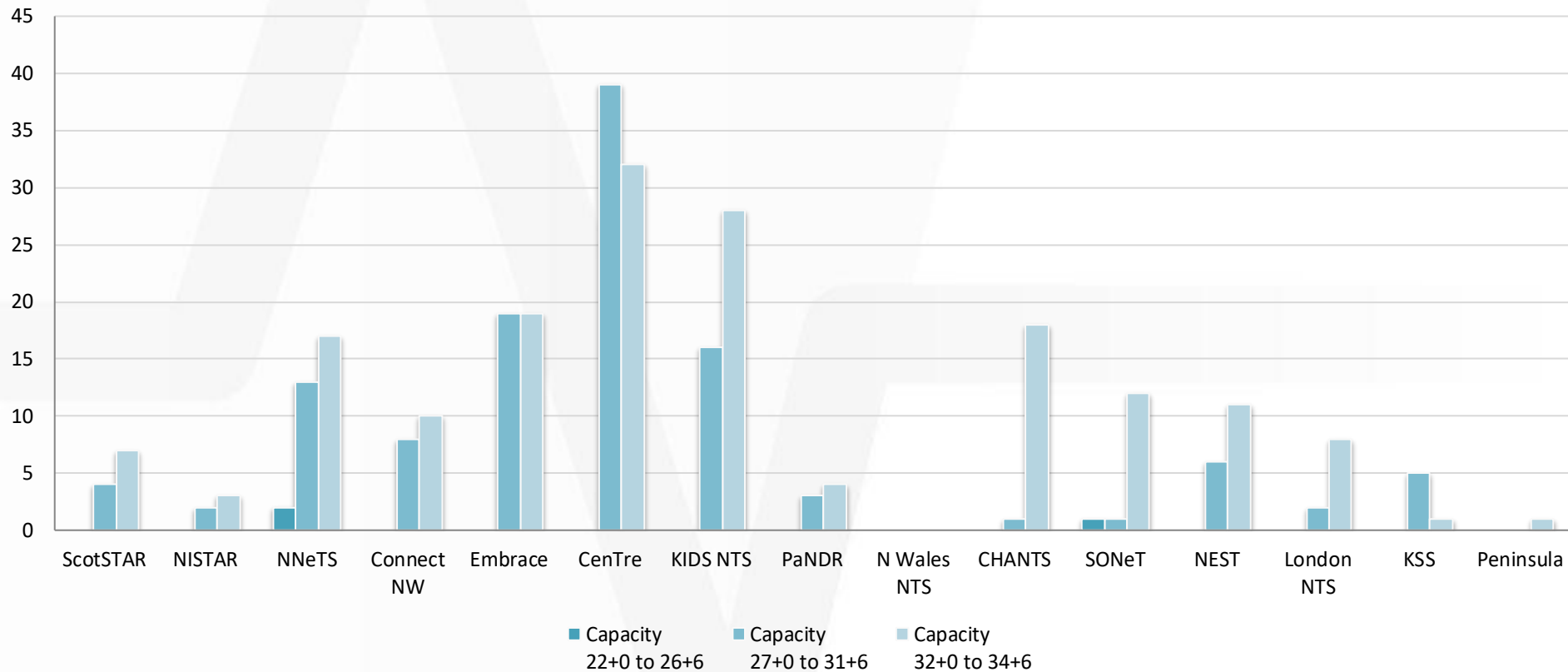
Scottish  
Ambulance  
Service  
University National NHS Board



# 2022/23 Capacity transfers by team, 1<sup>st</sup> 3 days of life, 22-34<sup>+6</sup> week infants



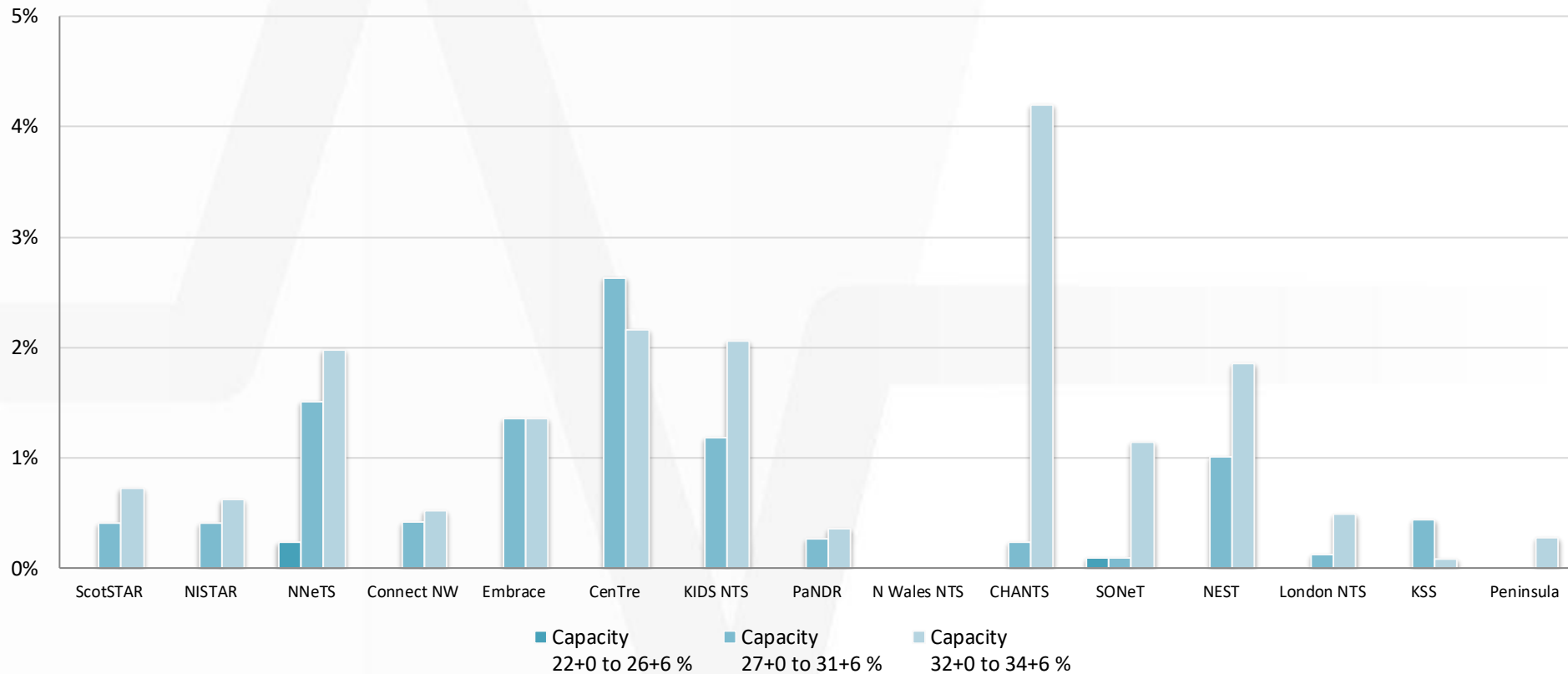
Scottish Ambulance Service  
University National NHS Board



# 2022/23 Capacity transfers by Team as a percentage of total transfers 1<sup>st</sup> 3 days of life, 22-34<sup>+6</sup> weeks



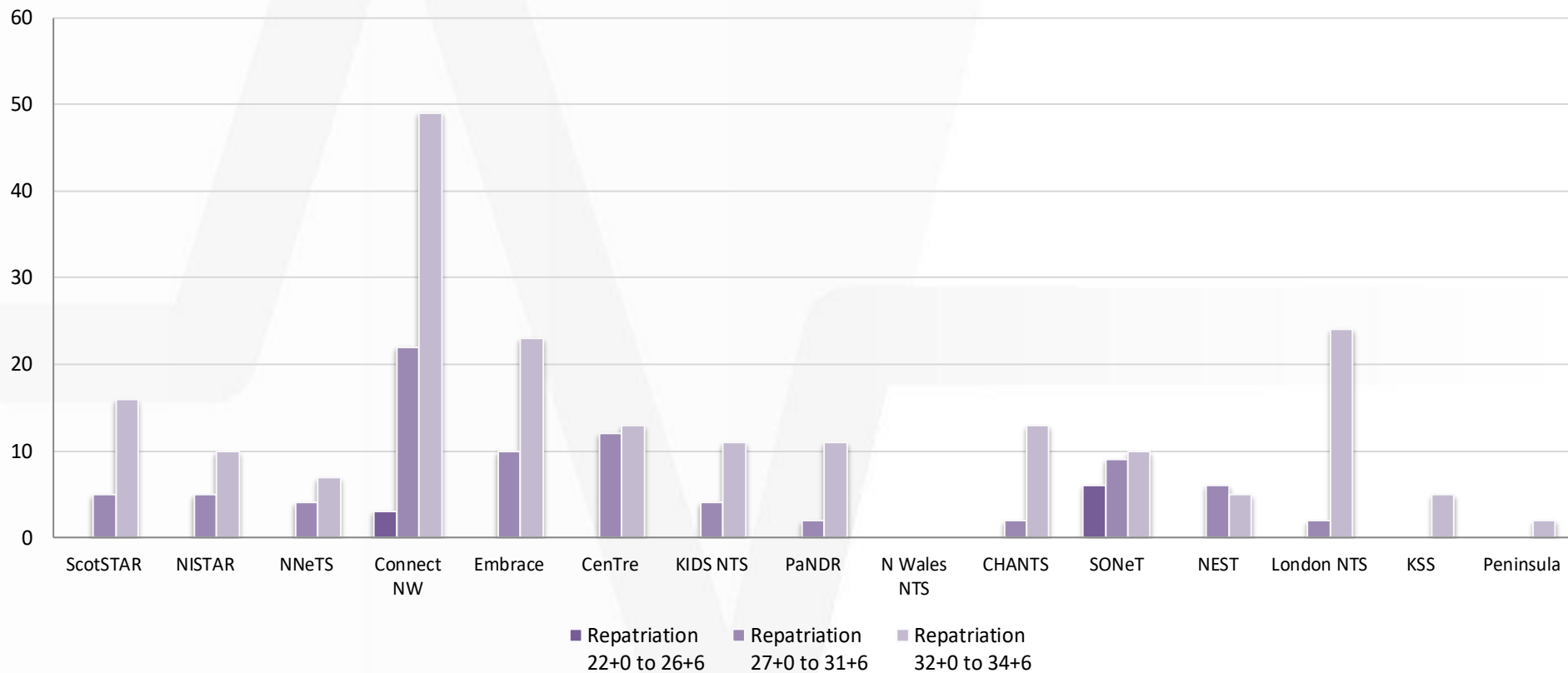
Scottish Ambulance Service  
University National NHS Board



# 2022/23 Repatriation transfers by team, 1<sup>st</sup> 3 days of life, 22-34<sup>+6</sup> week infants



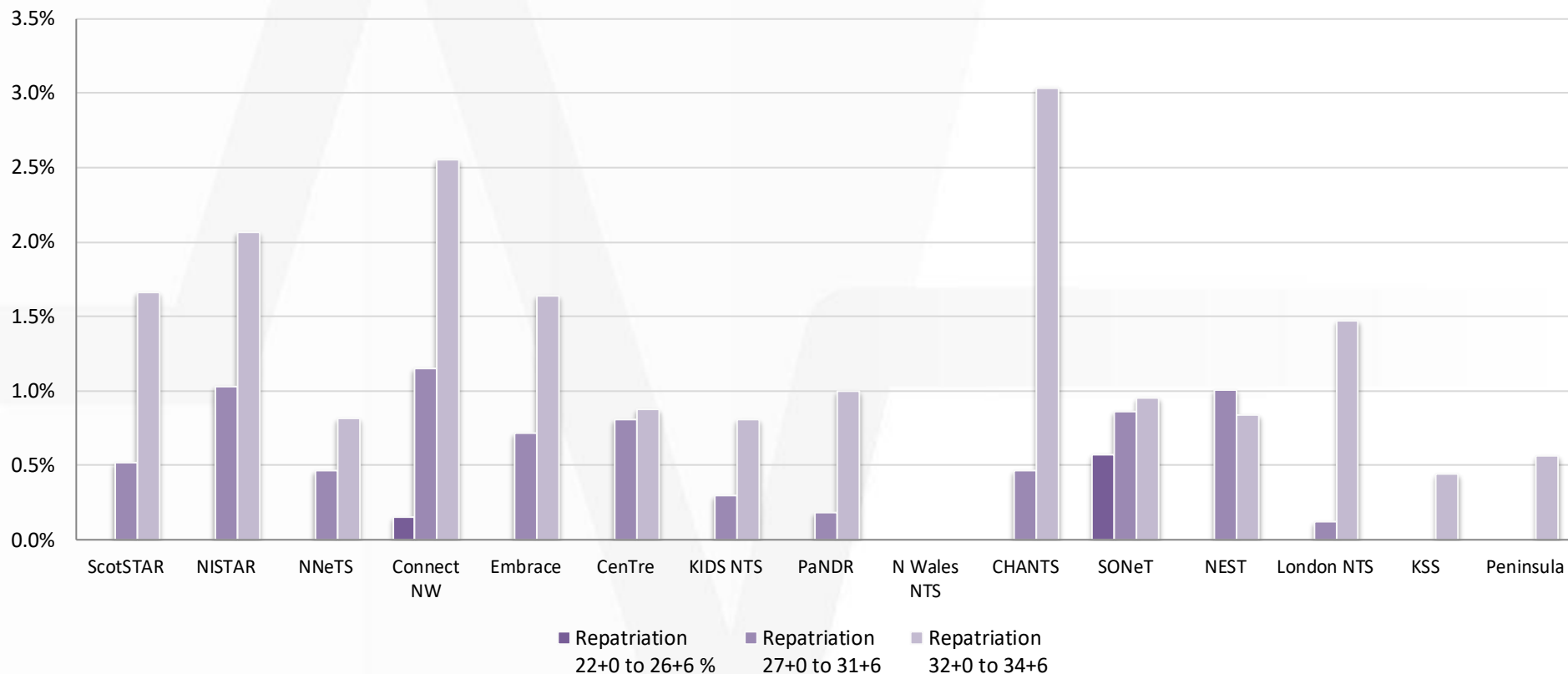
Scottish Ambulance Service  
University National NHS Board



# 2022/23 Repatriation transfers by Team as a percentage of total transfers 1<sup>st</sup> 3 days of life, 22-31<sup>+6</sup> weeks



Scottish  
Ambulance  
Service  
University National NHS Board



# Thermal control



Scottish  
Ambulance  
Service

University National NHS Board

**NHS**  
SCOTLAND



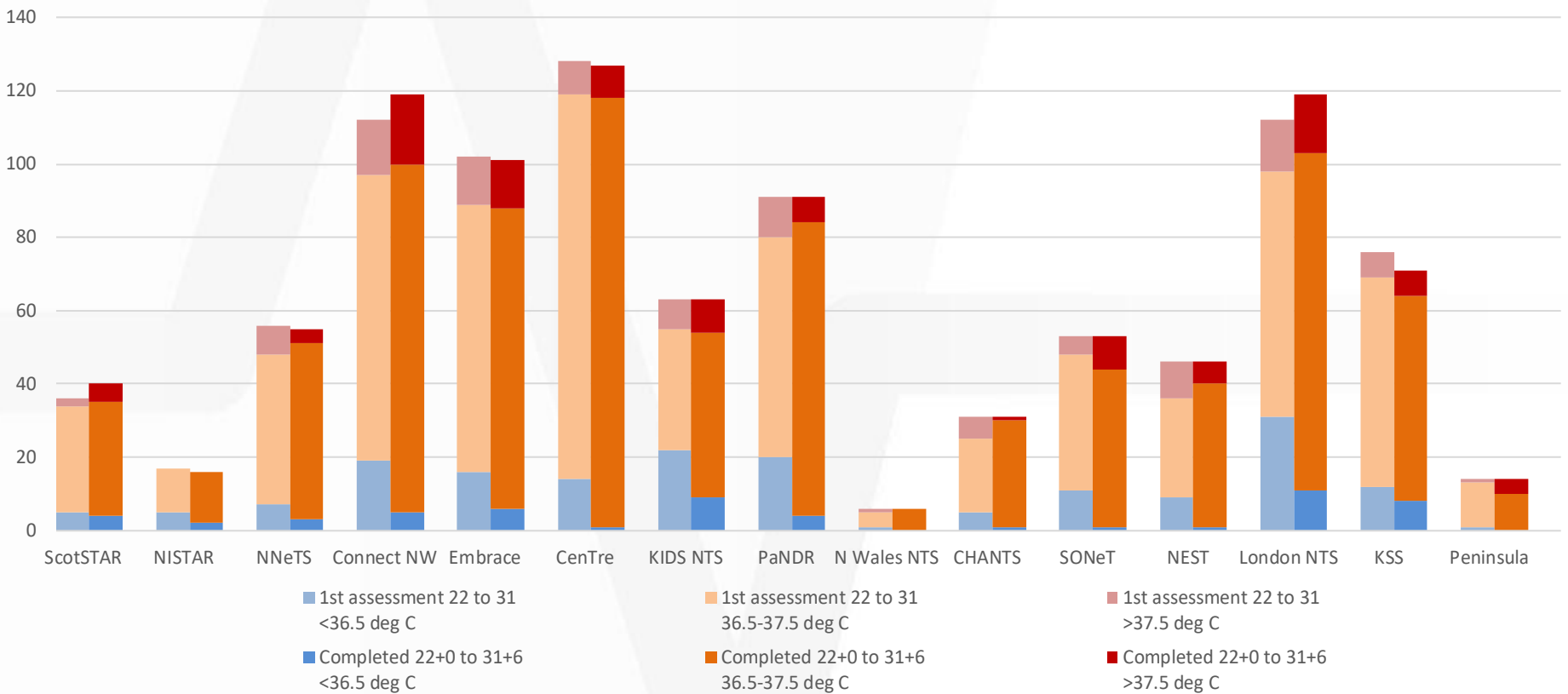
# 1.3 Newborn Infants 22 to 31<sup>+6</sup> weeks



Scottish Ambulance Service  
University National NHS Board



## Temperatures on arrival and completion of transfer Apr 2022 to Mar 2023



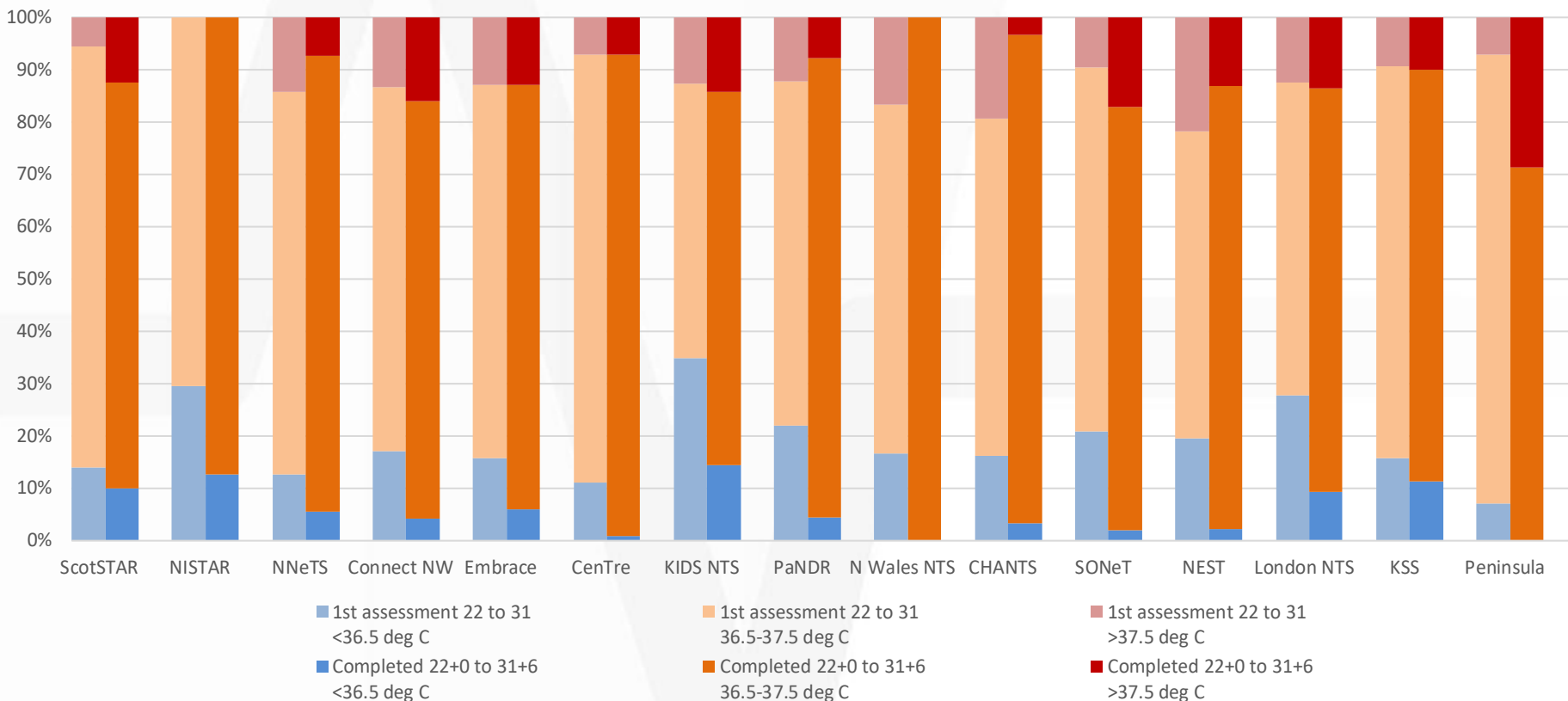
# 1.3 Newborn Infants 22 to 31<sup>+6</sup> weeks



Scottish Ambulance Service  
University National NHS Board



## Temperatures on arrival and completion of transfer as 100% Apr 2022 to Mar 2023

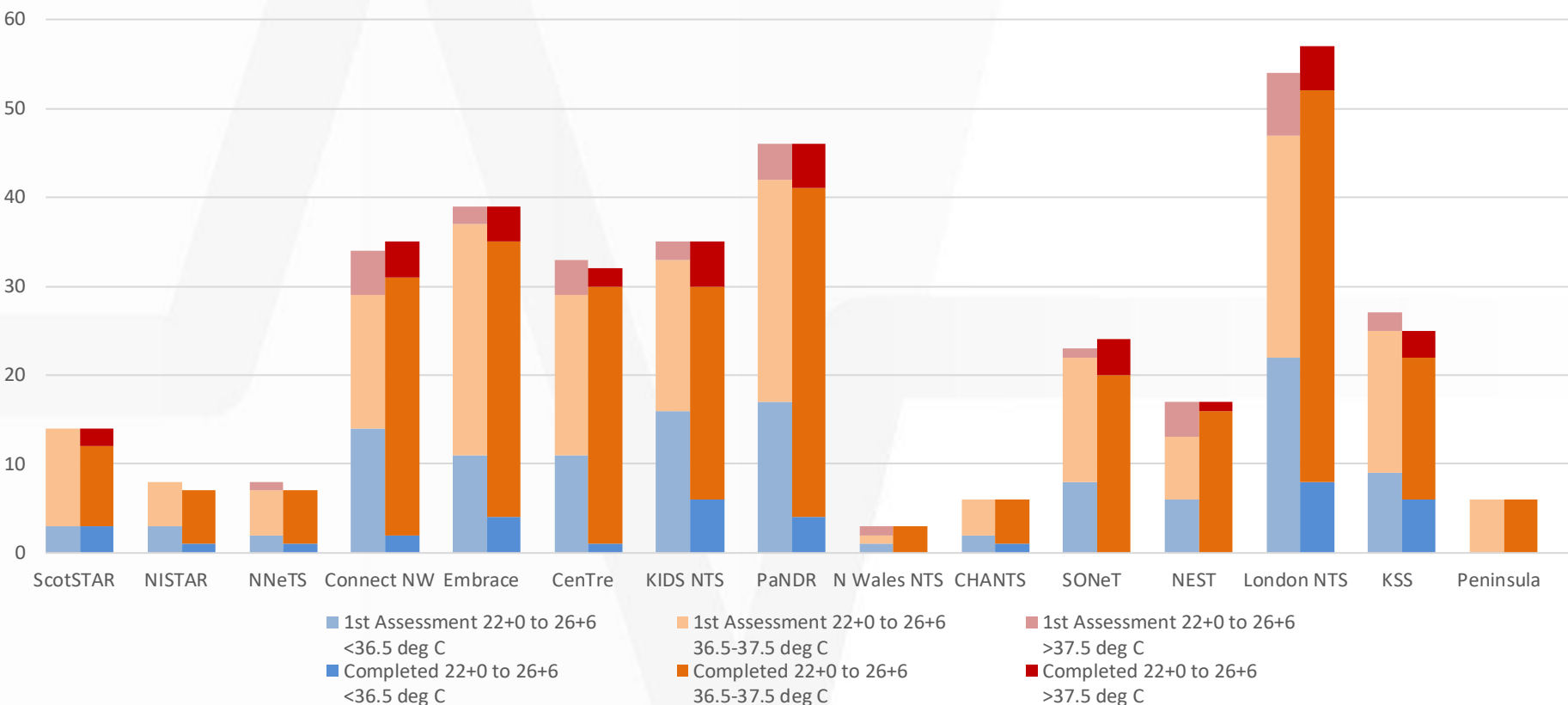


# 1.3 Newborn Infants 22 to 26<sup>+6</sup> weeks

## Temperatures on arrival and completion of transfer Apr 2022 to Mar 2023



Scottish Ambulance Service  
University National NHS Board

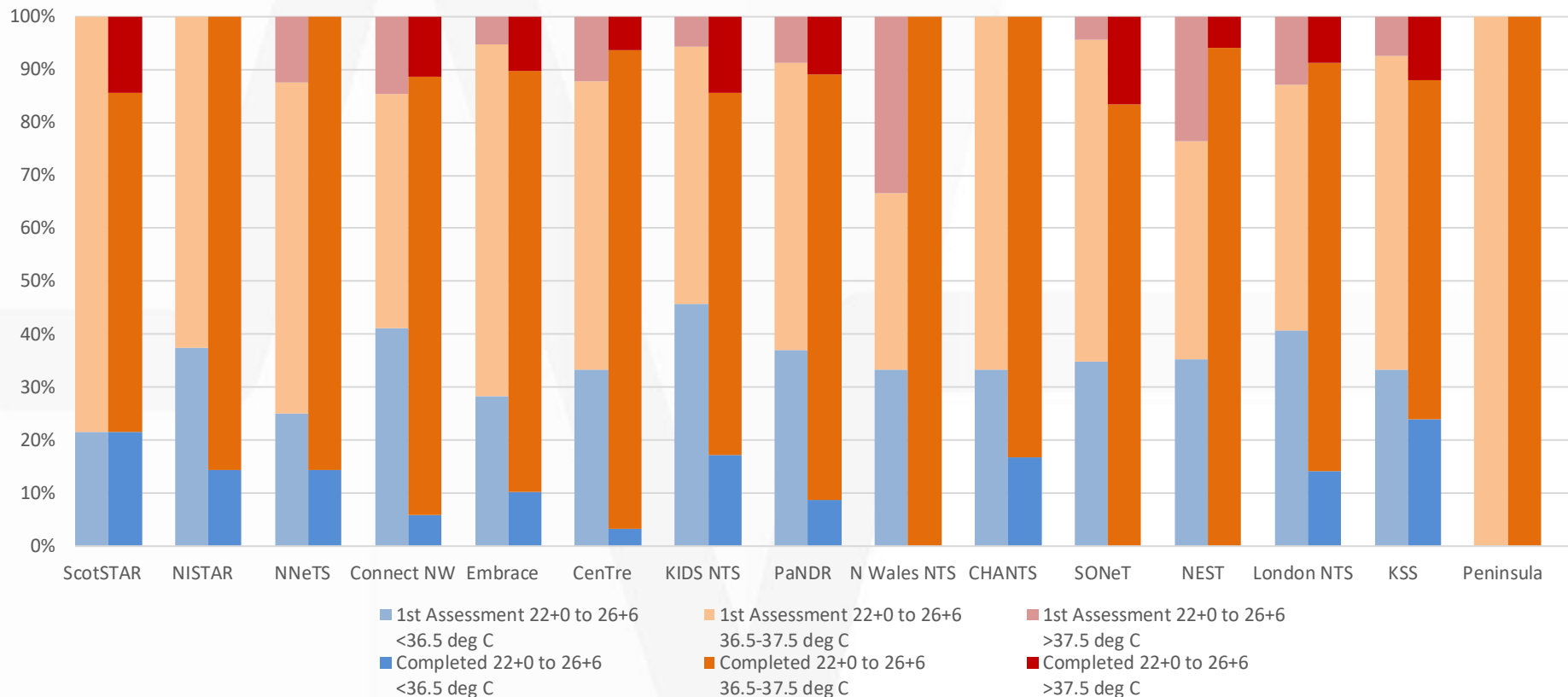


# 1.3 Newborn Infants 22 to 26<sup>+6</sup> weeks

## Temperatures on arrival and completion of transfer as 100% Apr 2022 to Mar 2023



Scottish Ambulance Service  
University National NHS Board

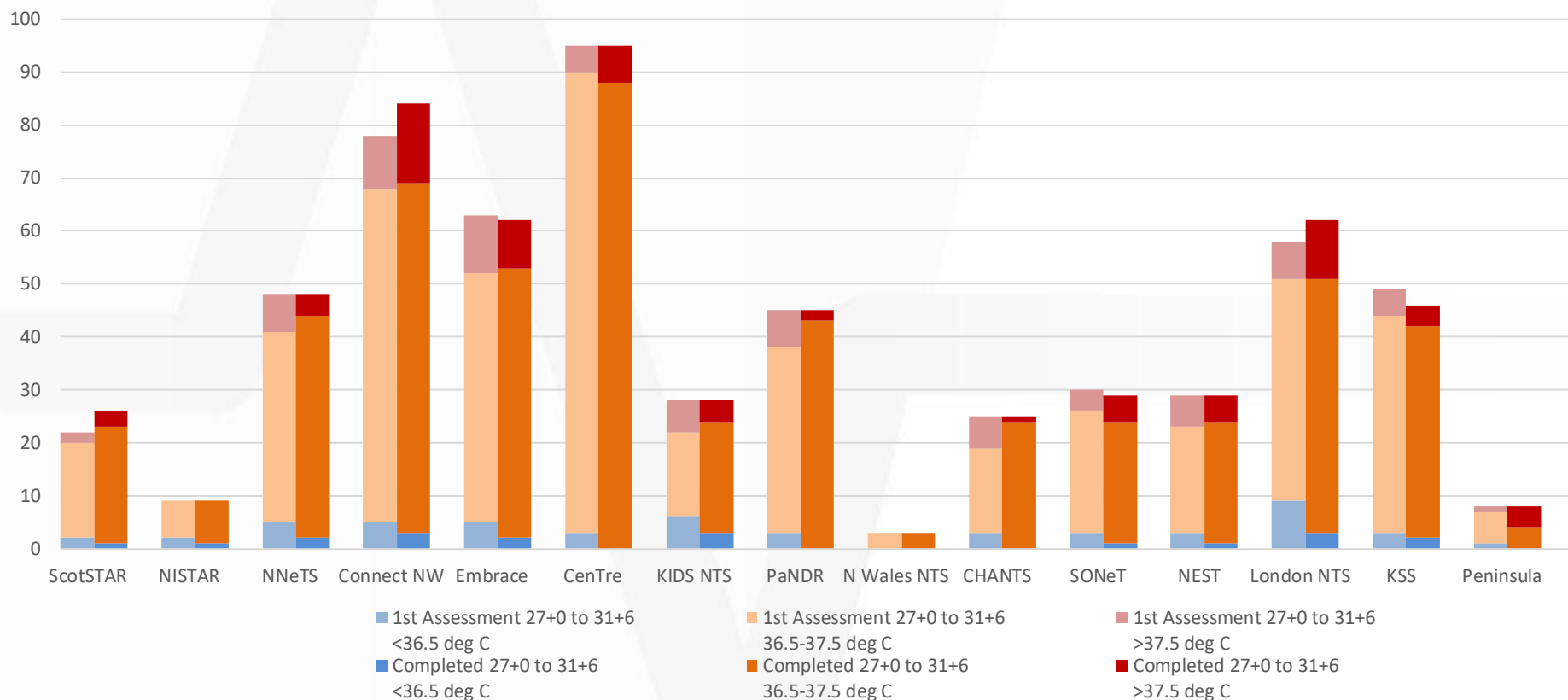


# 1.3 Newborn Infants 27 to 32<sup>+6</sup> weeks

## Temperatures on arrival and completion of transfer Apr 2022 to Mar 2023



Scottish  
Ambulance  
Service  
University National NHS Board



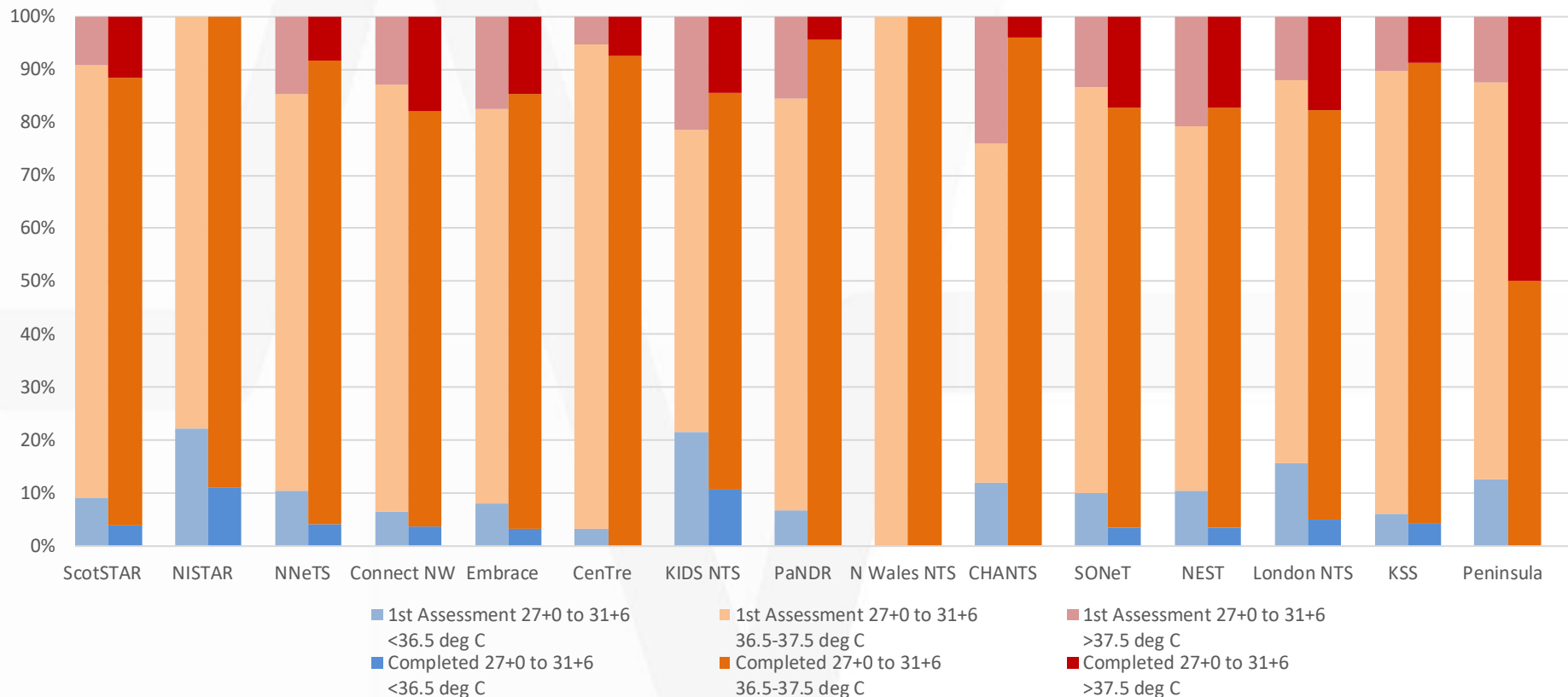
# 1.3 Newborn Infants 27 to 32<sup>+6</sup> weeks



Scottish Ambulance Service  
University National NHS Board



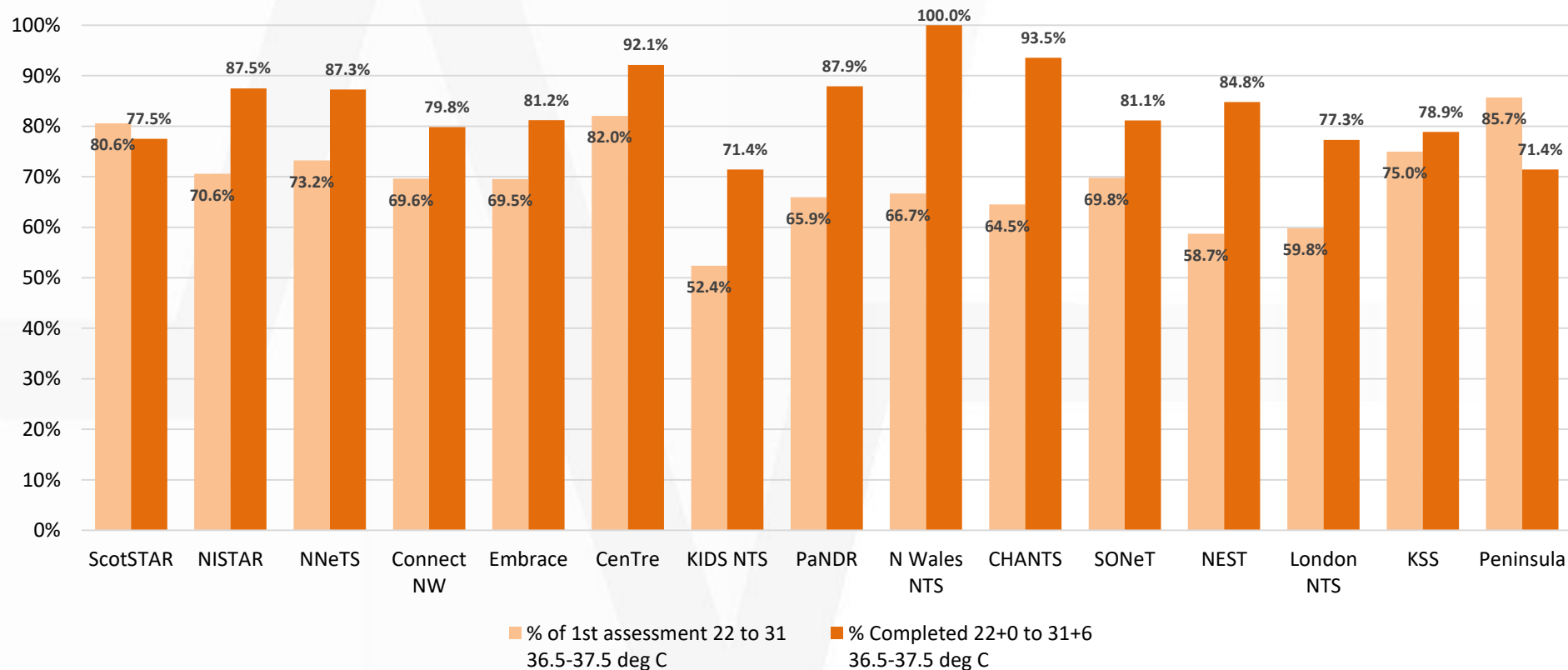
## Temperatures on arrival and completion of transfer as 100% Apr 2022 to Mar 2023



# Normothermia rates 2022-23



Scottish  
Ambulance  
Service  
University National NHS Board



# Parent Travelling



Scottish  
Ambulance  
Service

University National NHS Board



**SCOTSTAR**

Critical care, anywhere

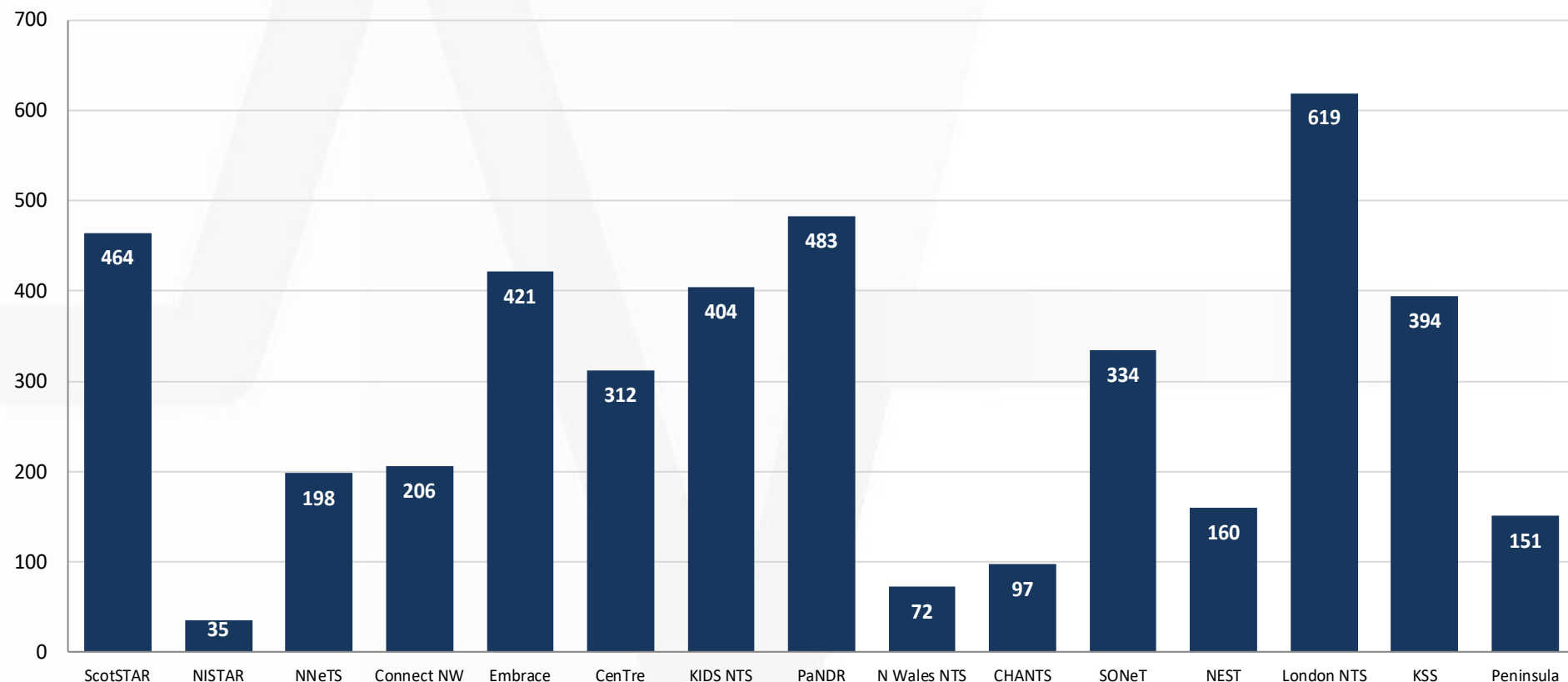




# Number of parents travelling with their baby by team Apr 2022 to Mar 2023



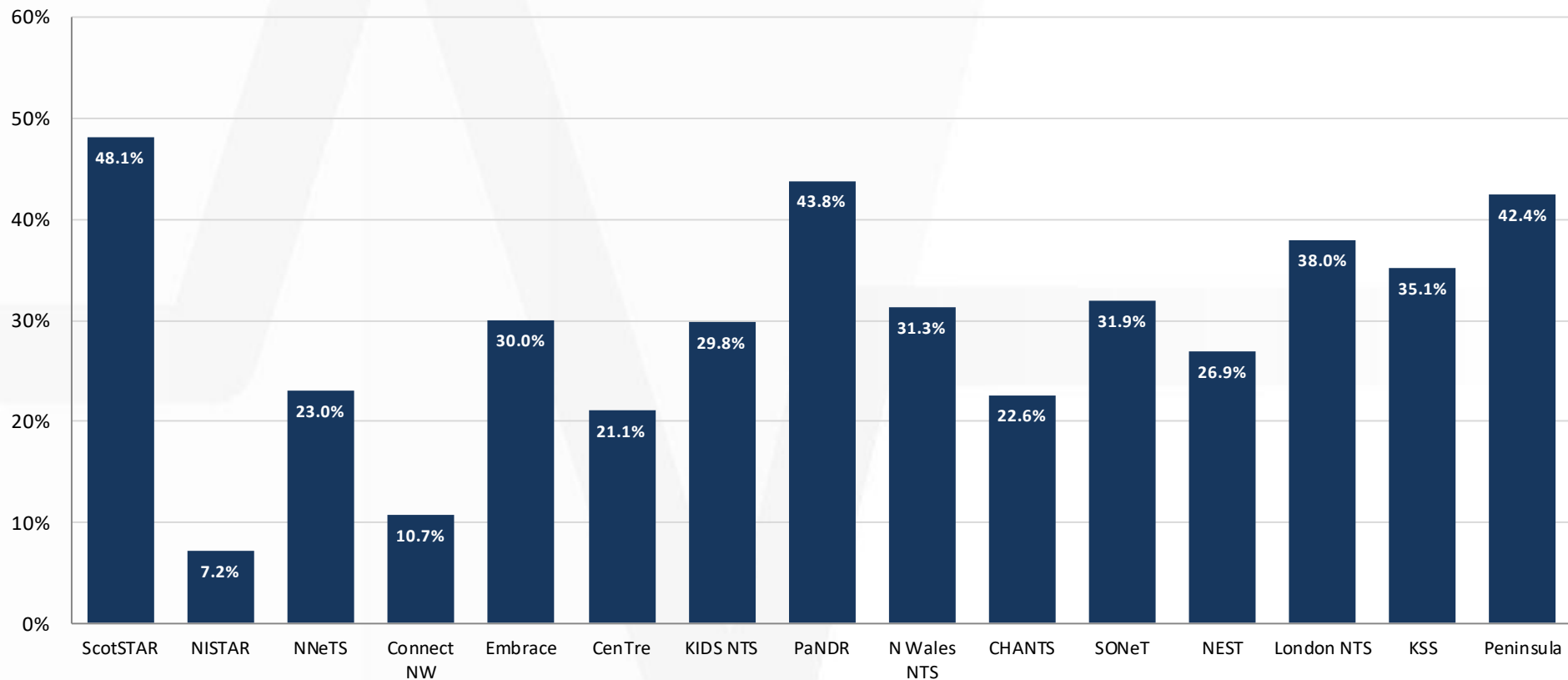
Scottish  
Ambulance  
Service  
University National NHS Board



# Parents travelling with their baby by team, as a percentage of total transfers Apr 2022 to Mar 2023



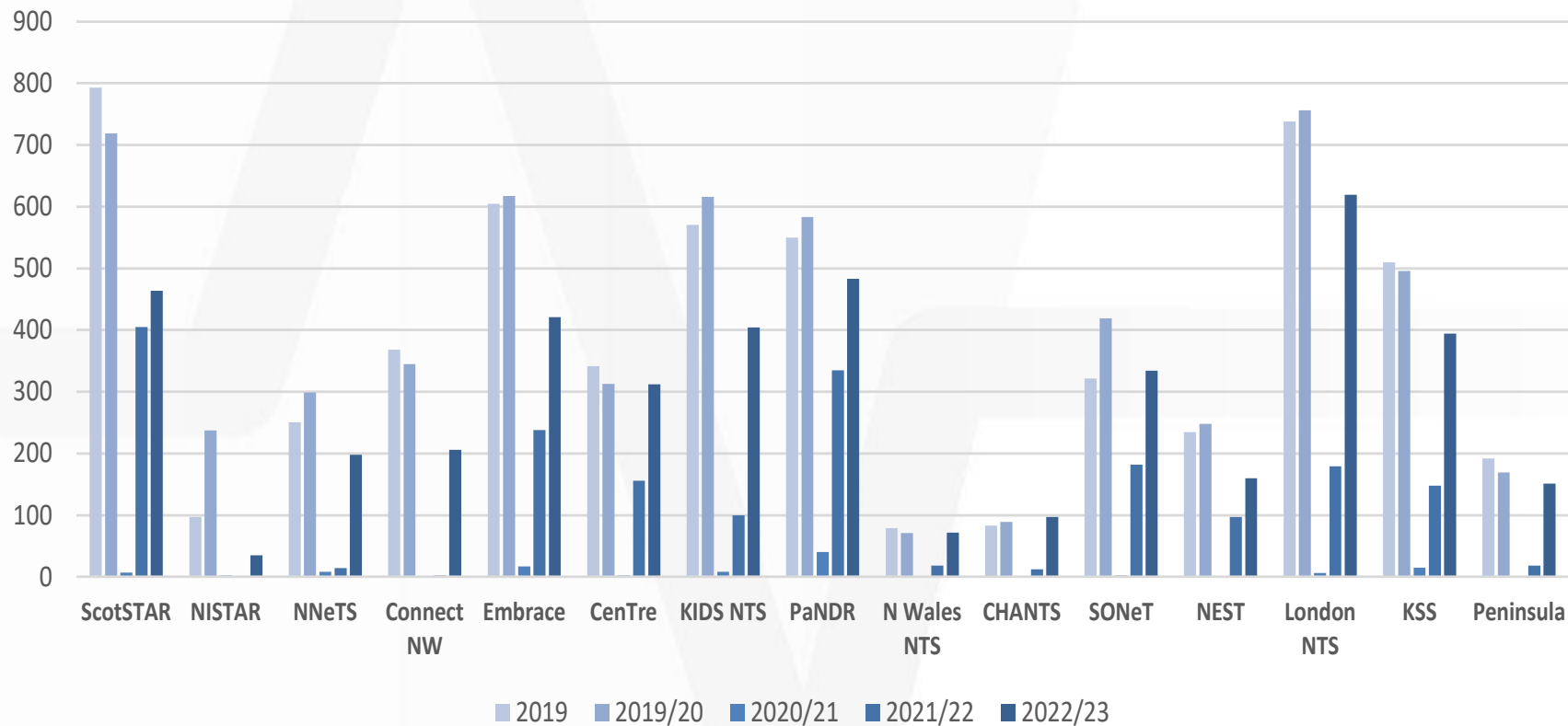
Scottish  
Ambulance  
Service  
University National NHS Board



# Trends in numbers of parents travelling with their baby



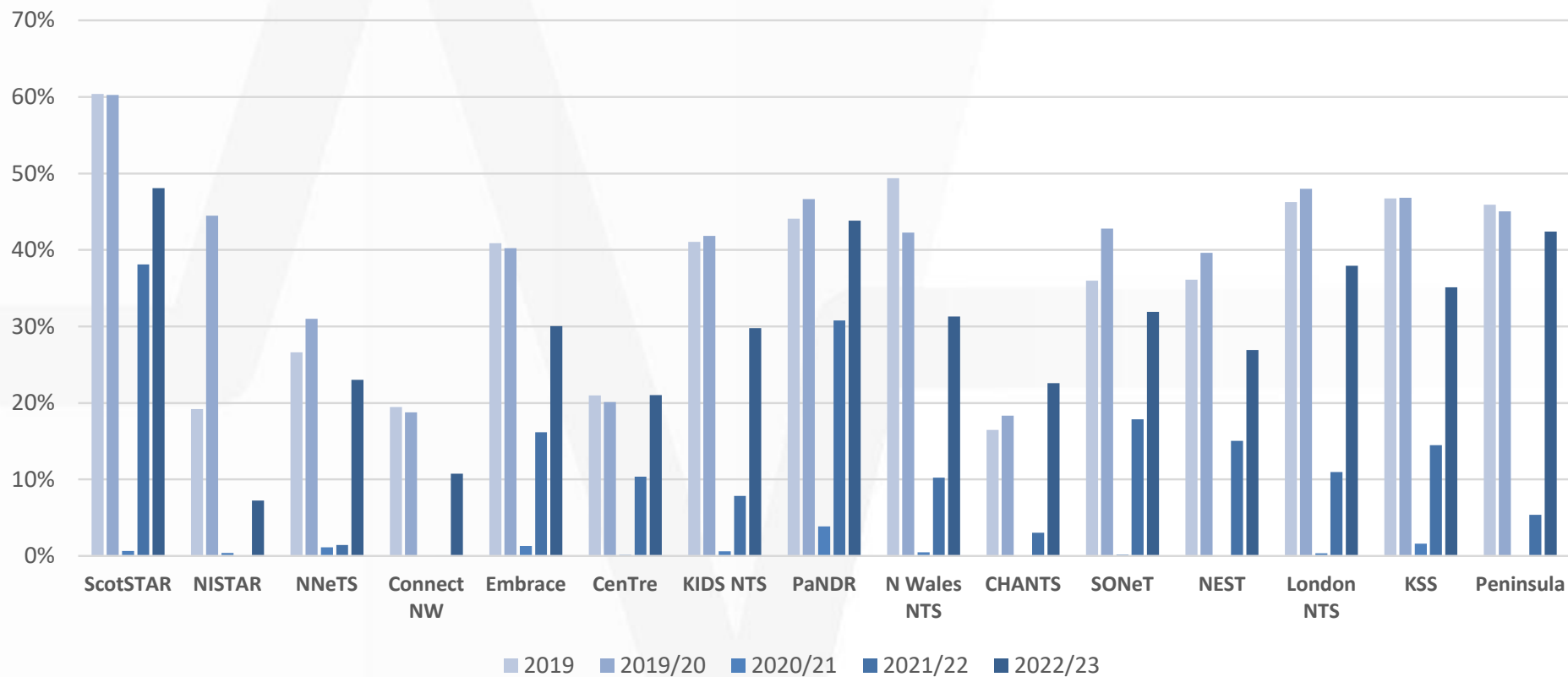
Scottish Ambulance Service  
University National NHS Board



# Trends in percentages of total transfers where parents travelled with their baby



Scottish  
Ambulance  
Service  
University National NHS Board





Scottish  
Ambulance  
Service

University National NHS Board

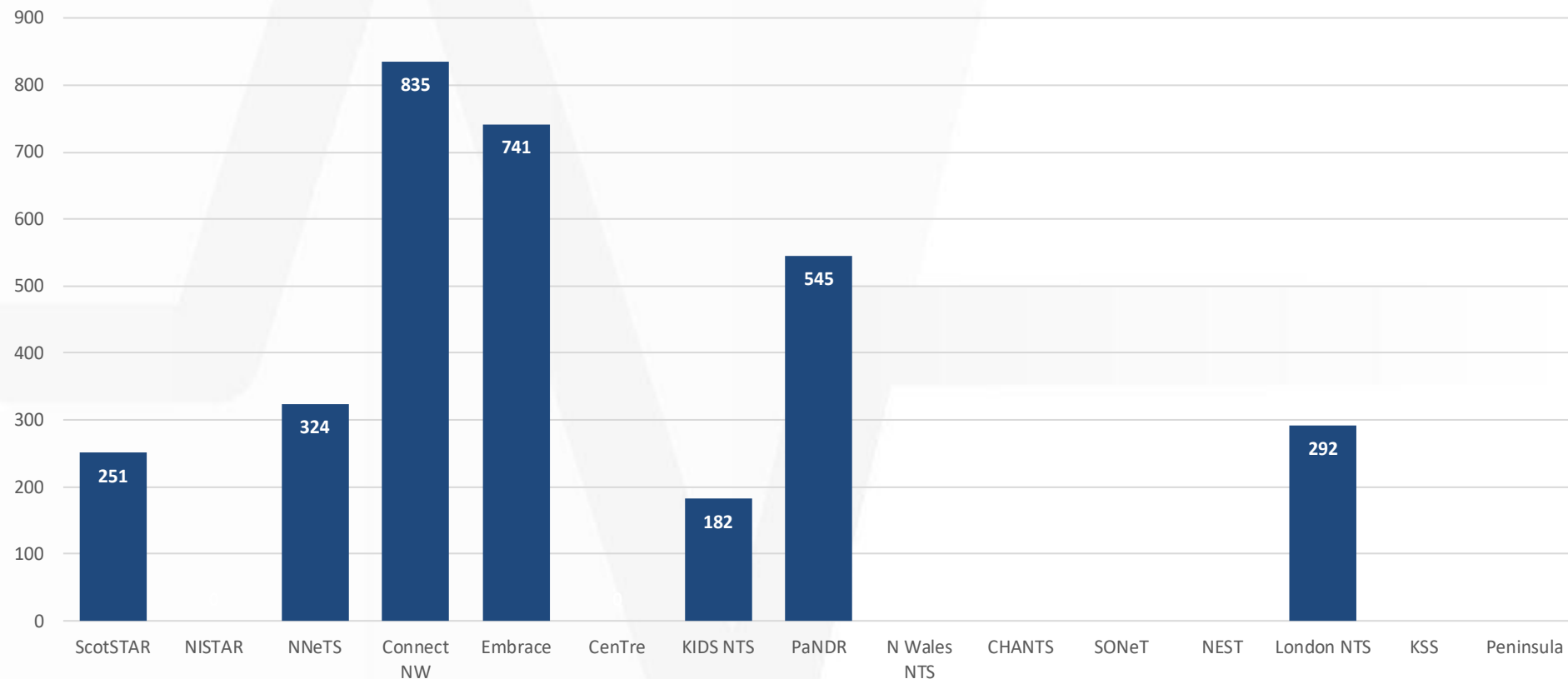


# In Utero Transfer Coordination

# In Utero Transfer Coordination Workload 2022/23



Scottish  
Ambulance  
Service  
University National NHS Board



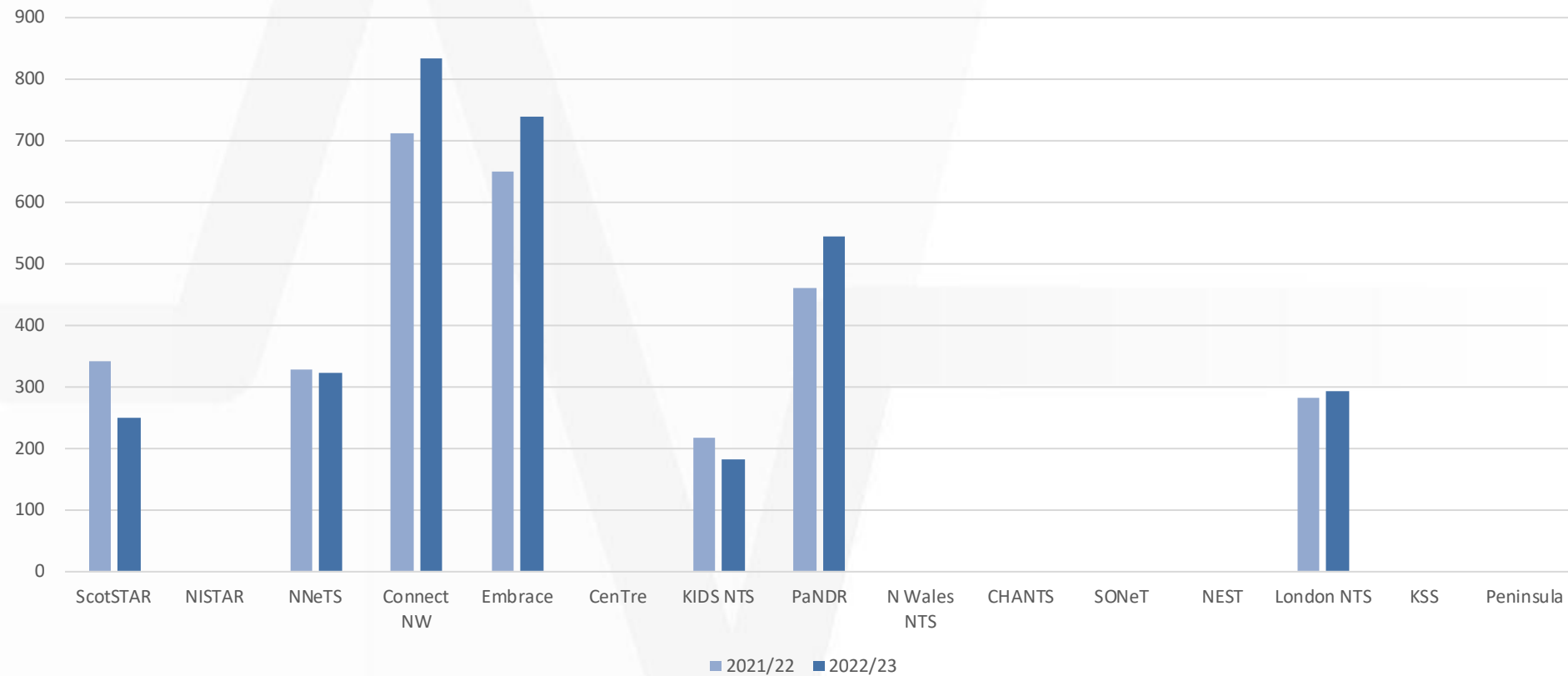
Number of IUTs coordinated by teams offering this service



# In Utero Transfer Coordination numbers year to year comparison



Scottish Ambulance Service  
University National NHS Board



Number of IUTs coordinated by teams offering this service



# Workload:



Scottish  
Ambulance  
Service  
University National NHS Board

**NHS**  
SCOTLAND

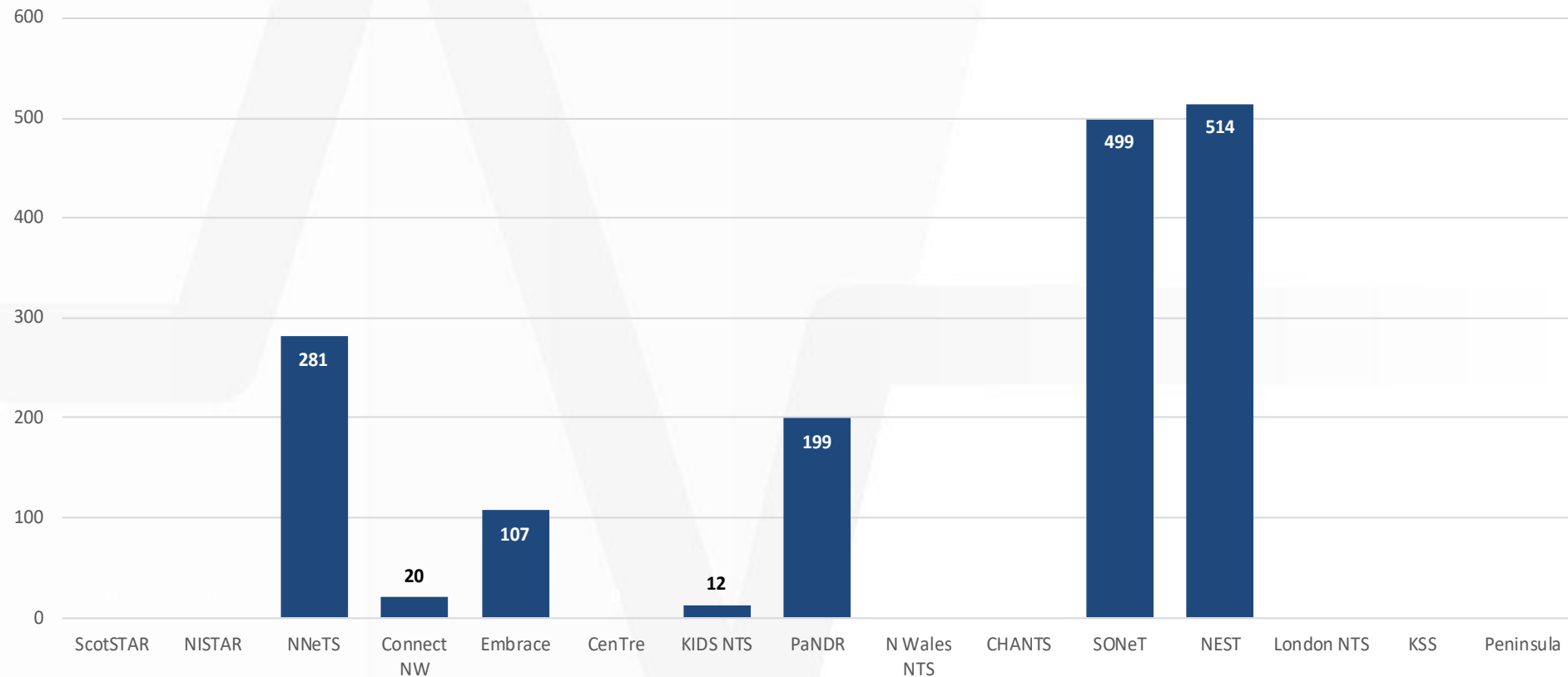
- Advice calls
- Bilious vomiting
- Prolonged transfers



# Advice Calls Workload 2022/23



Scottish  
Ambulance  
Service  
University National NHS Board



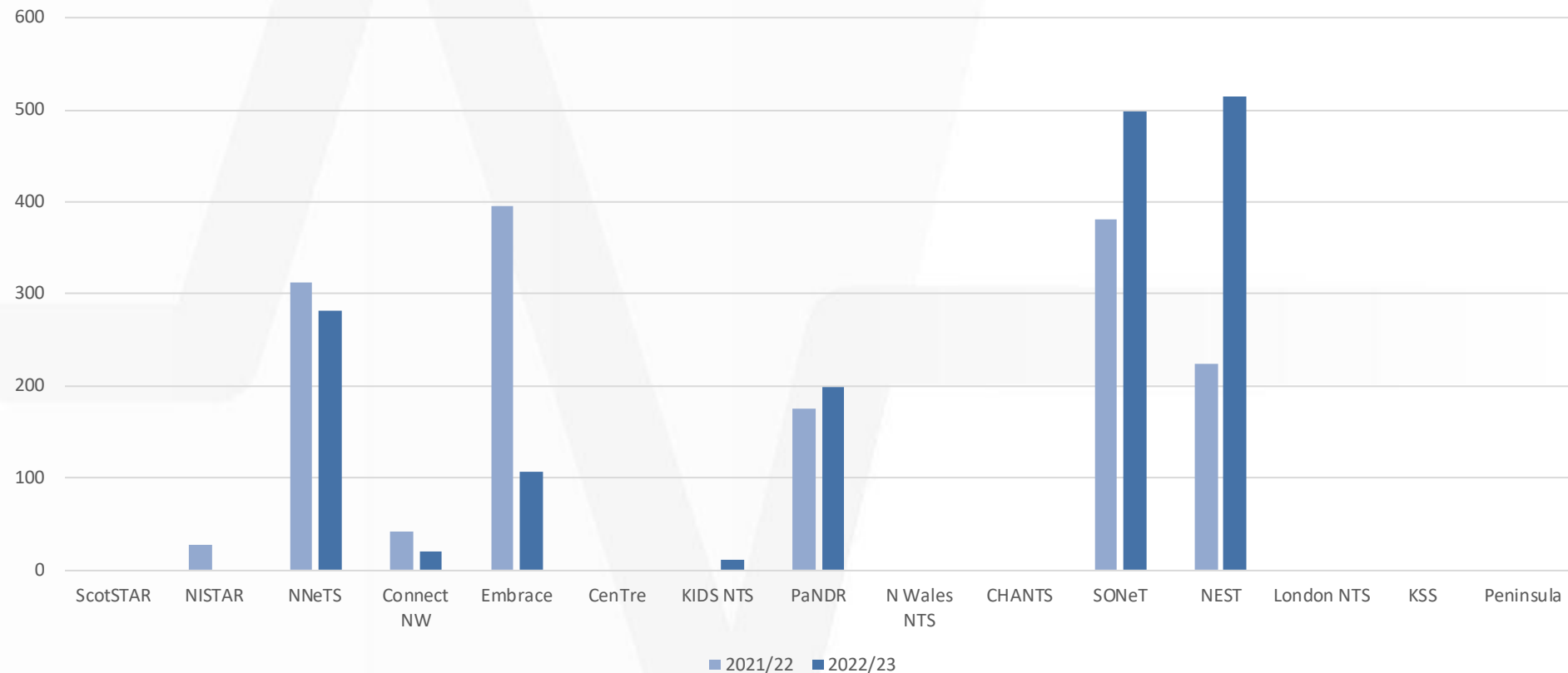
Number of advice calls taken  
by teams offering this service



# Advice Calls Workload year on year comparison



Scottish  
Ambulance  
Service  
University National NHS Board



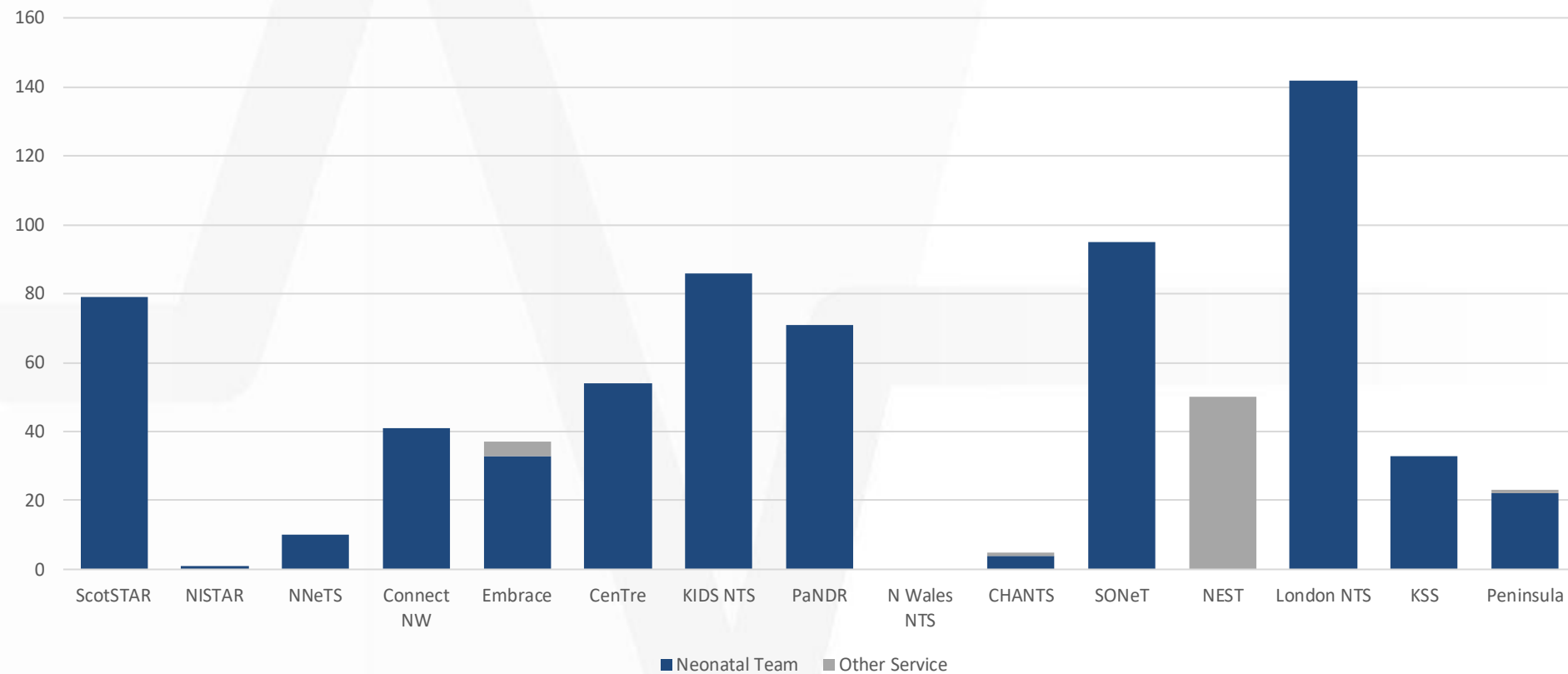
Number of advice calls taken  
by teams offering this service



# Number of babies transferred for Bilious Vomiting by service 2022/23



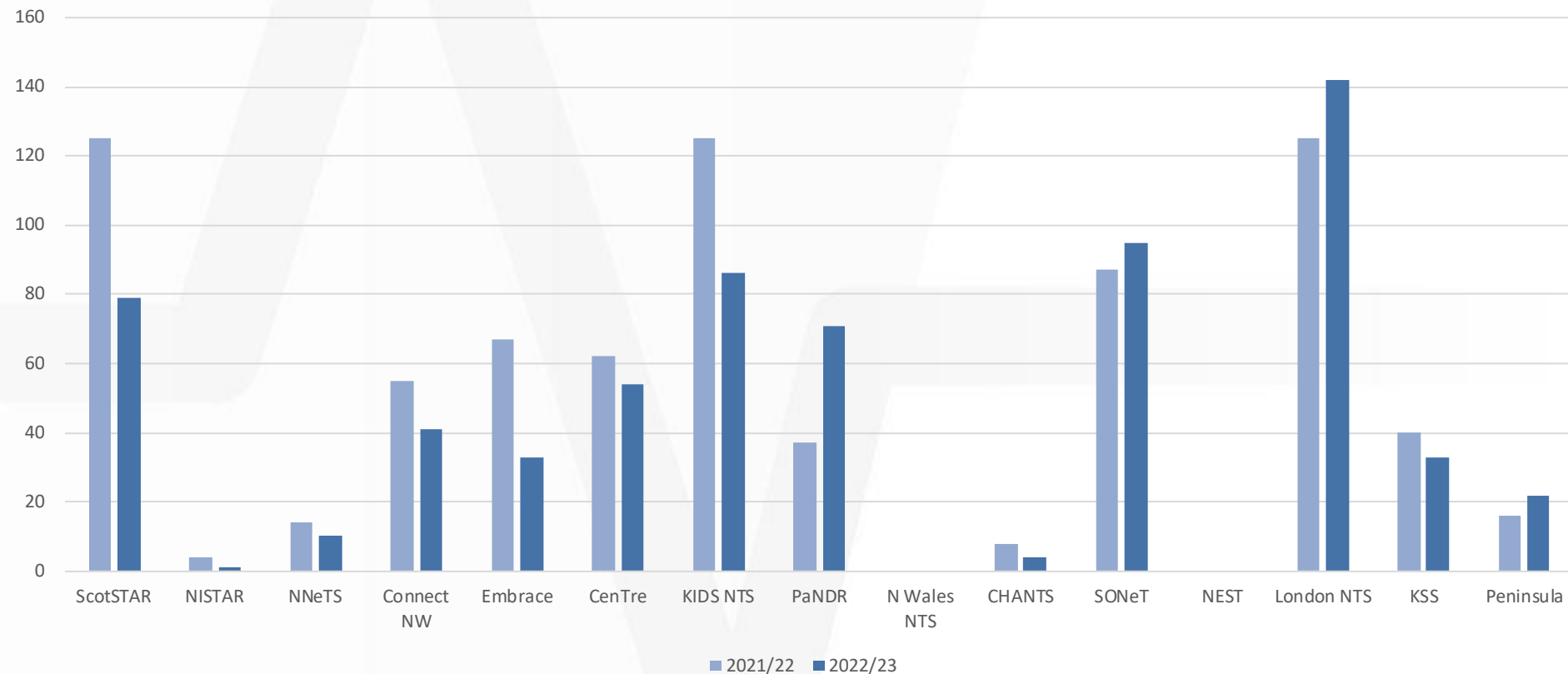
Scottish Ambulance Service  
University National NHS Board



# Numbers of babies transferred for Bilious Vomiting year to year comparison



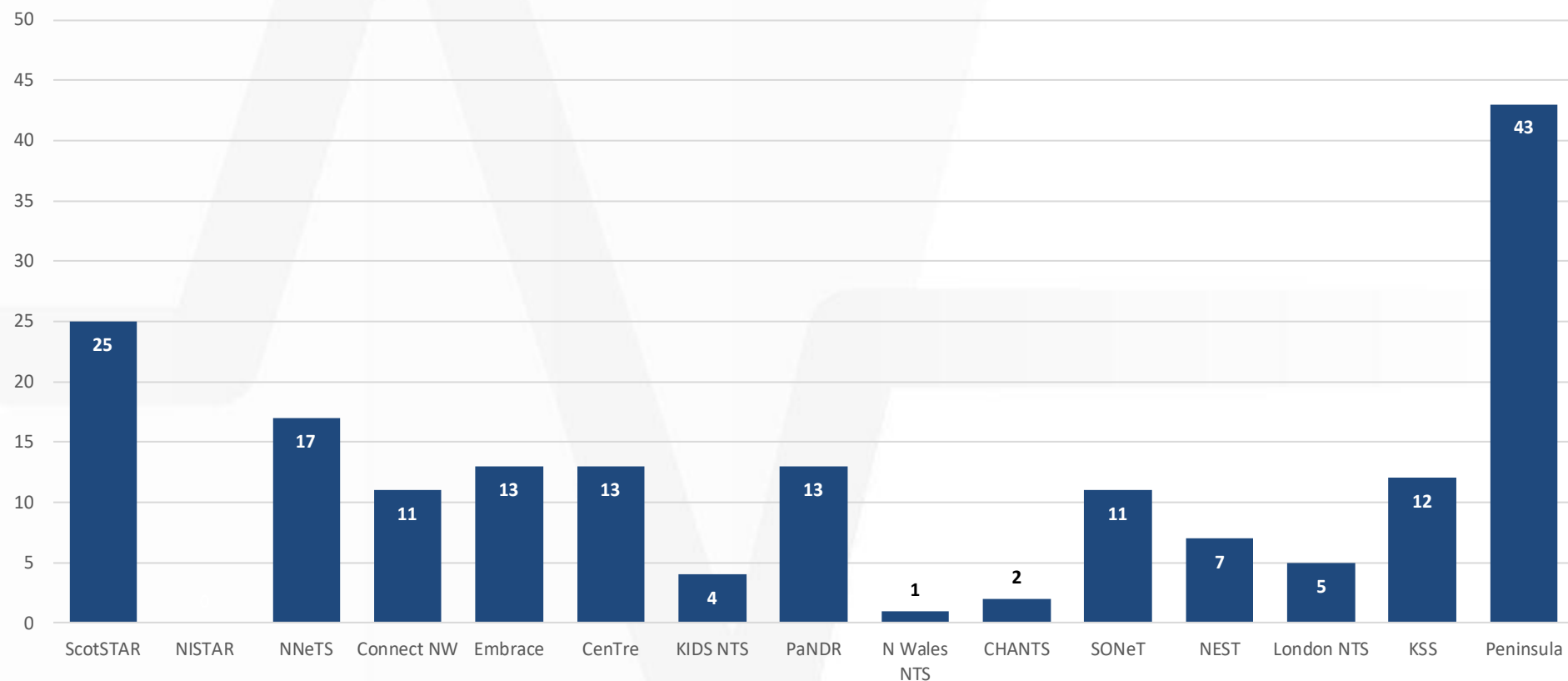
Scottish Ambulance Service  
University National NHS Board



# Prolonged Transfers- baby in transit for 3 hours or more 2022/23



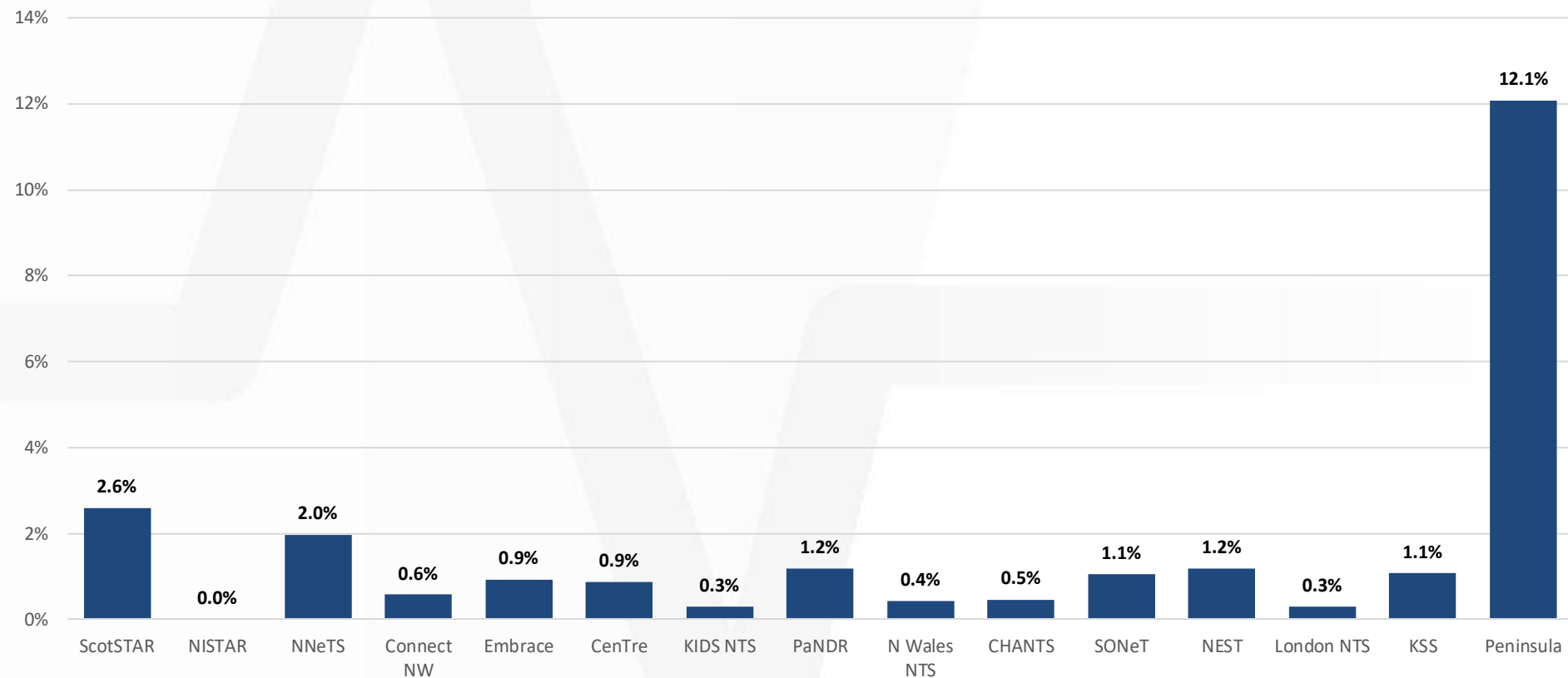
Scottish  
Ambulance  
Service  
University National NHS Board



# Prolonged Transfers (3 hours or more) as a percentage of total transfers 2022/23



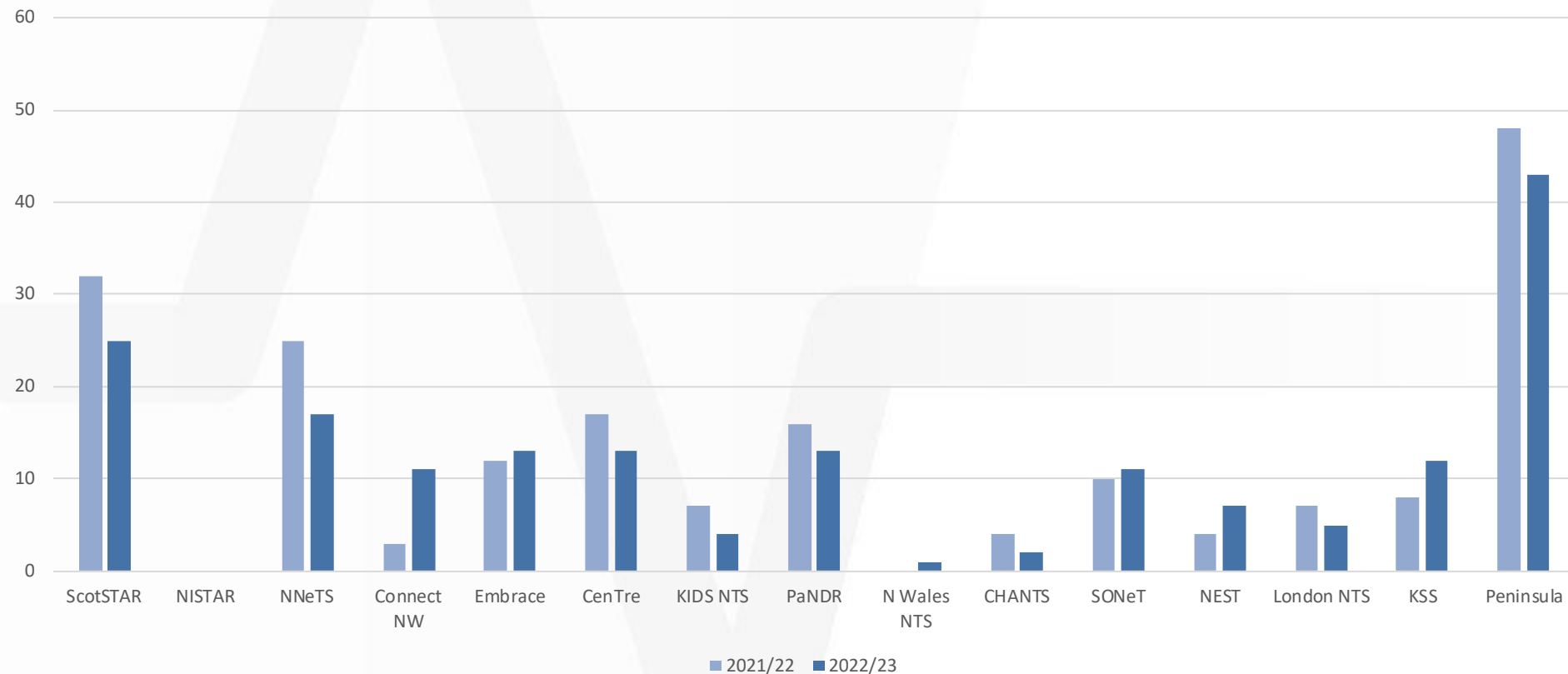
Scottish  
Ambulance  
Service  
University National NHS Board



# Prolonged Transfers- baby in transit for 3 hours or more year on year comparison



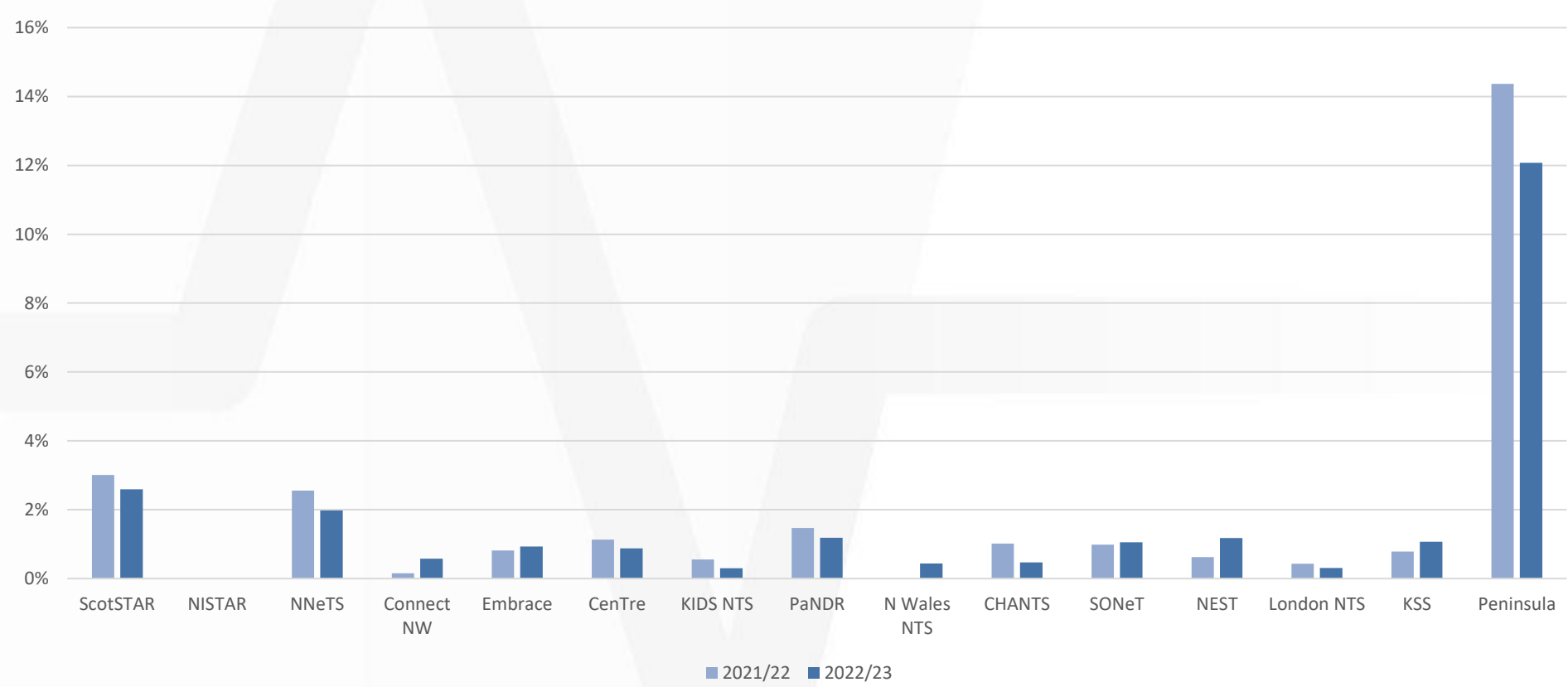
Scottish Ambulance Service  
University National NHS Board



# Trends in prolonged Transfers, baby in transit for 3 hours or more, as a percentage of total transfers



Scottish Ambulance Service  
University National NHS Board





# Benchmarking



Scottish  
Ambulance  
Service

University National NHS Board



## Data on

- Immediate dispatch (% mobile within 60 mins)
- Referral response time (for ICU uplift)
- Uplift transfers performed within commissioned area (%)

# Immediate dispatch benchmarking criteria



Scottish  
Ambulance  
Service  
University National NHS Board



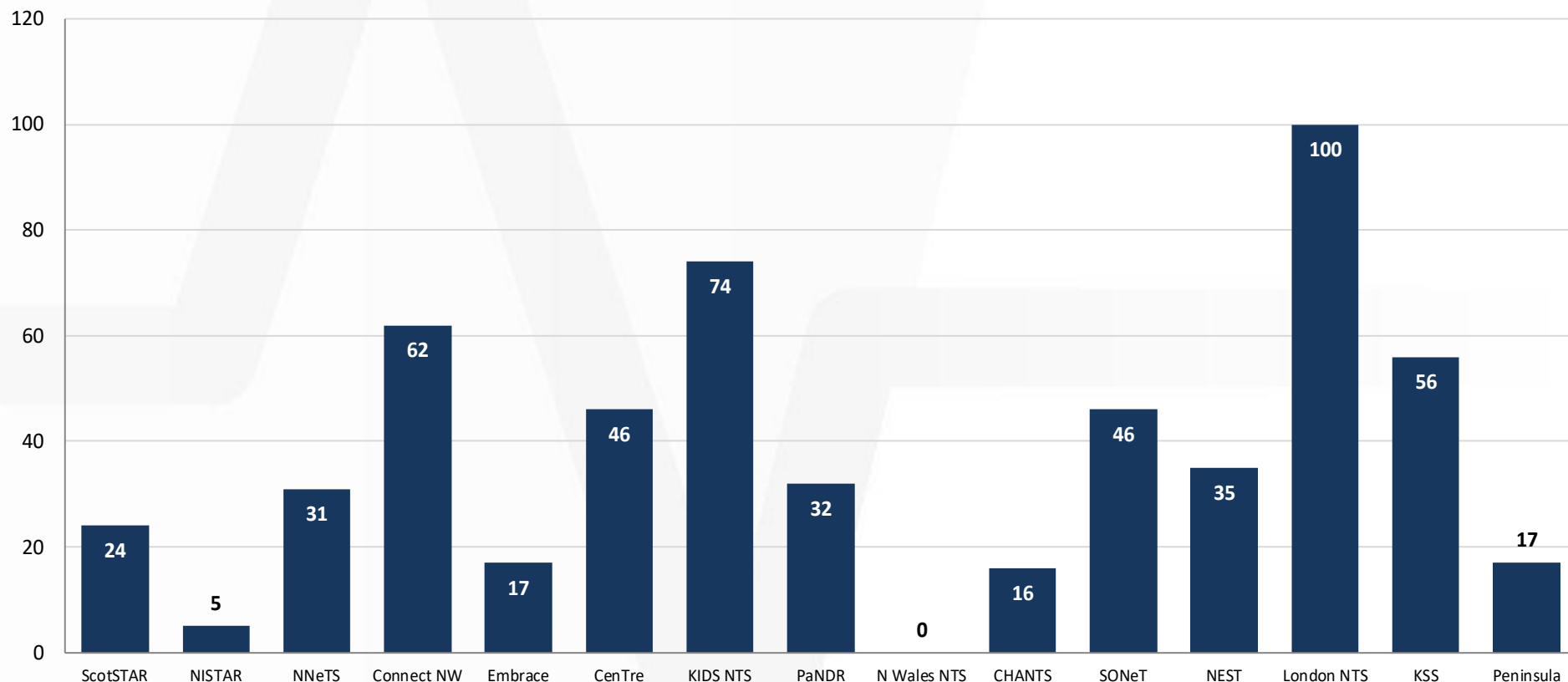
- Gastroschisis
- Ventilated infant with Tracheo-oesophageal fistula +/- atresia
- Intestinal perforation
- Suspected duct-dependent cardiac lesion not responding to prostin
- Unstable respiratory or cardiovascular failure not responding to appropriate management:
  - *Despite giving appropriate ventilation via endotracheal tube the infant's respiratory status remains unstable or severely compromised:*
  - *persistent unstable pneumothorax despite chest drain*
  - *requiring FiO<sub>2</sub> 100%*
  - *arterial oxygen < 5kPa on 2 consecutive blood gas measurements*
  - *pH <7.1 and pCO<sub>2</sub> >9kPa*
  - *persistent mean blood pressure below corrected gestational age, measured on arterial line; if measured with cuff only, there should also be acidosis (pH <7.1)*

N.b. this is benchmarking data on response for a defined group of transfers, this does not represent overall "emergency workload"

# Immediate dispatch transfers by team Apr 2022 to Mar 2023



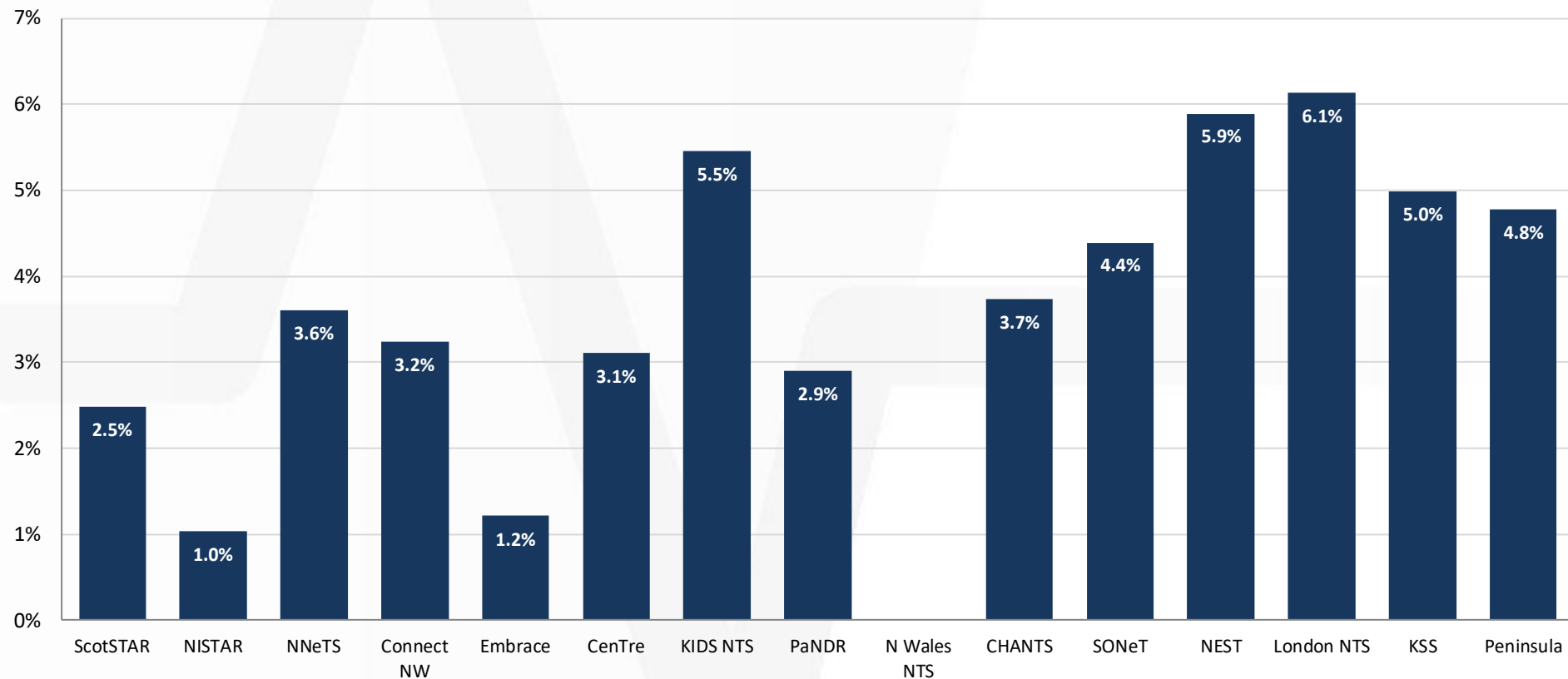
Scottish  
Ambulance  
Service  
University National NHS Board



N.b. this is benchmarking data on response for a defined group of transfers, this does not represent overall "emergency workload"



# Immediate dispatch transfers by team as a percentage of total transfer 2022/23

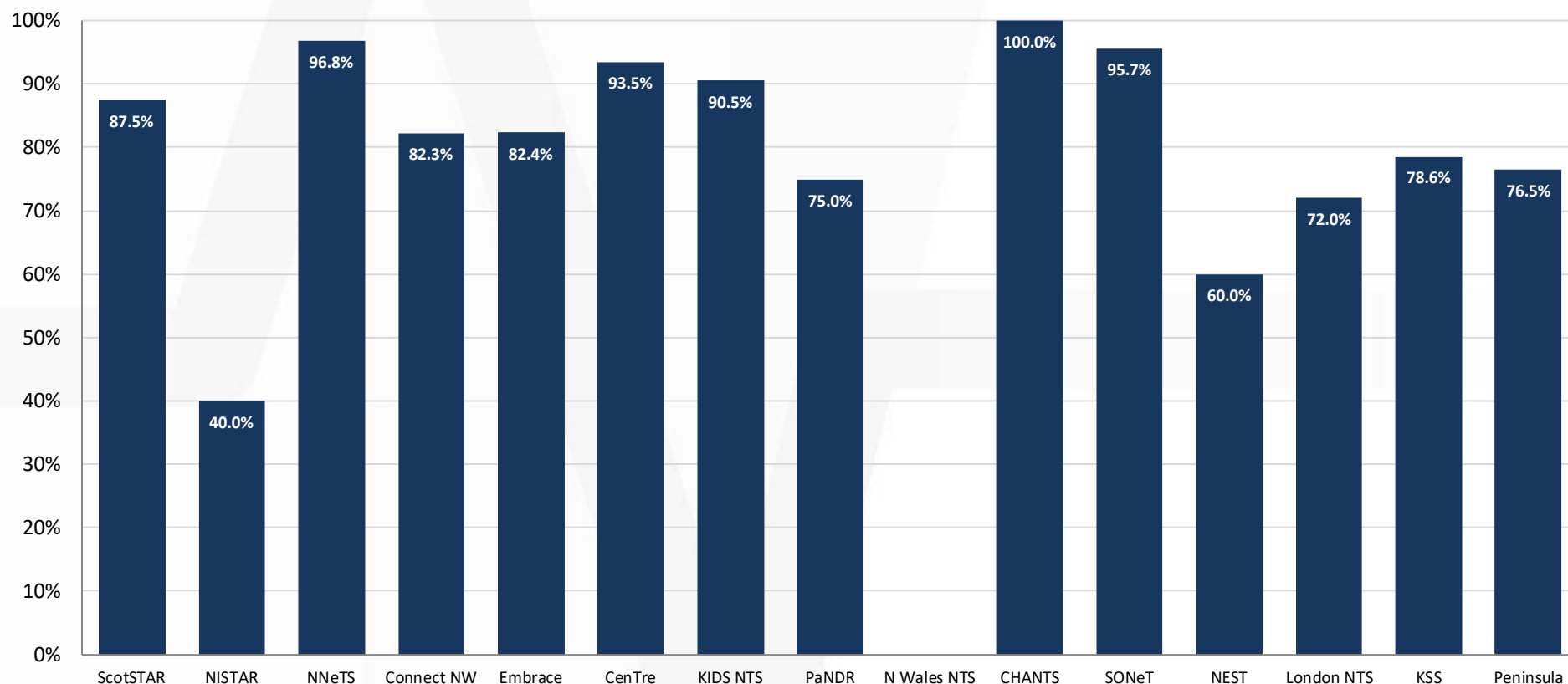


N.b. this is benchmarking data on response for a defined group of transfers, this does not represent overall "emergency workload"

# Percentage of Immediate Dispatch transfers dispatched within 60 minutes by team Apr 2022 to Mar 2023



Scottish  
Ambulance  
Service  
University National NHS Board



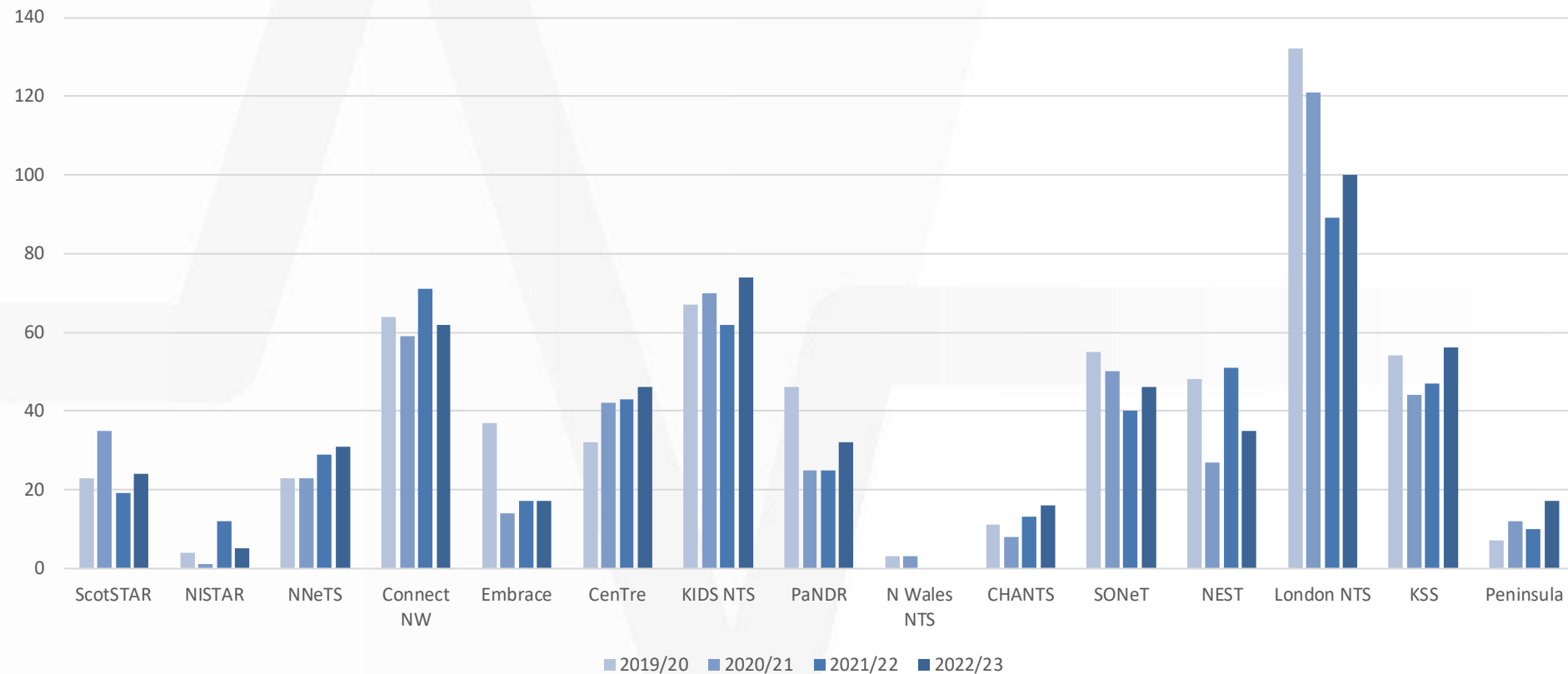
N.b. this is benchmarking data on response for a defined group of transfers, this does not represent overall "emergency workload"



# Trends in numbers of immediate dispatch transfers by team, 2019/20 to 2022/23



Scottish Ambulance Service  
University National NHS Board



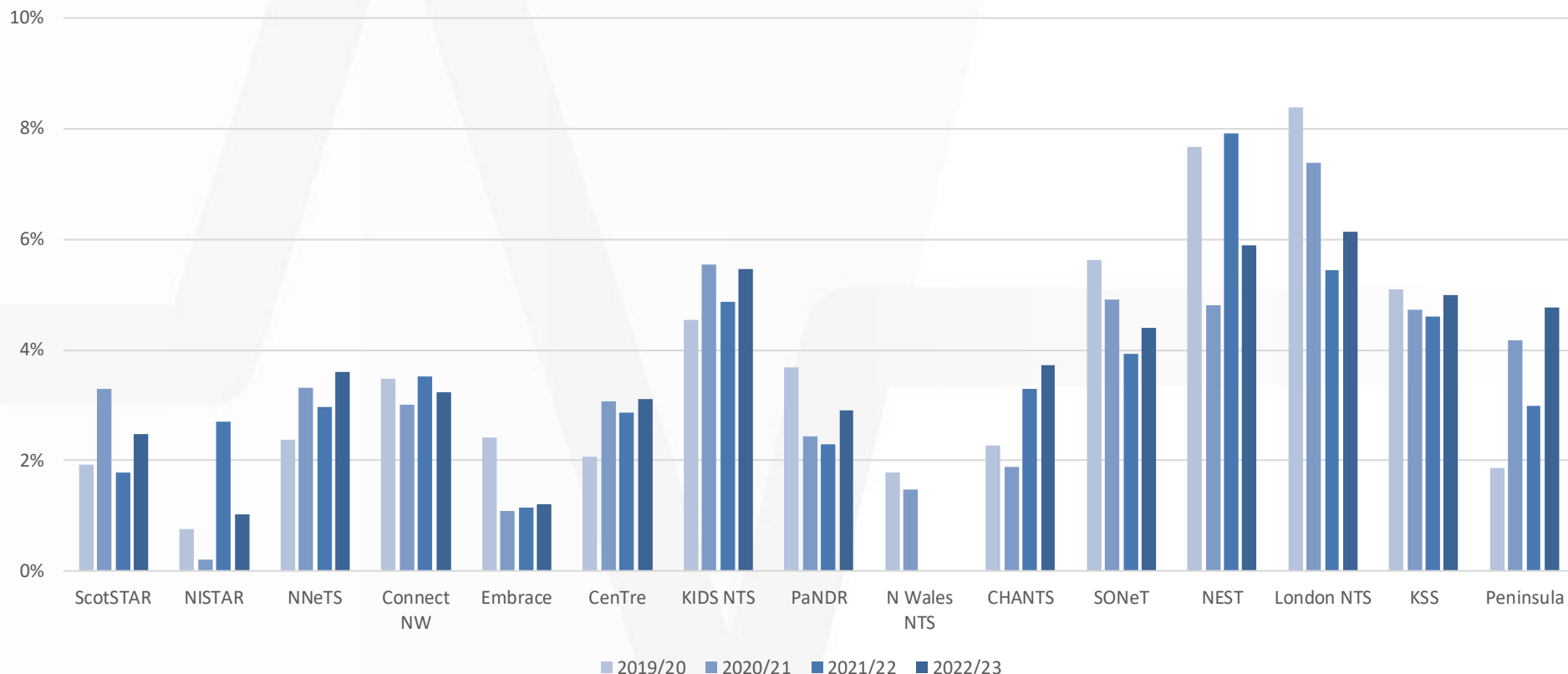
N.b. this is benchmarking data on response for a defined group of transfers, this does not represent overall "emergency workload"



# Trends in immediate dispatch transfers percentage of total transfers, by team, 2019/20 to 2022/23



Scottish Ambulance Service  
University National NHS Board



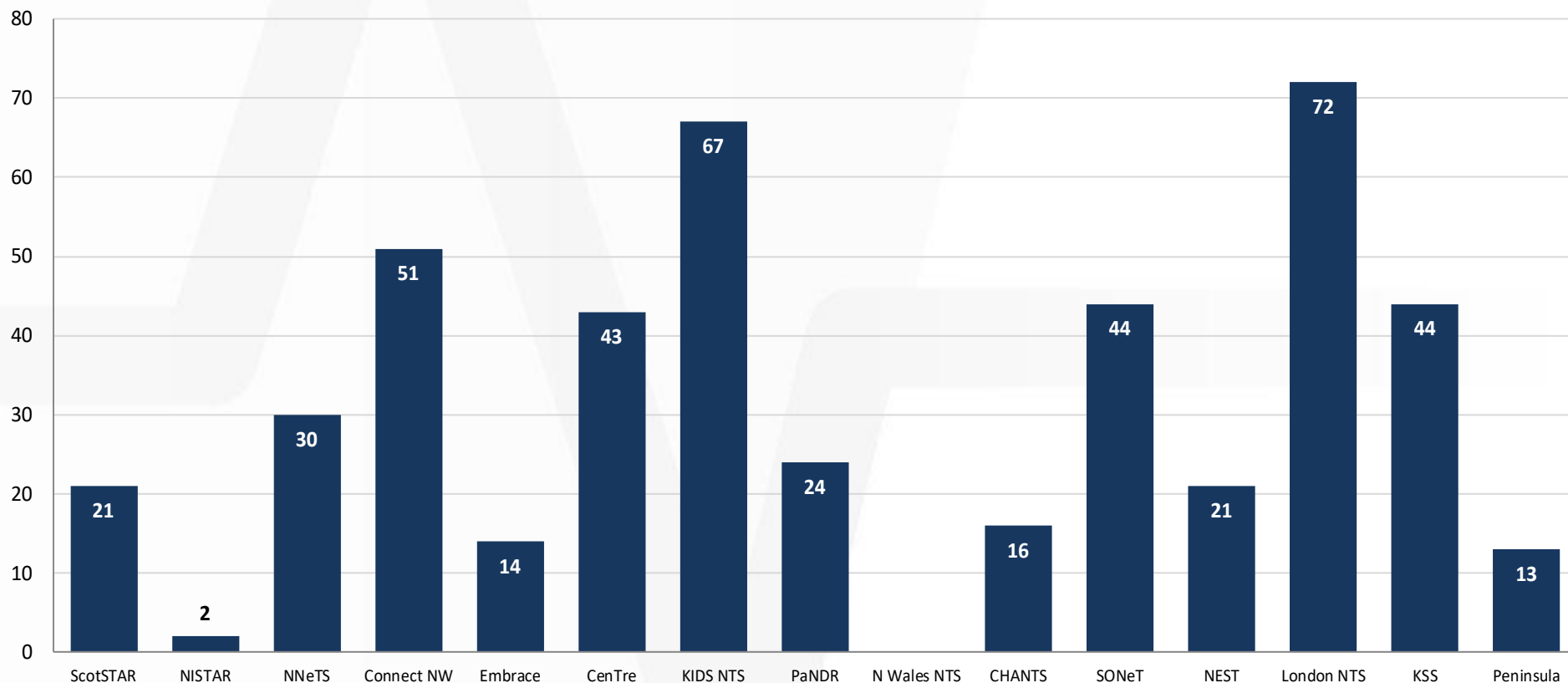
N.b. this is benchmarking data on response for a defined group of transfers, this does not represent overall "emergency workload"



# Immediate dispatch transfers dispatched within 60 minutes by team Apr 2022 to Mar 2023



Scottish  
Ambulance  
Service  
University National NHS Board



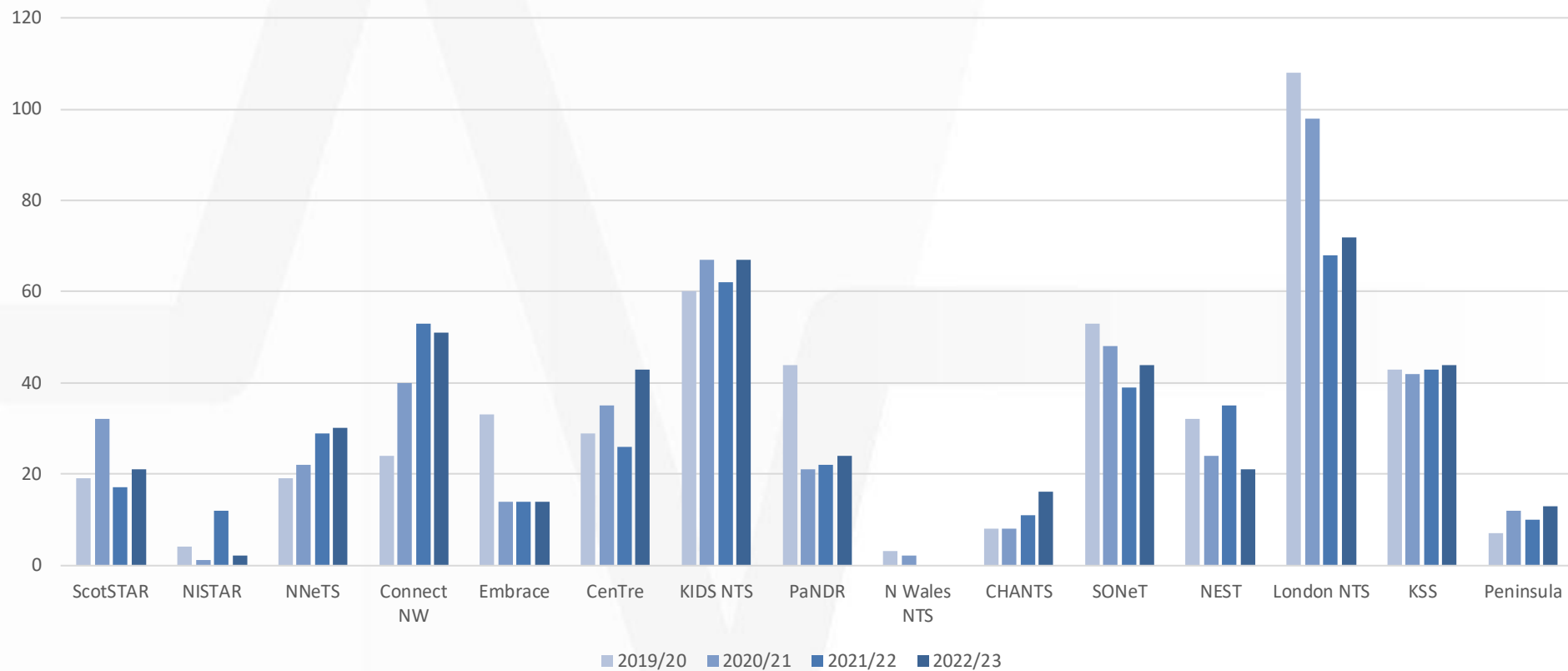
N.b. this is benchmarking data on response for a defined group of transfers, this does not represent overall "emergency workload"



# Number of Immediate Dispatch transfers dispatched within 60 minutes by team, 2019/20 to 2022/23



Scottish Ambulance Service  
University National NHS Board



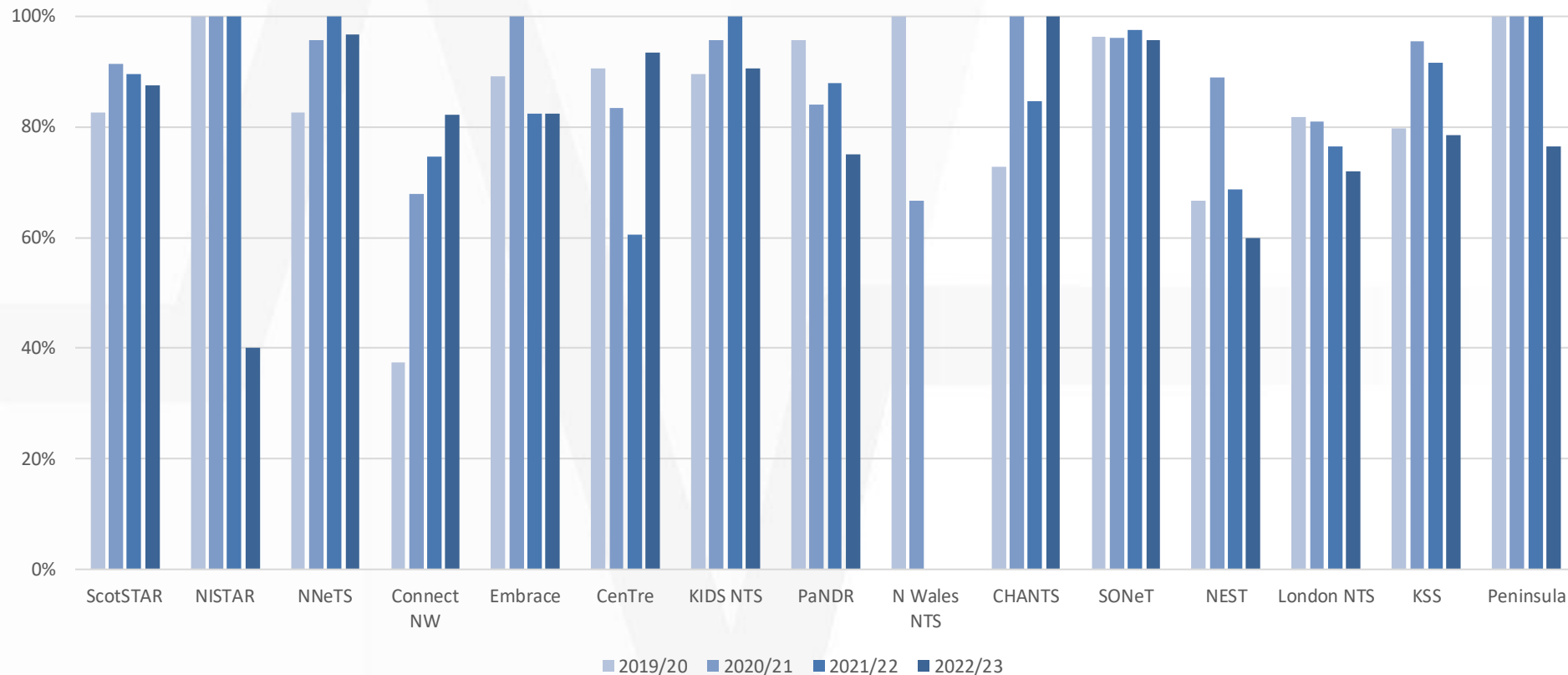
N.b. this is benchmarking data on response for a defined group of transfers, this does not represent overall "emergency workload"



# Trends in percentage of Immediate Dispatch transfers dispatched within 60 minutes by team, 2019/20 to 2022/23



Scottish Ambulance Service  
University National NHS Board



N.b. this is benchmarking data on response for a defined group of transfers, this does not represent overall "emergency workload"



# Team Area Uplift Transfers



Scottish  
Ambulance  
Service

University National NHS Board



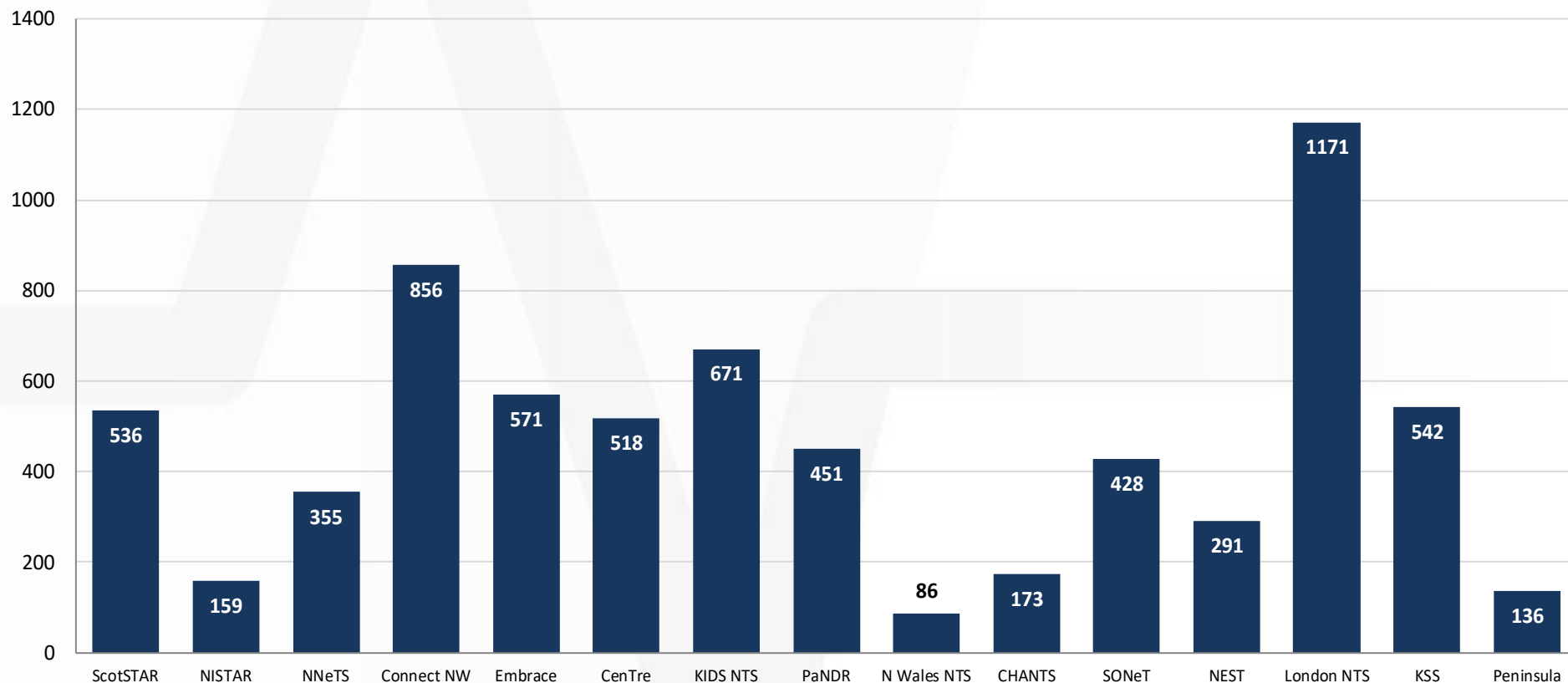
## Data on

- Uplift Transfers by the Dedicated Neonatal Team in their commissioned area
  - Standard: 95% of uplift transfers within area by dedicated team

# Numbers of Uplift transfers in dedicated area 2022/23



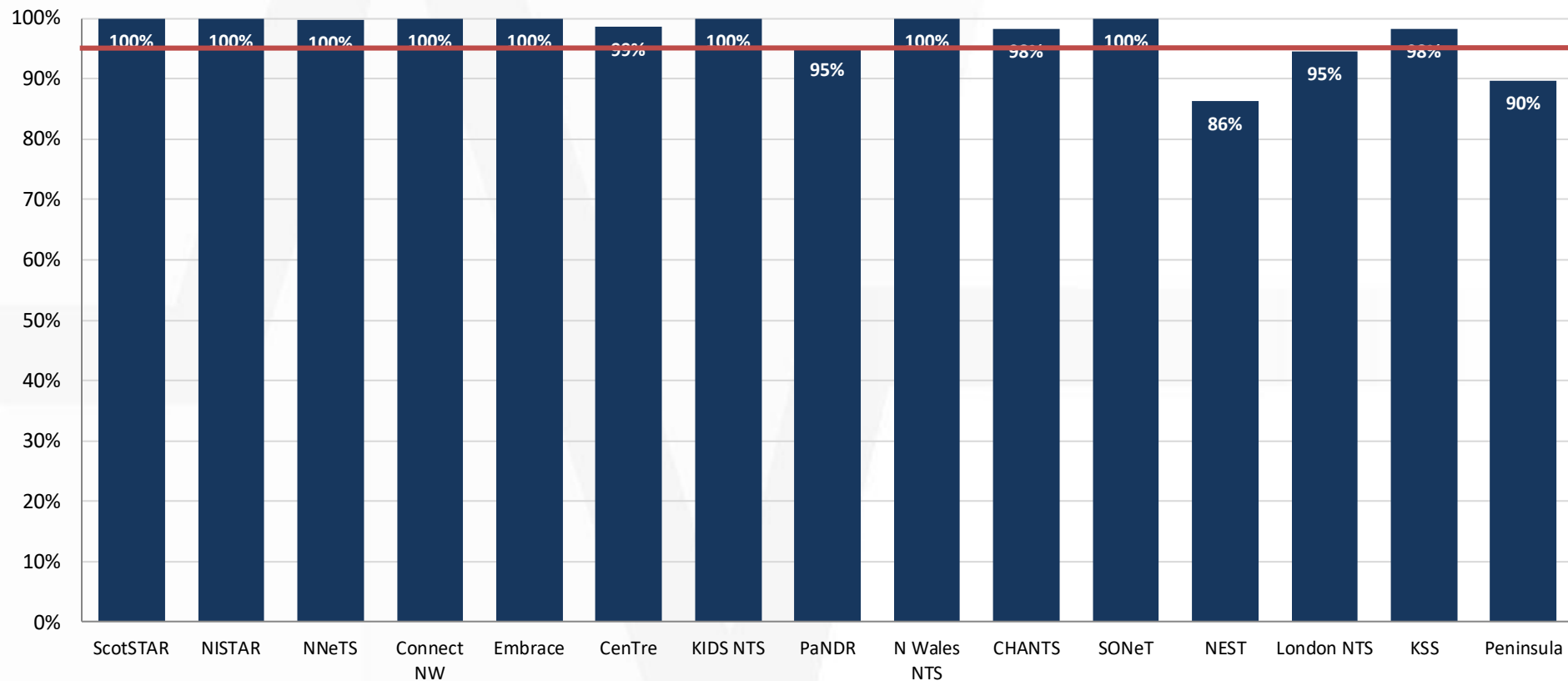
Scottish  
Ambulance  
Service  
University National NHS Board



# Uplift transfers by Dedicated team in own area as a percentage of total uplift transfers



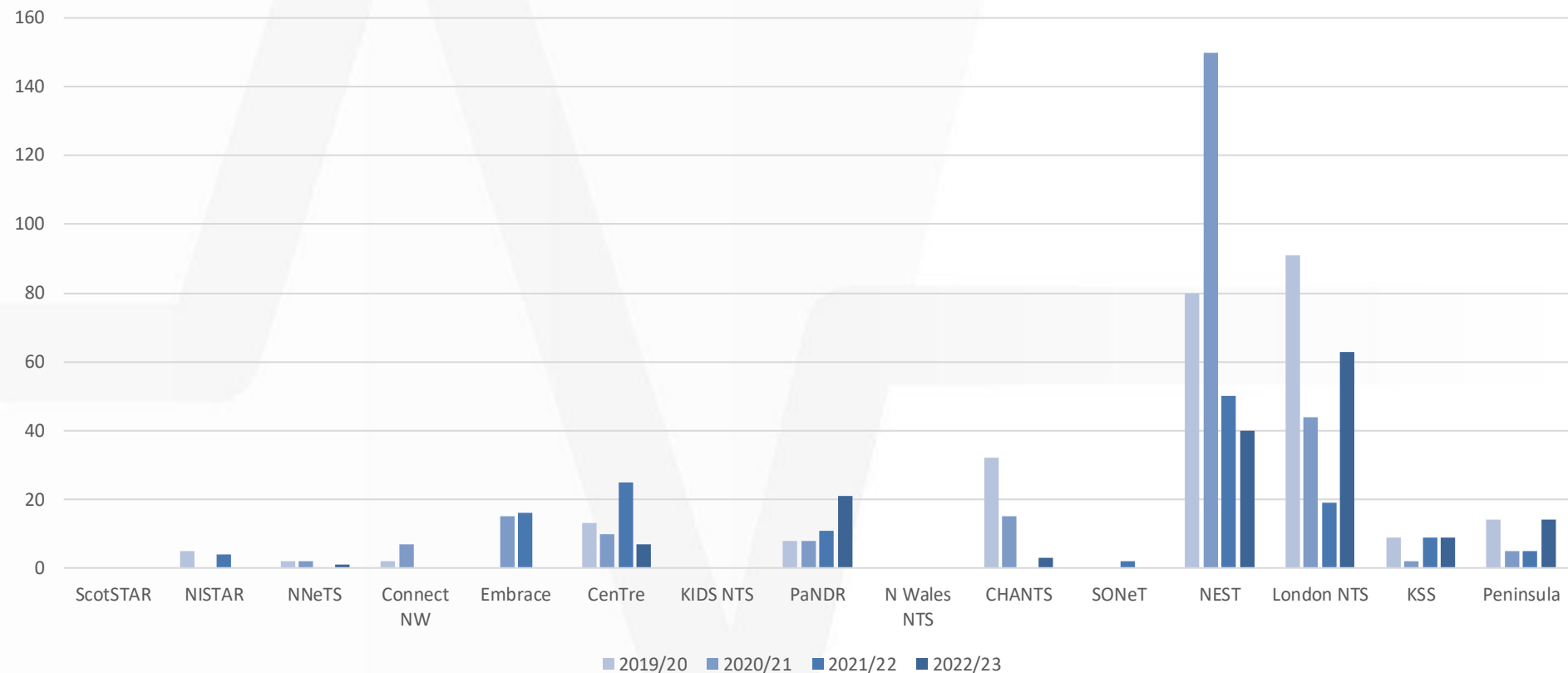
Scottish Ambulance Service  
University National NHS Board



# Number of Uplift transfers by other team in dedicated area 2019/20 to 2022/23



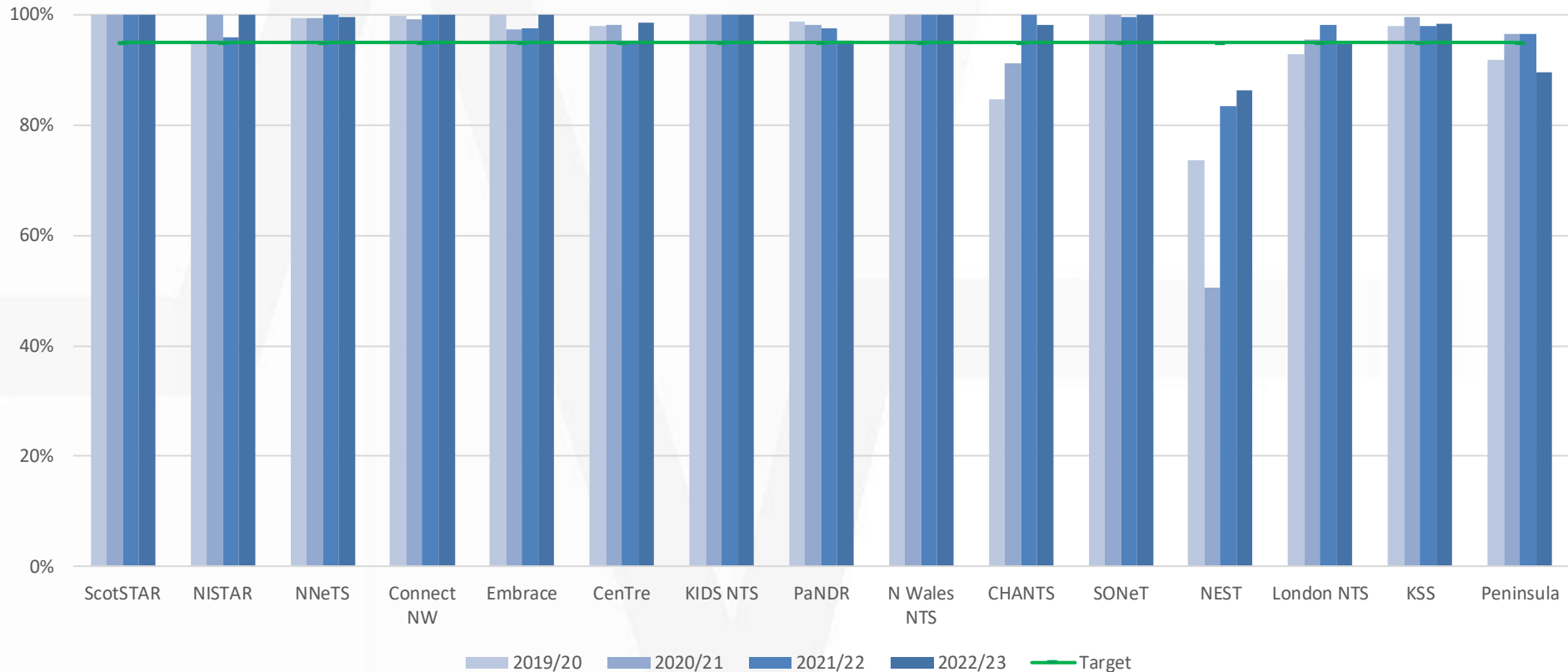
Scottish Ambulance Service  
University National NHS Board



# Trends in Uplift transfers by Dedicated team in own area, as a percentage of uplift transfers 2019/20 to 2022/23



Scottish Ambulance Service  
University National NHS Board



# Benchmark 3



Scottish  
Ambulance  
Service

University National NHS Board

**NHS**  
SCOTLAND

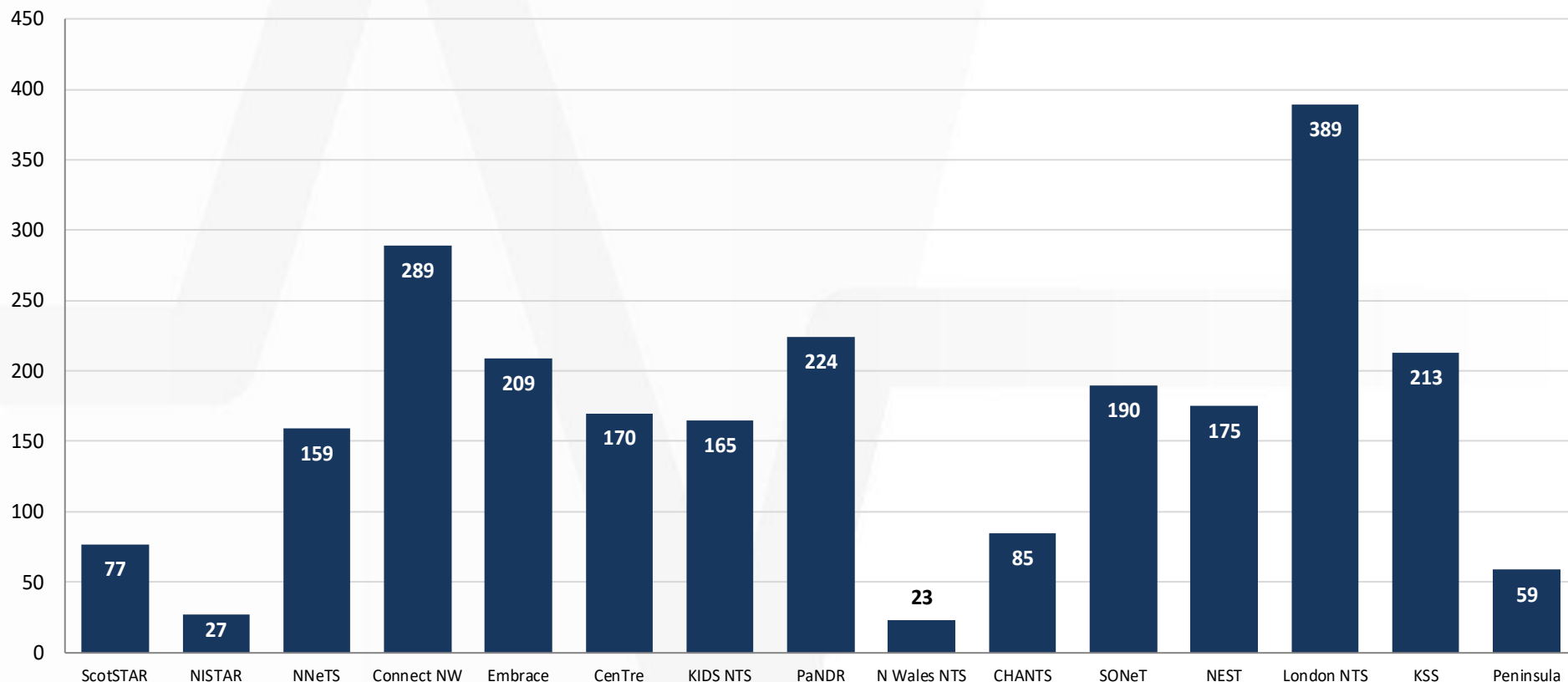
- Arrival at the cotside within 3.5 hours for ICU uplift transfers from level 1 and 2 units in the first 3 days of life



# Number of Intensive Care Uplift Transfers from level 1 and 2 units of babies in the first 72 hours of life 2022/23



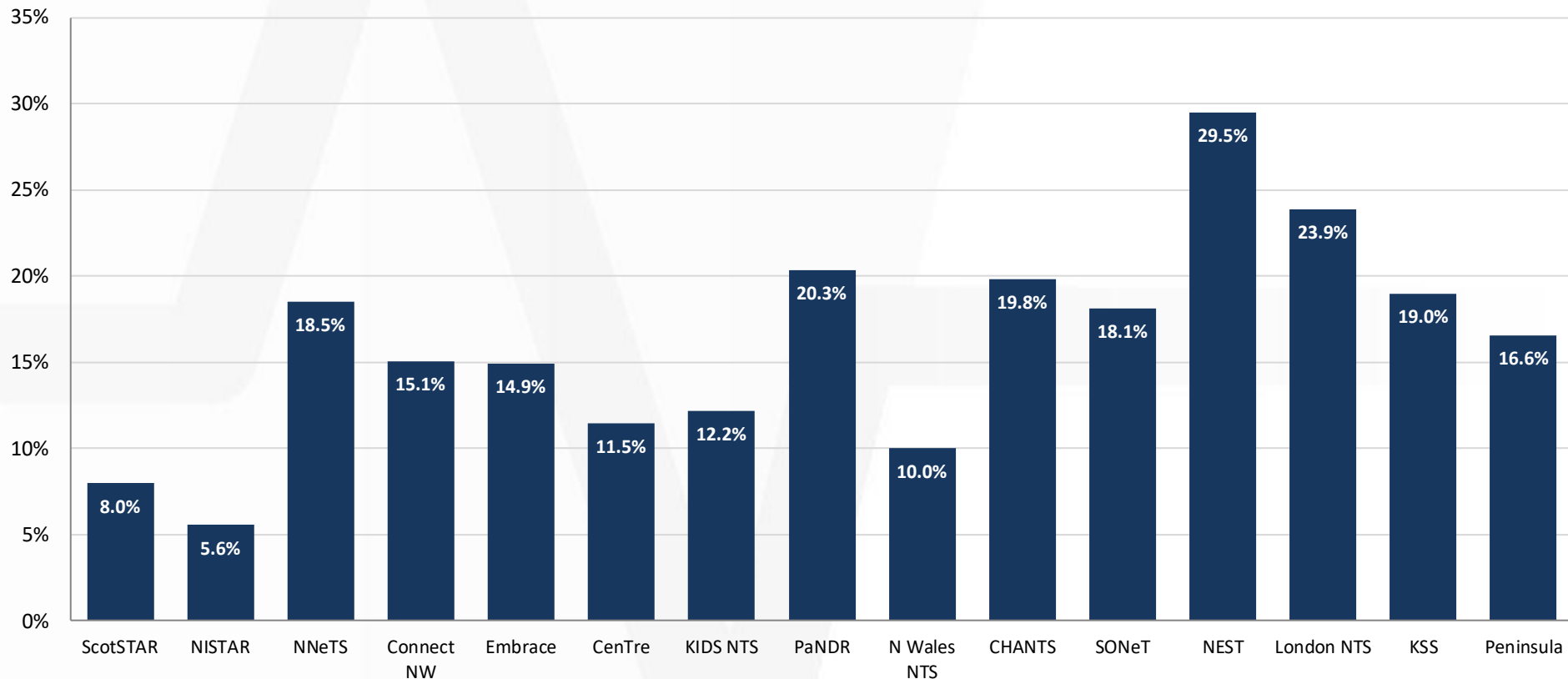
Scottish  
Ambulance  
Service  
University National NHS Board



# Intensive care, uplift first 72 hours of life from level 1 and 2 units as a percentage of total transfers 2022/23



Scottish Ambulance Service  
University National NHS Board

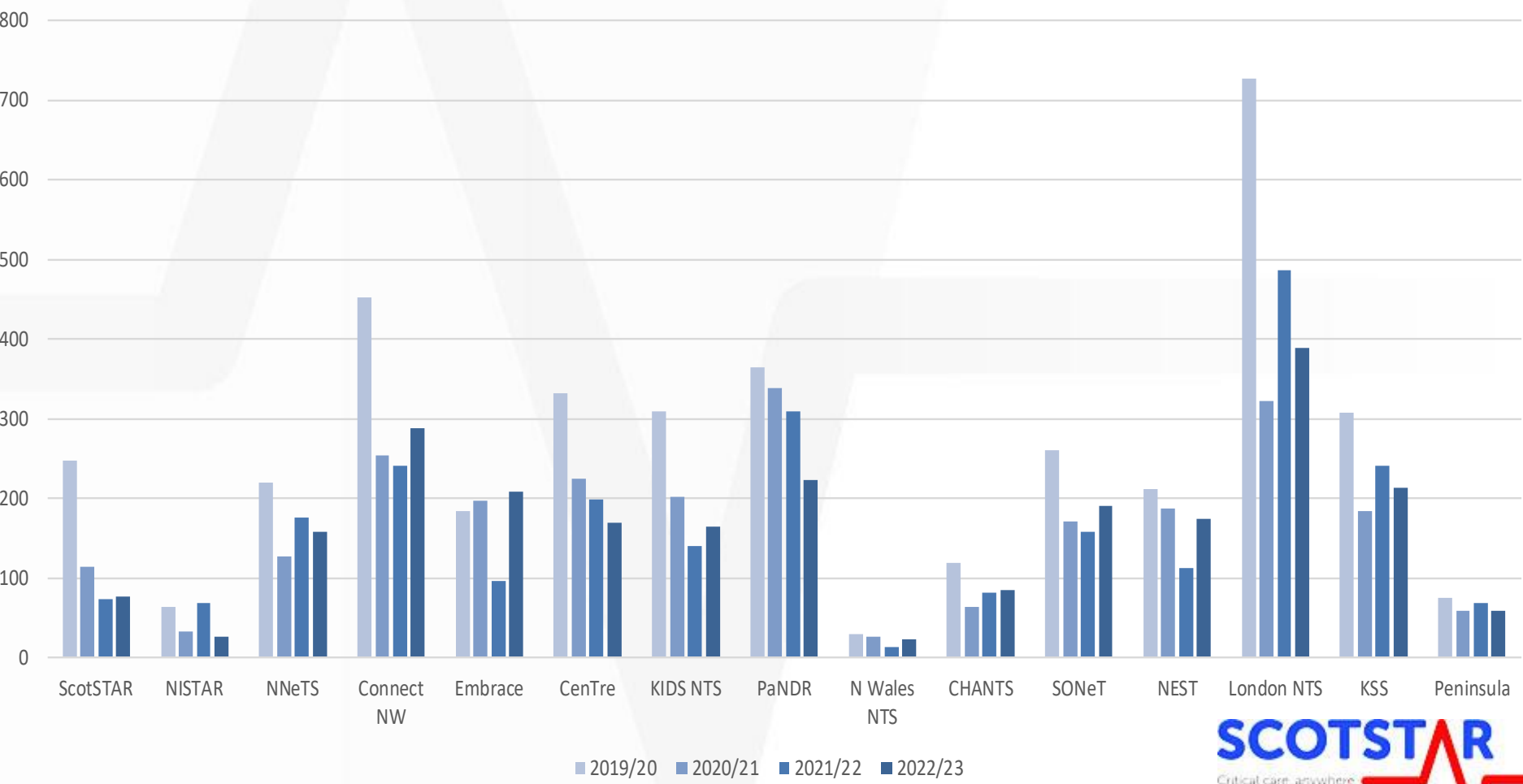




Scottish Ambulance Service  
University National NHS Board

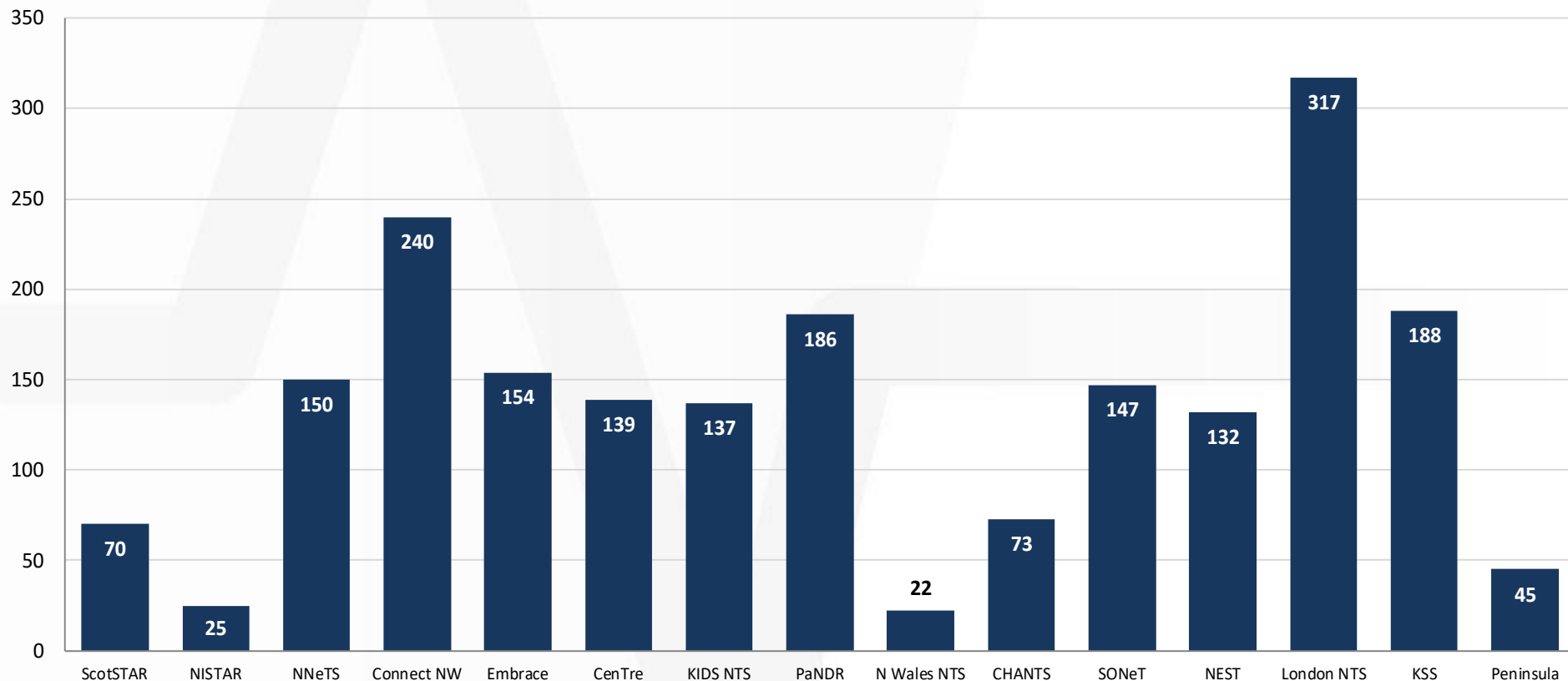


# Trends in the number of Intensive Care Uplift transfers over time



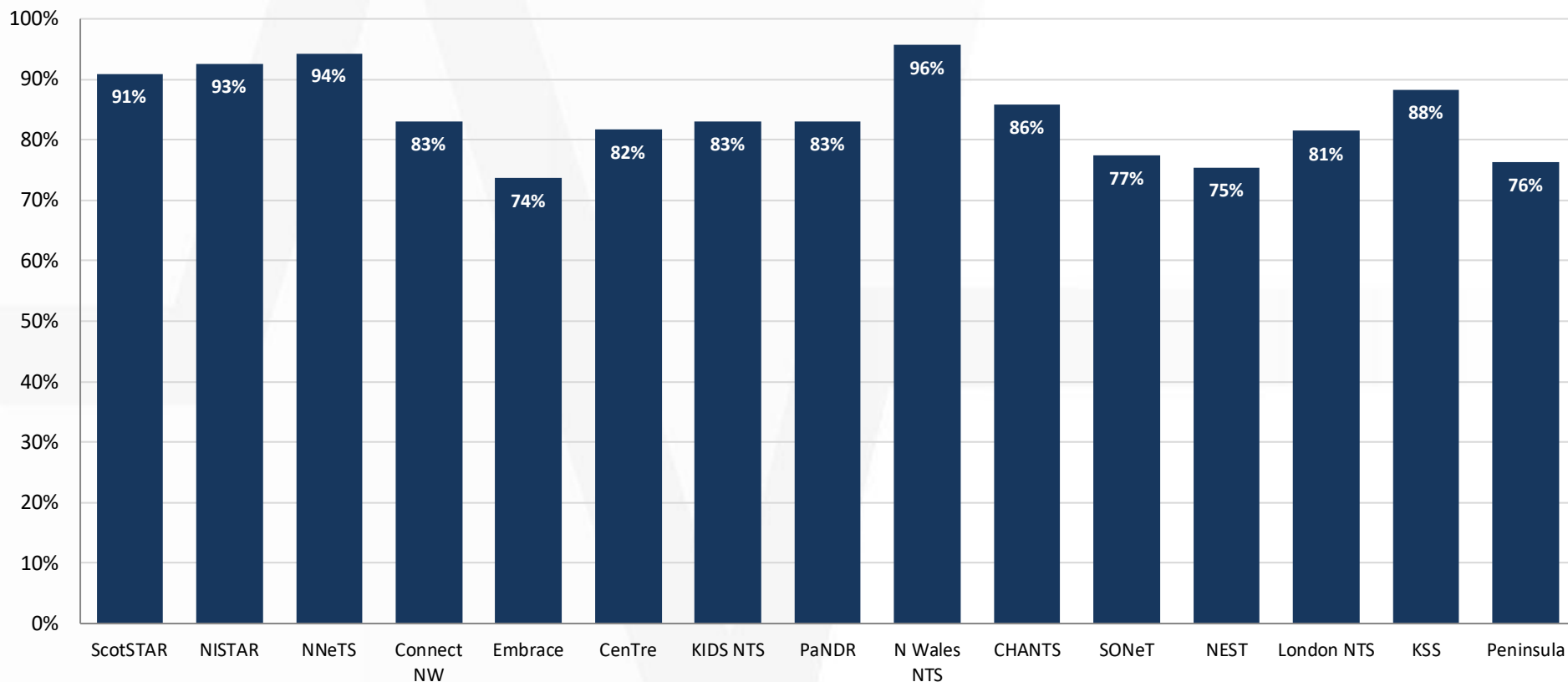


# Number where team arrived with the patient within 3.5 hours of the start of the referring call (Intensive care, uplift first 72 hours of life from level 1 and 2 units), numbers, 2022/23





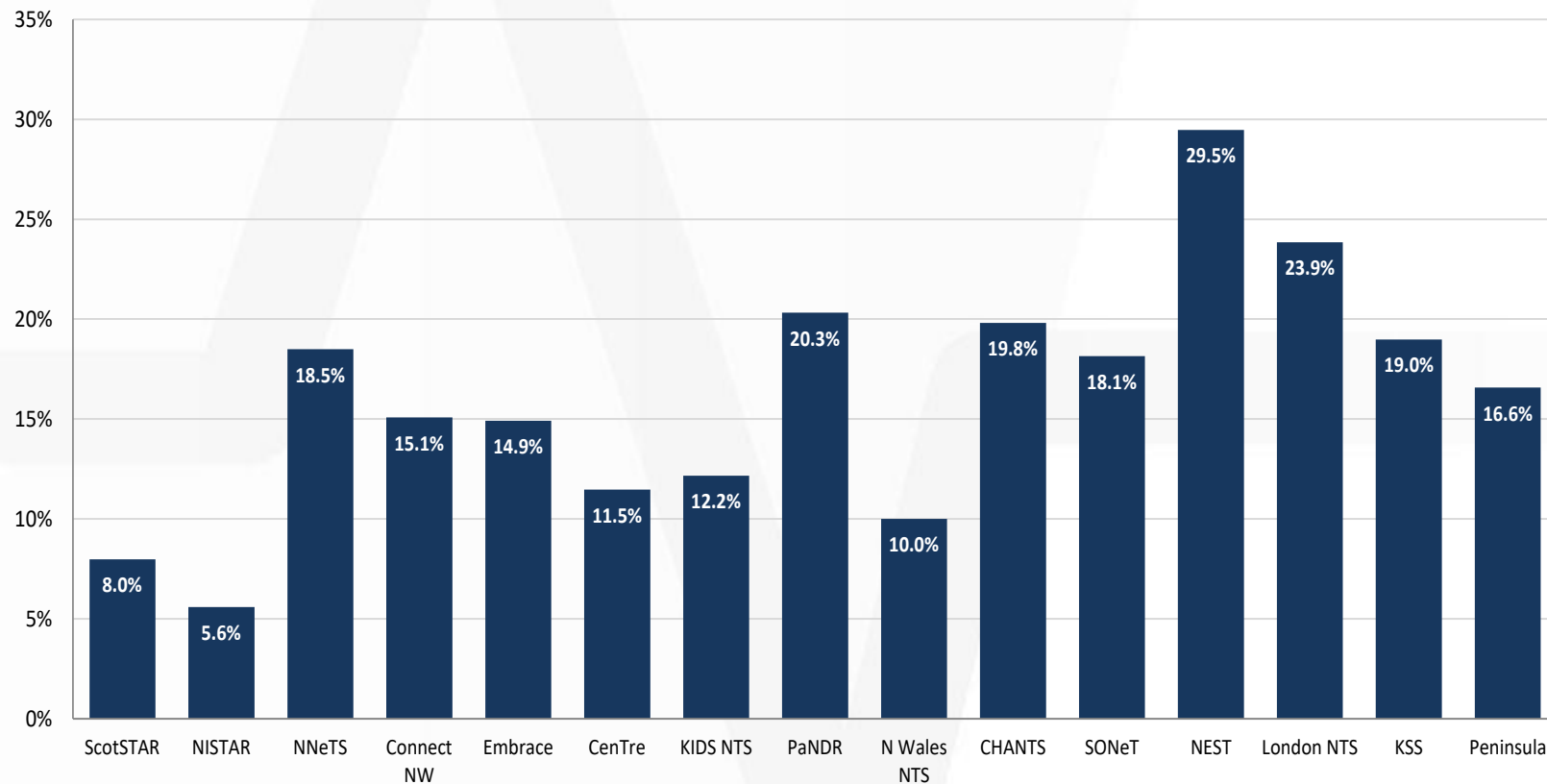
# Percentage where team arrived with the patient within 3.5 hours of the start of the referring call (Intensive care, uplift first 72 hours of life from level 1 and 2 units) as a percentage of those transfers 2022/23



# Intensive care, uplift first 72 hours of life from level 1 and 2 units as a percentage of total transfers 2022/23



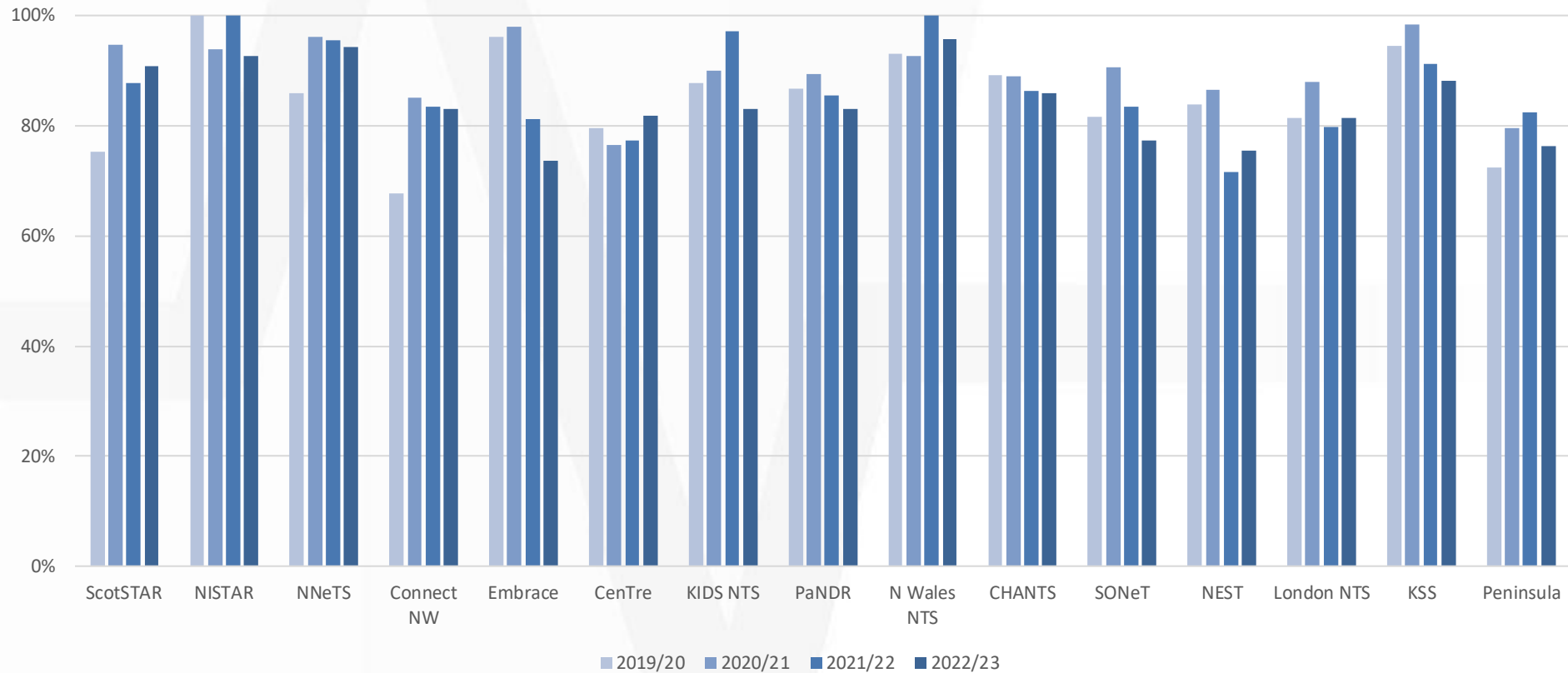
Scottish  
Ambulance  
Service  
University National NHS Board



# Trends in team arrived with the patient within 3.5 hours of the start of the referring call as a percentage of Intensive care, uplift first 72 hours of life from level 1 and 2 units by team 2019/20 to 2022/23



Scottish Ambulance Service  
University National NHS Board



# Stabilising times



Scottish  
Ambulance  
Service

University National NHS Board

**NHS**  
SCOTLAND

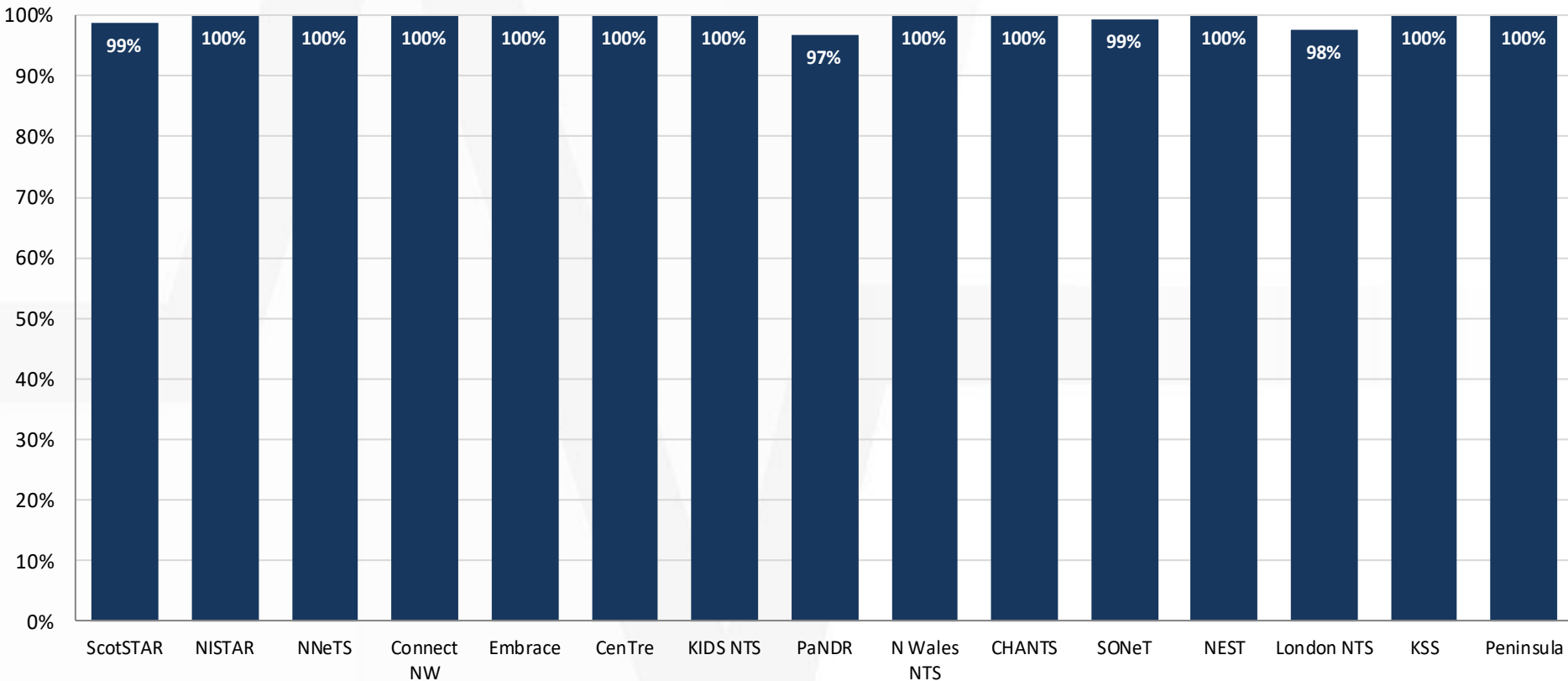
- Intensive care, uplift first 72 hours of life from level 1 and 2 units
  - Time from arrival to departure of the transport team



# Percentage Intensive care, uplift first 72 hours of life from level 1 and 2 units records with a stabilisation time



Scottish Ambulance Service  
University National NHS Board

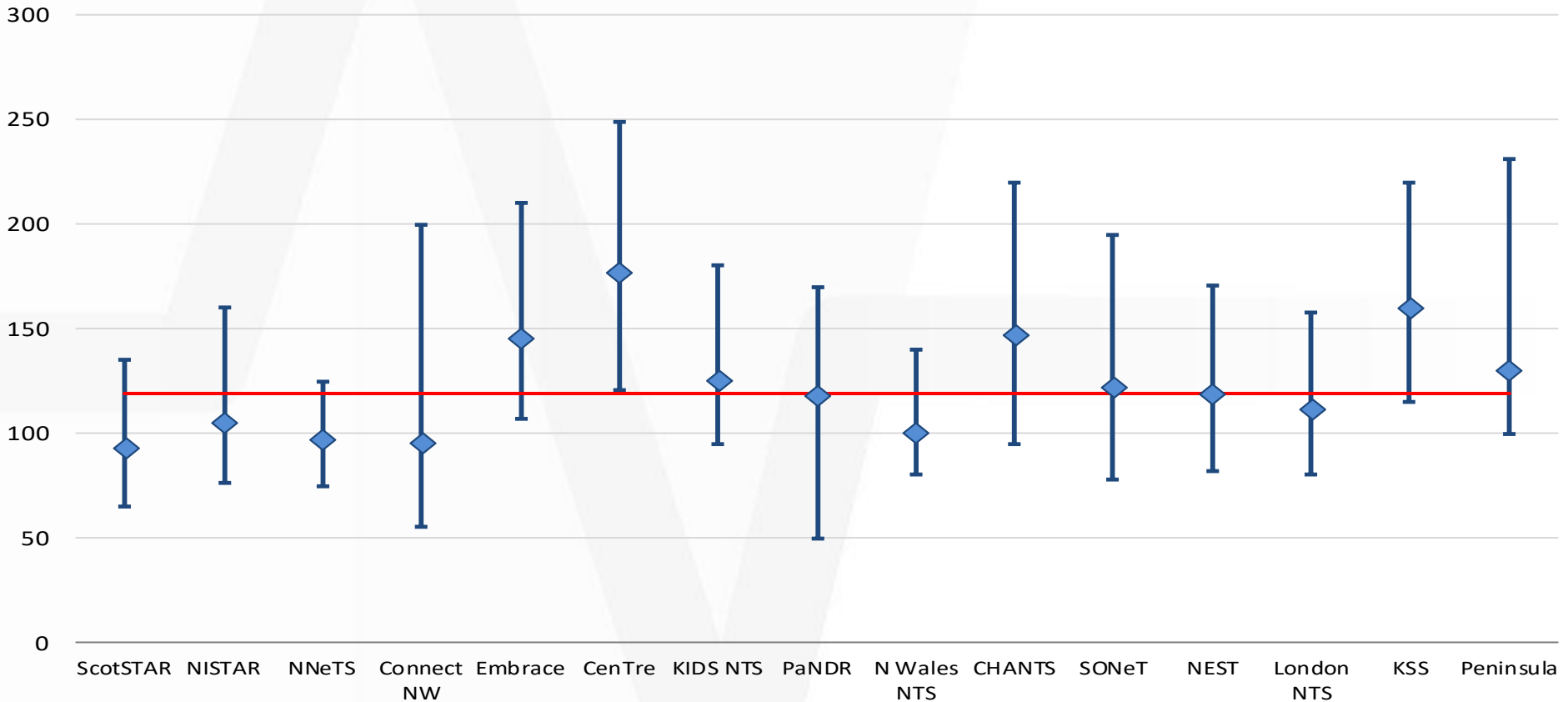


# Stabilising time (minutes), 2022/23

Median (25<sup>th</sup> & 75<sup>th</sup> centiles), uplift/ICU transfers, first 3 days of life from level 1 and 2 units



Scottish Ambulance Service  
University National NHS Board

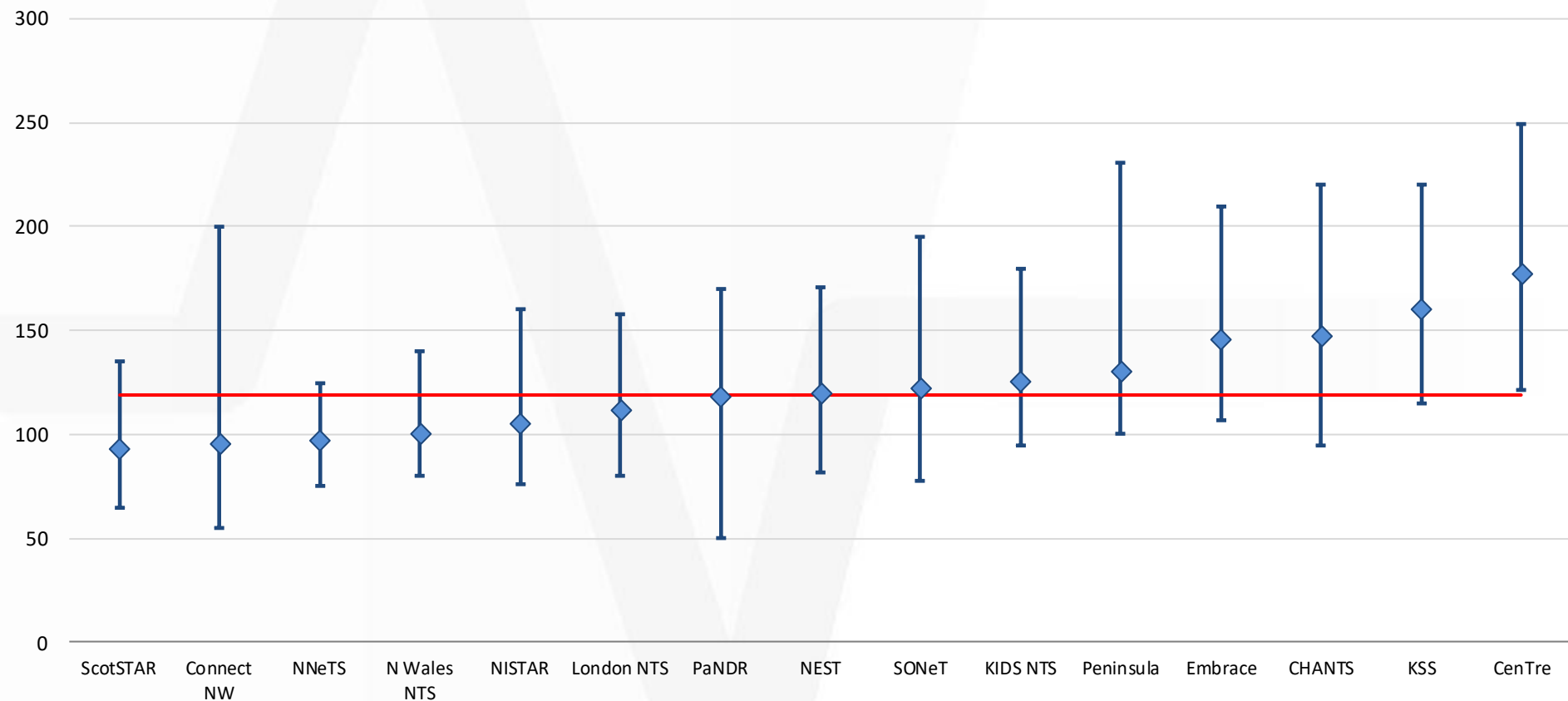


# Stabilising time (minutes), 2022/23

Median (25<sup>th</sup> & 75<sup>th</sup> centiles), uplift/ICU transfers, first 3 days of life from level 1 and 2 units - ranked



Scottish Ambulance Service  
University National NHS Board

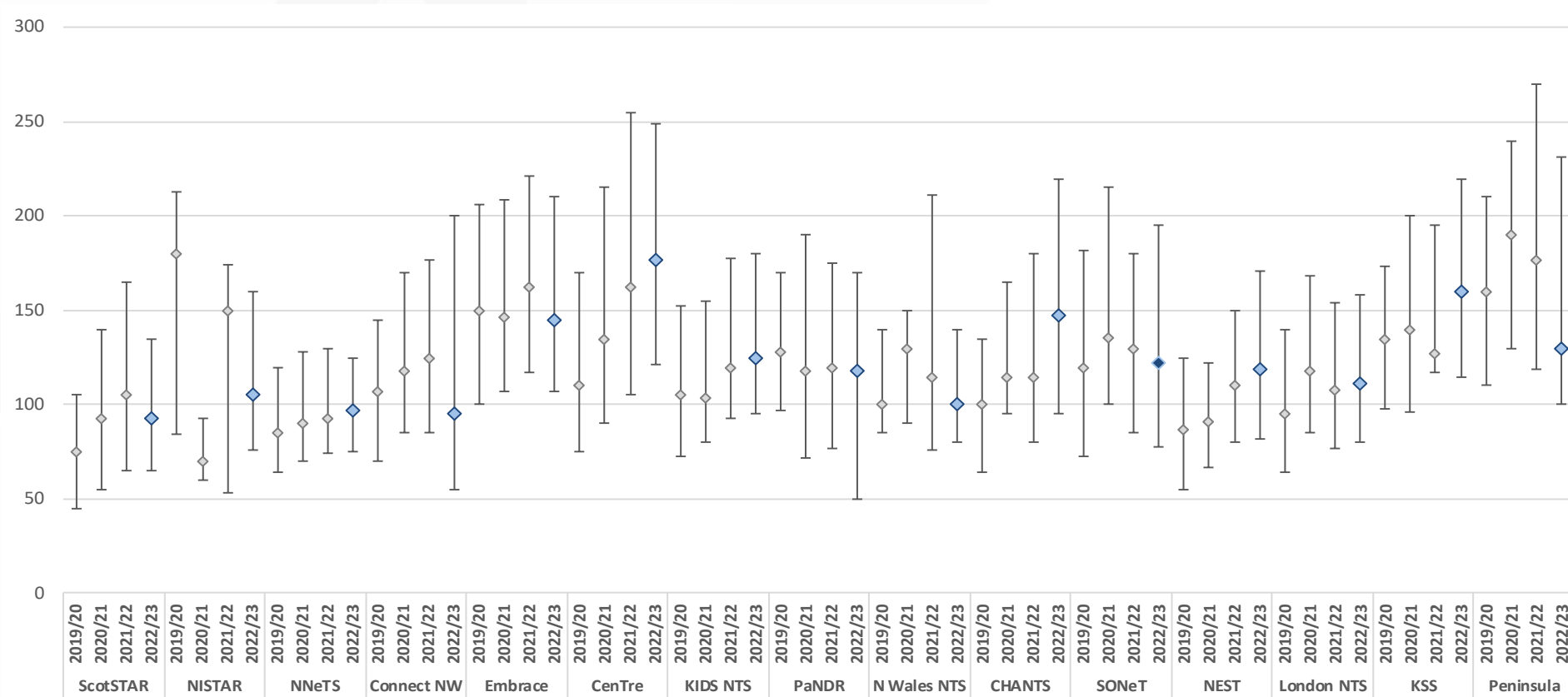


# Stabilising time (minutes), 2022/23

## Historical Times (25<sup>th</sup> centile, median and 75<sup>th</sup> centile)



Scottish  
Ambulance  
Service  
University National NHS Board





Scottish  
Ambulance  
Service

University National NHS Board

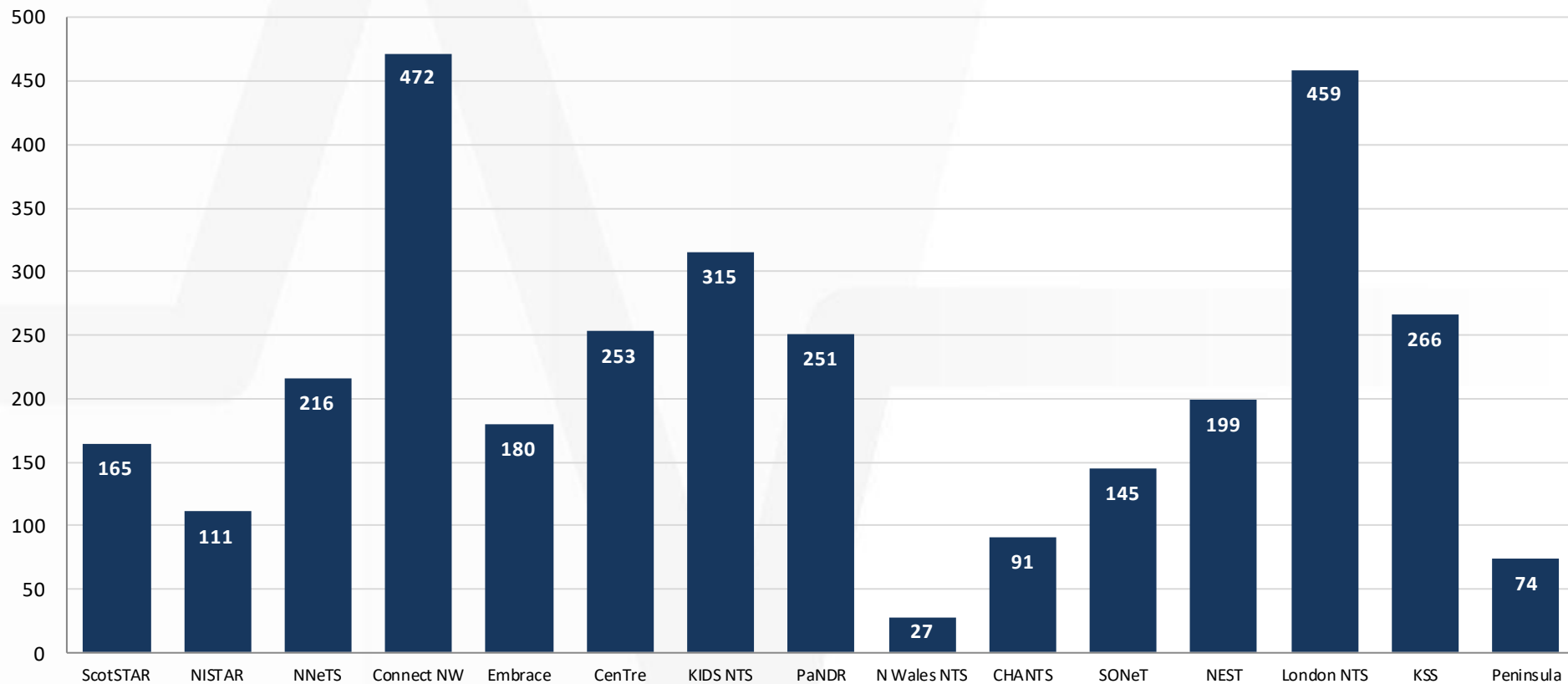


# Under and over ventilation

# Number of infants who are ventilated via an ETT in transit by team Apr 2022 to Mar 2023



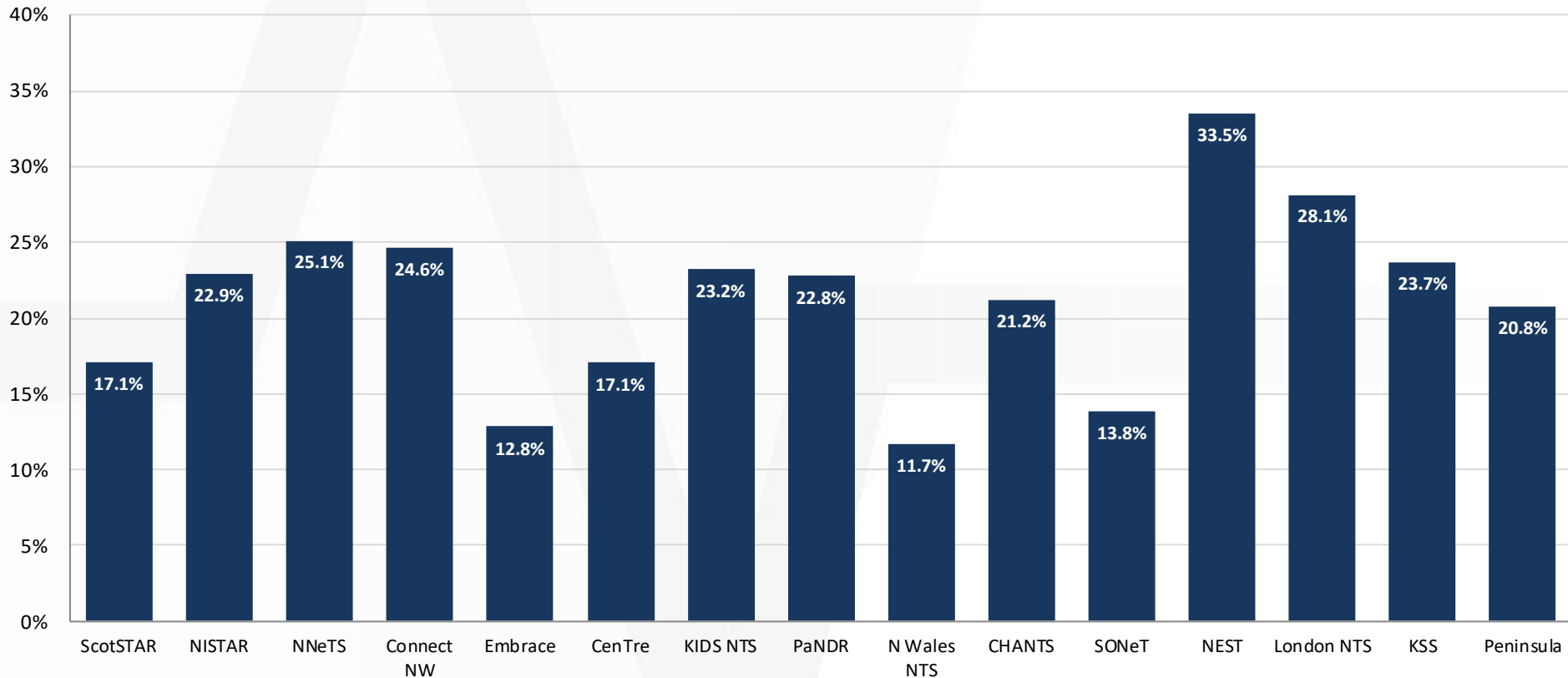
Scottish  
Ambulance  
Service  
University National NHS Board



# Infants who are ventilated in transit as a percentage of total transfers, by team Apr 2022 to Mar 2023



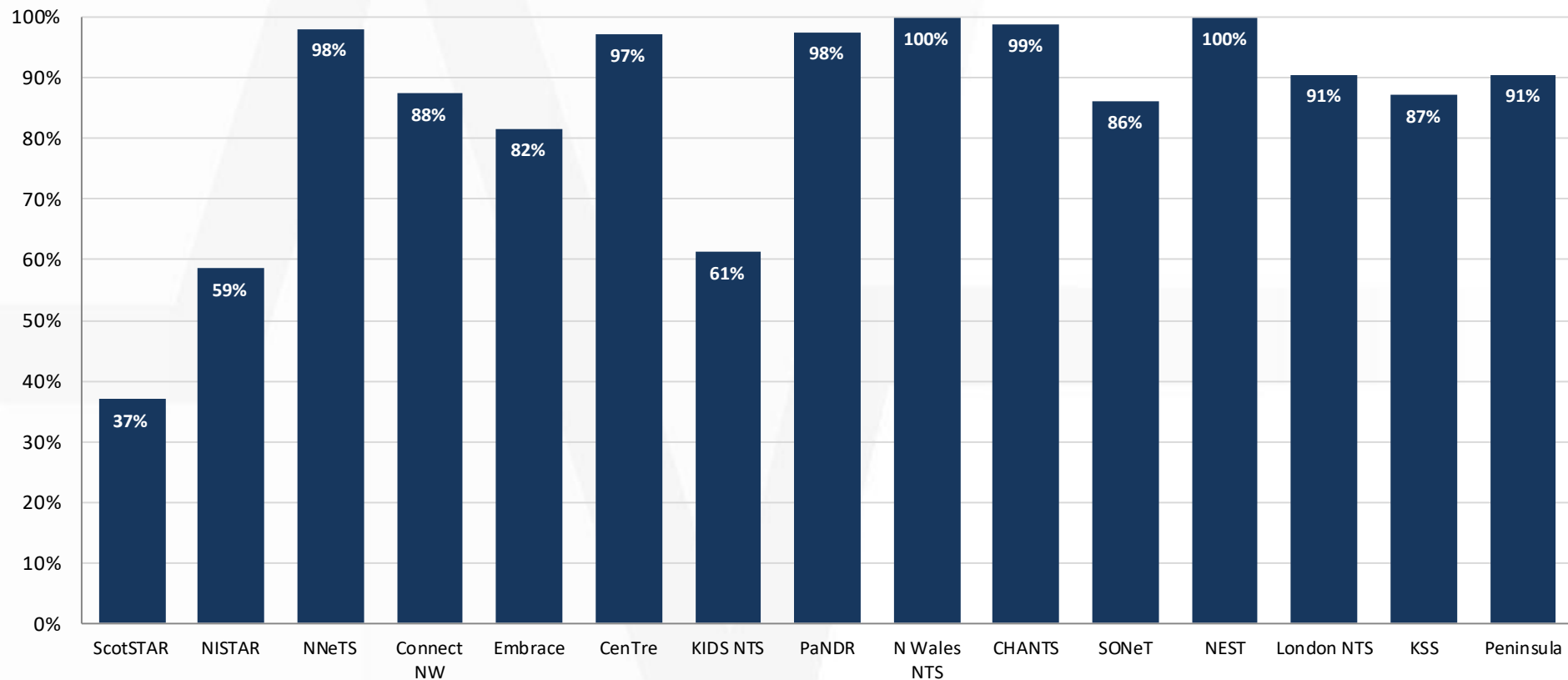
Scottish  
Ambulance  
Service  
University National NHS Board



# Ventilated patients with a pCO<sub>2</sub> recorded on completion of transfer, as a percentage of ventilated transfers by team Apr 2022 to Mar 2023



Scottish  
Ambulance  
Service  
University National NHS Board

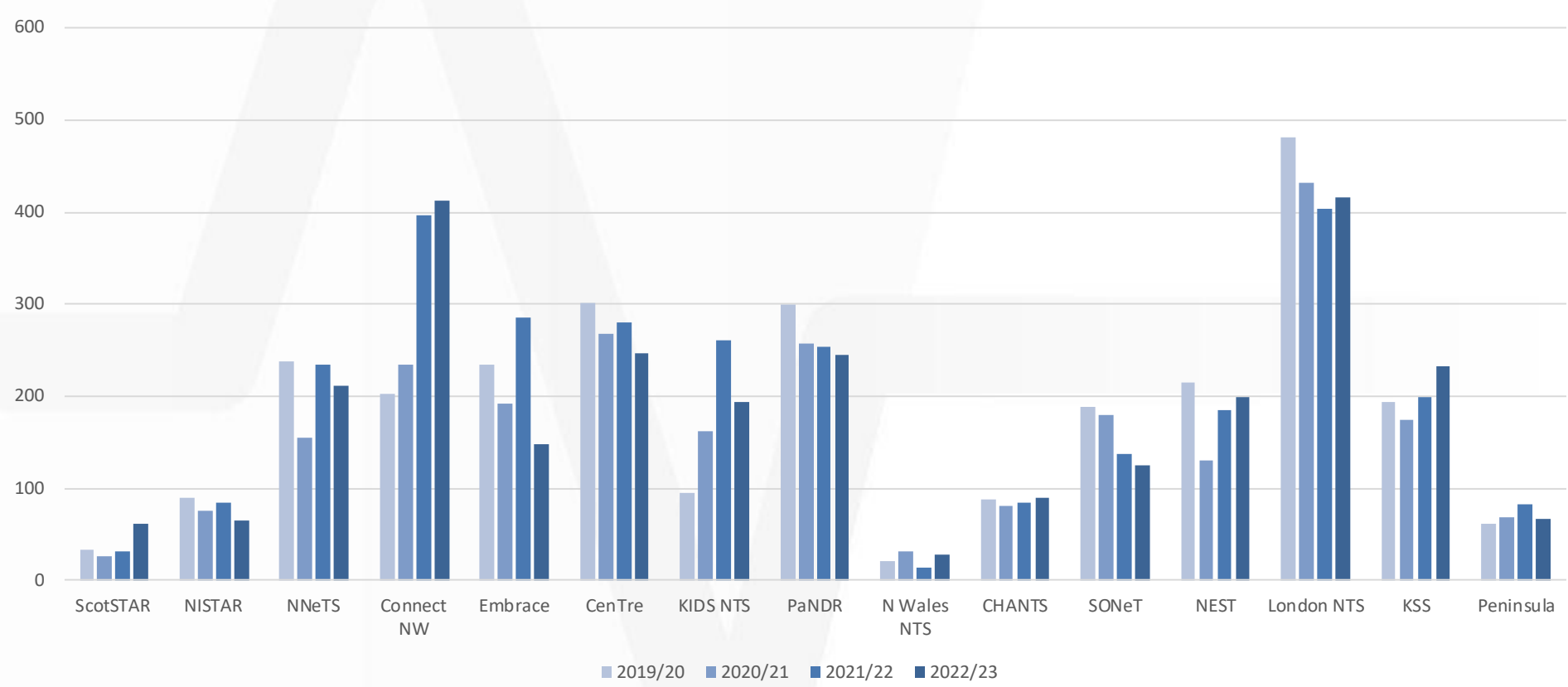




# Trends in numbers with a pCO<sub>2</sub> recorded on completion of the transfer/team by team, 2019/20 to 2022/23



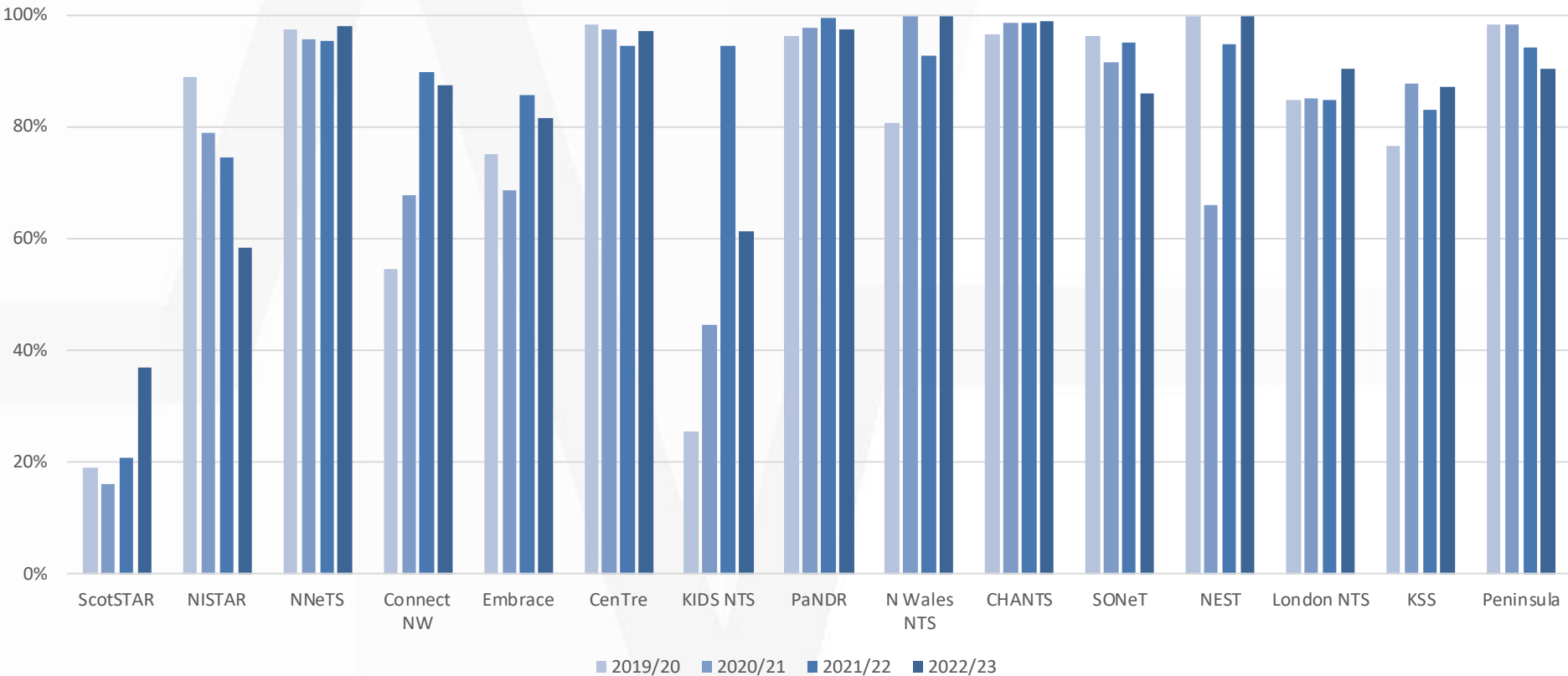
Scottish  
Ambulance  
Service  
University National NHS Board



# Trends in percentages of ventilated infants with a pCO<sub>2</sub> recorded on completion of the transfer, by team, 2019/20 to 2022/23



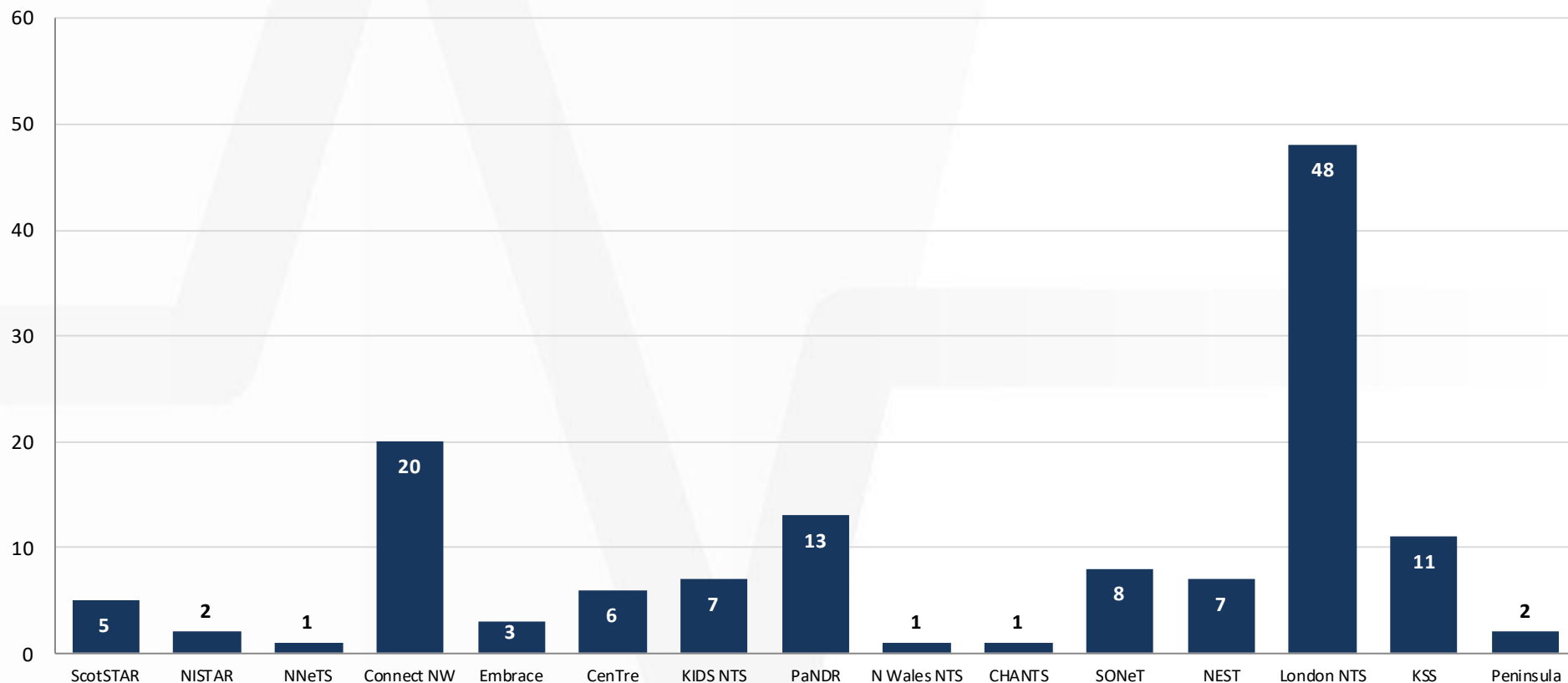
Scottish Ambulance Service  
University National NHS Board



# Numbers of ventilated patients with a pCO<sub>2</sub> <4 kPa on completion of transfer, by team Apr 2022 to Mar 2023



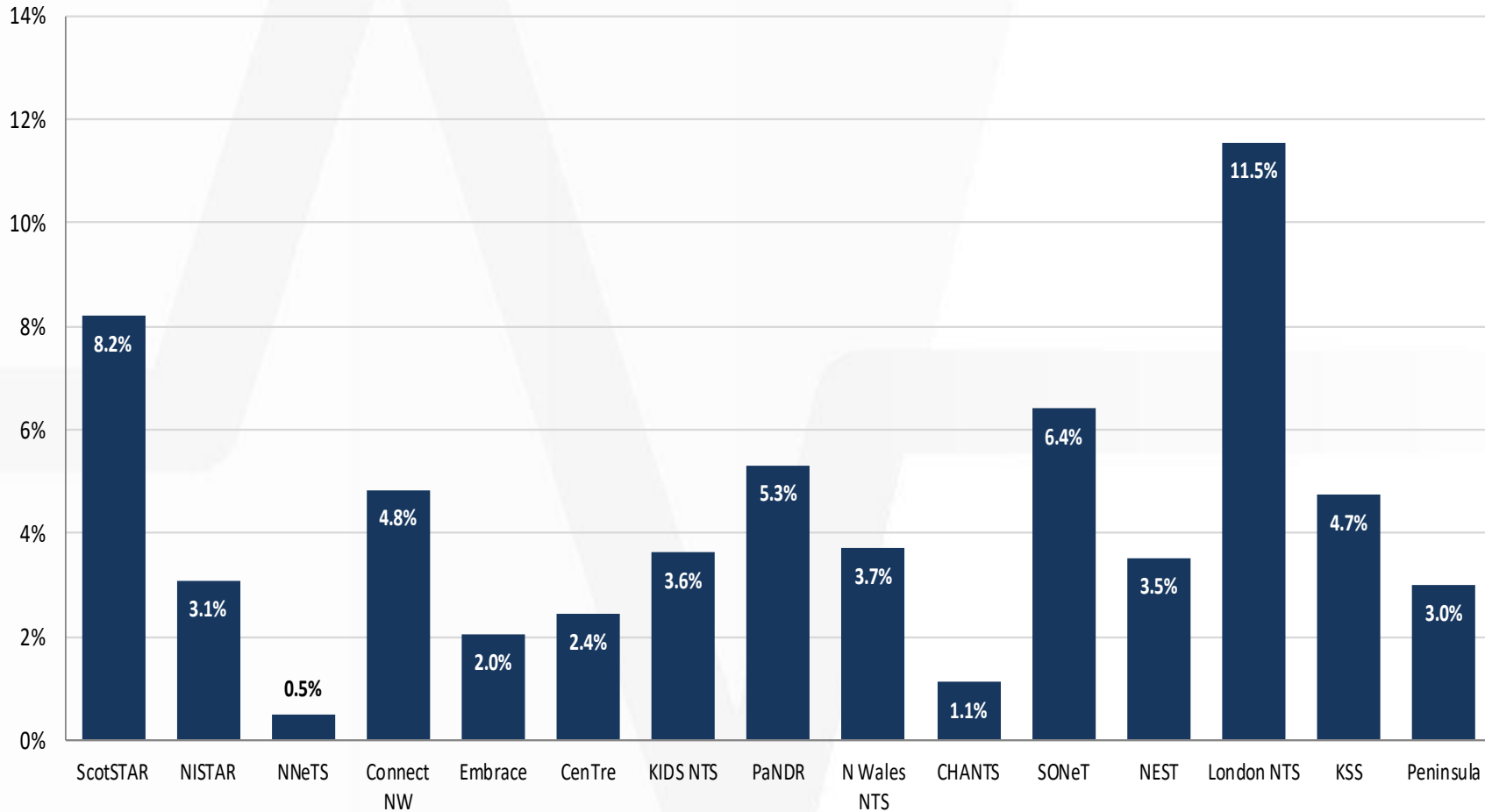
Scottish Ambulance Service  
University National NHS Board



# pCO<sub>2</sub> <4 on completion of transfer as a percentage of ventilated transfers by team, 2022/23



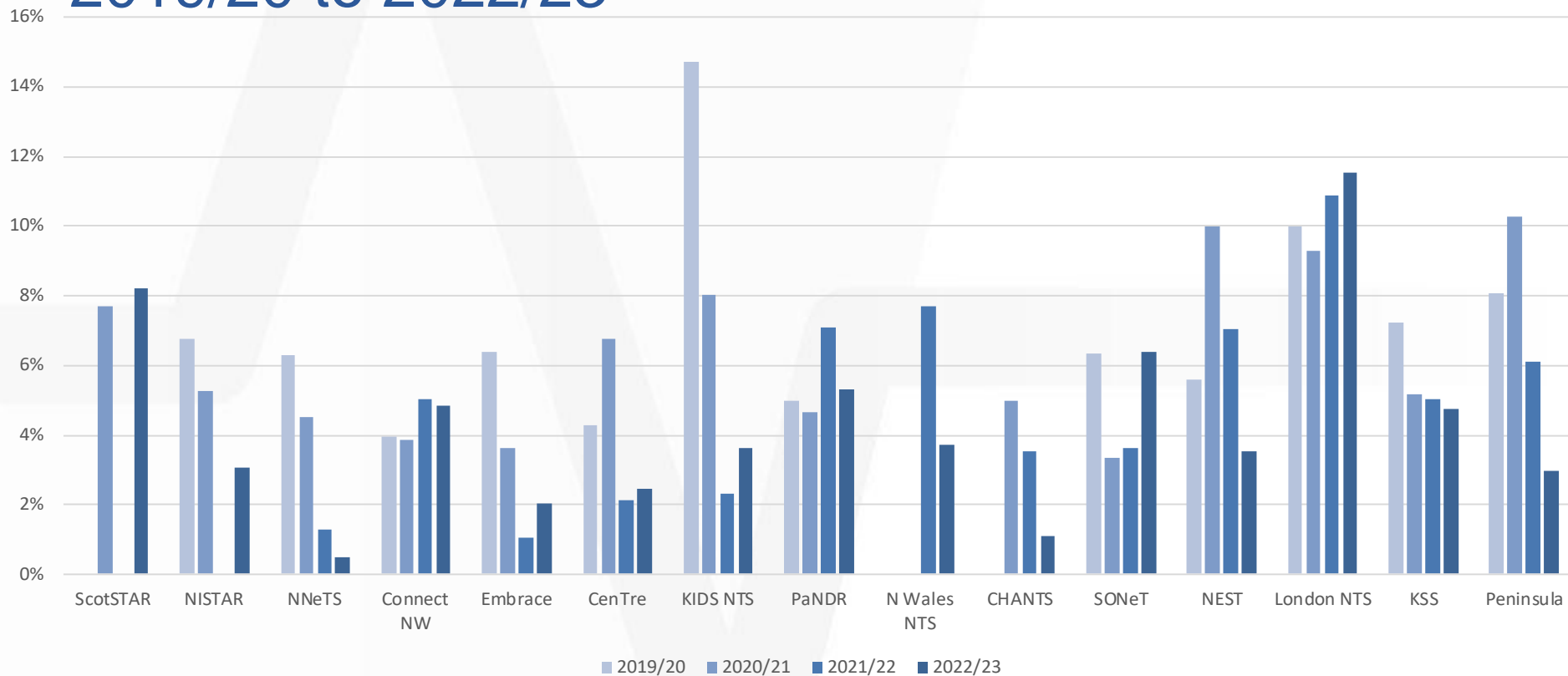
Scottish  
Ambulance  
Service  
University National NHS Board



# Trends in infants with pCO<sub>2</sub> <4kPa on completion of transfer, as a percentage of ventilated transfers with pCO<sub>2</sub> recorded, by team 2019/20 to 2022/23



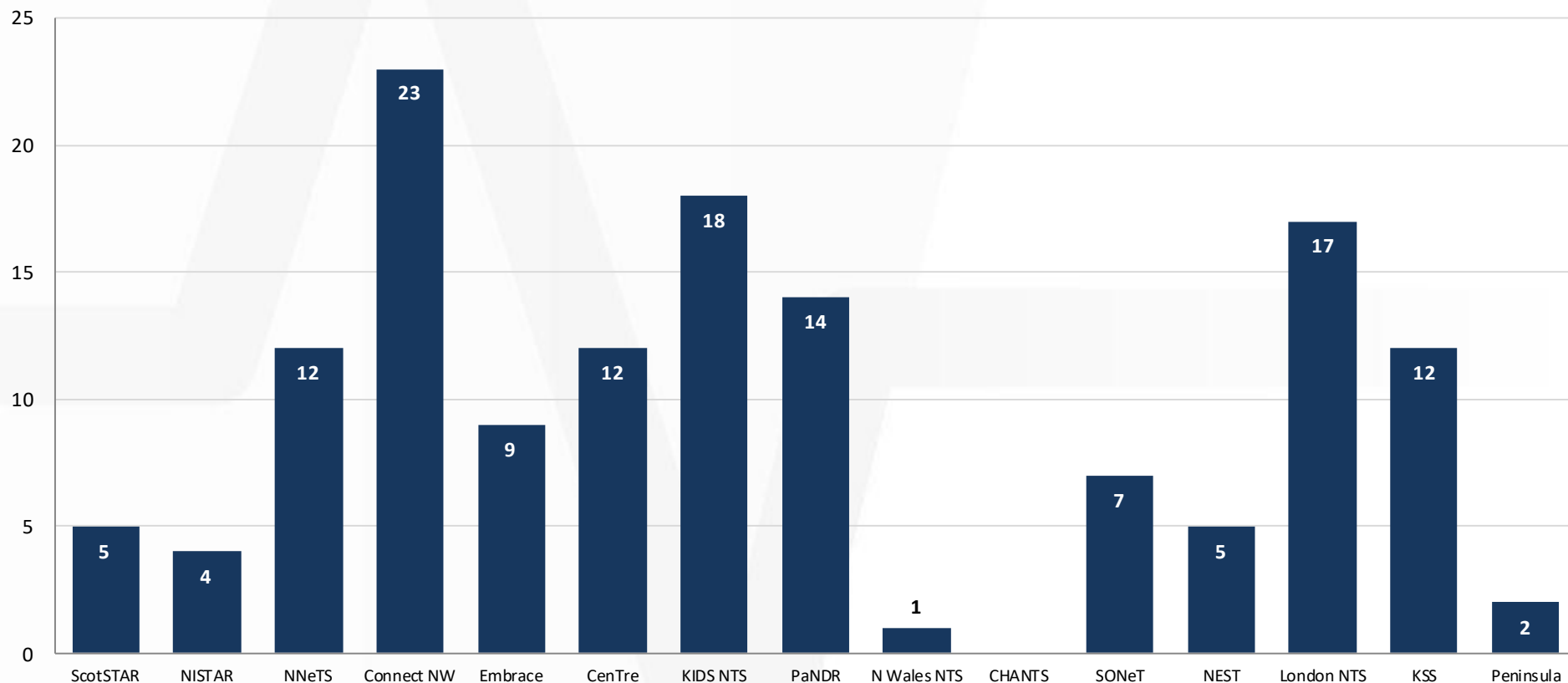
Scottish Ambulance Service  
University National NHS Board



# Numbers where $p\text{CO}_2 > 7$ kPa and $\text{pH} < 7.2$ on completion of transfer by team 2022/23



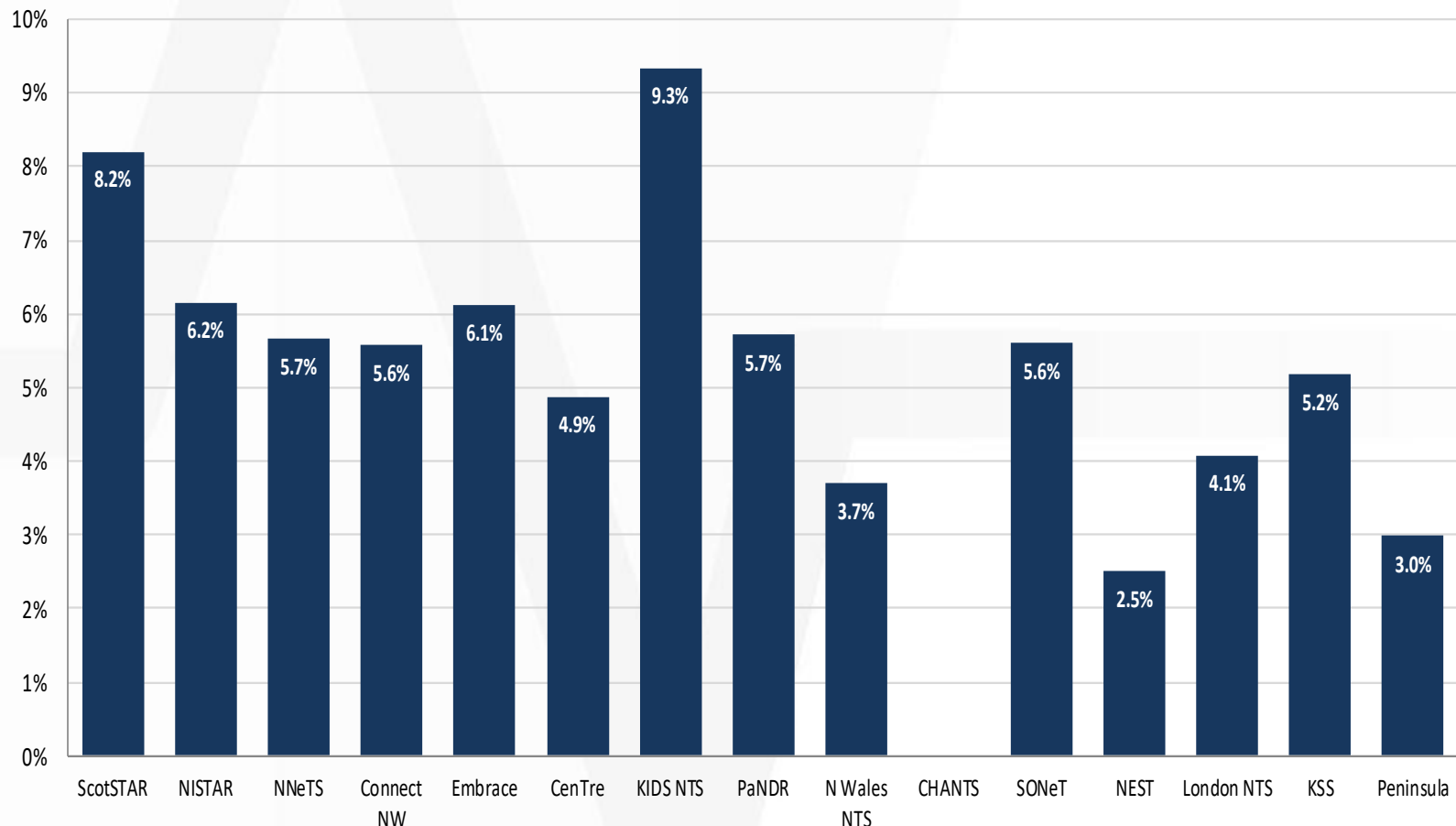
Scottish  
Ambulance  
Service  
University National NHS Board



# pCO<sub>2</sub> >7 kPa and pH <7.2 on completion of transfer as a percentage of ventilated transfers with pCO<sub>2</sub> recorded by team 2022/23



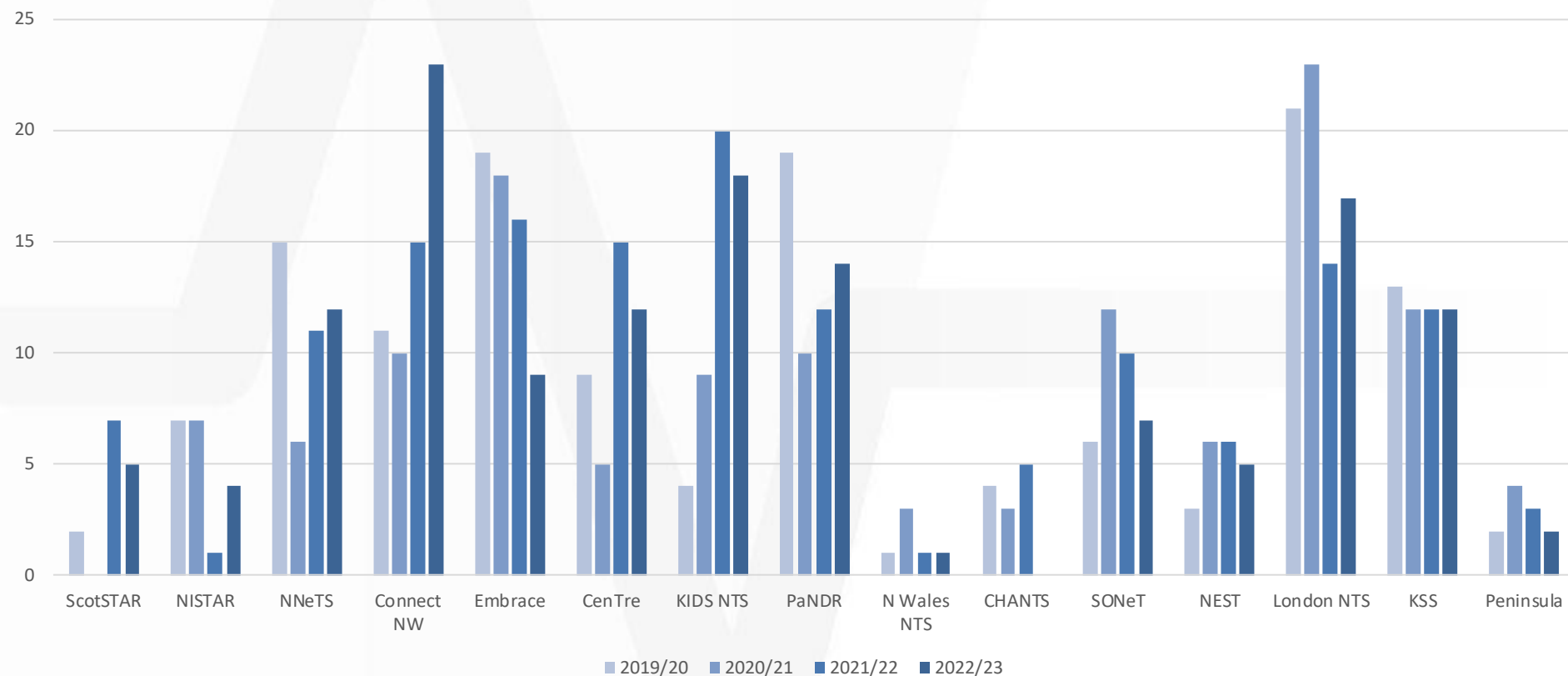
Scottish Ambulance Service  
University National NHS Board



# Trends in numbers where $\text{CO}_2 > 7 \text{ kPa}$ and $\text{pH} < 7.2$ on completion of transfer by team 2019/20 to 2022/23



Scottish Ambulance Service  
University National NHS Board

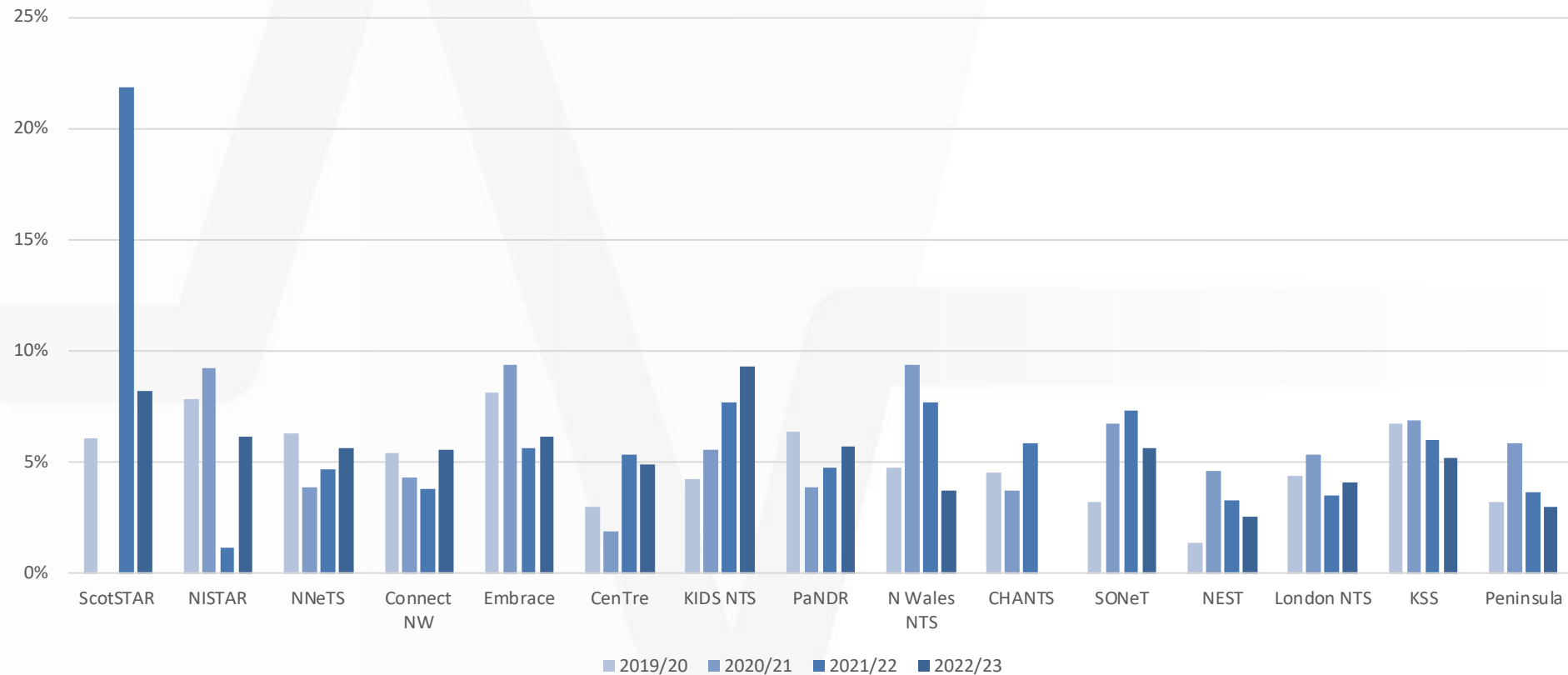




# Trends In $p\text{CO}_2 >7$ kPa and $\text{pH} <7.2$ on completion of transfer as a percentage of ventilated transfers by team 2019/20 to 2022/23



Scottish Ambulance Service  
University National NHS Board

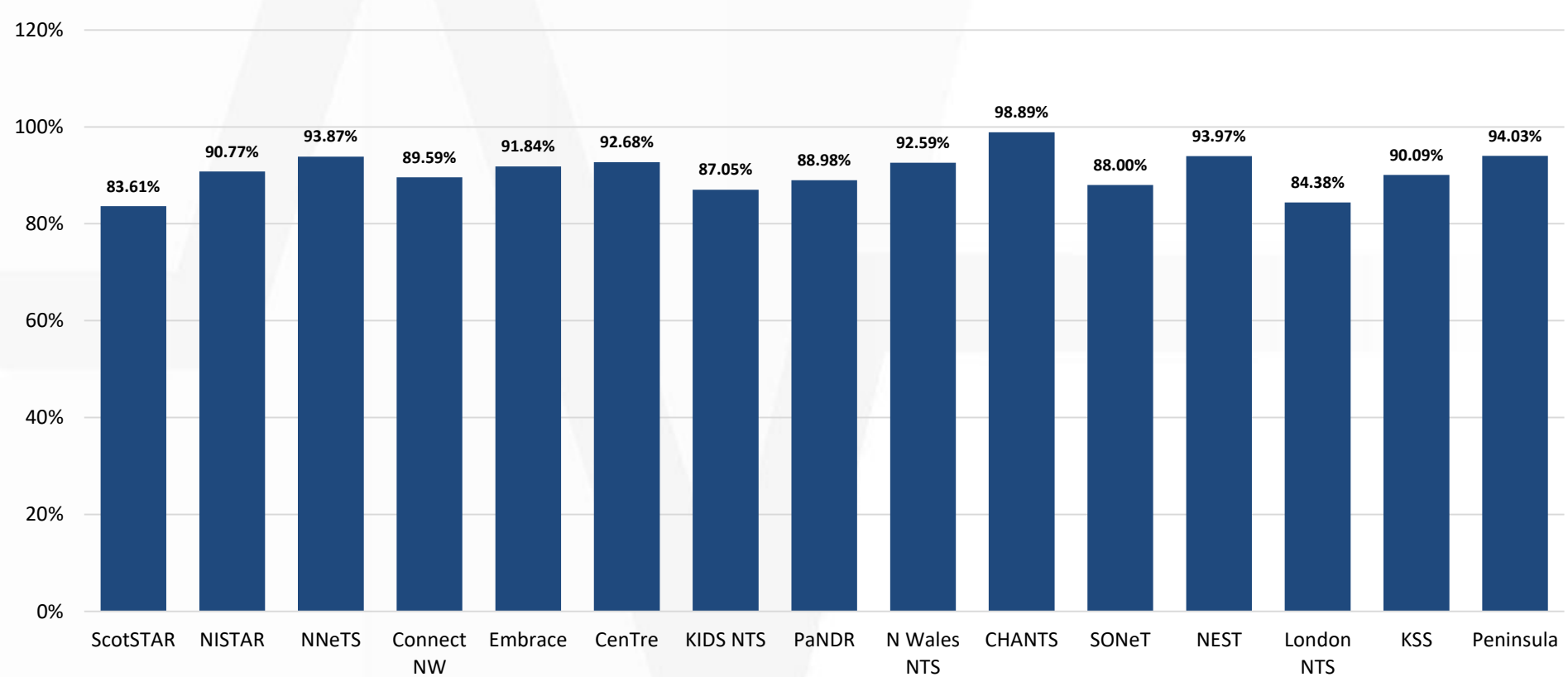


# Normocapnia 2022-23

## pCO2 >4 and <7 (and pH>7.2)



Scottish  
Ambulance  
Service  
University National NHS Board



# Team characteristics



Scottish  
Ambulance  
Service  
University National NHS Board

**NHS**  
SCOTLAND

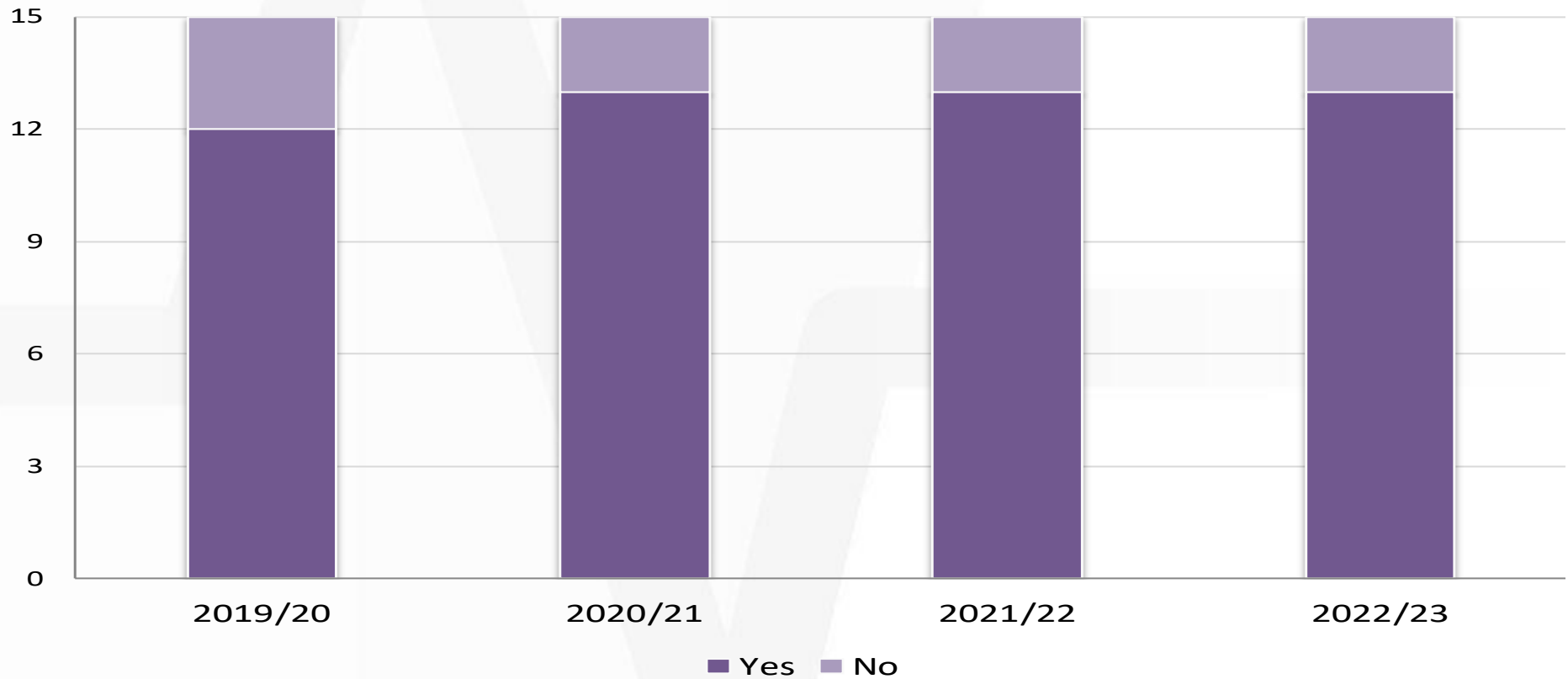
- Data on
  - 24 hour service
  - Dedicated vehicles
  - Cot bureau/In Utero transfer coordination
  - Conference calling
  - Eligible births not in a NICU centre review process
  - Consultant presence
  - HFO, iNO, VG cooling, ET/Tc CO<sub>2</sub>
  - Bilious vomiting
  - Parental feedback

# Service Characteristics 2022/23

## 24 hour service



Scottish  
Ambulance  
Service  
University National NHS Board

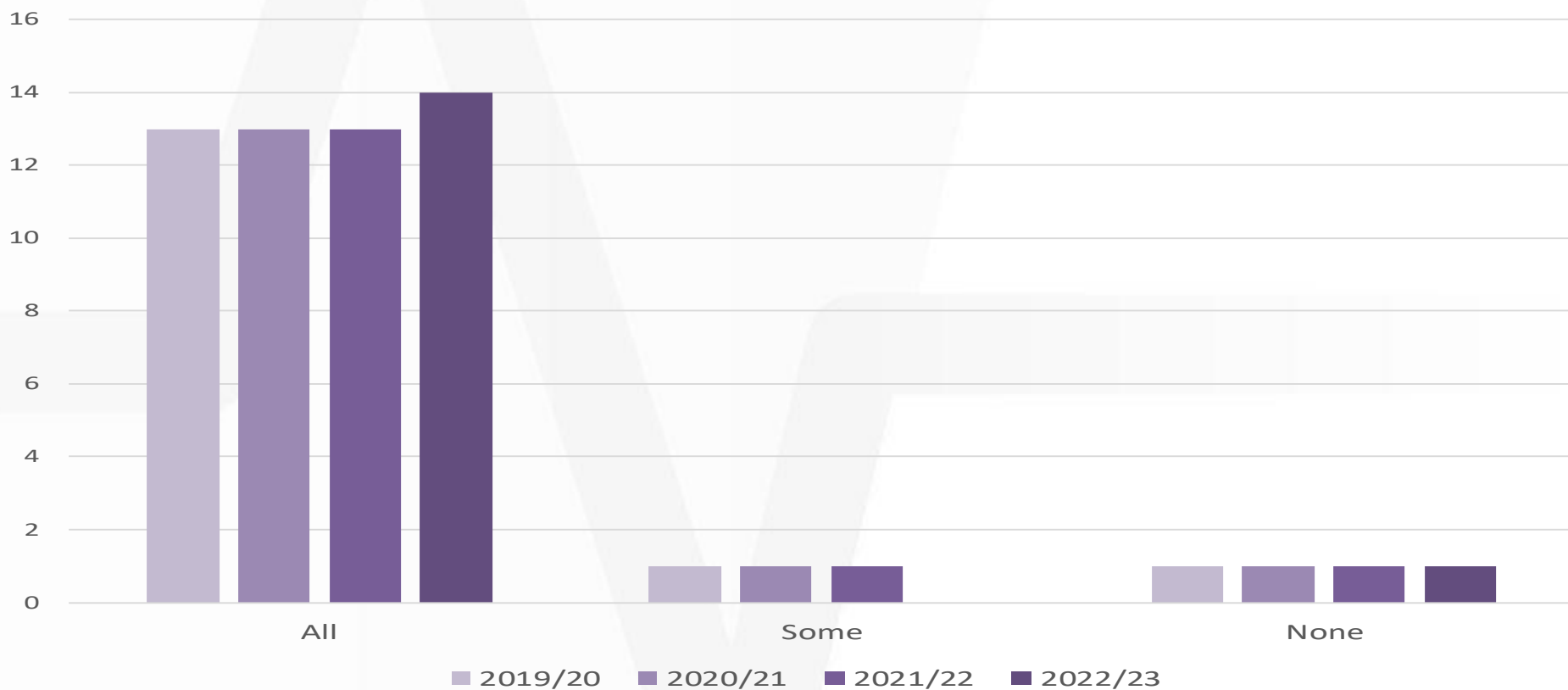


# Service Characteristics 2022/23

## Dedicated Vehicles



Scottish  
Ambulance  
Service  
University National NHS Board

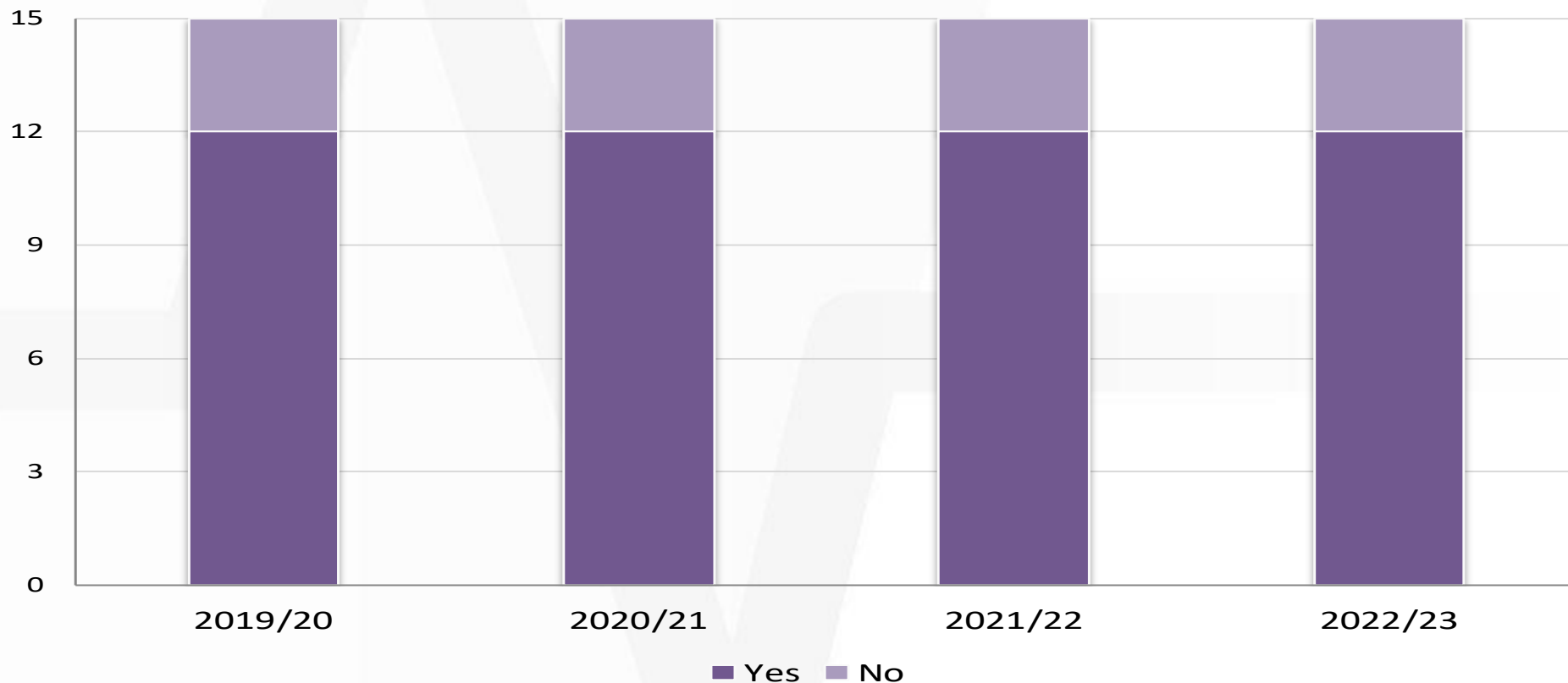


# Service Characteristics 2022/23

## Run a cot bureau



Scottish  
Ambulance  
Service  
University National NHS Board



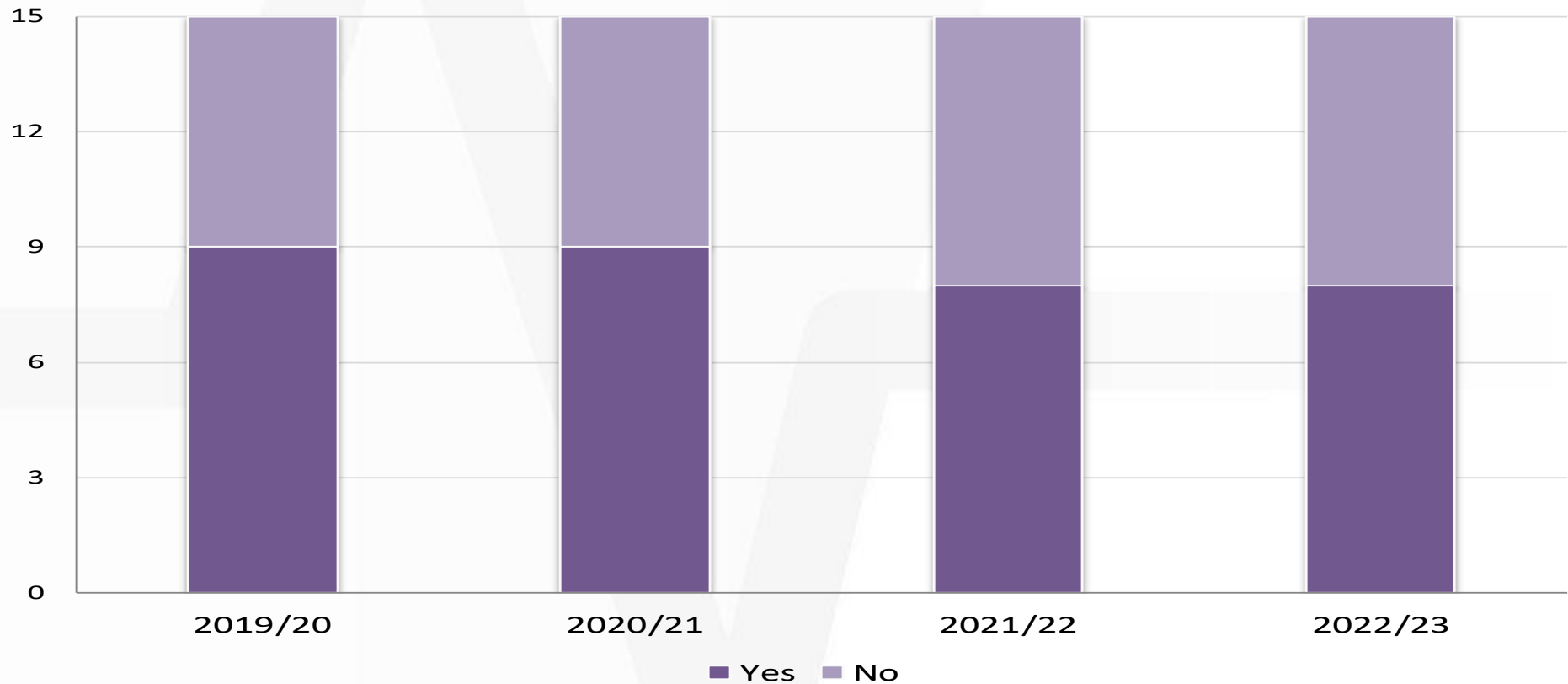
# Service Characteristics 2022/23



Scottish  
Ambulance  
Service  
University National NHS Board



## Do you offer support for locating appropriate maternal and neonatal beds for in-utero transfers?

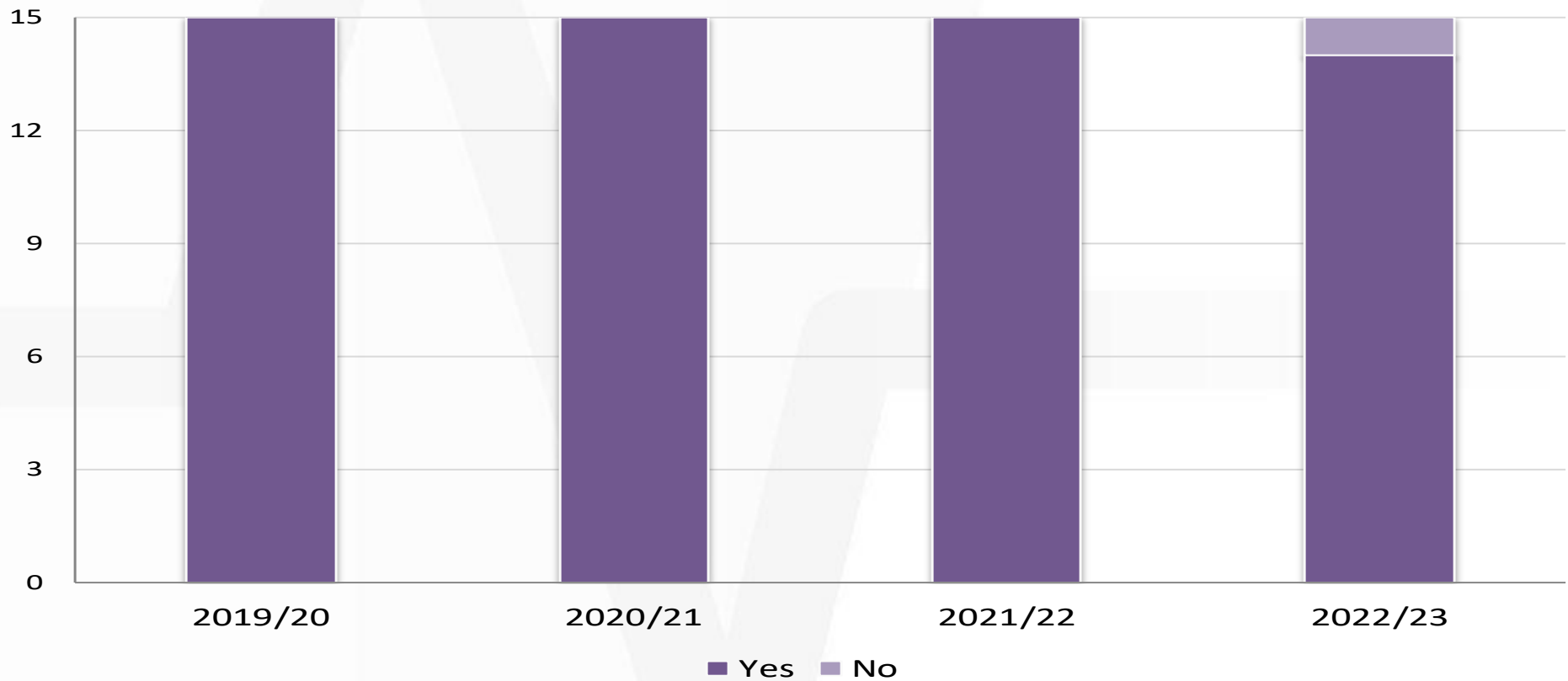


# Service Characteristics 2022/23

## Conference Calling



Scottish  
Ambulance  
Service  
University National NHS Board



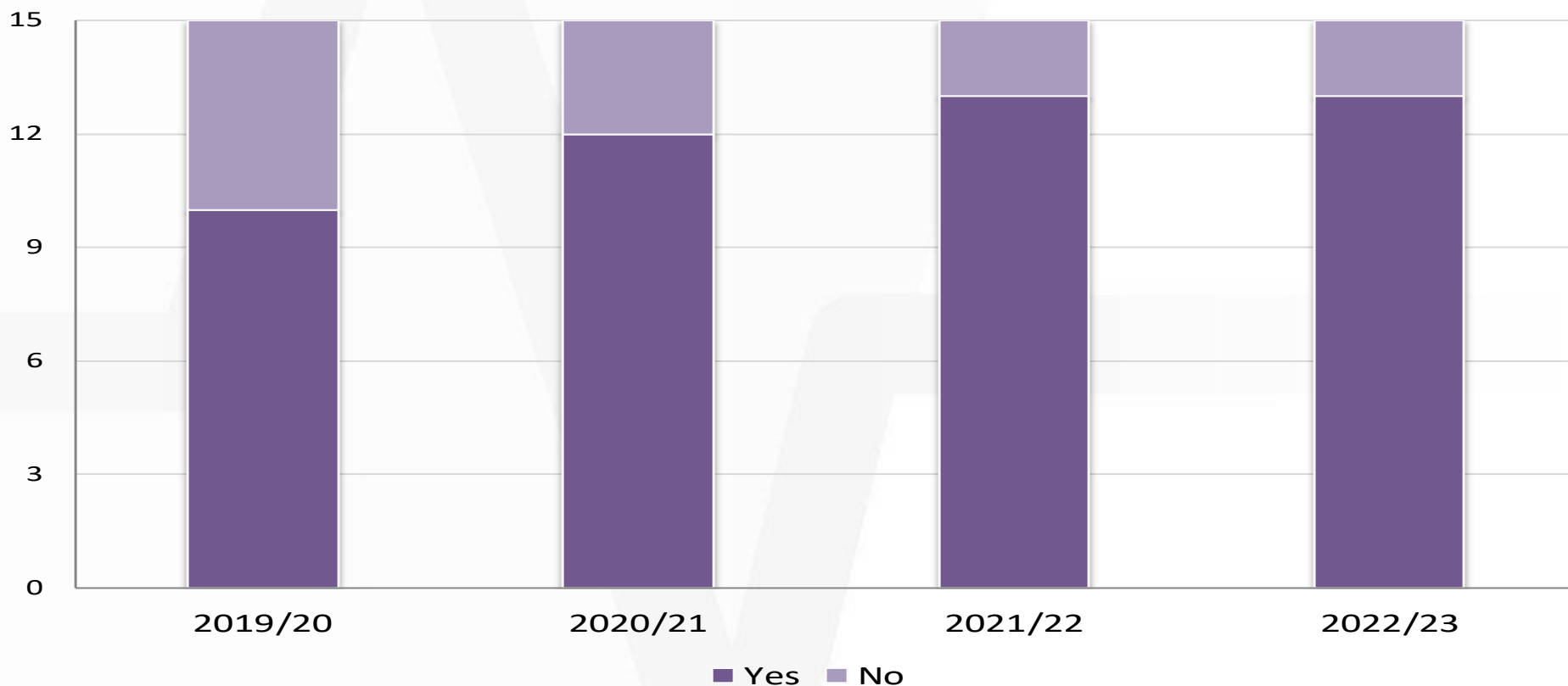


# Service Characteristics 2022/23

## Local network “wrong place” review



Scottish  
Ambulance  
Service  
University National NHS Board

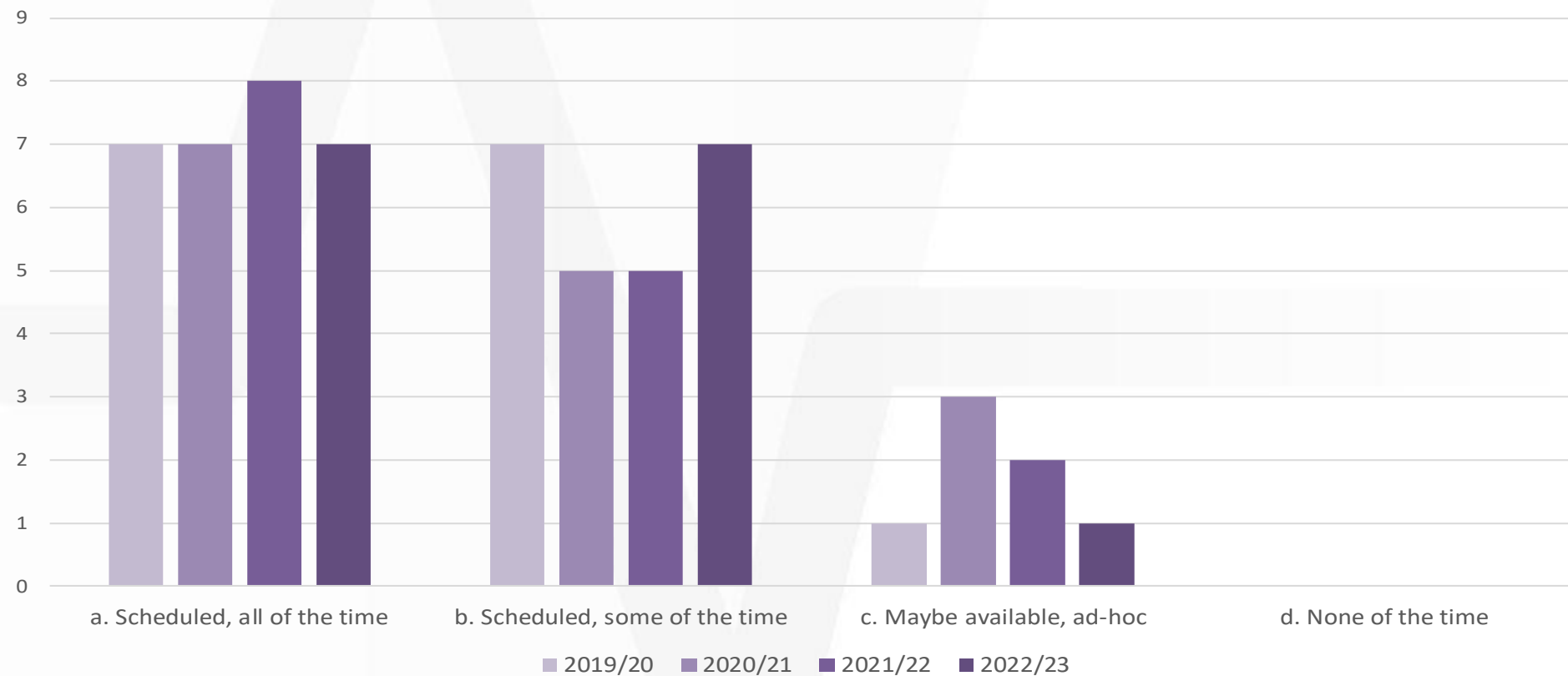


# Service Characteristics 2022/23

## Consultants on duty for neonatal transport



Scottish  
Ambulance  
Service  
University National NHS Board

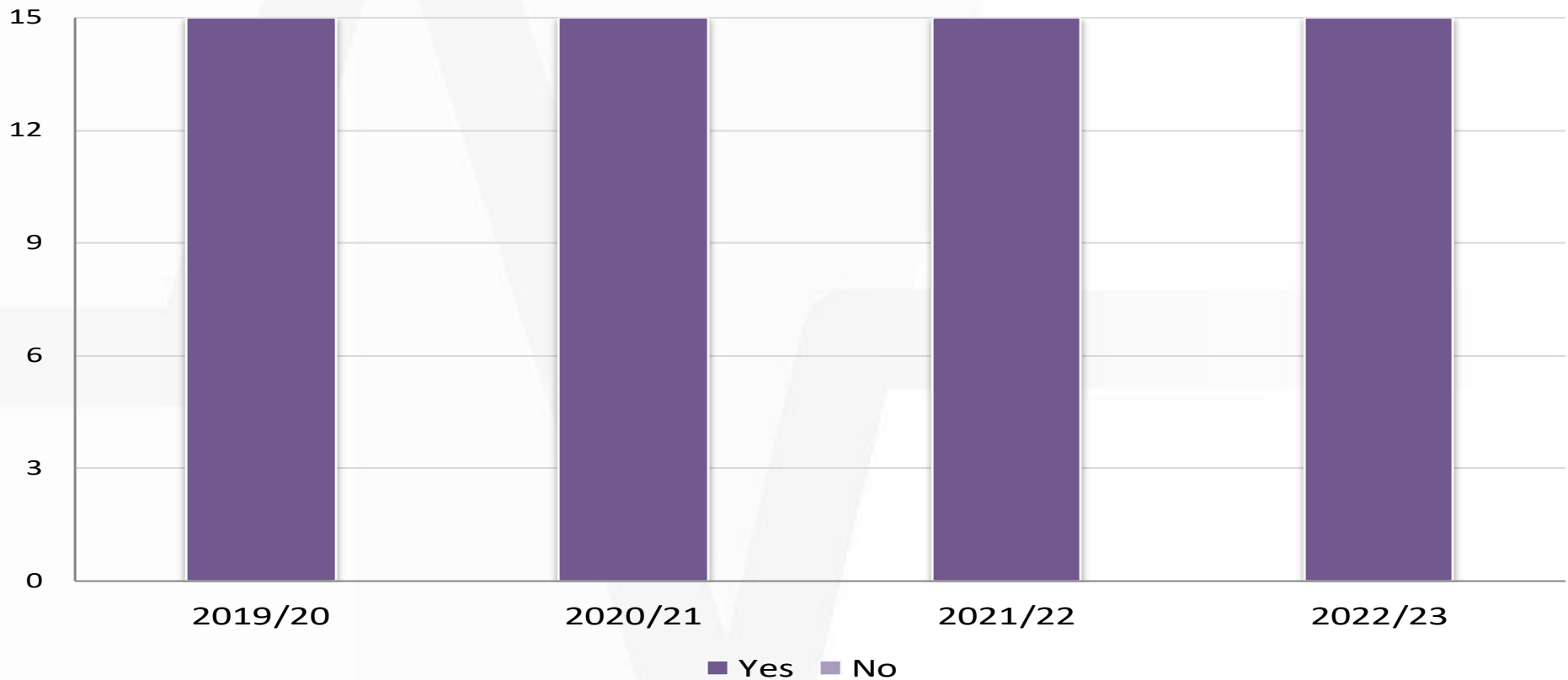


# Service Characteristics 2022/23

## Provide servo-controlled active cooling in transit



Scottish  
Ambulance  
Service  
University National NHS Board

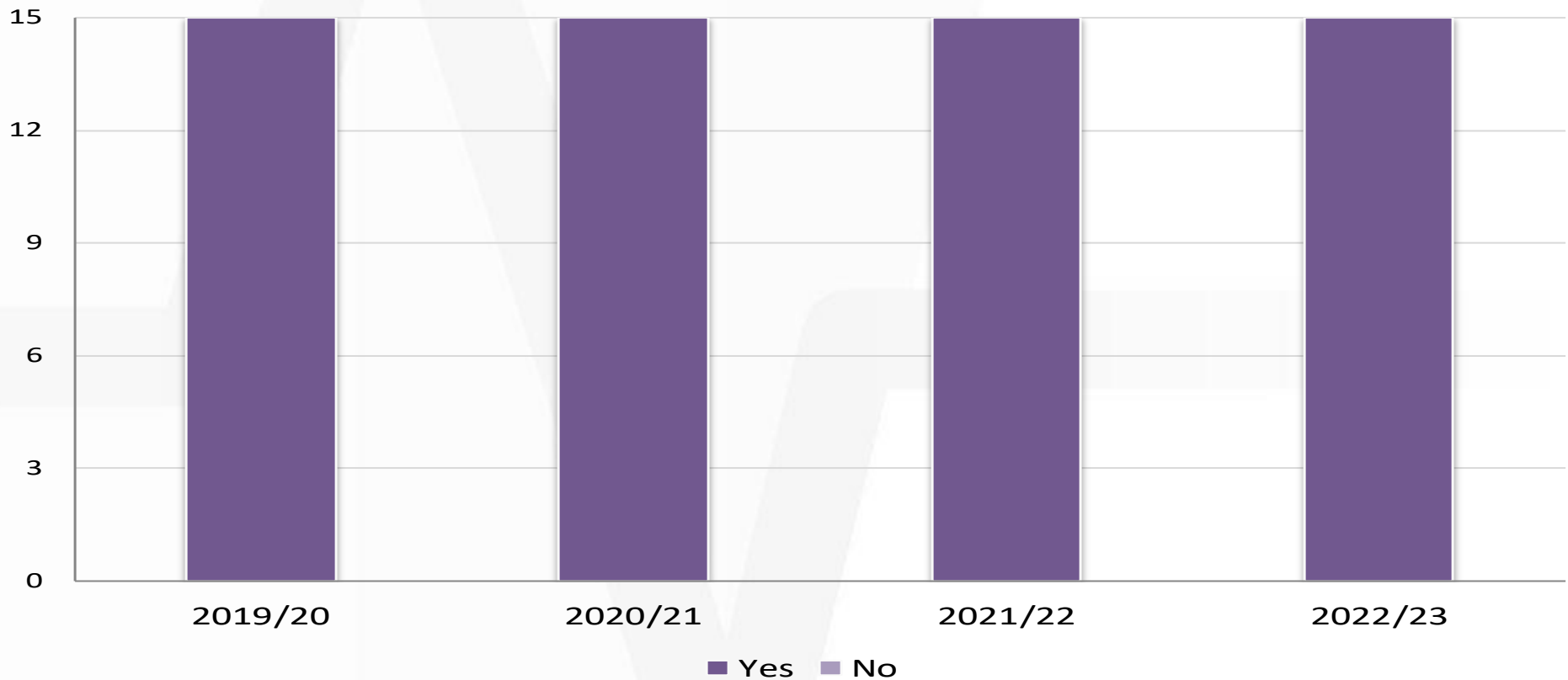


# Service Characteristics 2022/23

## Are you able to offer inhaled nitric oxide in transit?



Scottish  
Ambulance  
Service  
University National NHS Board

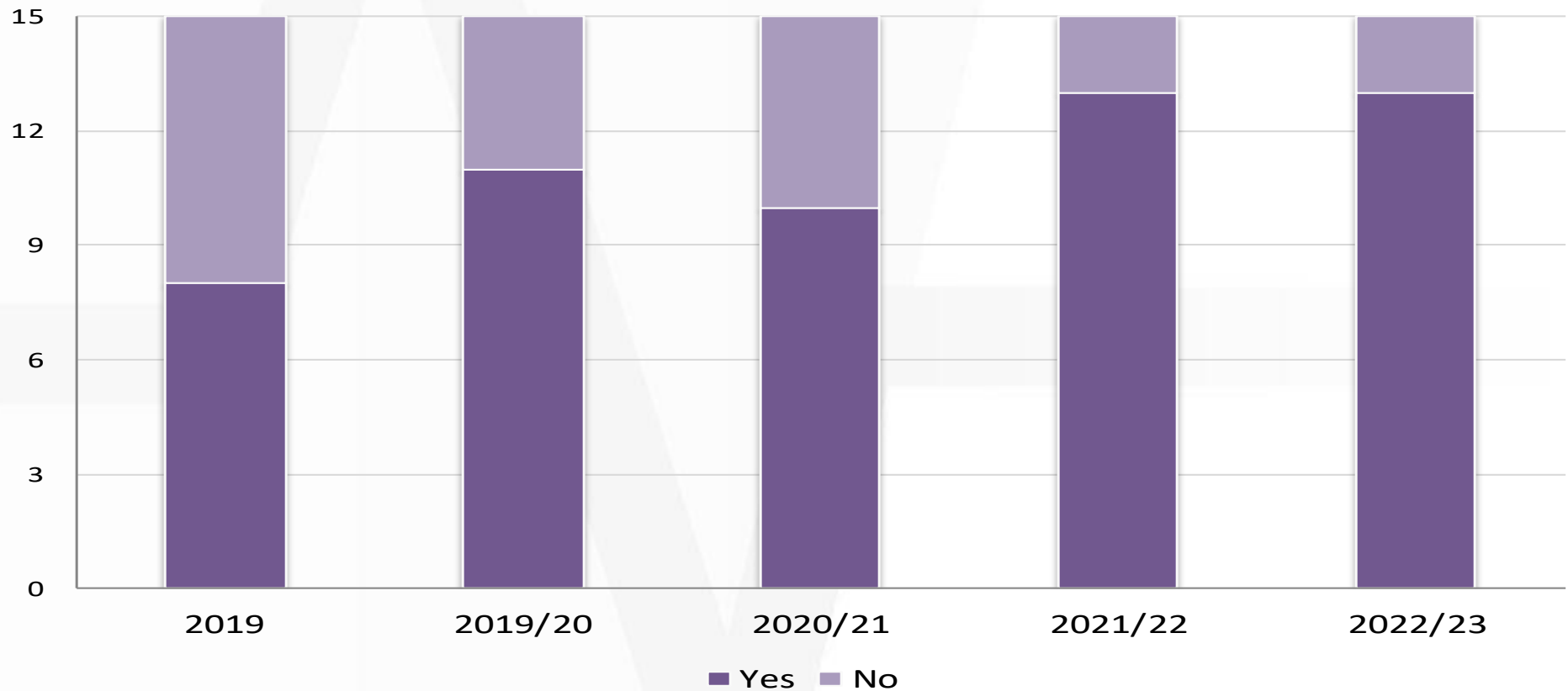


# Service Characteristics 2022/23

## HFO offered in Transit



Scottish  
Ambulance  
Service  
University National NHS Board

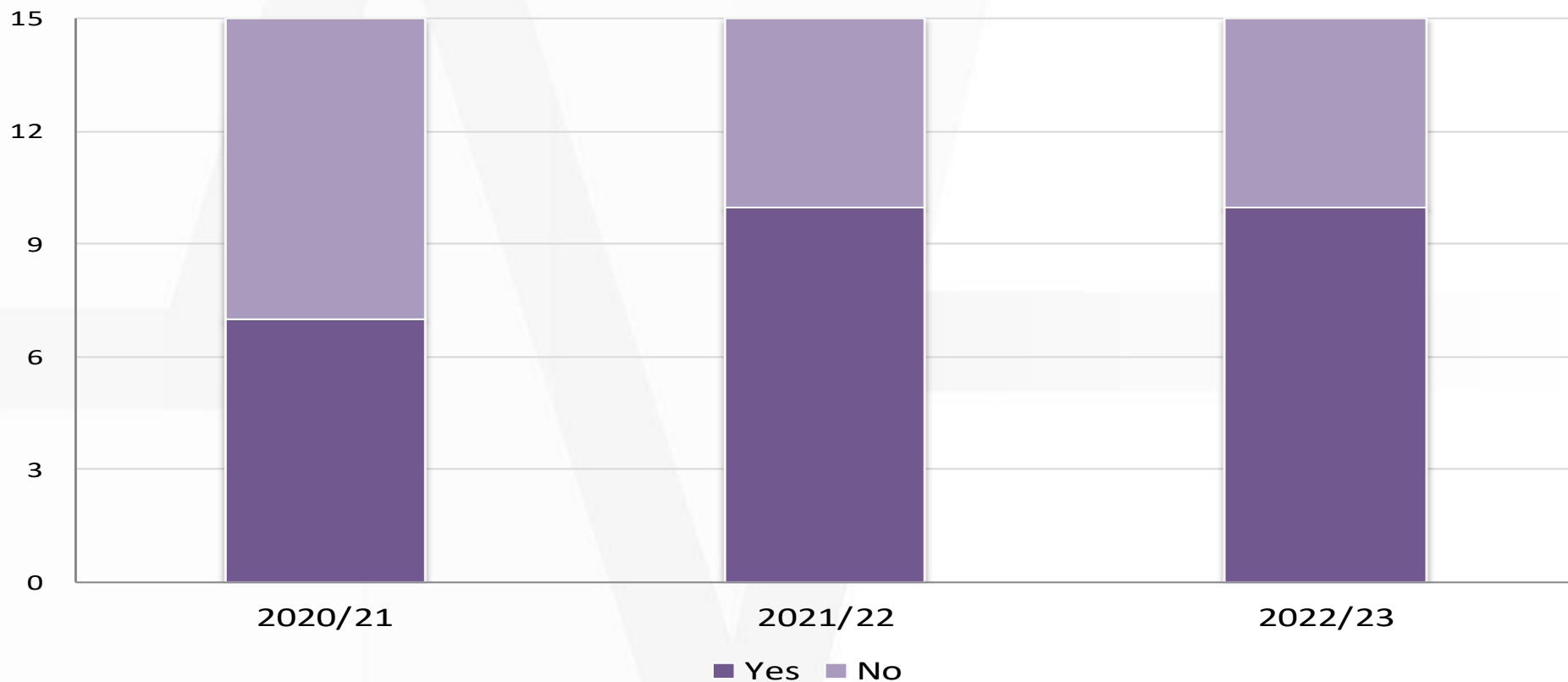


# Service Characteristics 2022/23

## Do you use a transcutaneous CO<sub>2</sub> monitor in transit?



Scottish  
Ambulance  
Service  
University National NHS Board

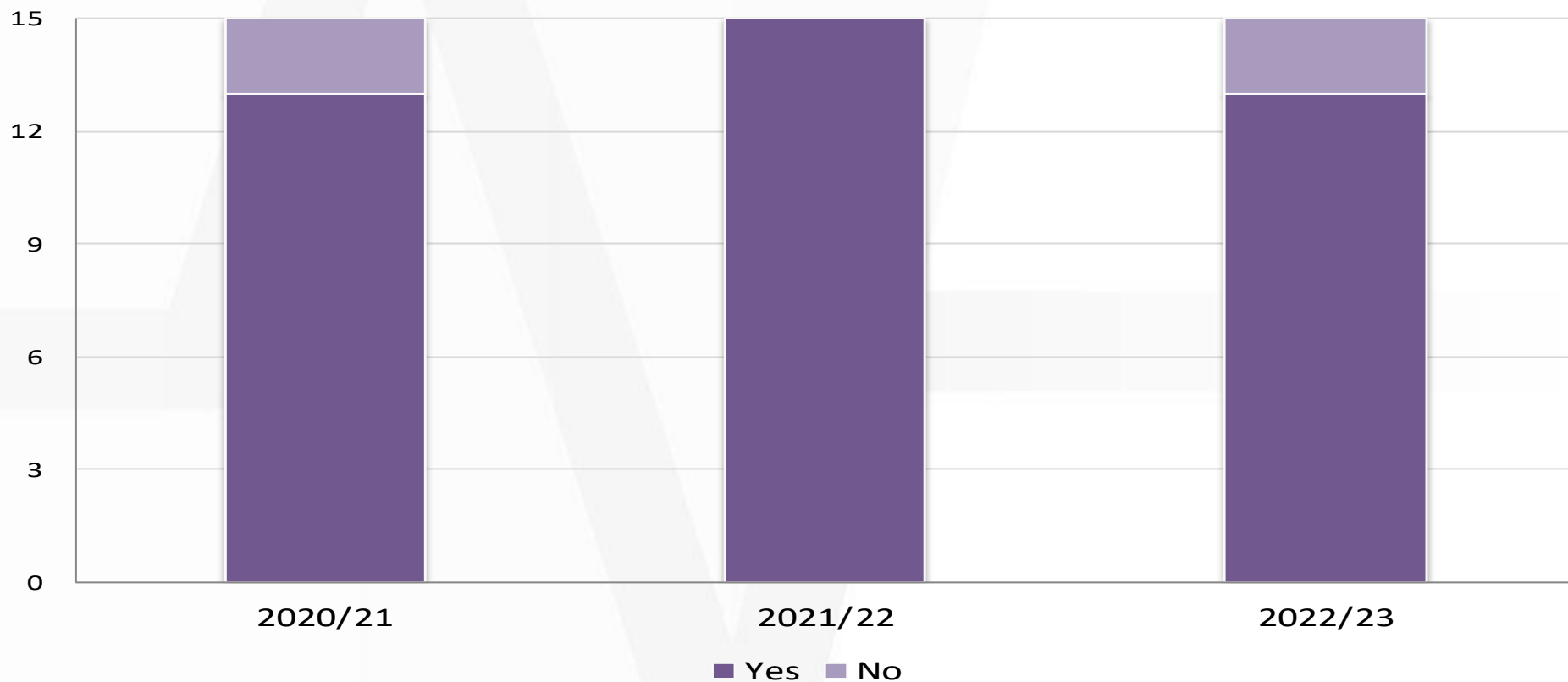


# Service Characteristics 2022/23

## Do you use ET CO<sub>2</sub> monitoring in transit?



Scottish  
Ambulance  
Service  
University National NHS Board

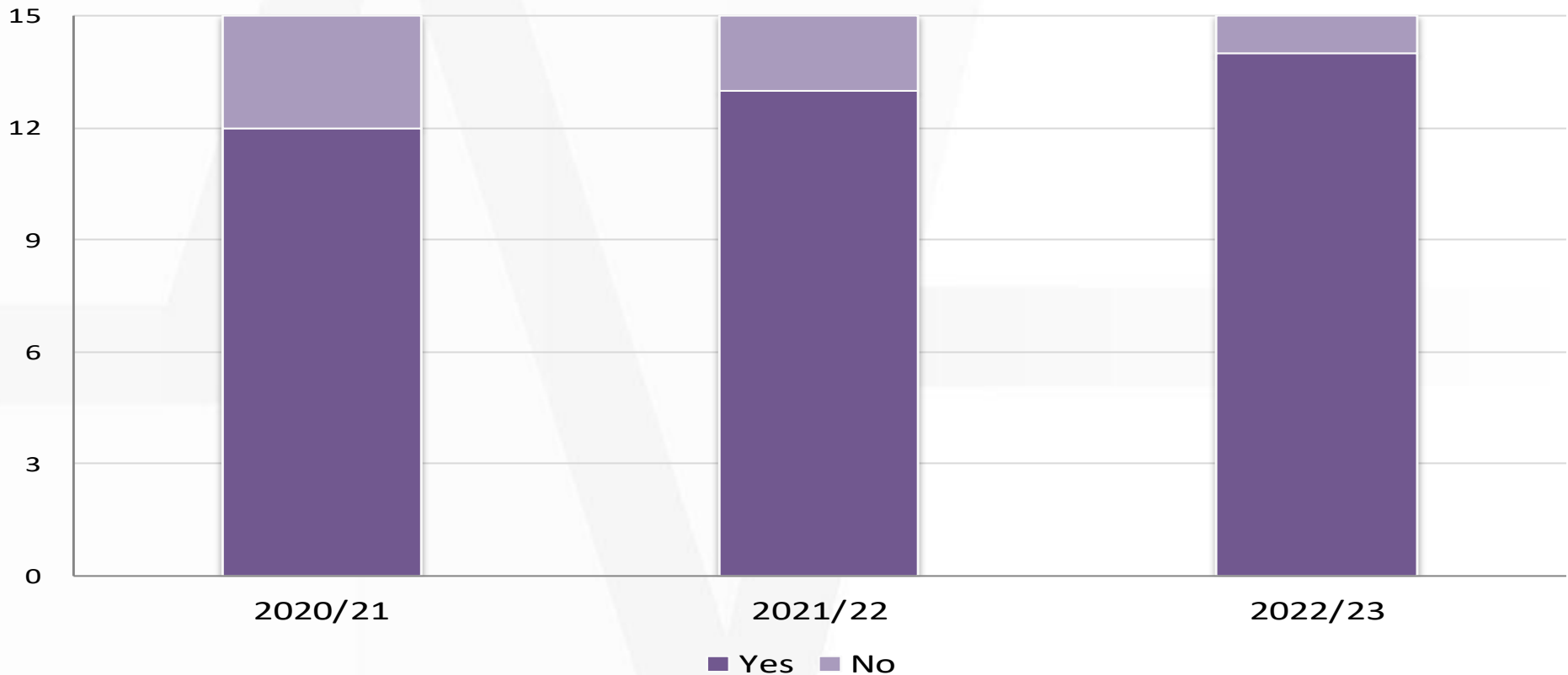


# Service Characteristics 2022/23

## Do you offer Volume Guarantee Ventilation in transit?



Scottish  
Ambulance  
Service  
University National NHS Board





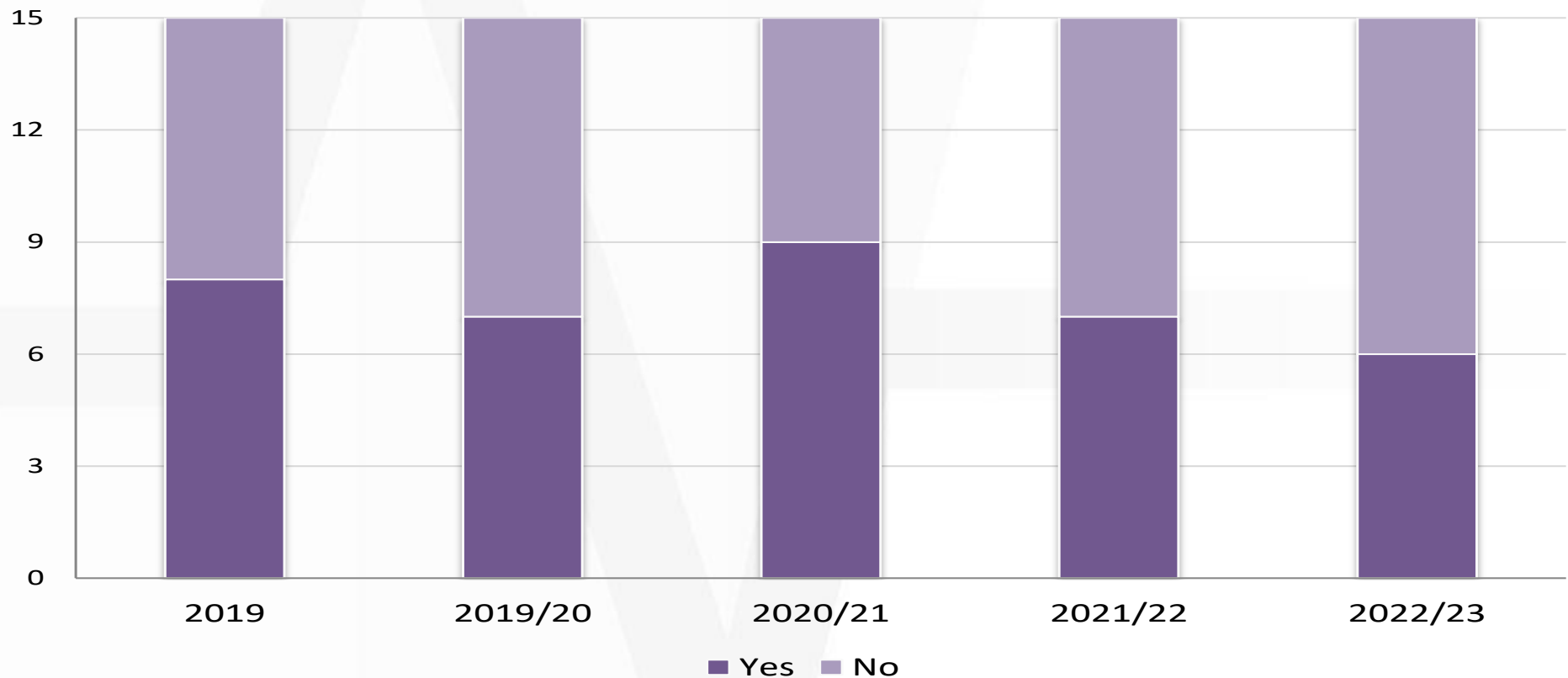
# Service Characteristics 2022/23



Scottish  
Ambulance  
Service  
University National NHS Board



## Infants referred with bile-stained vomiting/aspirates treated as immediate dispatch transfers ?



# Service Characteristics 2022/23

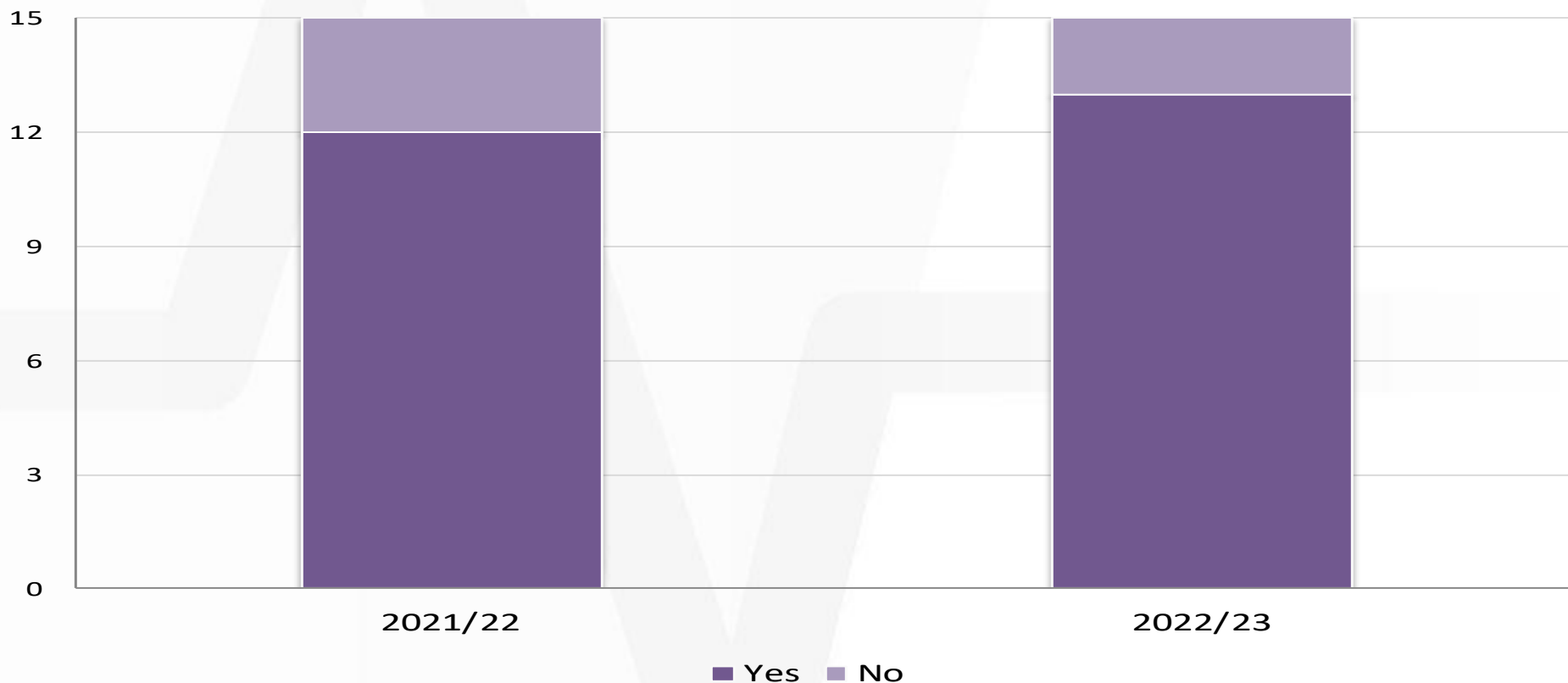


Scottish  
Ambulance  
Service

University National NHS Board



## Do you have a system in place for collecting parental feedback?



# Thanks



Scottish  
Ambulance  
Service  
University National NHS Board



- To all of the data collectors, analysers and submitters from all of the teams
- A huge thank you to Colin Devon, ScotSTAR data analyst who brings all of this together