



NTG Annual Transport Data 2019/20

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ScotSTAR



Method



- Email to transport service's medical and nursing leads requesting activity data from 1.4.19 to 31.3.20
- Brief additional information about each service.



Reorganisations & additions for 2019/20 data

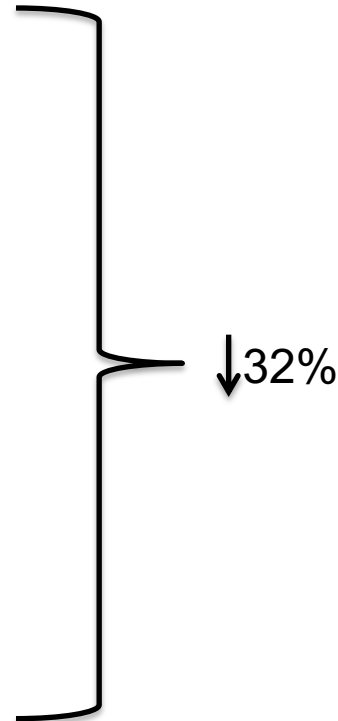


- No reorganisations in 2019/20
- 12 months of data from April 1st 2019 to March 31st 2020
 - Previous requests covered first 6 months of calendar year.
 - Informal review of service statistics showed lack of seasonality across the year in previous years
- Historical data returns have a simple 2x adjustment factor to allow for comparison with the most recent return when displayed in this document

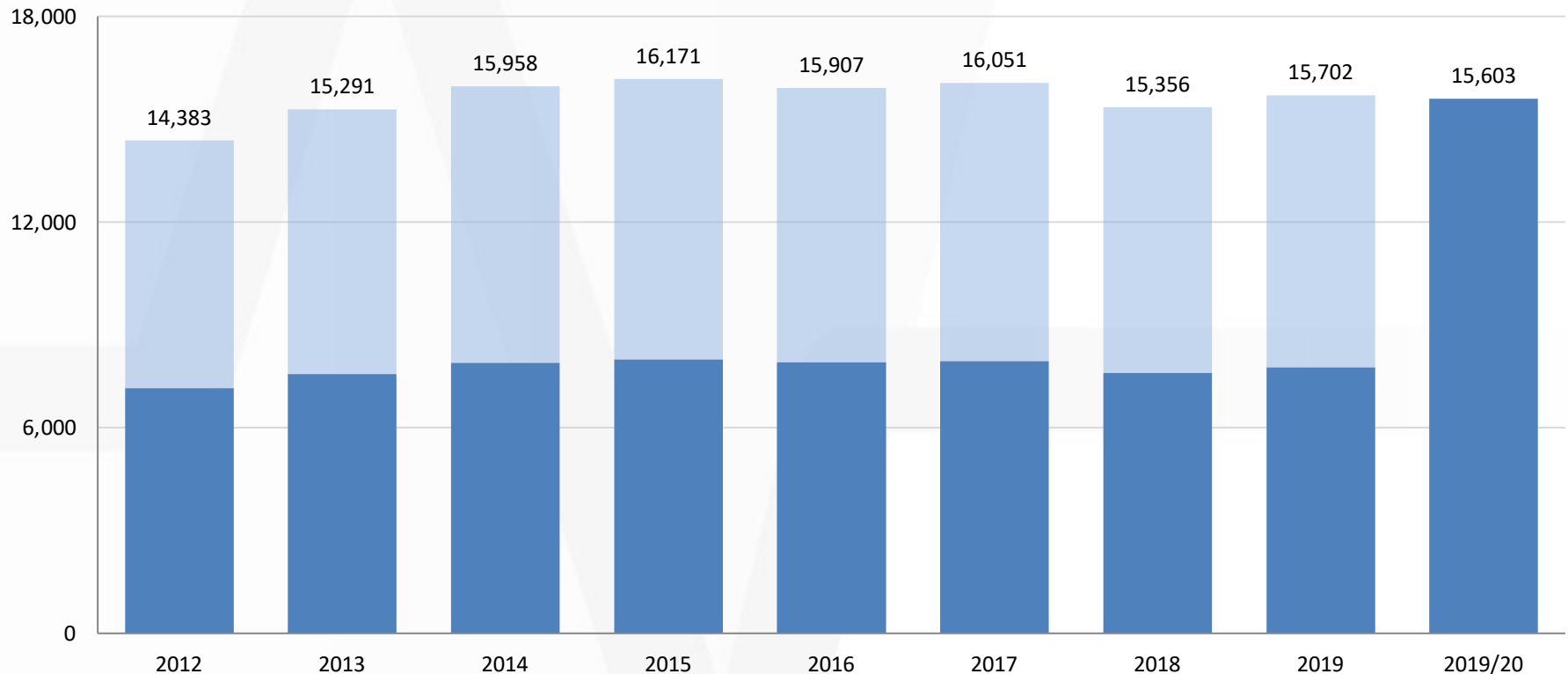


Number of services, UK

- 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 – data from 15
- 2019- data from 15
- 2019/20 – data from 15



All team annualised UK neonatal transport activity

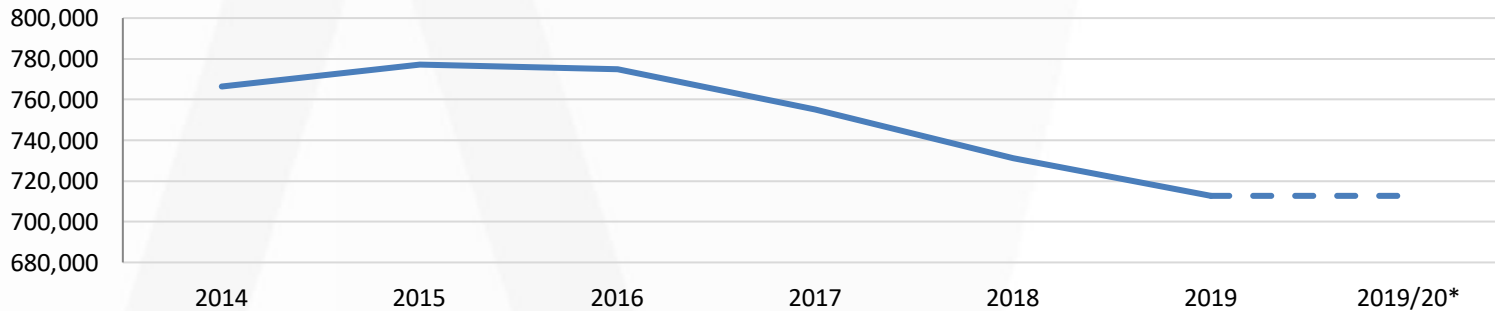


2019-2020 data 12-month
collection period, prior to that 6
months used

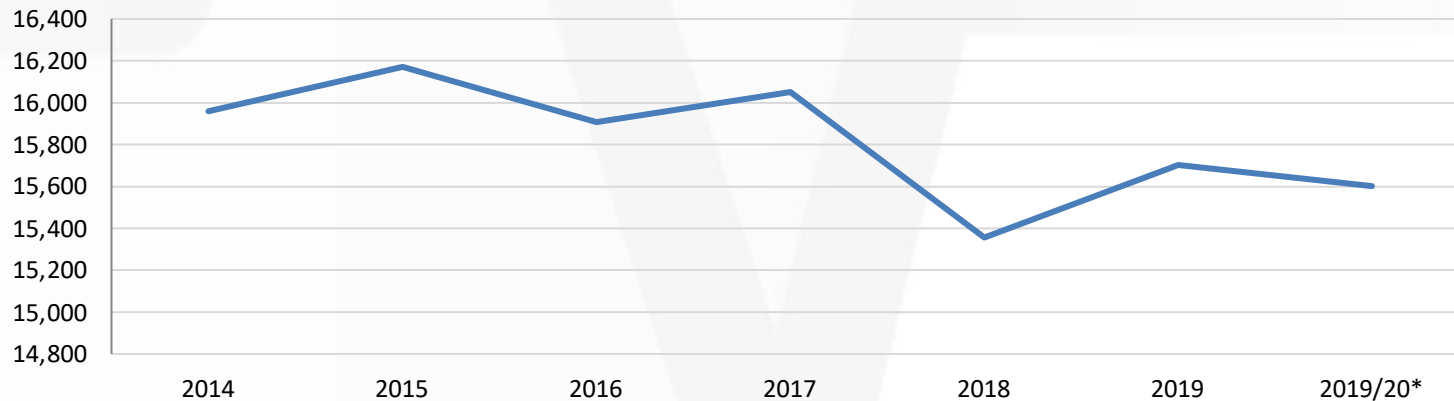
Contextualised national annual activity



UK Total Live Births

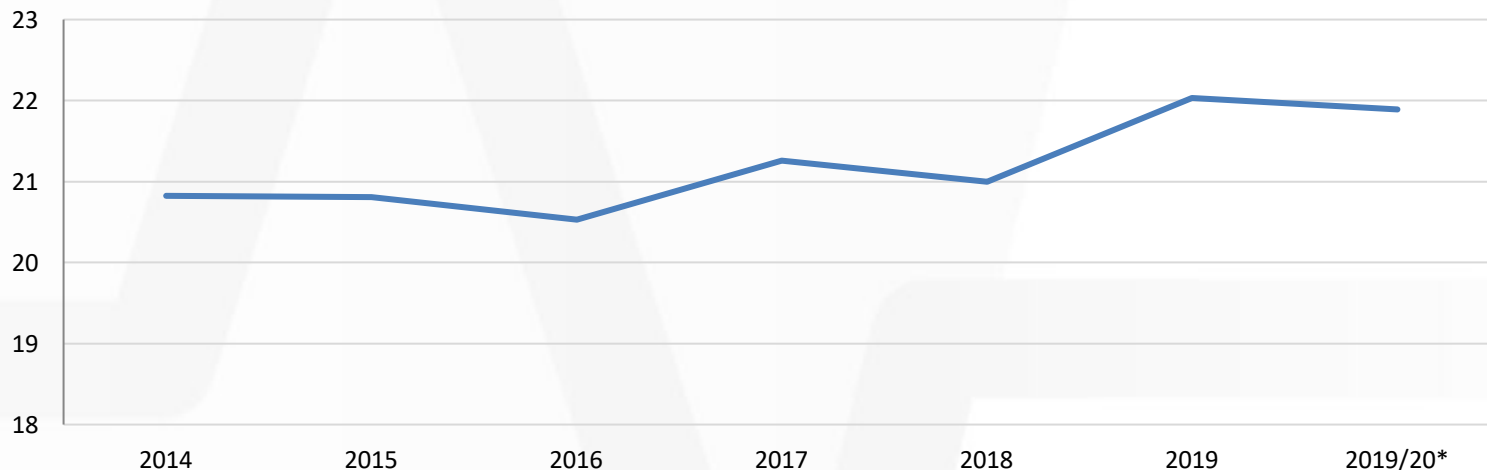


Total NTG Transfers



Contextualised national annual activity

NTG Transfers per 1,000 live births



Although the total number of transfers appeared to peak in 2015, as a proportion of total live births the numbers of transfers continue to rise

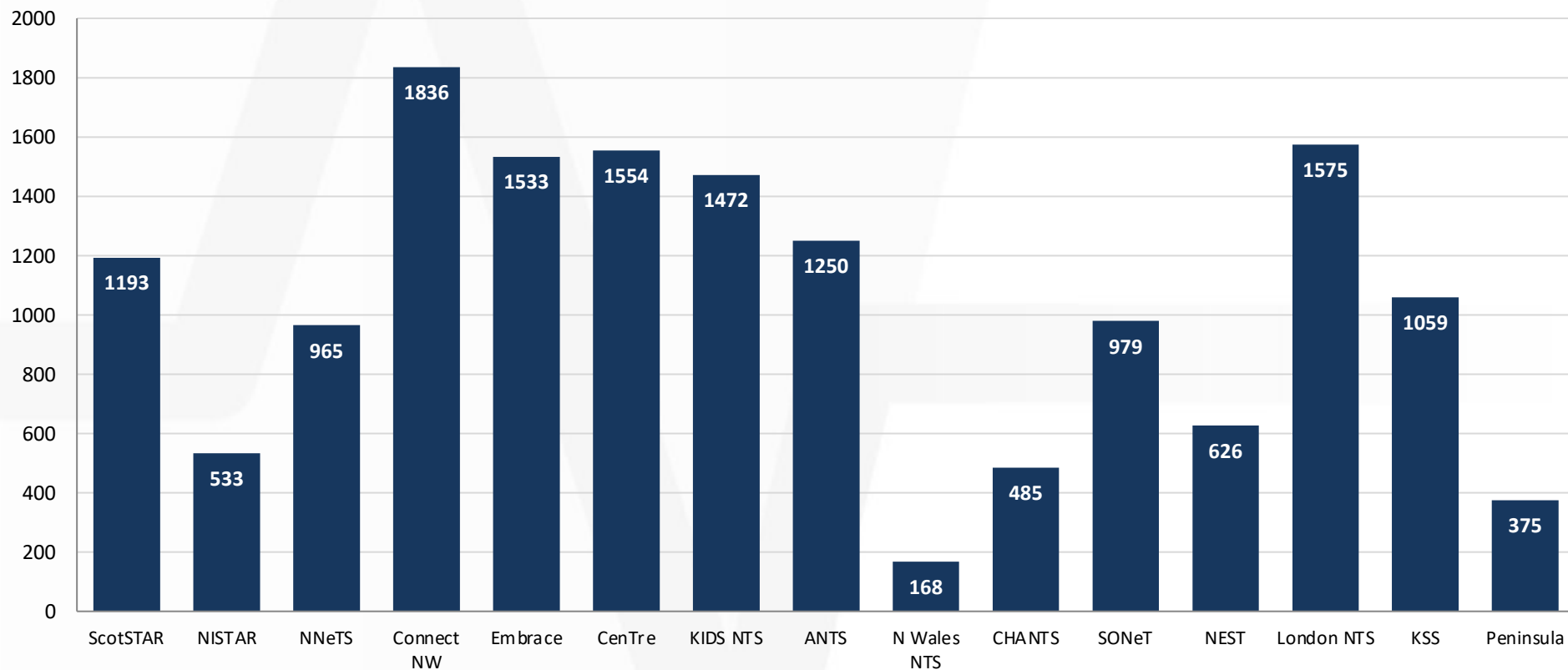
UK Summary Data

Apr 2019 to Mar 2020

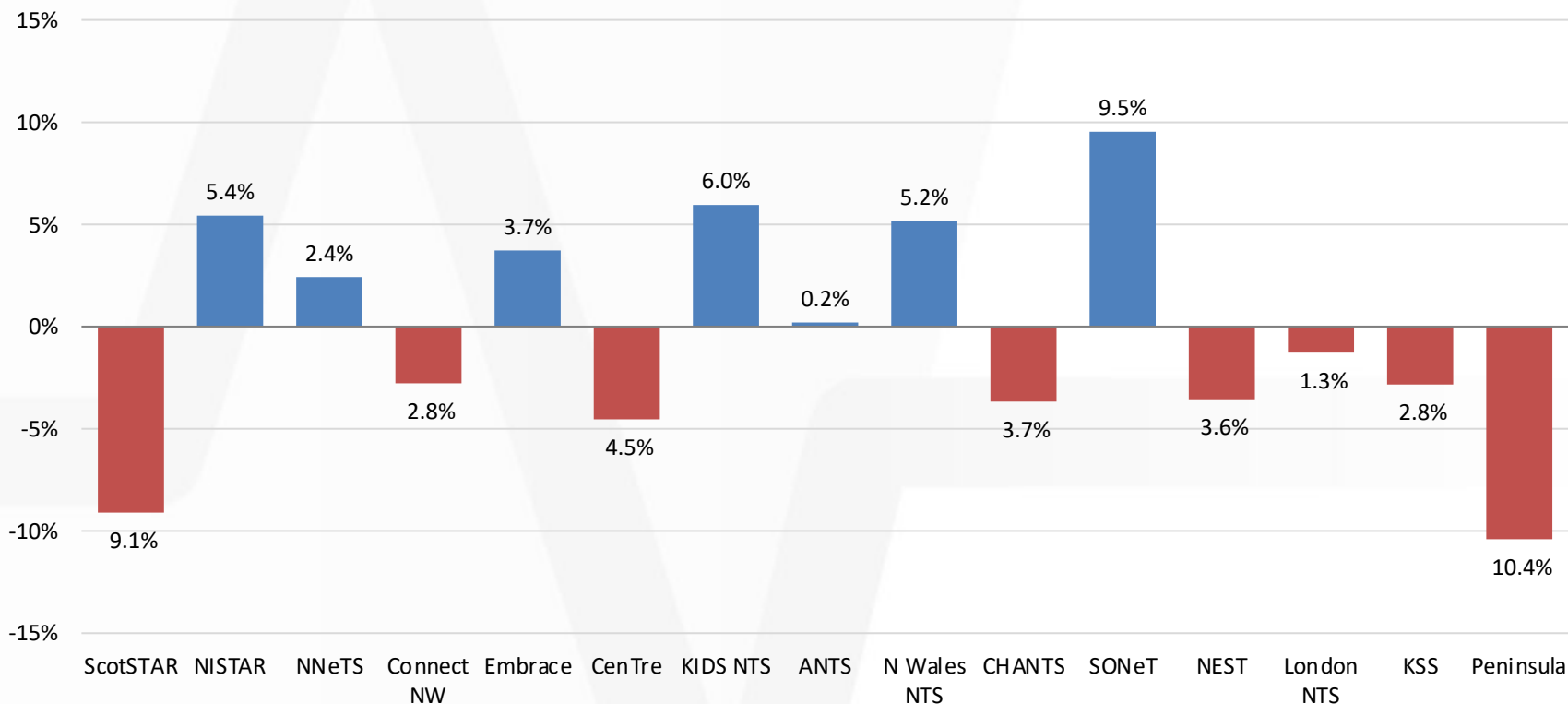


	2013	2014	2015	2016	2017	2018	2019	2019/20
	Adjusted	Adjusted	Adjusted	Adjusted	Adjusted	Adjusted	Adjusted	
Total transfers	15291	15958	16171	15907	16051	15356	15702	15603
Ventilated	3965 (26%)	3941 (25%)	4358 (27%)	4022 (25%)	3868 (24%)	3921 (26%)	3777 (24%)	3677 (24%)
HFOV (% of vent')	-	-	32 (<1%)	32 (<1%)	79 (2%)	97 (2.5%)	109 (3%)	102 (3%)
CPAP	1832 (12%)	1640 (10%)	1597 (10%)	1482 (9%)		1256 (8%)	1070 (7%)	1070 (7%)
High-flow	-	-	904 (6%)	992 (6%)		1348 (9%)	1532 (10%)	1712 (11%)
Cooling	582 (4%)	504 (3%)	554 (3%)	579 (4%)	495 (3%)	516 (3%)	568 (4%)	541 (3.5%)
iNO	222 (1%)	234 (1%)	276 (2%)	296 (2%)		308 (2%)	314 (2%)	293 (2%)
Palliative		38 (<1%)	38 (<1%)	66 (<1%)	67 (<1%)	40 (<1%)	49 (<1%)	62 (<1%)

Total Transfers/team Apr 2019 to Mar 2020



Changes in activity by team, 2019 adjusted v 2019/20



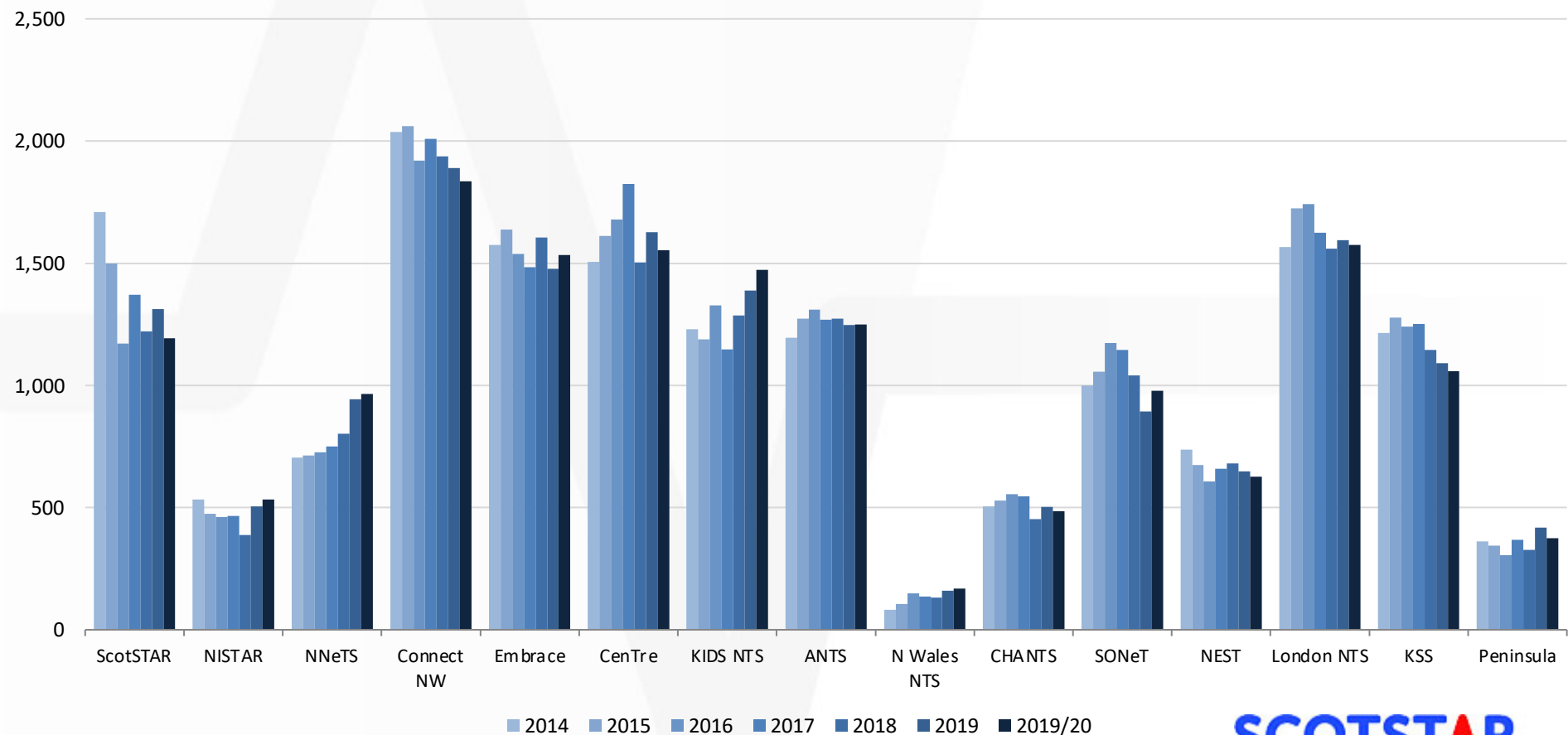
Nb estimates based on 6 months of 2019 data, assuming no seasonality to allow for basic comparison to 2019/20. There is overlap in this data as well April-June 2019



Trends in transfer number by team, 2014-2020

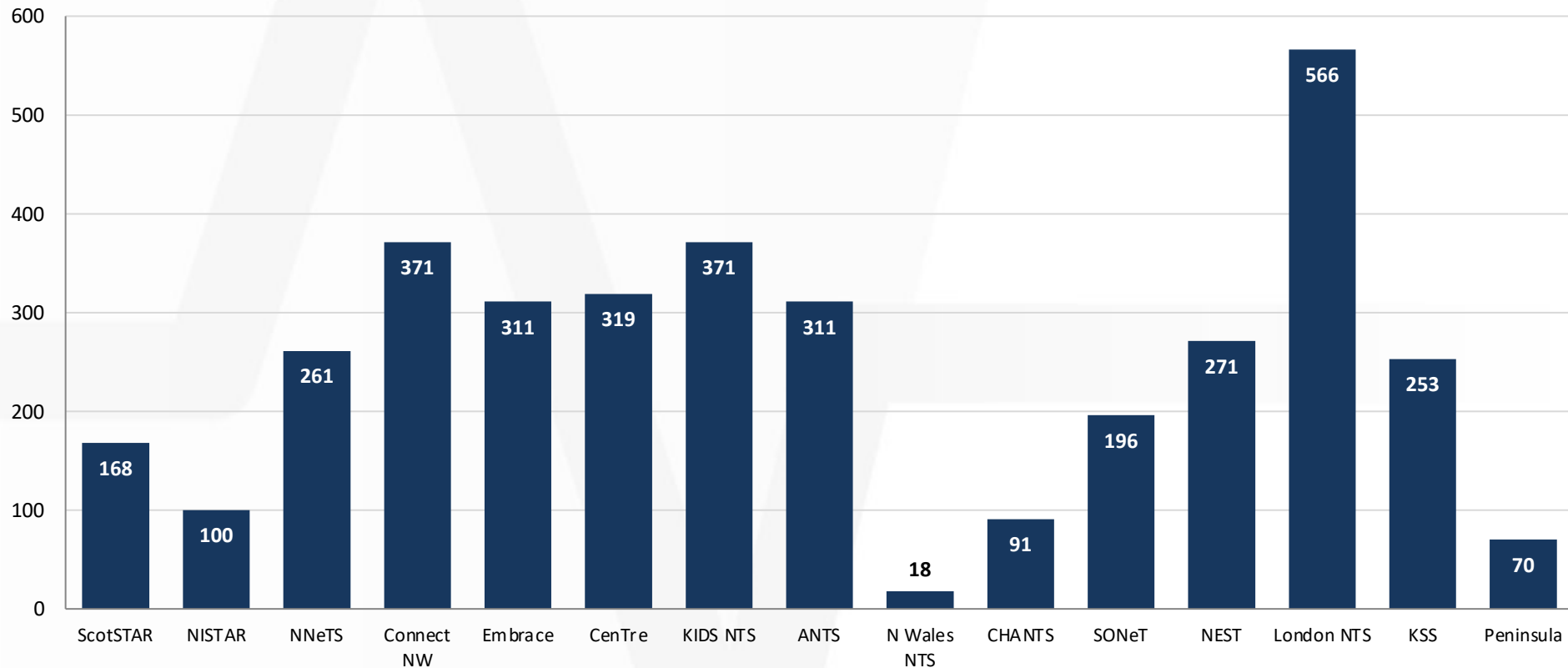


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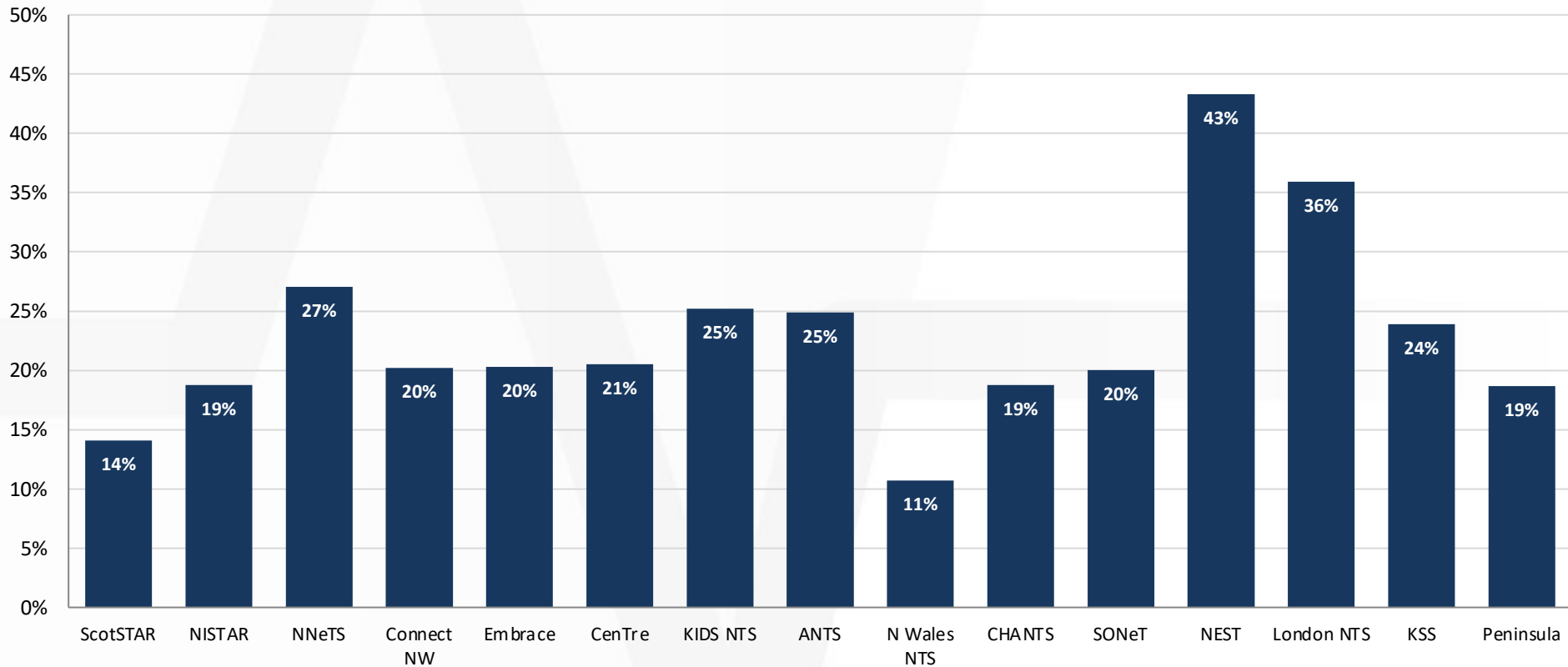


Previous years are estimates assuming no seasonality to allow for basic comparison to 2019/20

Ventilated Transfers by team Apr 2019 to Mar 2020



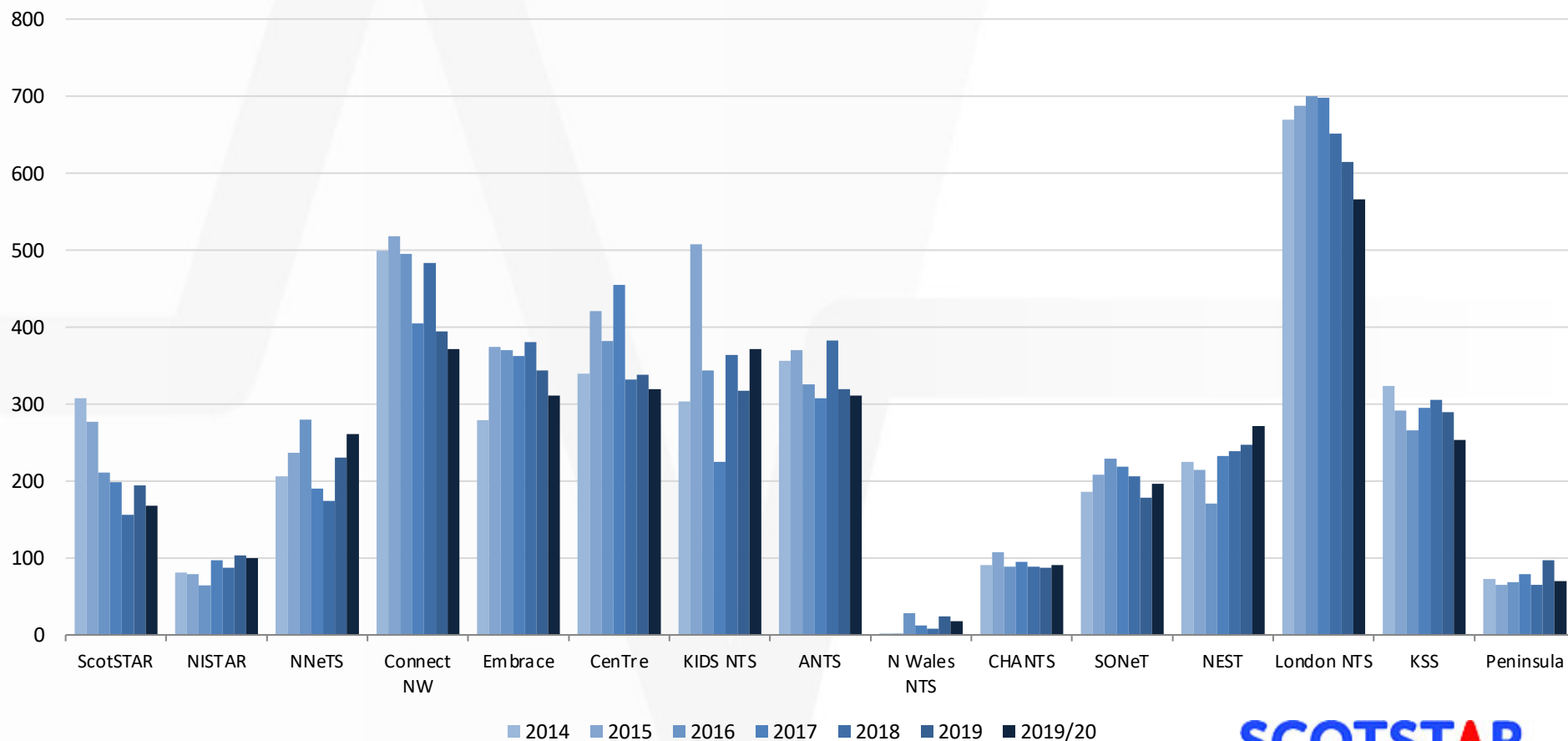
Ventilated Transfers as a percentage of total transfers, by team Apr 2019 to Mar 2020



Trends in numbers of ventilated transfer by team 2014-2020

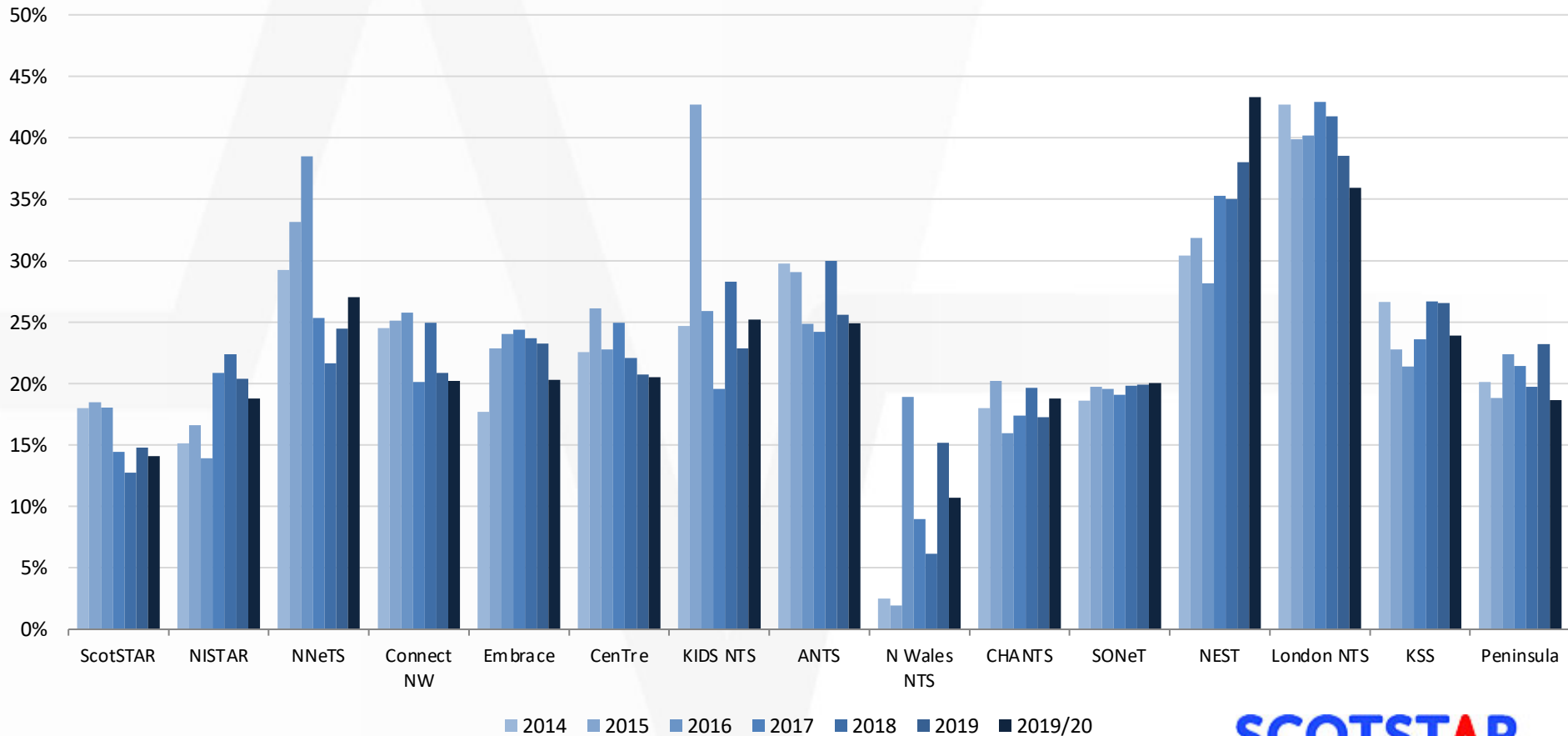


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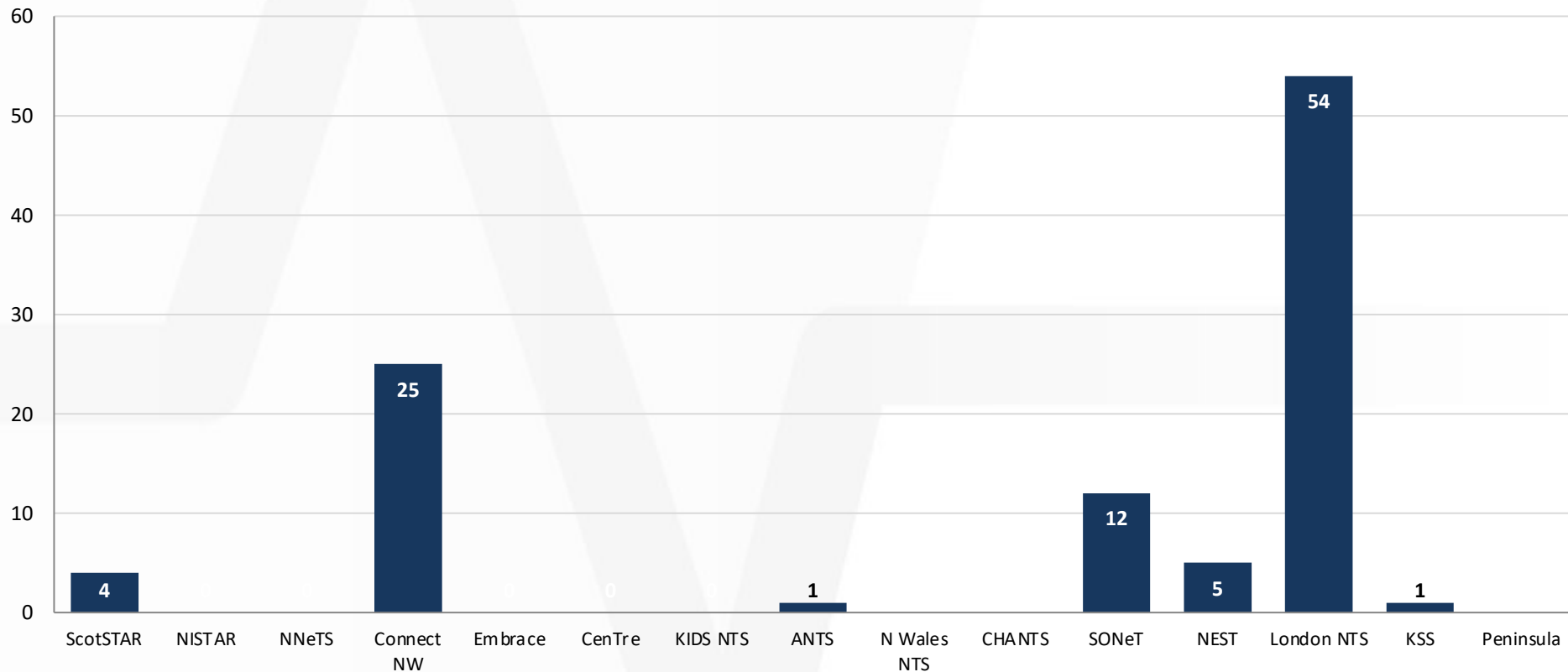


Previous years are estimates assuming no seasonality to allow for basic comparison to 2019/20

Ventilated transfers as percentage of total transfers, by team 2014-20



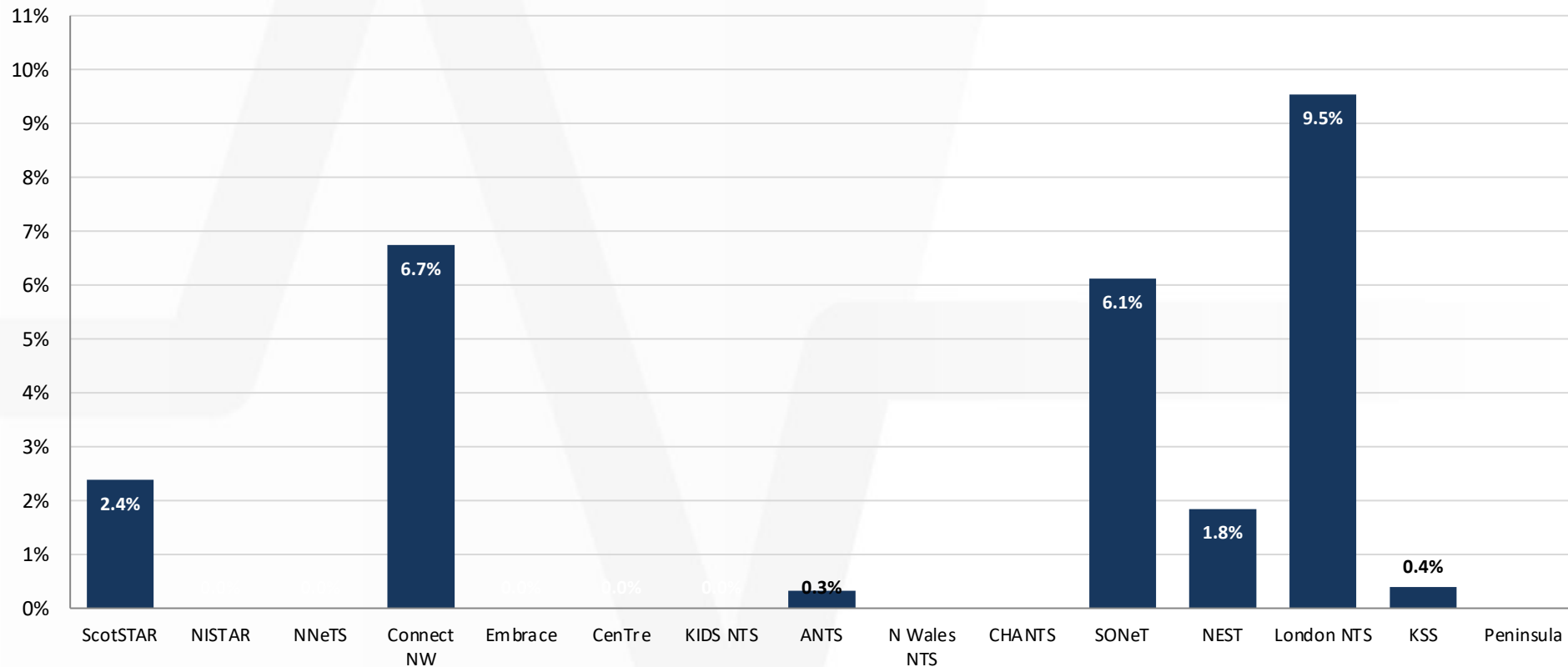
High Frequency Oscillatory Ventilation Transfers by team Apr 2019 to Mar 2020



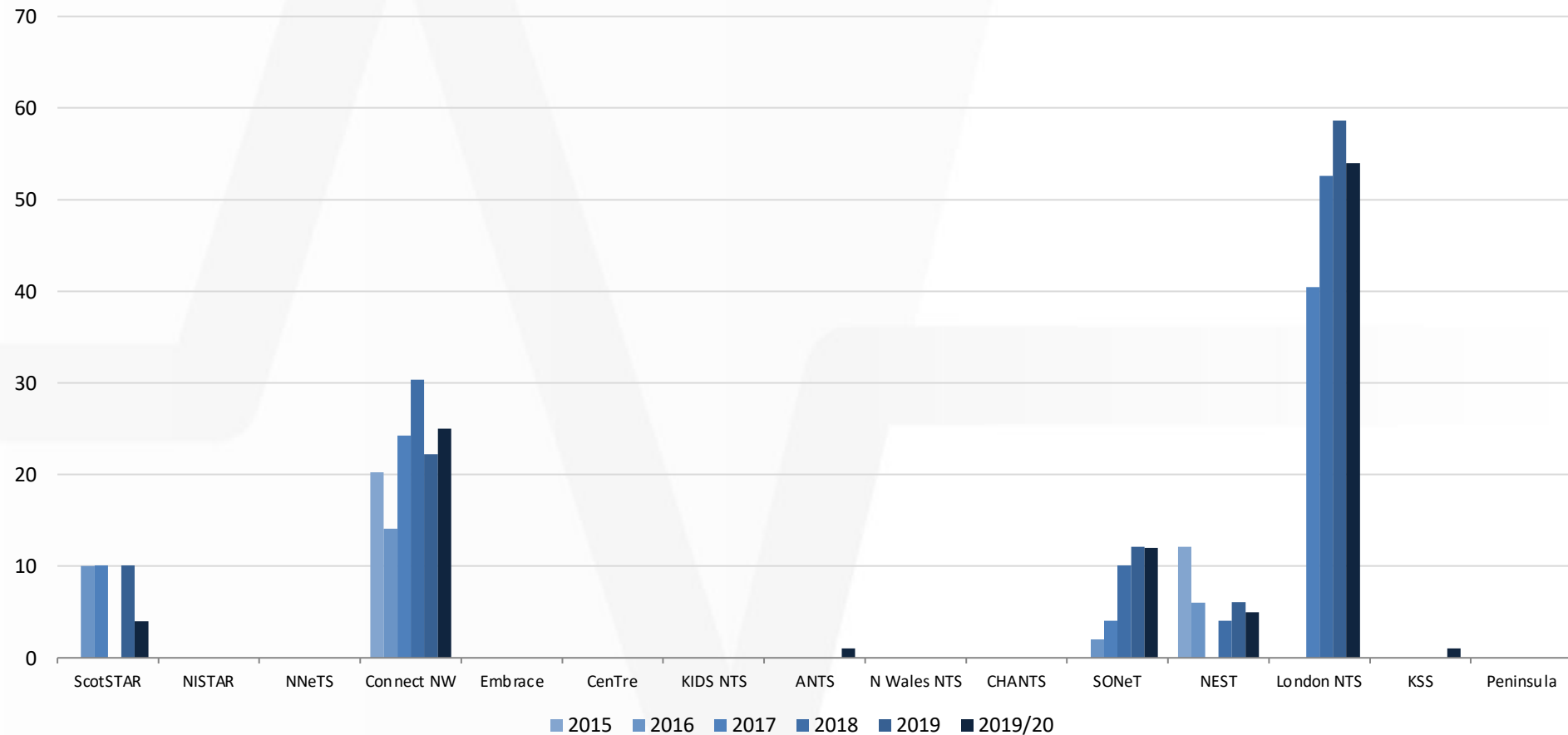
High Frequency Oscillatory Ventilation Transfers as a percentage of ventilated transfers, by team Apr 2019 to Mar 2020



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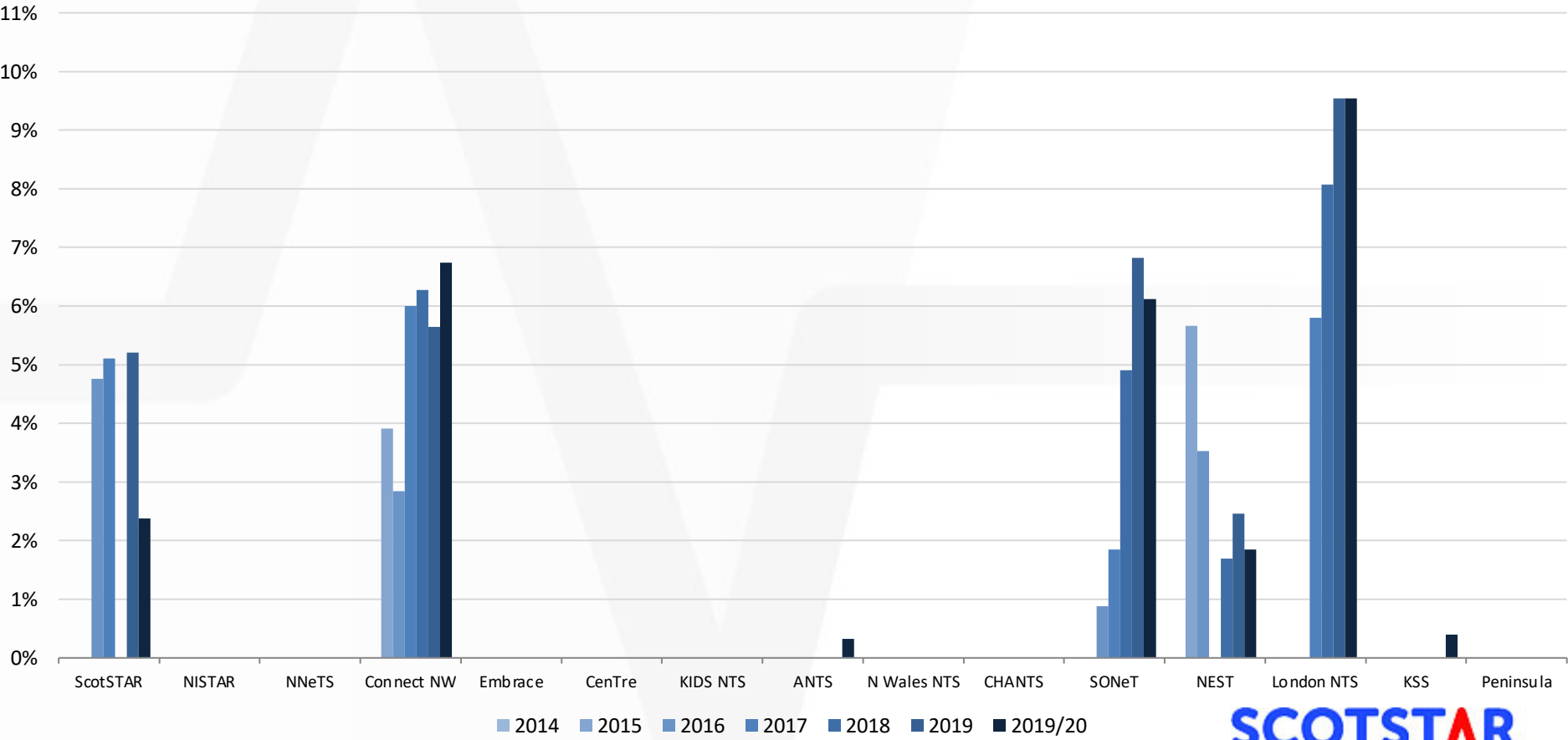


Trends in numbers on High Frequency Oscillatory Ventilation by team, 2014-2020



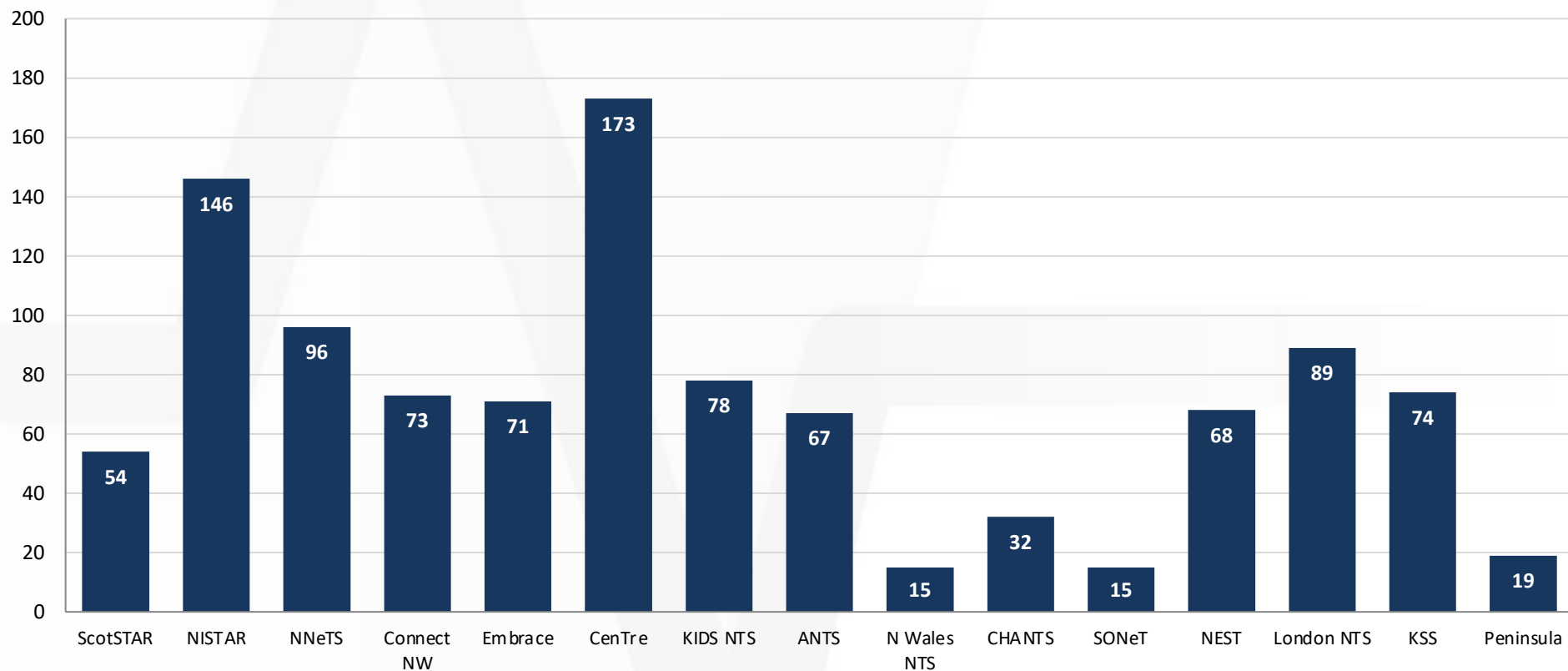
Previous years are estimates assuming no seasonality to allow for basic comparison to 2019/20

Trends in High Frequency Oscillatory Ventilation transfers as a percentage of ventilated transfers by team 2014-20

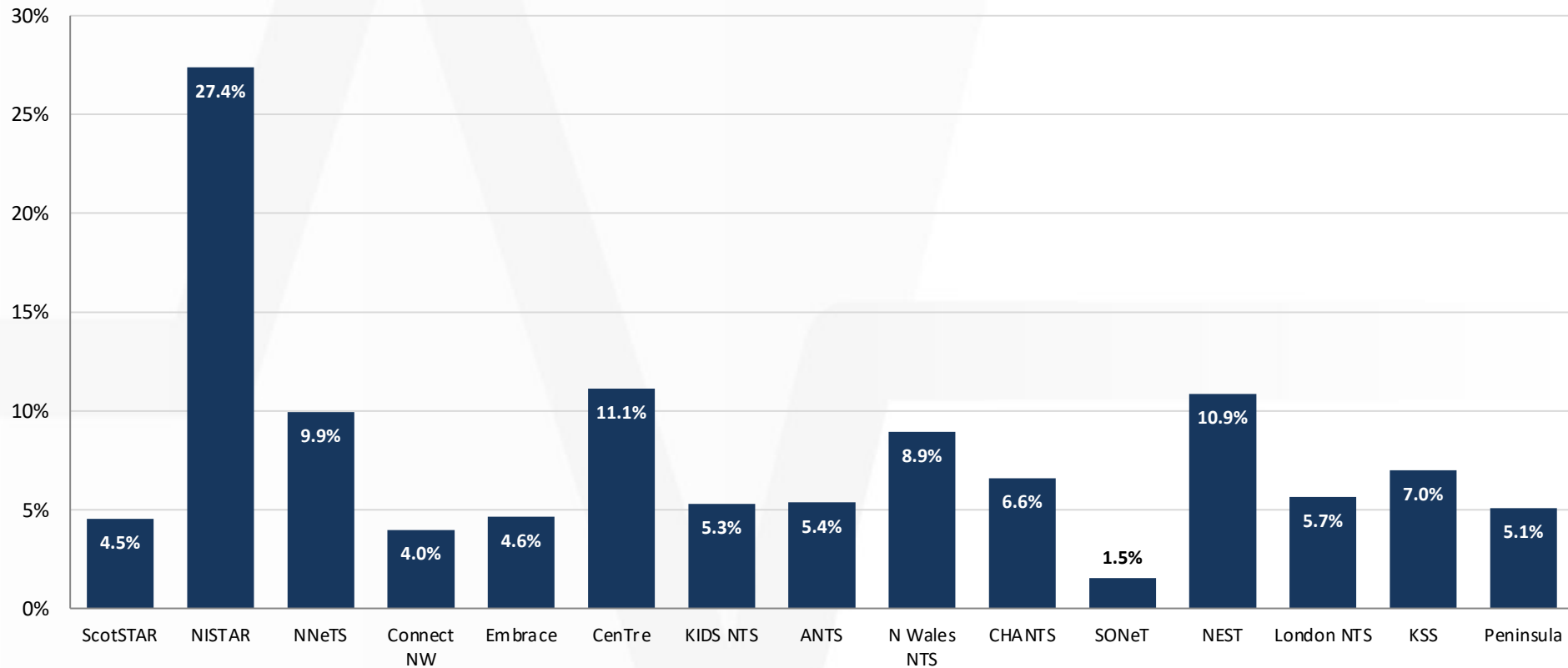


CPAP Transfers by team

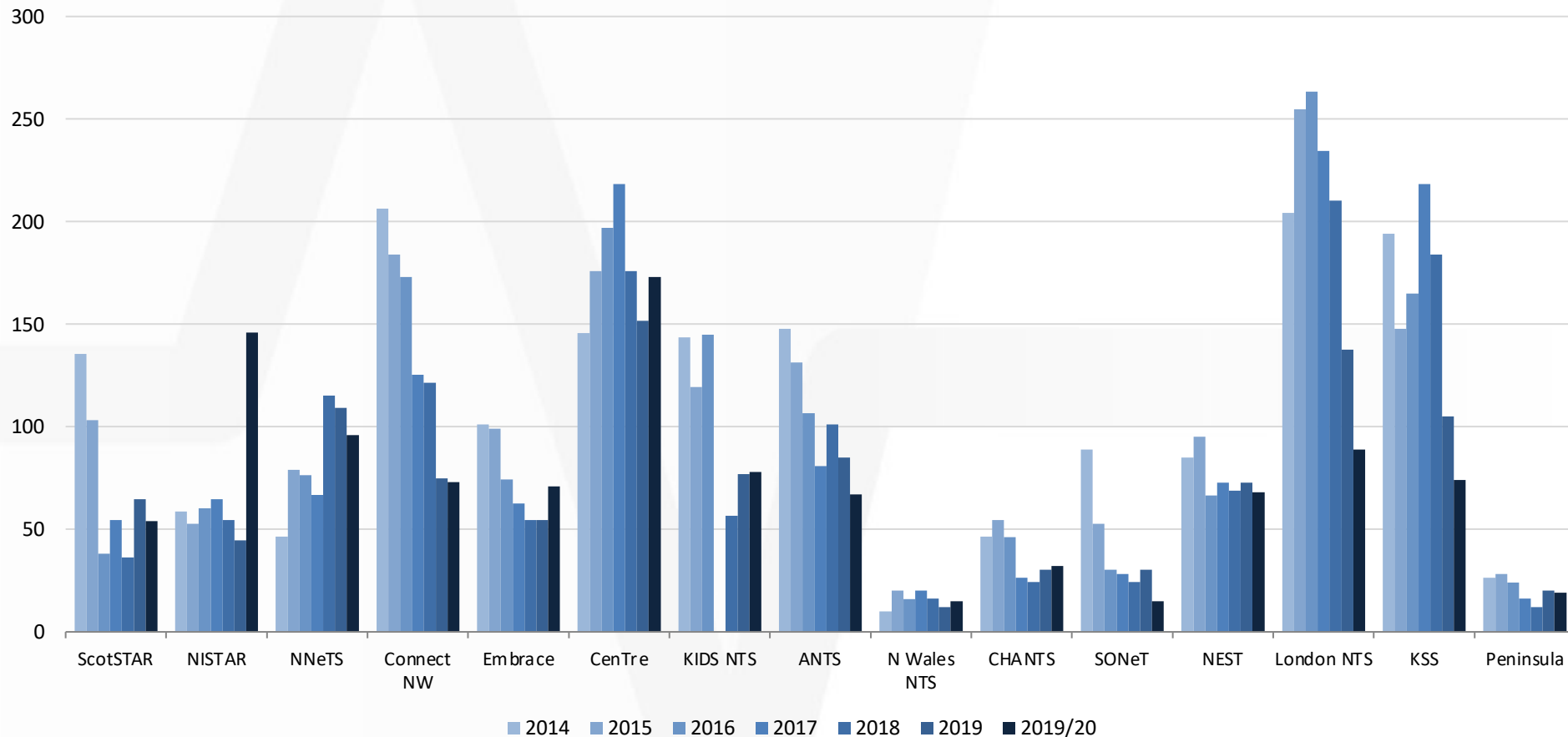
Apr 2019 to Mar 2020



CPAP Transfers by team as a percentage of total transfers Apr 2019 to Mar 2020



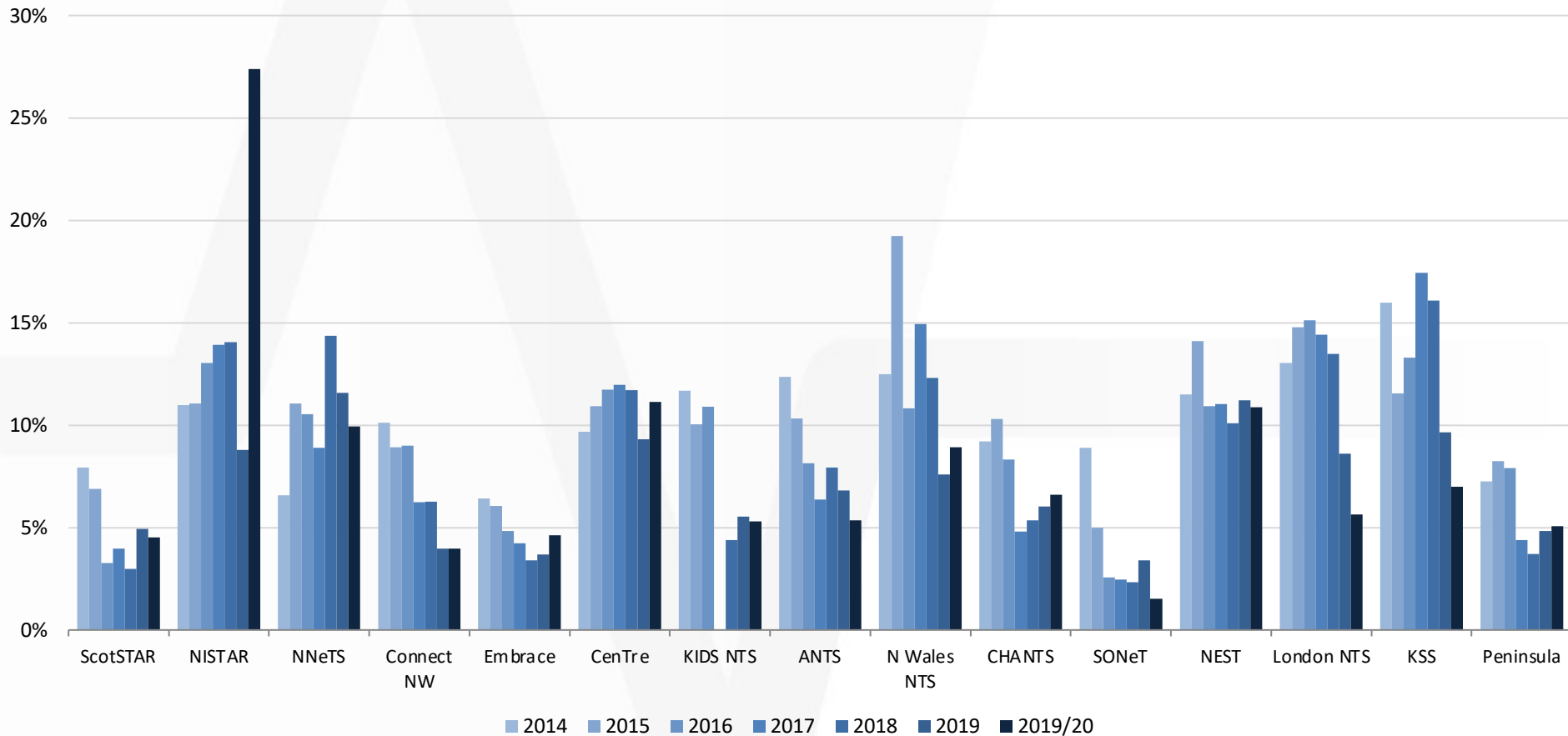
Trends in numbers of CPAP transfers by team, 2014-2020



Trends in CPAP transfers as a percentage of total transfers, by team, 2014-2020

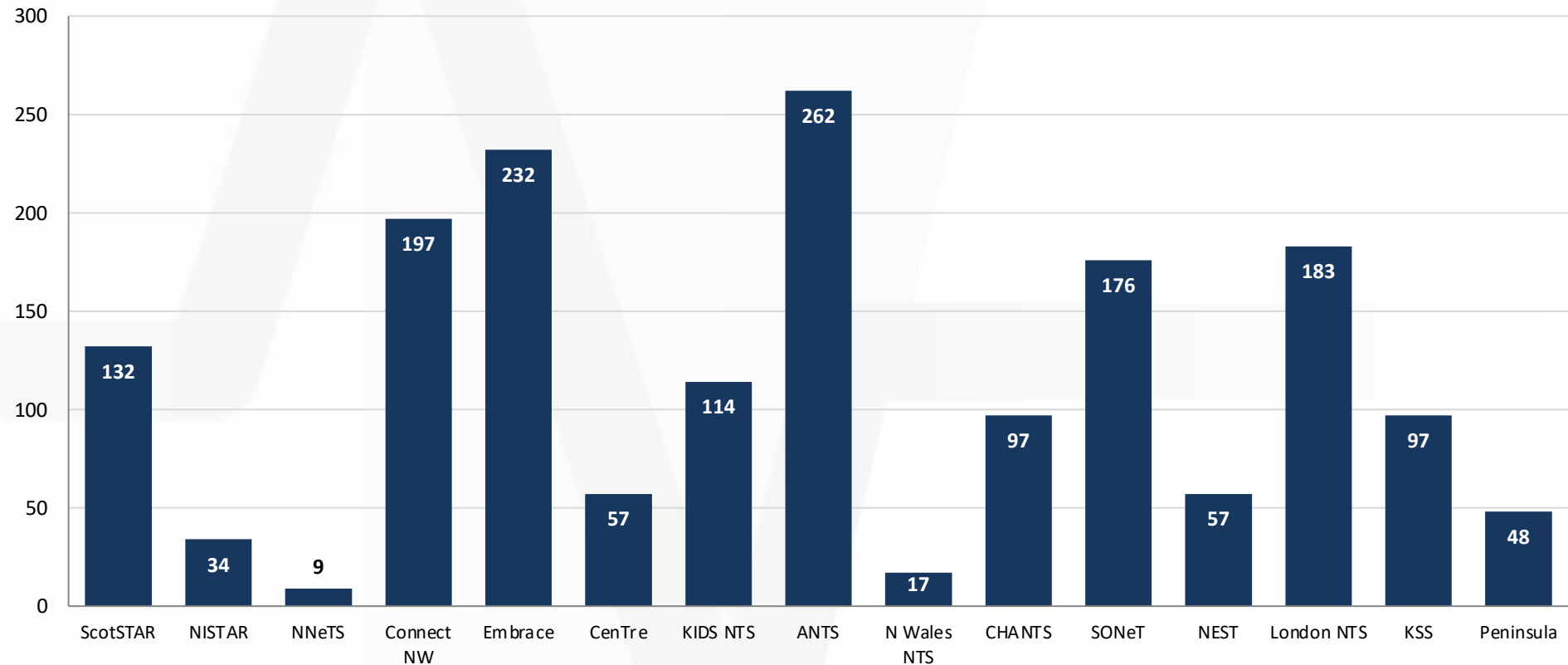


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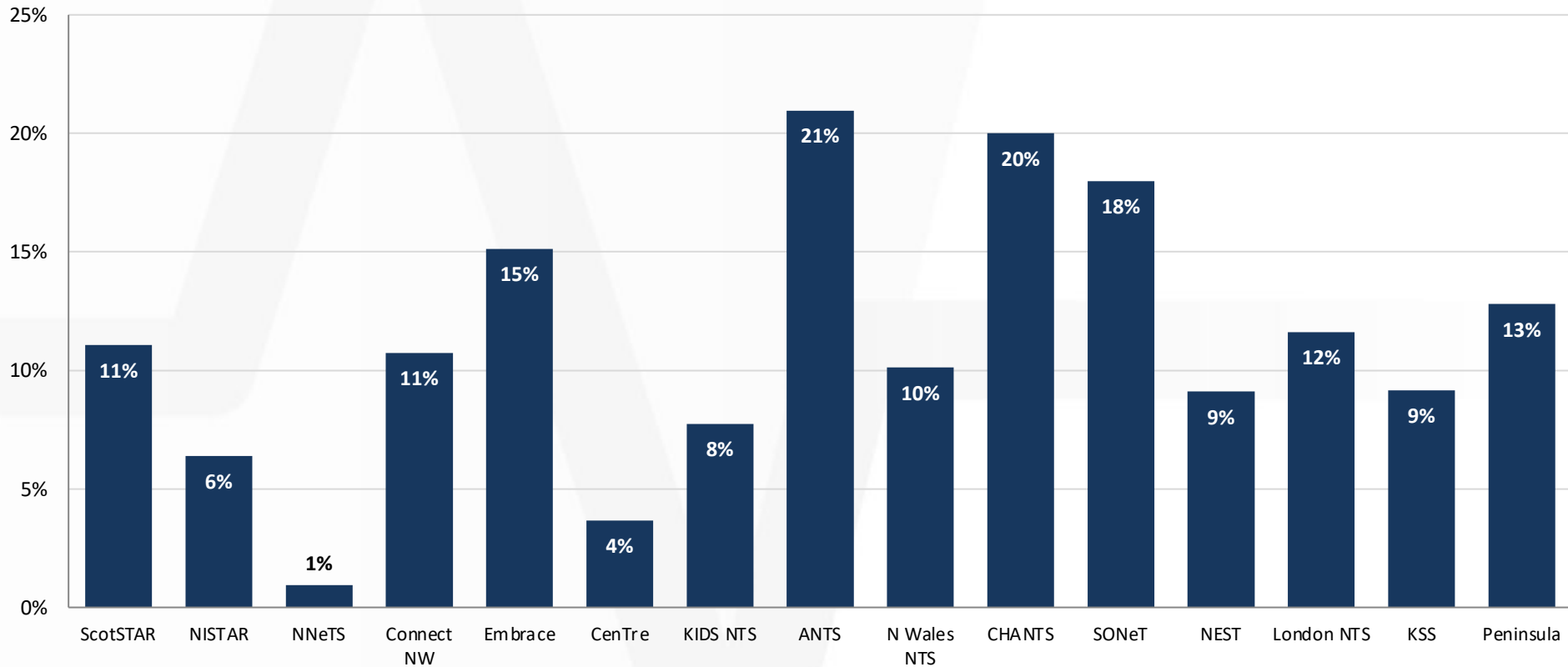
High-flow transfers by team

Apr 2019 to Mar 2020



High-flow transfers by team as a percentage of total transfers

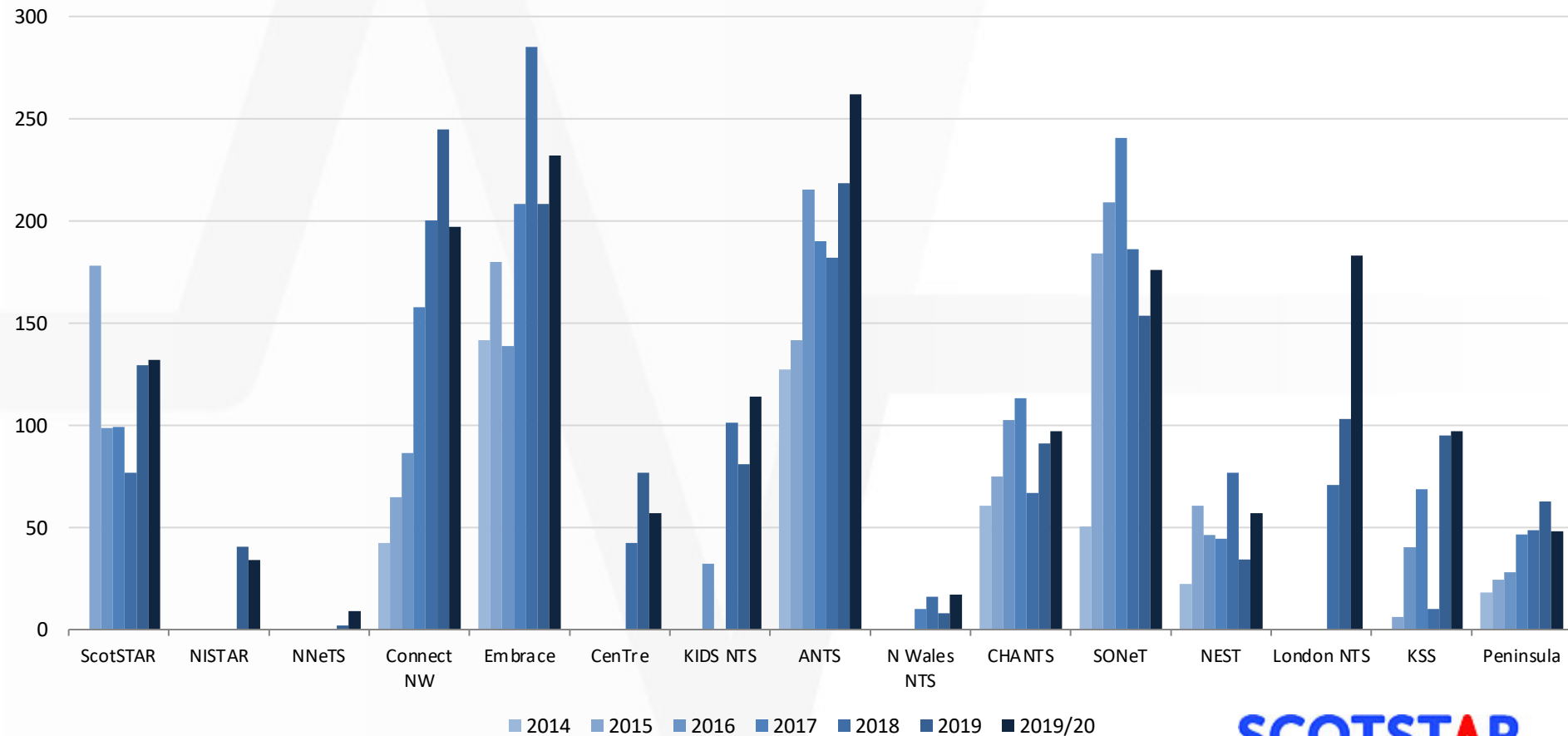
Apr 2019 to Mar 2020



Trends in numbers of High-Flow transfers by team, 2014-20



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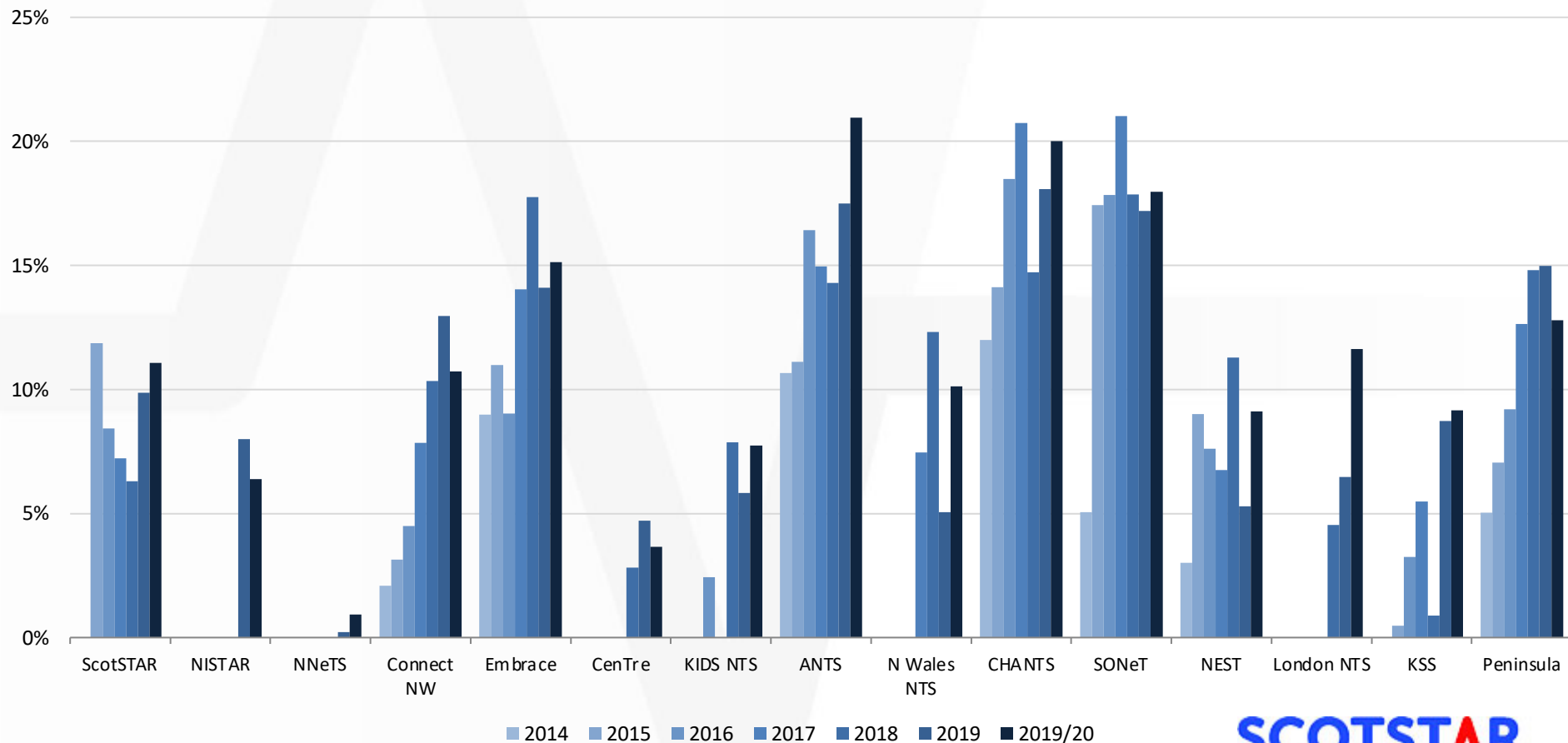


Previous years are estimates assuming no seasonality to allow for basic comparison to 2019/20

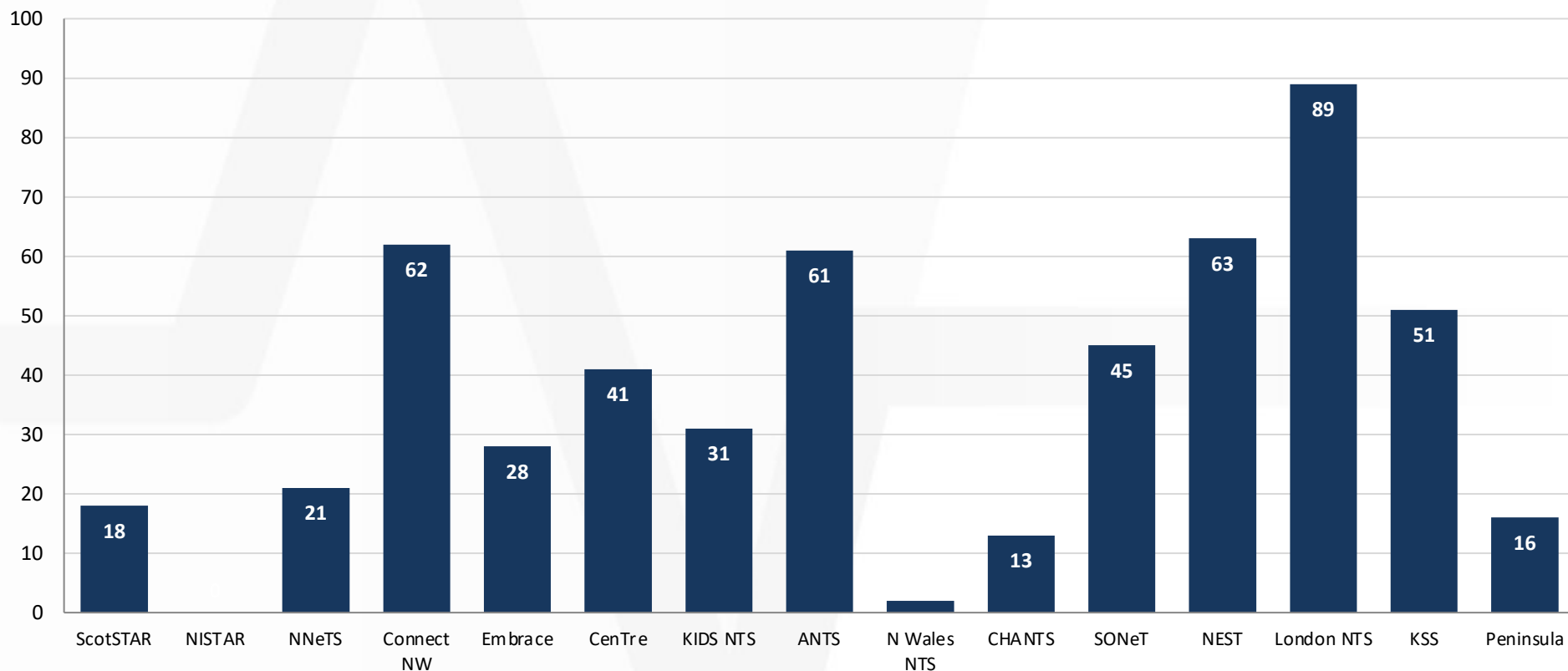
Trends in High-Flow transfers as a percentage of total transfers, by team, 2014-20



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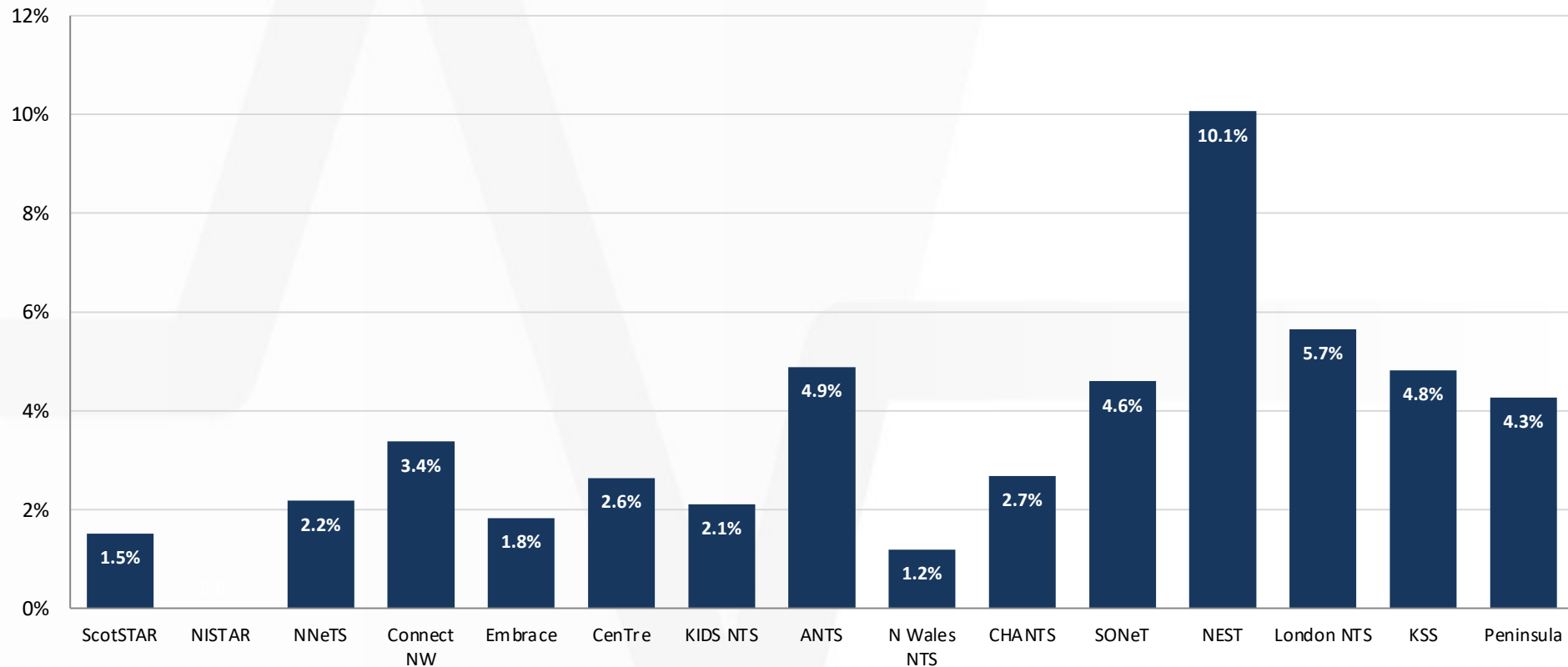
Therapeutic hypothermia transfers with by team Apr 2019 to Mar 2020



Therapeutic hypothermia transfers as a percentage of total transfer by team, Apr 2019 to Mar 2020



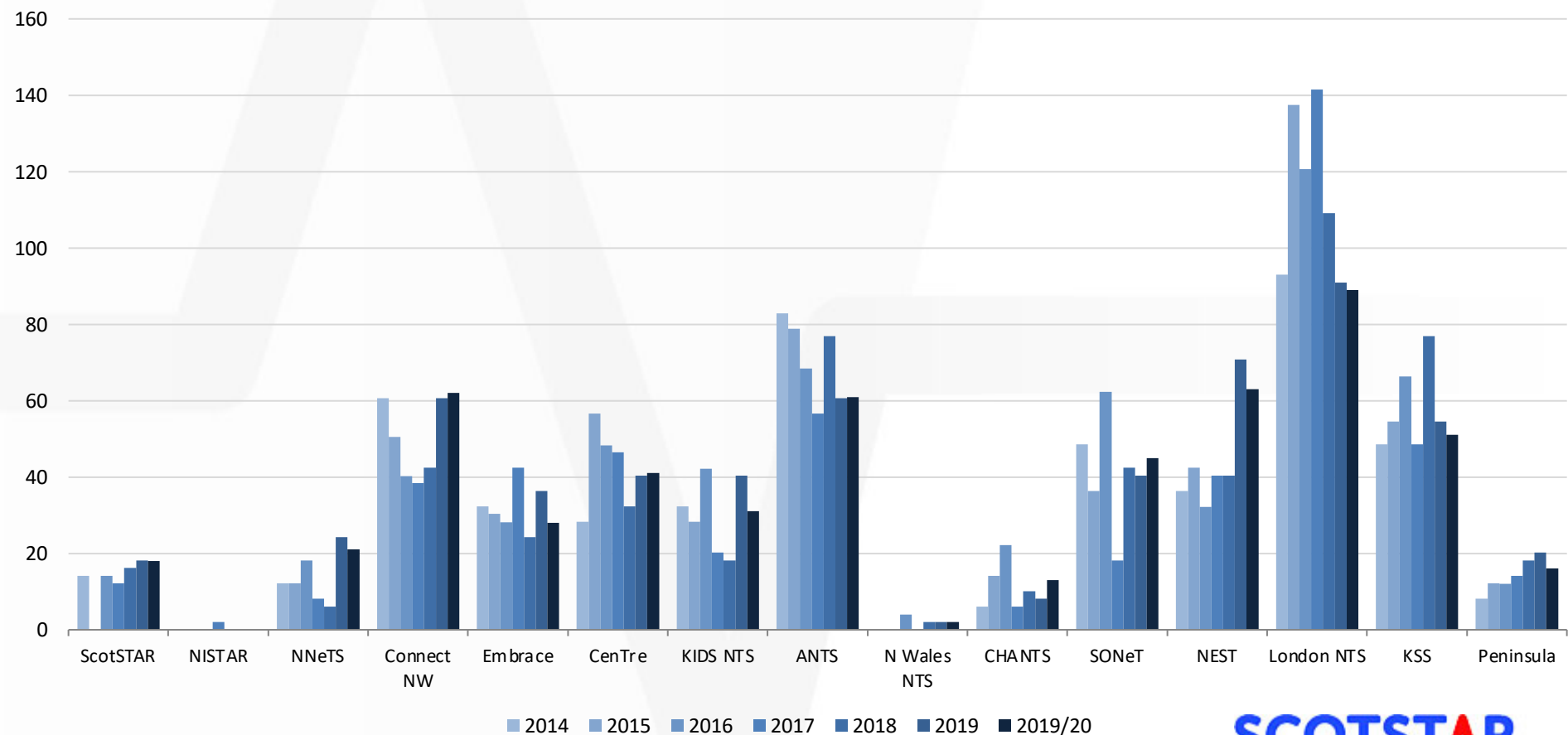
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Trends in numbers of therapeutic hypothermia transfers by team 2014-20

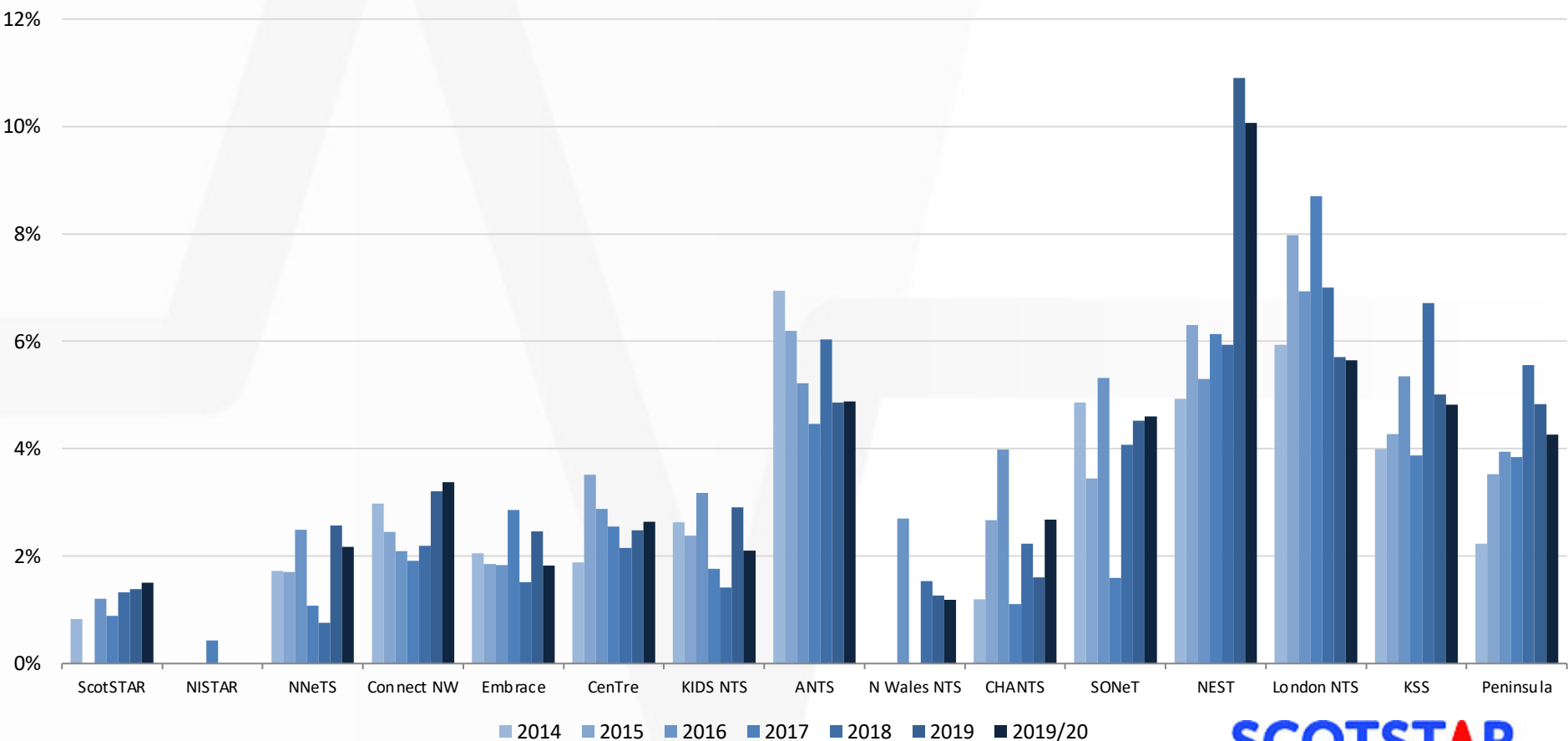


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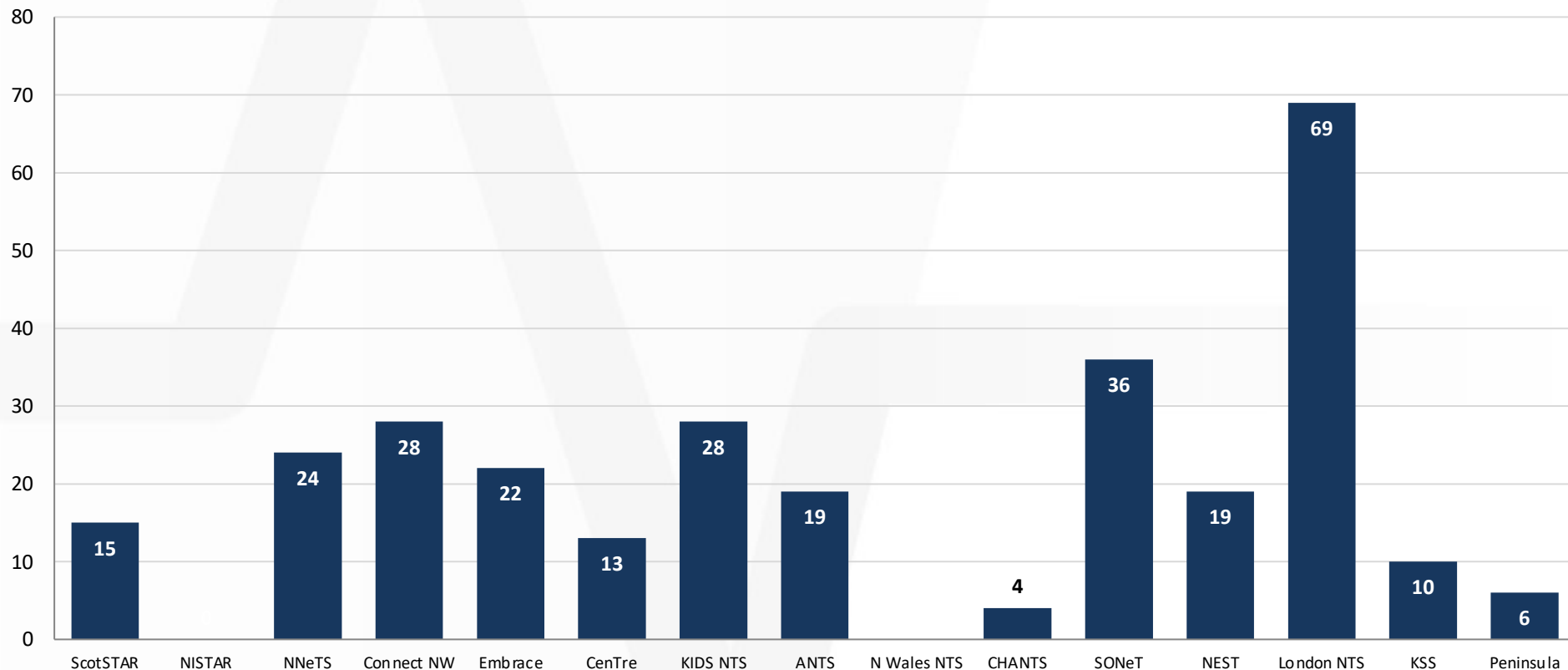


Previous years are estimates assuming no seasonality to allow for basic comparison to 2019/20

Trends in therapeutic hypothermia transfers as a percentage of total transfers, by team 2014-20



Transfers using inhaled Nitric Oxide by team Apr 2019 to Mar 2020

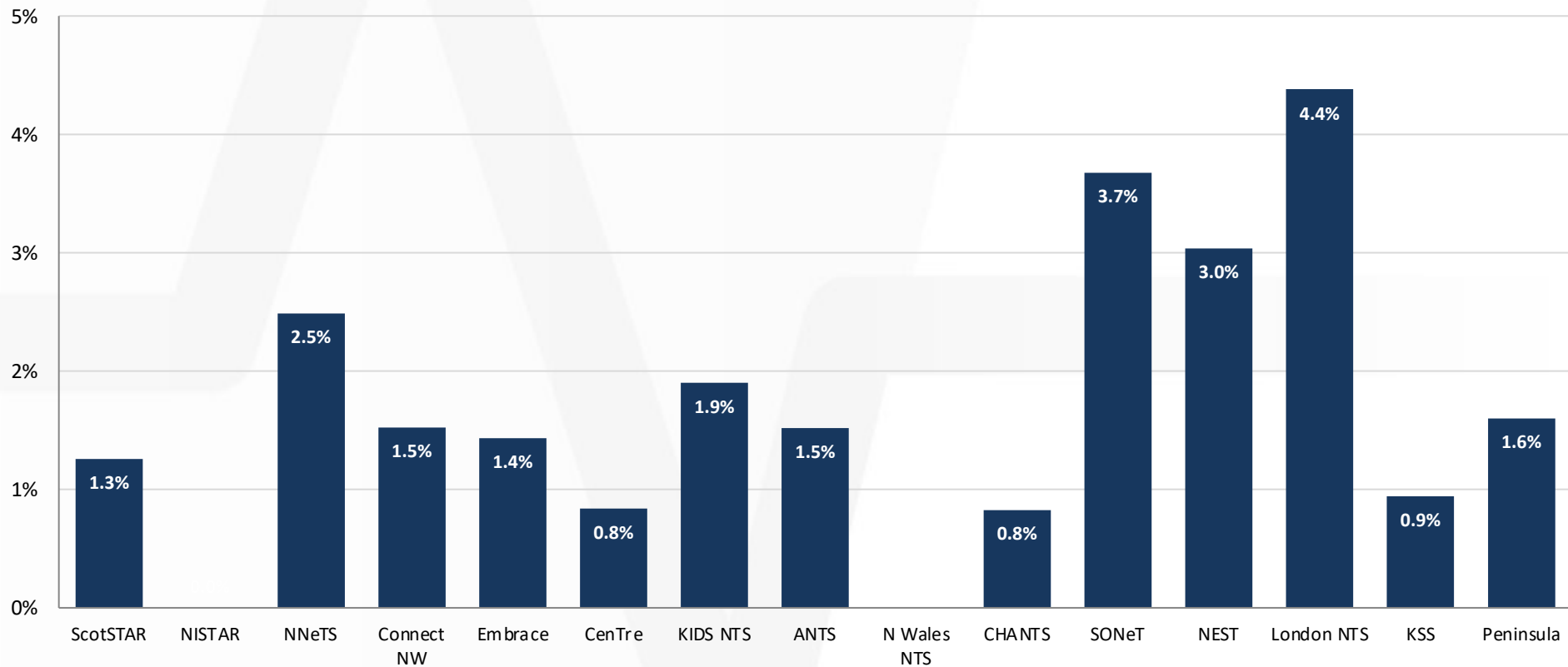


Nitric Oxide Transfers by team as a percentage of total transfers

Apr 2019 to Mar 2020



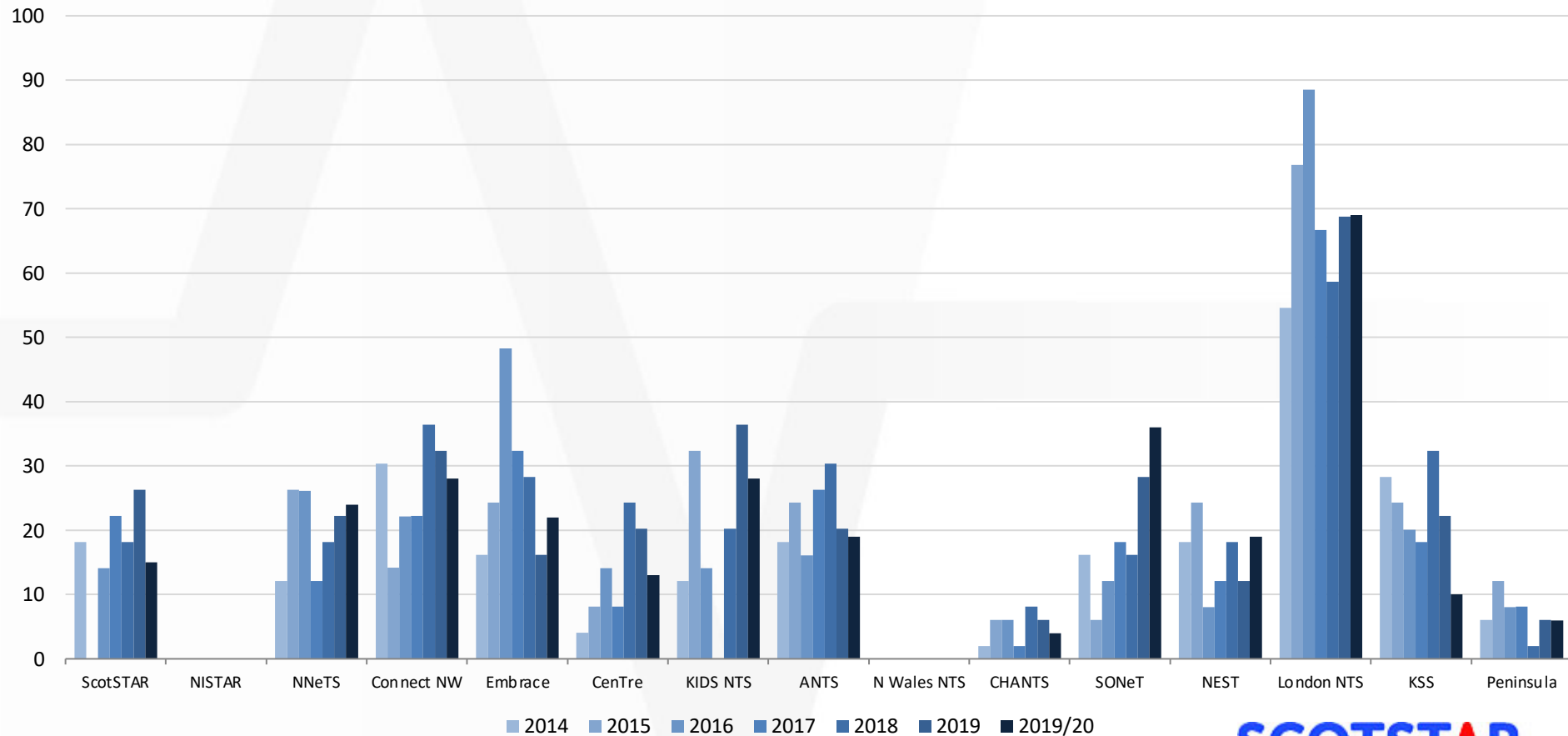
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Trends in numbers of Nitric oxide transfers by team, 2014-20



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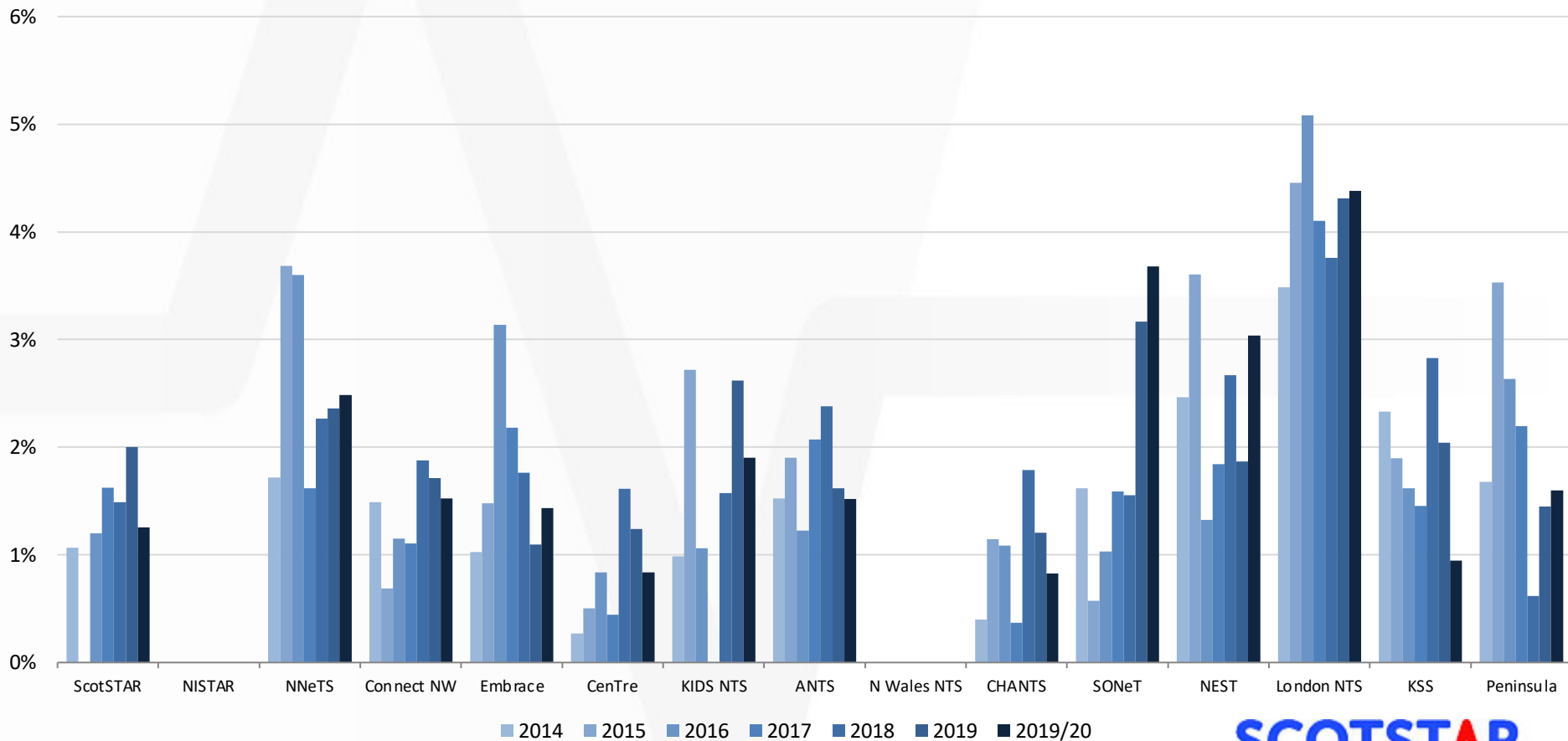


Previous years are estimates assuming no seasonality to allow for basic comparison to 2019/20

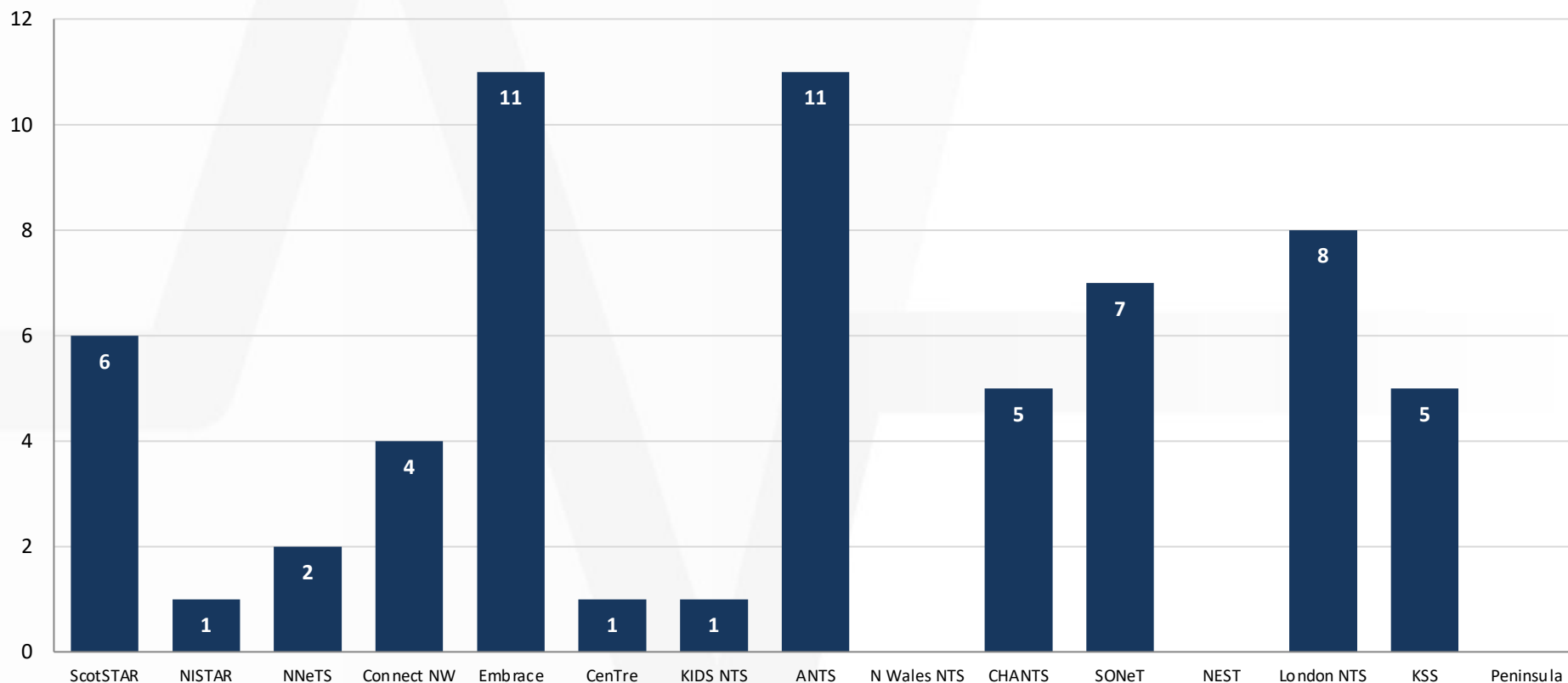
Trends in nitric oxide transfers as a percentage of total transfers, by team 2014-20



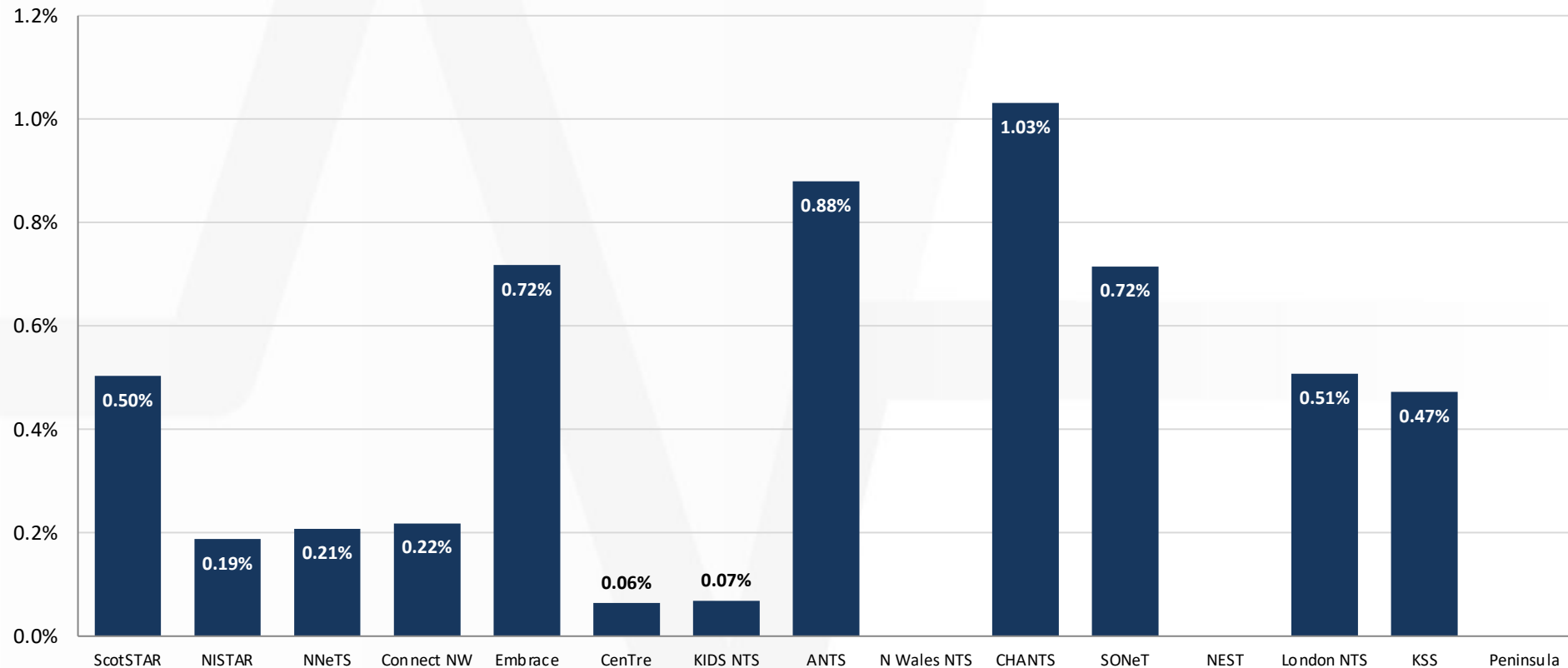
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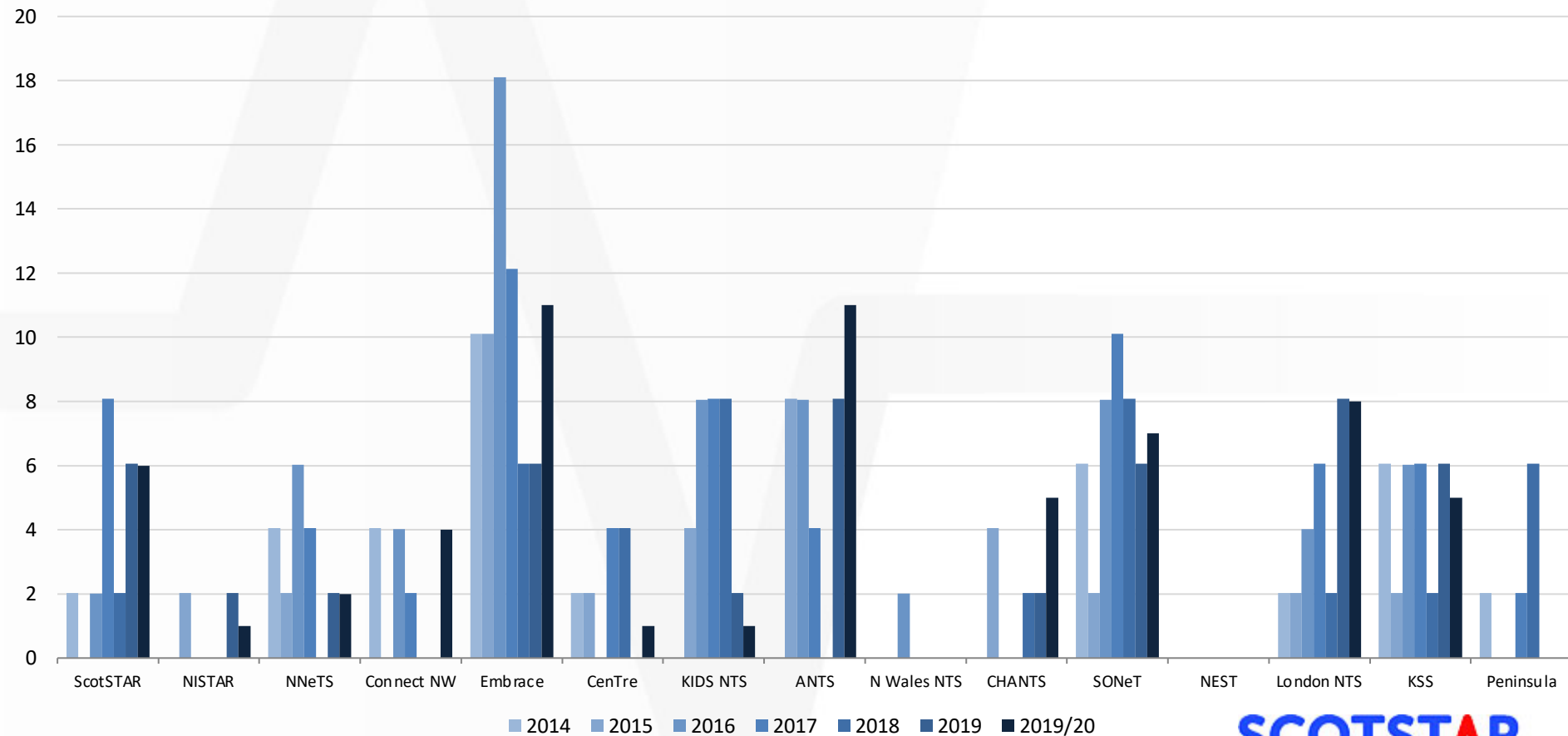
Transfers for palliative care by team Apr 2019 to Mar 2020



Palliative Care Transfers as a percentage of total transfers, by team Apr 2019 to Mar 2020



Trends in numbers of palliative care transfers by team, 2014-20

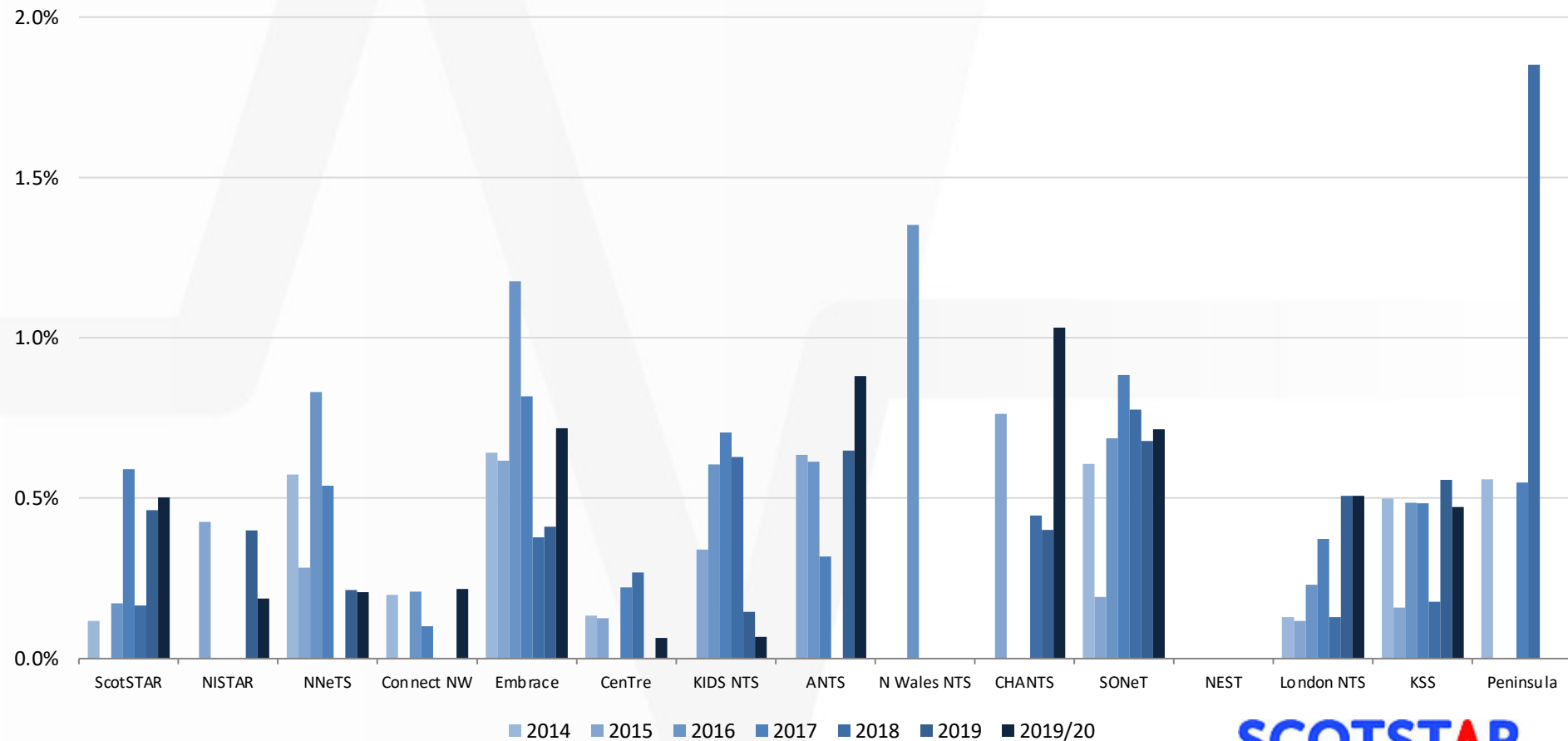


Previous years are estimates assuming no seasonality to allow for basic comparison to 2019/20

Trends in palliative care transfers as a percentage of total transfers, by team 2014-20



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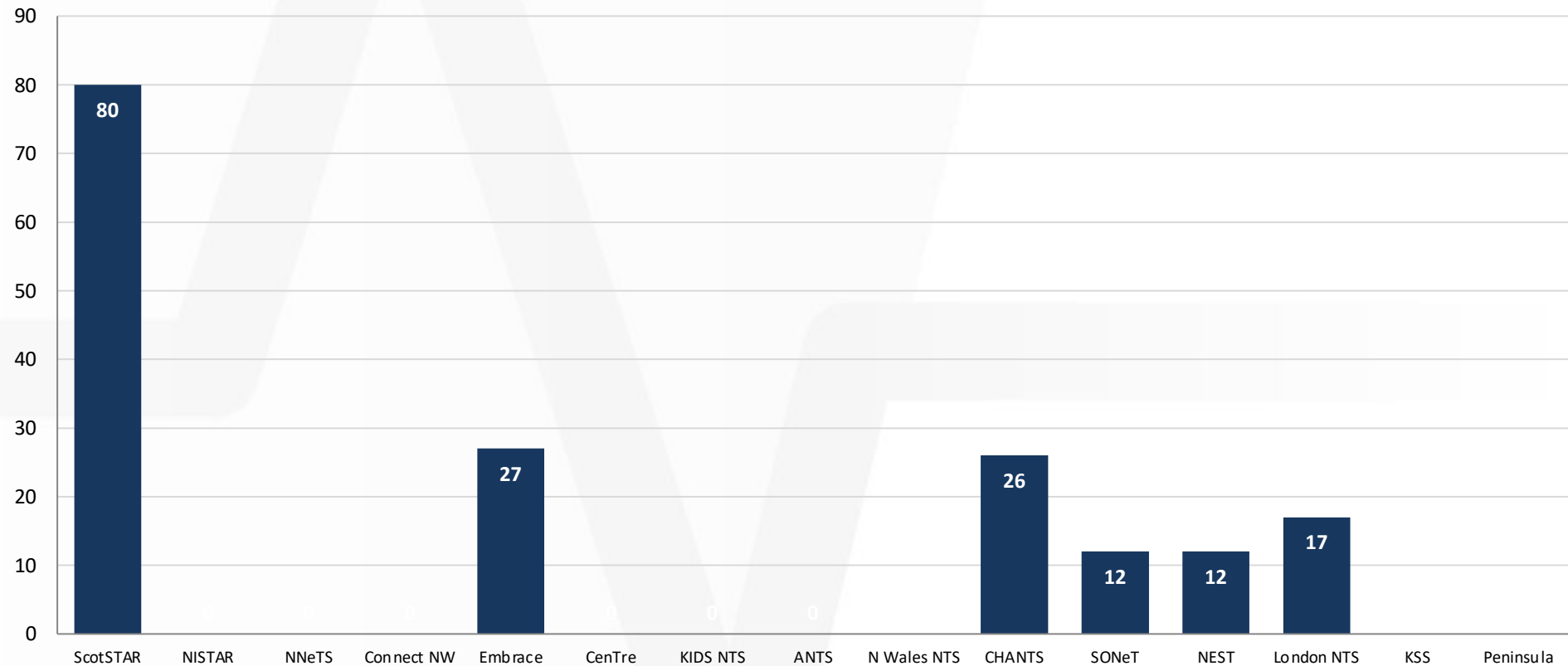


Air Transfers by team

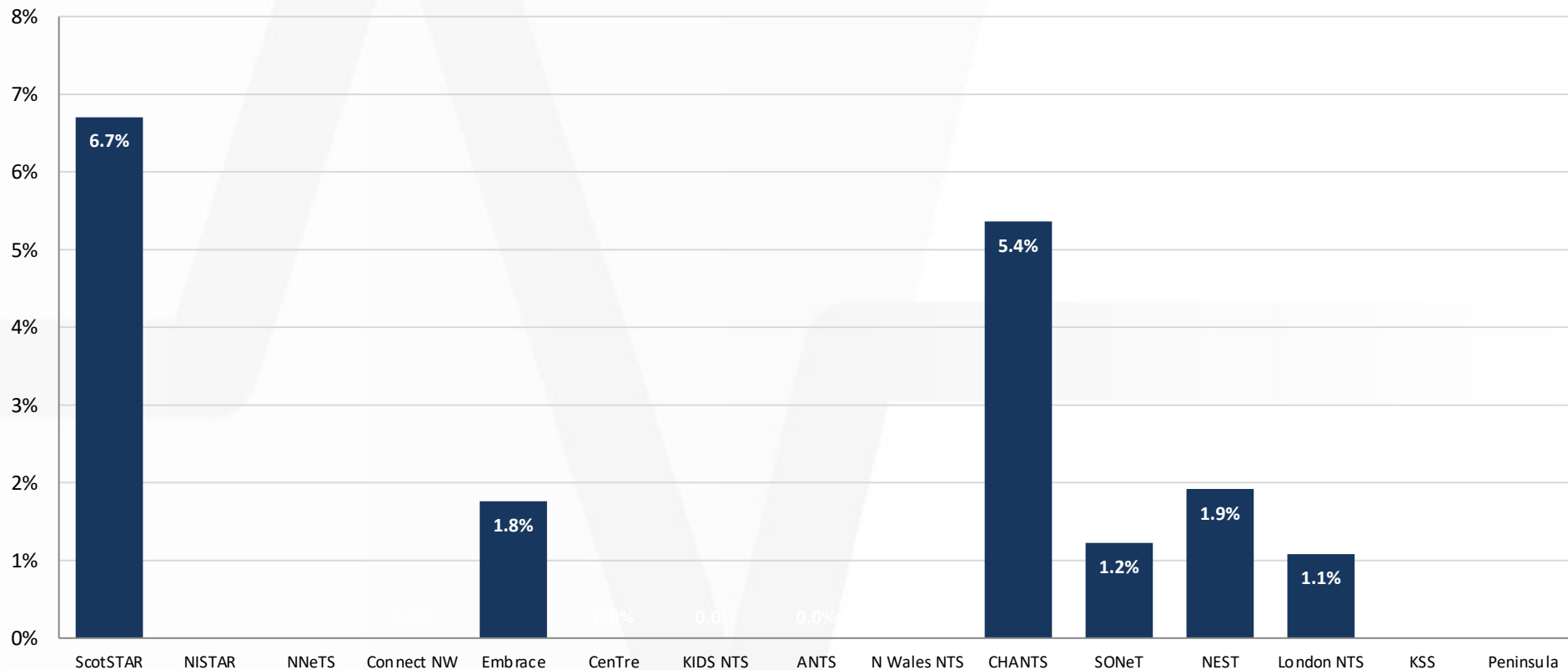
Apr 2019 to Mar 2020



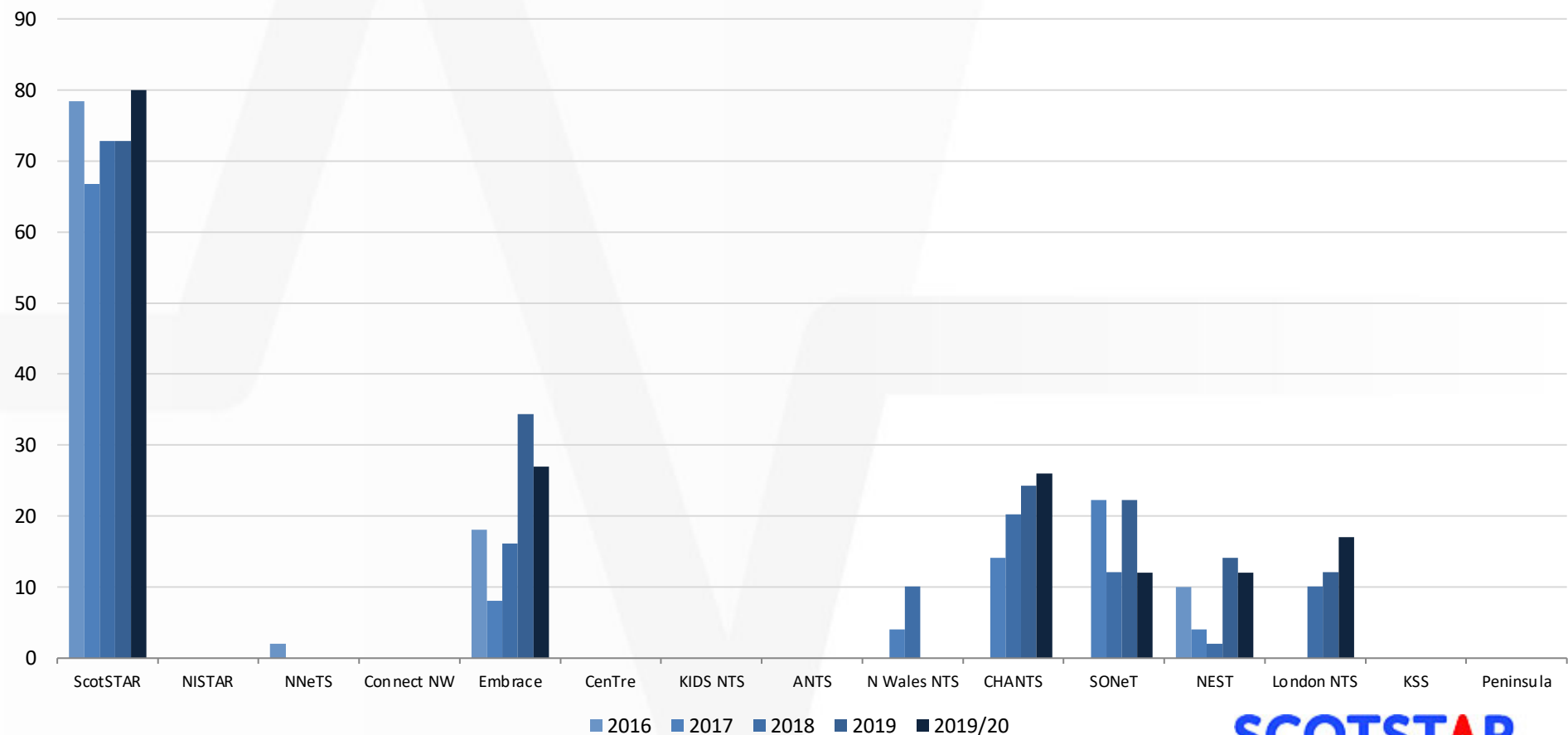
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Air Transfers by team as a percentage of total transfers Apr 2019 to Mar 2020

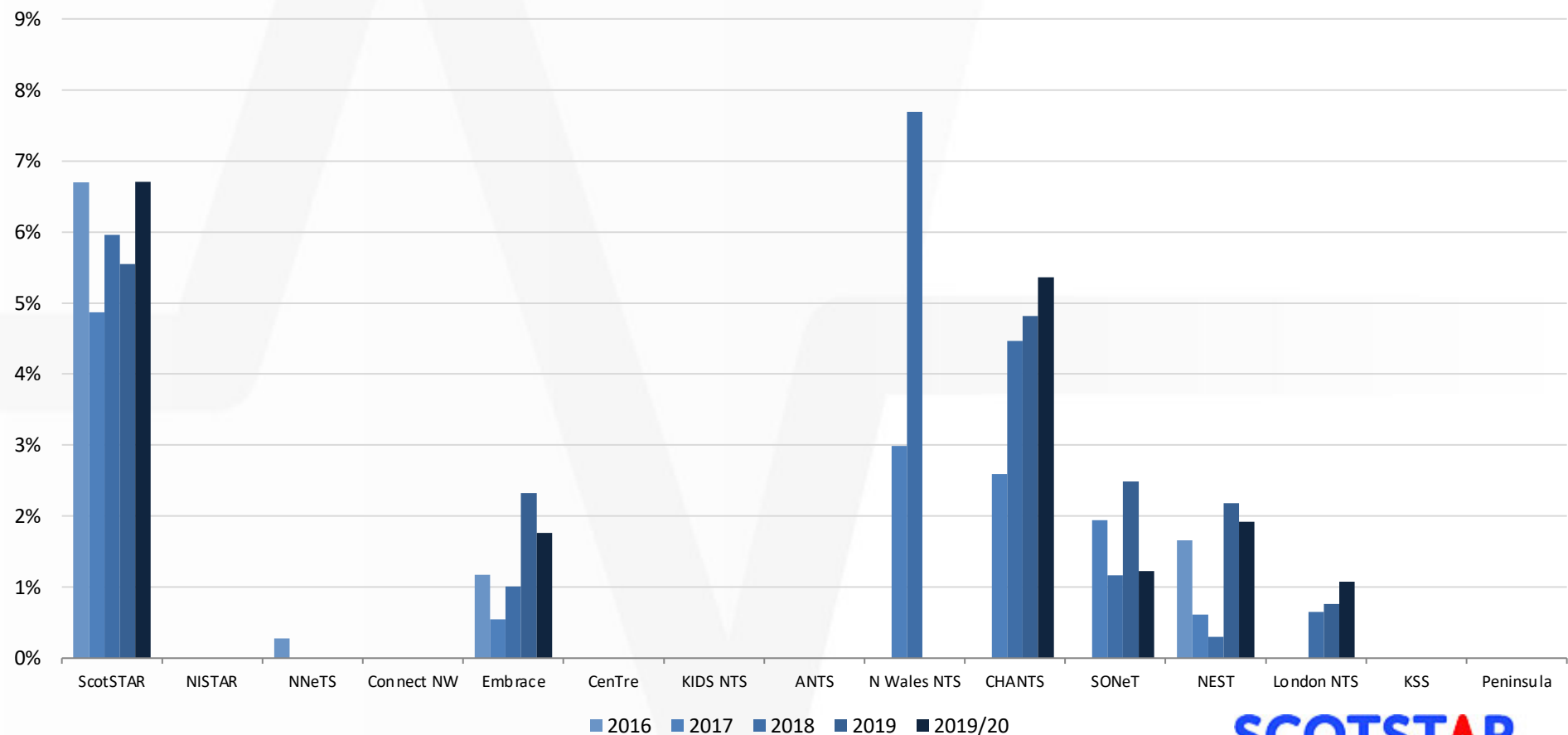


Trends in numbers of air transfers by team, 2014-20



Previous years are estimates assuming no seasonality to allow for basic comparison to 2019/20

Trends in air transfers as a percentage of total transfers by team, 2014-20



Premature Newborn Infant Workload

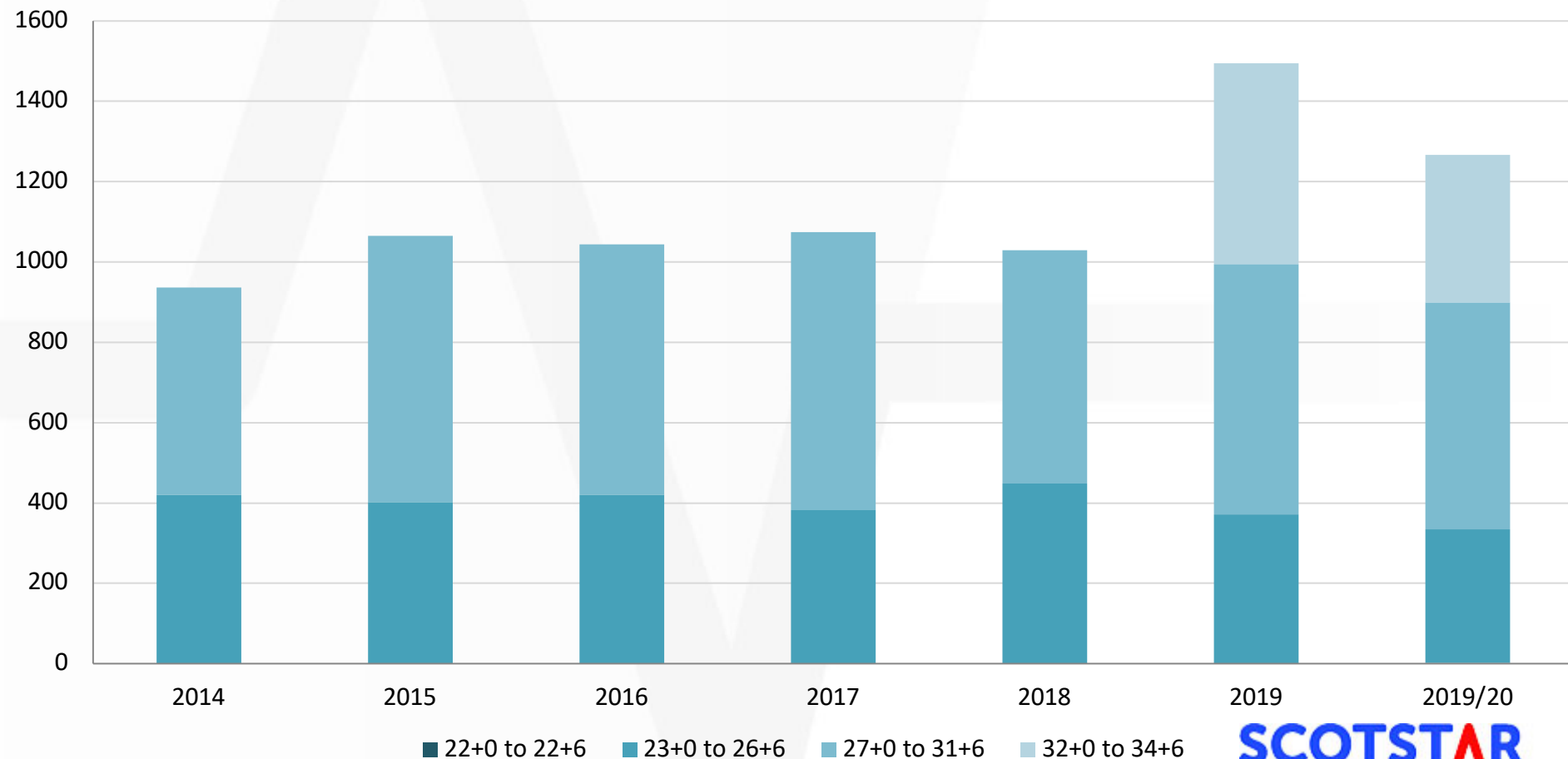
Data on

- Transfer on first 3 days of birth
 - 22⁺⁰ weeks to 22⁺⁶ weeks (new)
 - 23⁺⁰ weeks to 26⁺⁶ weeks
 - 27⁺⁰ weeks to 31⁺⁶ weeks
 - 32⁺⁰ weeks to 36⁺⁶ weeks
- Operational reason for transfer
 - Uplift
 - Capacity
 - Repatriation

Premature infants transferred on the first 3 days of life for **Uplift** (2014-2019 adjusted), 2019/20



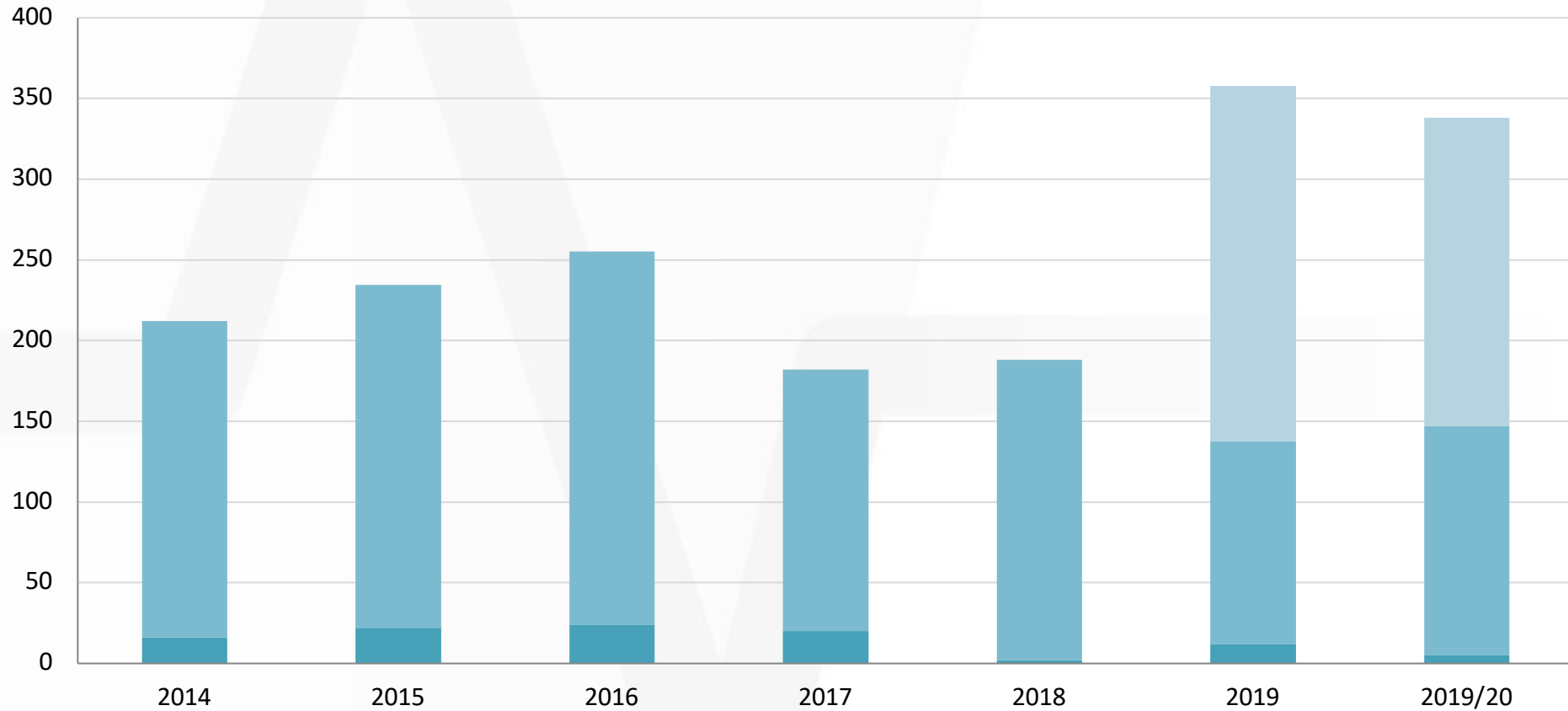
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Premature infants transferred on the first 3 days of life for **Capacity** (2014-2019 adjusted) , 2019/20



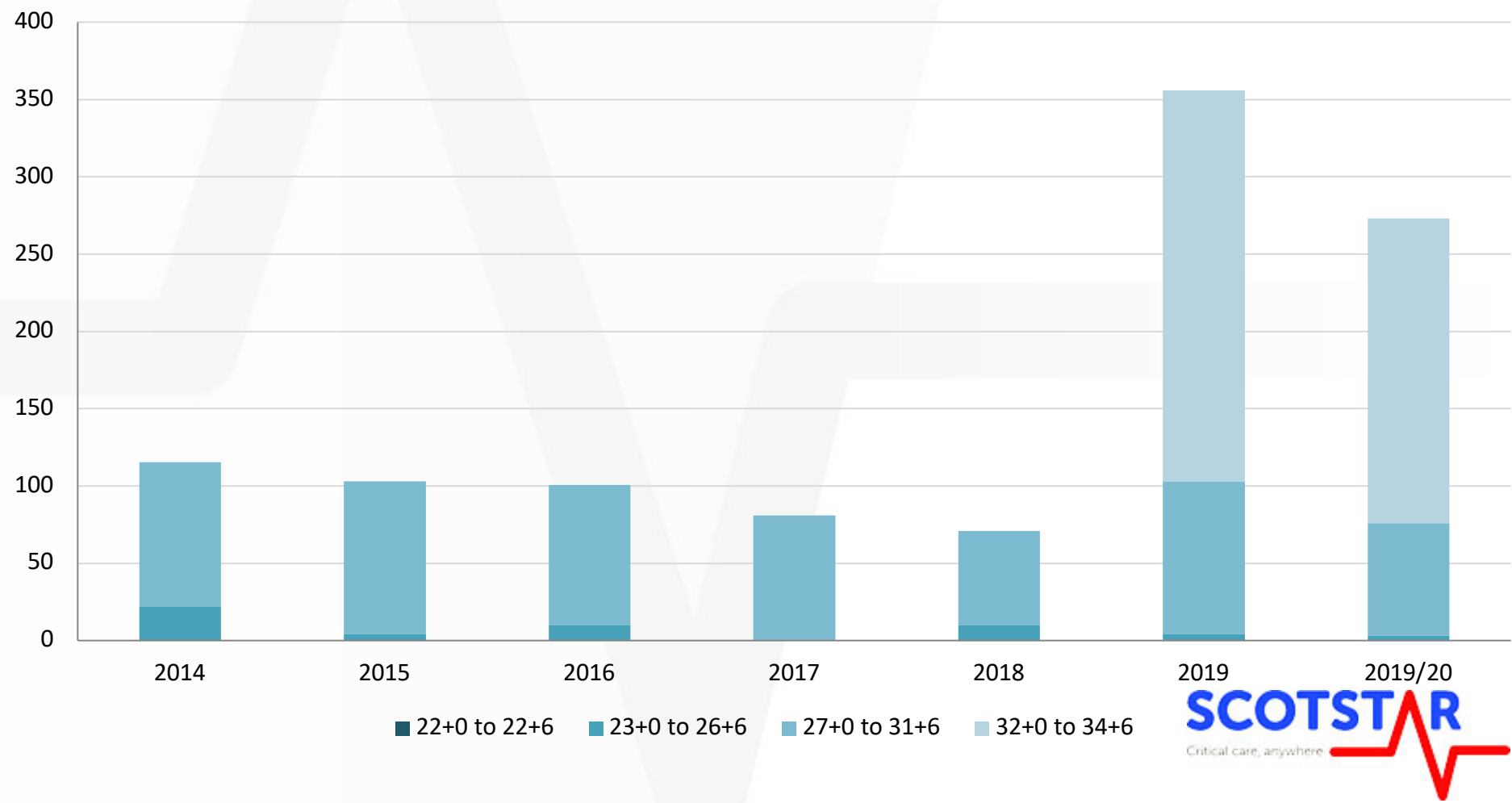
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■ 22+0 to 22+6 ■ 23+0 to 26+6 ■ 27+0 to 31+6 ■ 32+0 to 34+6



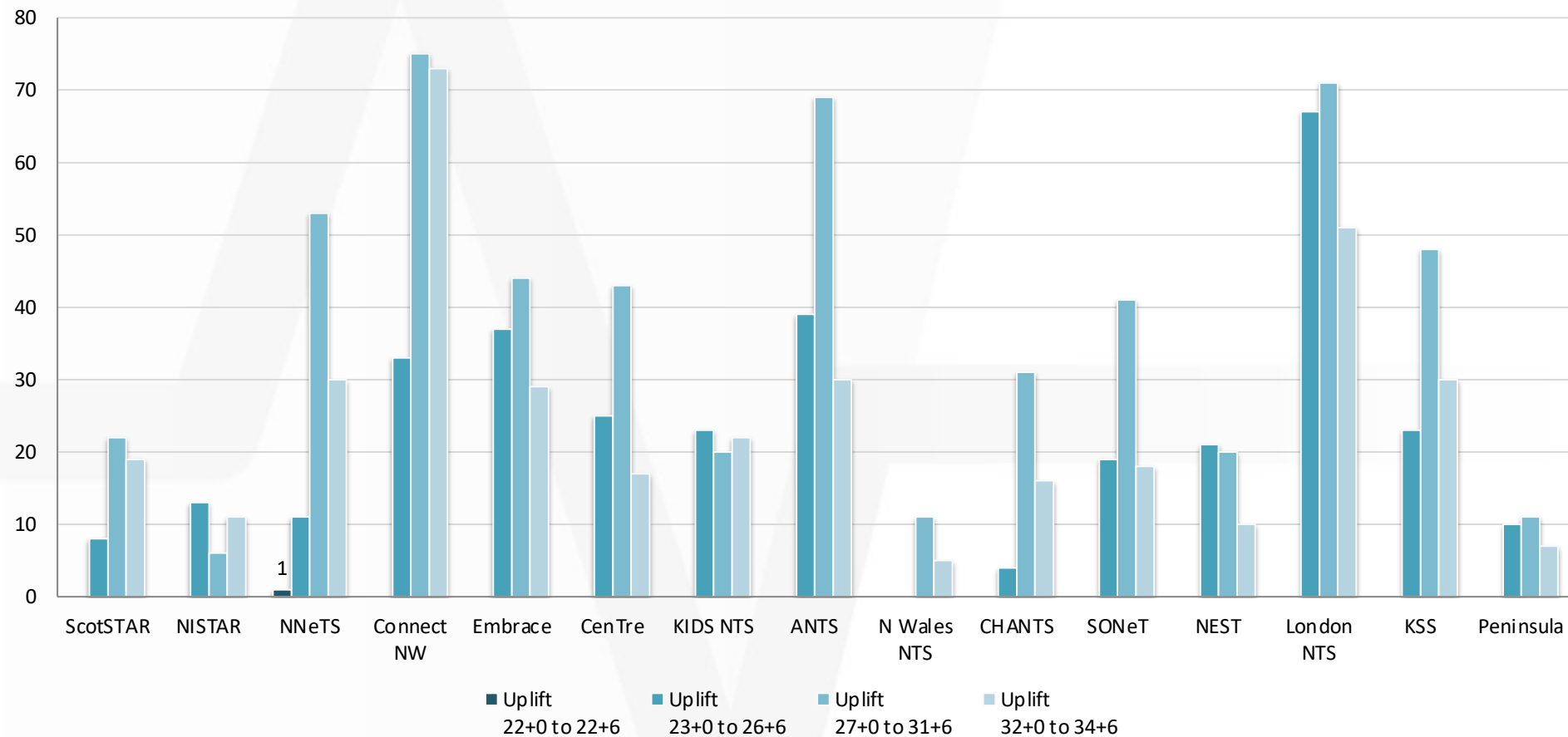
Premature infants transferred on the first 3 days of life for **Repatriation** (2014-2019 adjusted) , 2019/20



2019/20 Uplift transfers by team, 1st 3 days of life, 22-34⁺⁶ week infants



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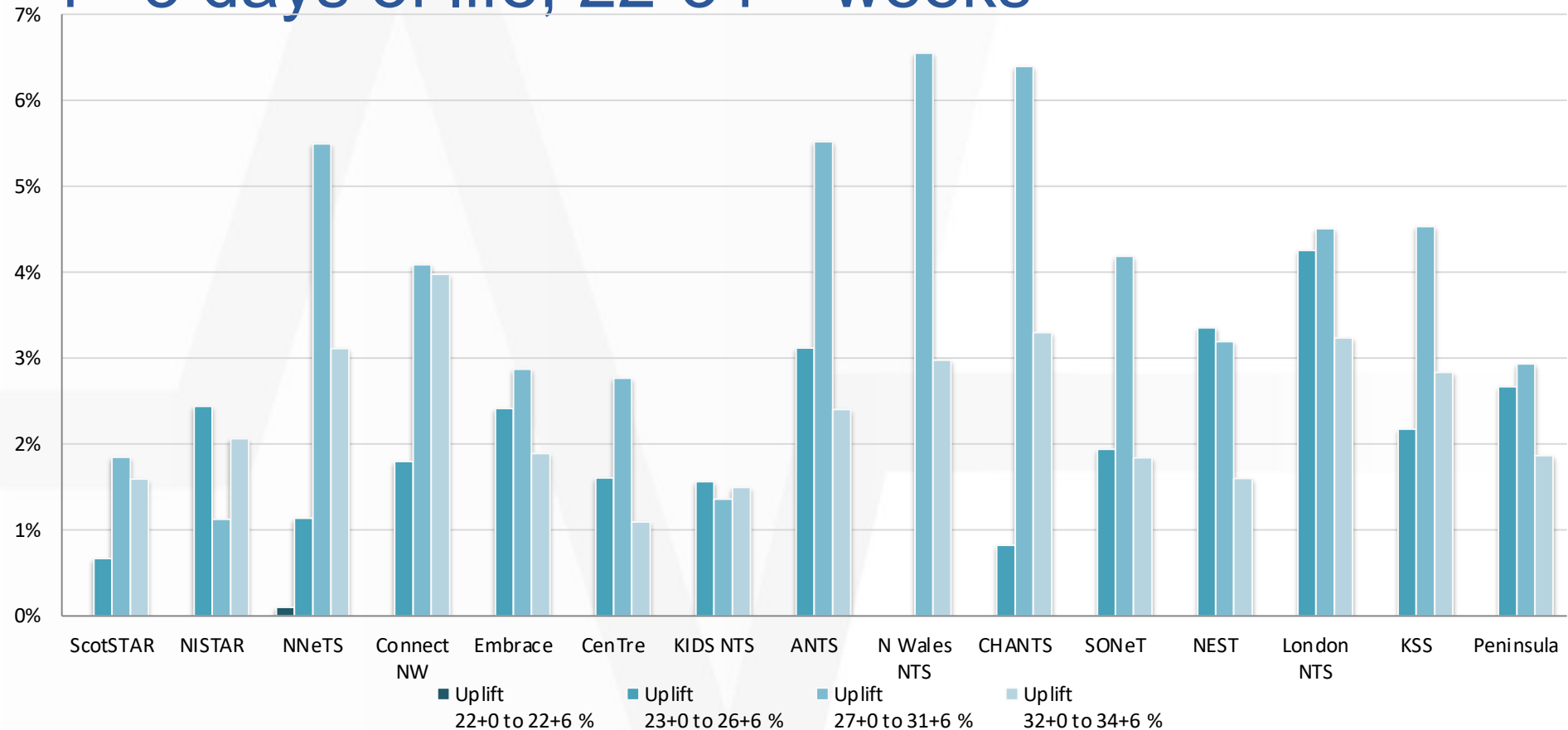


2019/20 Uplift transfers by Team as a percentage of total transfers

1st 3 days of life, 22-34⁺⁶ weeks



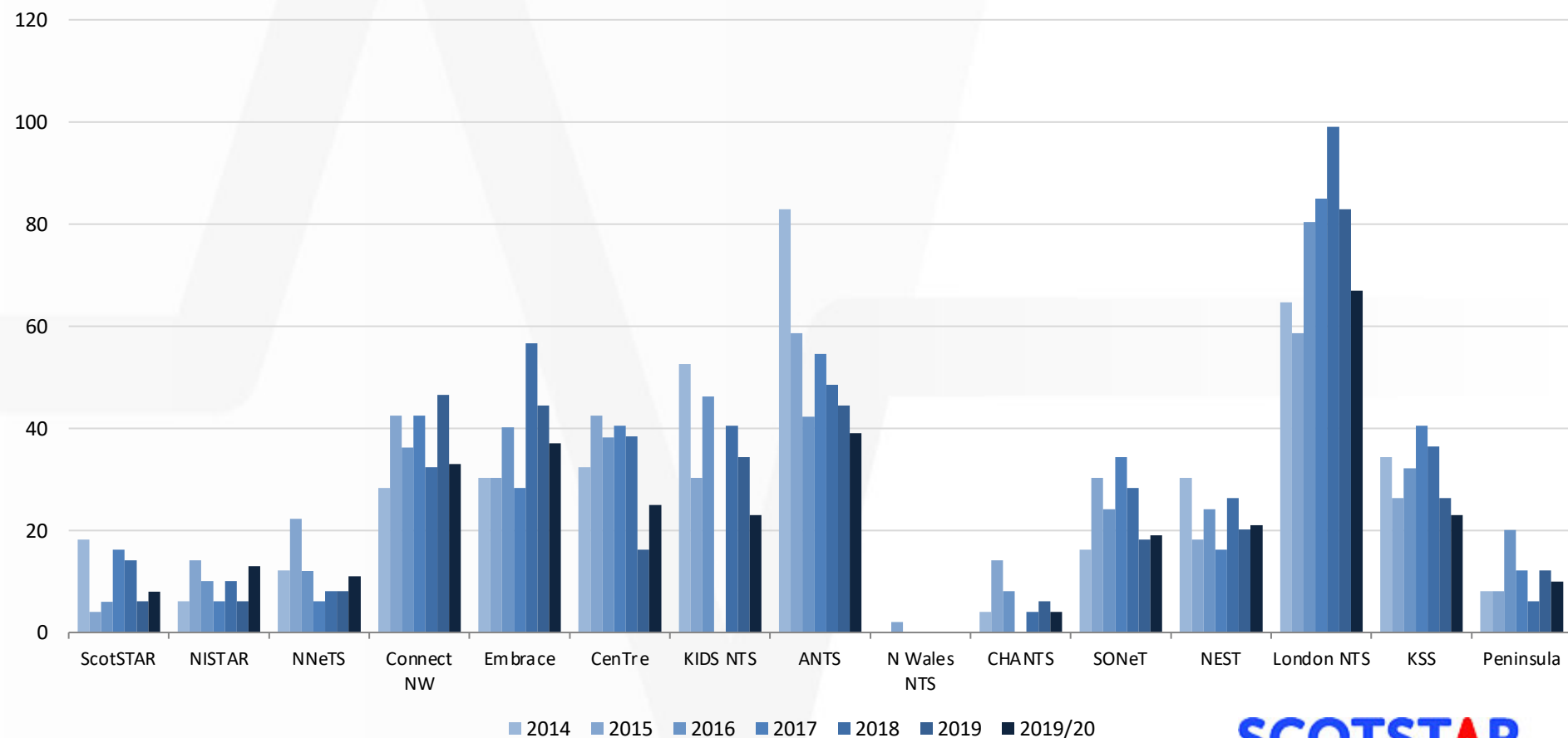
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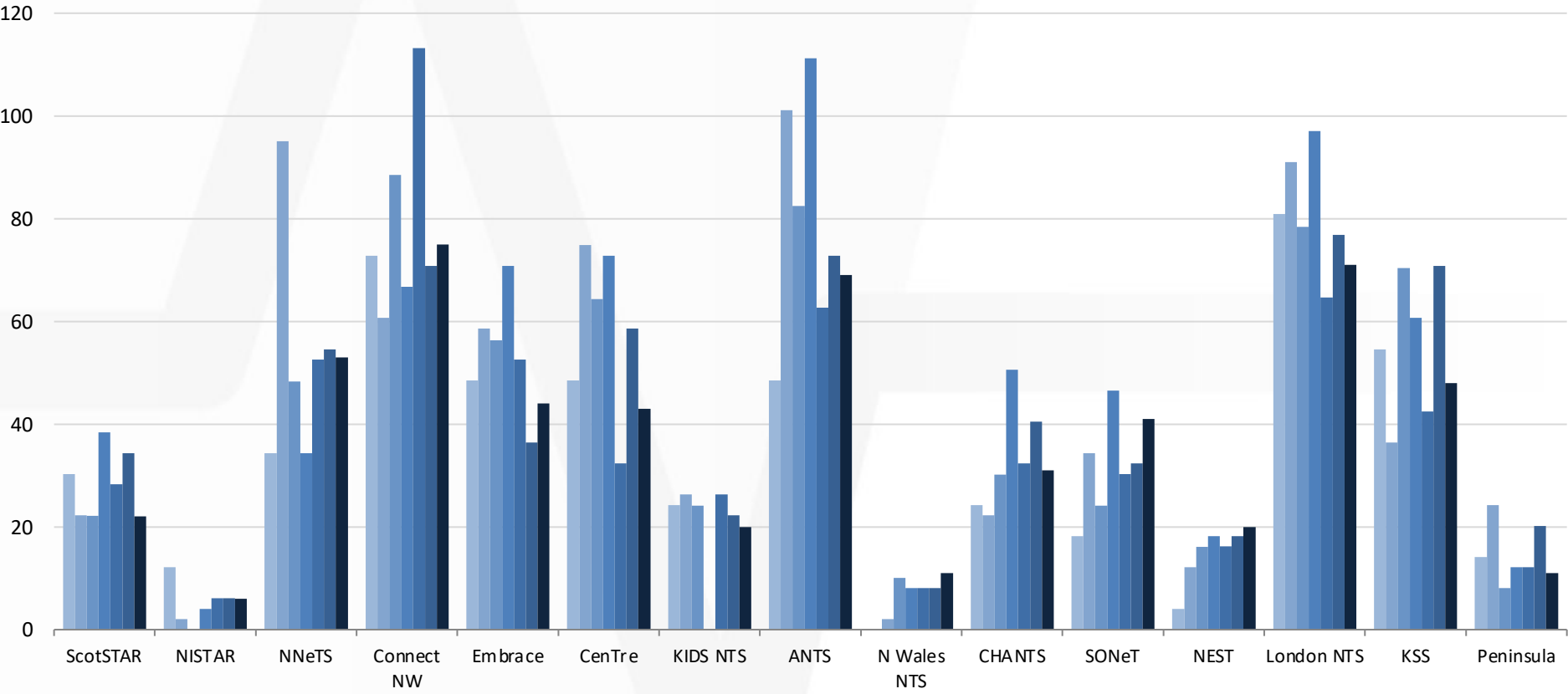
Trends in uplift transfers, 1st 3 days of life, 23-26⁺⁶ week infants, by team Jan-Jun 2014 – 2019 adj', 2019/20



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Trends in uplift transfers, 1st 3 days of life, 27-31⁺⁶ week infants, by team Jan-Jun 2014 – 2019 adj', 2019/20



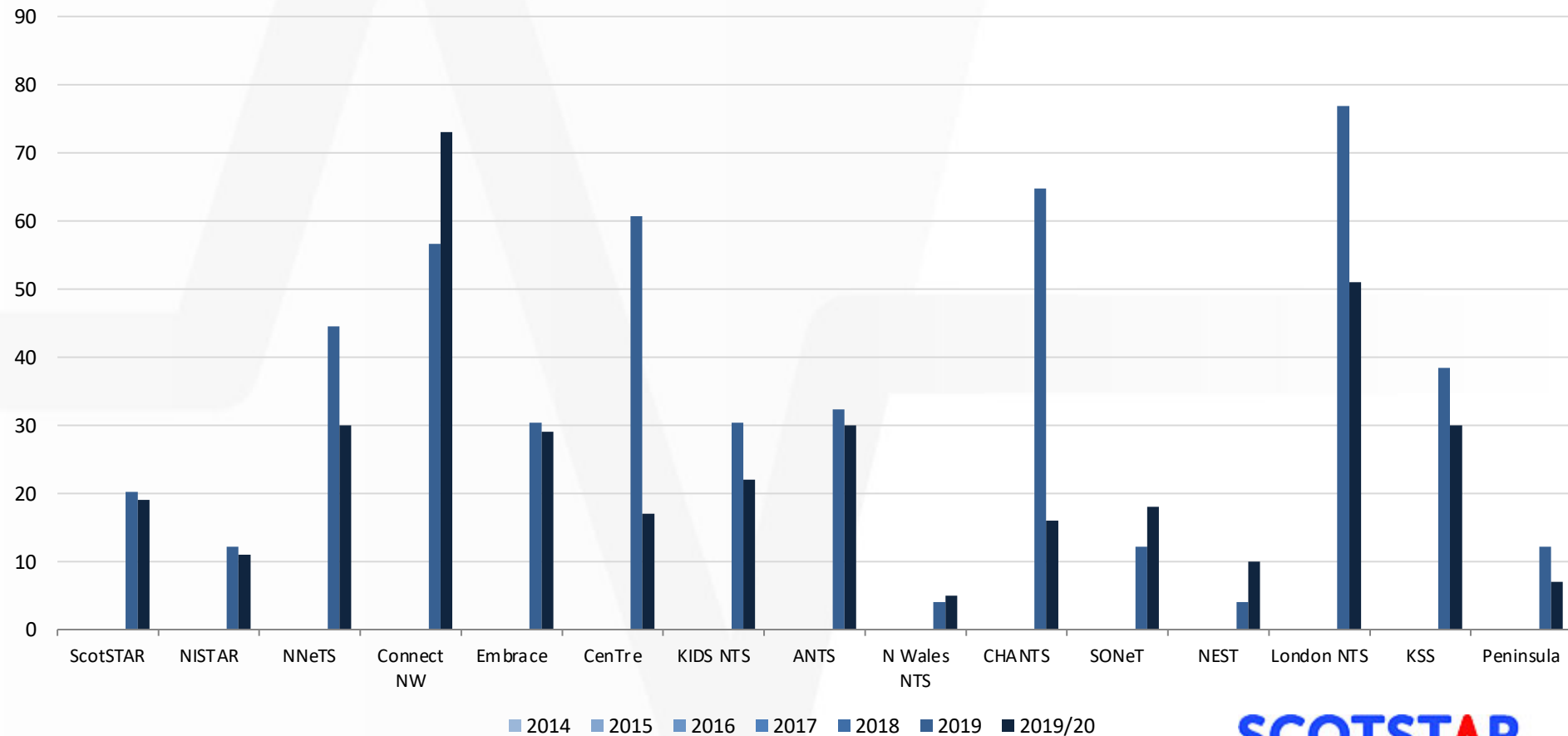
■ 2014 ■ 2015 ■ 2016 ■ 2017 ■ 2018 ■ 2019 ■ 2019/20



Trends in uplift transfers, 1st 3 days of life, 32-34⁺⁶ week infants, Jan-Jun 2019 adj', 2019/20



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This information has only been gathered for this gestational group in 2019 and 2020

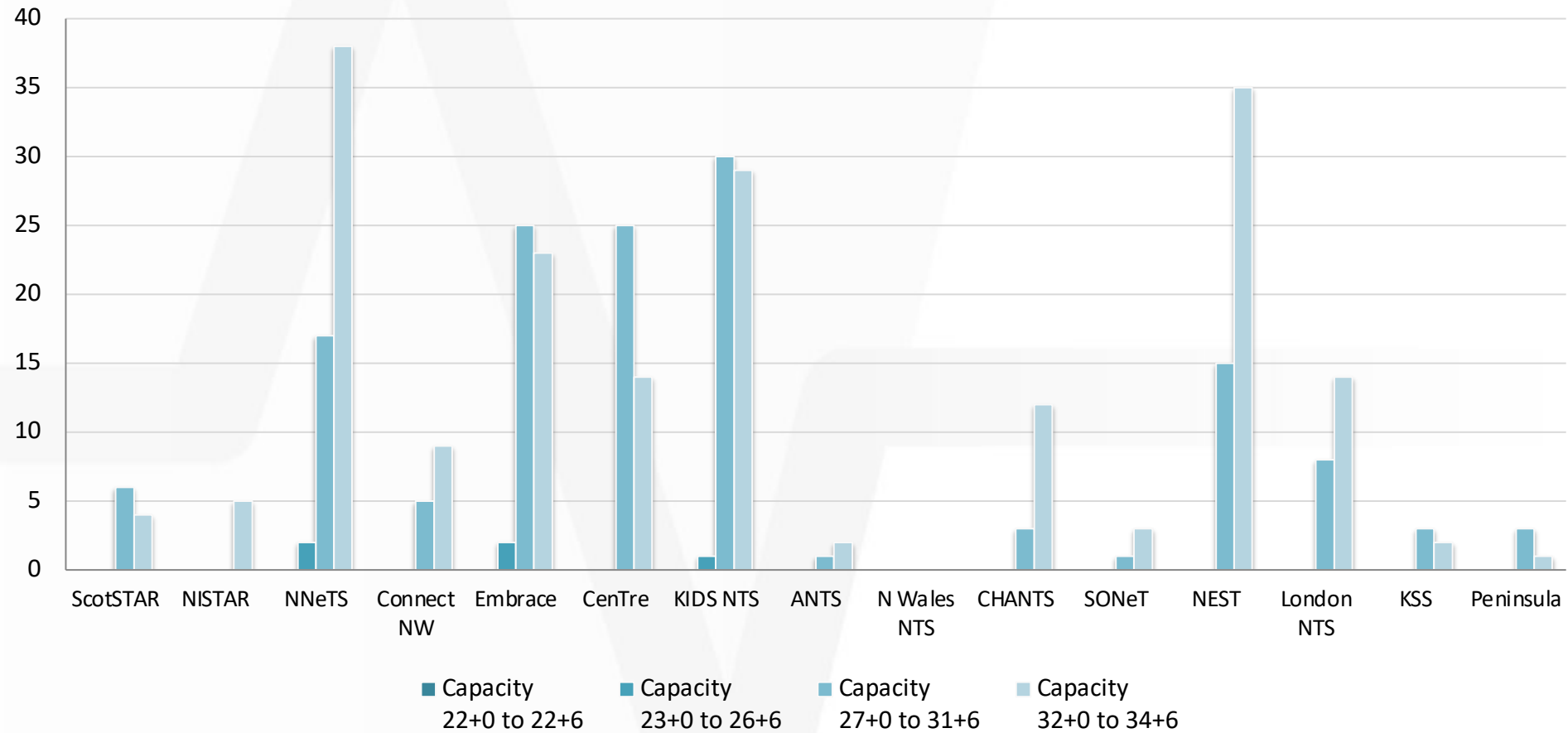


2019/20 Capacity transfers

1st 3 days of life, 22-31⁺⁶ week infants



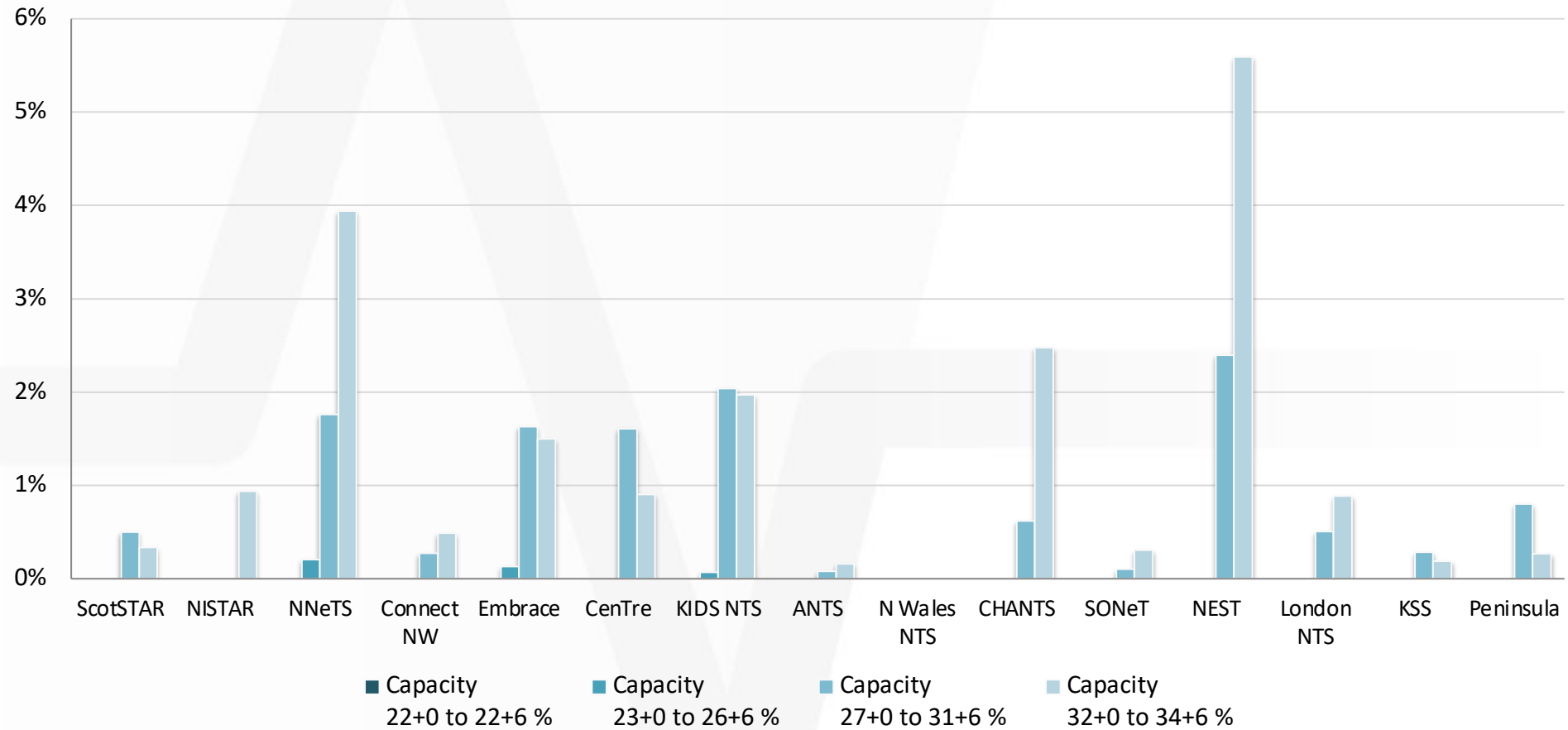
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2019/20 Capacity transfers by Team as percentage of total transfers, 1st 3 days of life, 22-34⁺⁶ weeks

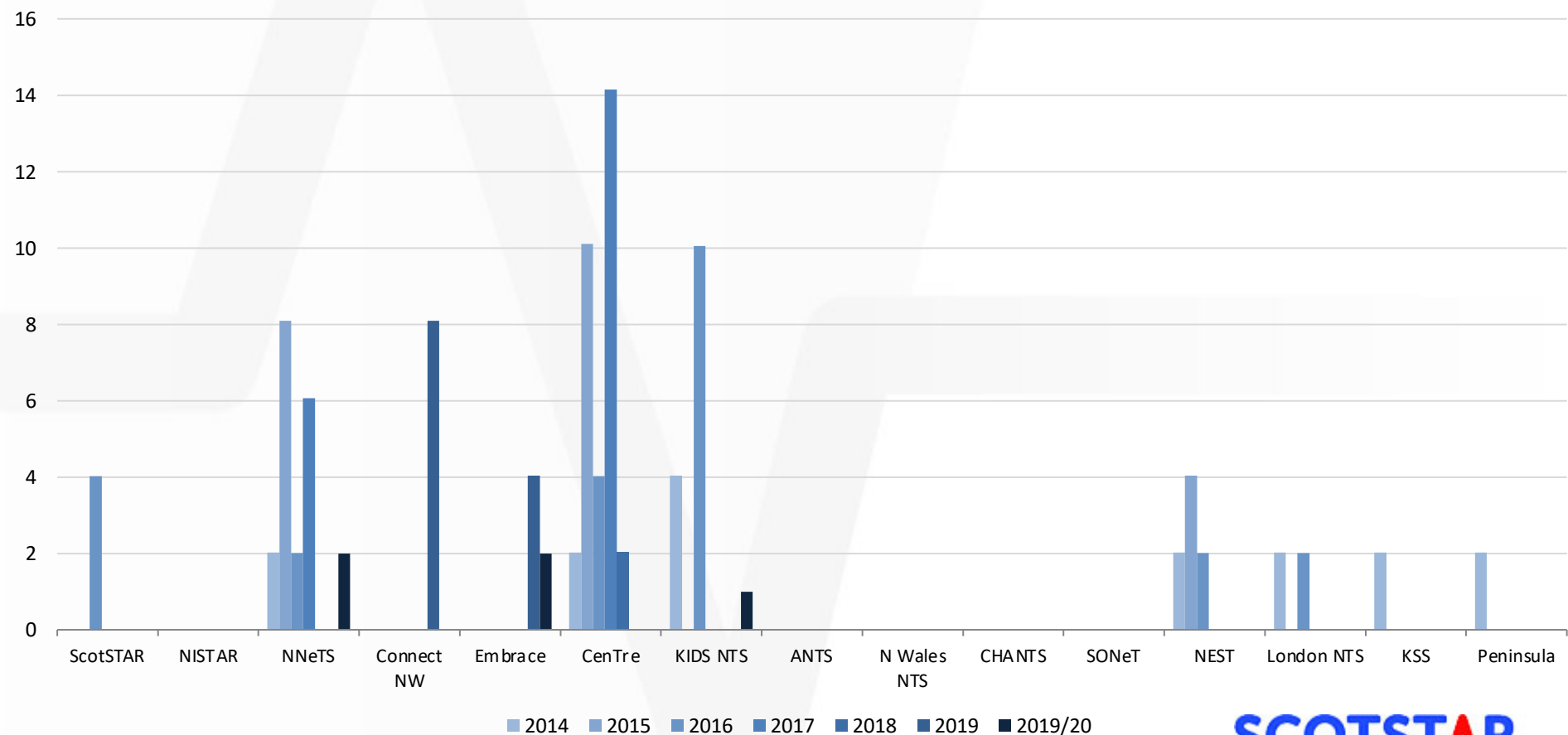


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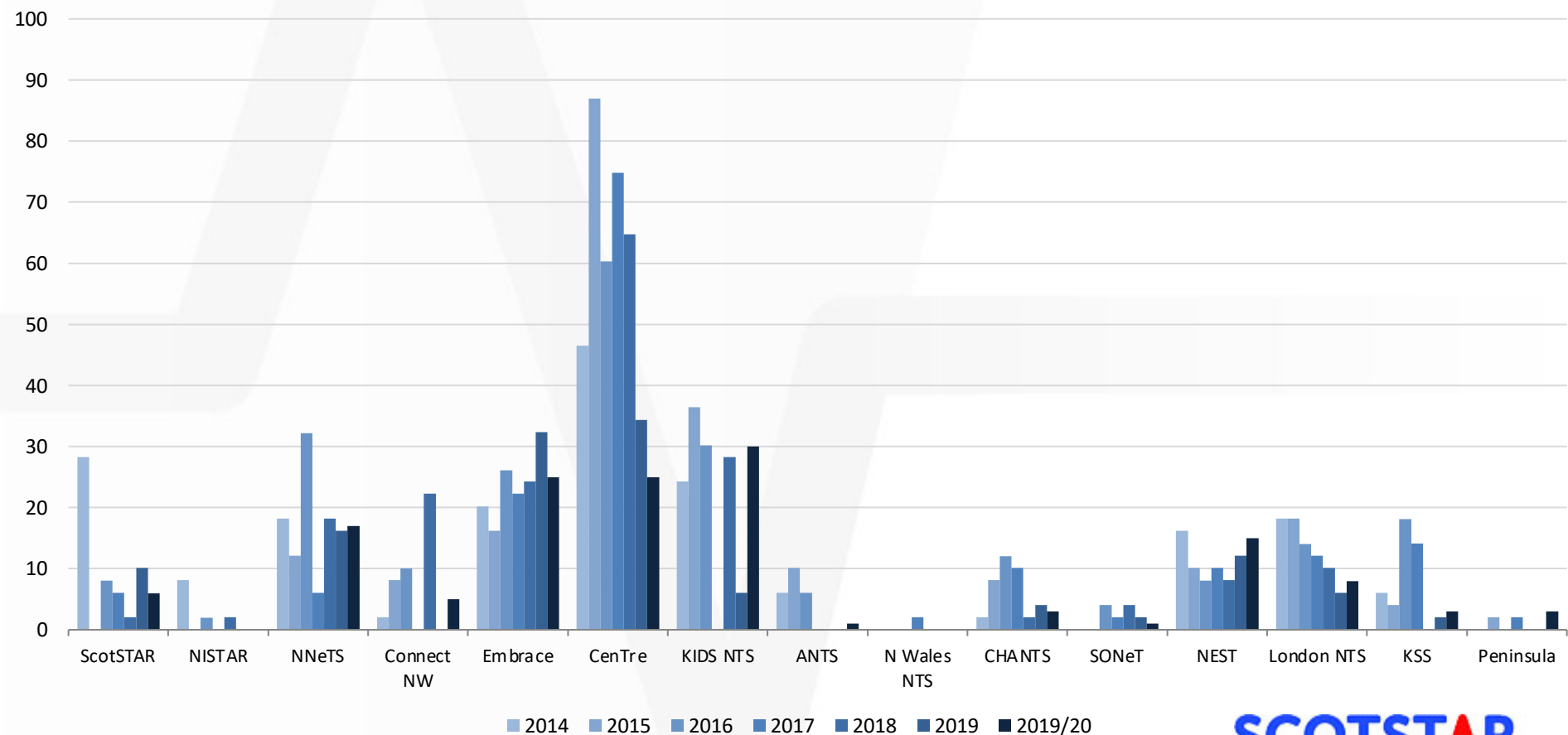


Trends in capacity transfers, 1st 3 days of life, 23-26⁺⁶ week infants, by team

Jan-Jun 2014 – 2019 adj', 2019/20



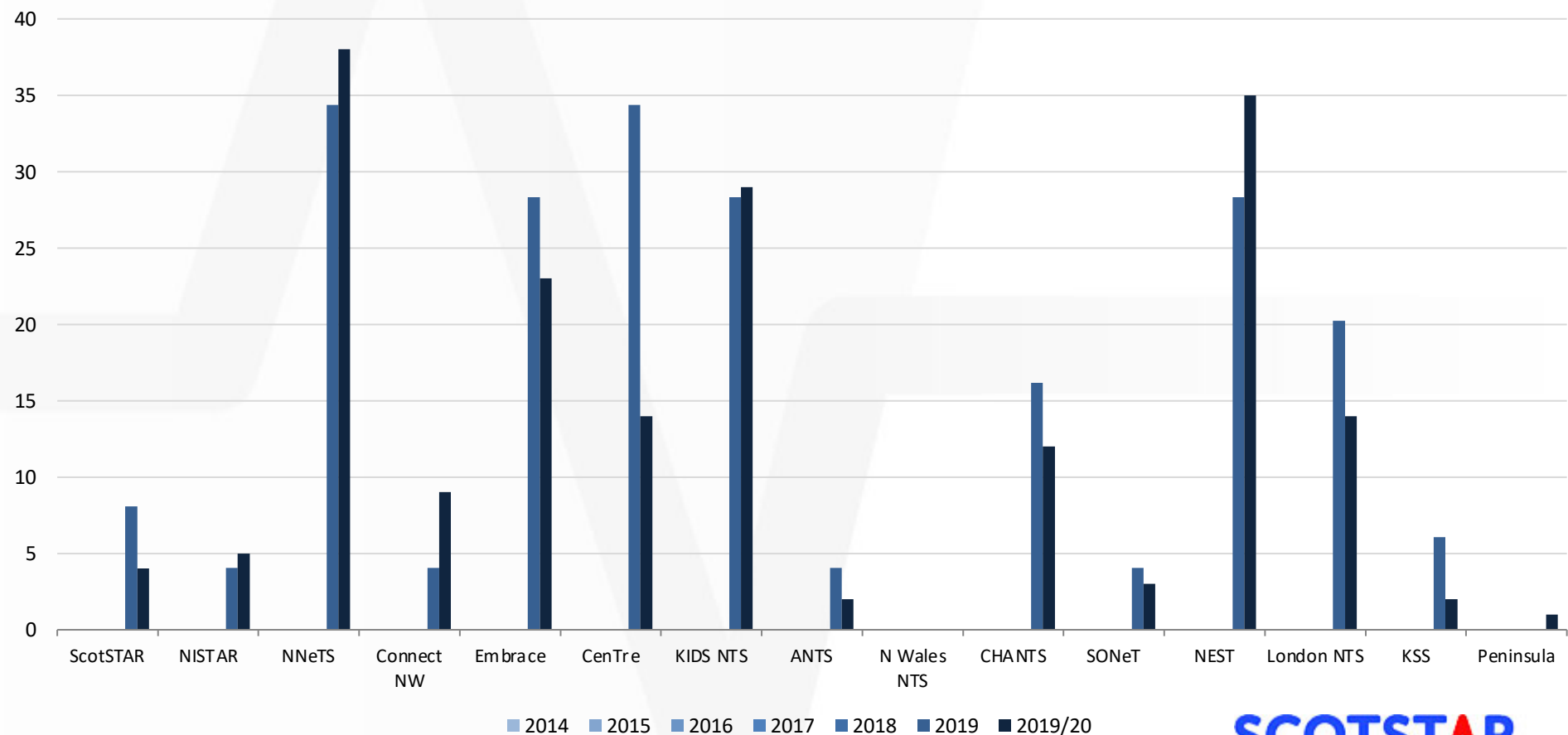
Trends in capacity transfers, 1st 3 days of life, 27-31⁺⁶ week infants, by team Jan-Jun 2014 – 2019 adj', 2019/20



Trends in capacity transfers, 1st 3 days of life, 32-34⁺⁶ week infants, by team Jan-Jun 2014 – 2019 adj', 2019/20



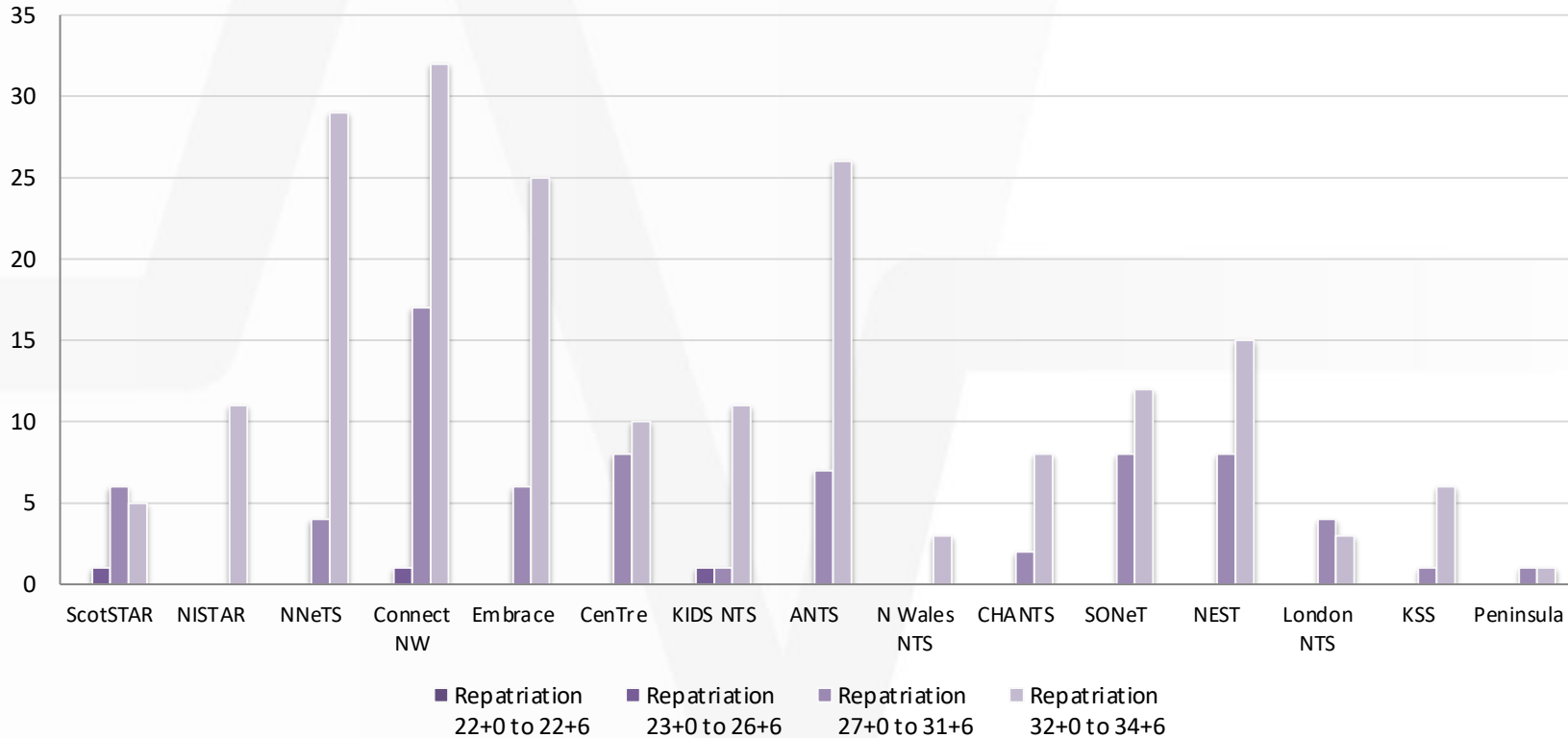
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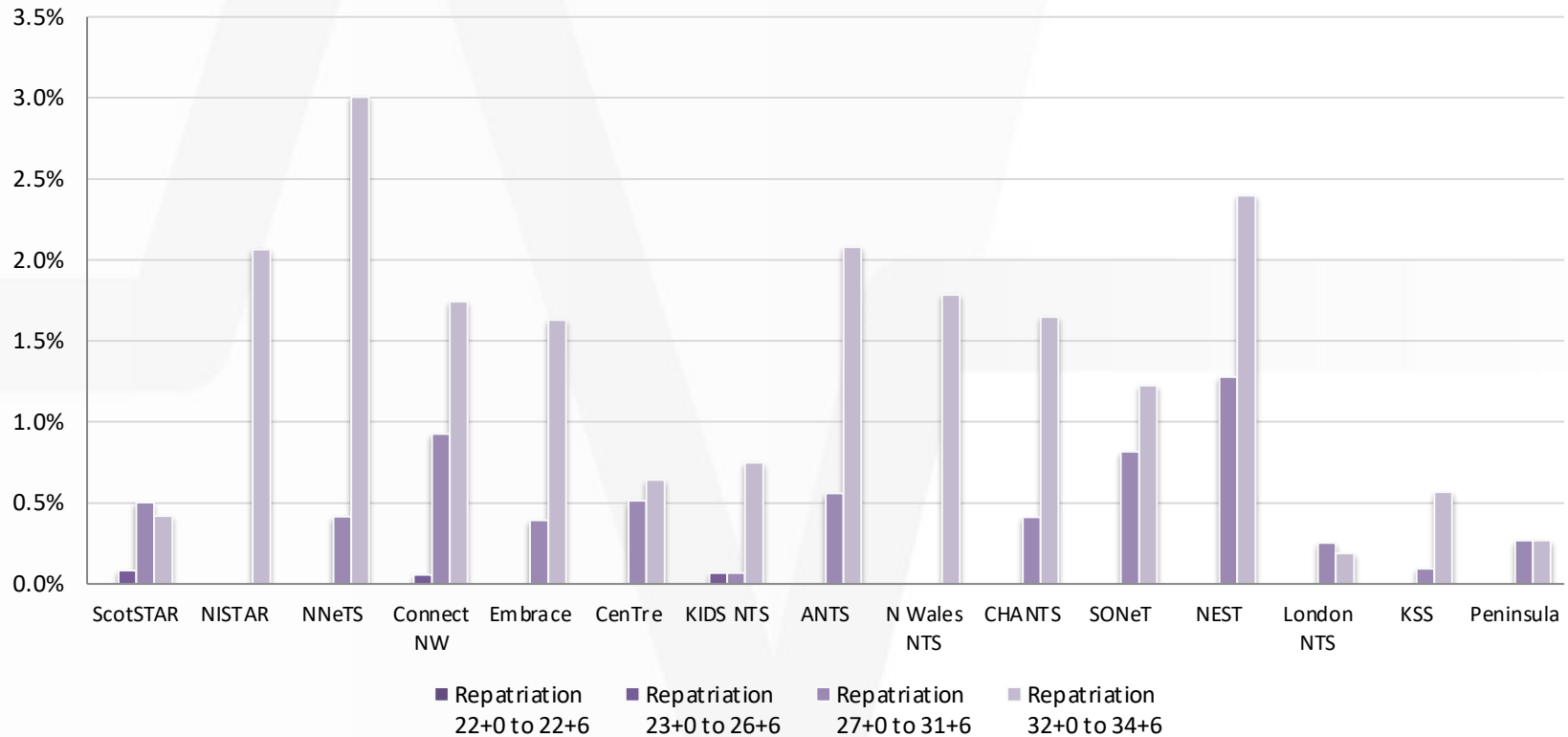
This information has only been gathered for this gestational group in 2019 and 2020



2019/20 Repatriation transfers by team, 22-34+6 weeks gestation



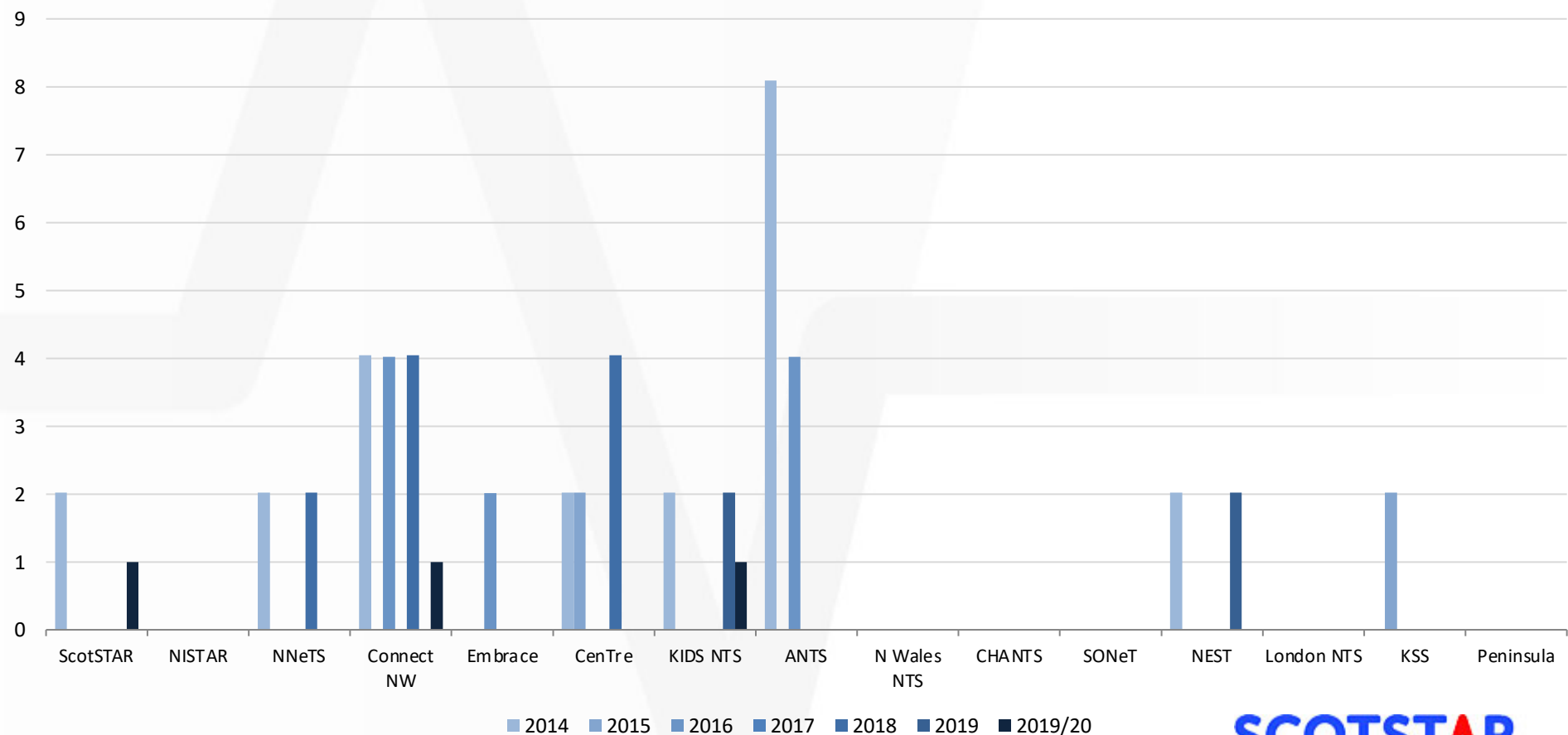
2019/20 Repatriation transfers by team, 22-34+6 weeks gestation



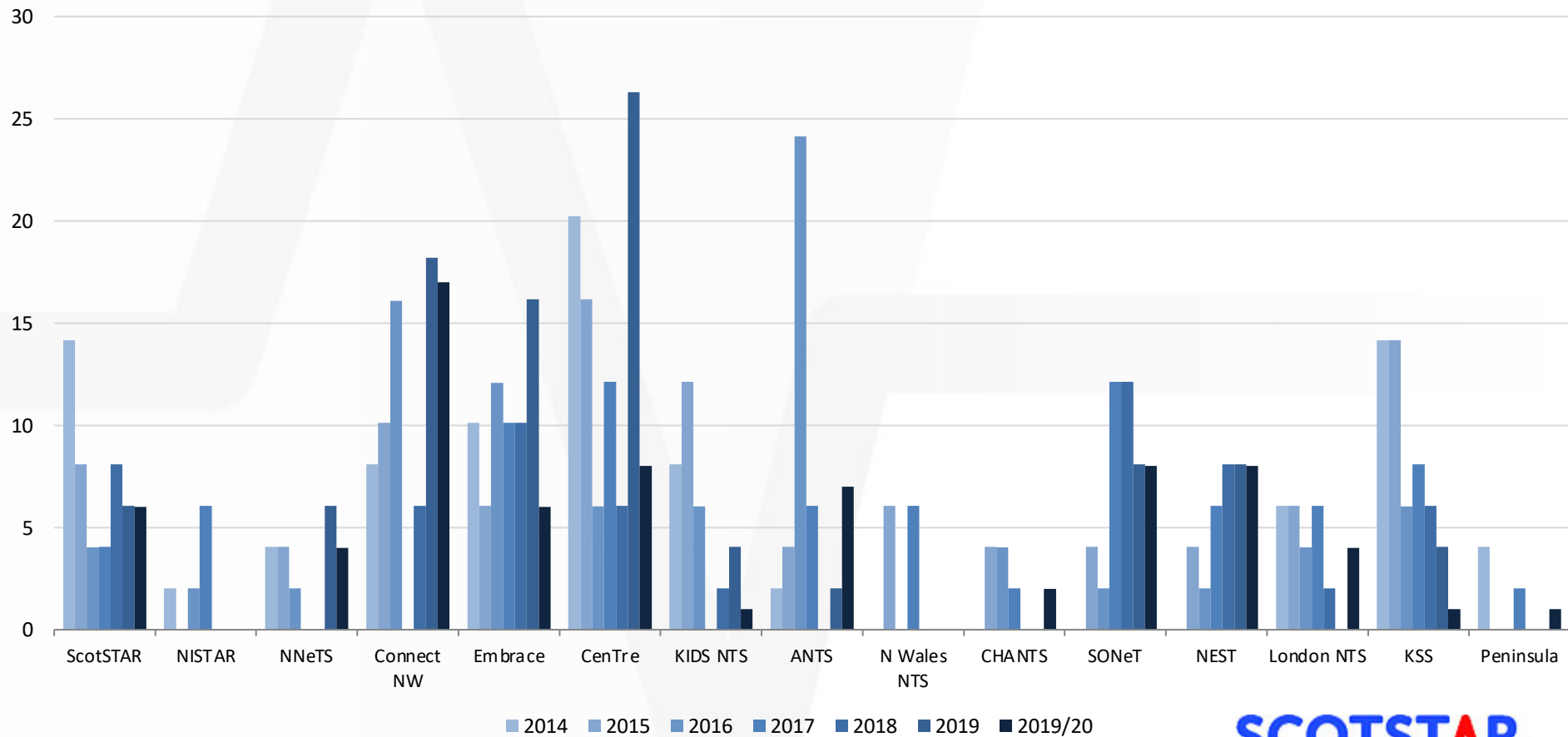
Trends in repatriation transfers, 1st 3 days of life, 23-26⁺⁶ week infants, by team Jan-Jun 2014 – 2019 adj', 2019/20



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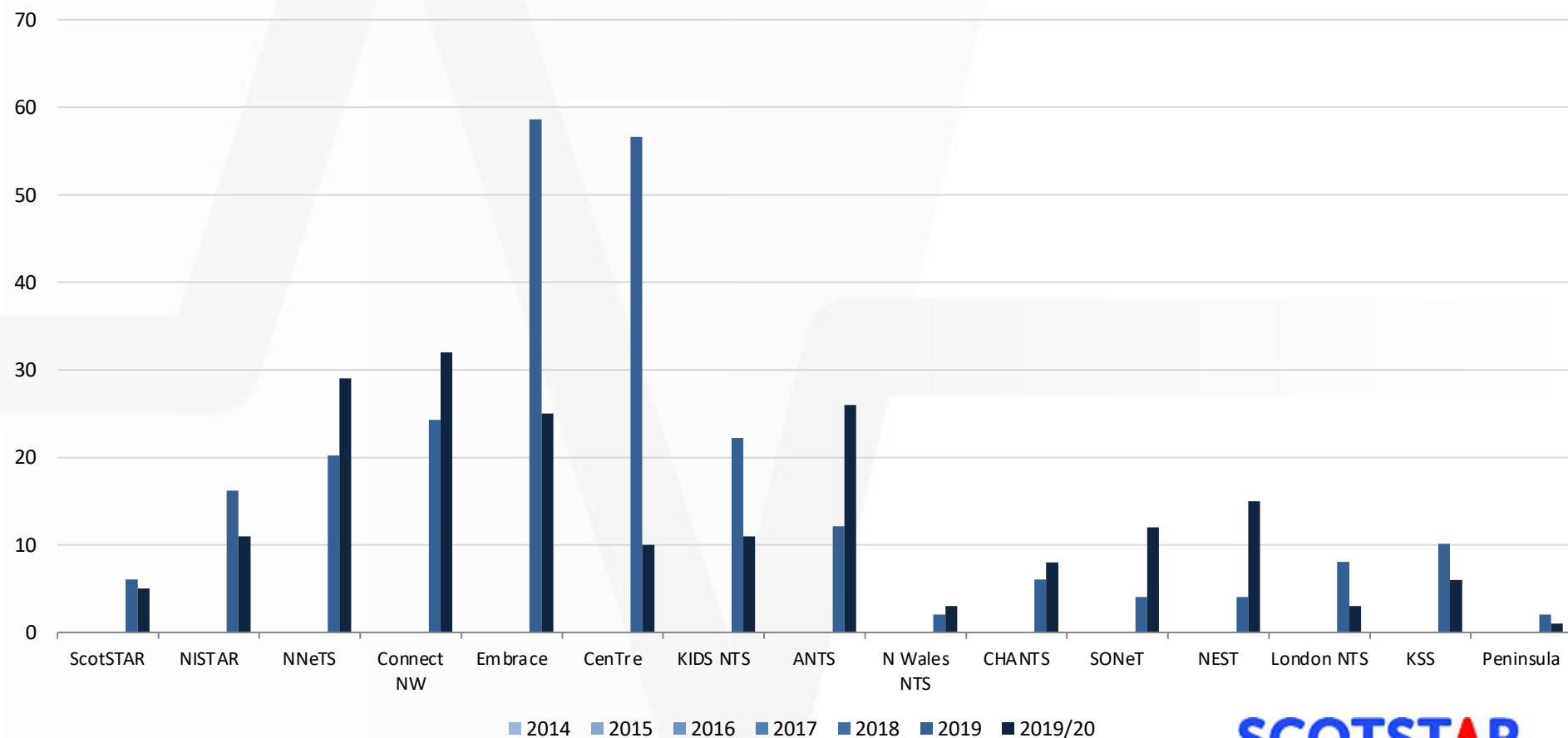
Trends in repatriation transfers, 1st 3 days of life, 27-31⁺⁶ week infants, by team Jan-Jun 2014 – 2019 adj', 2019/20



Trends in repatriation transfers, 1st 3 days of life, 32-34⁺⁶ week infants, by team Jan-Jun 2014 – 2019 adj', 2019/20



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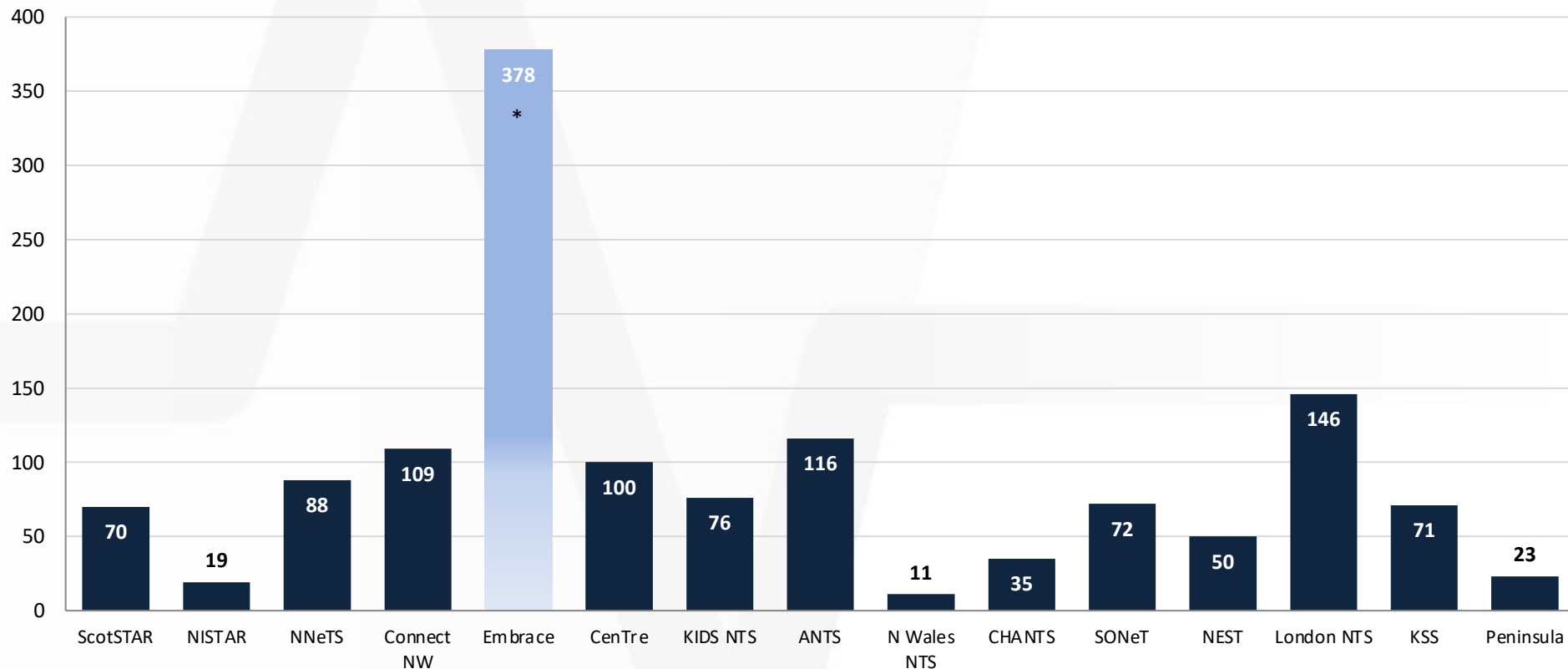


Temperature on completion of transfer

- Preterm uplift transfers in the first day of life*
 - 22-31+6 weeks gestation
- Temperature Breakdown
 - Less than 36.5 degrees
 - 36.5 to 37.5 degrees
 - Greater than 37.5 degrees

* nb due to an error on the initial data collection form this was not clear and one service was unable to provide this information subsequent to the error being noted

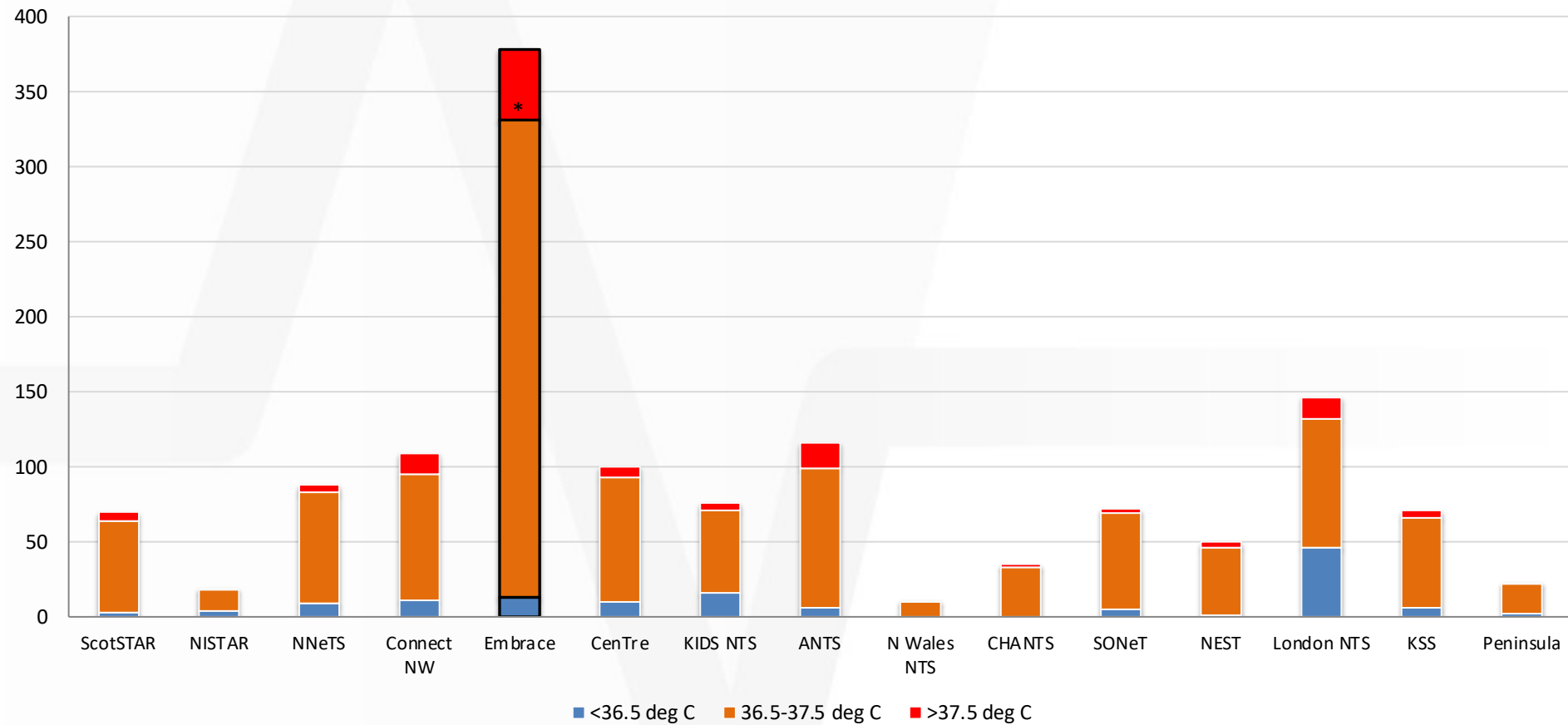
Temperatures on completion/team Apr 2019 to Mar 2020



* Embrace data using different denominator due to an error in the initial data collection form

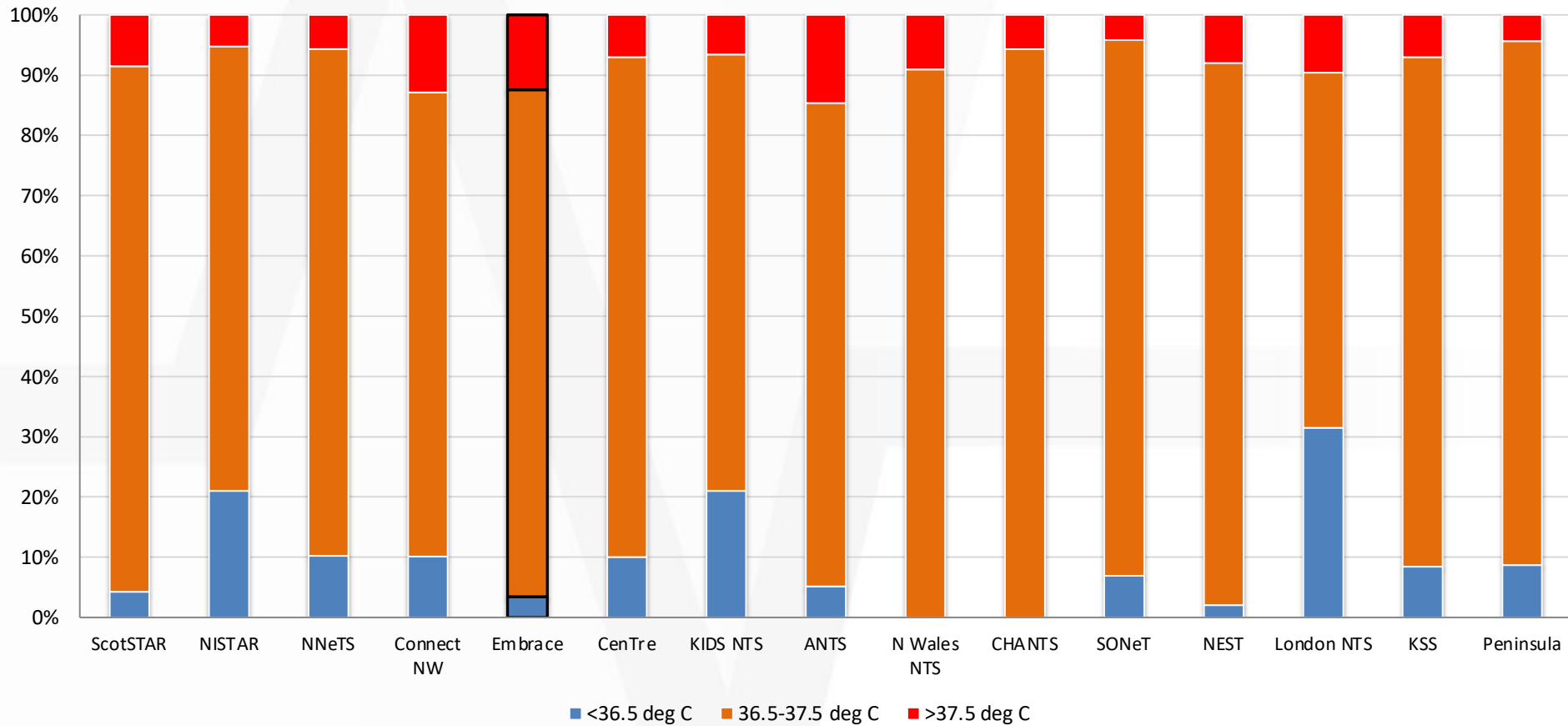


Temperature on completion



* Embrace data using different denominator due to an error in the initial data collection form

Temperature on completion of transfer- stacked



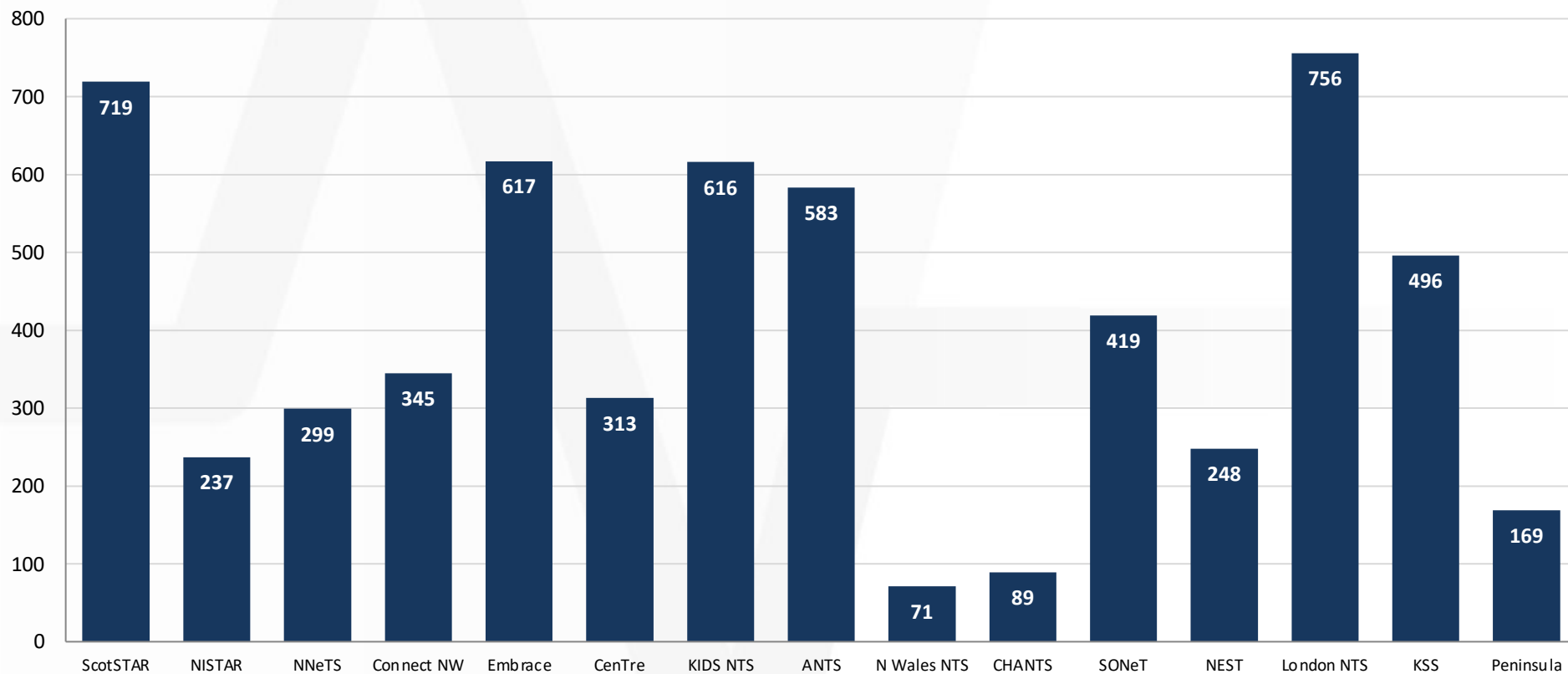
Parents travelling



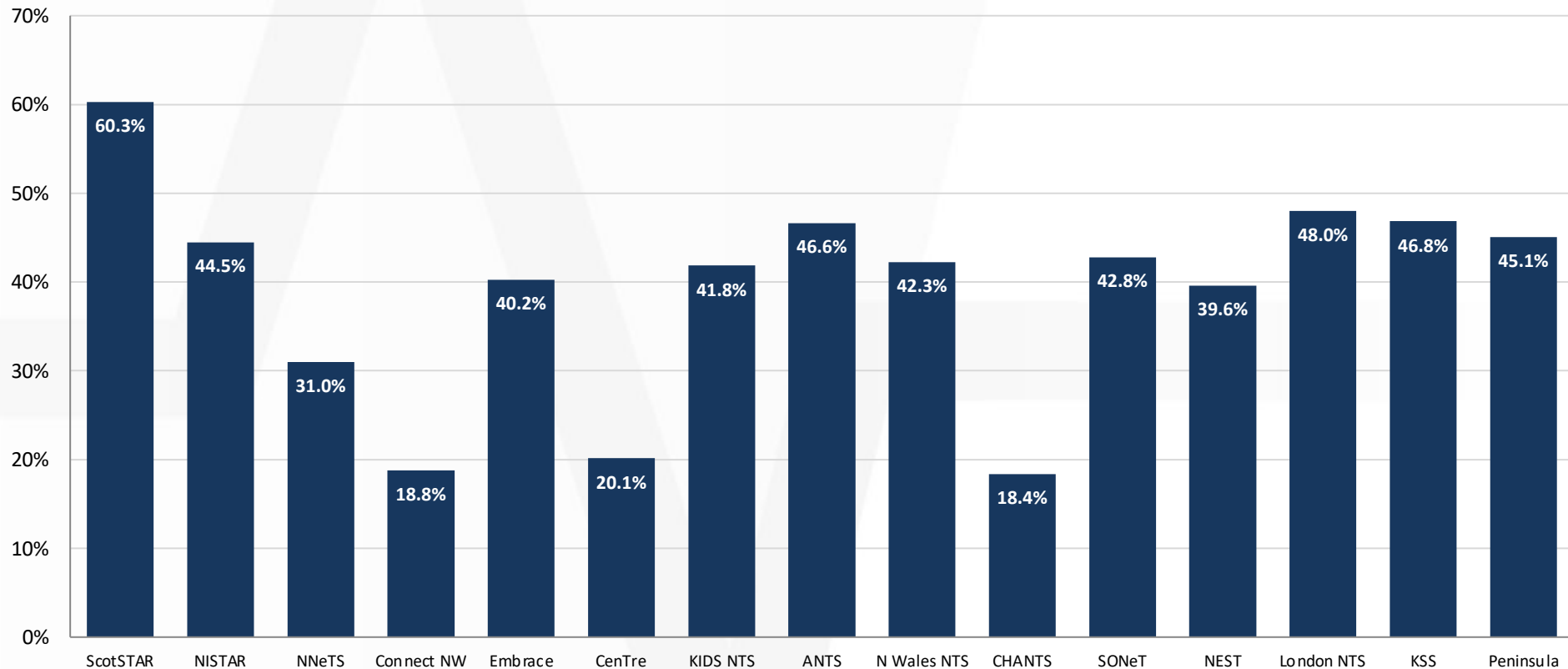
Data on

- Parents travelling with the baby simplified from last year

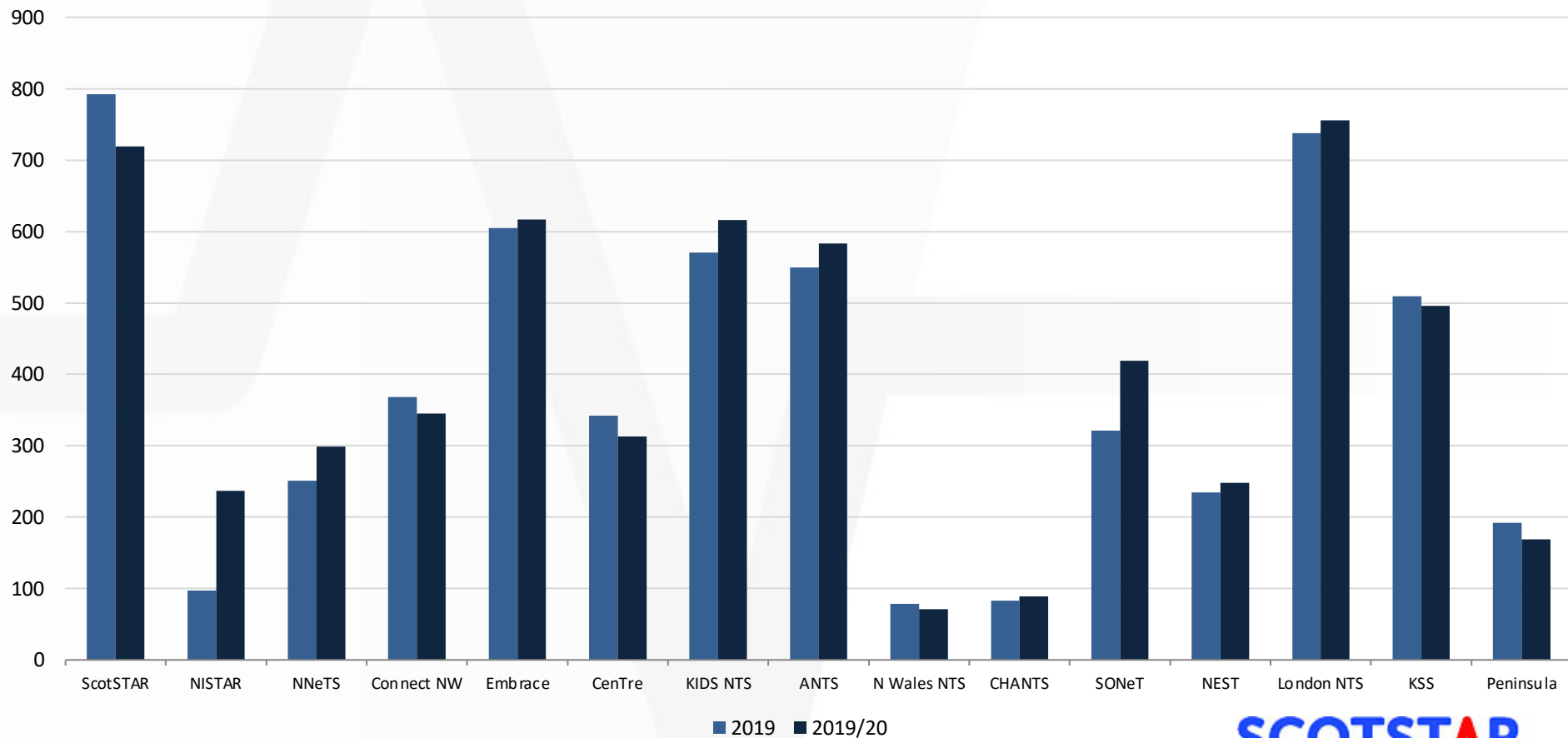
Parents travel/team Apr 2019 to Mar 2020



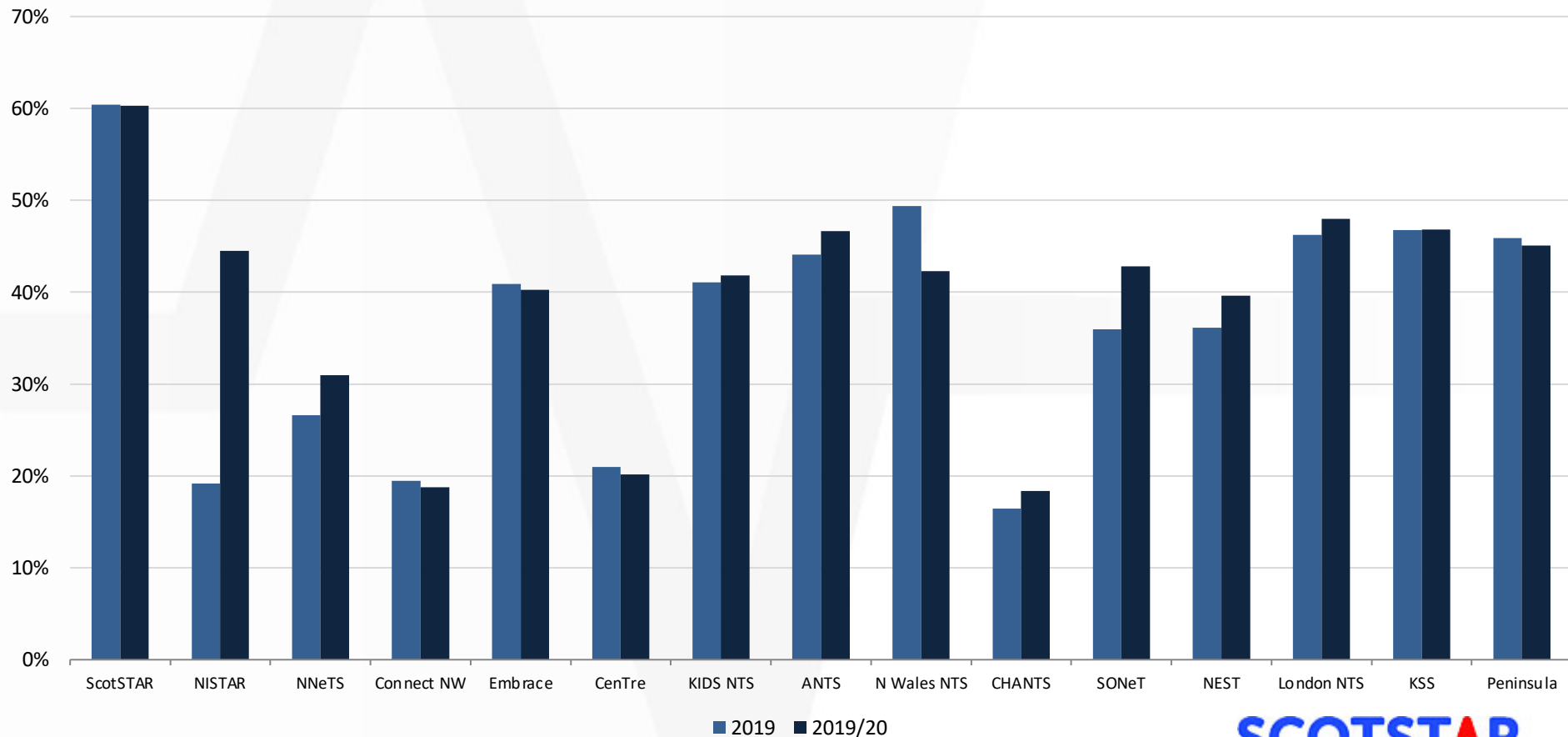
Parents travelling as a percentage of total transfers by team Apr 2019 to Mar 2020



Trends in numbers of parents travelling during transfers by team 2019-20



Trends in parent travelling during transfers, by team as a percentage of total transfers 2019-20



Response standards



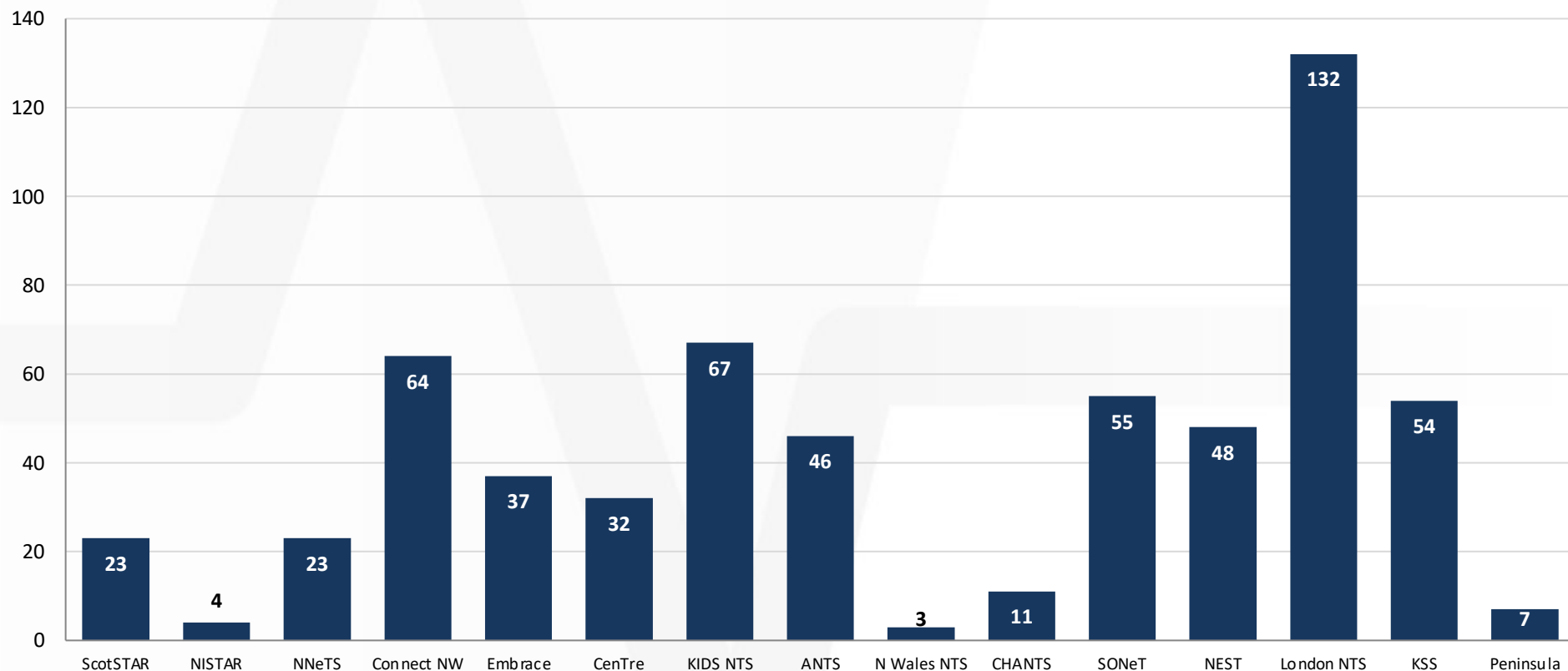
Data on

- Time critical transfers
 - Standard- to be mobile within 60 minutes of referral
 - Benchmarked conditions*:
 - 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:
- Referral response time for ICU uplift transfers (excluding elective referrals)
 - Standard- to be at the referring centre cotside within 3.5 hours of referral
- Uplift transfers within catchment performed by commissioned team
 - Standard: 100%

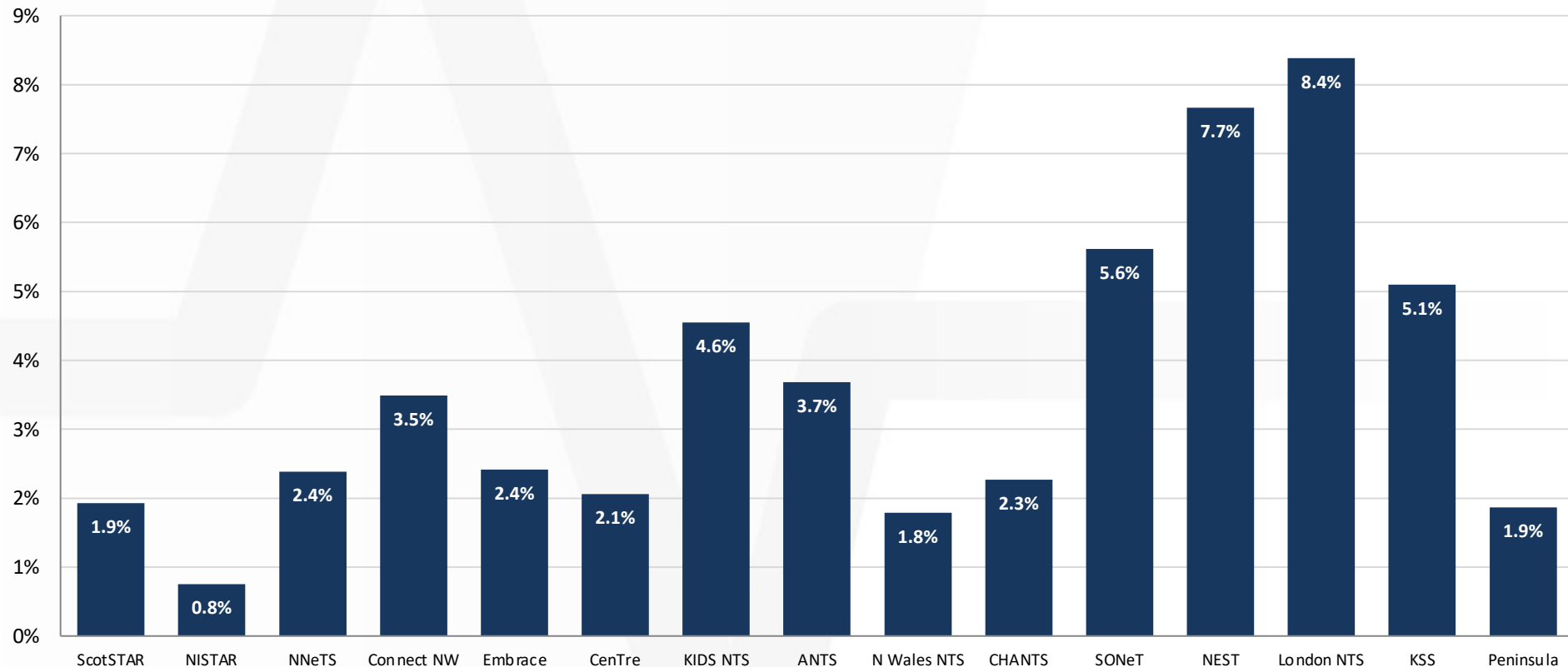


*nb this is not a complete list of situations where a team will be required to deploy within one hour, but a defined group used for benchmarking purposes

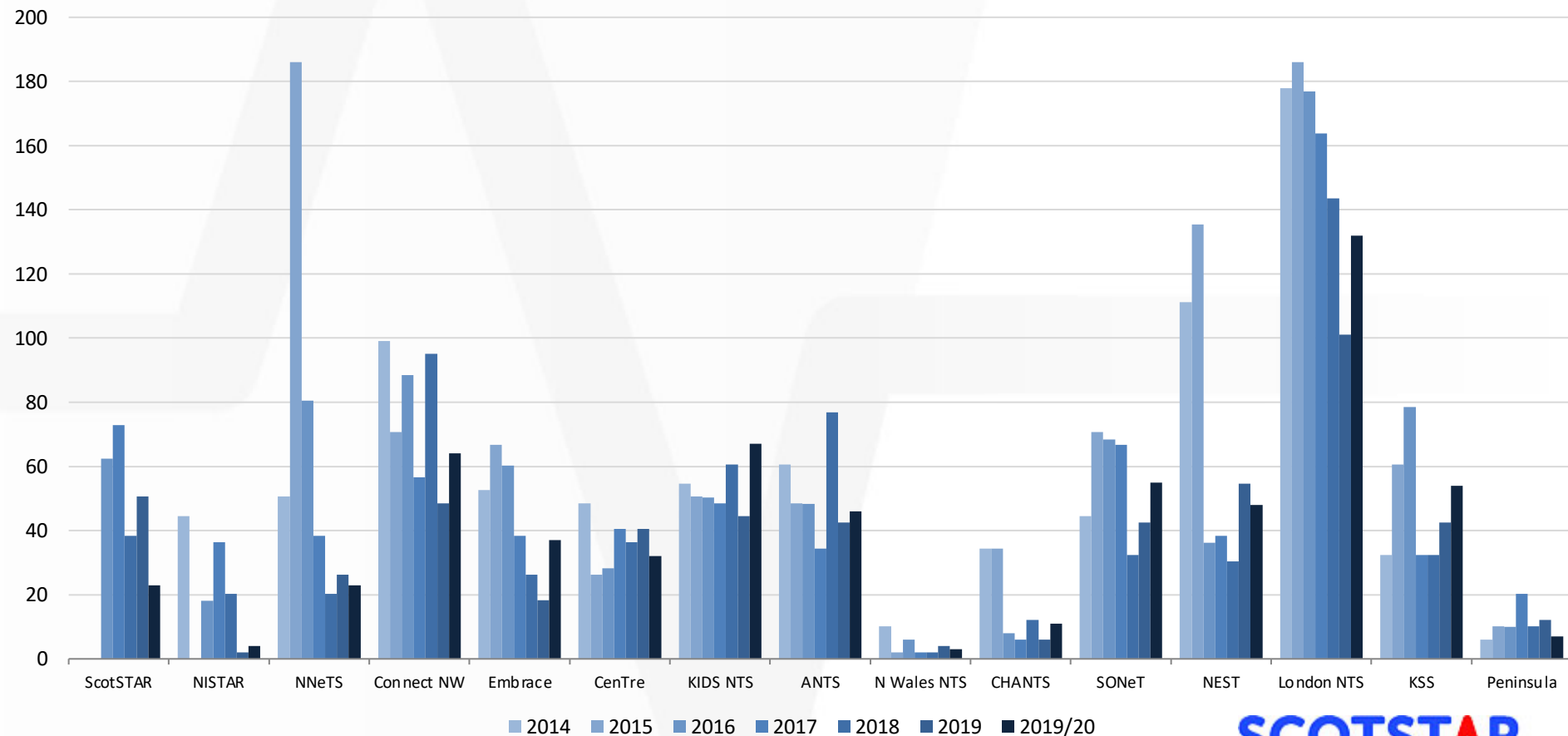
Time Critical transfers/team Apr 2019 to Mar 2020



Time Critical transfers by team as a percentage of total transfer 2019-20

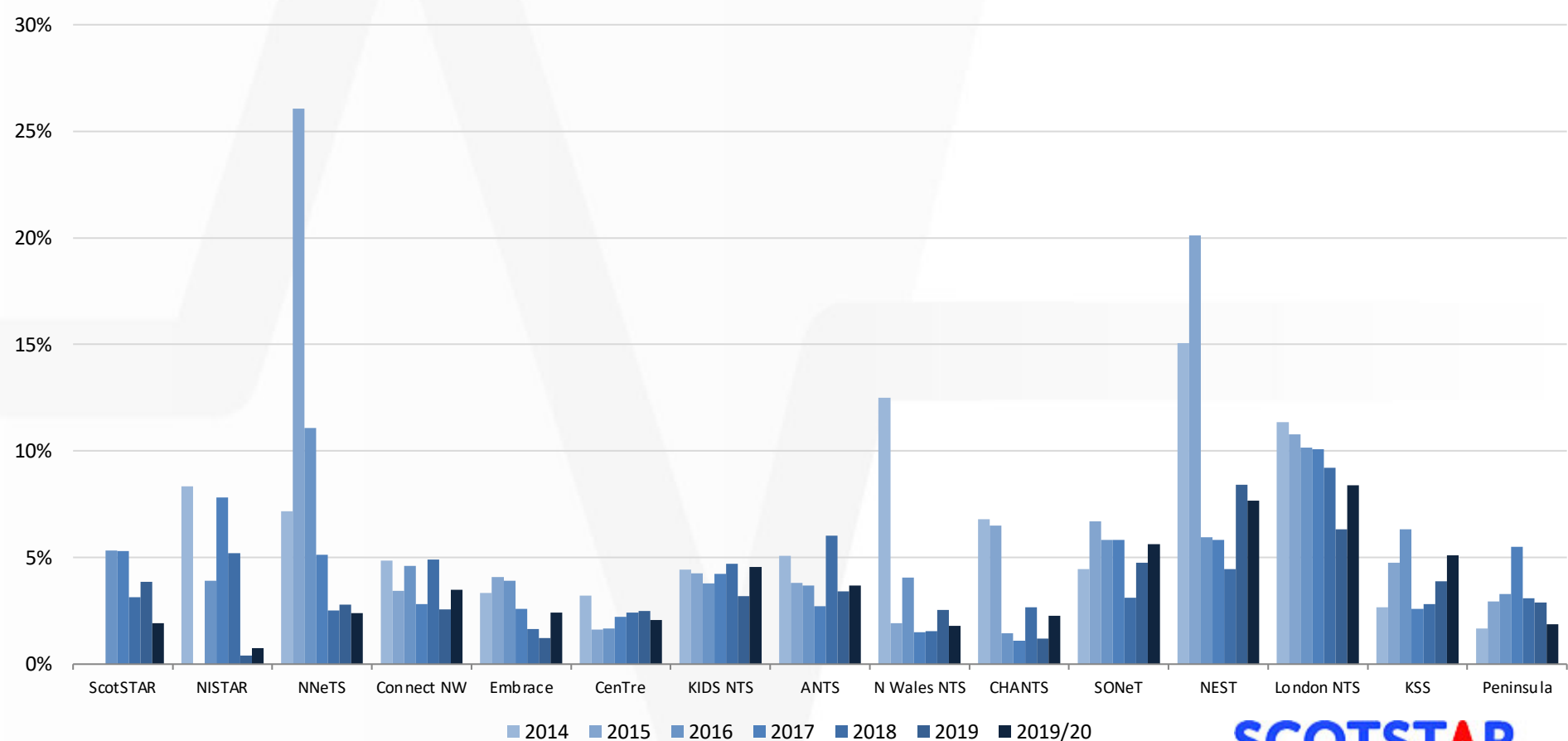


Trends in numbers of Time Critical transfers by team, 2014-20

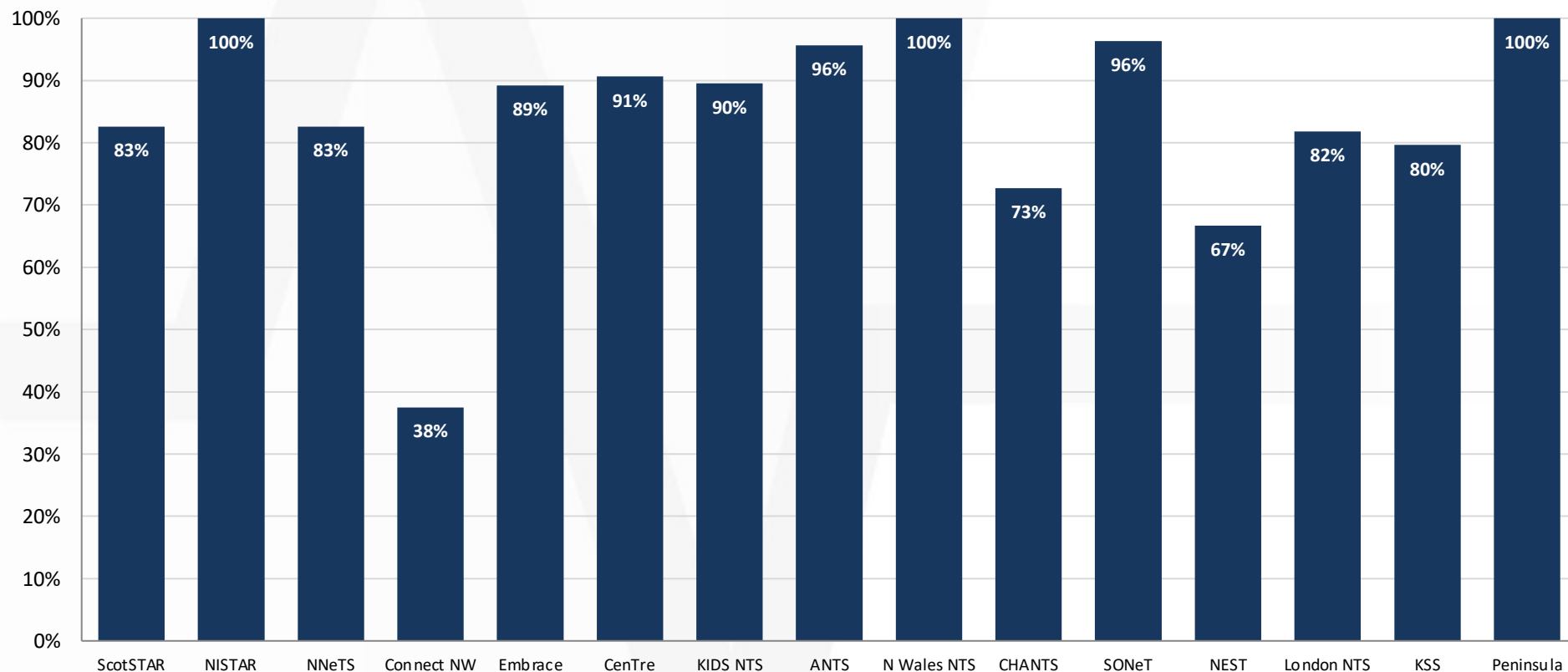


Previous years are estimates assuming no seasonality to allow for basic comparison to 2019/20

Time Critical transfers as a percentage of total transfers, by team, 2014-20



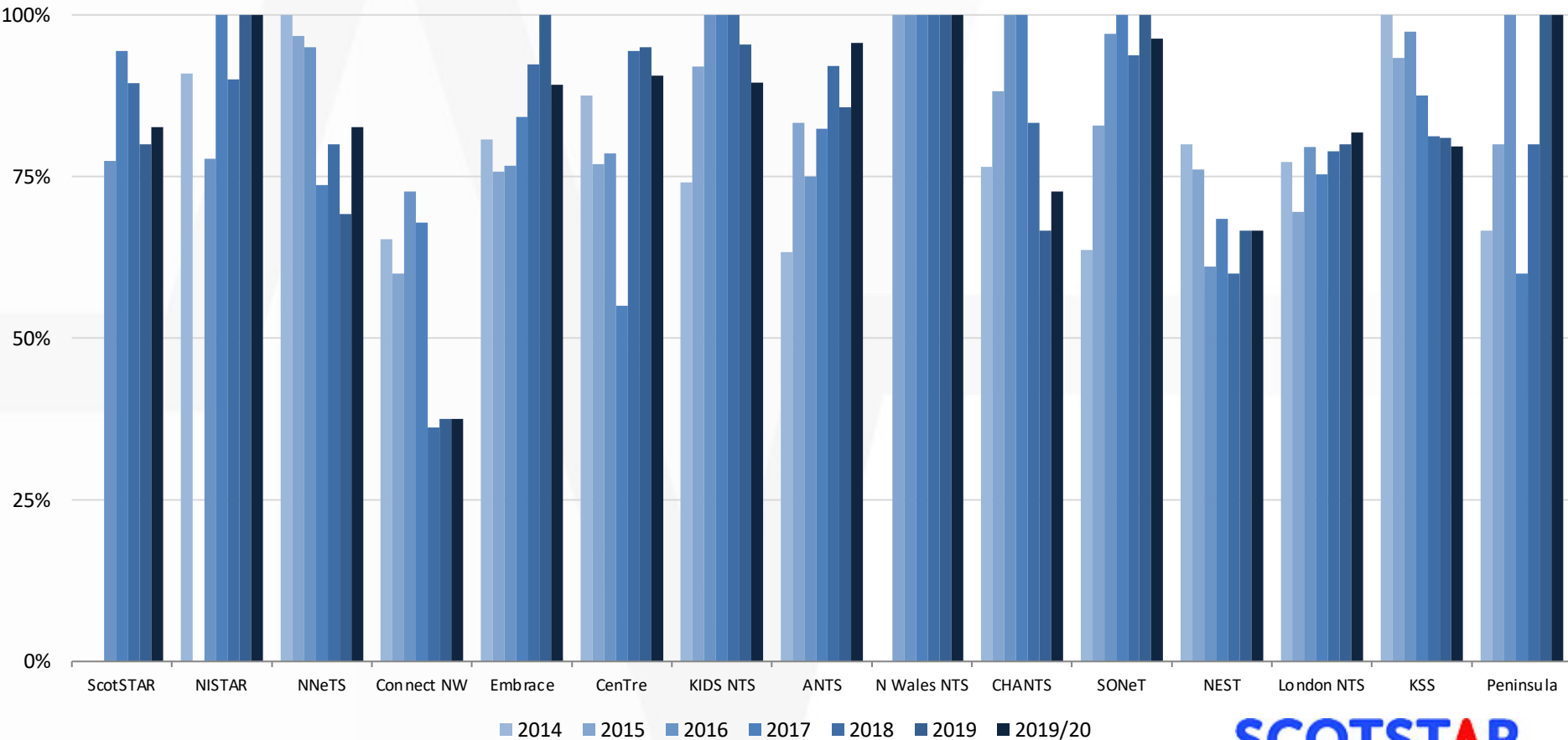
% of Time Critical transfers dispatched within 60 minutes by team Apr 2019 to Mar 2020



Trends in percentage of Time Critical transfers dispatched within 60 minutes by team, 2014-20



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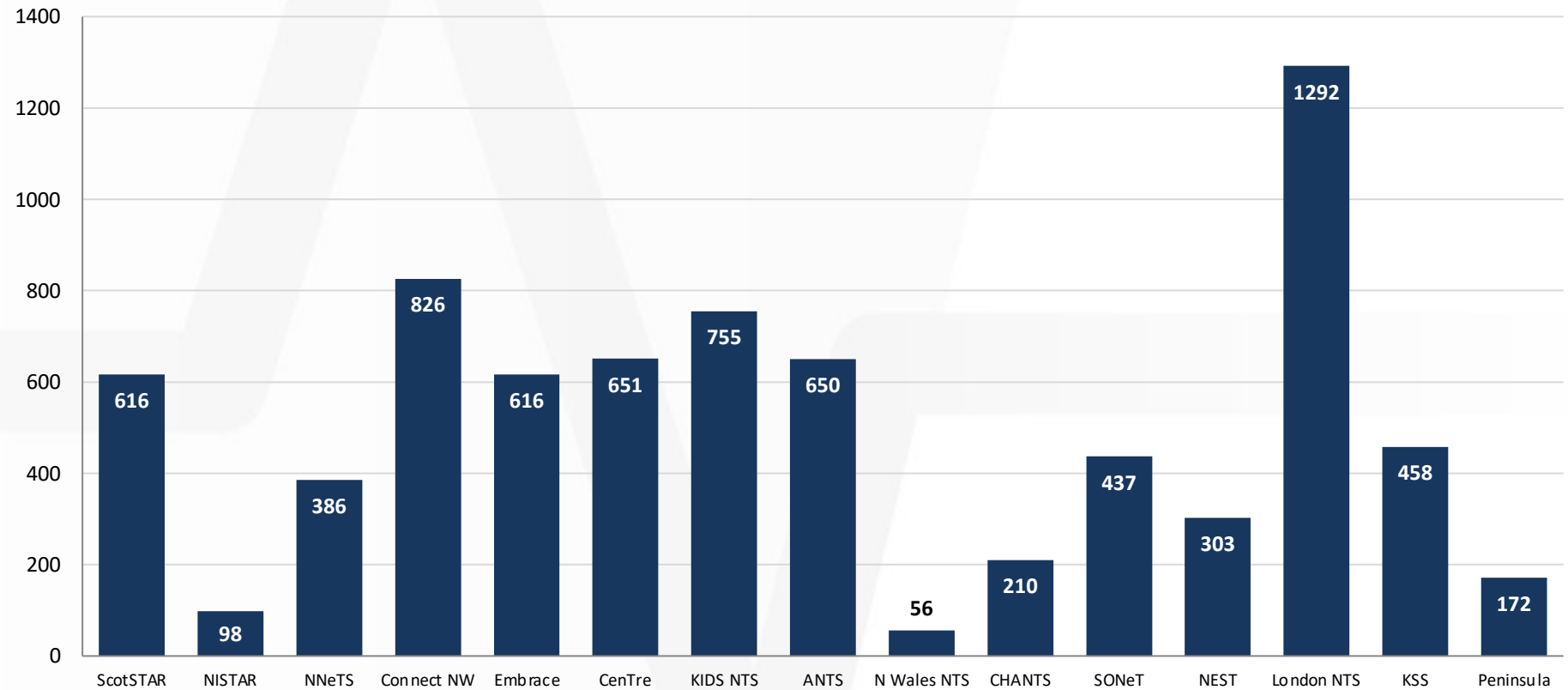


Team Area Uplift Transfers

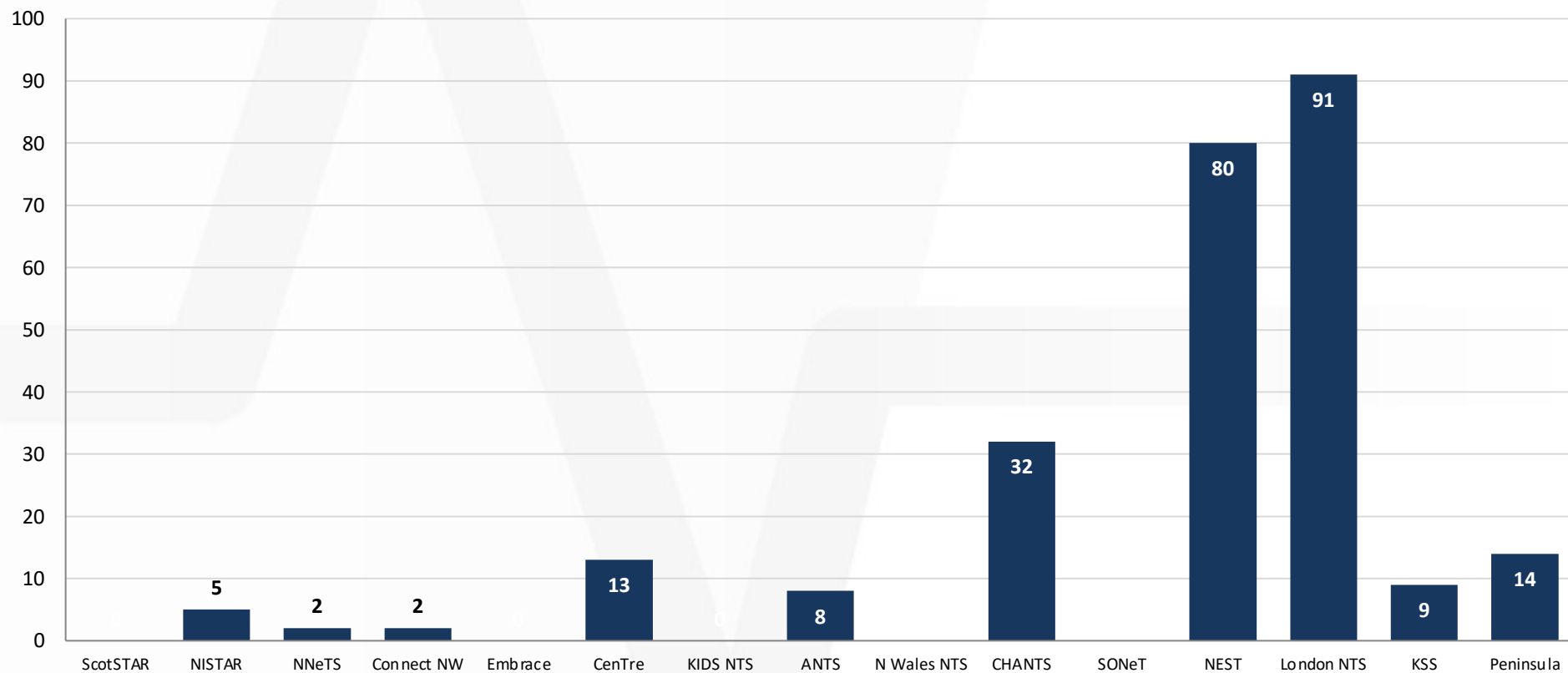
Data on

- Dedicated Neonatal Team Transfers in Area
- Uplift Transfers
- 95% of uplift transfers within area by dedicated team

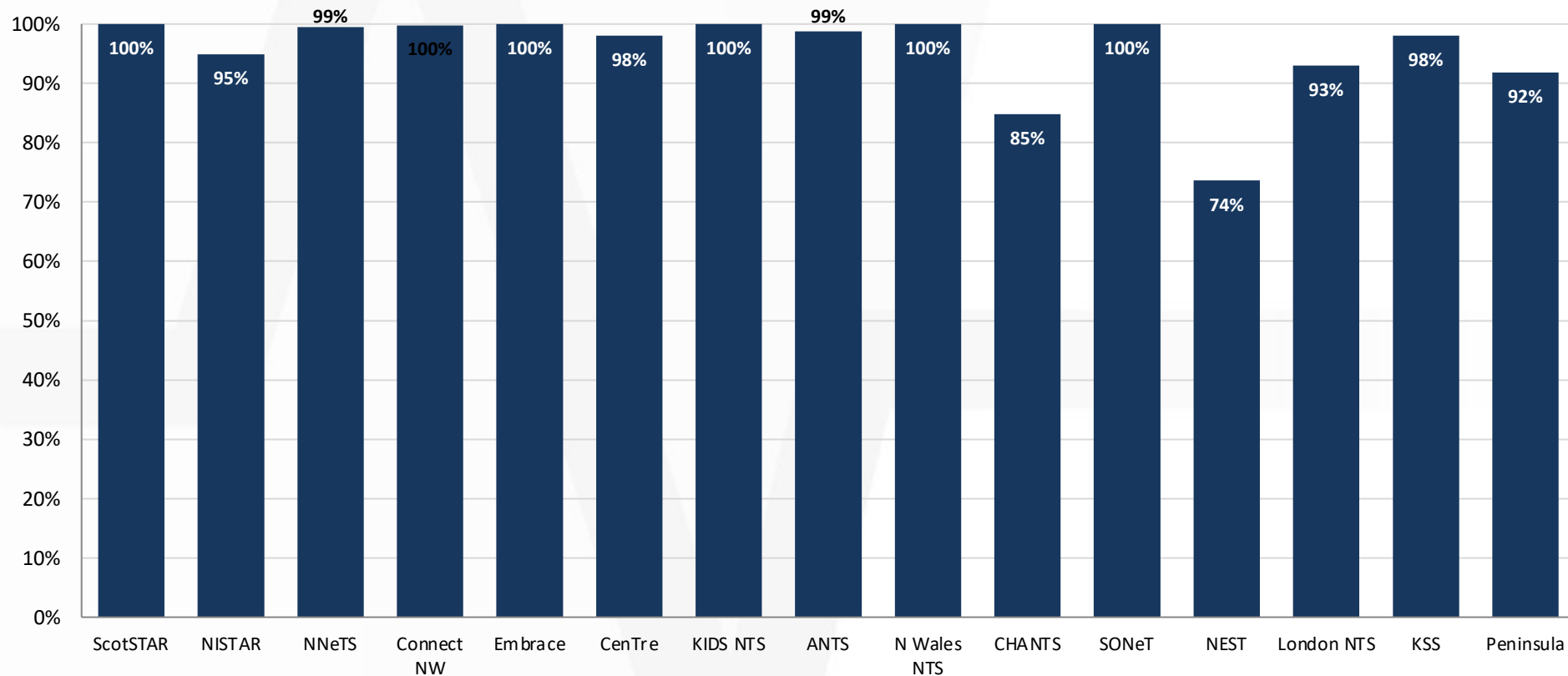
Numbers of Uplift transfers in dedicated area 2019/20



Numbers of Uplift transfers conducted by other teams in dedicated area



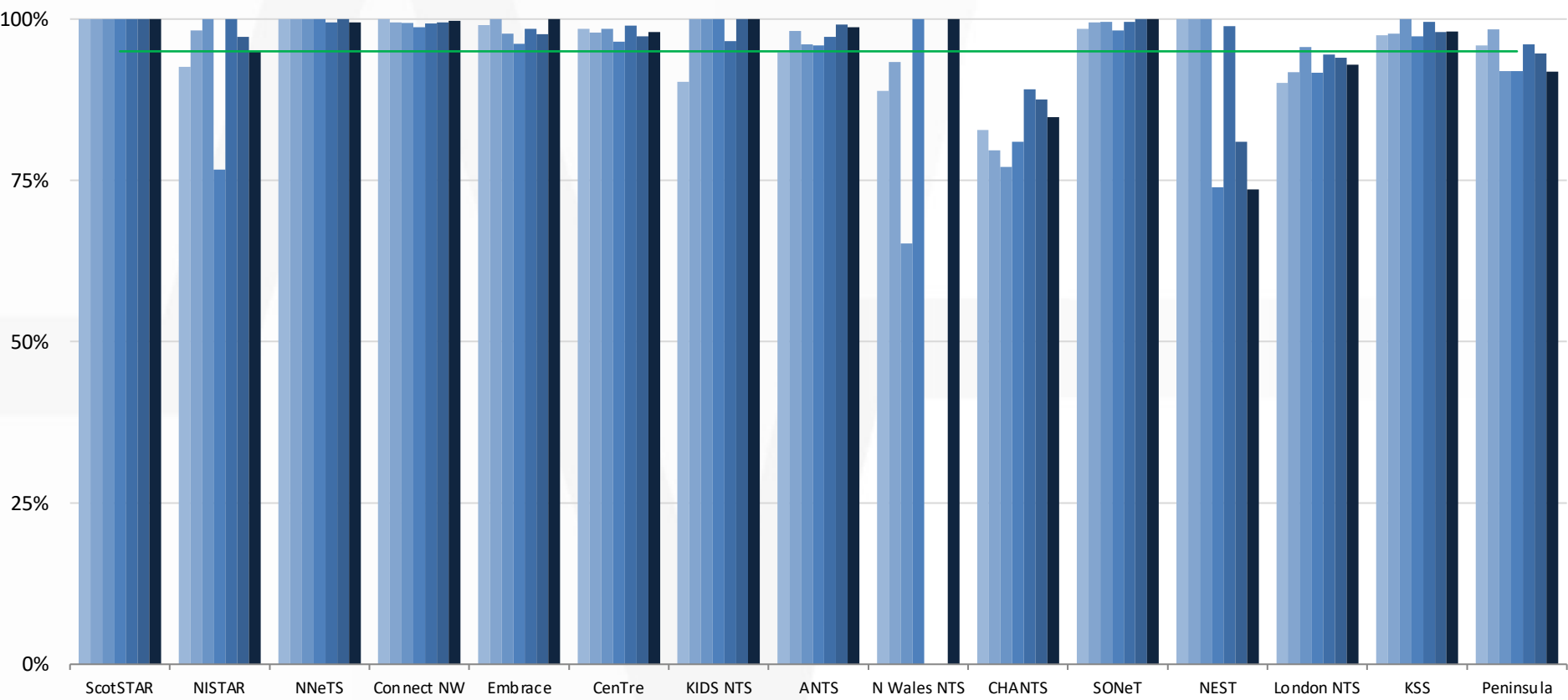
Uplift transfers by Dedicated team in own area as a percentage of total uplift transfers



Trends in Uplift transfers by Dedicated team in own area, as a percentage of uplift transfers 2014-20



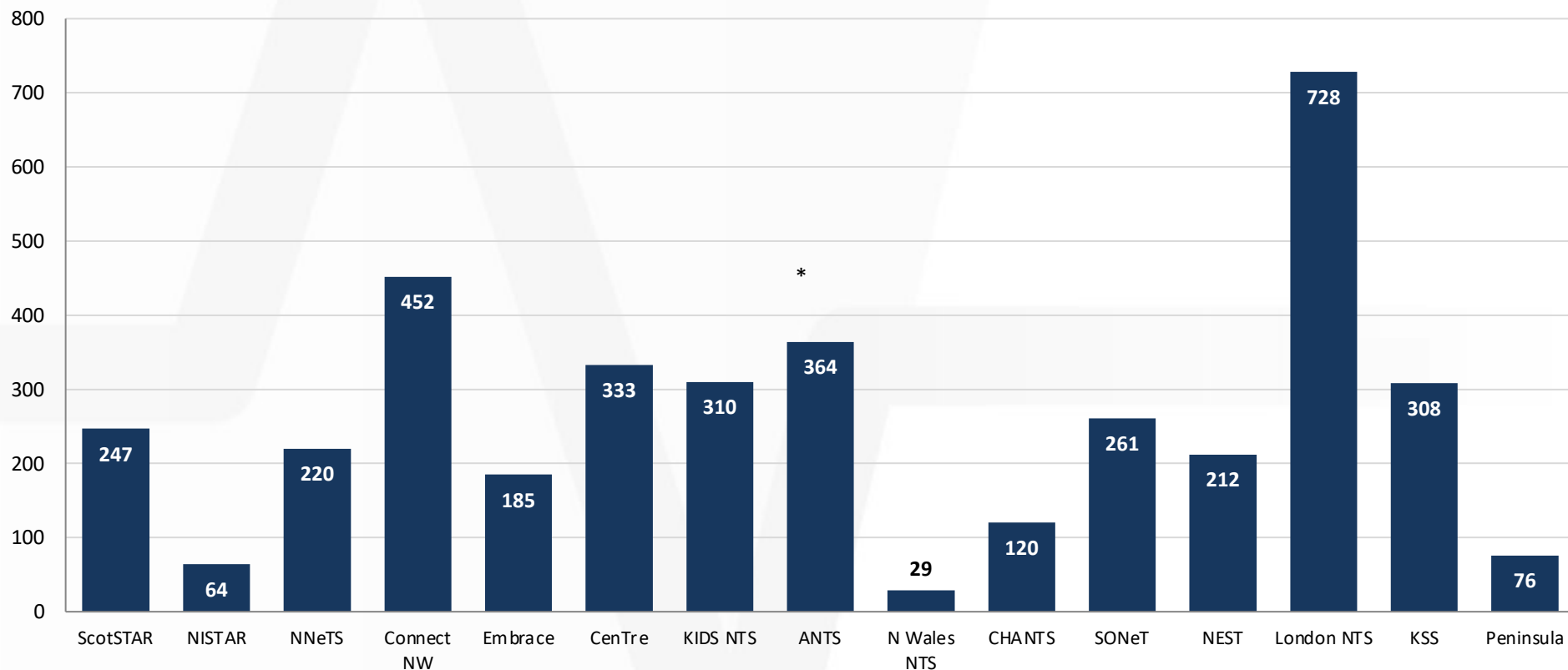
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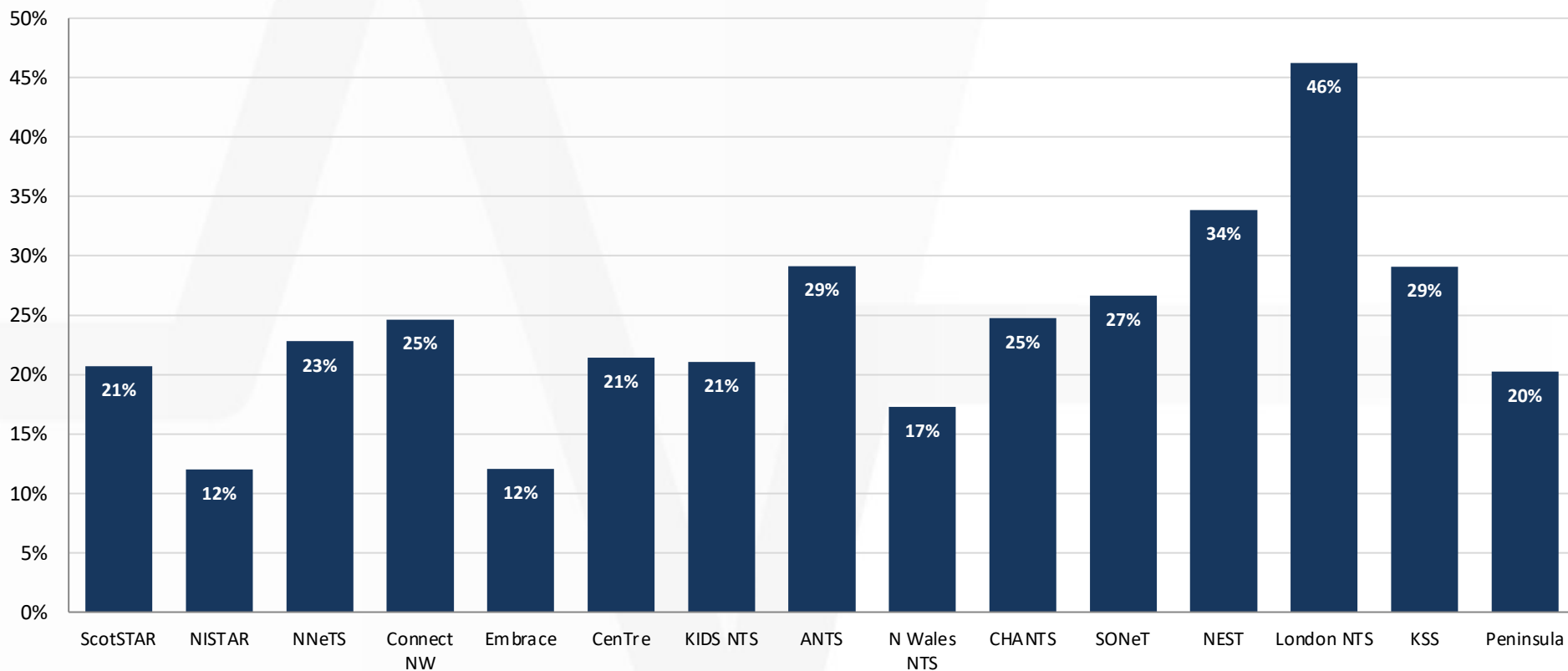
■ 2014 ■ 2015 ■ 2016 ■ 2017 ■ 2018 ■ 2019 ■ 2019/20



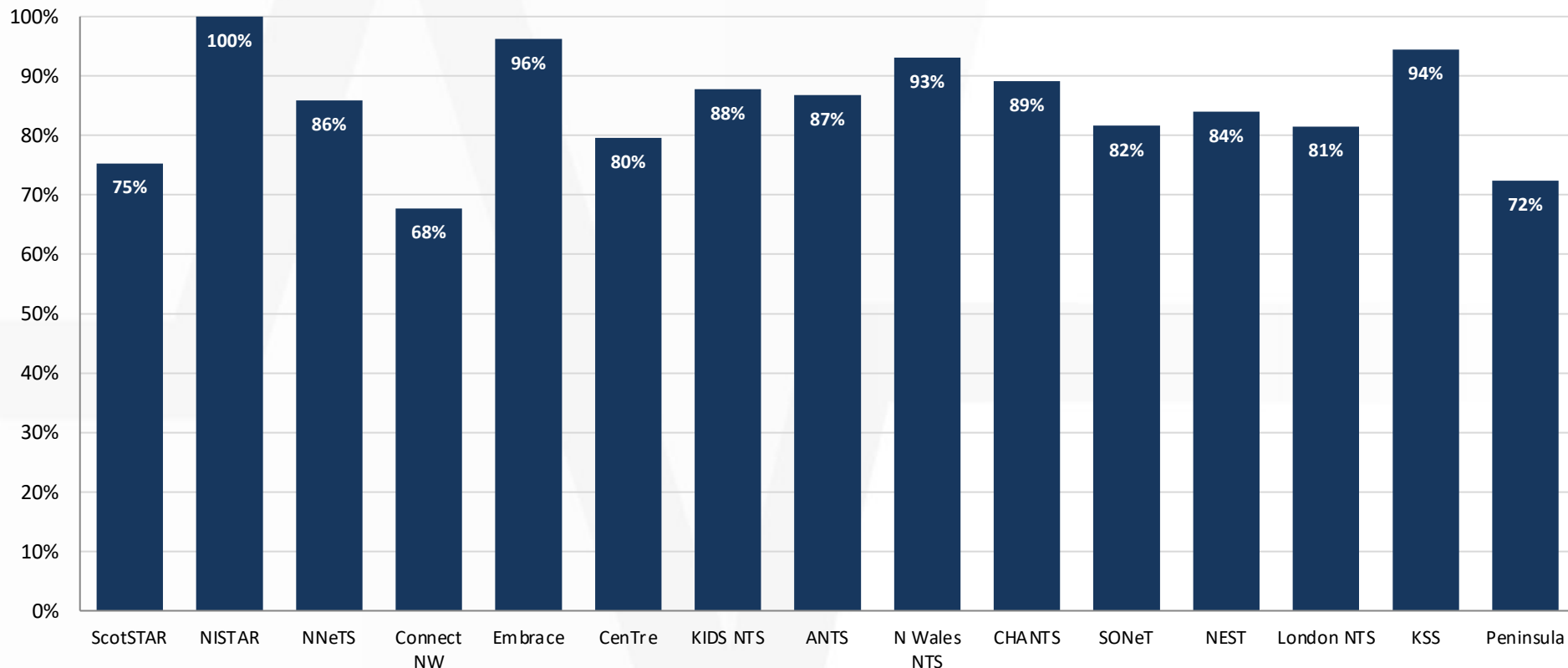
Number of Intensive care Uplift transfer by team, 2019-20



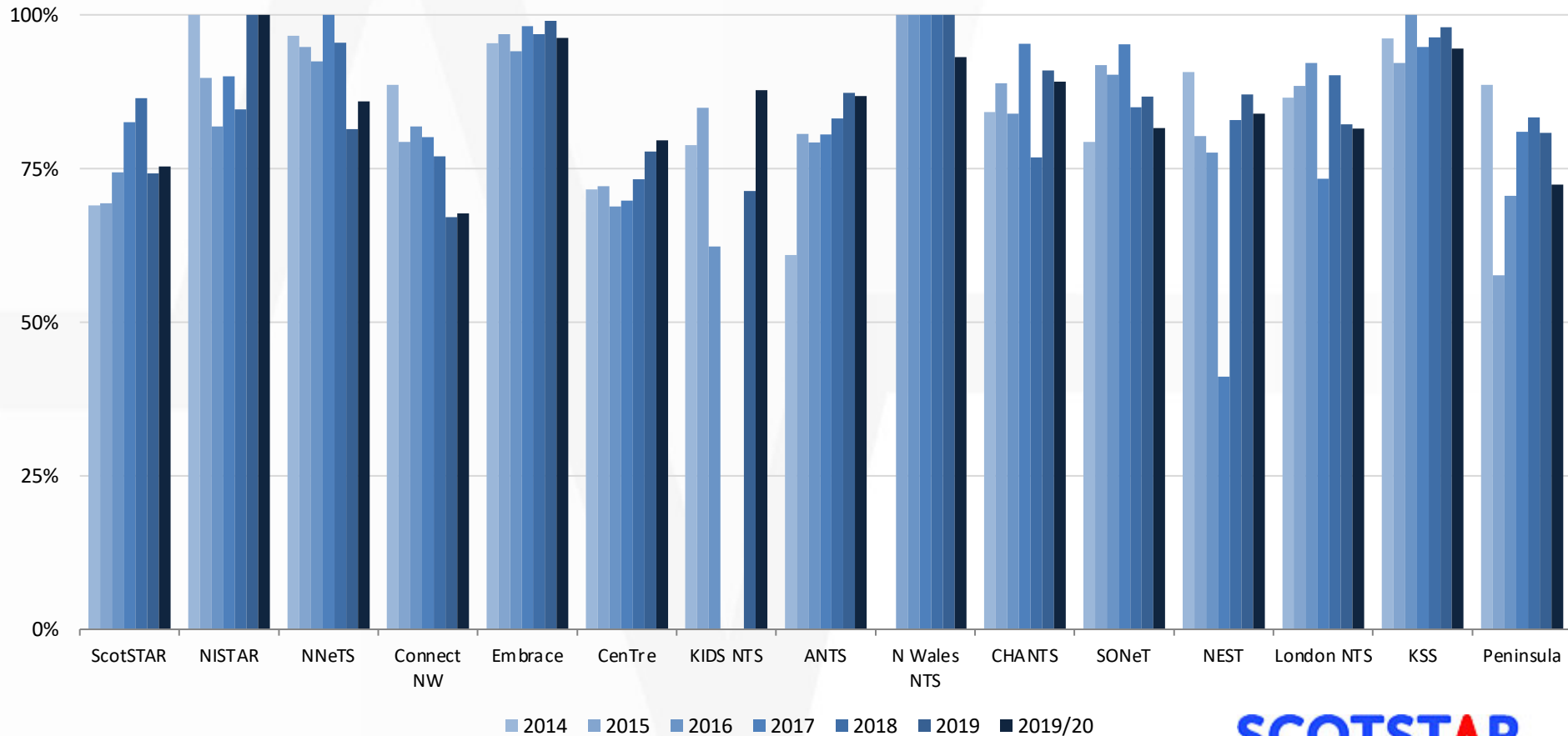
Intensive care Uplift transfer as a percentage of total transfers



Team arrived with the patient within 3.5 hours of the start of the referring call (Intensive care; uplift) as a percentage of ICU uplift transfers 2019/20

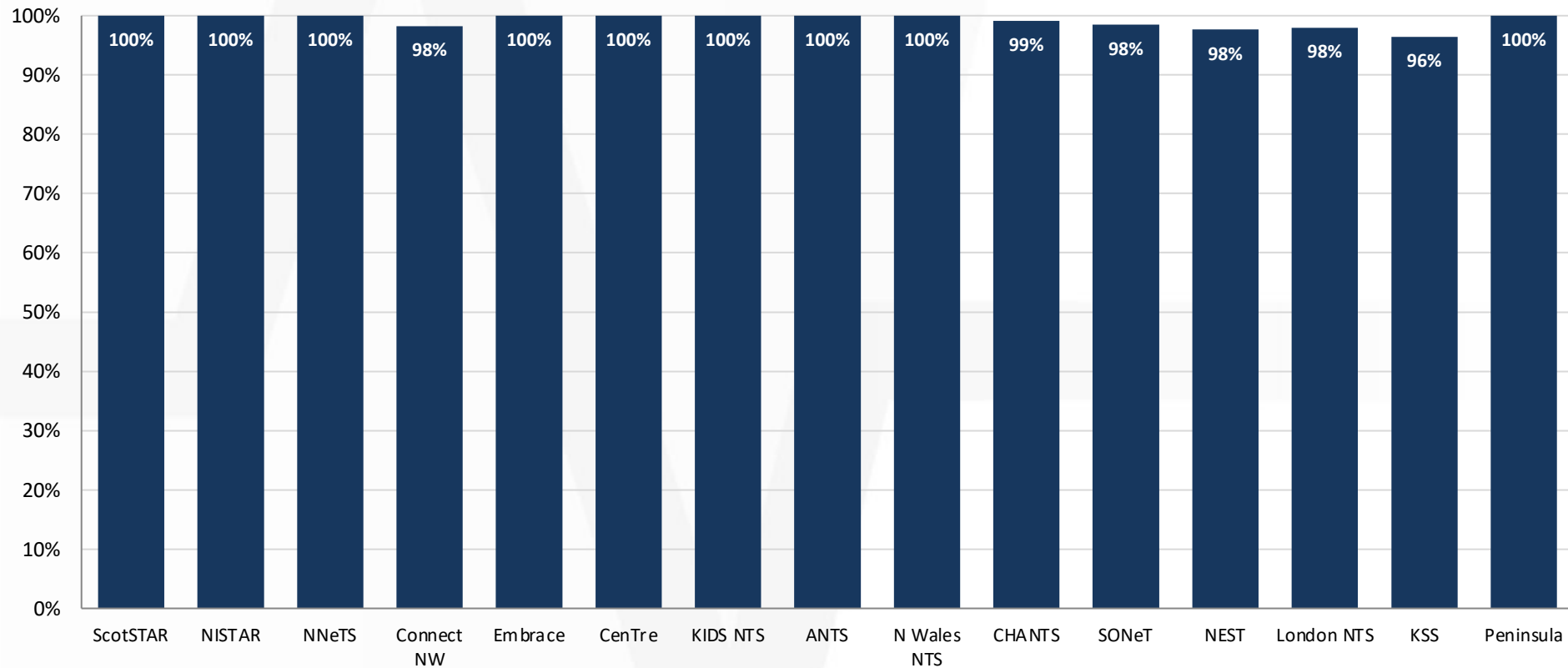


Trends in team arrived with the patient within 3.5 hours of the start of the referring call (Intensive care; uplift) as a percentage of ICU uplift transfers by team, 2014-20.

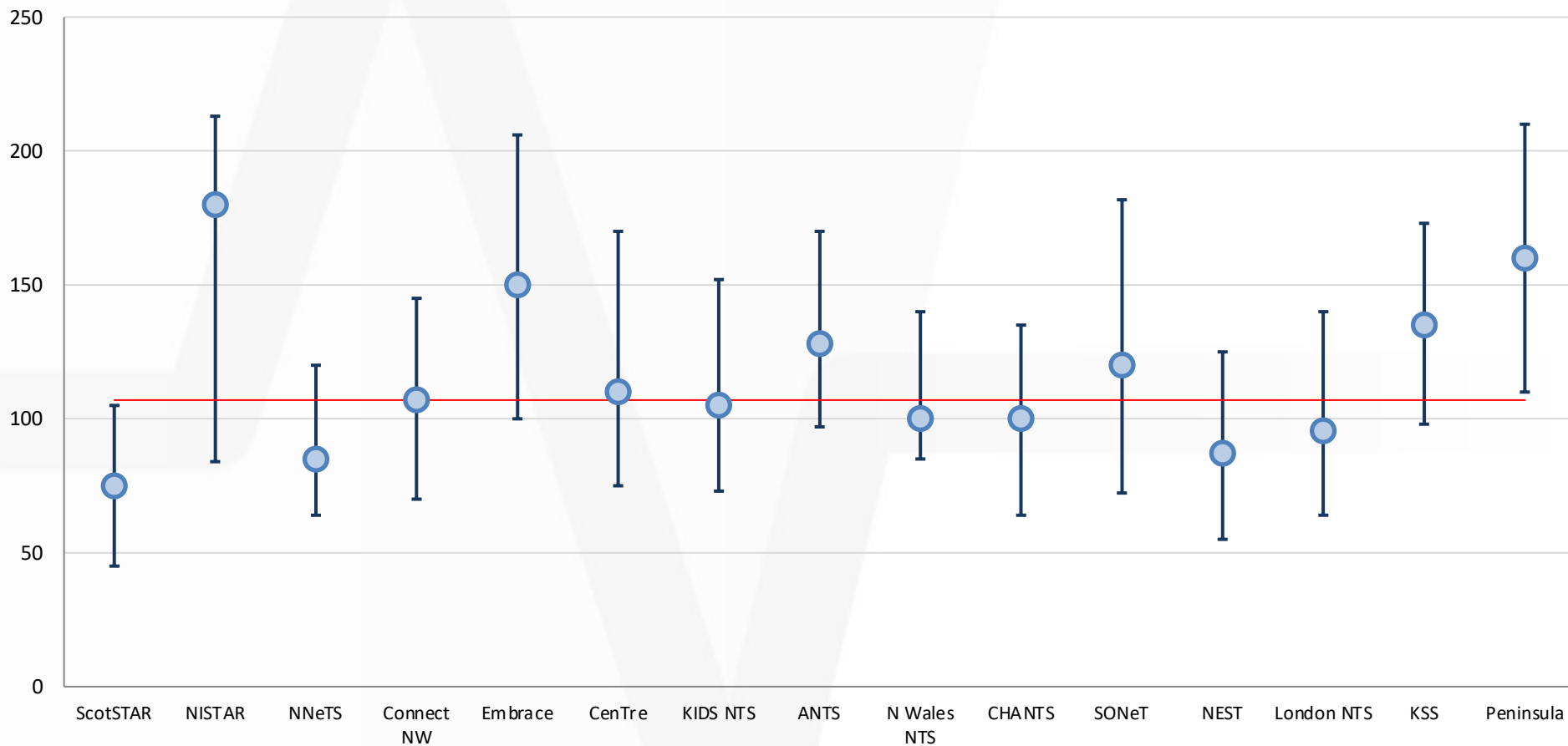


% of records with stabilising times

of the start of the referring call (Intensive care; uplift) (%), Jan-Jun/year.



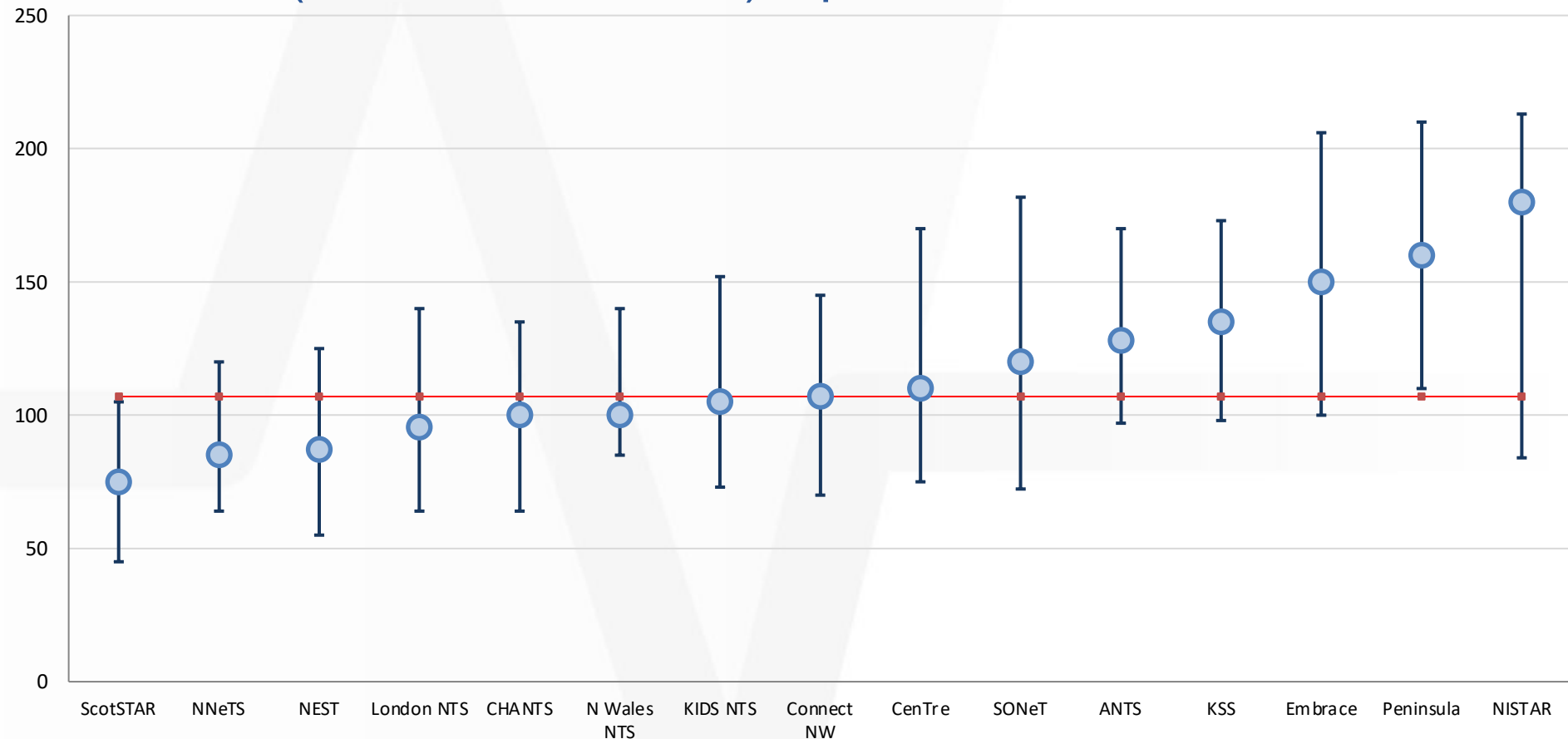
Stabilising time (minutes), uplift/ICU transfers, by team Median (25th & 75th centiles),. 2019/20



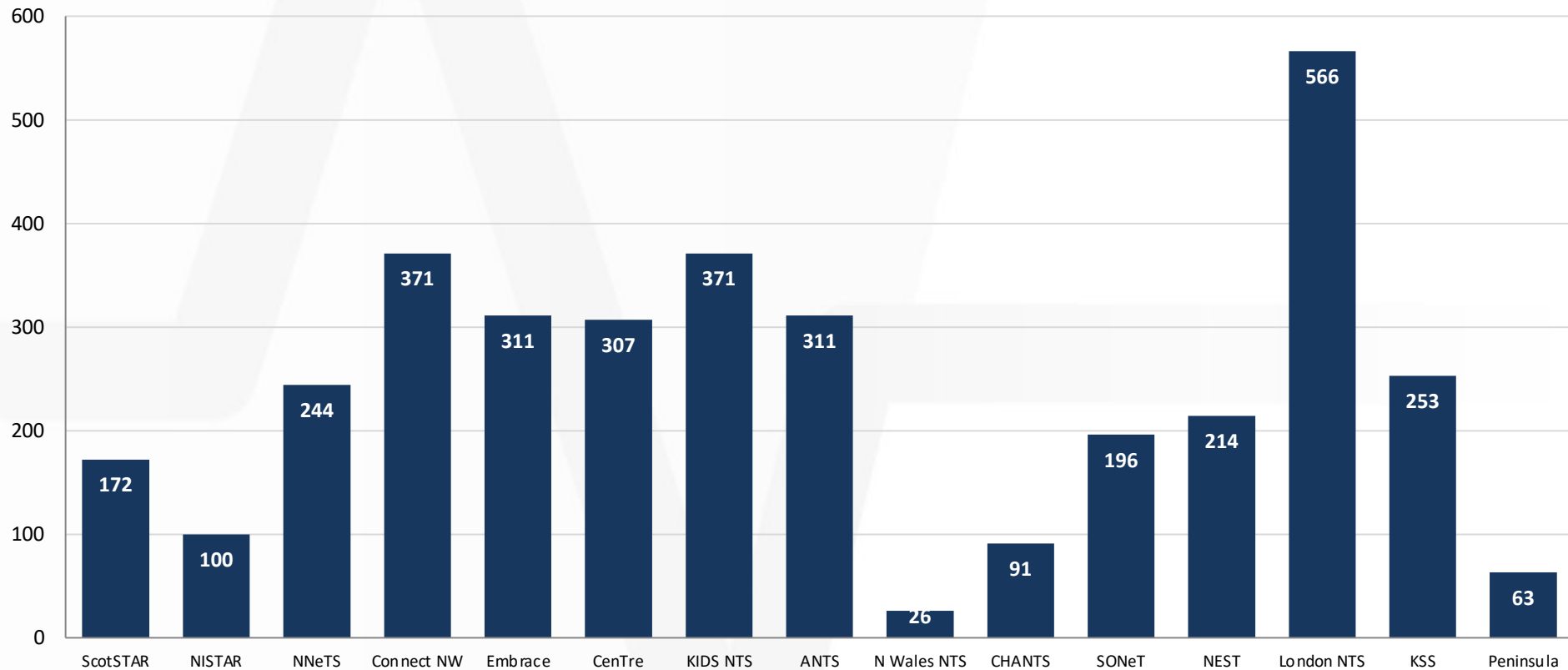
Stabilising time (minutes), 2019/20, by team



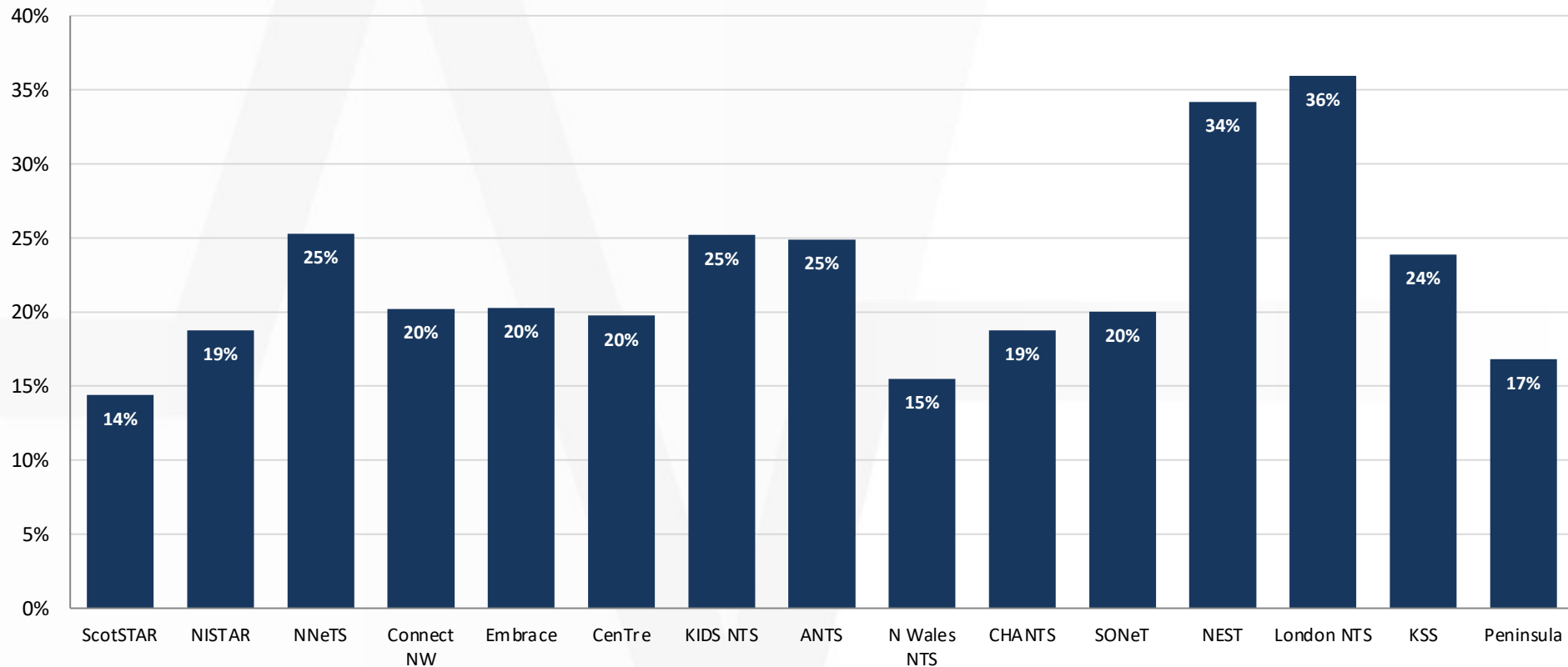
Median (25th & 75th centiles), uplift/ICU transfers- ranked



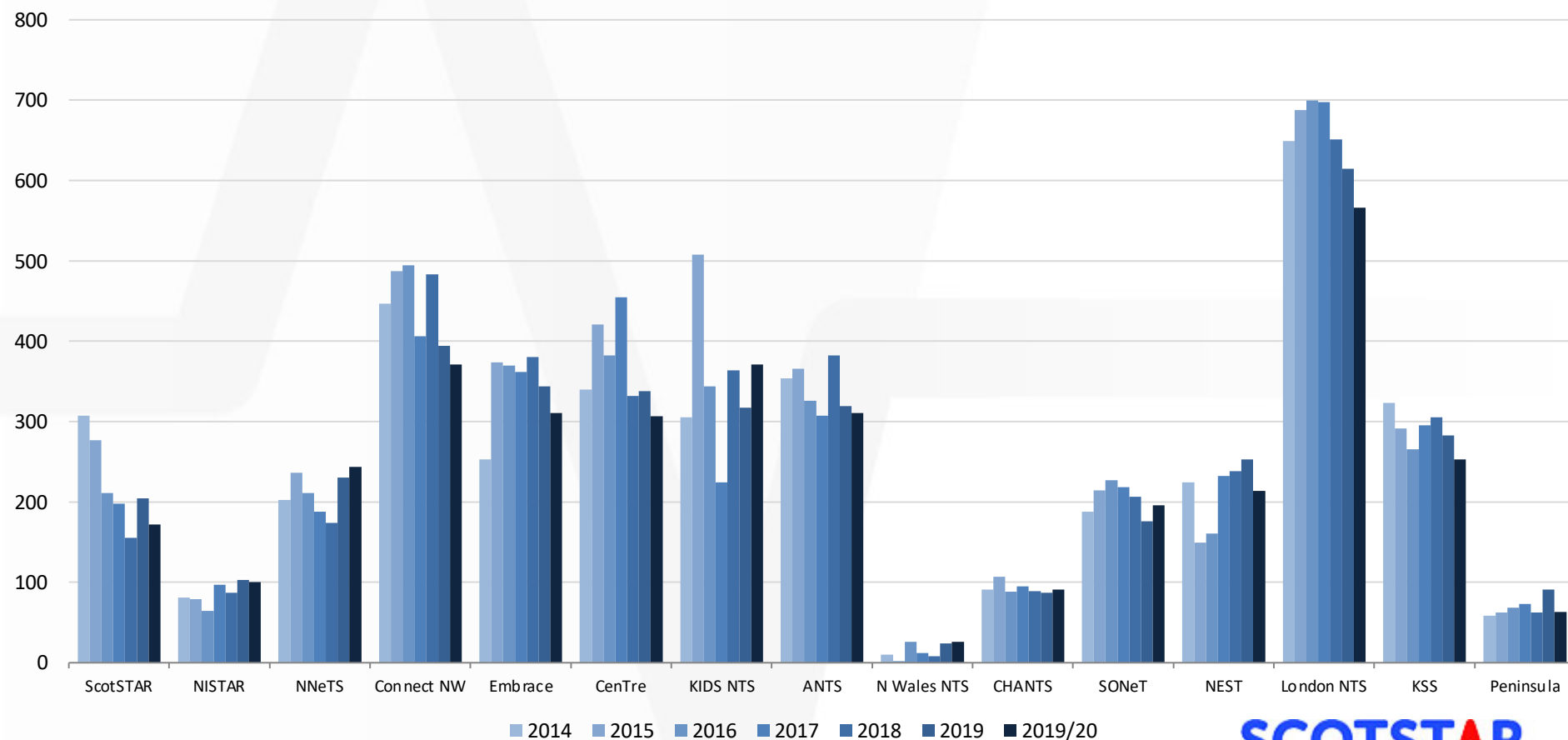
Number of infants who are ventilated in transit by team Apr 2019 to Mar 2020



Infants who are ventilated in transit as a percentage of total transfers, by team Apr 2019 to Mar 2020

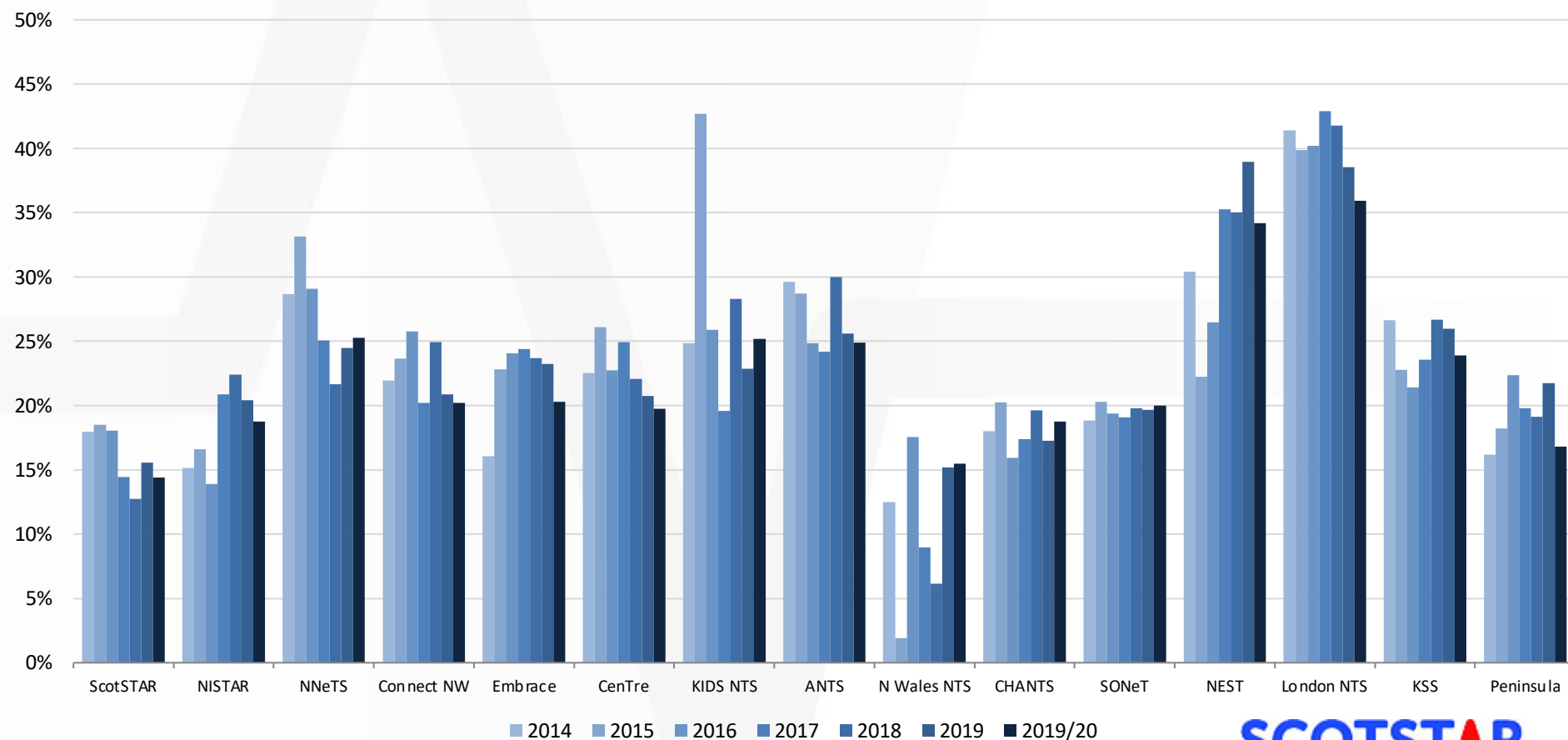


Trends in numbers of infants ventilated in transit by team, 2014-20

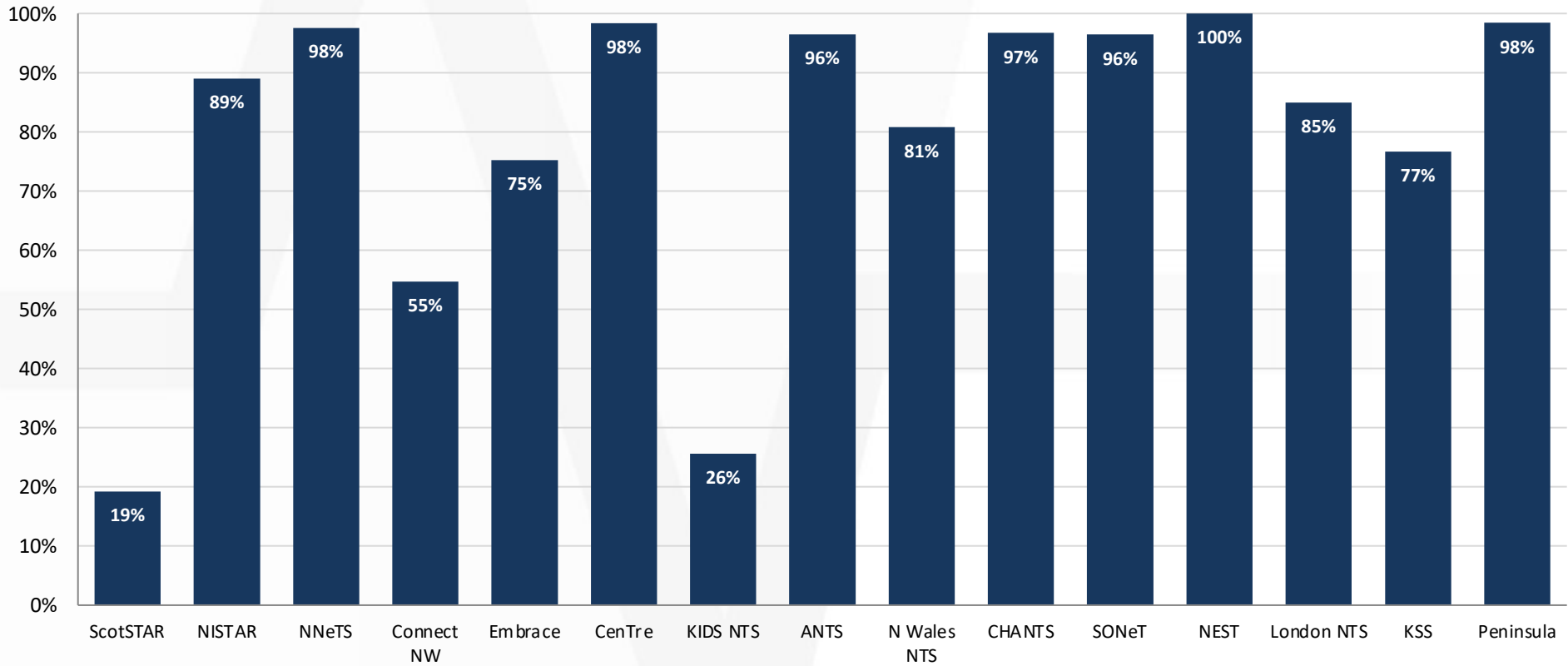


Previous years are estimates assuming no seasonality to allow for basic comparison to 2019/20

Trends in infants ventilated in transit as a percentage of total transfer, by team 2014-20



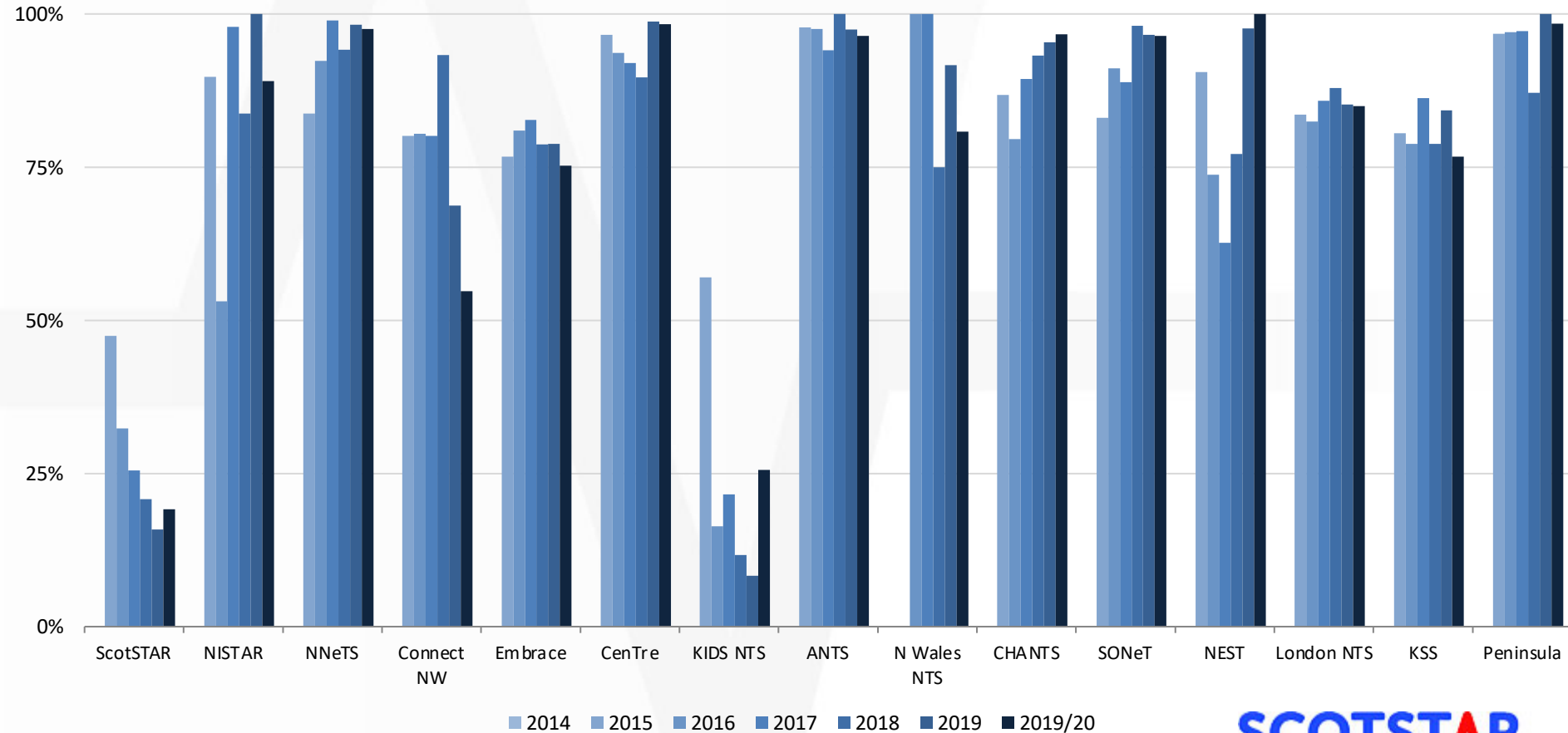
Ventilated patients with a pCO₂ recorded on completion of transfer, as a percentage of ventilated transfers by team Apr 2019 to Mar 2020



Trends in percentages of ventilated babies with a pCO₂ recorded on completion of the transfer by team, Jan-Jun 2014-2019 adj', 2019/20



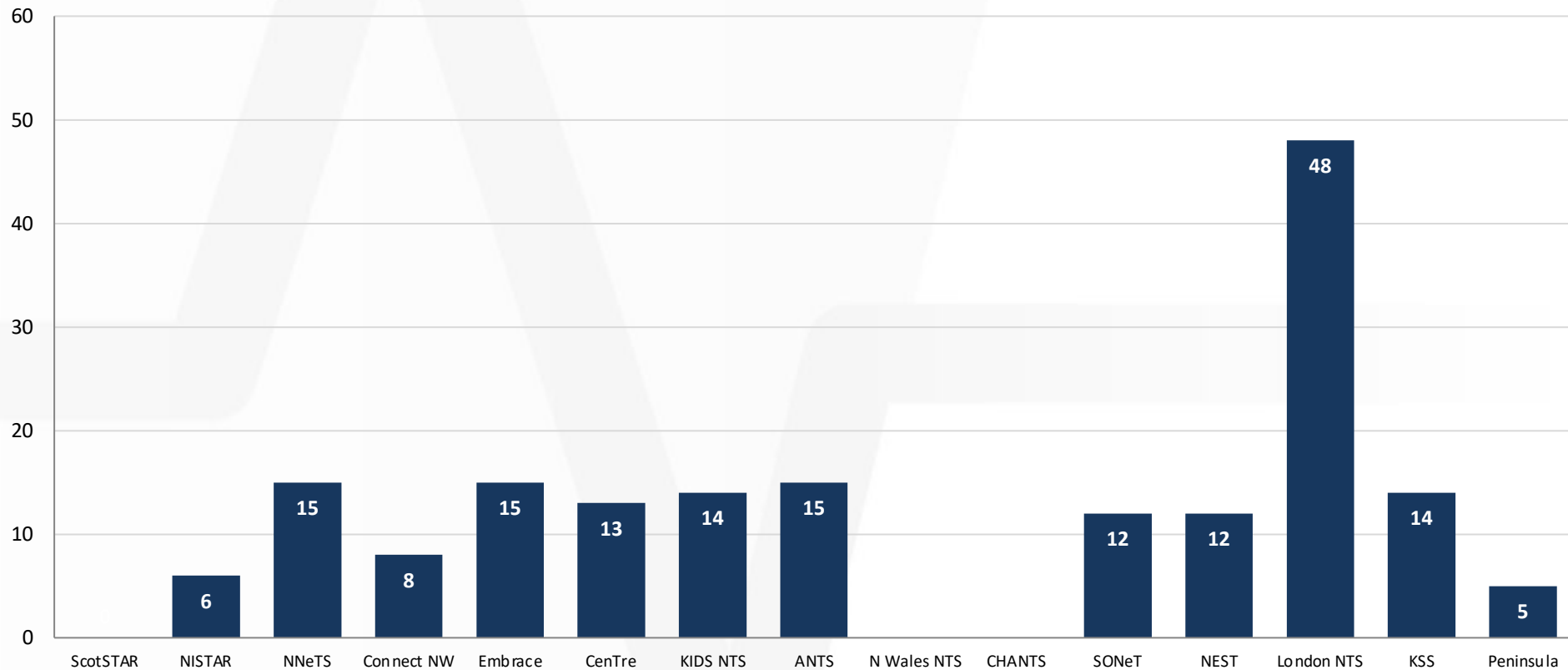
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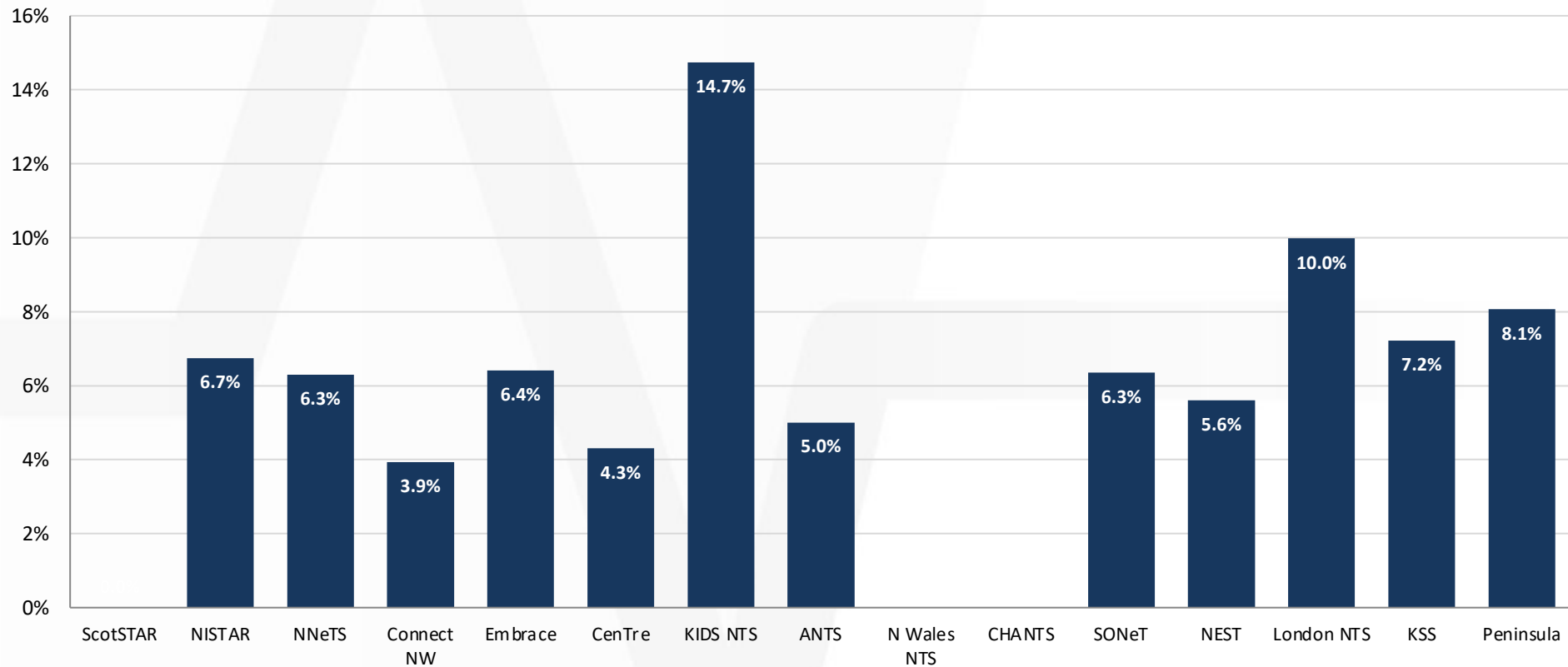
Numbers of ventilated patients with a pCO₂ <4 kPa by team Apr 2019 to Mar 2020



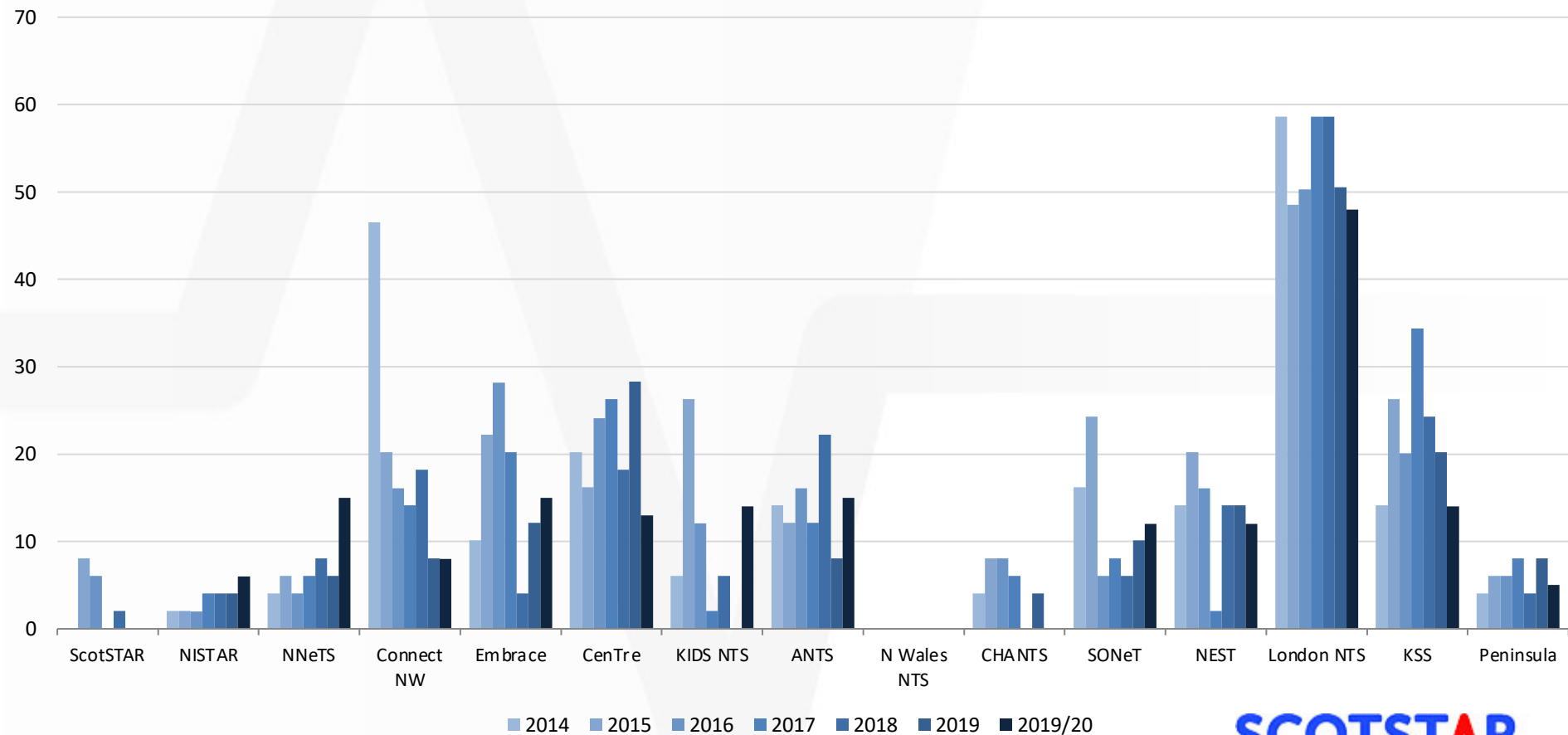
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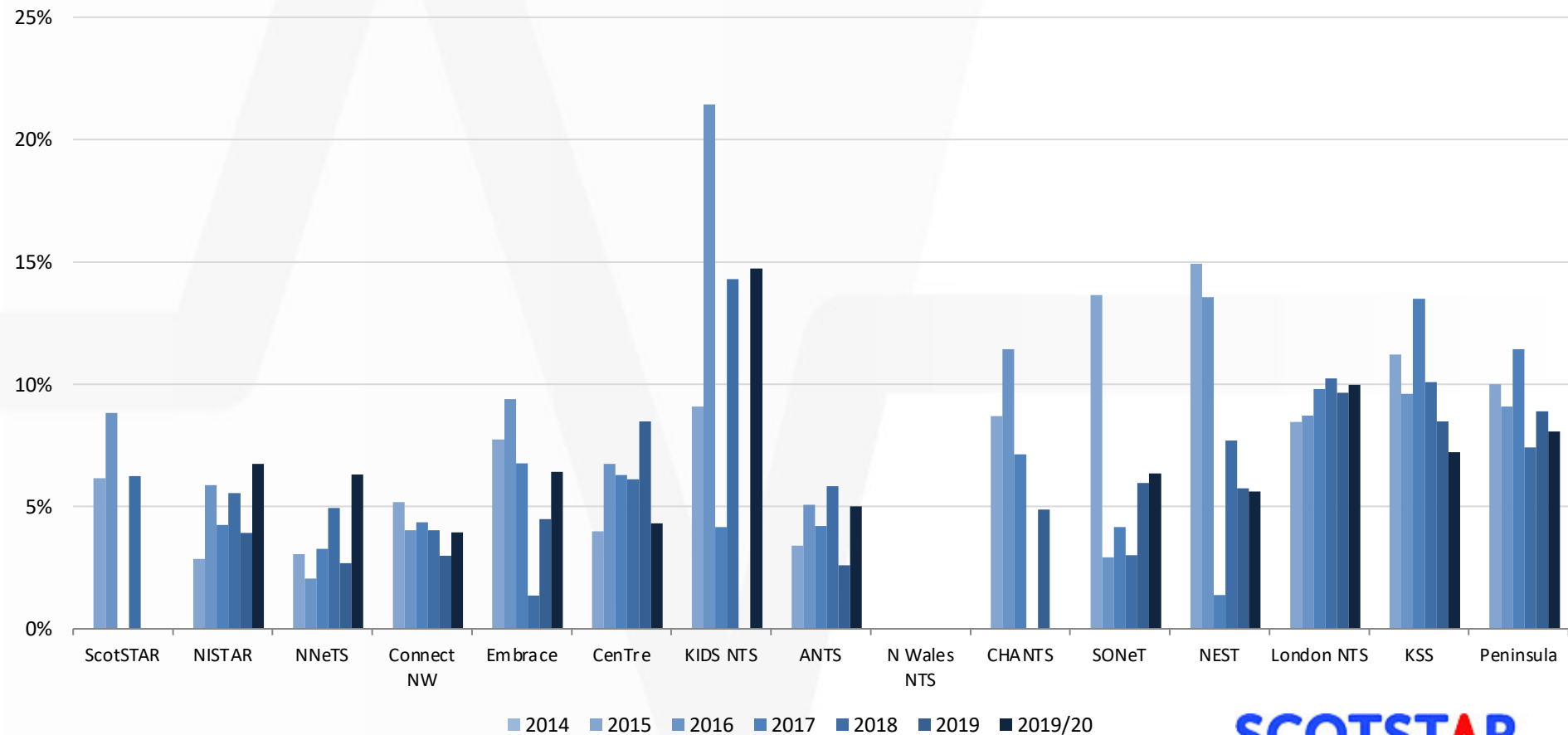
pCO₂ <4 on completion of transfer as a percentage of ventilated transfers by team, 2019/20



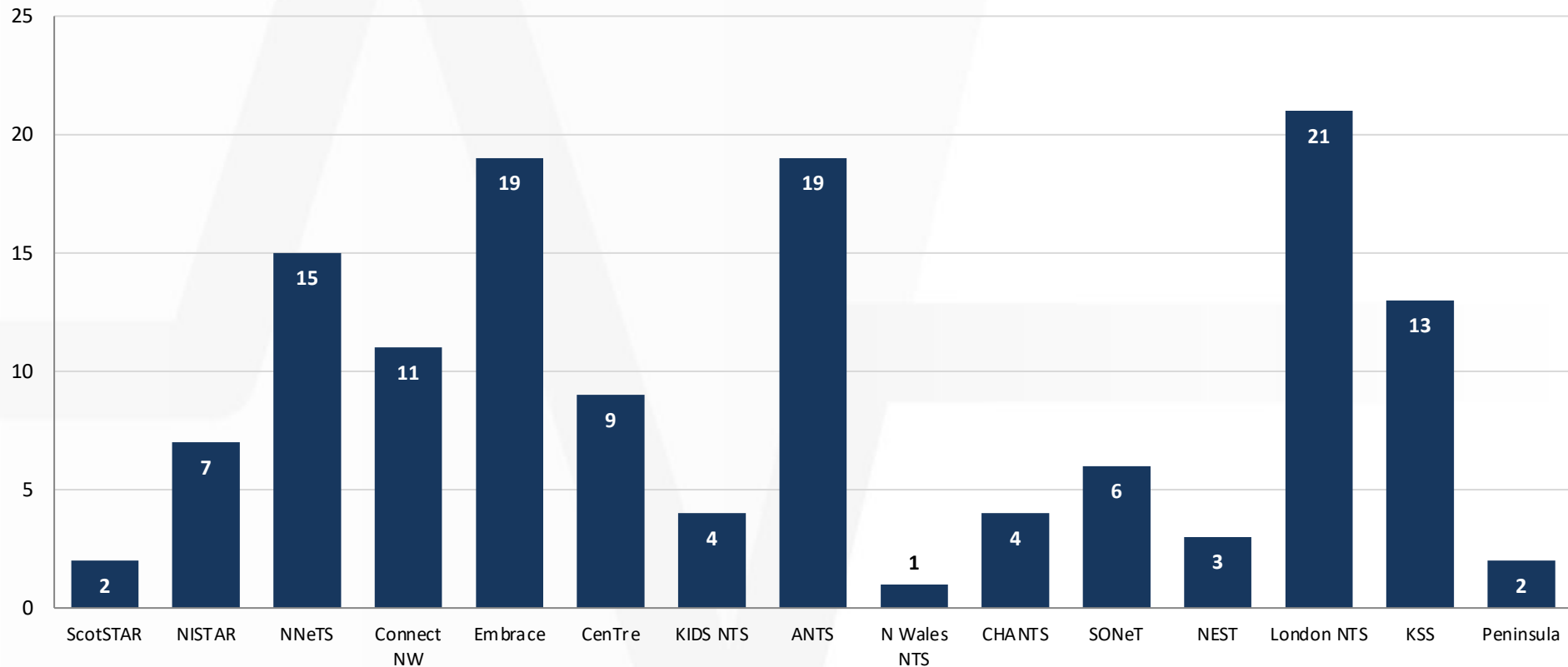
Numbers of ventilated babies with a $pCO_2 < 4$ kPa by team 2014-2020



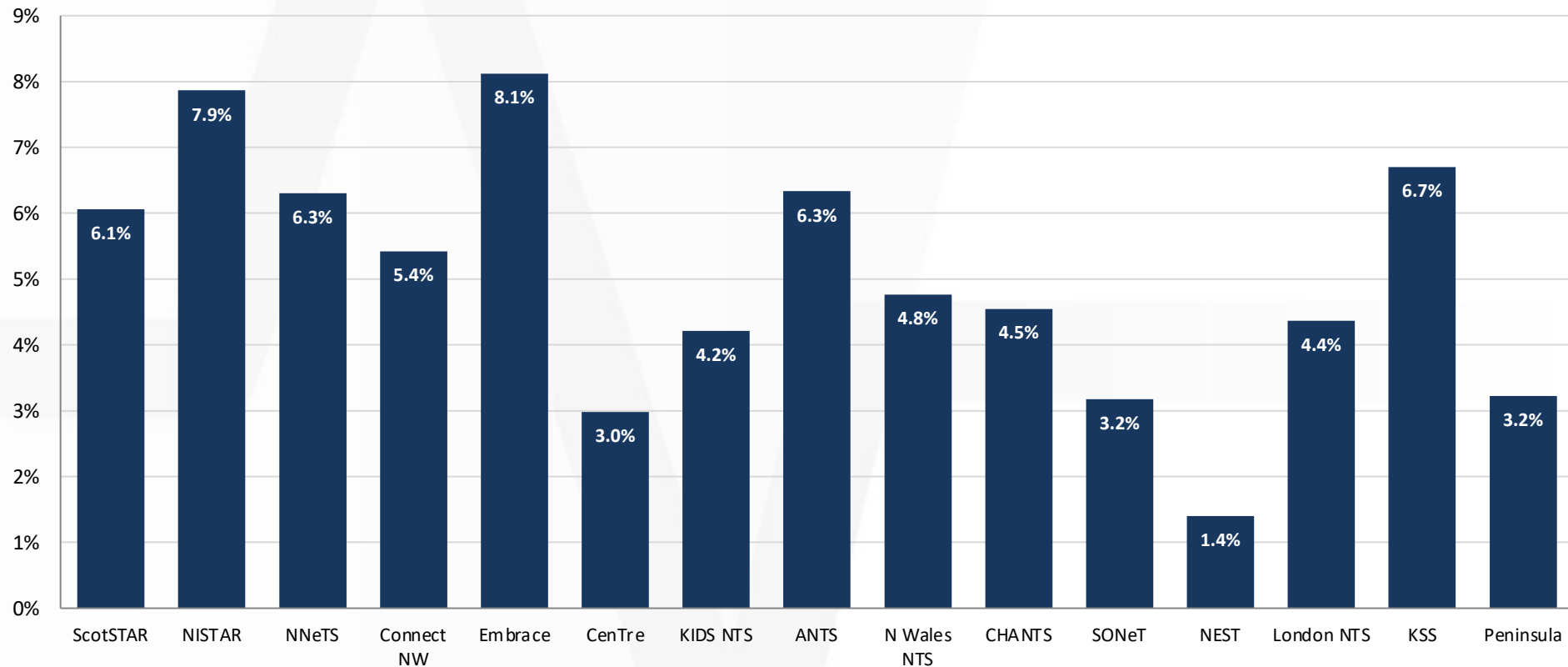
Trends in infants with $p\text{CO}_2 < 4\text{kPa}$ on completion of transfer, as a percentage of ventilated transfers, by team 2014-20



Numbers of babies with a $p\text{CO}_2 > 7$ kPa and $\text{pH} < 7.2$ on completion of transfer by team 2019/20



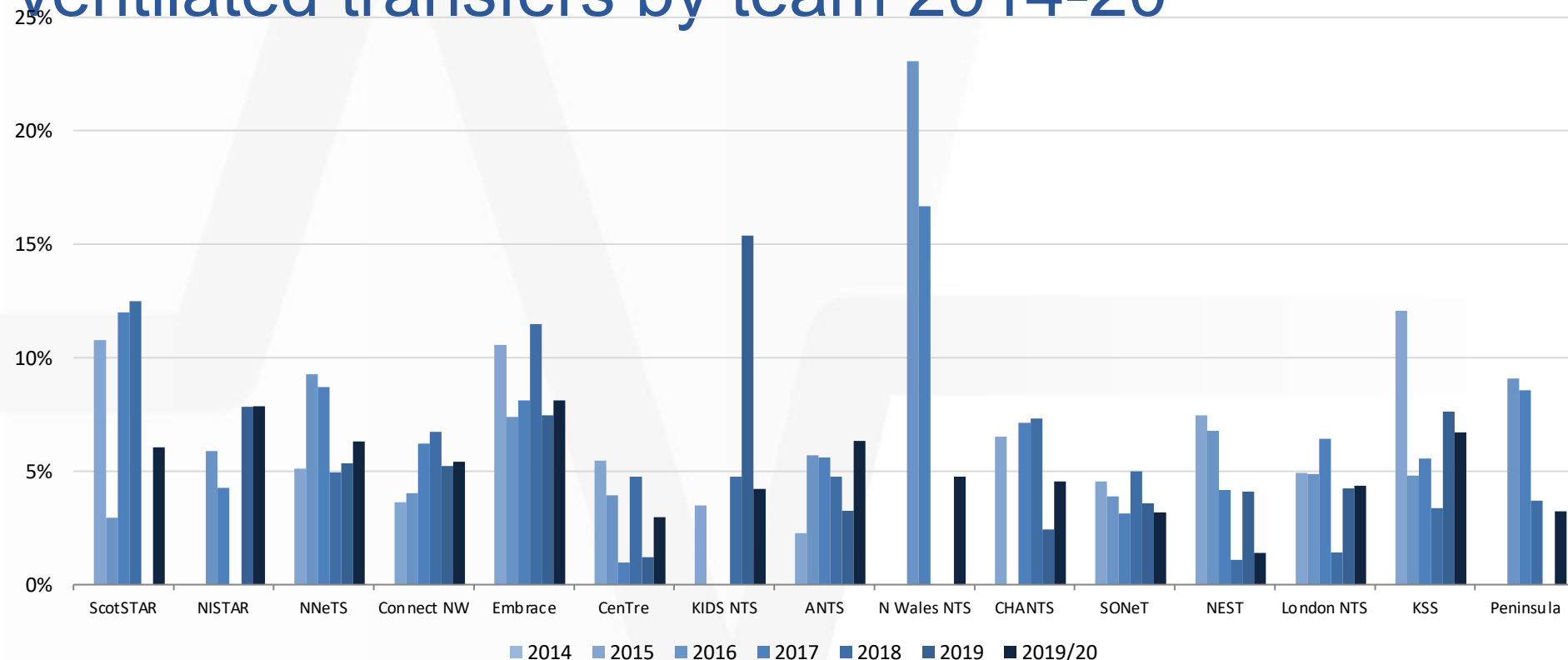
Babies with a $p\text{CO}_2 >7$ kPa and $\text{pH} <7.2$ on completion of transfer as a percentage of ventilated transfers by team 2019/20



Trends in proportion of babies with a $p\text{CO}_2 > 7$ kPa and $\text{pH} < 7.2$ on completion of transfer as a percentage of ventilated transfers by team 2014-20



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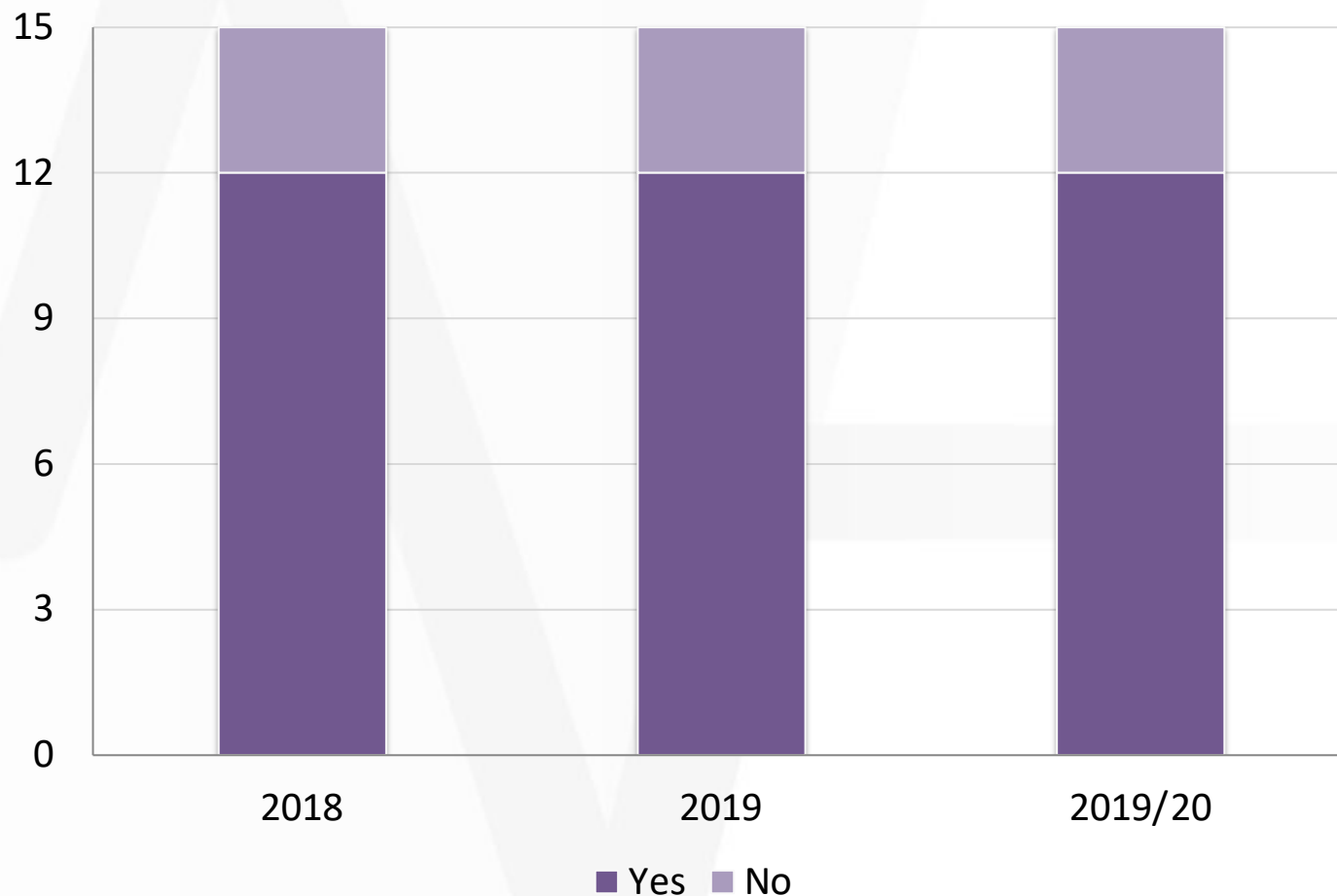


Service Characteristics 2019/20

24 hour service



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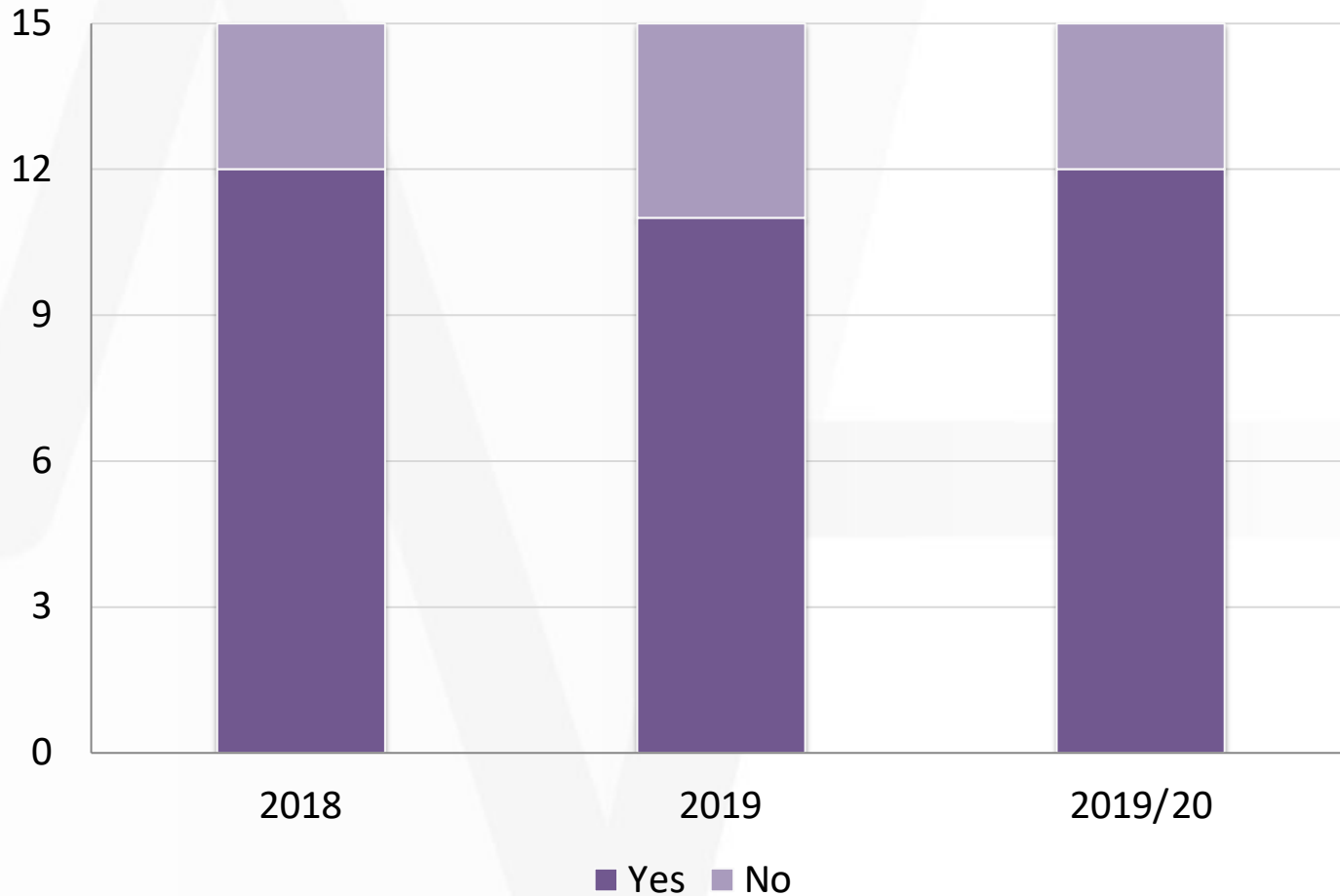


Service Characteristics 2019/20

Run a cot bureau

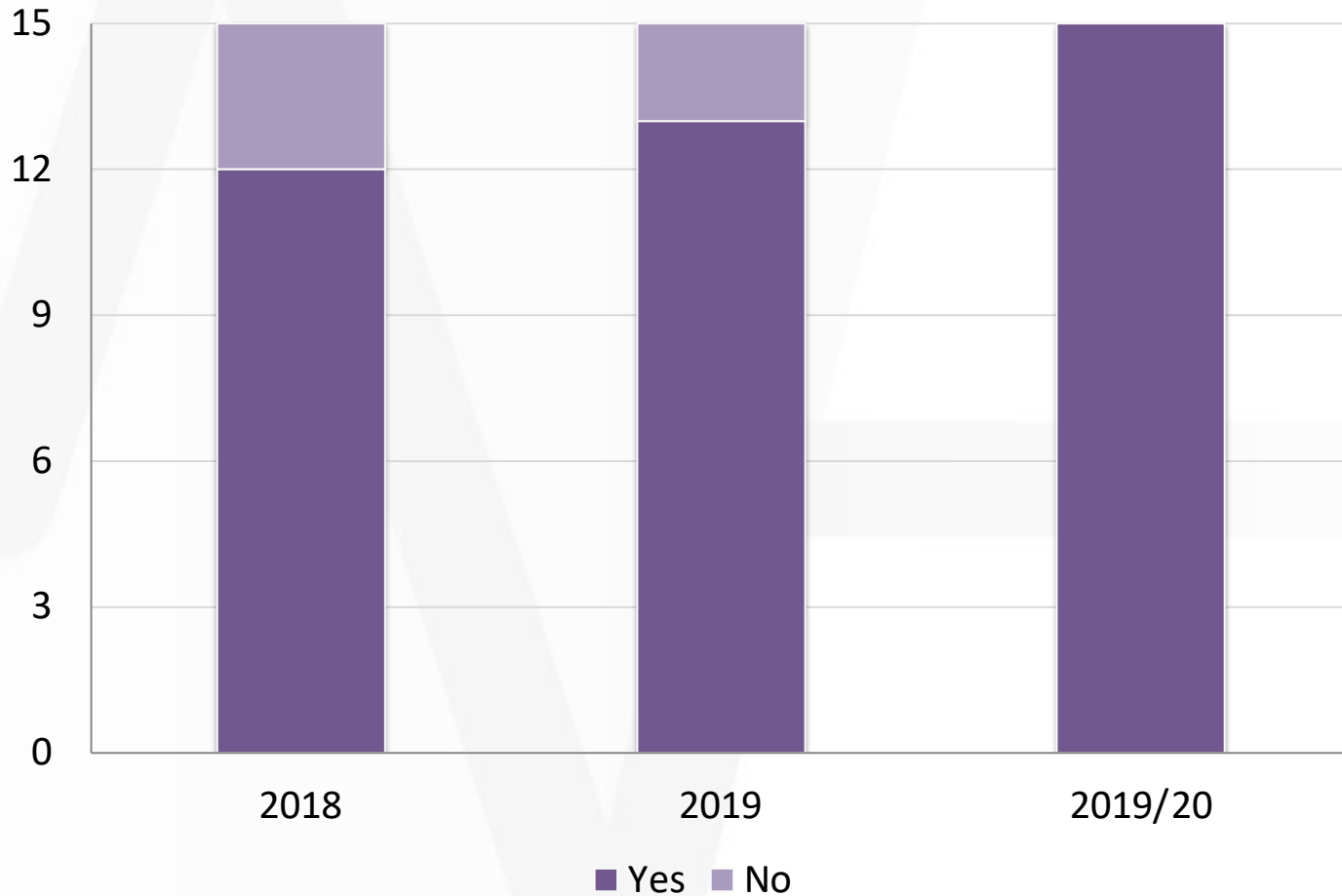


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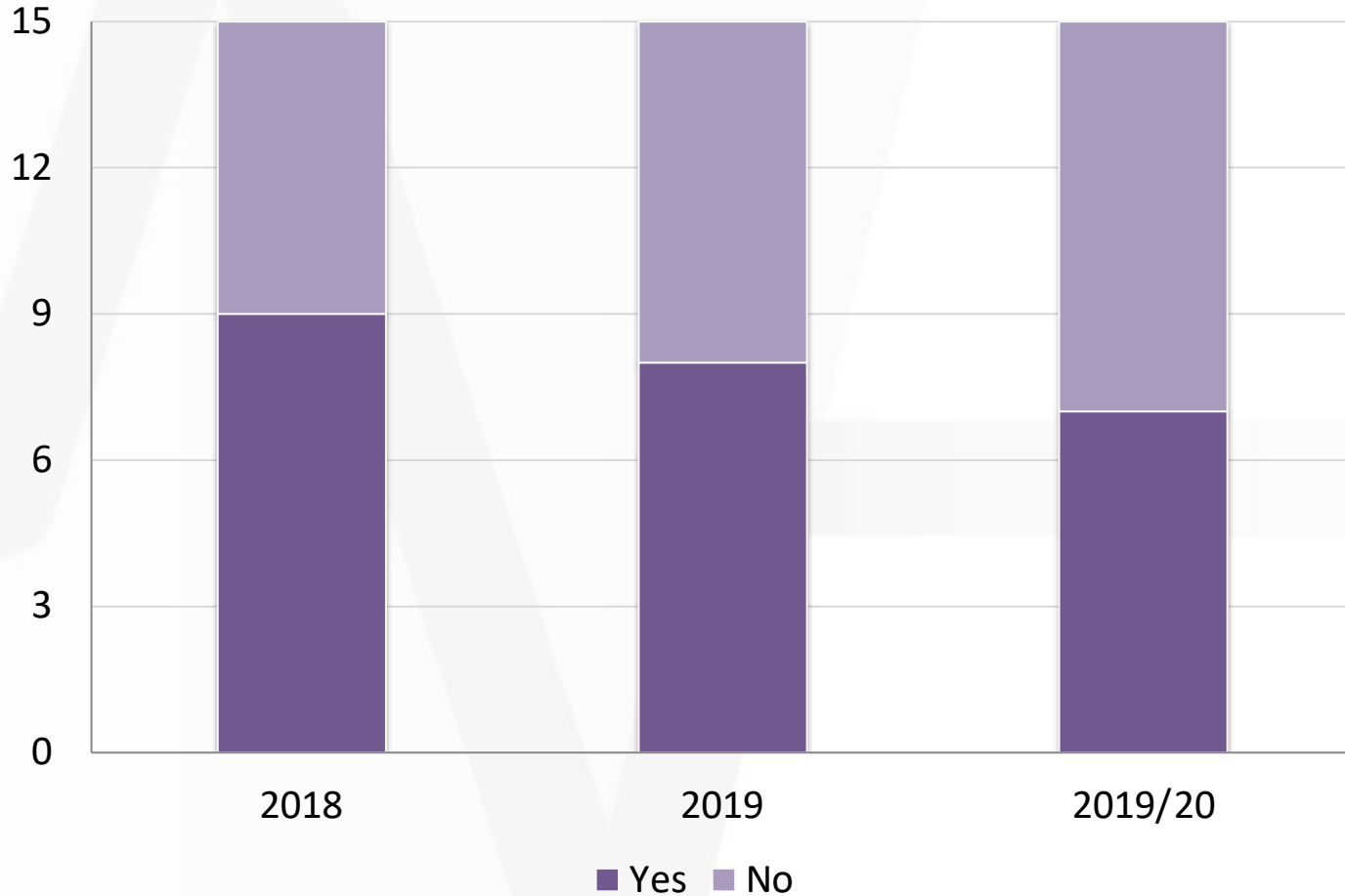


Service Characteristics 2019/20

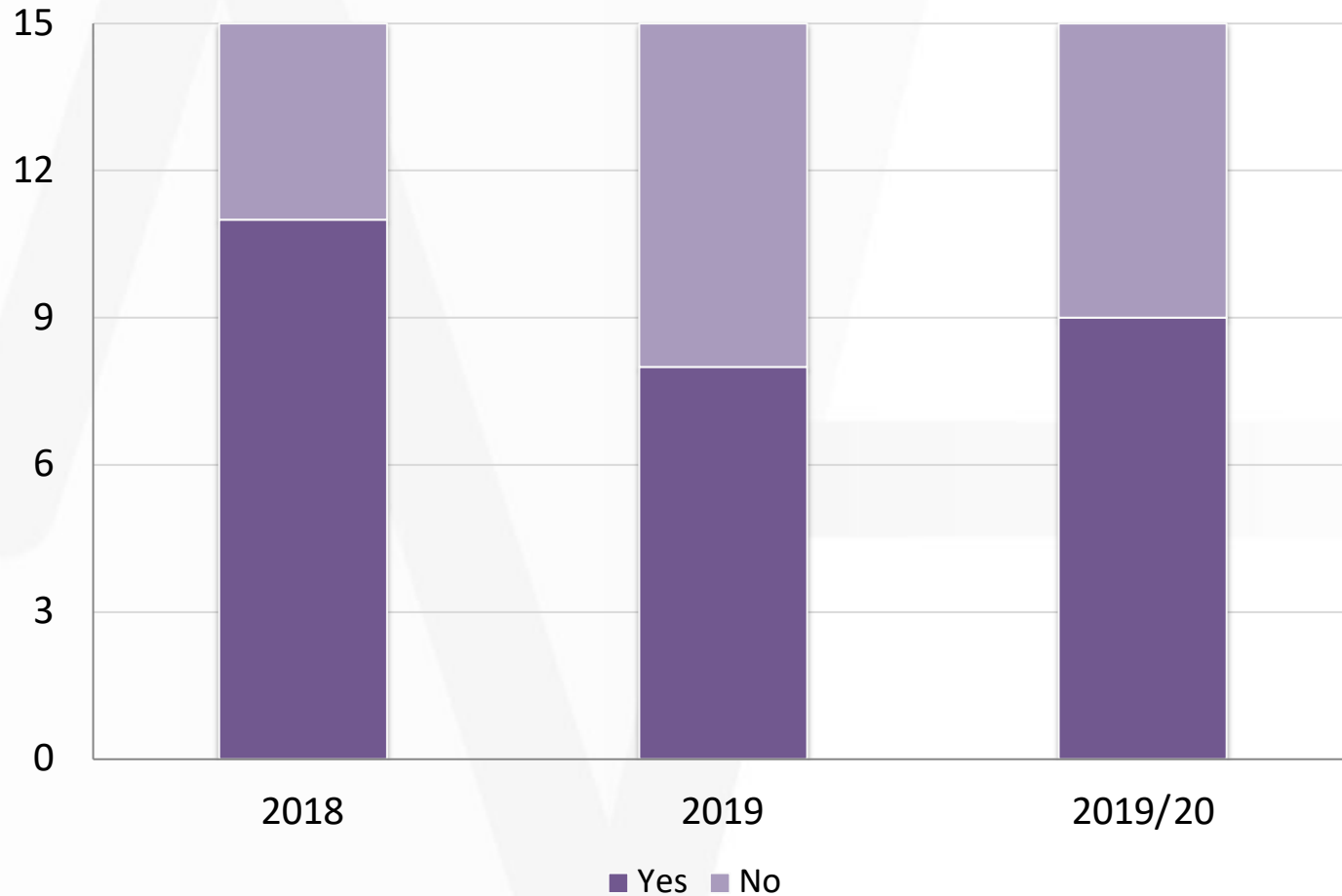
Conference calling



Service Characteristic- infants referred with bile-stained vomiting/aspirates treated as time-critical transfers ?



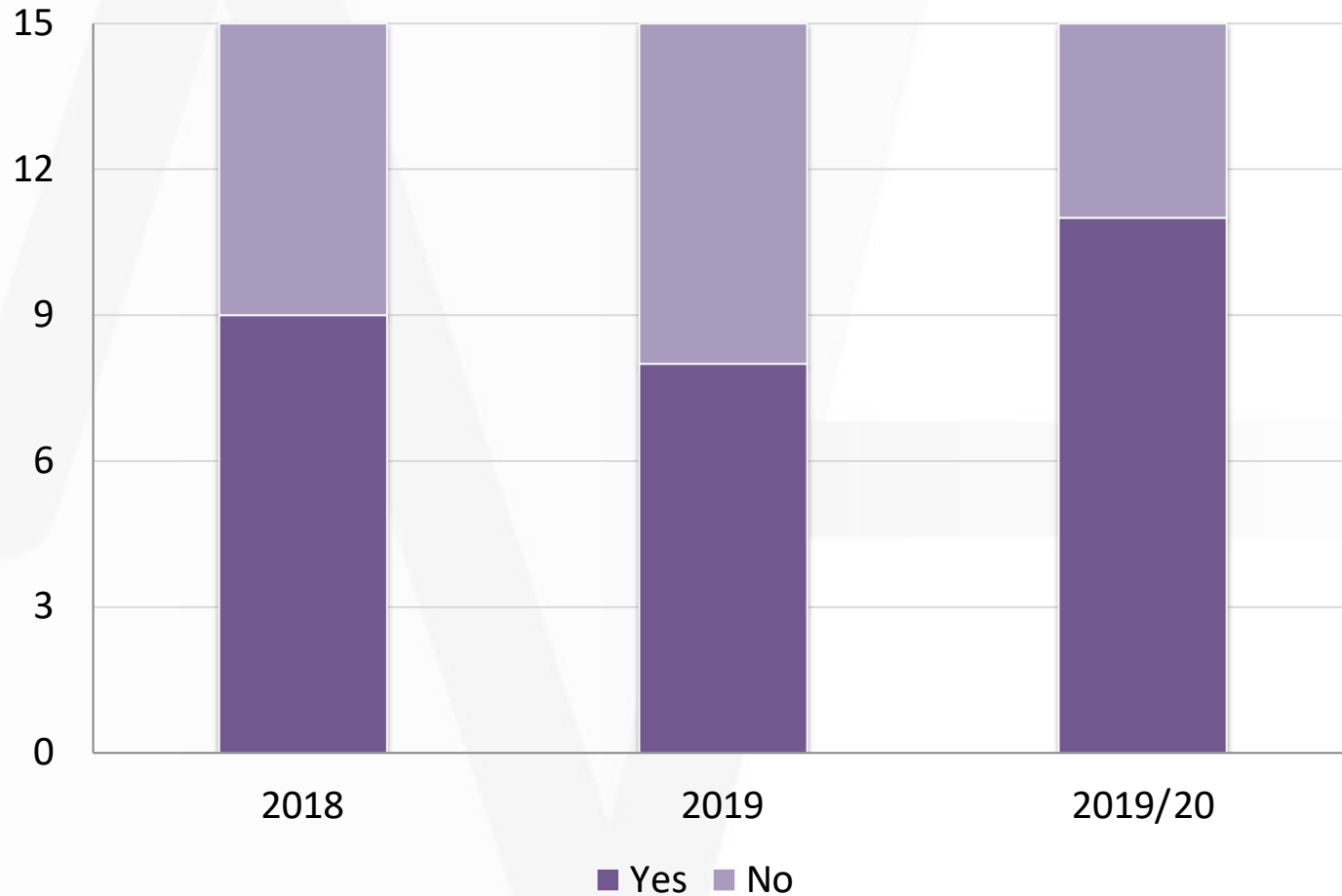
Do you offer support for locating appropriate maternal and neonatal beds for in-utero transfers?



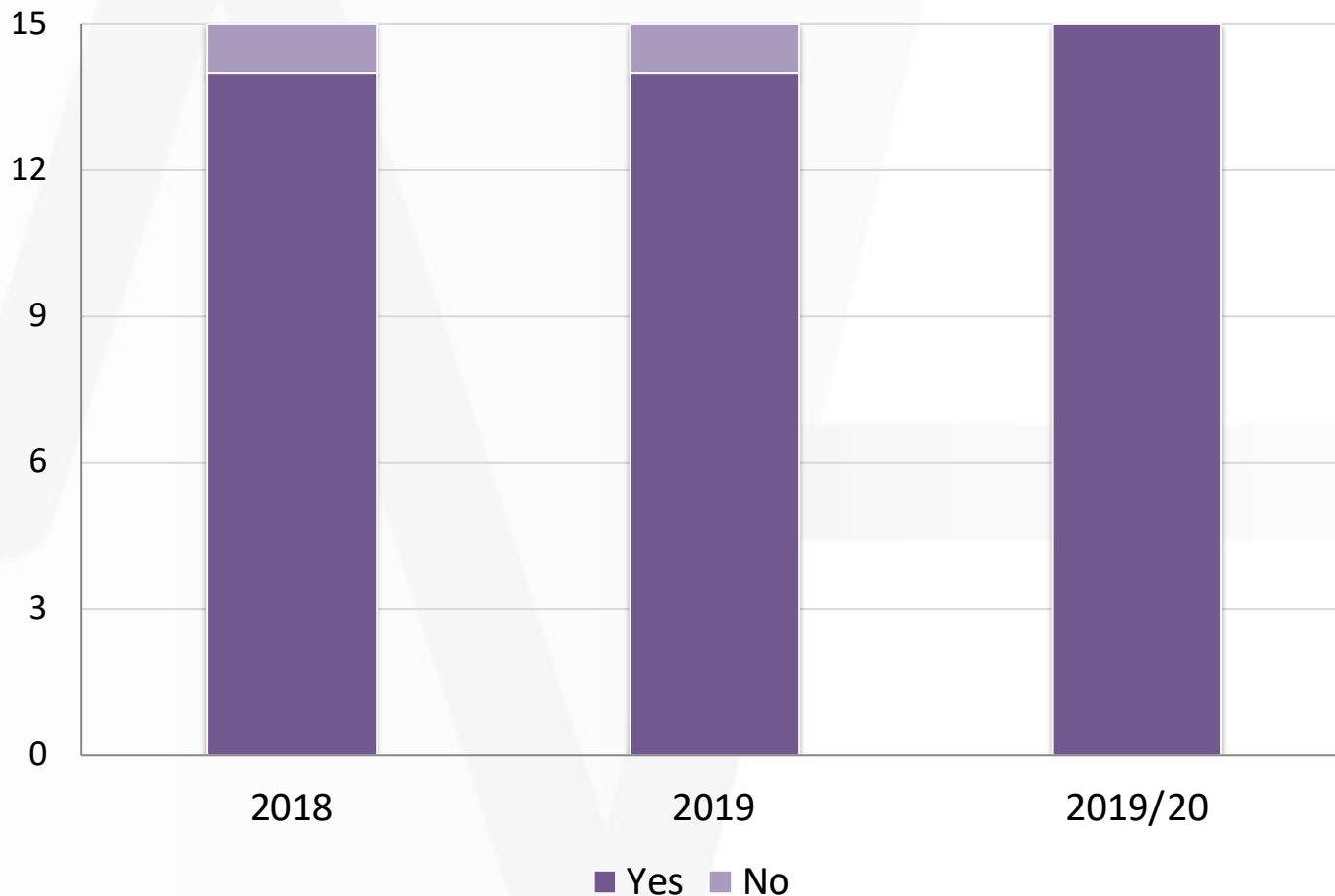
High Frequency Oscillatory ventilation available in transit 2019/20



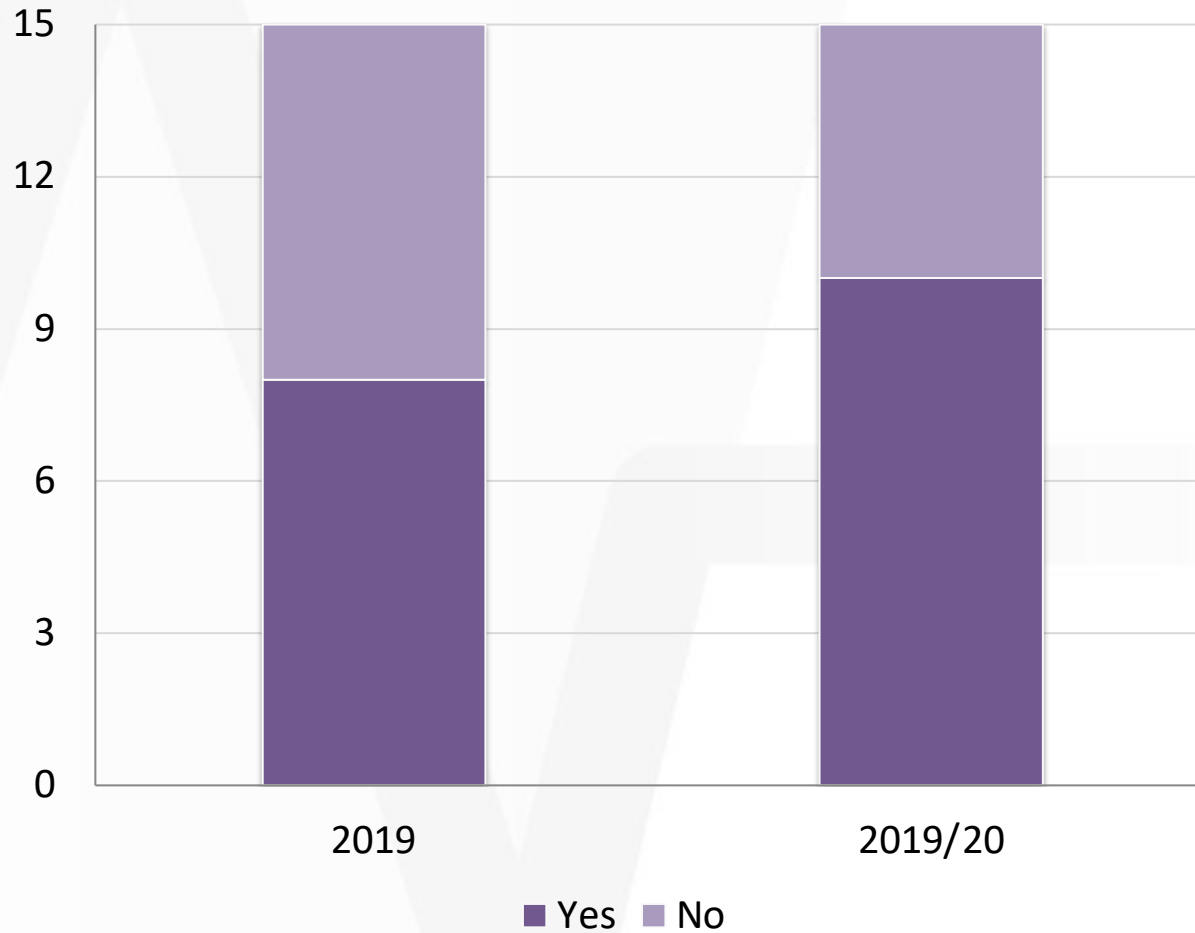
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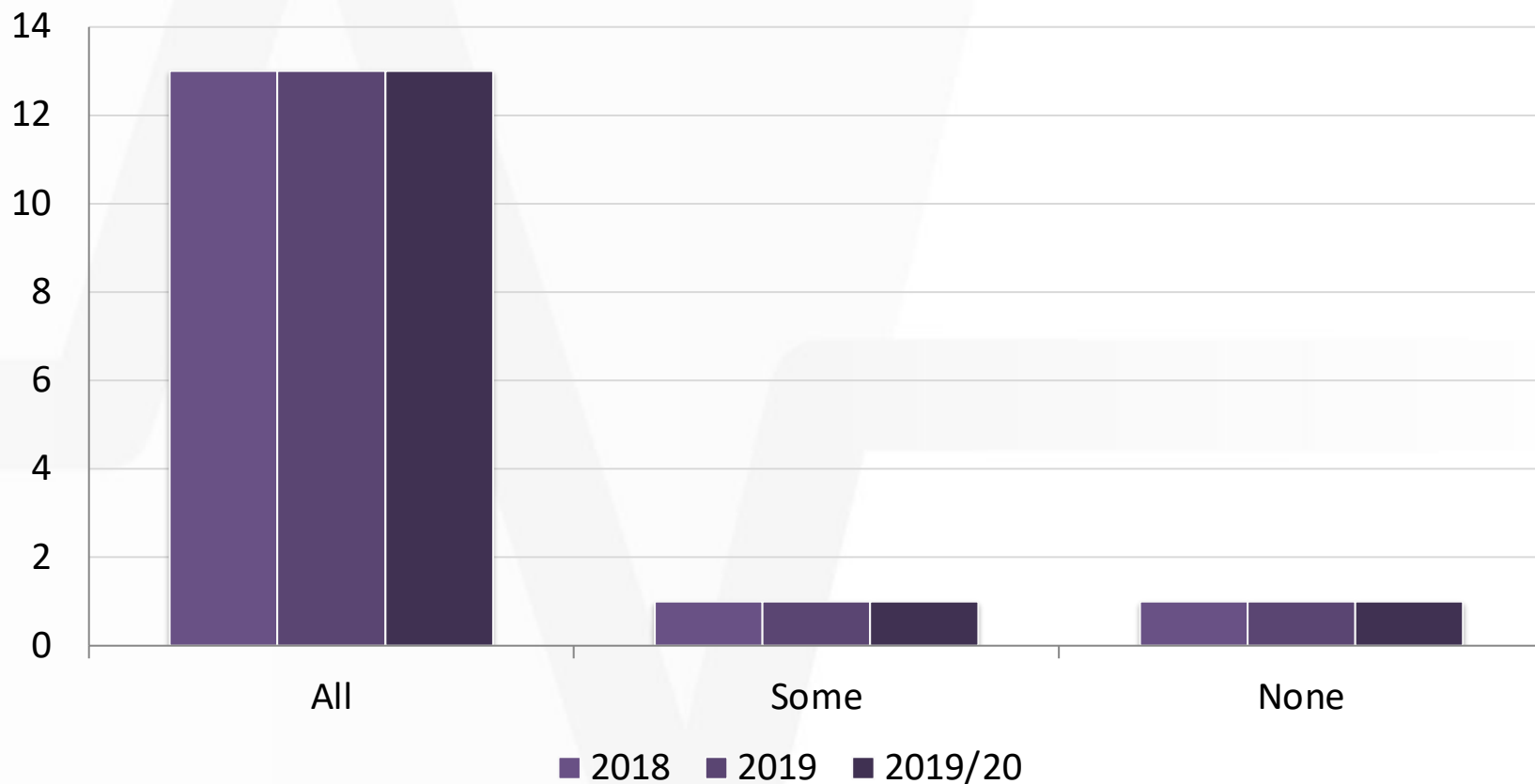
Provide servo-controlled active cooling in transit 2019/20



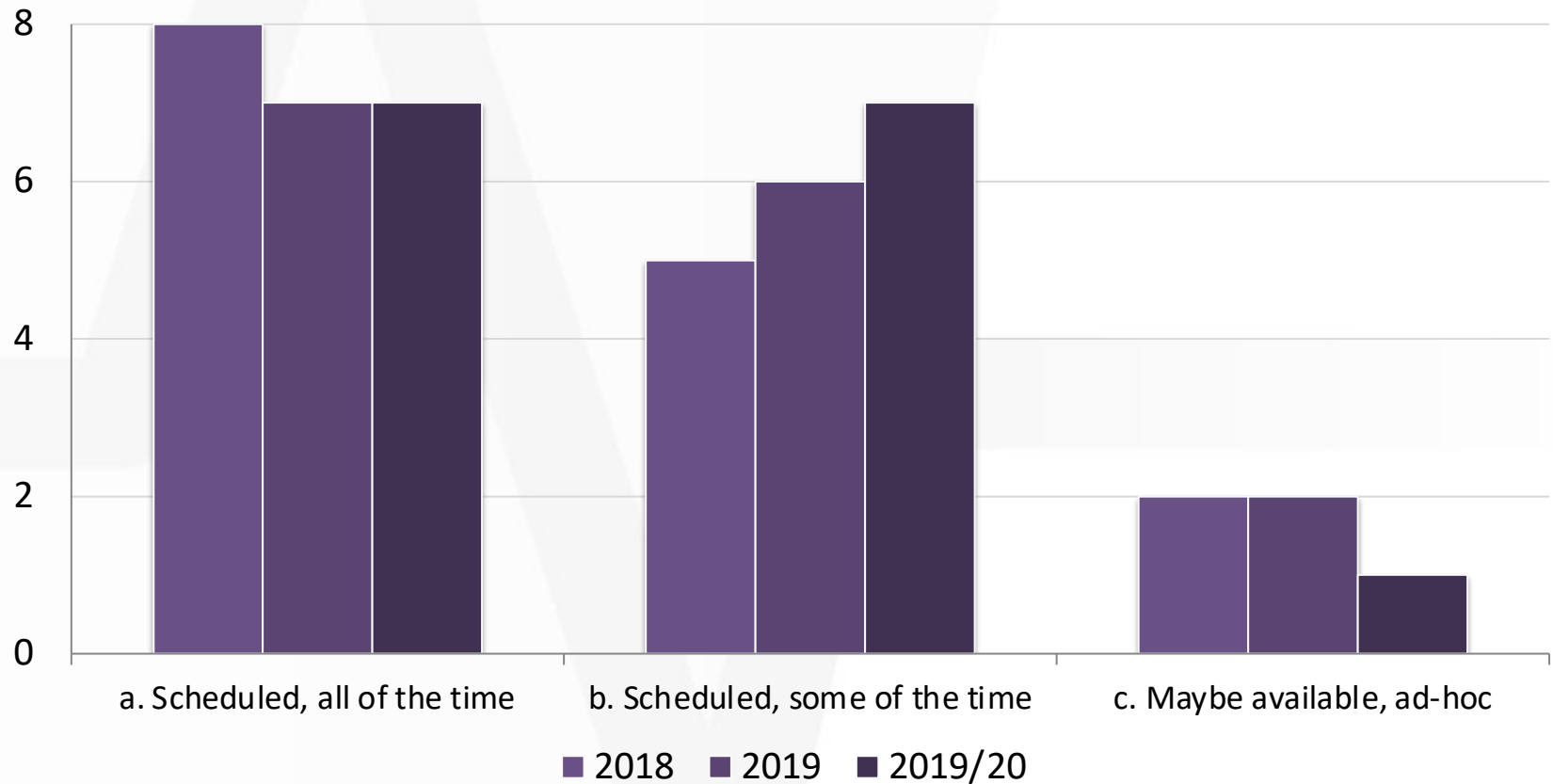
Local network “wrong place” review 2019/20



Dedicated vehicles, 2018-2019/20



Consultant service provision 2018-2019/20



Conclusions/trends 2019/20



- The change to a 12 month reporting period was achieved without significant issues
- Number of transport services across the UK has stabilised after a period of consistent consolidation
- Although the numbers of transfers is falling from a peak in 2015, the proportion of live births being transferred is increasing
- Proportions ventilated, on CPAP and High Flow stabilising
- Numbers and proportions of time critical numbers continue to fall- time to look at the definitions again?
- Questions remain around the value of recording response and stabilisation times- what do they tell us? Further discussion around this area is required for the next data collection period.
- Hypothermia on completion of transfer remains a stubborn problem through previous years data has shown the the incidence of hypothermia is higher before transfer and most infants' temperatures improve during the transfer process
- Wide variation in rates of parents travelling with their babies remain, though significant improvements have been seen in some teams .



Thanks



- All the service leads and data crunchers
- Colin Devon

