NTG Annual Transport Data. 2019.

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ScotSTAR

Method

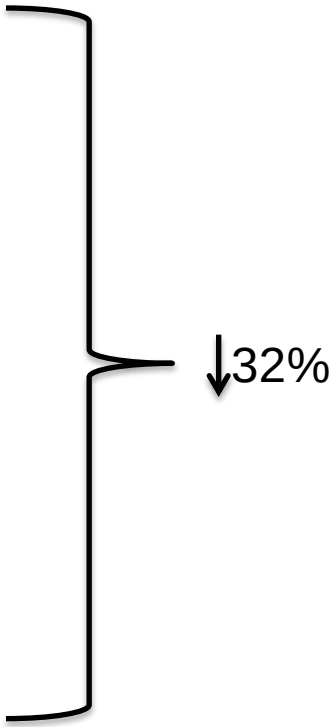
- Email to transport service's medical and nursing leads requesting activity data from 1.1.19 to 30.6.19
- Brief additional information about each service.

Reorganisations & additions for **2019** data

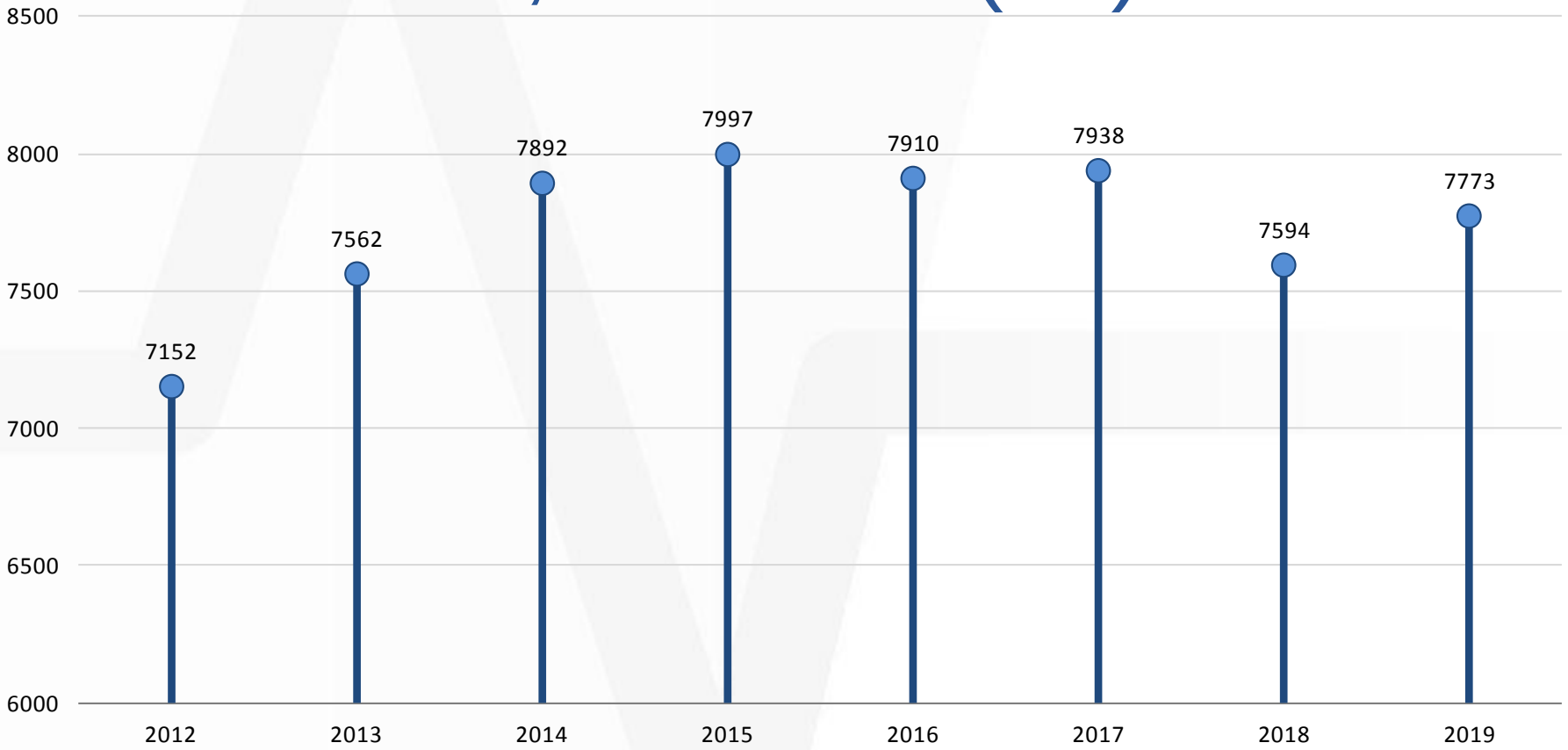
- No reorganisations in 2019
- 1 service new to the data submission- Jersey

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 16 (1 new)



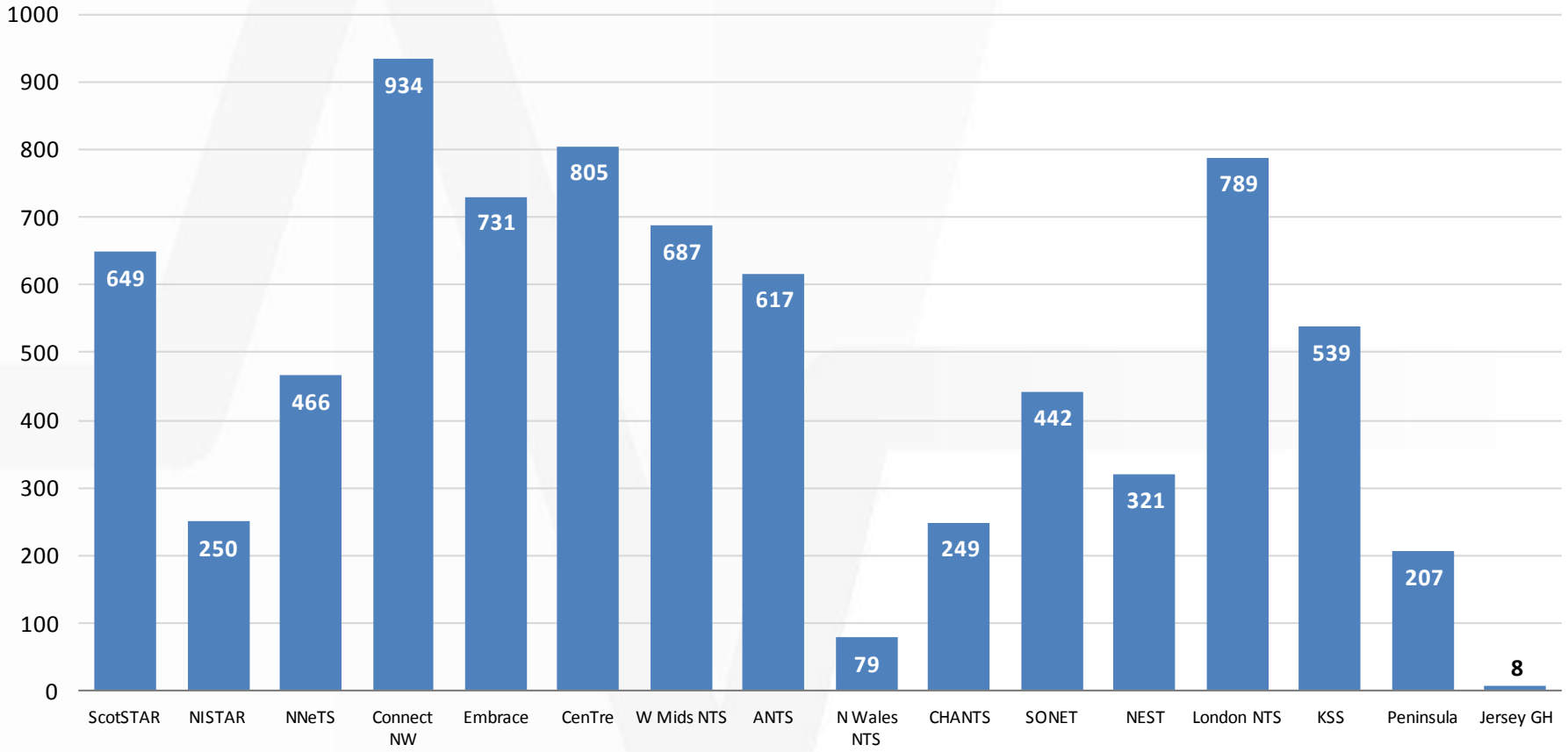
UK summary data, Jan-Jun/year, all transfers, all teams (n=)



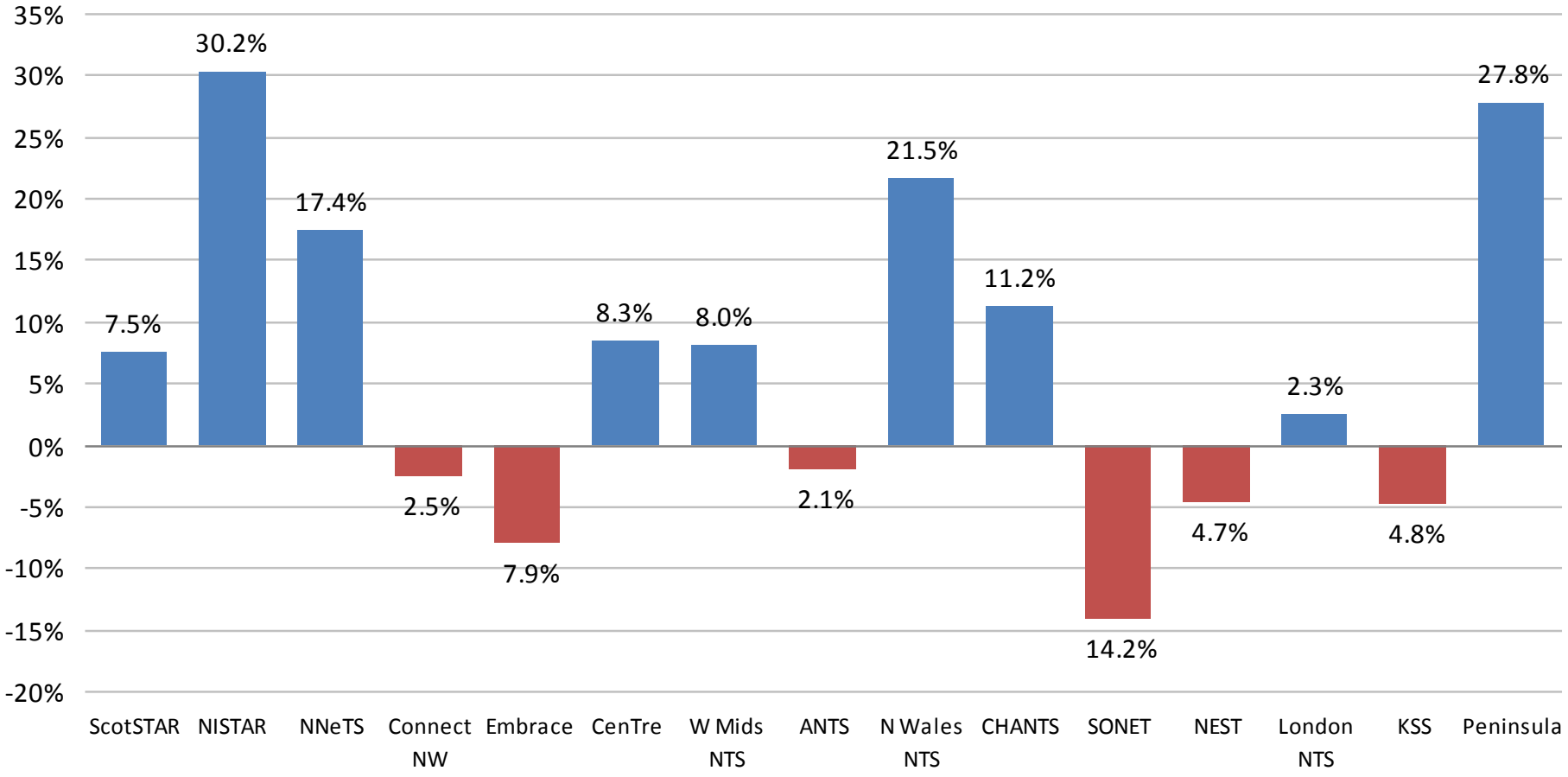
UK summary data Jan-Jun/year

	2013	2014	2015	2016	2017	2018	2019
Total transfers	**7562**	**7892**	**7997**	**7910**	**7938**	**7594**	**7773**
Ventilated	1961 (26%)	1949 (25%)	2155 (27%)	2000 (25%)	1913 (24%)	1939 (26%)	1871 (24%)
HFOV	-	-	16 (<1%)	16 (<1%)	39 (2%)	48 (2%)	54 (3%)
CPAP	906(12%)	819 (10%)	790 (10%)	737 (9%)		621 (8%)	529 (7%)
High-flow	-	-	452 (6%)	496 (6%)		674 (9%)	767 (10%)
Cooling	288 (4%)	249 (3%)	274 (3%)	288 (4%)	245 (3%)	255 (3%)	281 (4%)
iNO	111 (1%)	117 (1%)	138 (2%)	145 (2%)		154 (2%)	157 (2%)
Palliative		9 (<1%)	19	33	33	20	24

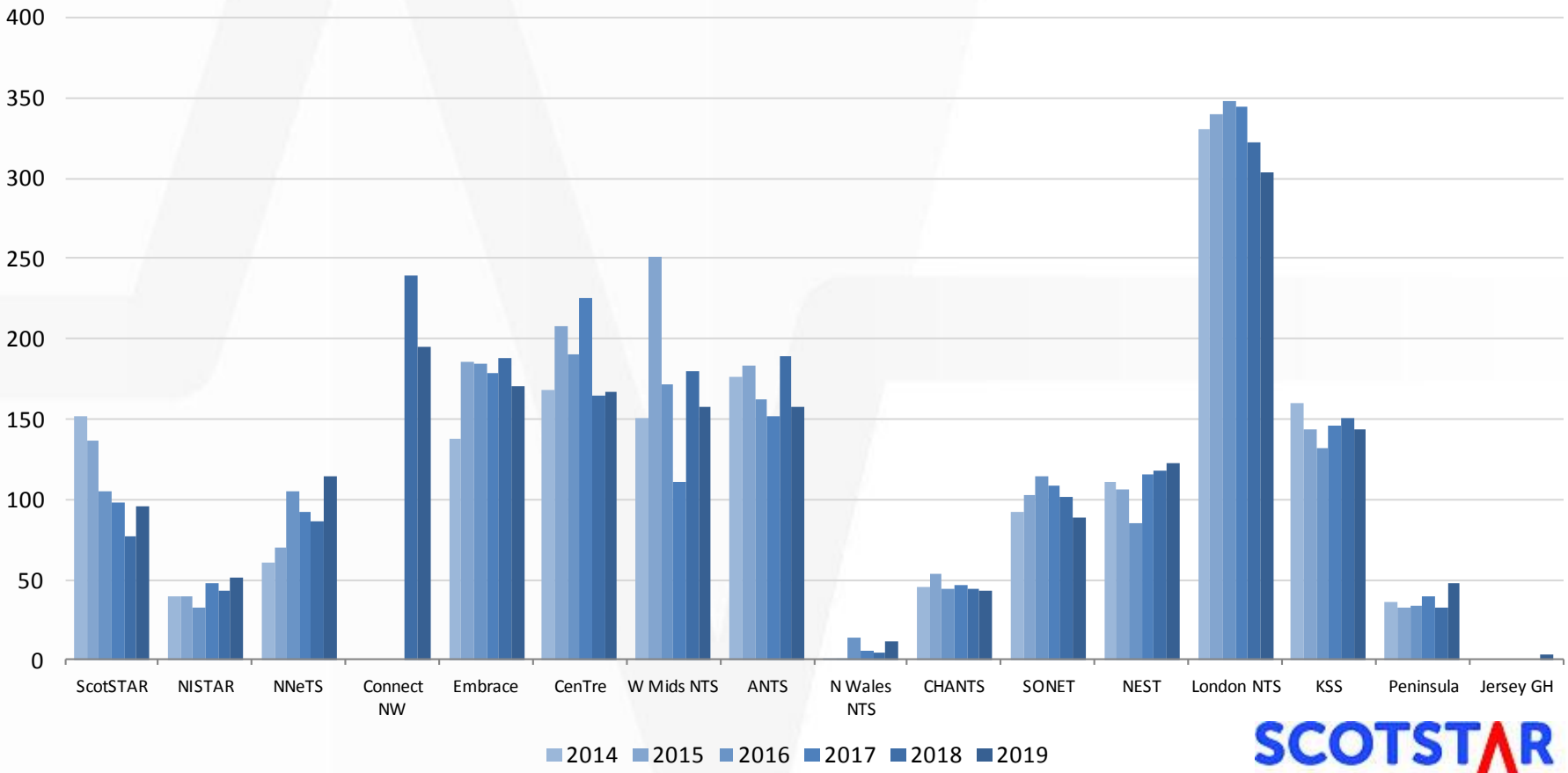
Total Transfers/team, Jan-Jun 2019



Changes in activity by team, 2018 v 2019



Number of ventilated transfers, Jan-Jun 2014-2019



HFO capability and activity

- 2 teams in 2015
- 5 teams in 2016
- 6 teams in 2017
- 8 teams in 2018 and 2019

Teams with HFO	HFO in transit	HFO commenced by NTS	HFO commenced by NTS %
ScotSTAR	5	0	0%
Connect NW	11	3	27%
W Mids NTS	0	0	N/A
CHANTS	0	0	N/A
NEST	3	3	100%
SONET	6	4	67%
London NTS	29	17	59%

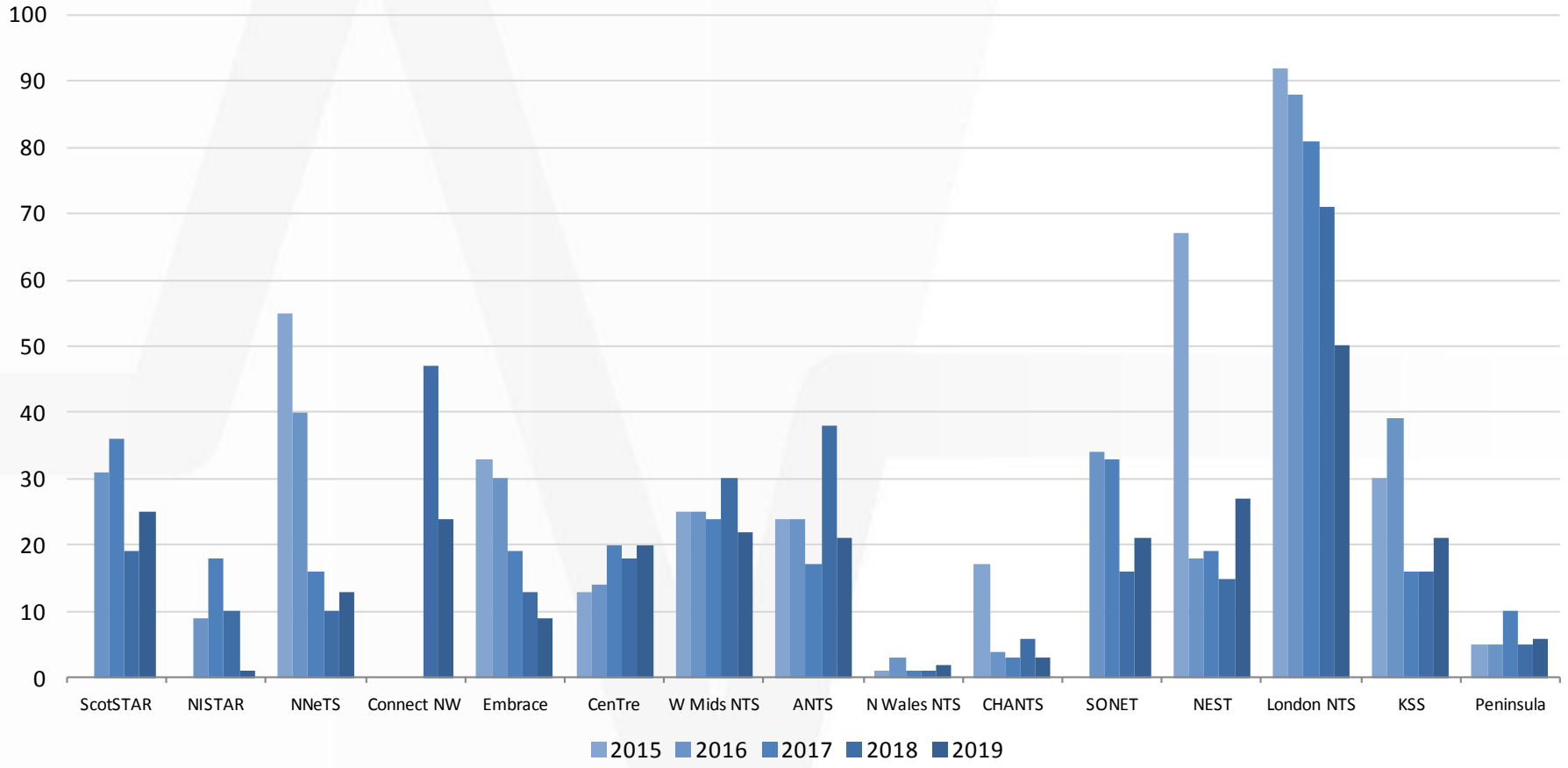
This is the first year that data on initiation of HFOV has been collected

Response standards

Data on

- Time critical % mobile in 60 mins
- Referral response time for ICU/uplift transfers- 3.5 hours
- Uplift transfers within catchment are performed be commissioned team(%)

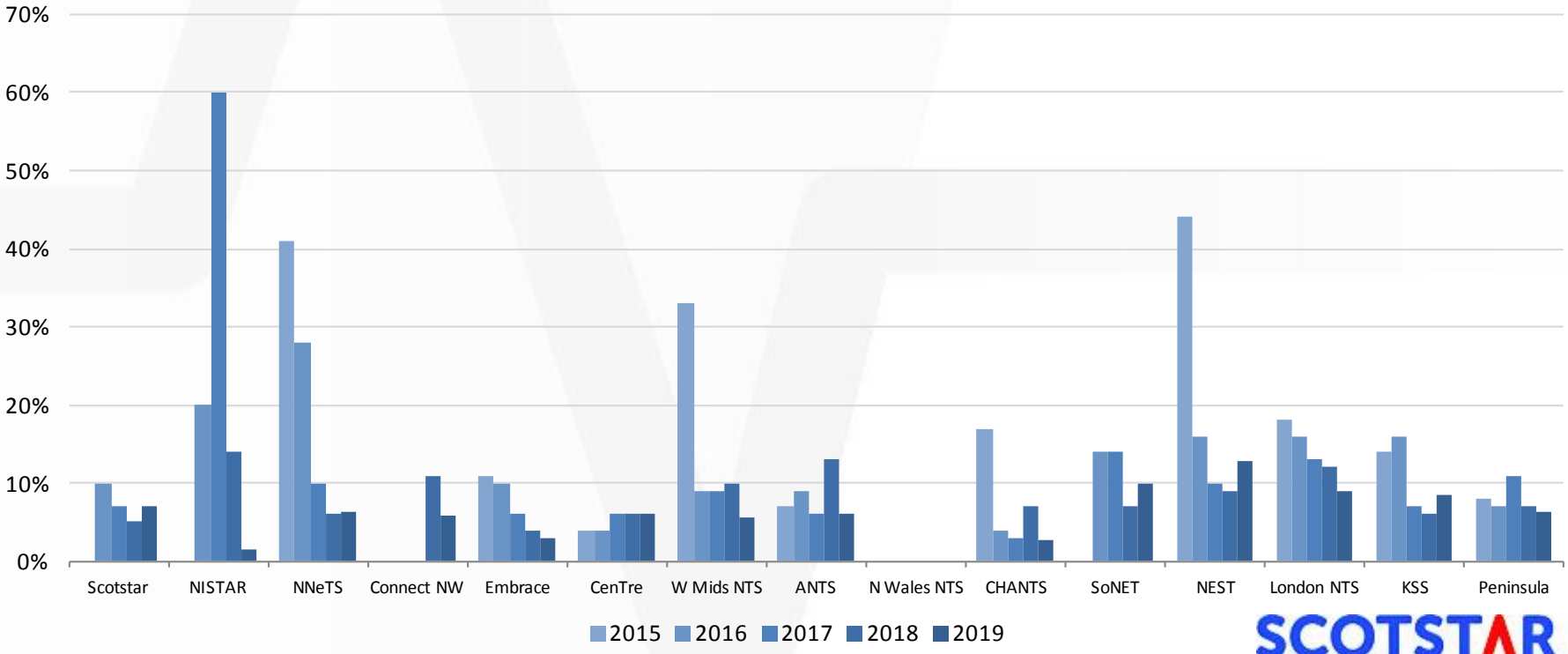
Number of time-critical transfers/team, Jan-Jun 2015-2019



Note that this does not represent the total emergency workload of the teams, the NTG team critical benchmark uses specific case definitions to assess response times

TC transfers/team as % of uplift transfers, Jan-Jun 2015 - 2019

	2015	2016	2017	2018	2019
TC	469	408	341	315	265
Uplift	3172	3355	3729	3718	3839
%	**15%**	**12%**	**9%**	**8%**	**7%**

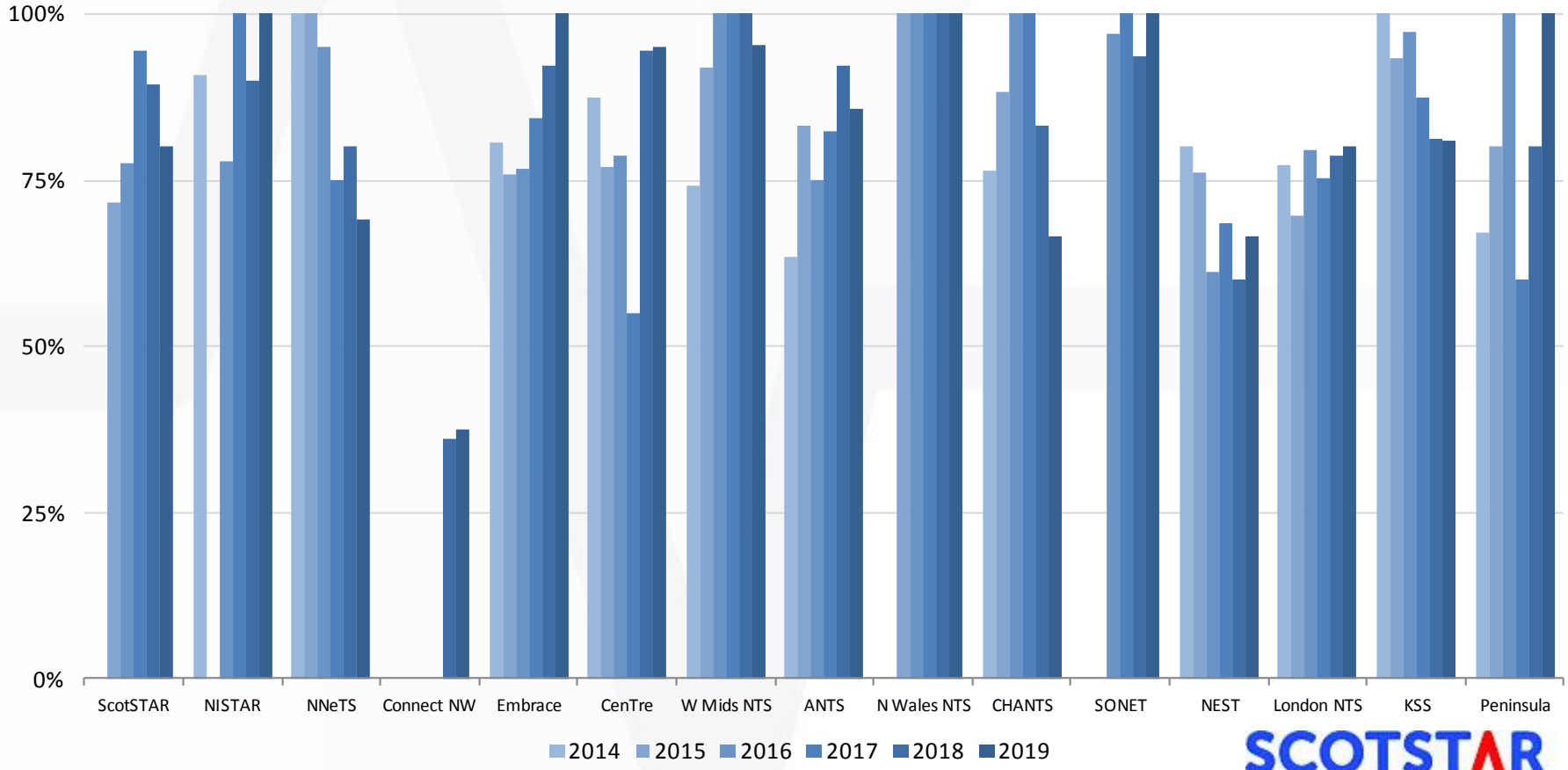


% of time critical transfers team mobile within 60 minutes of start of referring call.

	2014	2015	2016	2017	2018	2019
% Met	77%	81%	84%	82%	79%	**80%**
Total (=n)	409	469	408	341	315	**265**

Without the outlier out in this years' numbers (see next slide) target was met on 87% of occassions

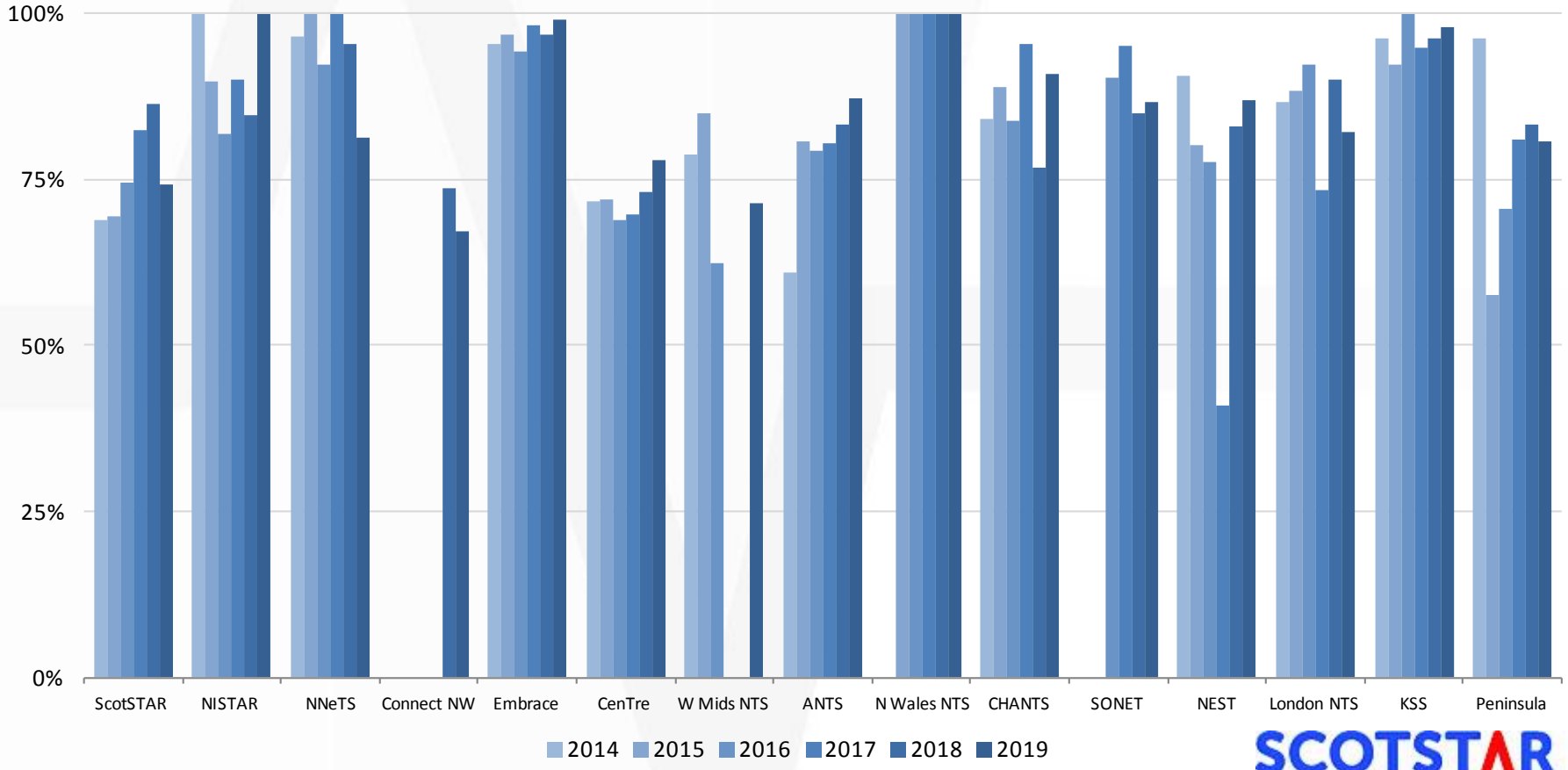
% of time critical transfers team mobile within 60 minutes of start of referring call.



Team arrived with the patient within 3.5 hours of the start of the referring call (Intensive care; uplift) (%), Jan-Jun/year.

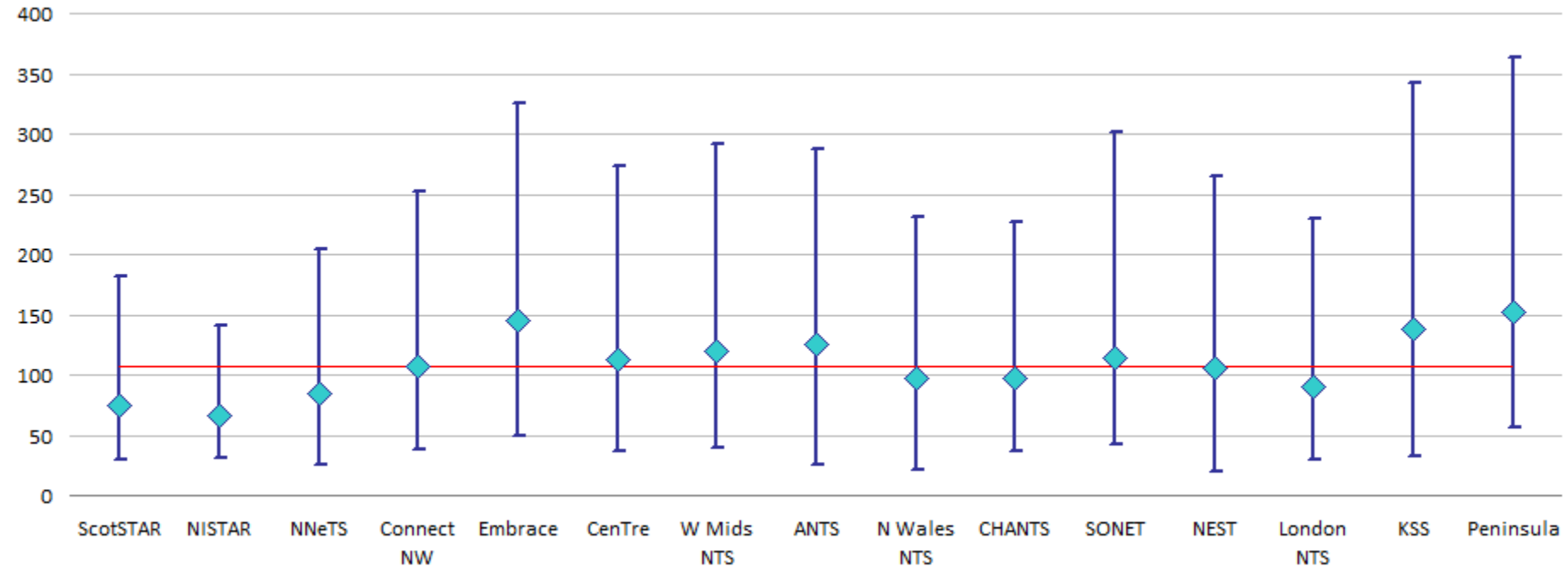
	2013	2014	2015	2016	2017	2018	2019
% Met	72%	86%	83%	82%	80%	85%	**82%**
Total (=n)	1689	1836	1945	1787	2031	1800	**1953**

Team arrived with the patient within 3.5 hours of the start of the referring call (Intensive care; uplift) (%), Jan-Jun/year.



Stabilising time (minutes), Jan-Jun 2019,

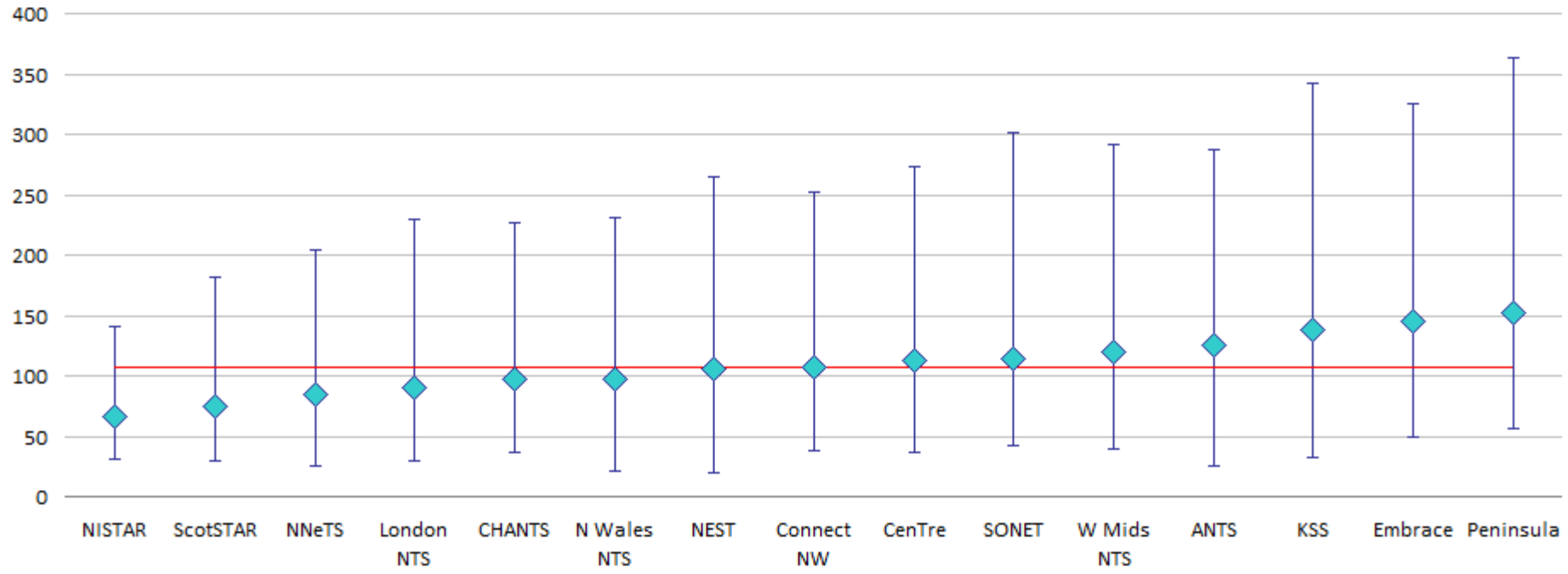
Median (25th & 75th centiles), uplift/ICU transfers.



The red line indicates the mean stabilising team for all teams

Stabilising time (minutes), Jan-Jun 2019,

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



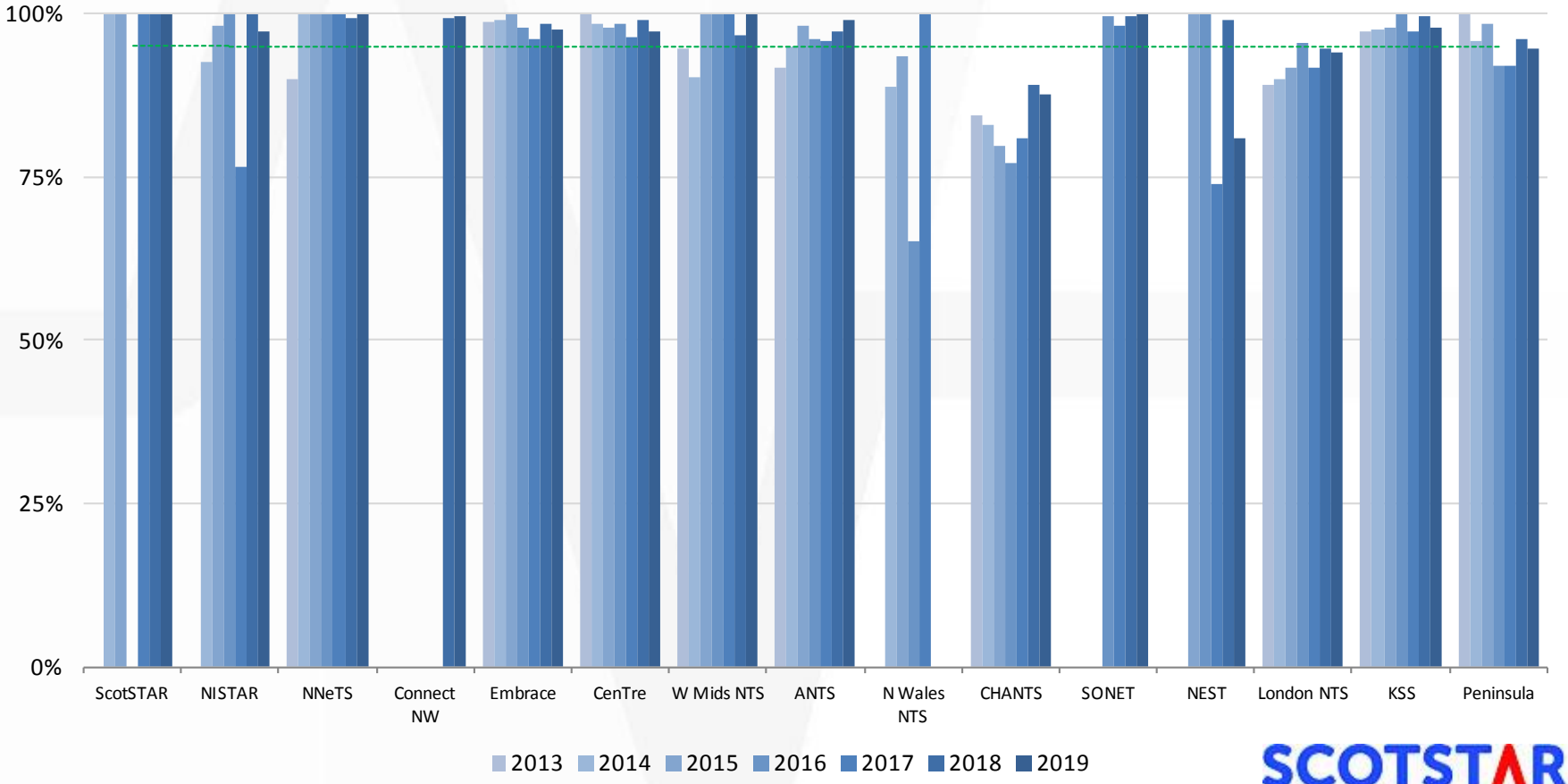
The red line indicates the mean stabilising team for all teams

Neonatal Transport Services transfer at least 95% of patients requiring transfer for uplift within its defined catchment area. (%)

Year	2013	2014	2015	2016	2017	2018	2019
n =	3109	3416	3268	3355	3729	3718	**3839**
Transfer by Commissioned Team n =	2704	3097	3172	2971	3543	3637	3719
	(87%)	(90.7%)	(97.1%)	(88.6%)	(95%)	(97.8%)	(96.9%)

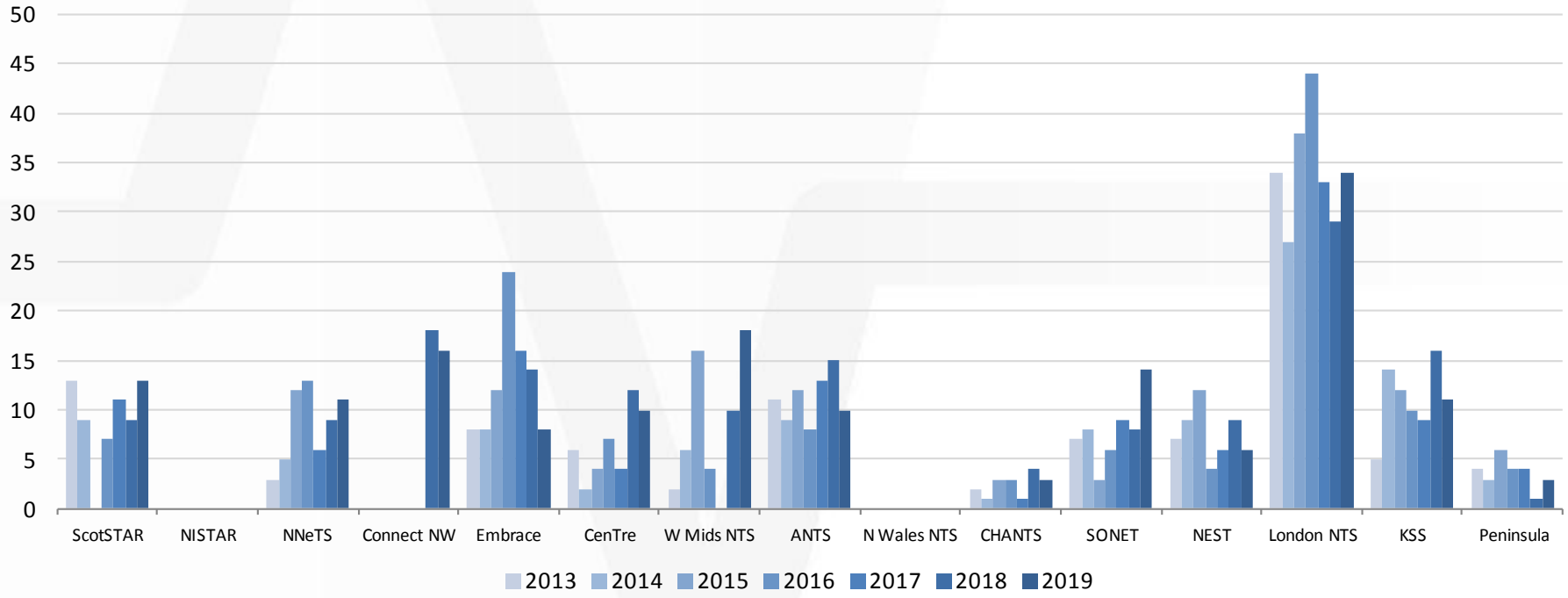
Previous 3 year average 94%

Neonatal Transport Services transfer at least 95% of patients requiring transfer for uplift within its defined catchment area. (%)

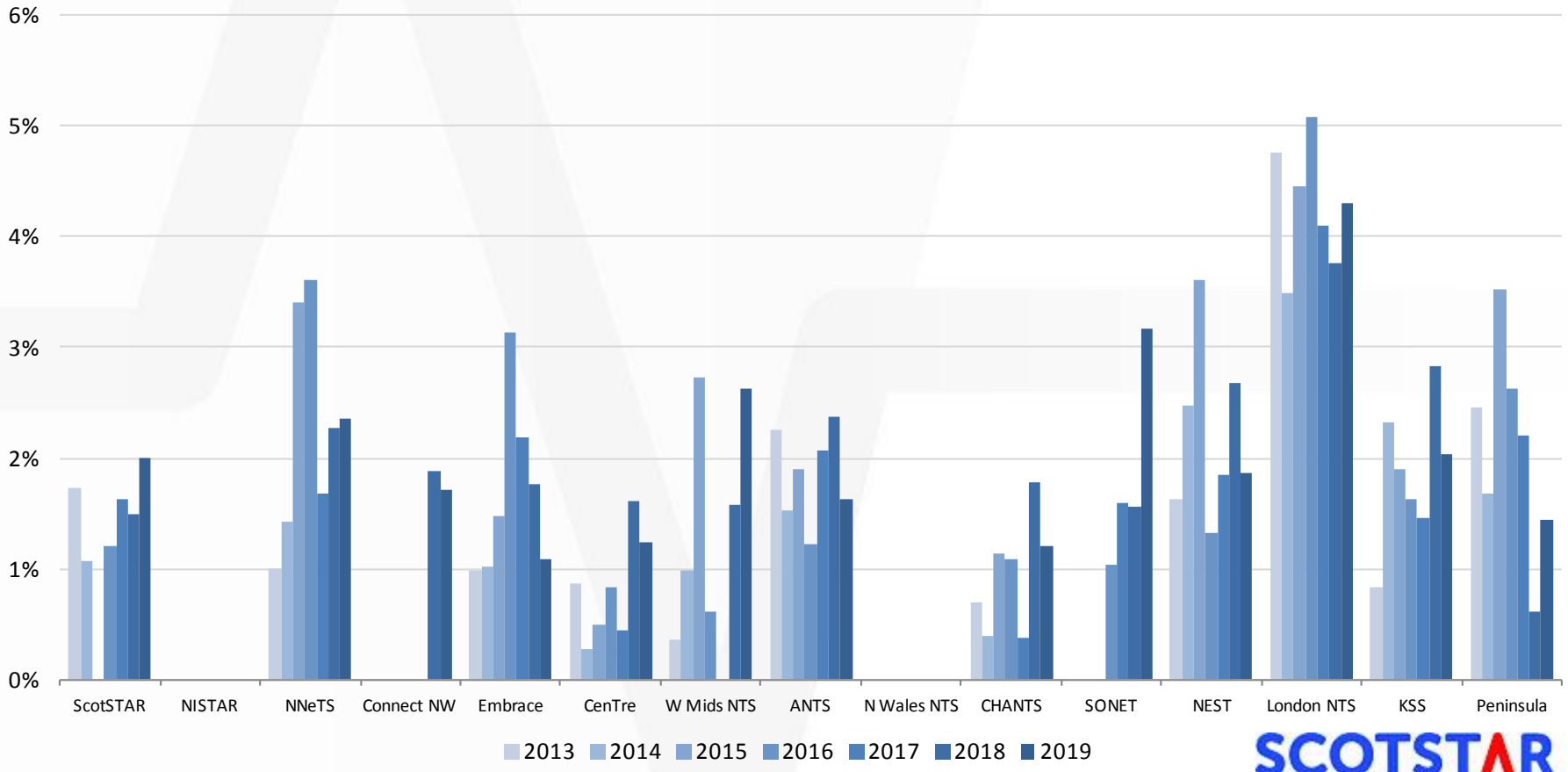


Number transferred on iNO Jan-Jun/year

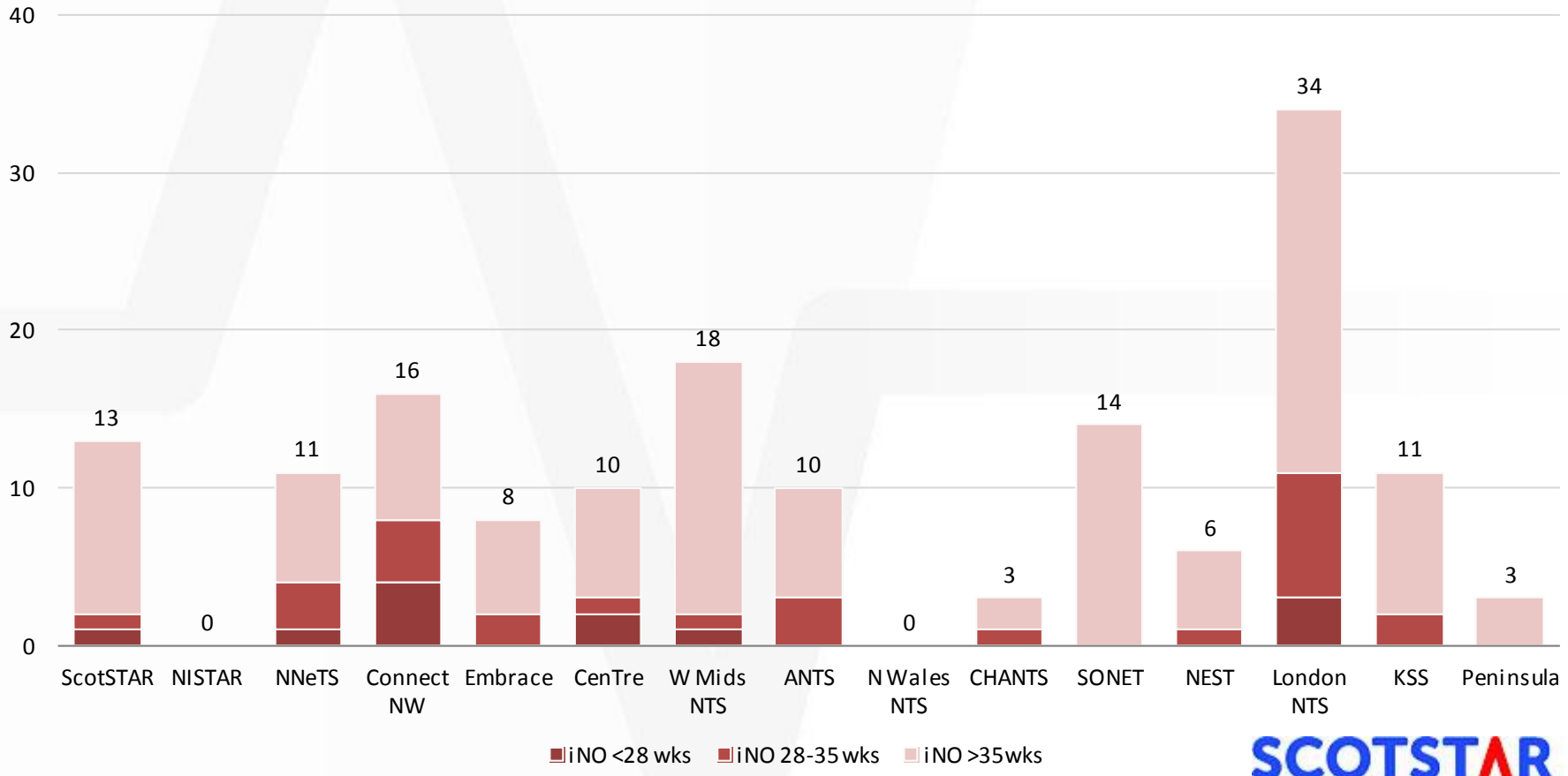
	2013	2014	2015	2016	2017	2018	2019
iNO for UK	111	117	138	145	-	154	157



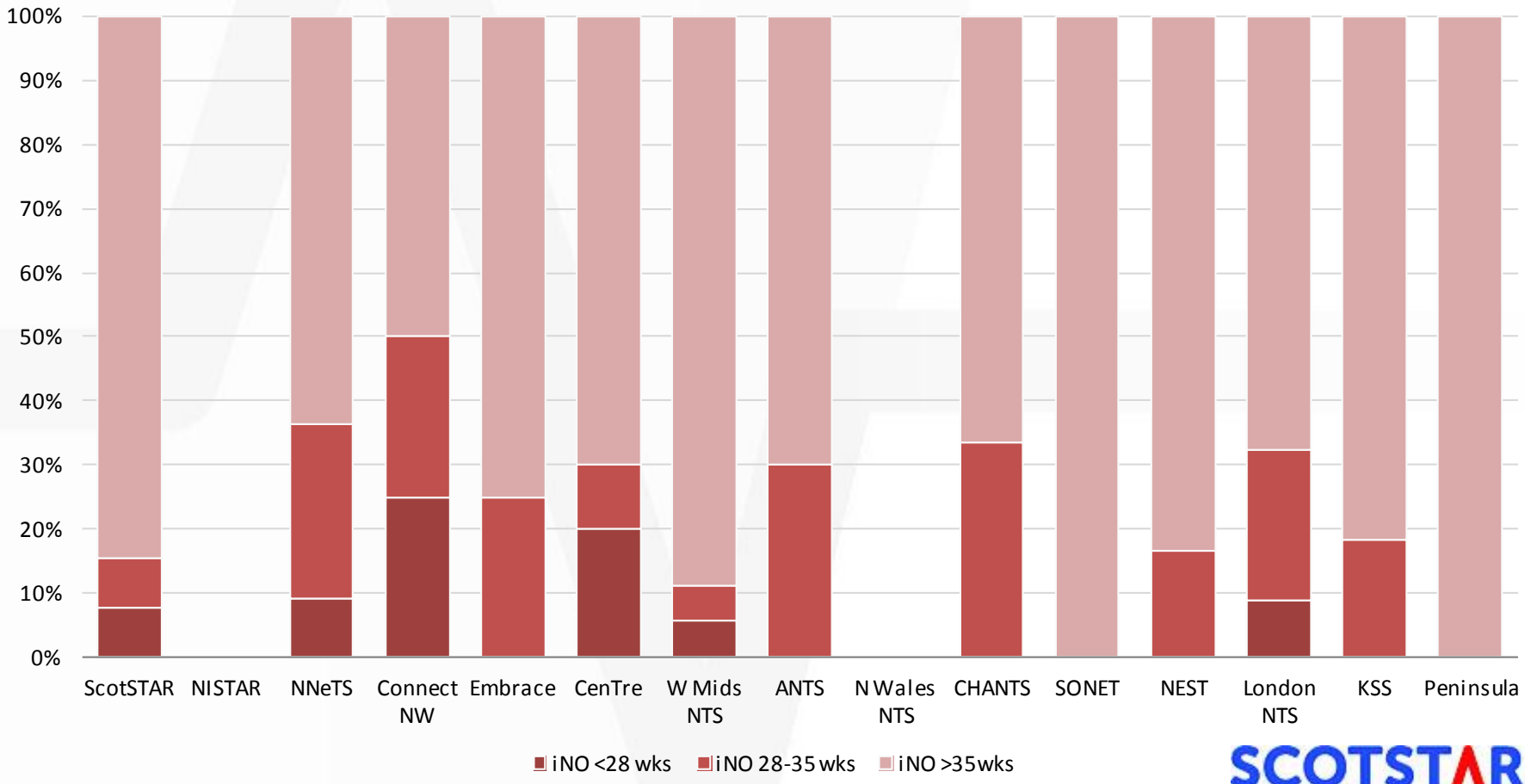
% transferred on iNO Jan-Jun/year



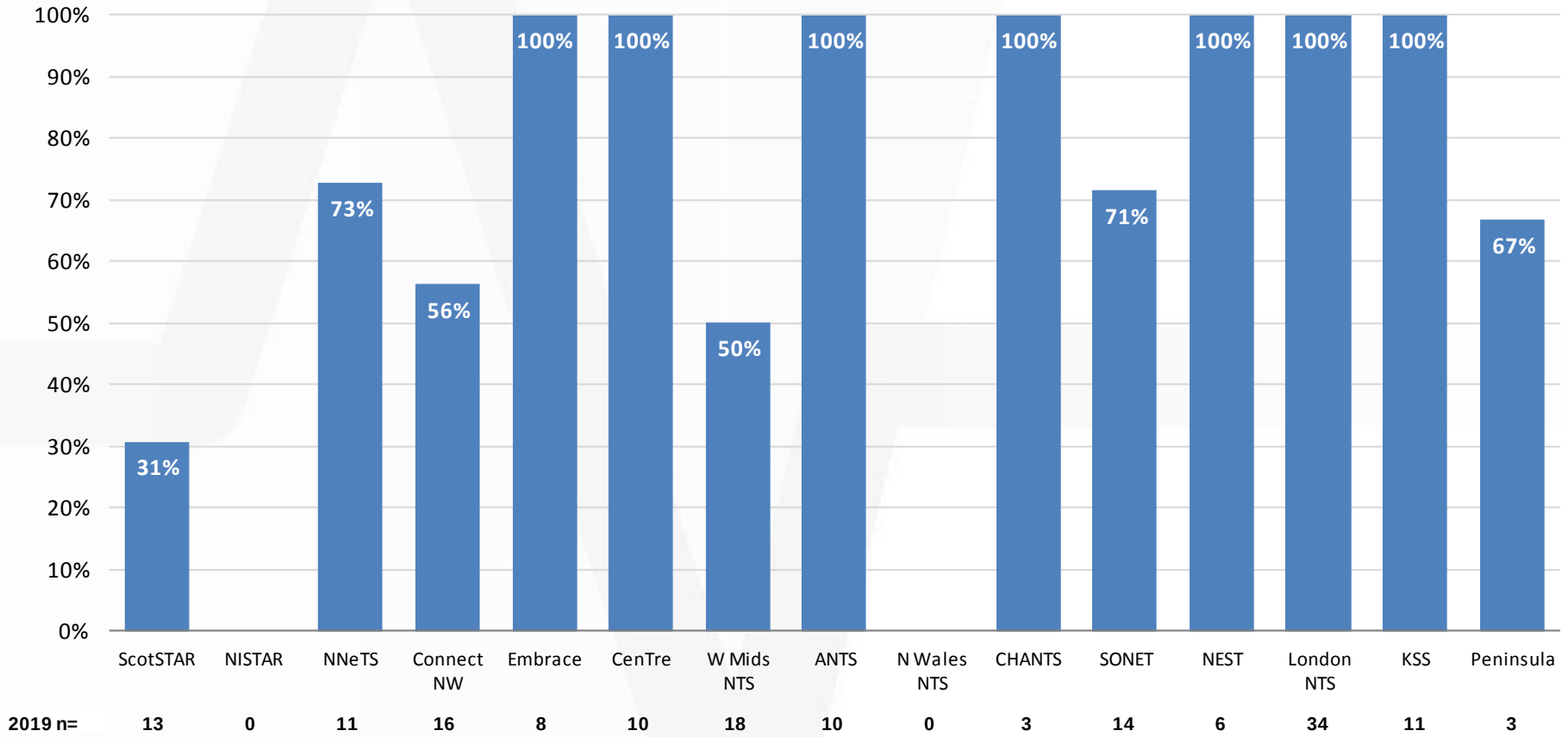
iNO use by team, gestation breakdown 2019



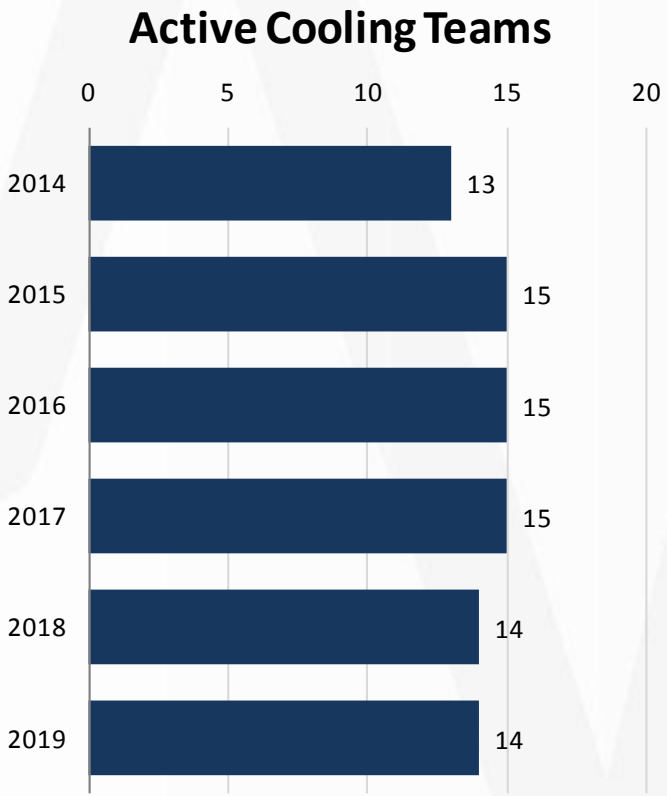
iNO use by team, gestation breakdown 2019

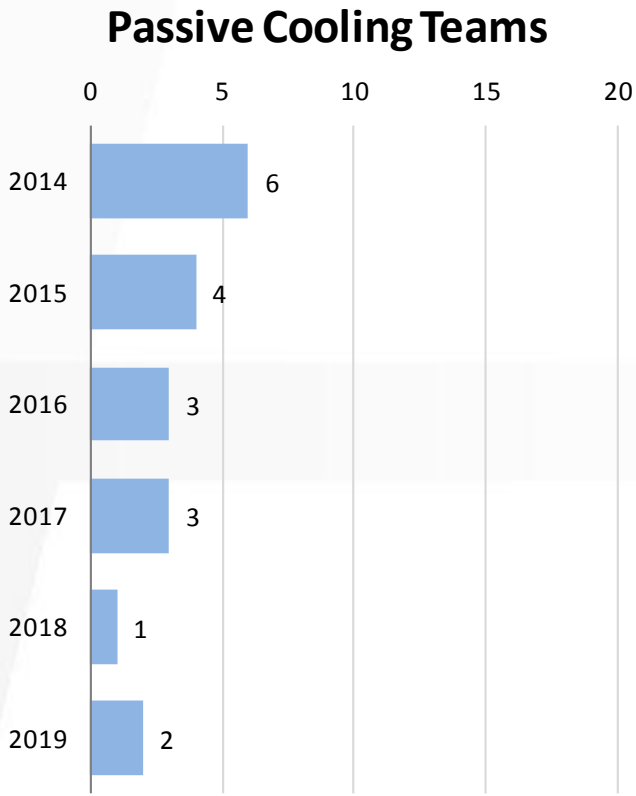


iNO started by team, Jan-Jun 2019

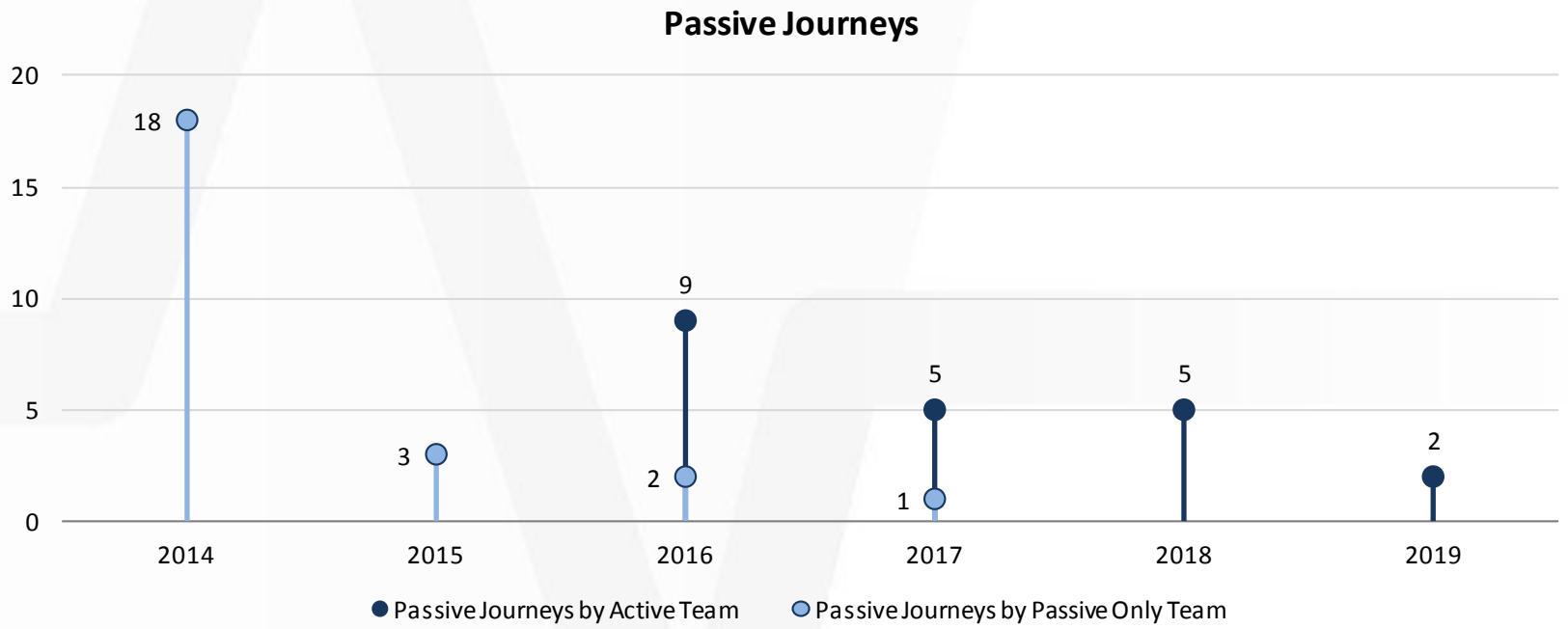


Active vs. passive cooling, number of teams, 2014 - 2019.

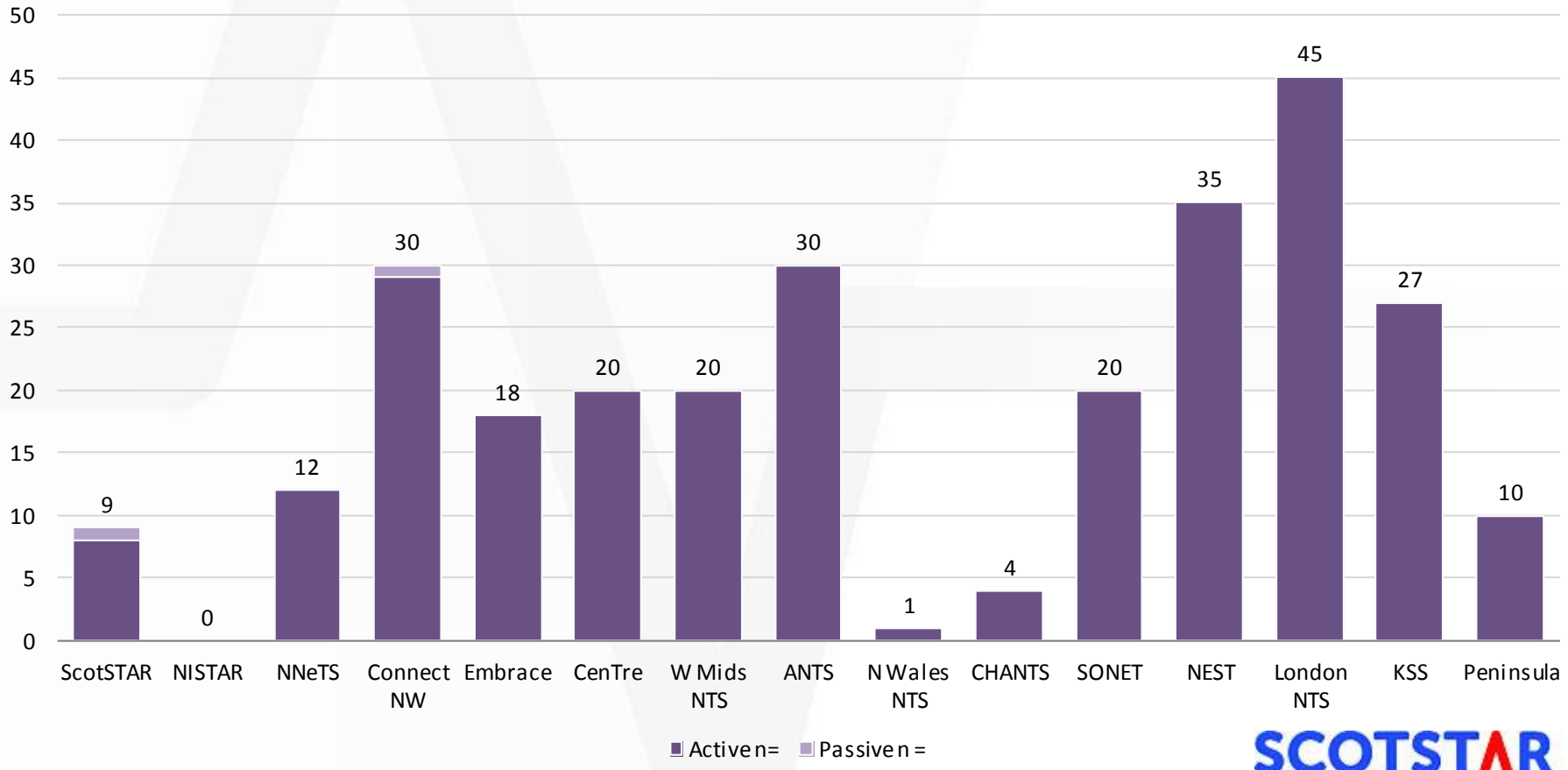




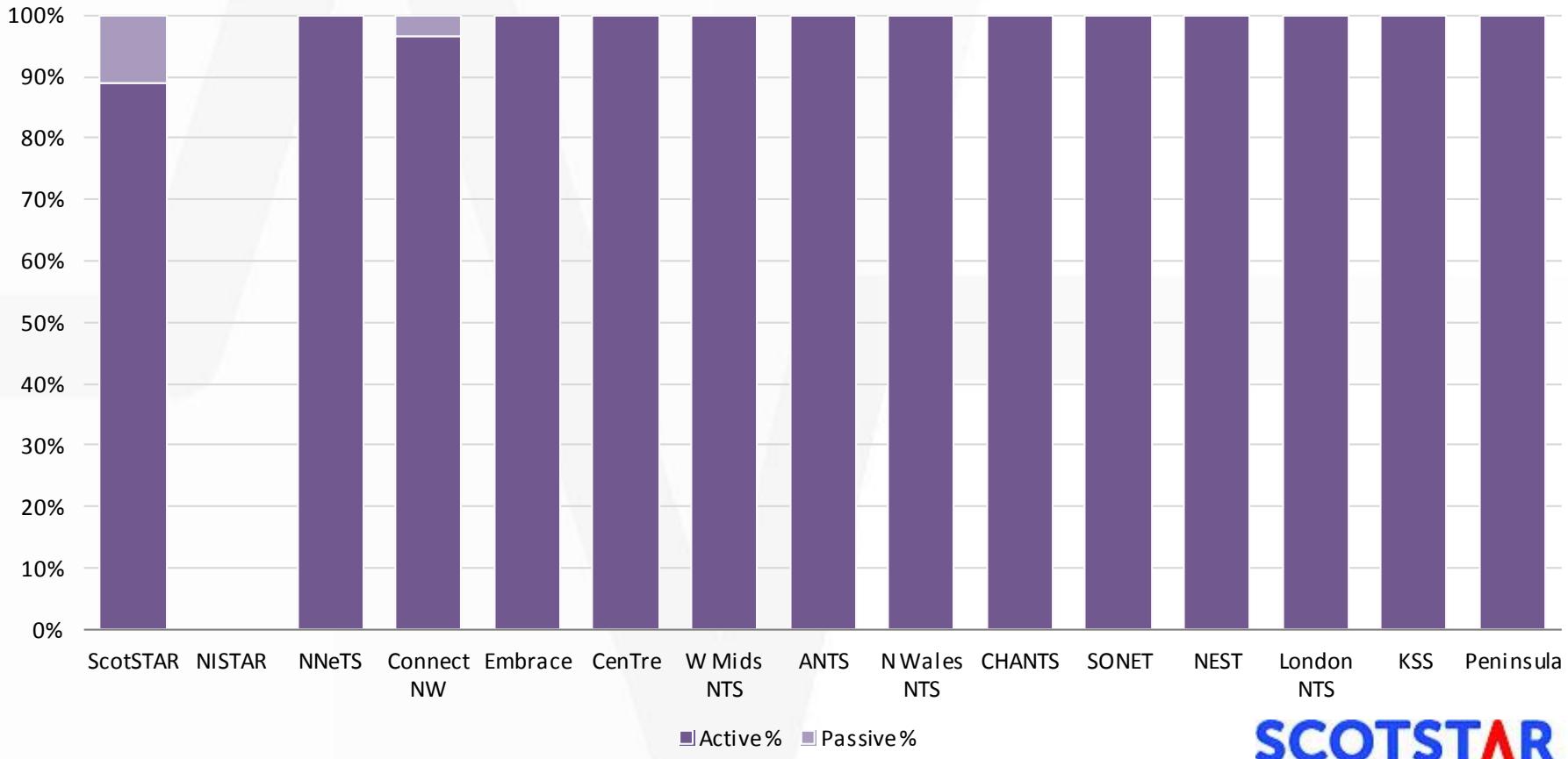
Passive cooling in transit over time: 2014 – 2019, Jan-Jun



Number transferred for cooling or assessment for cooling by team, Jan-Jun 2019

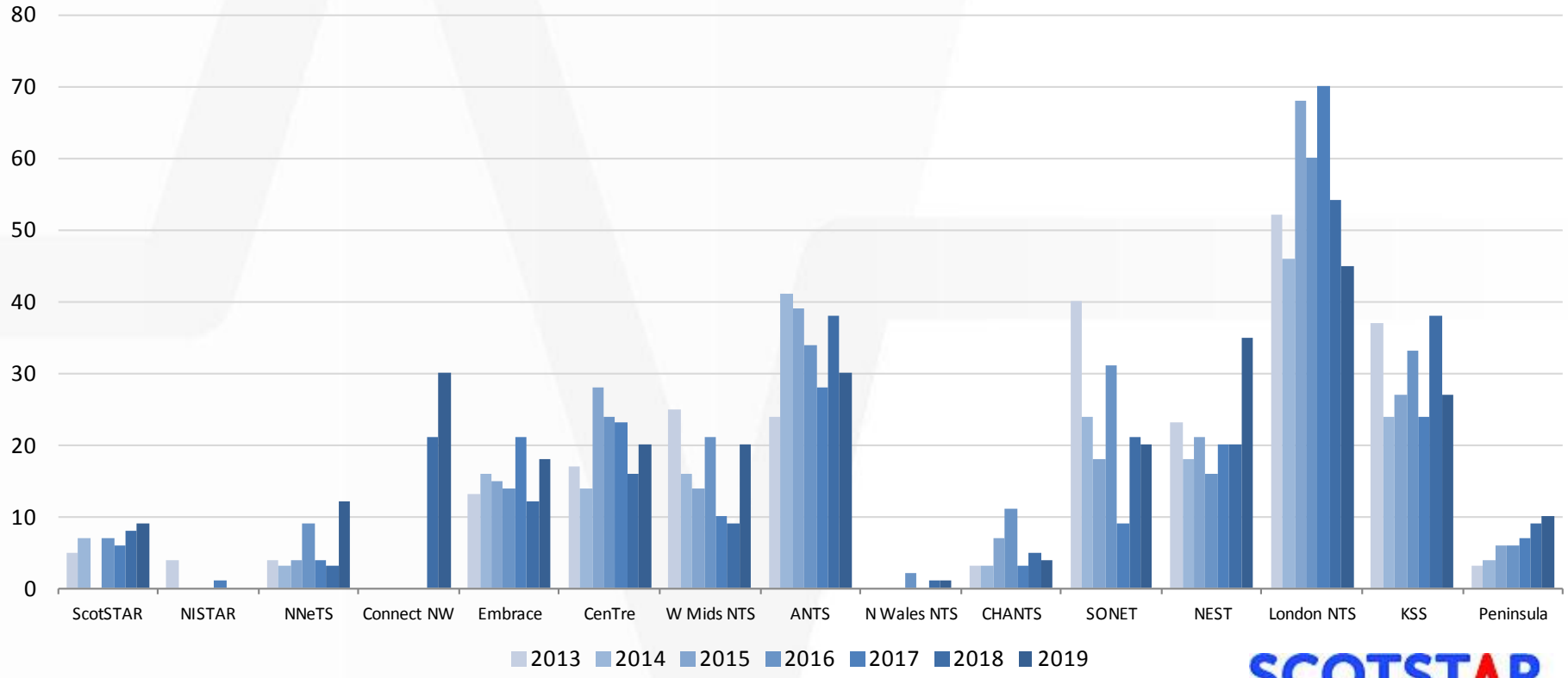


Number transferred for cooling or assessment for cooling by team, Jan-Jun 2019- active/passive detail



Number transferred for cooling or assessment for cooling, Jan-Jun 2013 - 2019

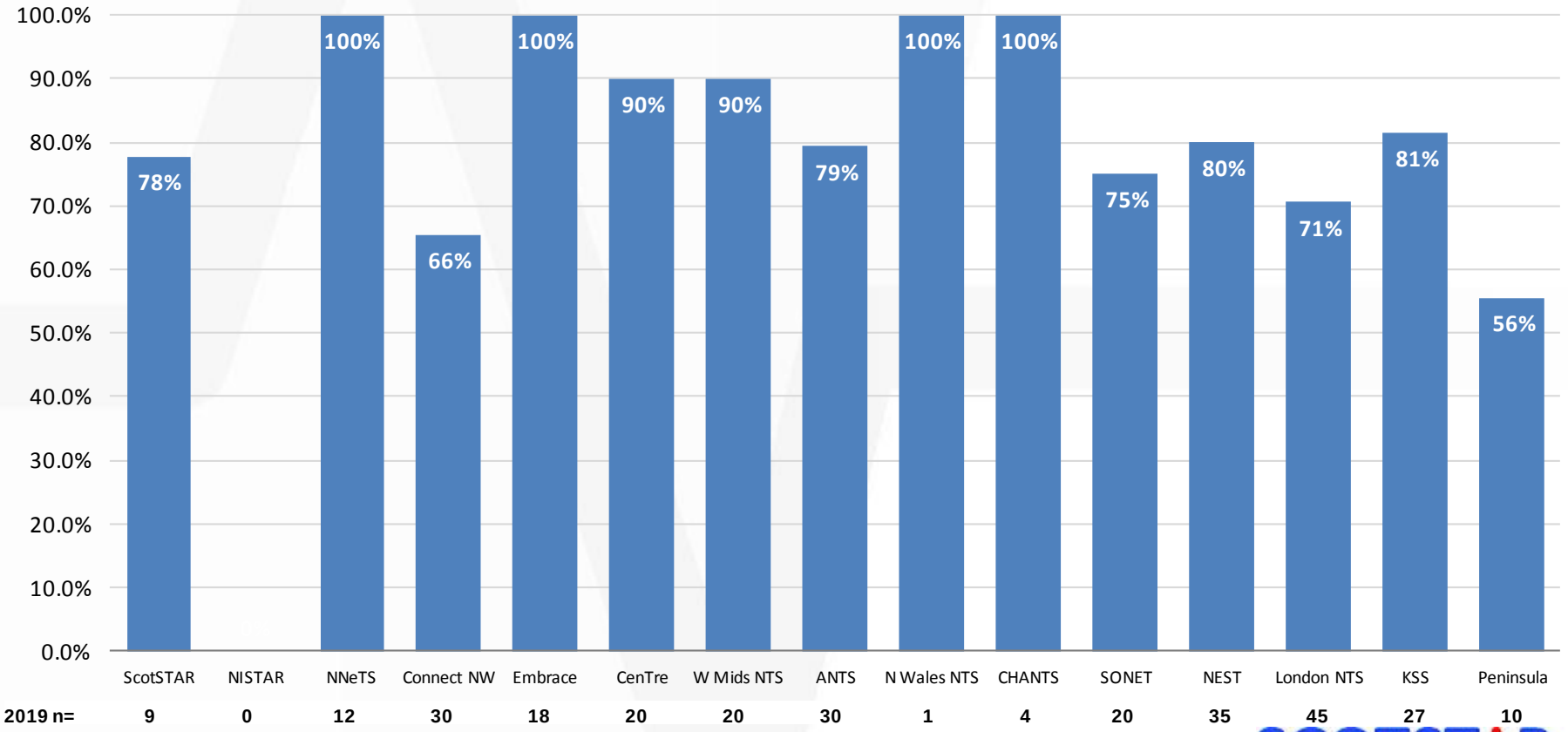
Year	2013	2014	2015	2016	2017	2018	2019
UK total	288	249	274	288	245	255	281



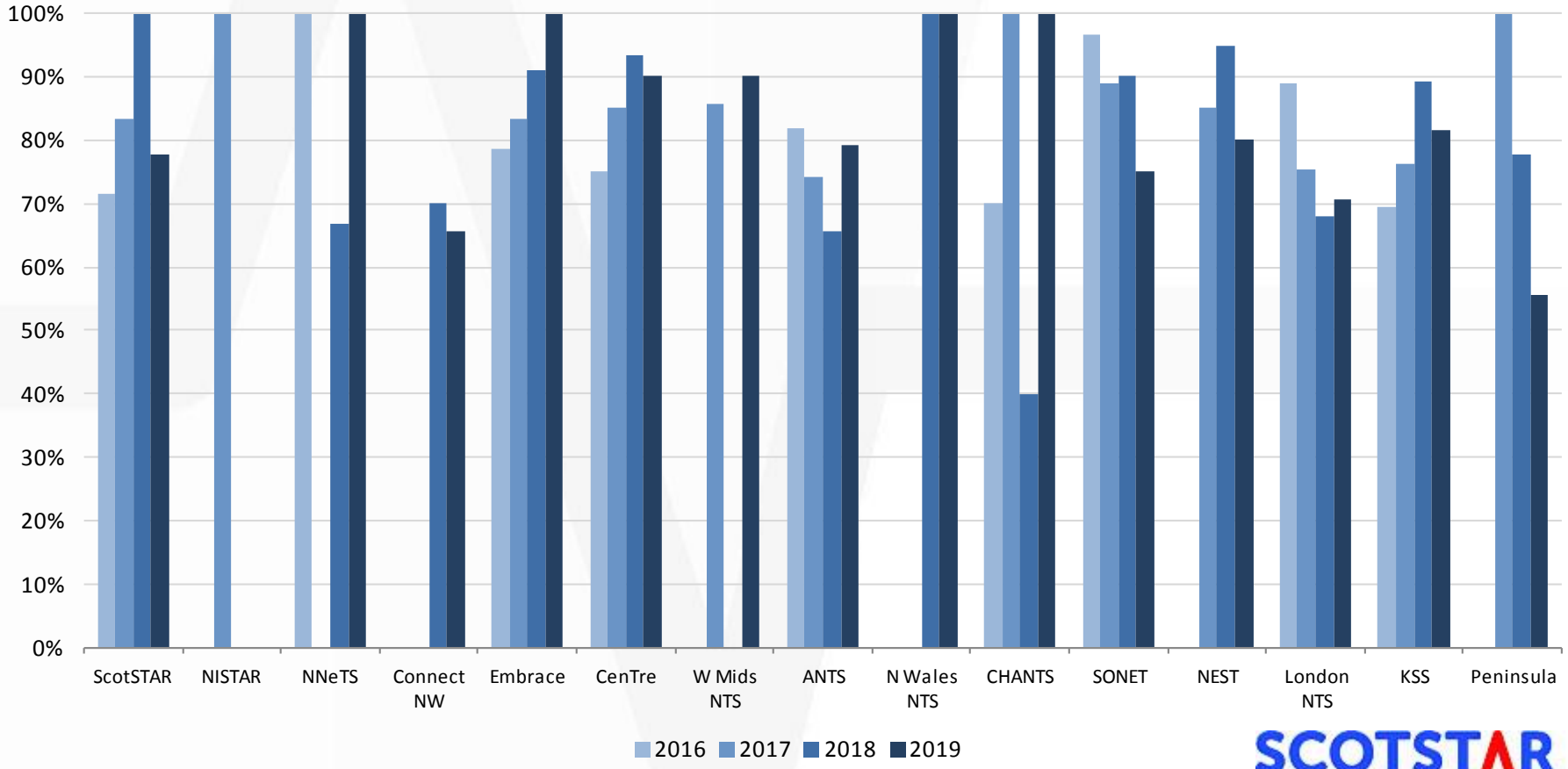
Transferred for cooling, temp 33-34^{0}C at 6 hours of age.

Year	**2016**	**2017**	**2018**	**2019**
Cooling n=	**288**	**245**	**255**	**281**
Transferred on active cooling n= (%)	277 (96.2%)	229 (93.5%)	250 (98%)	279 (99.3%)
Infant temperature data available n= (%)	216 (75%)	191 (78%)	230 (90.2%)	267 (95%)
Temp 33-34^{0}C at 6hrs n= (%)	180 (62.5%)	154 (62.9%)	182 (71.4%)	214 (76.2%)

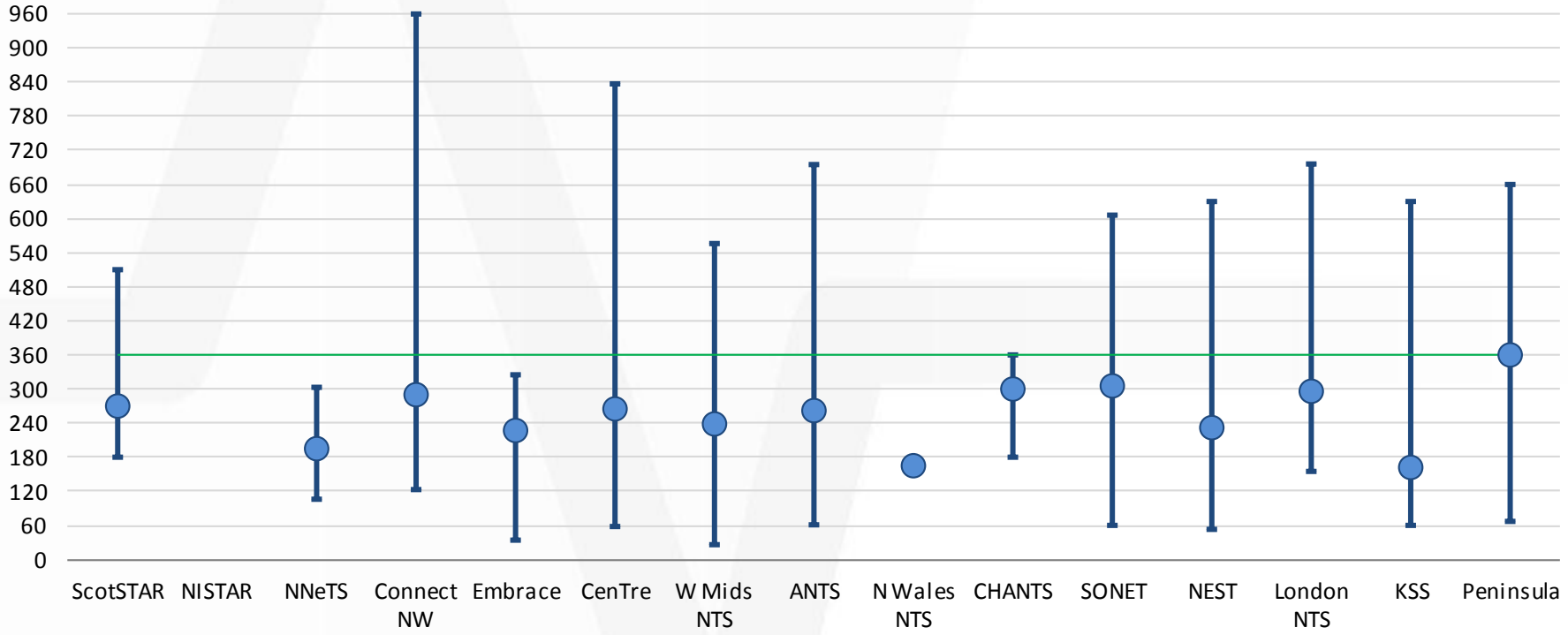
Infants transferred for cooling, percentage in target range at 6 hours of age by service, Jan-Jun 2019



Infants transferred for cooling, percentage in target range at 6 hours of age by service, Jan-Jun/year.



Age (mins) target temperature achieved, infants transferred for cooling, Jan-Jun 2019 (median, range)



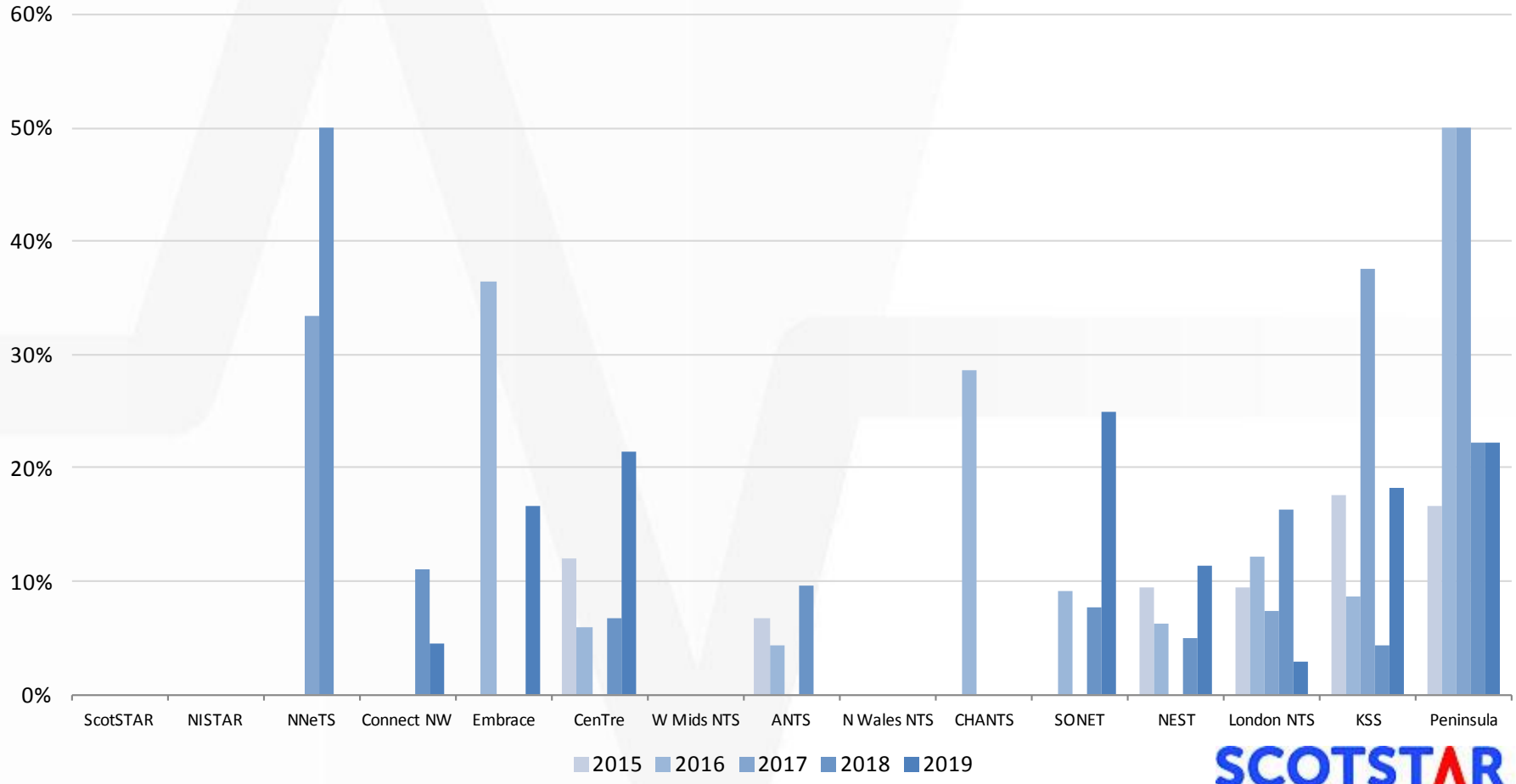
The green line indicates the target time of 6 hours.

On further enquiry it is clear that the longer times to target temperature relate to timing of initiation of cooling in referring centres

Hypocarbia Jan-Jun/year, infants on a ventilator during journey, cooling transfers, national data Jan-Jun 2015-2019

Year	2014	2015	2016	2017	2018	2019
Cooling n =	249	274	288	245	255	281
Cooling & Ventilated, n= (%)	202 (81.1%)	230 (83.9%)	217 (75.3%)	190 (77.6%)	195 (76.5%)	203 (72.2%)
pCO2 <4kPa, n= (%)	27 (13.4%)	25 (10.9%)	21 (9.7%)	15 (7.9%)	19 (9.7%)	19 (9.4%)

Hypocarbia in infants transferred for cooling: pPO2<4 at end of transfer by service, Jan-Jun 2015-2019



Hypocarbia & hypercarbia

- pCO_2 <4 kPa
- pCO_2 >7 kPa and pH<7.2

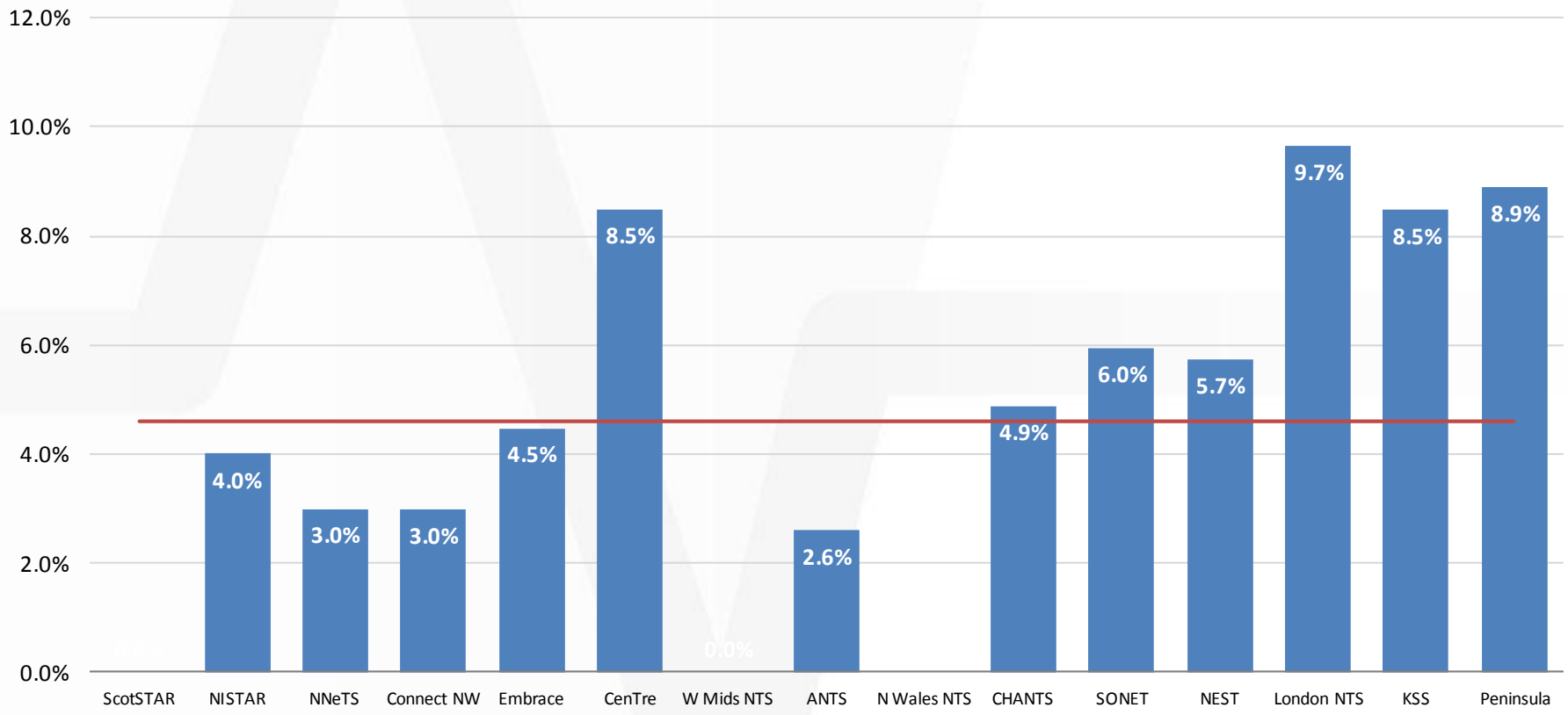
…on the gas measurement on completion of transfer of ventilated infants.

Note that not all infants had pCO_2 available post-transfer.

Hypocarbia & hypercarbia, Jan-Jun/year, infants on a ventilator during journey, all operational reasons.

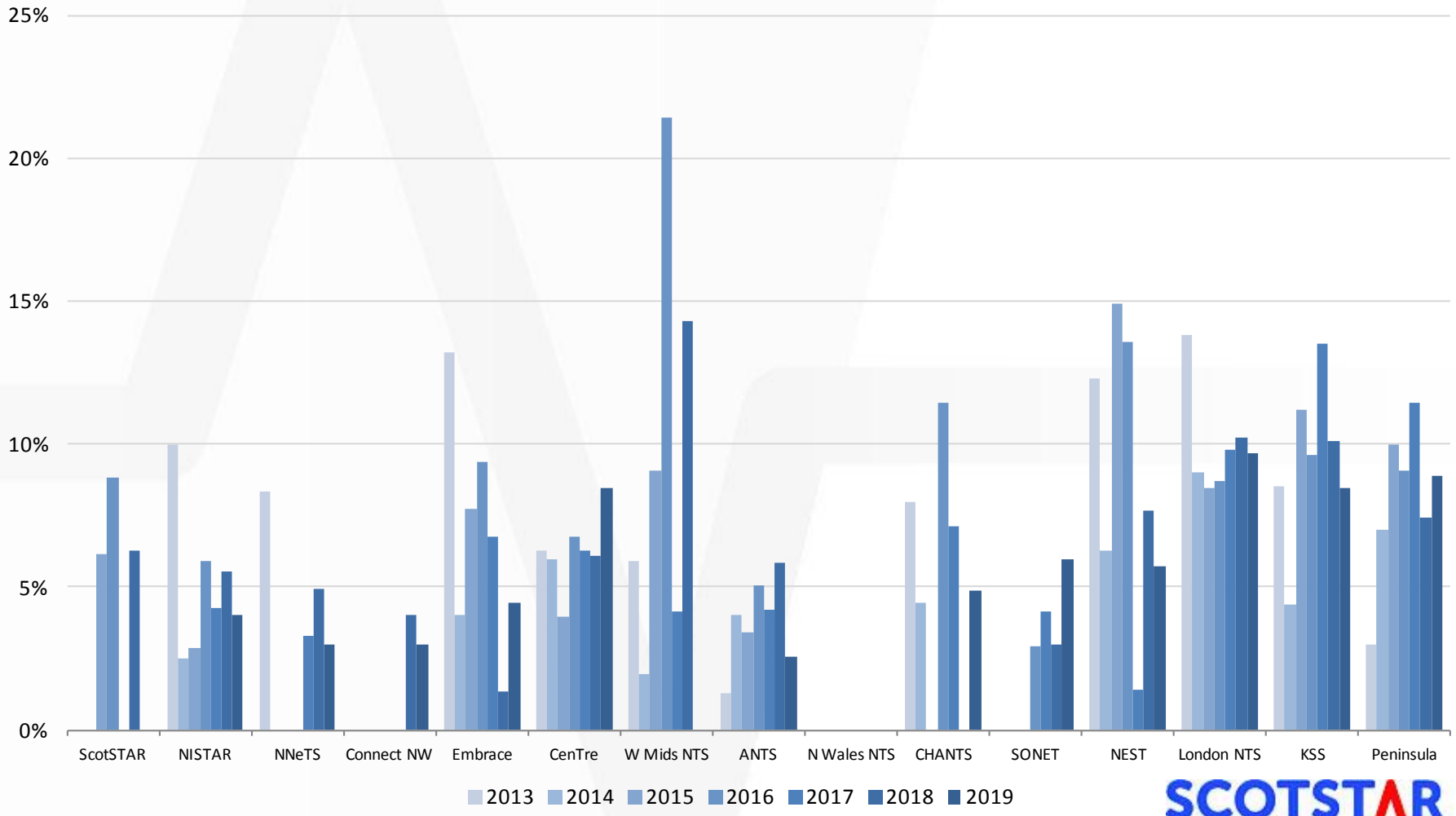
Year	2013	2014	2015	2016	2017	2018	2019
Ventilated + Gas n =	1355	1895	1685	1493	1519	1524	1459
pCO2 <4kPa, n= (%)	118	106	122	107	100	94	86
	(8.7%)	(5.6%)	(7.2%)	(7.2%)	(6.6%)	(6.2%)	(5.9%)
pCO2>7kPa & pH<7.2, n= (%)		68	94	79	83	73	65
		(3.6%)	(5.6%)	(5.3%)	(5.5%)	(4.8%)	(4.5%)

% pCO_2 <4 kPa on completion, by service. Jan-Jun 2019

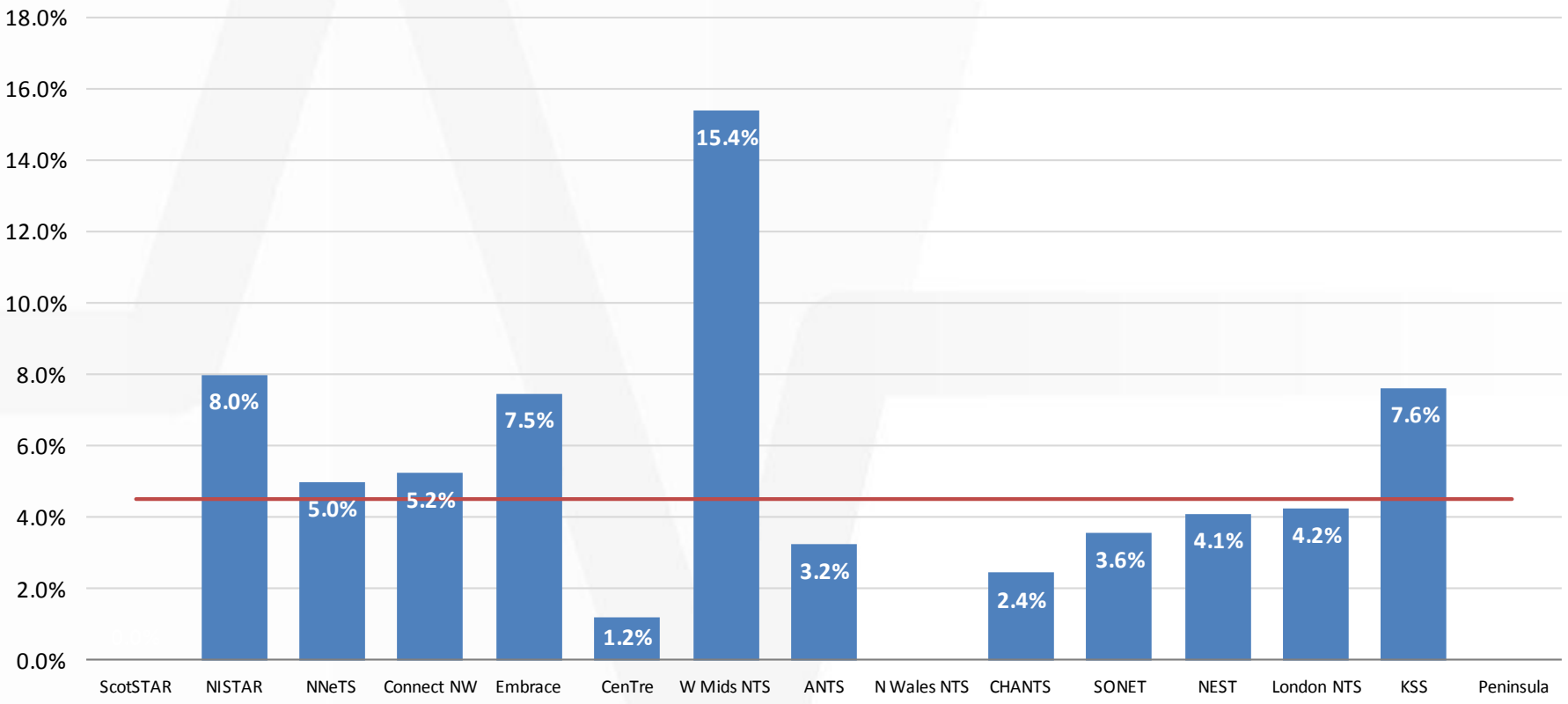


Red line displays mean of teams

% pCO_2 <4 kPa on completion, by service. Jan-Jun 2013-19

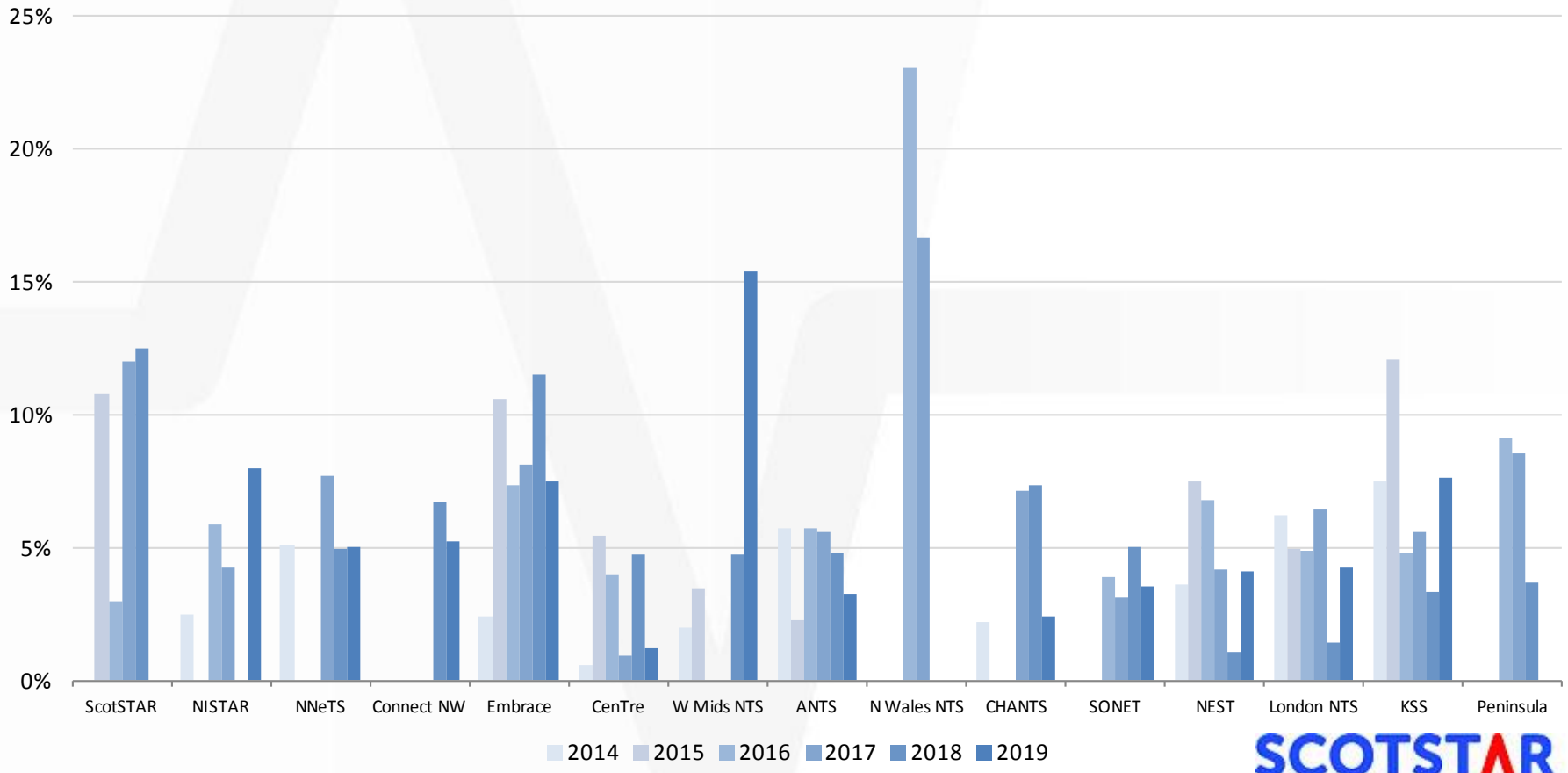


% pCO_2 >7kPa & pH<7.2 on completion , per service, Jan-Jun 2019

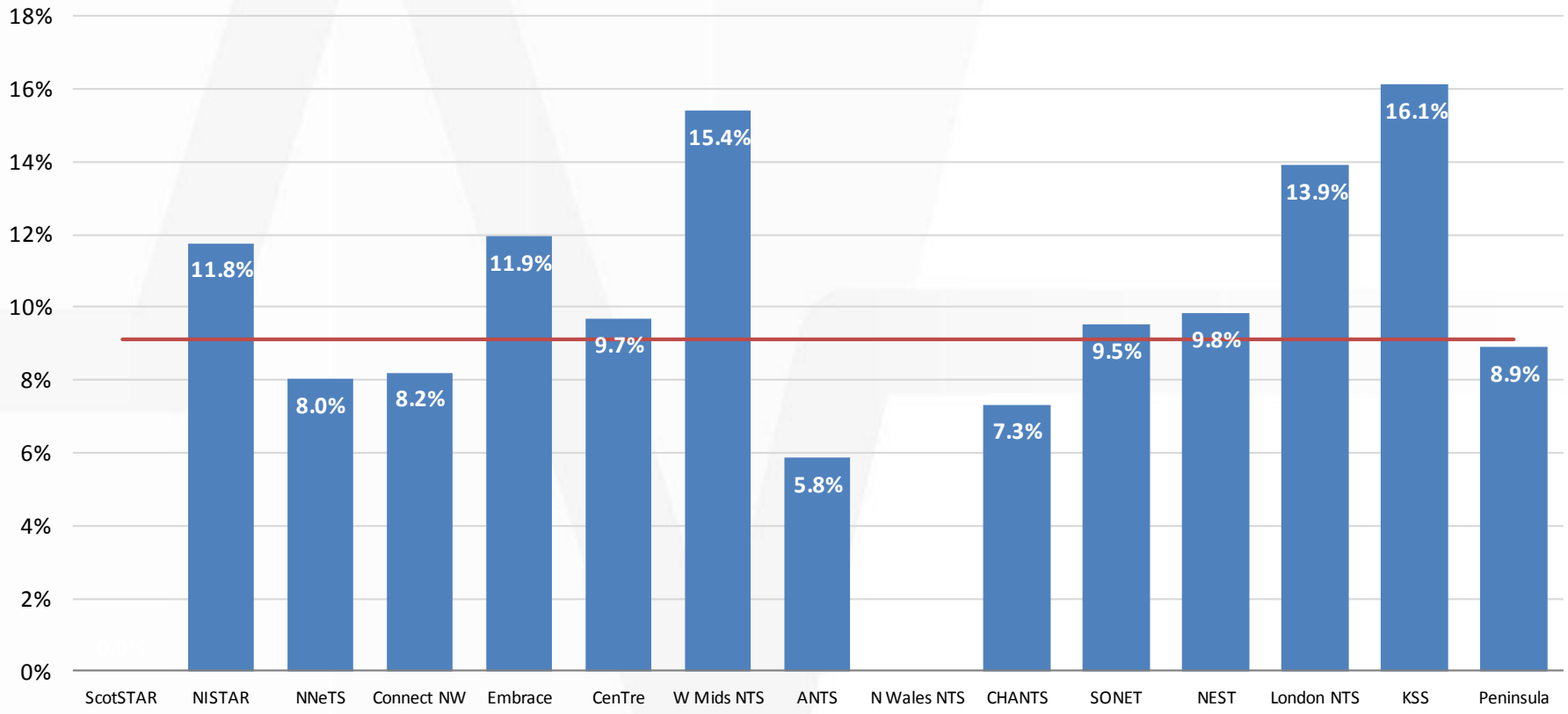


Red line displays mean of teams

% pCO_2 >7kPa & pH<7.2 on completion , per service, Jan-Jun 2014-19.

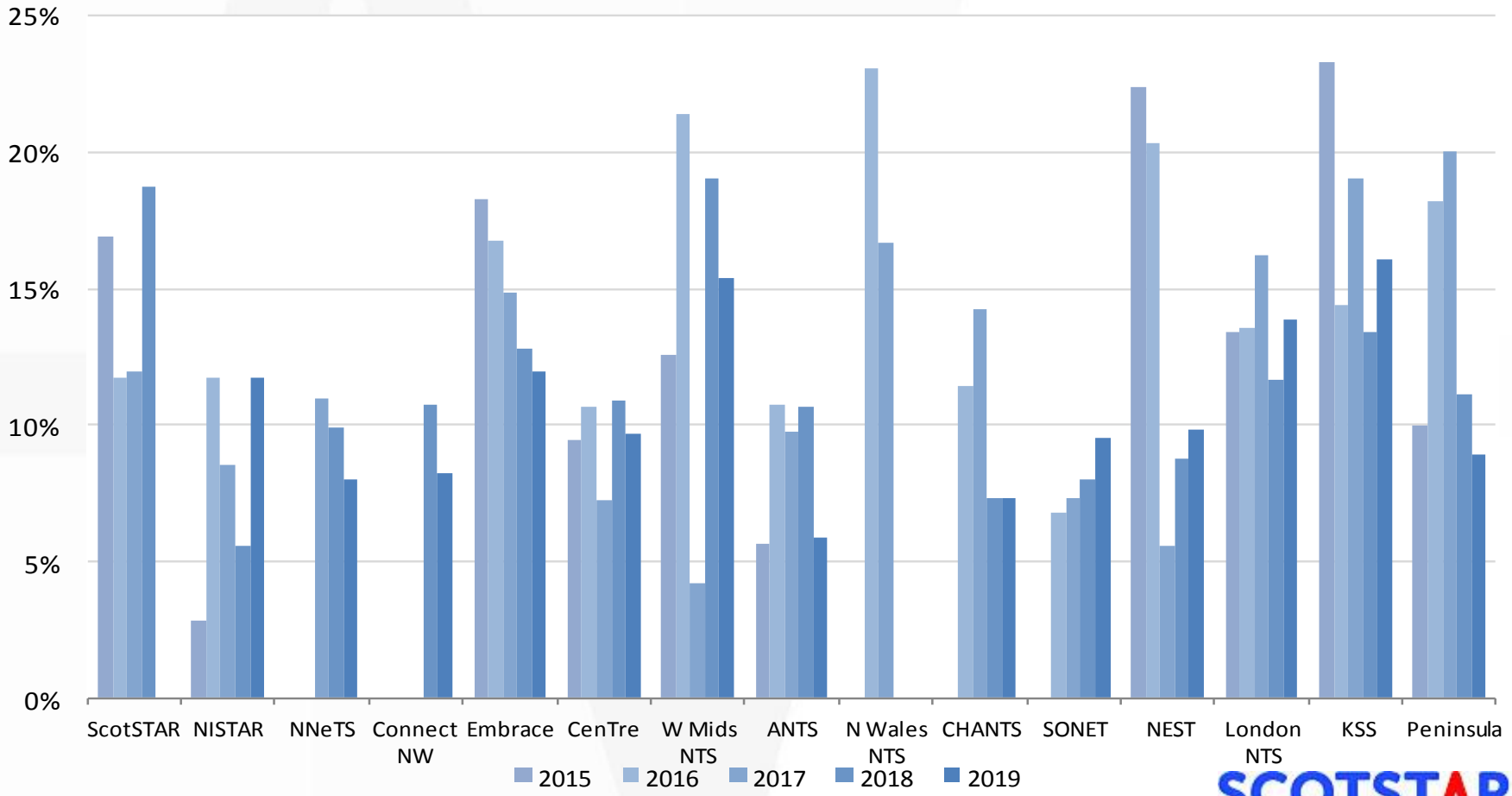


% pCO_2 >7kPa & pH<7.2 and/or pCO_2 <4 kPa on completion , per service, Jan-Jun 2019

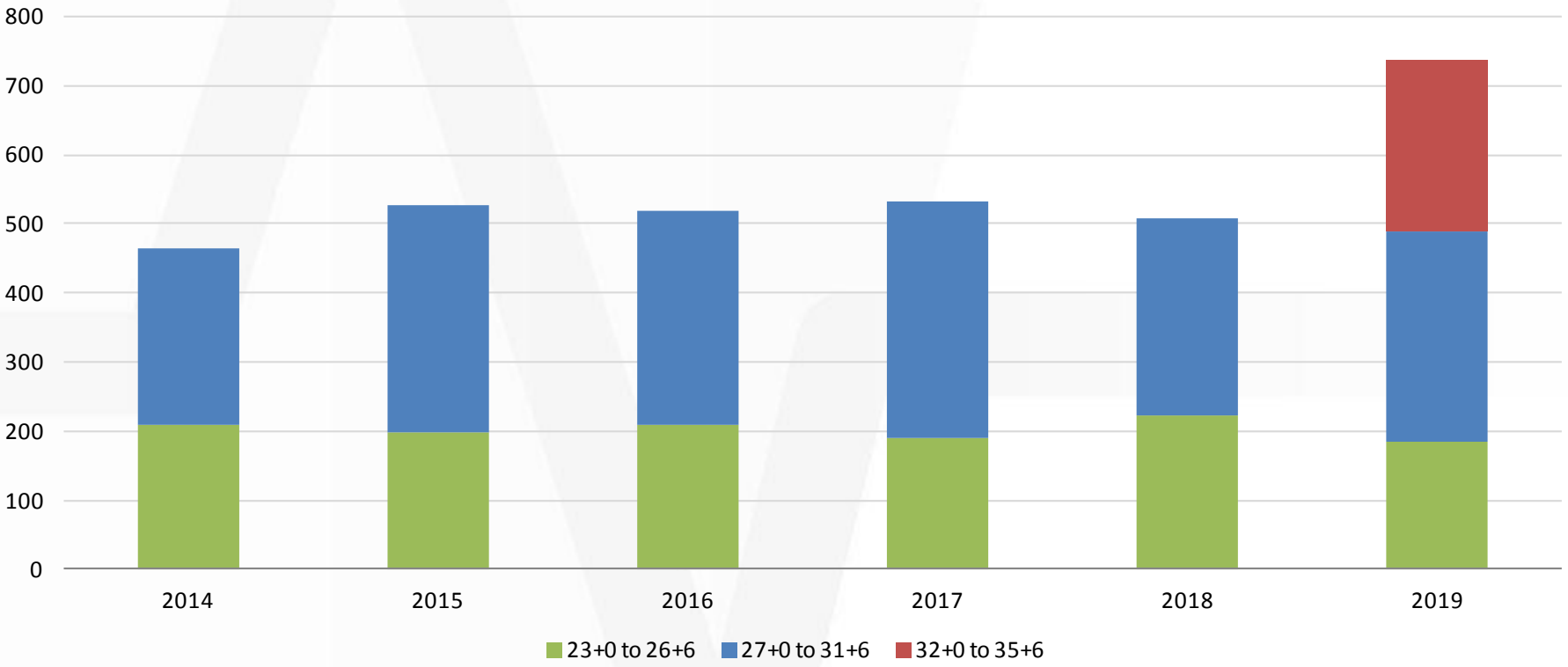


Red line displays mean of teams

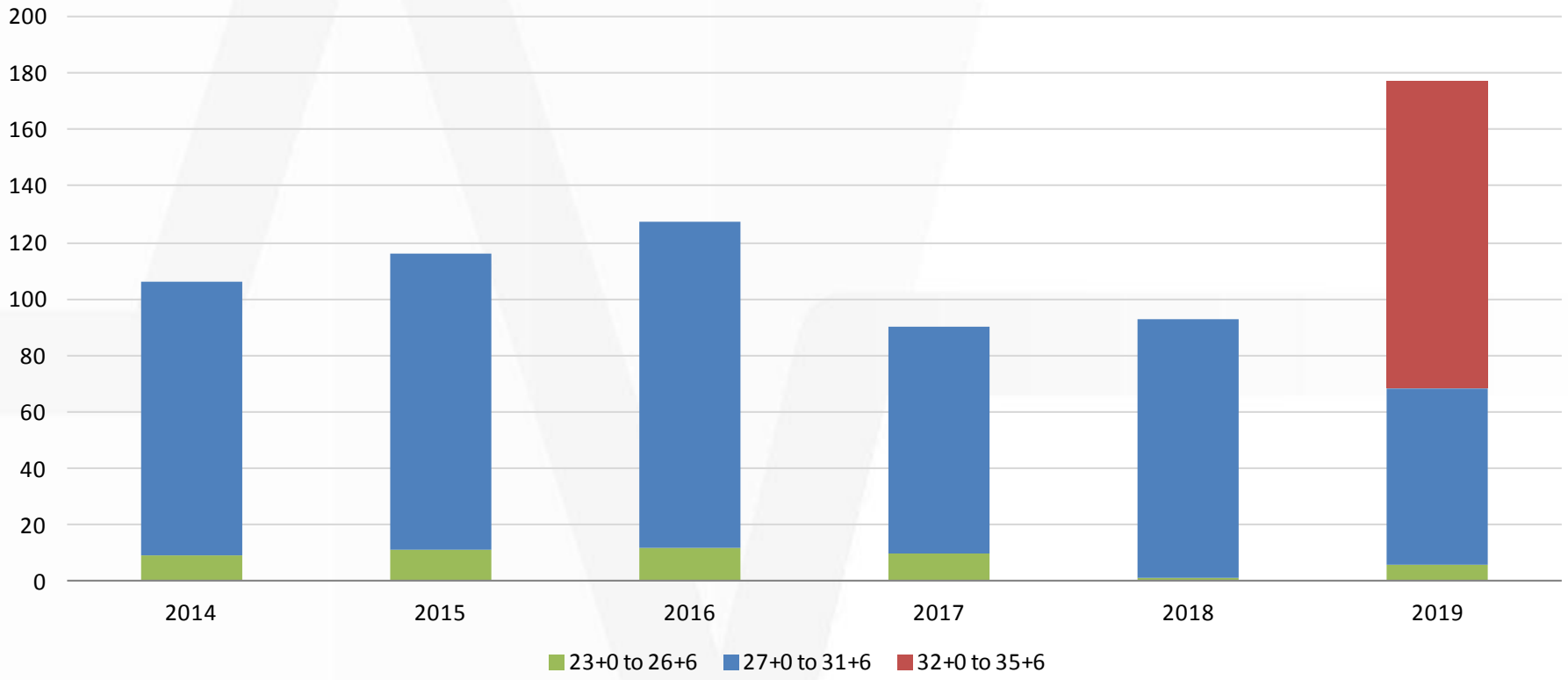
% pCO_2 >7kPa & pH<7.2 and/or pCO_2 <4 kPa on completion , per service, Jan-Jun 2015-19



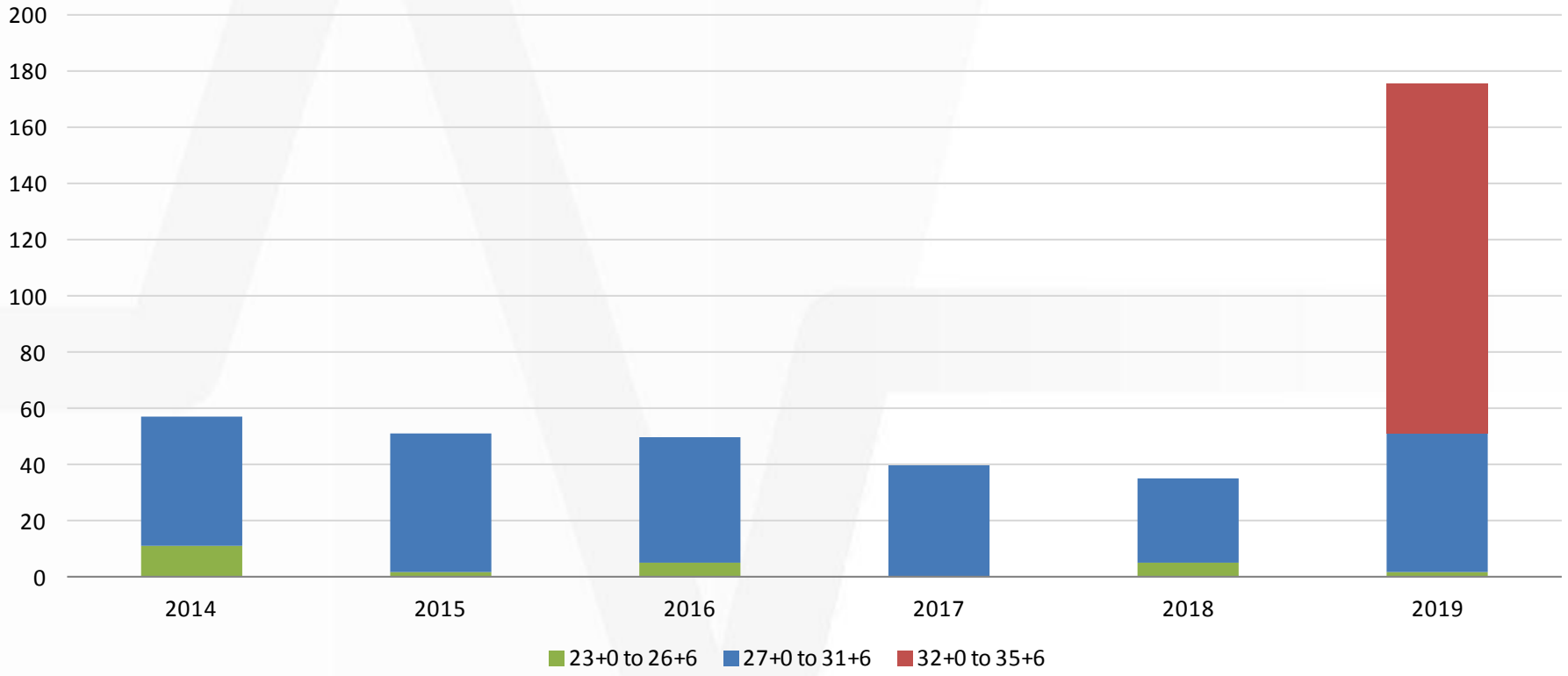
Operational reason for transfer for premature infants transferred on the first 3 days of life: Uplift



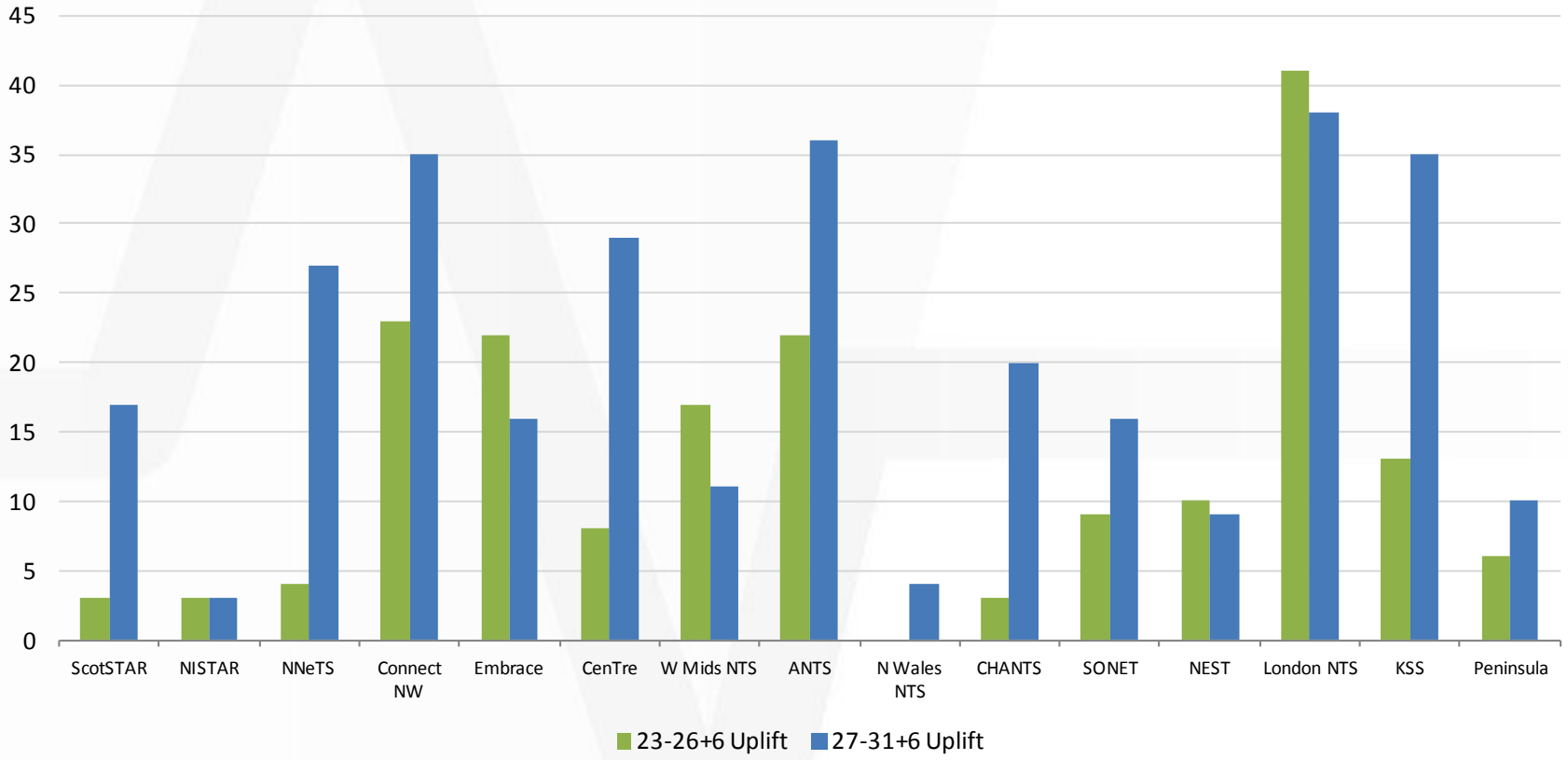
Operational reason for transfer for premature infants transferred on the first 3 days of life: Capacity



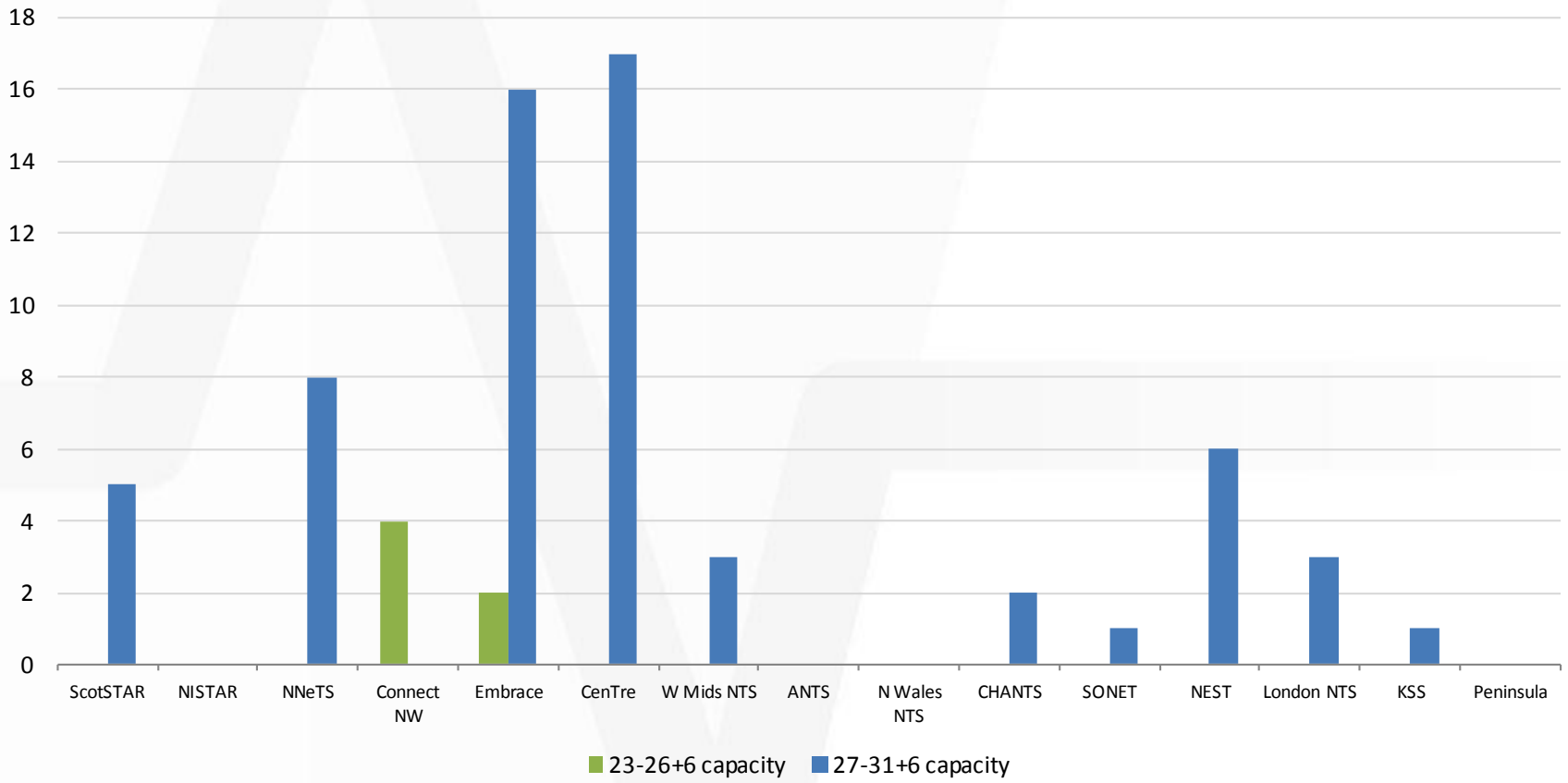
Operational reason for transfer for premature infants transferred on the first 3 days of life, Repatriation



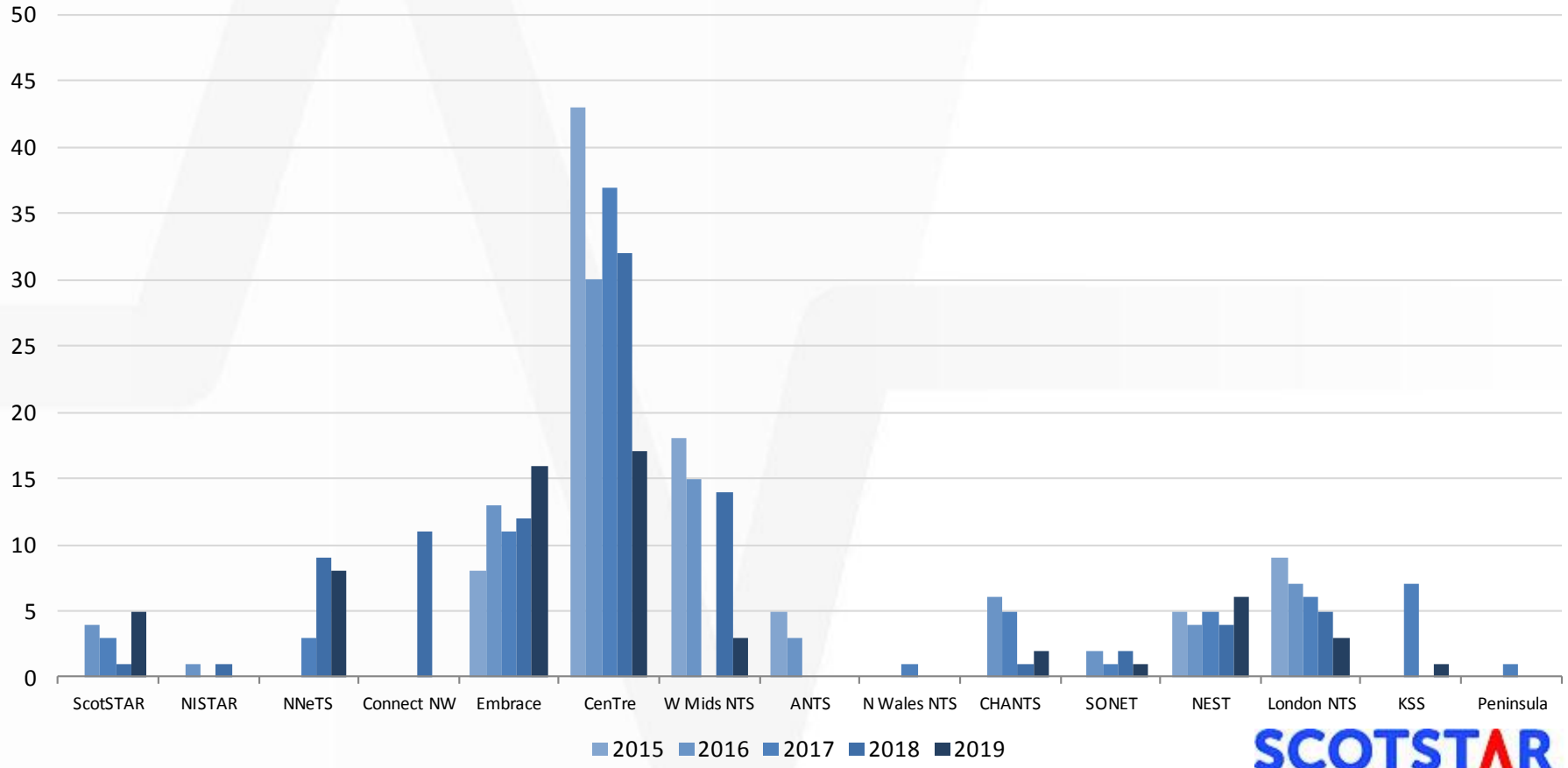
Uplift transfers, 1st 3 days of life, 23-32 week infants, Jan-Jun 2019



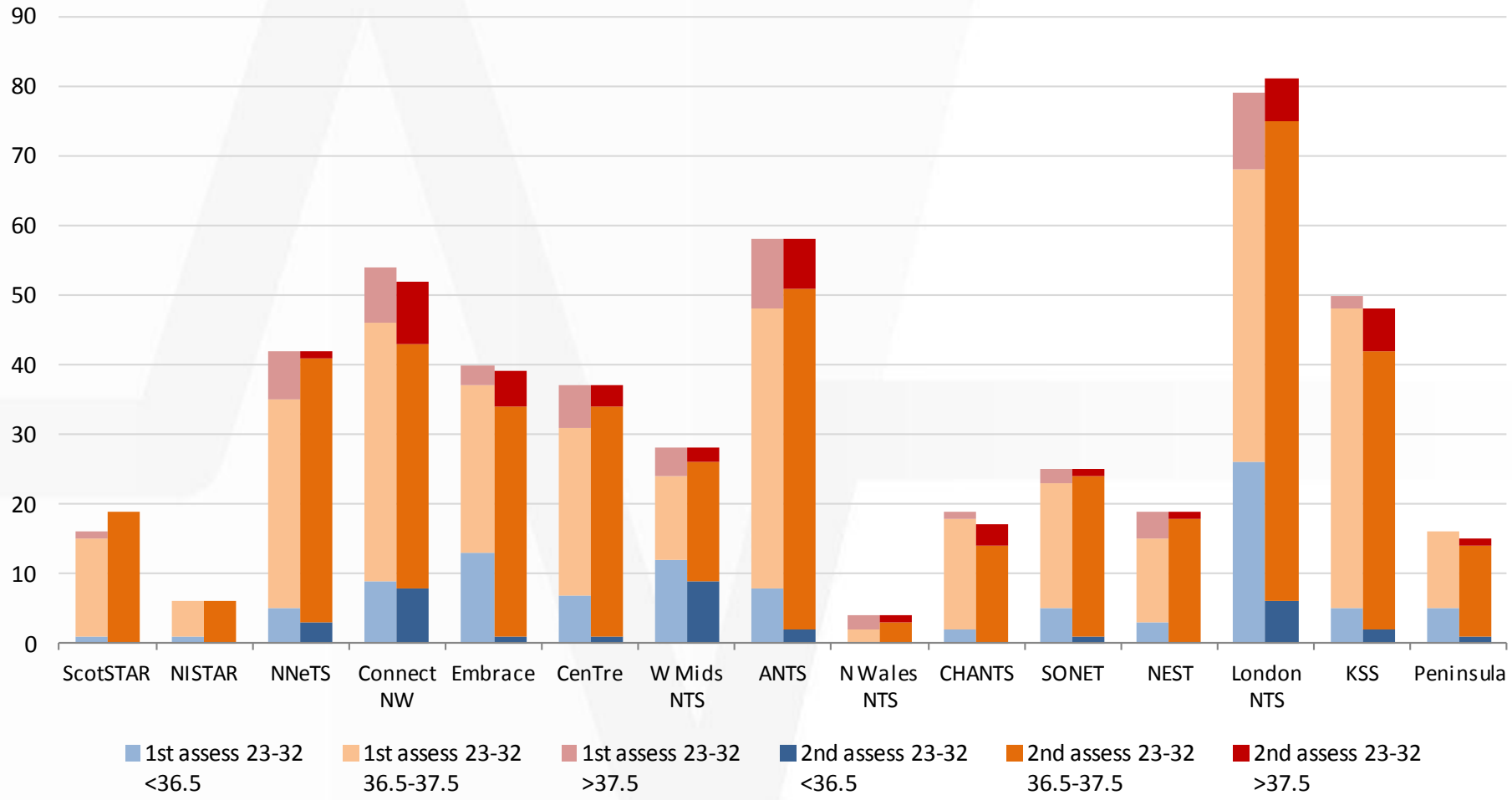
Capacity transfers, 1st 3 days of life, 23-31+6 week infants, Jan-Jun 2019



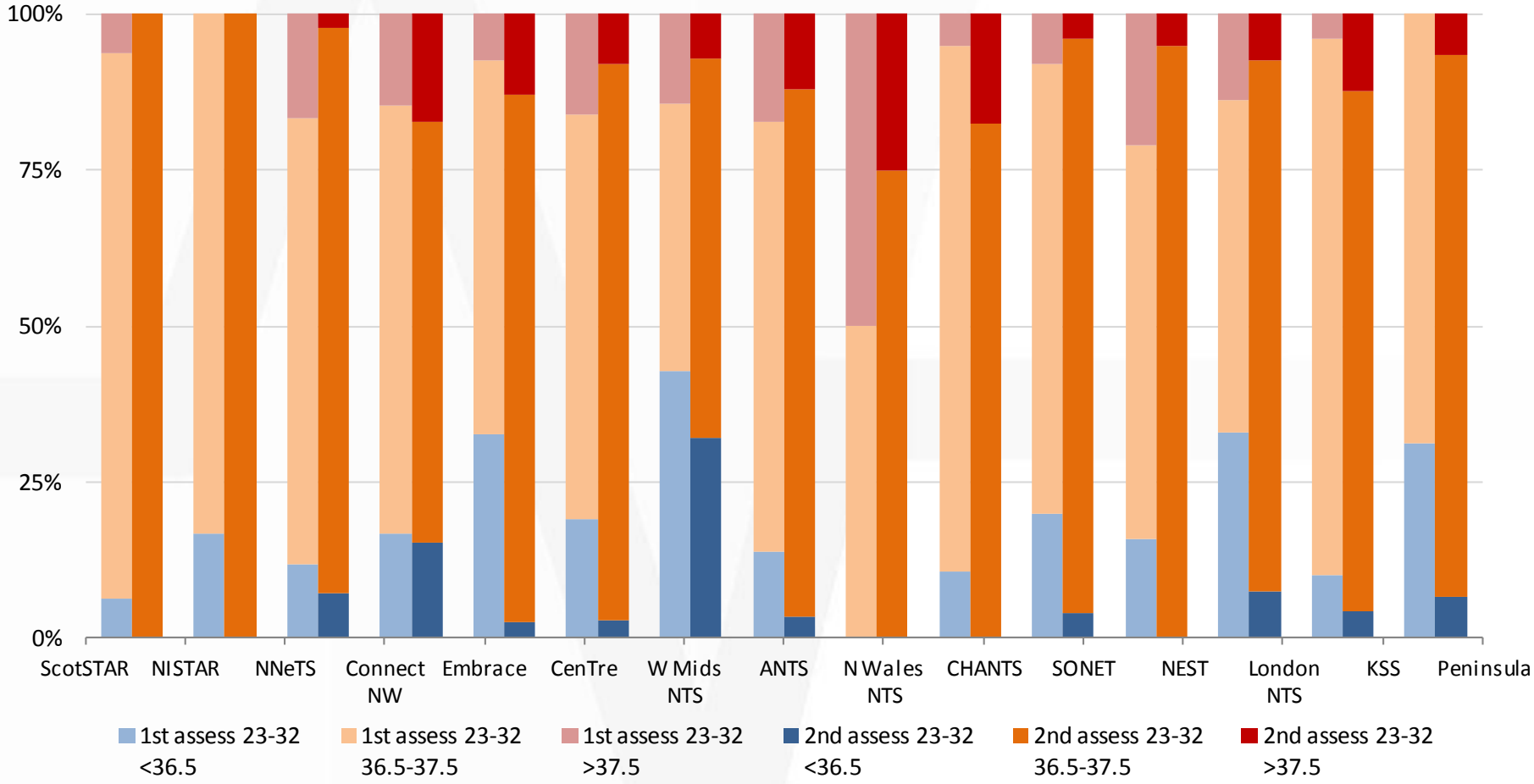
Capacity transfers, 1st 3 days of life, 27-31+6 week infants, Jan-Jun 2015 - 2019



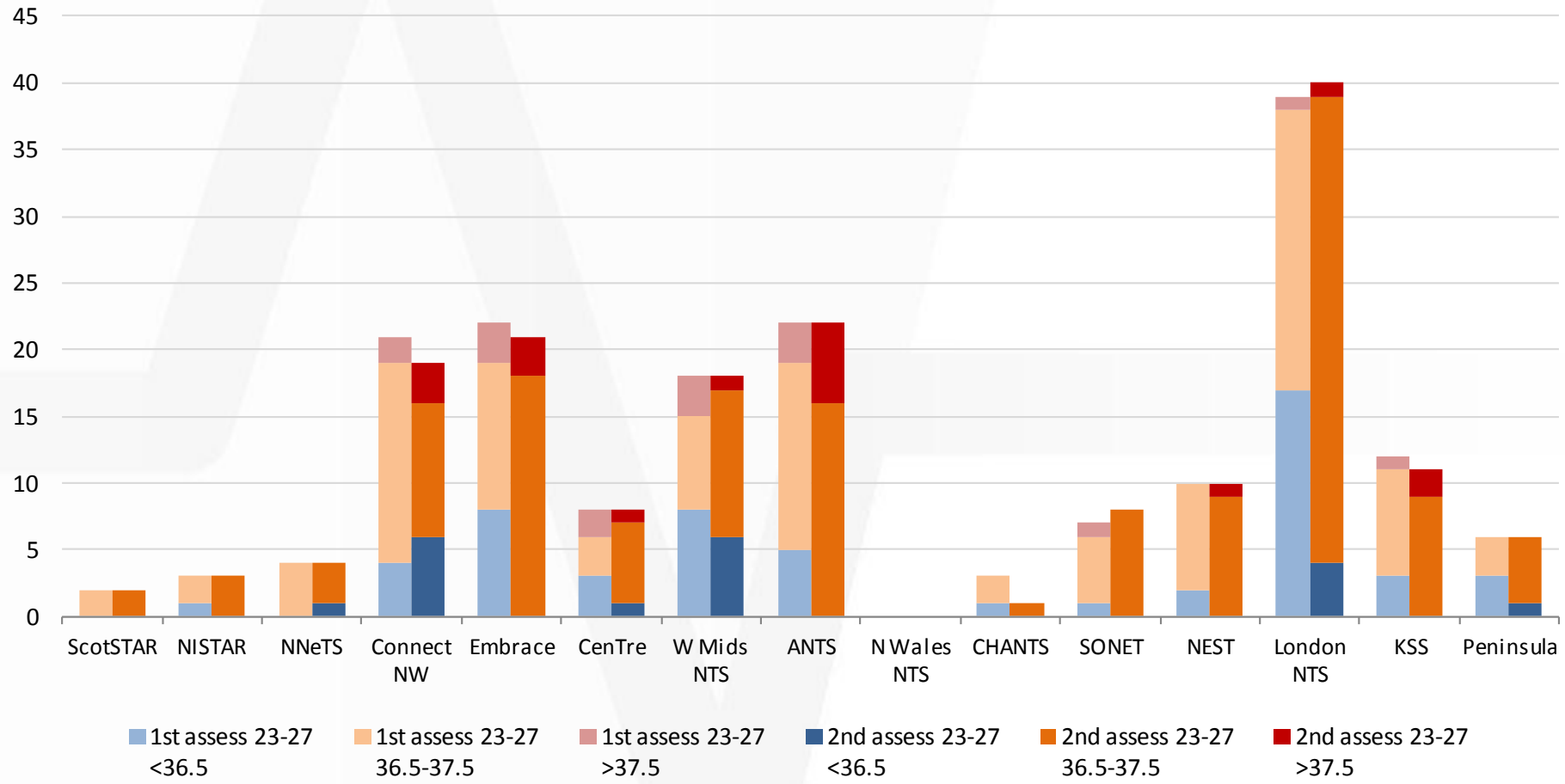
Premature Newborn Infants
23 to 32 weeks Temperature Tally, Jan-Jun 2019



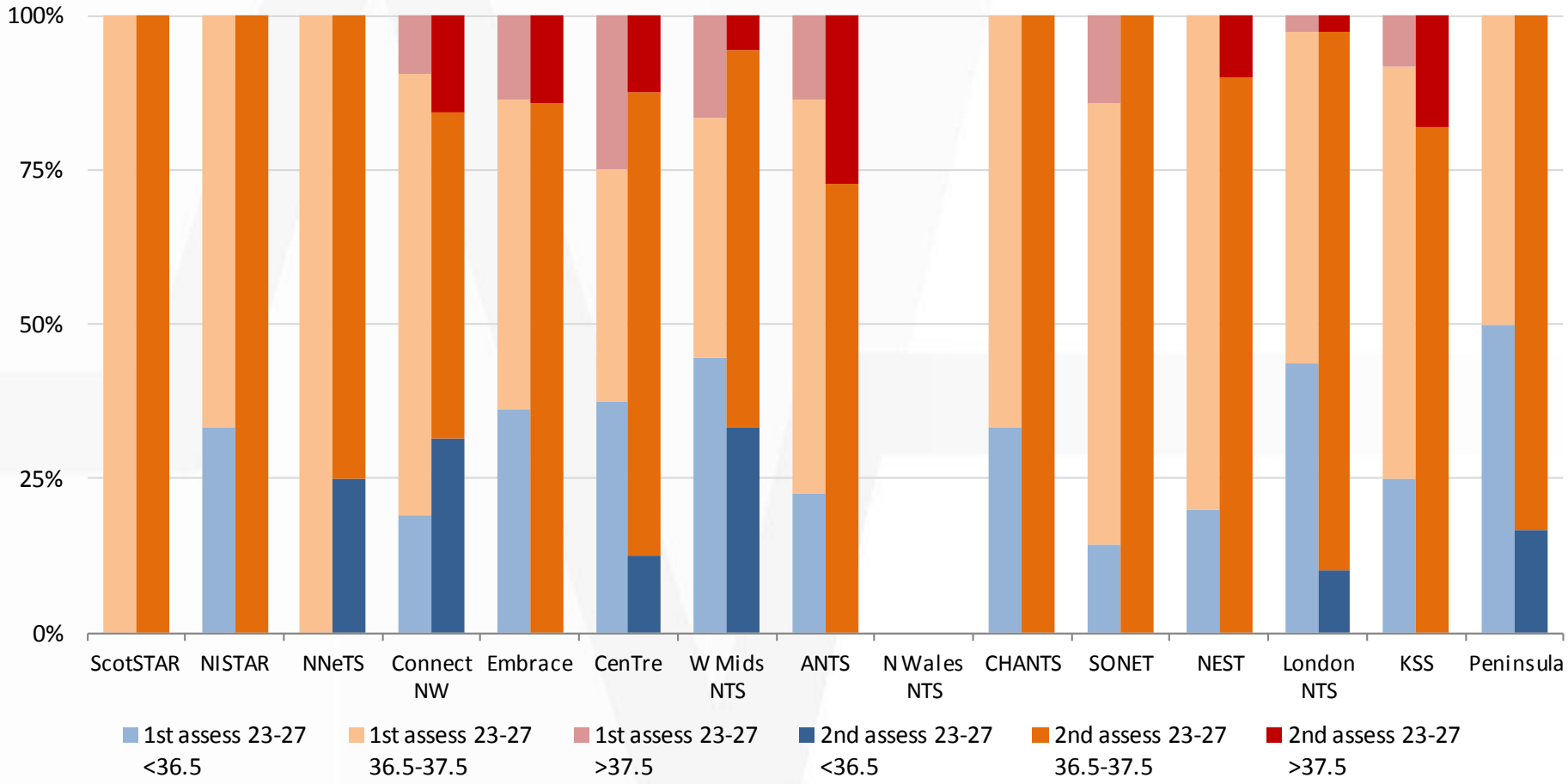
Premature Newborn Infants
23 to 32 weeks Temperature Tally, Jan-Jun 2019



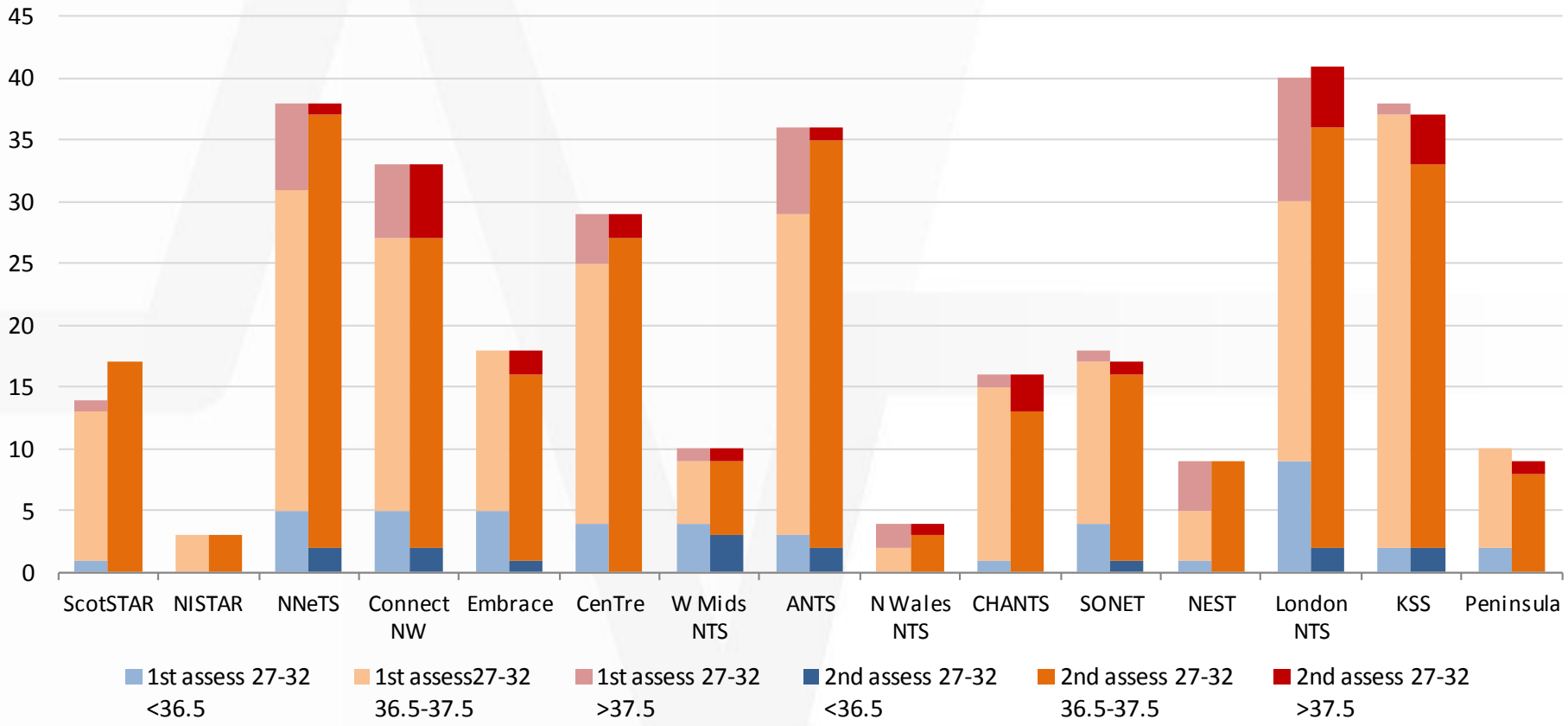
Premature Newborn Infants 23 to 26^{+6} weeks Temperature Tally, Jan-Jun 2019



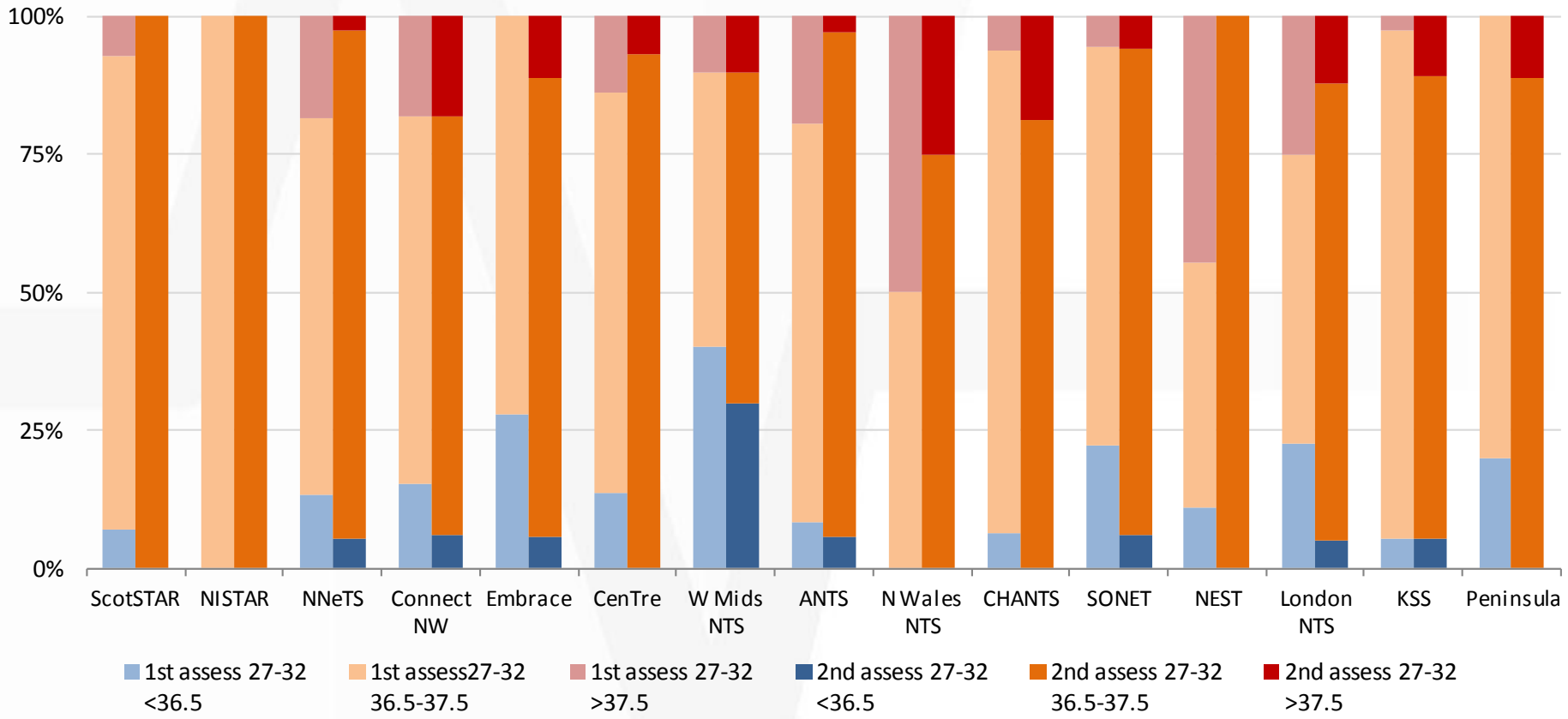
Premature Newborn Infants
23 to 26^{+6} weeks Temperature Tally, Jan-Jun 2019



Premature Newborn Infants
27 to 31^{+6} weeks Temperature Tally, Jan-Jun 2019

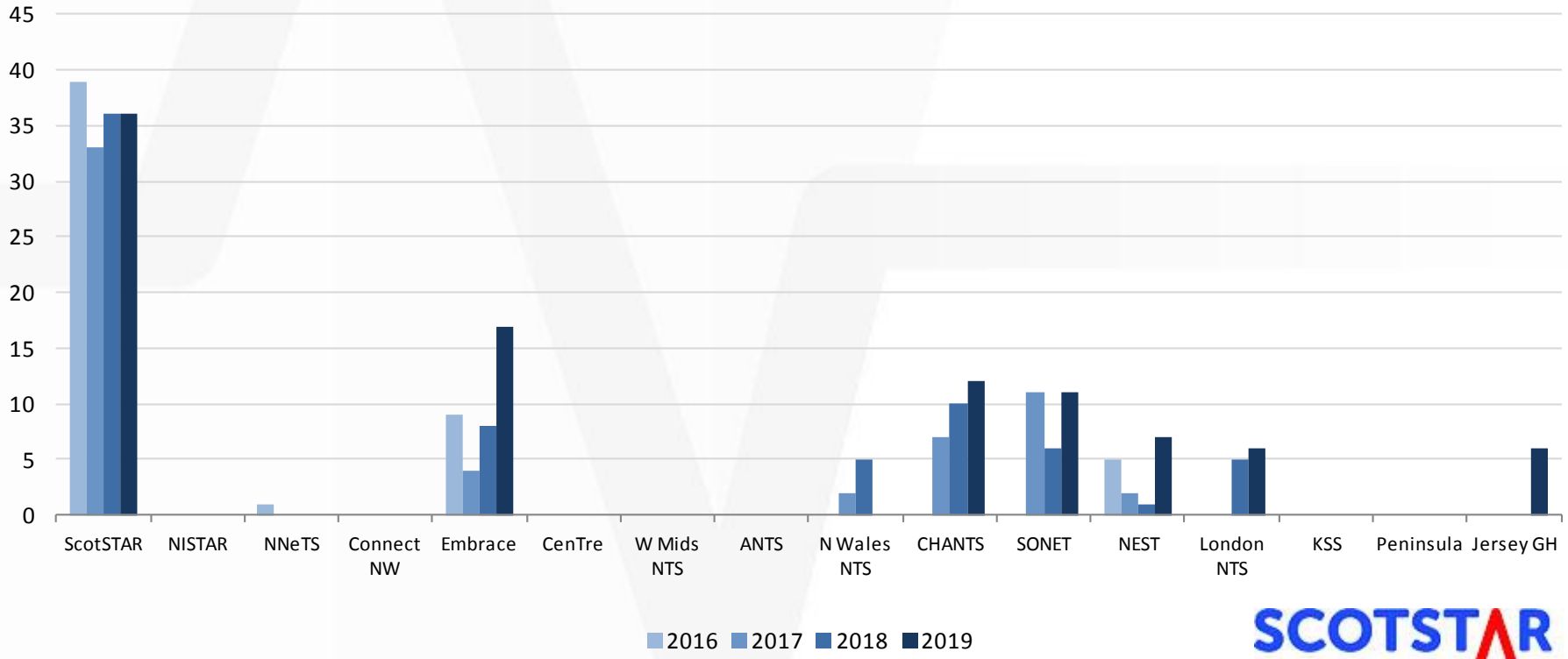


Premature Newborn Infants 27 to 31^{+6} weeks Temperature Tally, Jan-Jun 2019

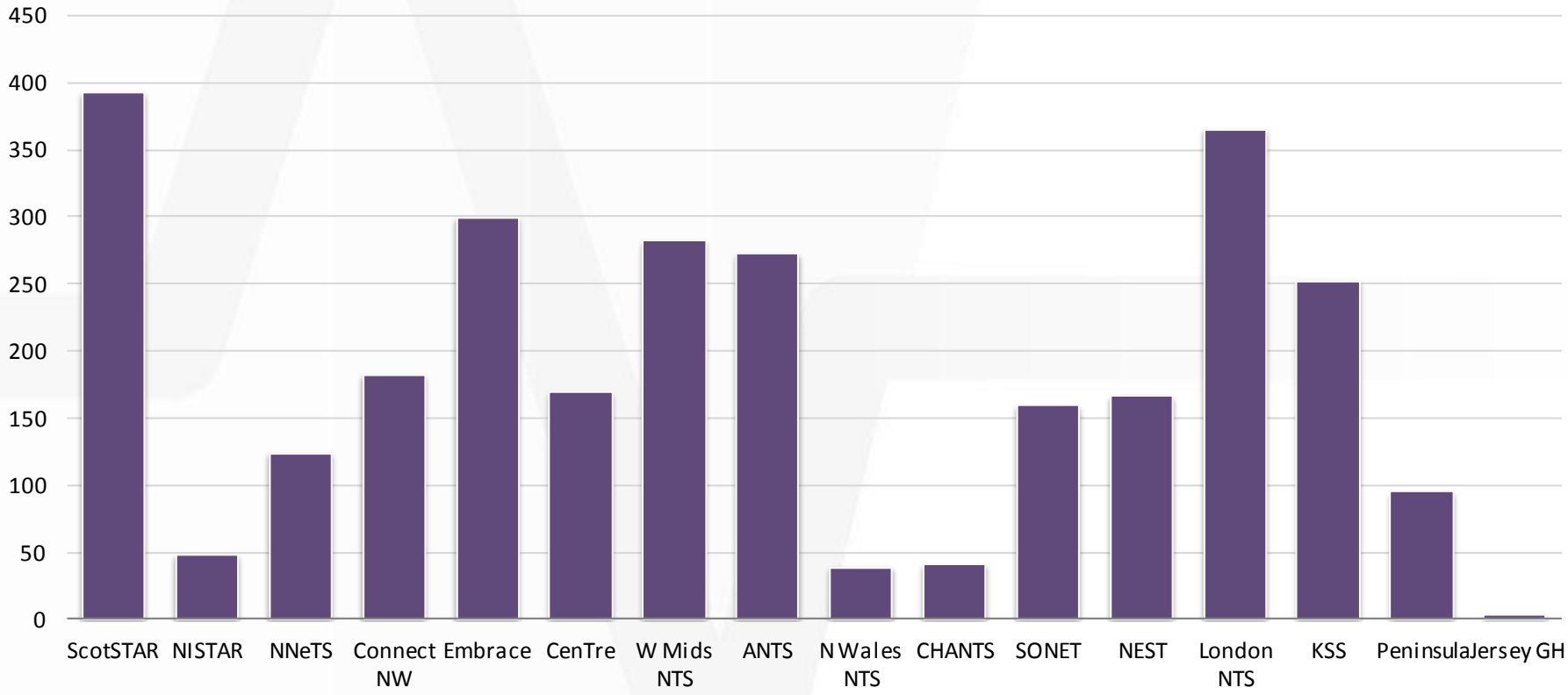


Air Transport, Jan-Jun 2016-19

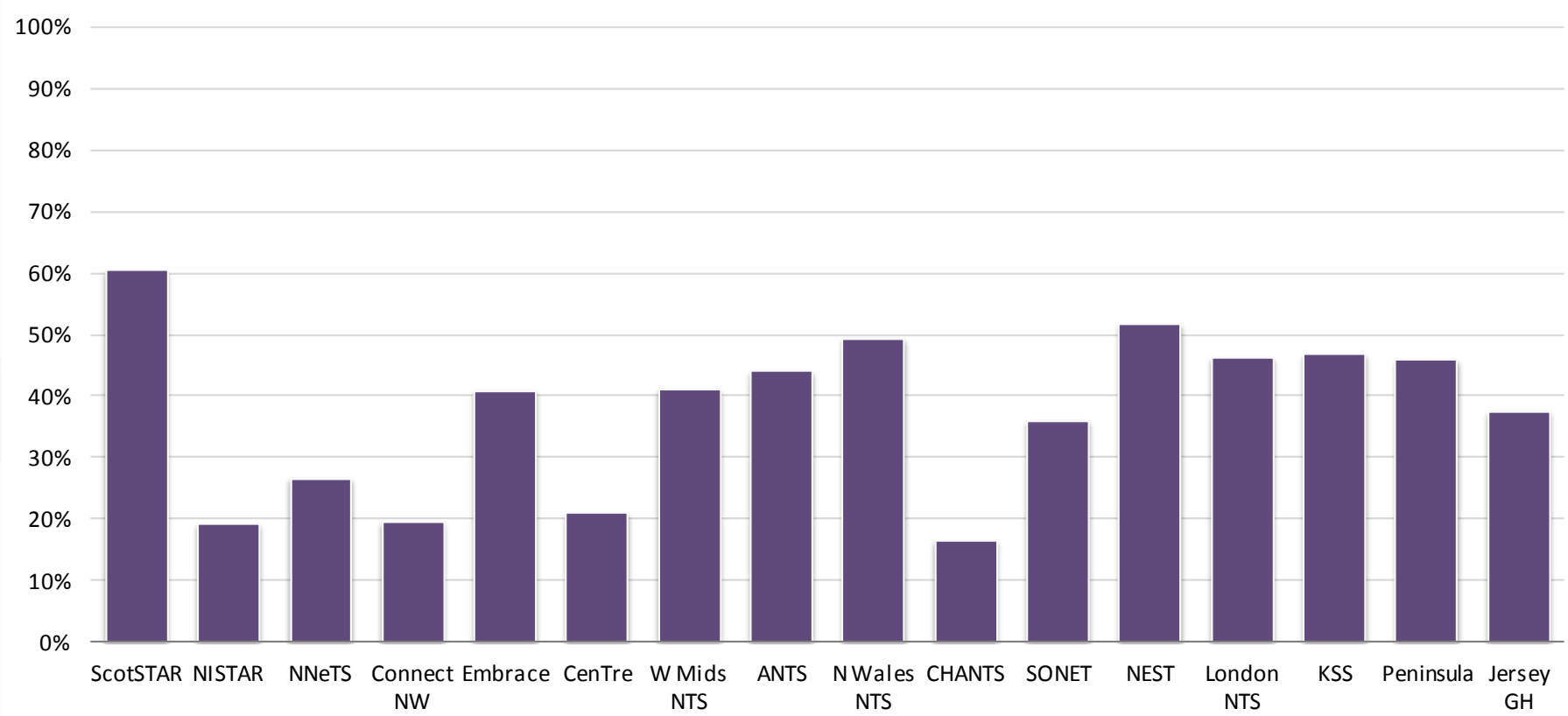
Jan-Jun 2016 - 54 transfers undertaken by 4 services.
Jan-Jun 2017 - 59 transfers undertaken by 6 services.
Jan-Jun 2018 - 71 transfers undertaken by 7 services.
Jan-Jun 2019 - 95 transfers undertaken by 7 services



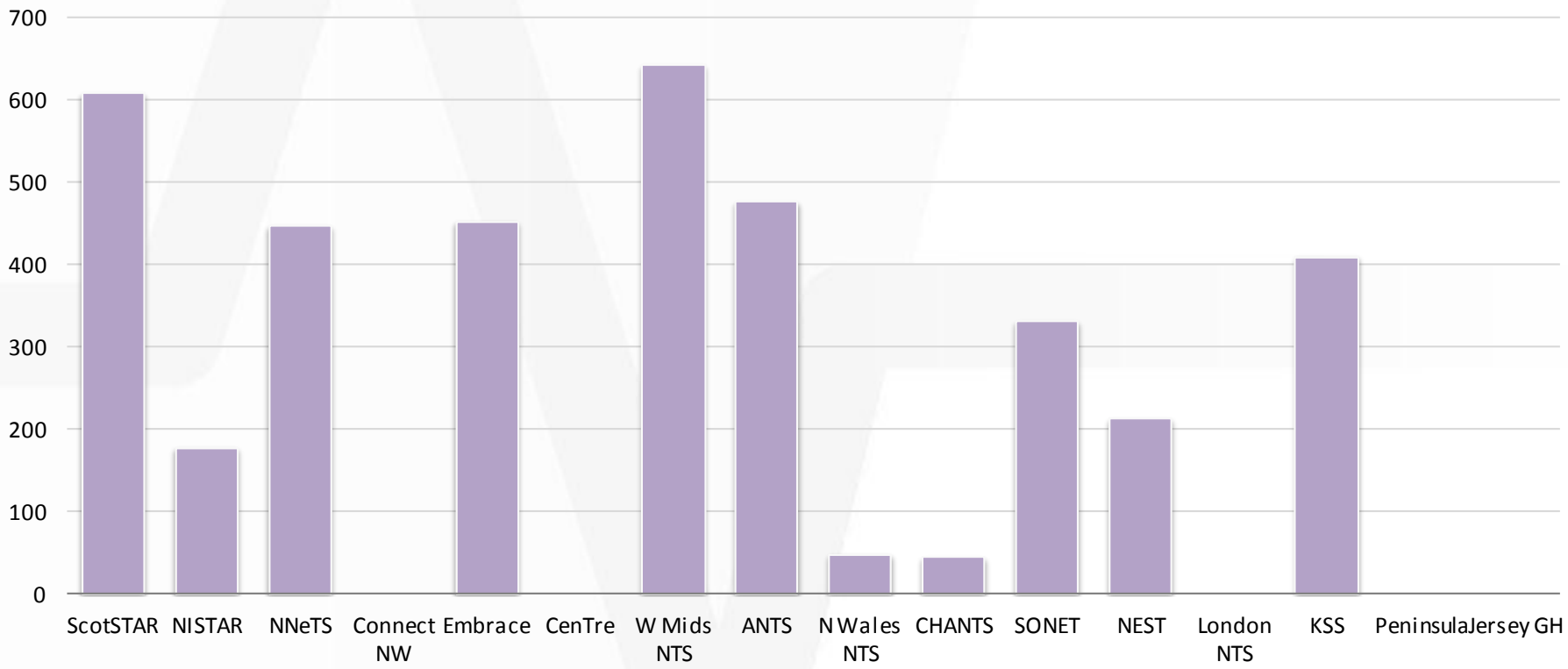
Parents travelling on transport: totals



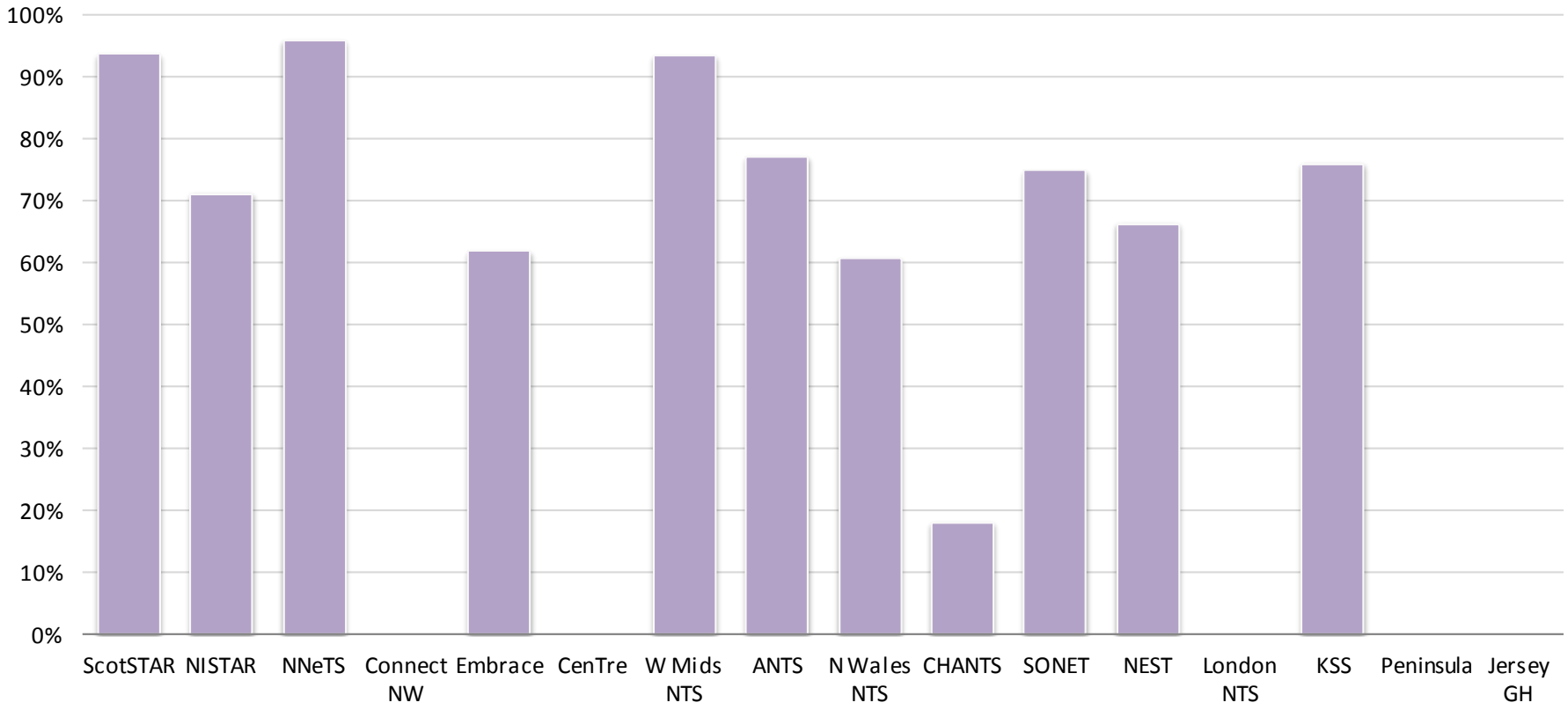
Parents travelling on transport as a percentage of total transfers



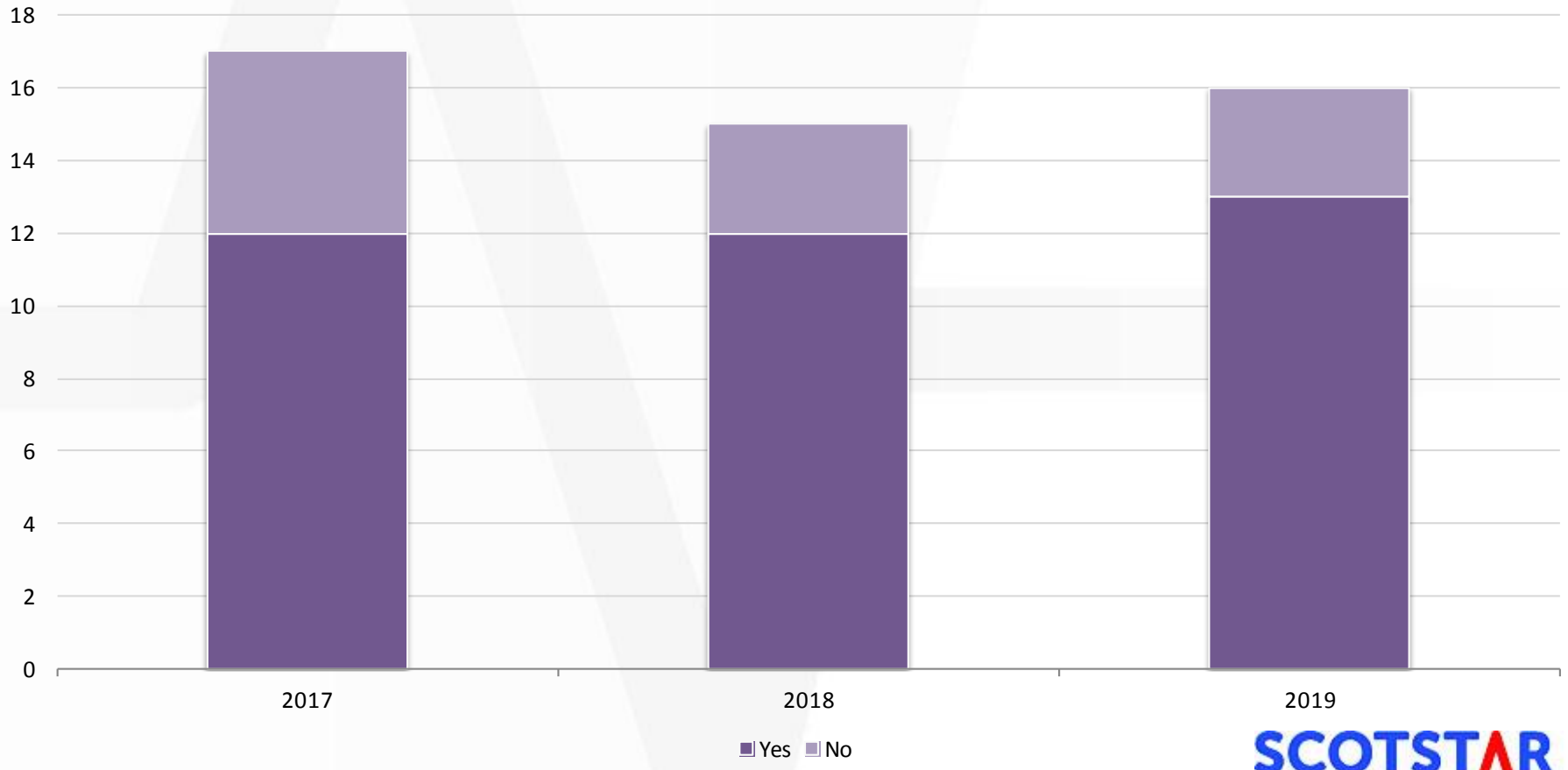
Parents offered to travel on transport totals



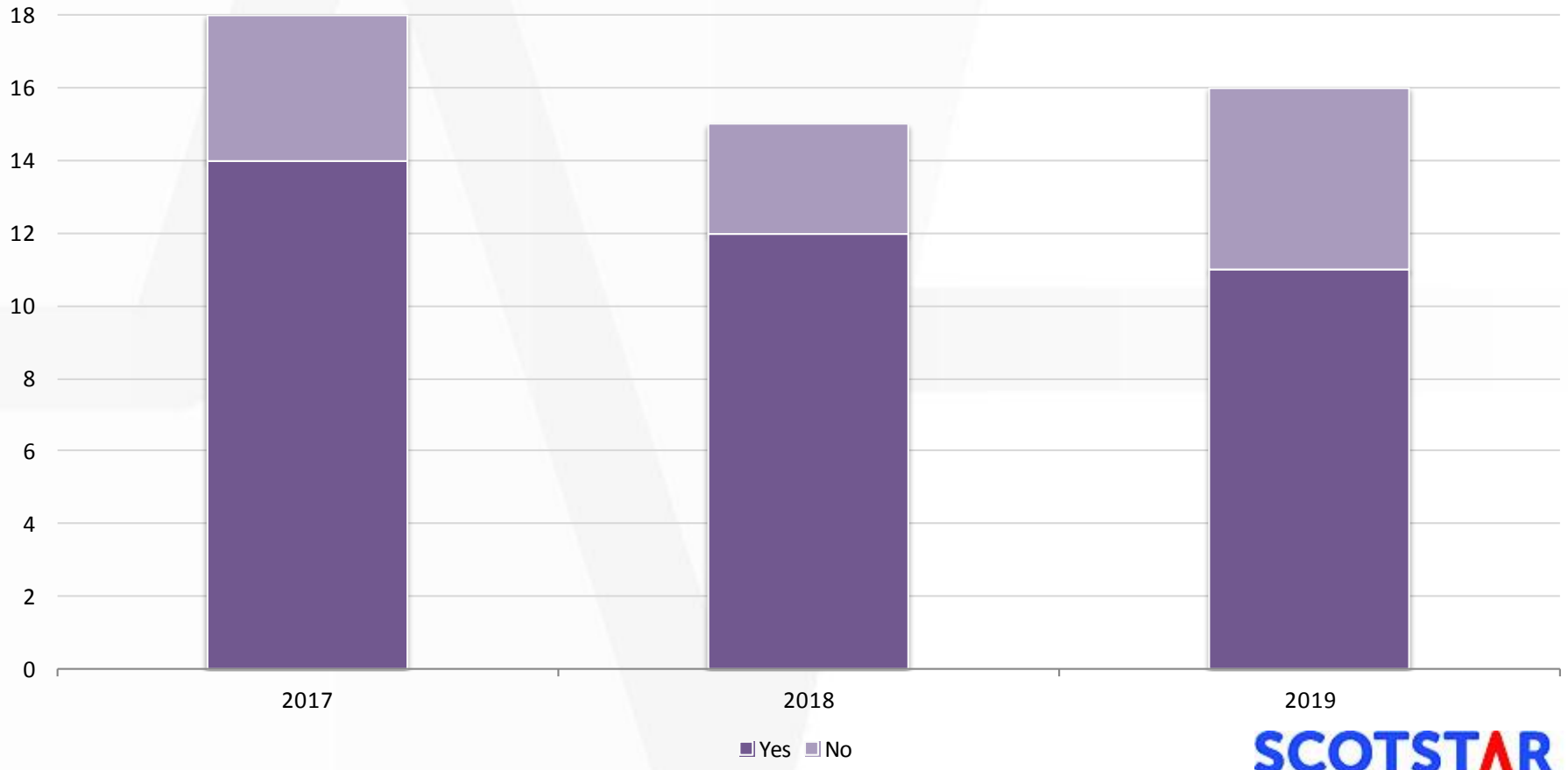
Parents offered to travel on transport as a percentage of total transfers



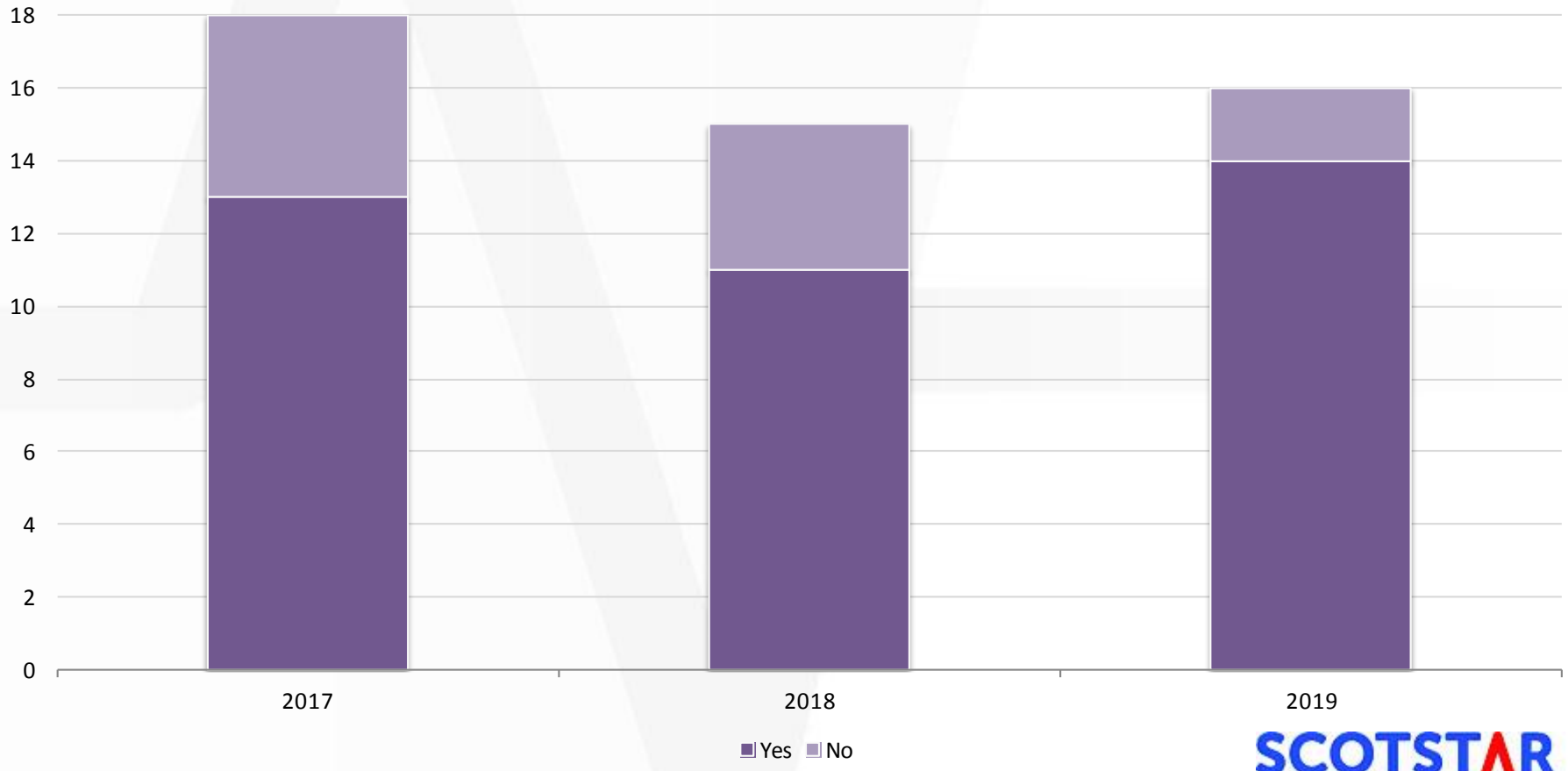
Service Characteristics 2019
24 hour service



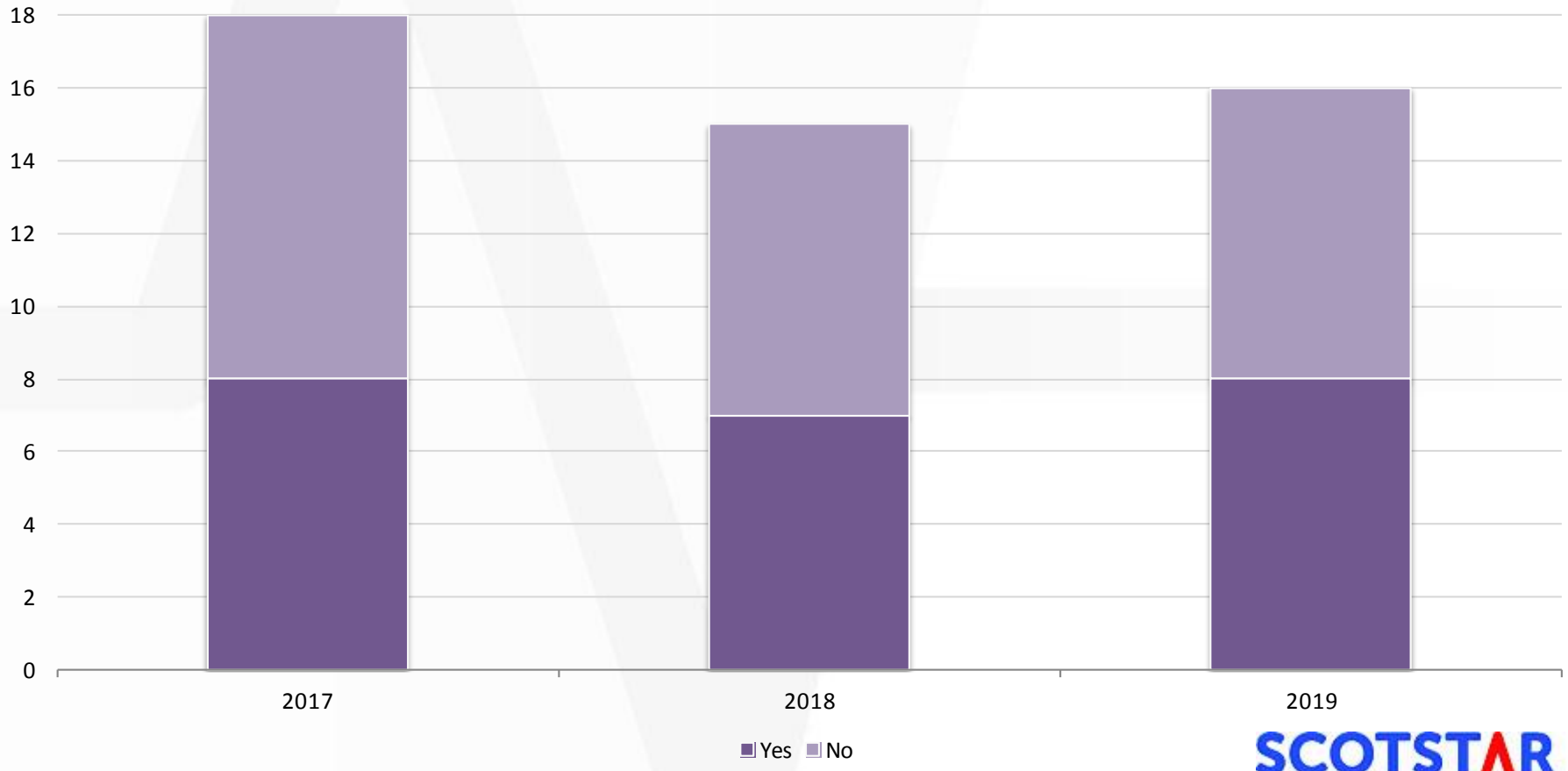
Service Characteristics 2019
Cot bureau



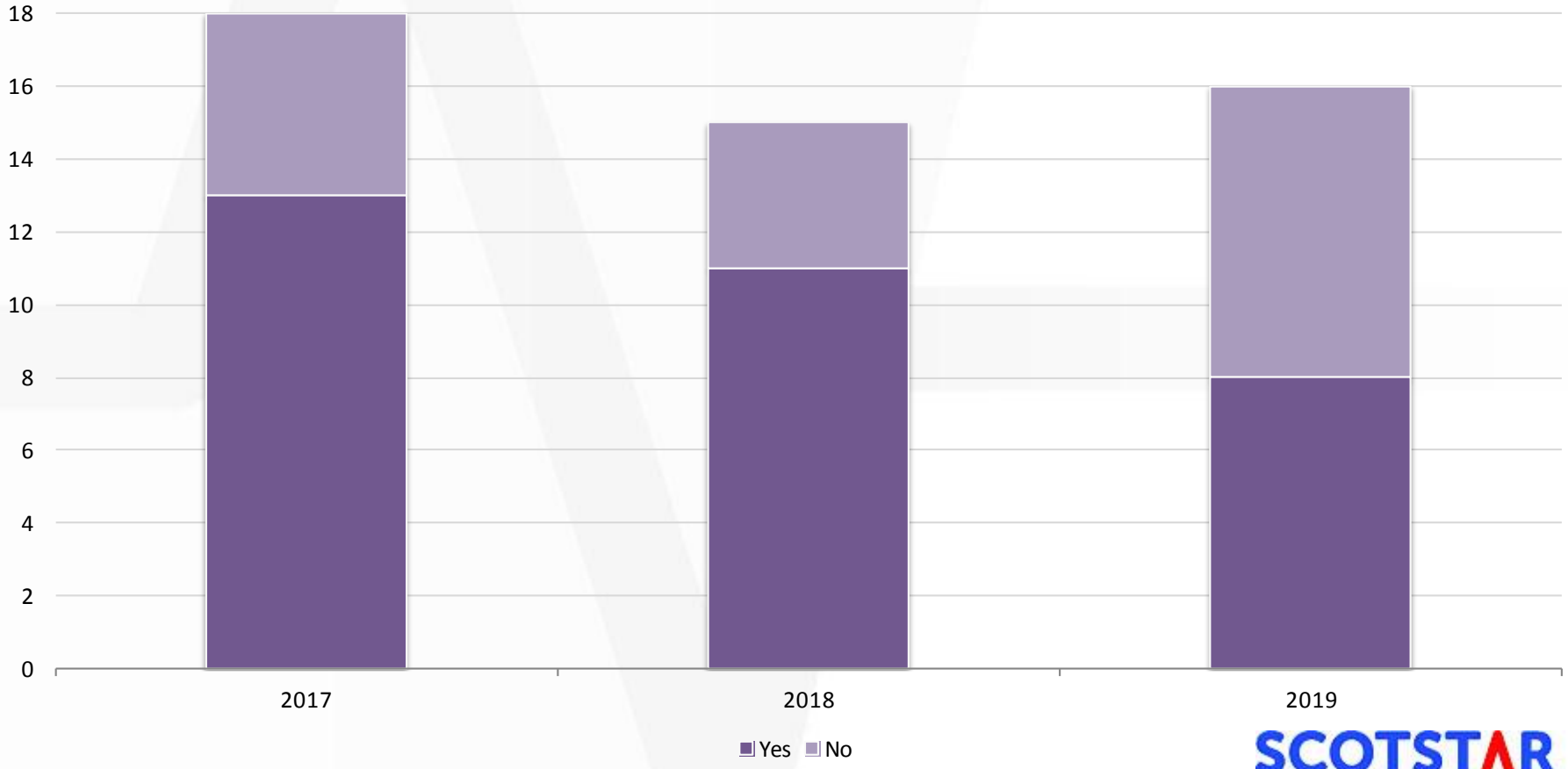
Service Characteristics 2019
Conference calling



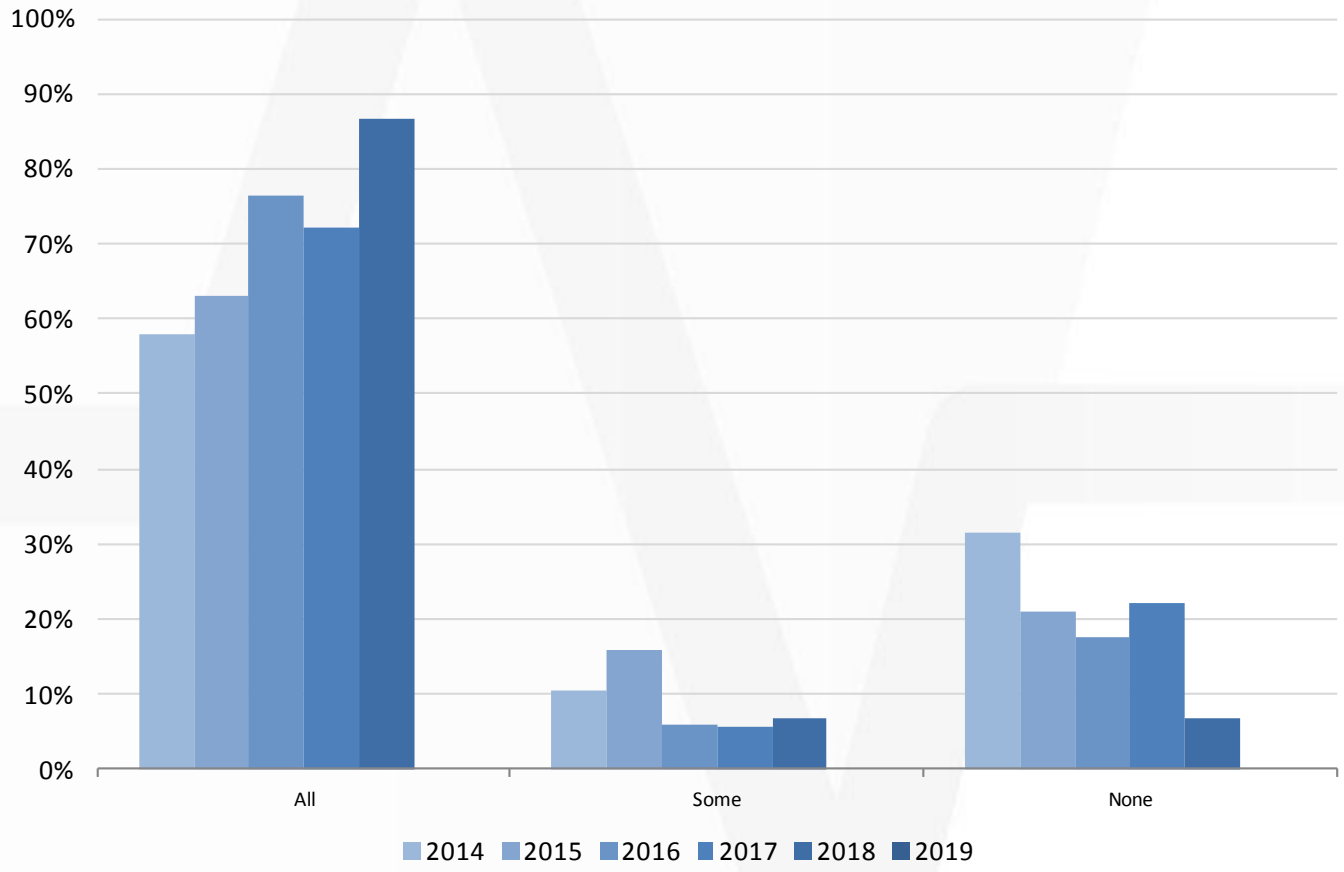
Service Characteristic- infants referred with bile-stained vomiting/aspirates treated as time-critical transfers ?



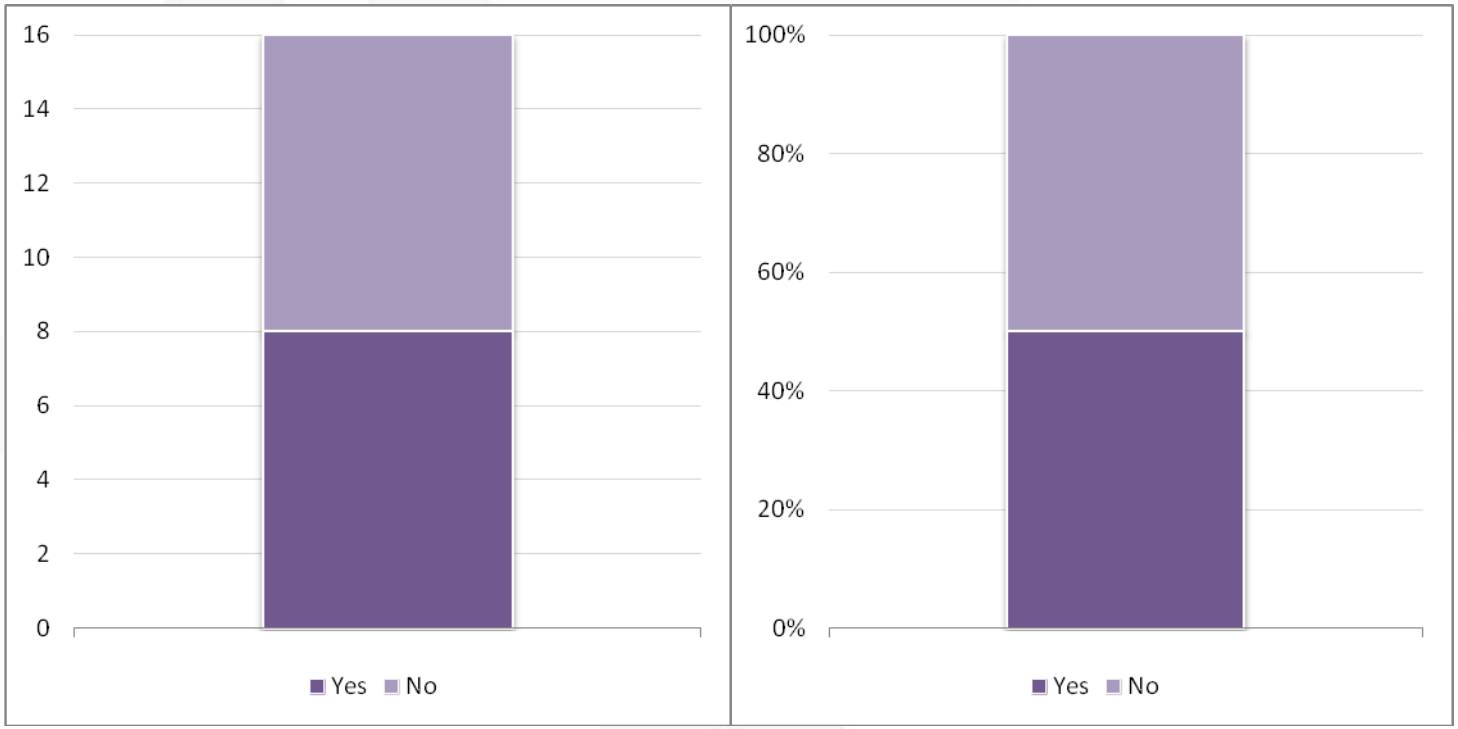
IUT Do you offer support for locating appropriate maternal and neonatal beds for in-utero transfers?



Dedicated vehicles, 2014-2019.

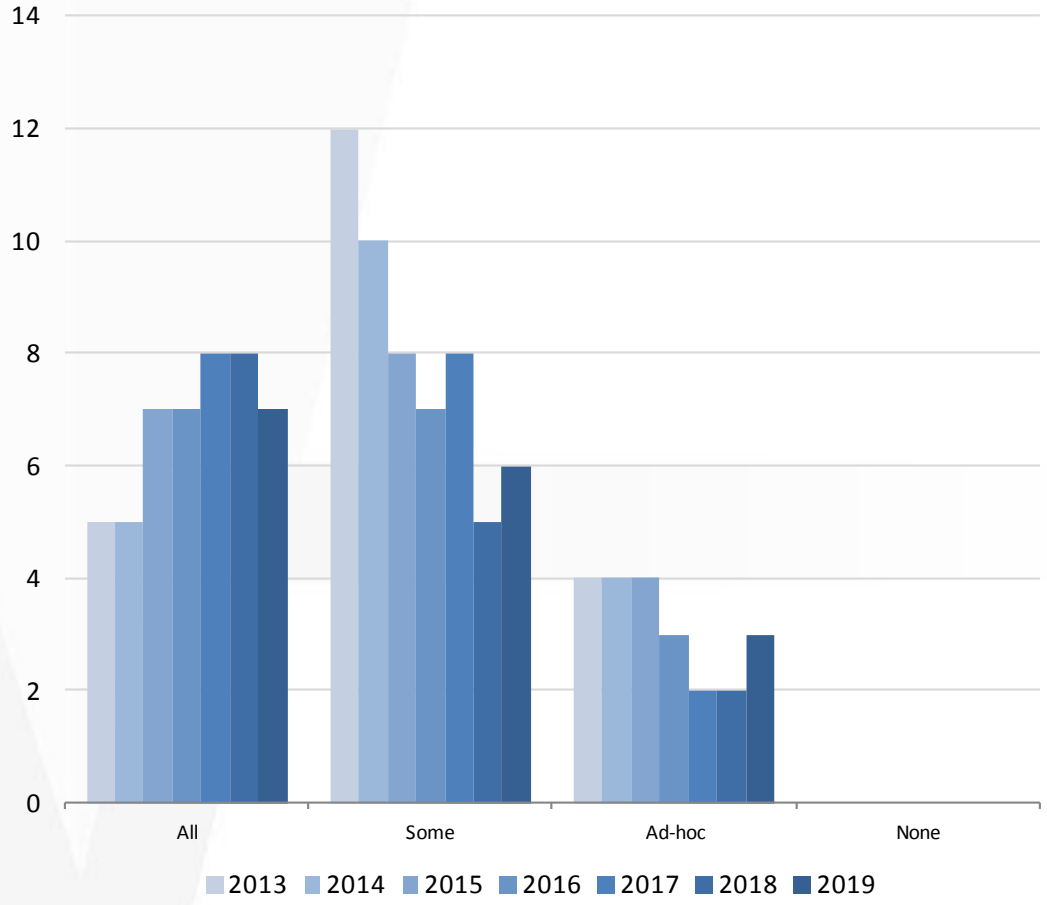


Service process for reviewing “wrong site” deliveries



Consultants

- Consultant availability **to attend transfers:**
  - Scheduled, all of the time.
  - Scheduled, some of the time
  - Maybe available, ad-hoc.
  - Never available to attend.



Conclusions/trends 2019

- Number of transfers trending rising again- blip or trend?
- Number of services stabilising.
- HFO and high-flow up.
- Time critical numbers down.
- Stabilising times are very variable- what is this telling us?
- Cooling now well established, timings very dependent on referrer practice. Better looked at as network wide audits than national level transport data?
- Lots of hypothermia at first assessment- will we see that improve?
- Wide variation in rates of parents travelling with their babies- work for 2020.

Acknowledgements

- All the service leads and team members providing their data
- Colin Devon, ScotSTAR data analyst
- Andy Leslie, outgoing NTG data lead