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Introduction

The National Blood Transfusion Committee have set a target that hospital transfusion laboratories (HTLs) hold no more than 10.5% of red cells as group O RhD negative (O-).

This is considered a particular challenge in the South West due to the amount of emergency O- believed to be supplied to other sites. At the South West Regional Transfusion Committee (SWRTC) meeting in November 2010 it was agreed to gather data on how many units of O- are held, and where, by HTLs in the region.

Method

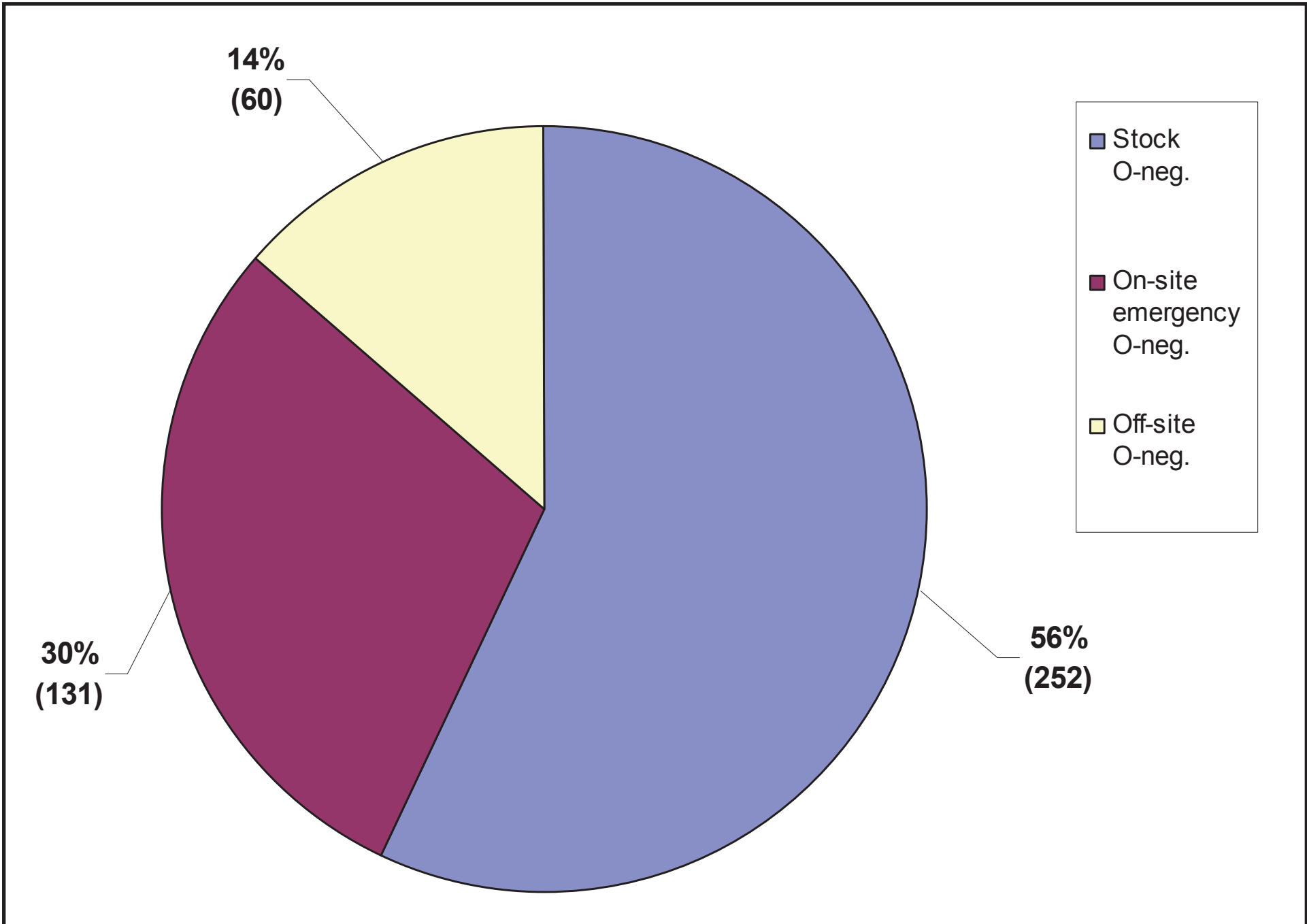
A survey of hospital transfusion laboratories in the South West of England was conducted from March to July 2011. It looked at the stock holding of O- (both routine and emergency) by hospitals, the provision of emergency O- to other sites outside of the hospital, and the use of emergency O- over a 12 month period.

18/19 (95%) NHS and 3/4 (75%) independent hospitals in the South West with a HTL responded.

Results

Units O- held

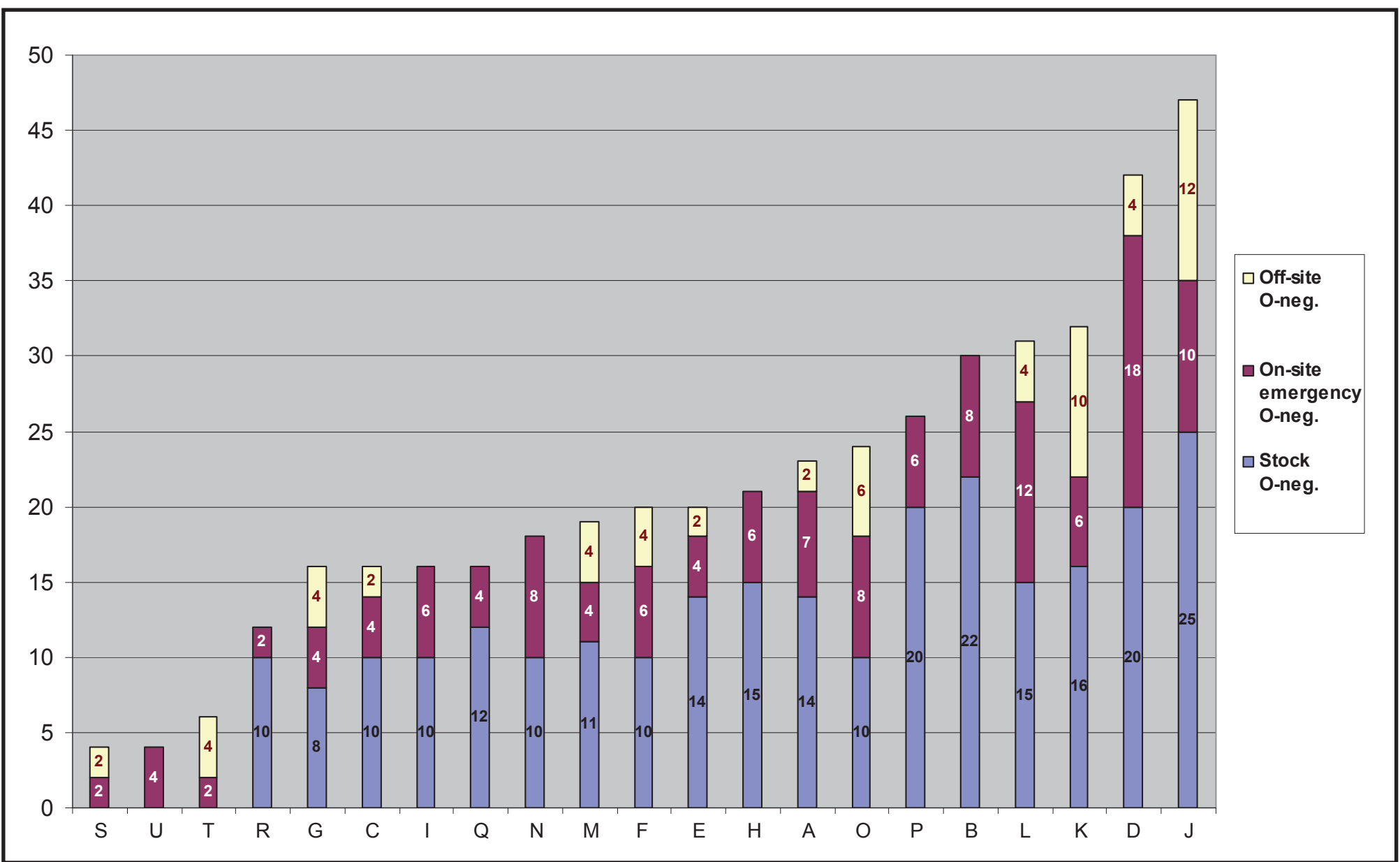
- 443 units of O- were held by hospitals in the South West: 56% as routine stock, 30% emergency on-site, and 14% as emergency off-site (see below)



Results

Distribution of O- units

- All hospitals held emergency on-site O- , and 62% (13/21) supplied O- off-site (see below)



- 11/13 hospitals supplied O- off-site to 1-2 fridges, 1/13 supplied 4 fridges, and 1/13 supplied 5.
- 72 fridges held emergency O- : 24 off-site and 48 on-site.
- 65% (31/48) of emergency on-site fridges held ≤2 units, 4% (2/48) held 3 units, and 31% (15/48) held 4+ units.

Larger hospitals held more on-site emergency O-, and there was commonality amongst all hospitals in the locations these were held.

Units O- used

- Emergency O- was used from 33/72 fridges in 2010: 30 were on-site fridges, 3 were off-site.
- 20/72 fridges issued no emergency units (no data given for other 19/72 fridges).
- 375 units of emergency O- were used in 2010.
- The median number of emergency units issued from on-site fridges was 6.

Appropriate use

There appeared to be:

- > a relationship between the total number of O- held and O- as a percentage of red cell stock: as one increased so did the other.
- > a tendency for hospitals holding higher total O- stock to transfuse a higher percentage of O- red cells to non O- recipients.
- > no obvious correlation between the percentage of O- held as emergency stock (both on and off site) and appropriate use.

Results

Expiry

- 6/18 NHS hospitals returned emergency O- to general red cell stock with 10 days or more shelf life.

There appeared to be a relationship between shelf life remaining and the percentage of O- given to non O- recipients: the shorter the shelf life remaining the higher the percentage of O- given to non O- recipients (see below)

Hospital	Shelf-life of Em. O-neg. on return to stock (days)	%age O-neg. given to O-neg. pts [NCA 2010]	O-neg. as %age of RCC issues [2010 average]
G	4*	74%	8.8
P	7	59%	12.4
A	7	59%	13.3
E	7	68%	9.2
N	7	71%	8.5
K	7	93%	9.5
L	7.25*	55%	12.2
M	7.5*	69%	10.5
O	7.85*	62%	10.3
R	7-10	75%	8.3
Q	7-10	85%	9.0
J	8-10	71%	10.9
H	10	59%	9.9
D	10	83%	11.9
I	10	92%	8.2
C	10	90%	9.7
F	10	90%	9.4
B	14	-	9.5

Conclusions

Only 2 NHS hospitals were holding >25% of O- off-site; while 3 had ≤10%, and 7 had none.

This finding challenges the perception that large amounts of O- are held off-site in satellite hospitals.

The higher the total number of O- held, the higher the percentage of O- held as stock and the greater the number of O- units transfused to non O- recipients.

There was no obvious association between where O- was held and indicators of appropriate use.

There was however an association between 'fresher' emergency O- being returned to stock within NHS hospitals and appropriate use.

Recommendations

- Hospitals should reconsider the total amount of O- stocked; in particular:
- > Reassess the need for storage of emergency O- in satellite fridges if none were used over a one year period.
 - > Reassess the need for storage of emergency O- on-site in locations very close to the main hospital issues fridge.
 - > Review the shelf life remaining on emergency O- on return to general stock: 10+ days may reduce the amount given to non O- recipients to avoid wastage.

Acknowledgements:

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Poster produced by:

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