West Nile Virus – Update on testing of blood donors during 2012 season

Background

West Nile Virus (WNV), which is carried by mosquitoes, has been spreading across southern Europe in recent years, and was predicted to move further north and west in 2012. The EU Blood Directive and UK Blood Safety and Quality Regulations (BSQR) mandate a 28 day deferral period for UK travellers returning from affected areas, which applies to travellers returning between 1 May – 30 November. However, analysis from a travel survey predicted a serious potential impact on NHS Blood and Transplant's (NHSBT) platelet supply if such deferrals were applied in the mosquito season of 2012, and should France, Portugal and Spain become affected. In addition, the planned stock build of red cells to cover the Olympic period could have been threatened.

The Medicines and Healthcare products Regulatory Agency (MHRA) informed SaBTO in March 2012 that instead of deferring travellers the four UK Blood Services would be free to test blood from donors returning from areas affected by WNV as required by the Blood Directives. The MHRA Corporate Board had agreed a policy of non-enforcement if Blood Services chose to use nucleic acid technology (NAT) testing instead of deferral, and Ministers supported this approach. This was because of the concerns about the potential impact of deferring large numbers of donors.

In 2012 the Blood Services in Scotland, Wales and Northern Ireland have continued to defer donors returning from affected areas, but NHSBT implemented NAT testing in England and North Wales from 1 May 2012.

Predicted deferrals and actual number of tests

Modelling was performed to predict the impact of deferral of donors who had visited the countries identified as a WNV risk in the Geographical Donor Risk Index (GDRI) in October 2011. The deferrals were offset by predicted re-attendance of deferred donors. The modelling included countries where WNV had become endemic during 2011, so did not represent the actual impact in the early summer months of 2011. Countries included were: Albania, Canada, mainland Greece, Israel including Palestine, Italy, Macedonia, Romania, specified regions of Russia, Turkey and USA. This is shown as 'predicted number of donor deferrals based on 2011 GDRI' in Table 1 and Figure 1.

As there was a risk of the mosquito and virus spreading into the major holiday destinations of France, Spain and Portugal, the modelling also predicted the effect of donor deferral should these countries be affected. This is shown as 'worst case' in Table 1 and Figure 1.

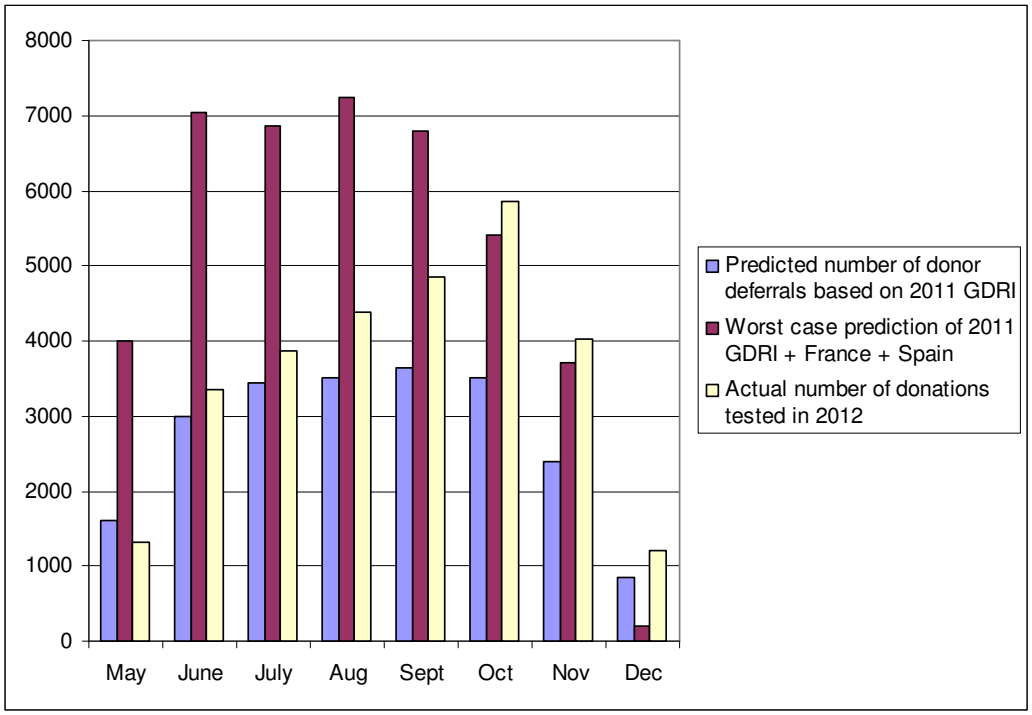
During 2012, WNV was not detected in France, Spain or Portugal, but deferrals for the following countries were included in the GDRI: Tunisia, West Bank, Gaza, Palestinian Occupied Territories, Greece, Serbia, additional regions of Russia (28/08/12), USA mainland (18/09/12), Hungary, Kosovo, Croatia (16/10/12) and Algeria (25/10/12). The effect of these deferrals is reflected in the 'actual number' data in Table 1 and Figure 1.

Table 1 – Number of predicted donor deferrals, and actual number of tests

	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Predicted number of donor deferrals based on 2011 GDRI	1600	3000	3450	3500	3650	3500	2400	850	**21950**
Worst case prediction of 2011 GDRI + France + Spain	4000	7050	6850	7250	6800	5400	3700	200	**41250**
Actual number of donations tested in 2012	1325	3358	3865	4390	4848	5865	4014*	1210*	**28875***

**Post meeting note: for completeness, the data for November and December have been added to the table and the figure.*

Figure 1 – Number of predicted donor deferrals, and actual number of tests



Test results

28875 donations have been tested by NHSBT, using NAT testing of pools of six donations. No confirmed positive results have been recorded.