

2022 Annual SHOT Report – Supplementary information

Chapter 6: Donor Haemovigilance

Additional analysis not included in the main 2022 Annual SHOT Report.

Adverse events in blood donors aged >70 years: key points

Background and methods

- Data on adverse events in blood donors were collated for the four UK Blood Services, in order to compare event rates in donors aged >70 years with those aged 25-69 (the baseline cohort)
- The time period covered was 2020-2022 for NHSBT data and 2018-2022 for SNBTS, WBS and NIBTS
- Adverse event definitions generally followed the ISBT 2014 reporting guidelines in all four Blood Services
- Event rates were calculated as the number of adverse events reported per 1,000 attendances with venepuncture attempted. Attendances were excluded if the donor was deferred prior to venepuncture (for example, for low Hb)
- The relative risk ratio (RRR) was calculated as the event rate in the older donor cohort divided by the event rate in the baseline cohort. An RRR greater than 1 indicates an increased risk for older donors; an RRR less than 1 indicates reduced risk

Results

- Among whole blood donors, those aged >70 years were at greater risk of reporting bruising and rebleeds compared with the younger baseline cohort. This was consistent across all four Blood Services: the RRR for bruising ranged from 1.33 (WBS) to 1.94 (NIBTS), and the RRR for rebleeds ranged from 2.37 (NHSBT) to 2.81 (WBS)
- However, whole blood donors aged >70 years had a much-reduced risk of reporting arm pain (including nerve injury, tendon injury and other causes) and immediate vasovagal events (without loss of consciousness or injury). Again, this was consistent across all four Blood Services where enough events had occurred for meaningful comparison: the RRR for arm pain ranged from 0.28 (SNBTS) to 0.45 (WBS); for vasovagal events the range was from 0.10 (NHSBT) to 0.15 (NIBTS)
- Among apheresis donors, low numbers of adverse events generally prevented meaningful comparisons between older and younger donors. However, based on NHSBT data only (the largest cohort), older apheresis donors appeared to be at reduced risk of reporting arm pain (RRR = 0.36) and immediate vasovagal event with LOC/injury (RRR = 0.50) but had an increased risk of reporting a rebleed (RRR = 1.86). Unlike whole blood donors, bruising was reported at similar rates in older and younger apheresis donors (RRR = 1.05)
- Although patterns of relative risk (older vs younger donors) were very similar across Blood Services, there were some marked differences in the underlying event rates. For example, at NHSBT, whole blood donors aged 25-69 reported 3.35 cases of arm pain per 1,000 venepunctures attempted; the corresponding event rate at SNBTS was 0.94 per 1,000 venepunctures attempted

See excel file for details of the data - AEs_over70_combined_data_UK_blood_services.xlsx