BloodNotes

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Process improvement case study between Canadian Blood Services and Valley Regional Hospital

Canadian Blood Services has a robust hospital customer feedback process for problems related to packaging, delivery, quality, labelling and communications. As part of that process, our Dartmouth distribution staff continuously review feedback and track cases in order to identify frequently reported problems. Tracking these cases helps to determine where problem solving, and continuous improvement can be initiated.

In 2019, our Dartmouth distribution site received a total of 32 reports of red blood cell (RBC) units with positive direct antiglobulin test (DAT) results from hospitals in the Maritime provinces. About 63 per cent of those reports were from one facility, and the numbers were higher than those documented at other Canadian Blood Services sites.

Although DAT is not carried out routinely on a donated blood unit, when a hospital reports a positive DAT on a donor RBC unit to Canadian Blood Services — usually discovered during their patient compatibility testing investigation — that donor is coded for a DAT on their next donation. The donor's case will be reviewed by Canadian Blood Services when a repeat positive DAT is identified to assess potential risk to their health. Also, if a donor has repeatedly positive DAT (x3) the donor is deferred. So Canadian Blood Services wants to avoid false positives since it can result in the loss of a donor.

To determine the frequency of the positive DAT, our Dartmouth distribution site conducted an internal investigation and collaborated with the Valley Regional Hospital in Nova Scotia to review the cases. Between December 2019 and January 2020, the hospital recorded nine positive DAT feedback, and they stored samples from the implicated donor units and performed a saline tube DAT for comparison. About eight of the nine samples tested negative by saline tube test.

As a result of the investigation, the hospital identified that that the increased rate of positive DATs at the hospital seemed to relate to differences in reagent and method for performing the DAT and may reflect false positive reactions or increased sensitivity with the MTS™ Gel testing system. They advised our Dartmouth staff that they would now also be performing a saline tube DAT on a unit before submitting future hospital customer feedback reports. After implementing this change in February 2020, Valley Regional Hospital (Nova Scotia) has only reported two additional donor RBC units with a positive DAT during the rest of 2020.

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We greatly appreciate the contributions and collaboration of Valley Regional Hospital staff who worked on this process improvement initiative with us. This collaboration has reduced the discard of RBCs, reduced hospital customer feedback reports, and donor testing activity.

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