

## BACKGROUND:

Rhesus D variant is a phenotypic variation of the Rhesus D antigen that does not show hemagglutination with monoclonal anti D reagent in the immediate spin (IS). The Rh D variants is able to cause allo-immunisation with its associated risks like hemolytic disease of the foetus and new born (HDFN) , haemolytic blood transfusion reaction, and auto immune haemolytic anaemia when transfused to Rhesus negative individual . Currently there is no documentation on Rhesus D variants at Gulu Regional Blood Bank. To this, the study sought to determine the percentage of RhD variants among blood donors at Gulu Regional

Blood Bank.

## METHODOLOGY:

The study used EDTA anticoagulated blood samples collected from voluntary non remunerated blood donors (VNRBD) to screen for RhD status using IgG/IgM monoclonal anti-D grouping antiserum (Rapid Labs and Fortress Diagnostics), for such samples that tested RhD negative, these were analysed with polyspecific Coomb's serum using indirect antihuman globulin (Coomb's) test using hemagglutination tube technique.

## RESULTS:

A total 138 RhD negative samples were tested using indirect antihuman globulin for RhD variant, out of which 0.7% (n=1, 95% CI; 0.5-0.9 ). The RhD variants was detected only in blood group O phenotype.

## CONCLUSION AND RECOMMENDATION:

The study revealed that, 0.7% of blood donors at Gulu Regional Blood Bank are RhD variant and because of the potential risk of allo-immunisation caused by these red blood cells, there is need to include indirect anti-human globulins test as part of routine blood donor typing.

To this, the study recommends that Uganda Blood Transfusion Service (UBTS) ought to include routine serological testing of all RhD negative blood units for D variant phenotype to minimise on the potential risk of allo-immunisation imposed by these red blood cells even when monoclonal IgG/IgM is used for typing.