of 1.29/1000, and 104 TRs in the adult group, for a rate of 1.59/1000; this difference was not statistically significant ($p = 0.18$). As expected, the most common type of TRs for both groups were allergic (19 in the pediatric group; 18 in adults) and febrile (24 in pediatric group; 20 in adults). Allergic reactions were more common in the pediatric group compared to adults ($p = 0.02$). There were 24 pediatric TRs associated with platelets and 13 in adults, this was a significant difference between the groups ($p = 0.00$). In the pediatric group, most of the TRs were in males (42 males vs. 26 females); in the adult group, the distribution was even (54 males vs. 50 females); this difference, however, was not statistically significant ($p = 0.2$). The number of other types of TRs in the two groups were not large enough for further analysis **Conclusion**: In our institution the TR rate in the adult and pediatric populations is very similar, but the proportion of allergic transfusion reactions and reactions associated with platelets is larger in the pediatric group. It seems that TRs are more common in males in the pediatric group, but this difference from the females did not reach statistical significance. We hope that multi-institutional aggregated data from the Hemovigilance system will further characterize the transfusion reactions in this group.

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S56-030J

Survey of the Use of Red Blood Cell Additive Solutions and Sopecial Attributes in Neonatal Patients

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Background/Case Studies: Red blood cell (RBC) additive solutions (AS) are used to extend the shelf life of stored RBC units. Some blood banks manage two inventories in an attempt to provide low-AS-containing RBC units to neonatal patients, in particular, in large-volume transfusion settings (>20 mL/kg), due to safety concerns. However, other blood banks have moved away from this practice. Although older publications suggest a safety benefit to decreasing AS exposure, there are no published studies showing clinical complications with AS in pediatric patients. Due to a lack of consensus, we endeavored to assess the transfusion practice at a subset of leading institutions concerning RBC additive of choice for neonatal patients. Policies concerning CMV-seronegative and irradiated blood products were also included in the assessment. **Study Design/Methods**: An electronic survey was sent to 78 centers identified as being associated with professional organizations such as the College of American Pathologists (CAP) or AABB throughout the United States. The survey included 23 questions. Neonatal patients were identified as infants <4 months of age; small-volume transfusion was defined as <20 mL/kg, and large-volume transfusion was defined as >20 mL/kg. Responses were collected over a 1-month period. **Results/Findings**: Twenty-one centers participated (27% response rate); 24% percent were pediatric only, and 76% were adult and pediatric centers. The average size of the facilities' neonatal intensive care units was 115 beds (range: 15-800). The RBC additive of choice for both large- and small-volume neonatal transfusion is AS-3, followed by AS-1, CPD, or CPD-A (Table). Some centers performed additional manipulation to AS RBCs, such as using fresh product, defined as that <10 days old (range: <5 days-<14 days) (Table). Eighty-nine percent of respondents transfuse irradiated RBC units to all neonatal patients. All centers provide leukocyte-reduced units; in addition, 47% do not provide CMV-seronegative (CMV-Neg) units, 26% provide CMV-Neg units to all patients, and 21% provide CMV-Neg units on a case-by-case basis. **Conclusion**: This survey was designed to identify trends in current neonatal transfusion practice. A majority (72%) of respondents have transitioned to the use of AS-1 or AS-3 for small- and large-volume transfusions. These data confirm that a sampling of US centers use AS RBC units for large-volume transfusion in many clinical settings, with various additional manipulation of the units. The use of AS units for neonatal transfusion may streamline blood banking RBC inventory management.

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Investigation of Changes in Potassium Levels in Infants Less Than 4 Months of Age After Transfusion of Irradiated CPDA-1 Red Blood Cells

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Background/Case Studies: Plasma potassium rises over time in red blood cell (RBC) units after irradiation due to damage to the RBC membrane. This study evaluated changes in potassium levels in infants less than 4 months of age who were given low-volume transfusions of leukoreduced, irradiated, CPDA-1 RBCs. **Study Design/Methods**: Transfusions to infants less than 4 months of age in the NICU at an urban medical center were evaluated. Of the

TABLE. Red blood cell (RBC) additive and RBC unit modifications

	All Centers (n = 21)					Additional Modifications to AS RBCs			
Clinical Setting	CPD	CPD-A	AS-1	AS-3	AS-5	Fresh	Washed	Supernatant Reduced	No Modifications
Small-Volume Transfusion (<20 mL/kg)	14%	14%	24%	38%	0%				
Large-Volume Transfusion (>20 mL/kg)	14%	14%	29%	43%	0%				
General Surgery (n = 13)						61%	8%	8%	23%
Cardiac Surgery (n = 12)						75%	8%	0%	17%
ABO-Incompatible Heart Transplant (n = 7)						29%	43%	14%	14%
Extracorporeal Life Support (N = 10)						80%	10%	0%	10%
Exchange Transfusion (n = 13)						69%	15%	8%	8%