Blood use between 2009–2013 in a North Eastern Italian Academic Hospital: reasons for a decrease
Lucia Lesa

L Lesa1, R Quattrin1, V Totis2, V De Angelis2, S Brusaferro2

1Postgraduation School of Hygiene and Preventive Medicine, Department of Medical and Biological Sciences, University of Udine, Italy
2Azienda Ospedaliero Universitaria “Santa Maria della Misericordia”, Udine, Italy
3Department of Medical and Biological Sciences, University of Udine, Italy

Contact: lesalucia@gmail.com

Blood management needs continuous efforts in order to maintain a balance between supply and demand. In the last decade many countries have introduced programs for a better use of blood and its consumption has been greatly reduced. In Italy a first reduction had been registered in 2013 with a percentage decrease of 2%. The study aims to analyze the phenomenon in a large North Eastern Italian Academic Hospital.

The study consisted in comparing red cell concentrates (RCC) consumption trends between 2009 and 2013 years and in analyzing other variables (hospitalizations, surgery interventions, hospital guidelines) to reach some hypothesis on causes of RCC reduction/increasing use in a large Academic Hospital. Between 2009 and 2013 RCC transfusions decreased from 19513 to 16882 units (∆13,4%) with the cardiothoracic department showing the higher reduction (∆29,6%), hospitalizations decreased of 10,2% and surgical interventions of 6,7%. A statistical significant difference between 2009 and 2013 RCC transfusions units means for each patient was found in heart surgery (5,0 + 5,6 vs 3,6+3,1; p < 0,01) and in hematology (11,6+12,2 vs 8,9+9,7; p < 0,01). Furthermore, during 2009–2013 period, 10 new blood management hospital guidelines had been produced and implemented.

First, these data become of critical importance since they confirm and explore the trend of RCC transfusions decrease present also at international level in countries such as United States, Australia (respectively –3% and –7% between 2009 and 2010) and UK (–20% between 2000 and 2009).

Second, the study allows to identify some reasons of the phenomenon: reduction of hospitalization and surgery interventions along with a continuous education and information activity on blood management throughout guidelines. However, it is necessary to conduct further analysis to better understand transfusions decrease (i.e. patient case-mix, introduction of new surgery technologies).

Key messages
- In the last decade reduction in blood use was found at national and international levels
- It is necessary a specific analysis of the trend in each hospital considering variables like admissions, surgical activity, guidelines