

Practical implementation of PBM strategies in a general hospital: results after 3 years and remaining challenges

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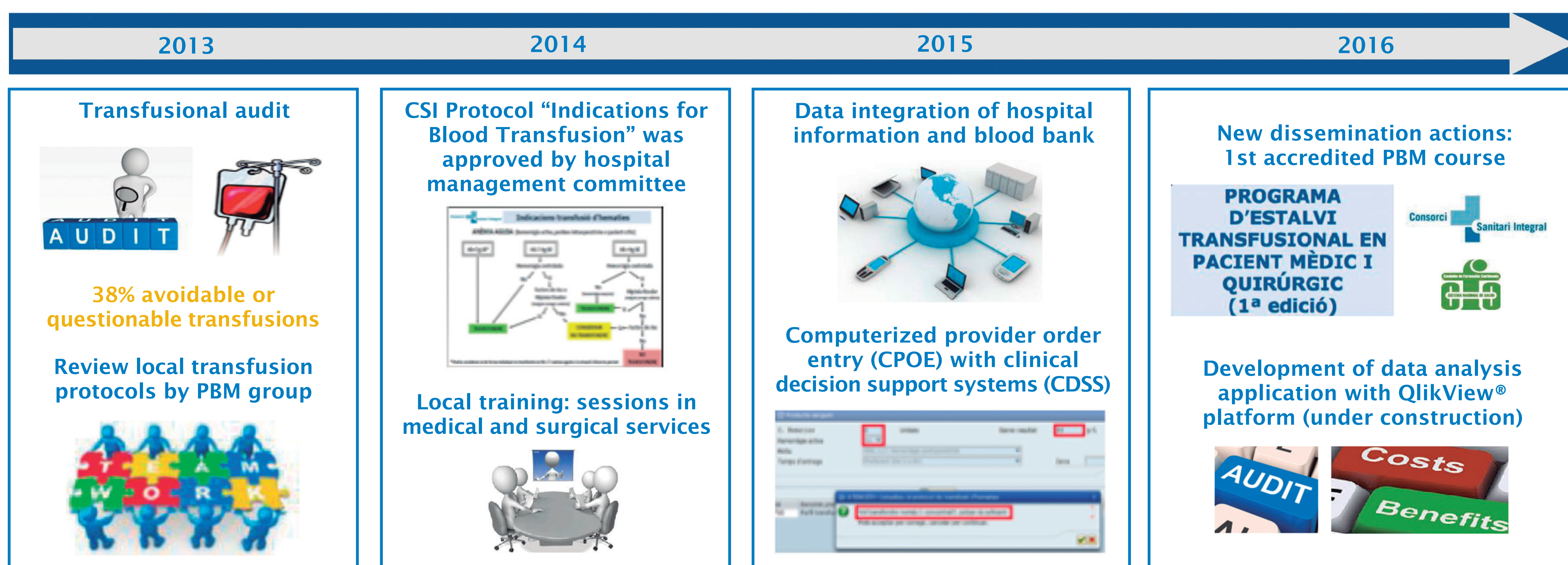
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INTRODUCTION

Although blood transfusion is necessary for treatment, it is often overused. PBM programs support the development of strategies with the aim of minimizing or avoiding unnecessary transfusions. In our center, a 400-bed general hospital for a population of 425,000, a multidisciplinary working group (PBM Group), integrated in the hemotherapy committee and with the approval of the hospital management, has developed and implemented since 2013 several scheduled actions to optimize the use of blood components.

METHODS



RESULTS

Taking as a reference the total of Red Blood Cells (RBC) units transfused in 2012 (5941), a progressive and continuous decrease (5772, 5460, 4874, 4595) was observed between 2013 and 2016, with a global reduction of 22.6% (figure 1). During this period, the hospital's activity was maintained with a similar annual number of hospital discharges and major surgery interventions (figure 2). With an average acquisition cost of 111.4€ per RBC unit, there is an annual progressive decrease, with an expenditure in 2016 of 150,000€ less compared to the initial situation (2012). This savings could be multiplied by x3 or x4 if the total costs associated with transfusion were calculated.

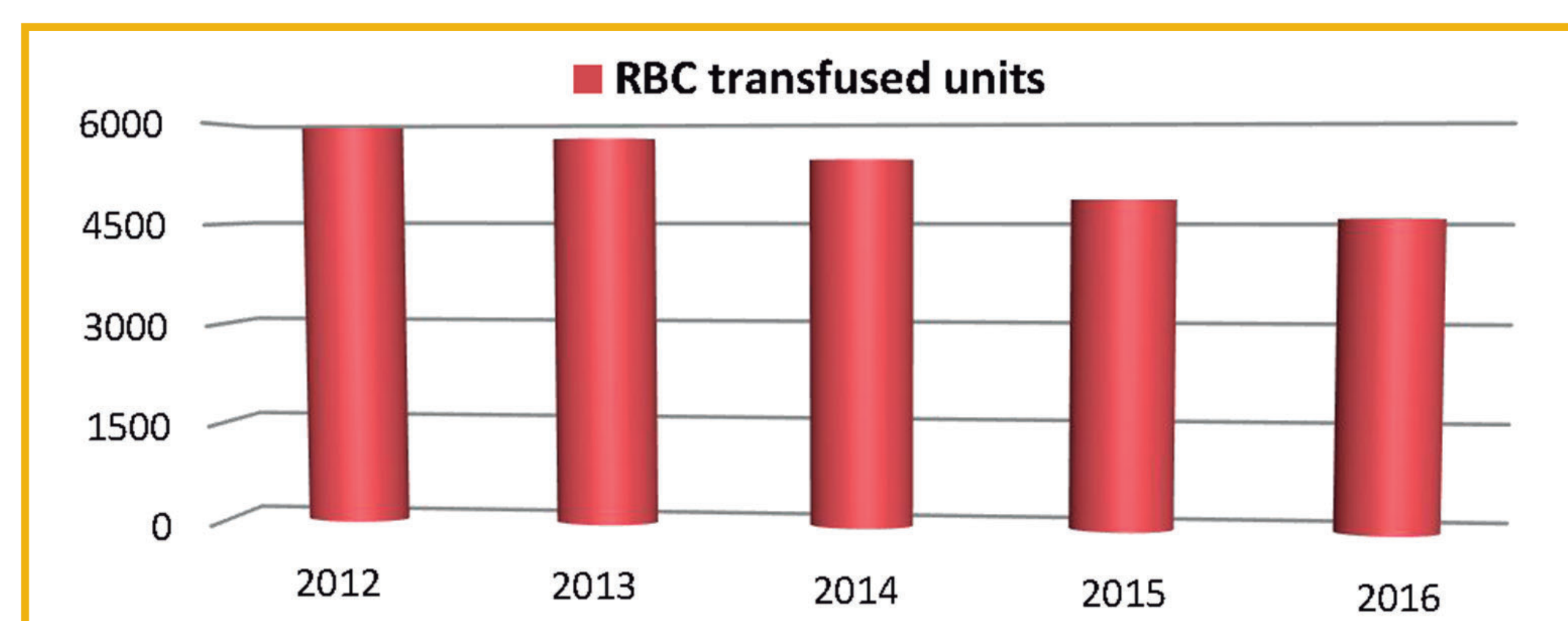


Figure 1. Total number of RBC transfused units (2012-2016)

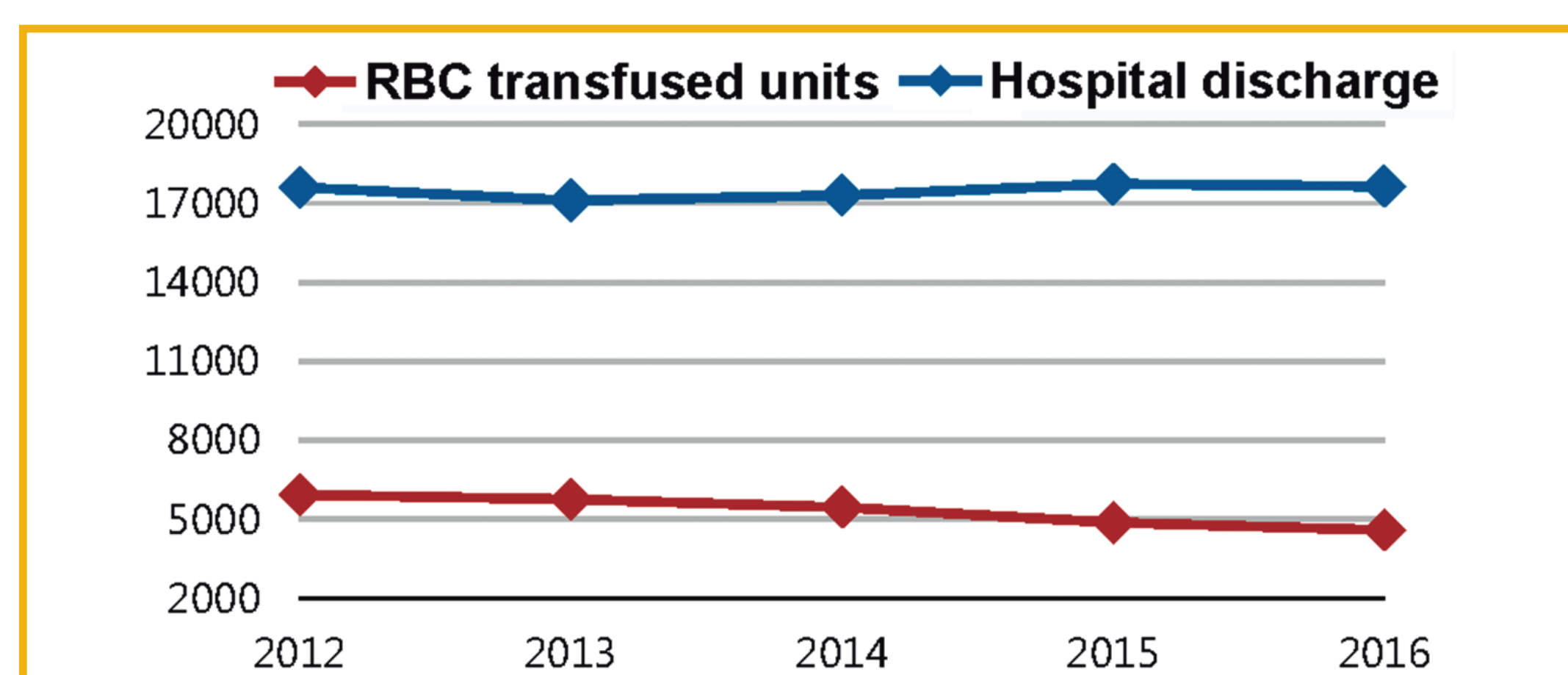


Figure 2. Comparative hospital's activity and RBC transfused units between 2012 and 2016.

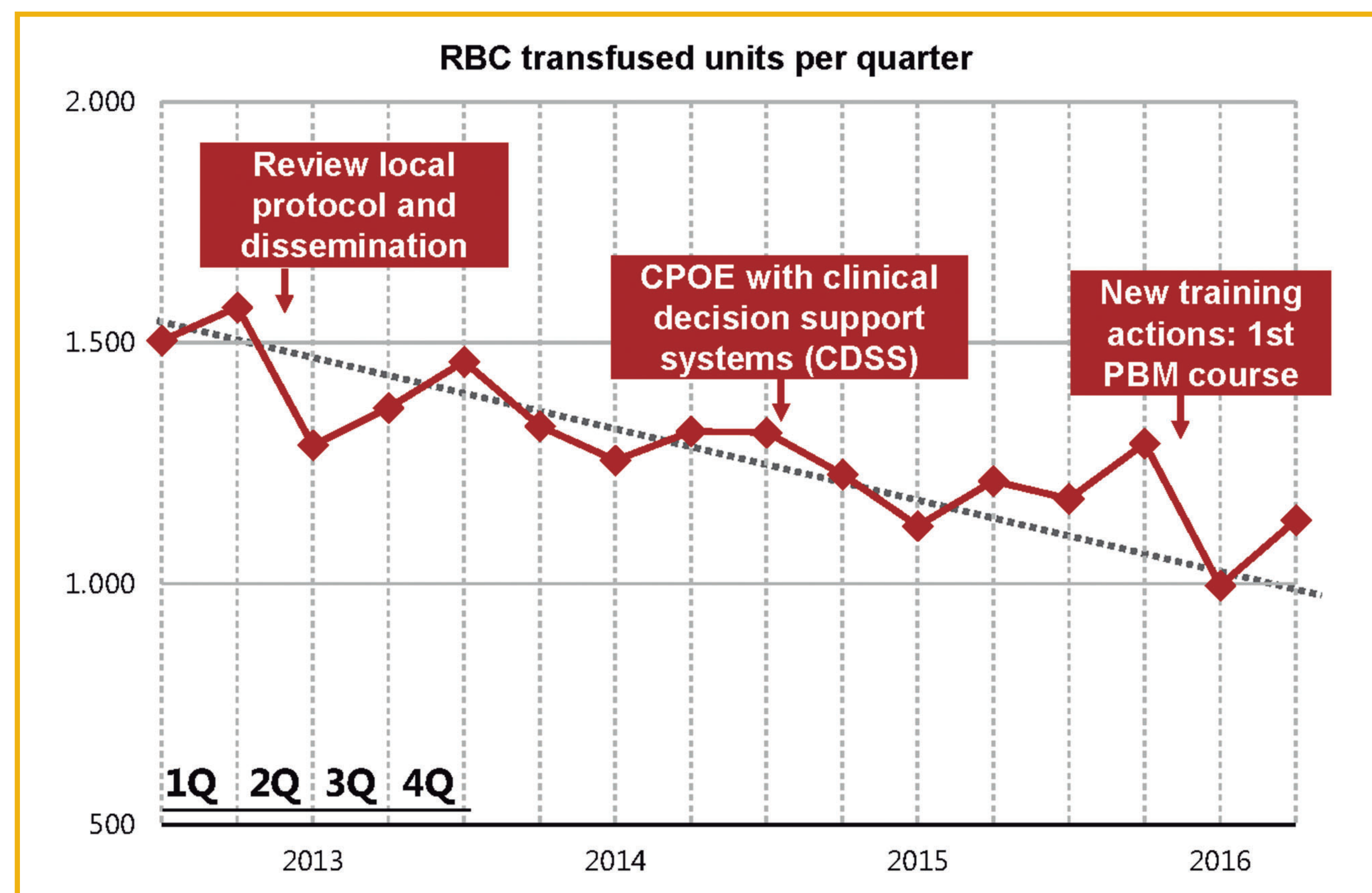


Figure 3. RBC transfused units per quarter from 2013 to 2016. The main actions developed by the PBM group are indicated (the arrow indicates the approximate date in which its implementation began)

CONCLUSION

- The implementation of PBM strategies coordinated from a multidisciplinary group is effective, with a progressive reduction of transfusion activity, adjusted to the center's attendance activity. In addition, an economic impact has been observed.
- A tool such as the computerized system to help the prescription of transfusion (CPOE-CDSS) improves the knowledge and application of the hospital transfusion protocol. Moreover, having an application for data analysis shall facilitate the evaluation and decision making on future actions.