

Reducing inpatient blood withdrawals with a multi-level-strategy based on transparency and awareness: a multicentre prospective study

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INTRODUCTION

The Choosing Wisely Campaign, as it was set by EOC, allows us to monitor the use of laboratory tests, starting from a variability analysis between EOC hospitals/services.

AIM

The aim of the study was to investigate whether a multi-level-strategy, based on transparency and awareness, could be effective in reducing the number of blood withdrawals in hospitalized patients.

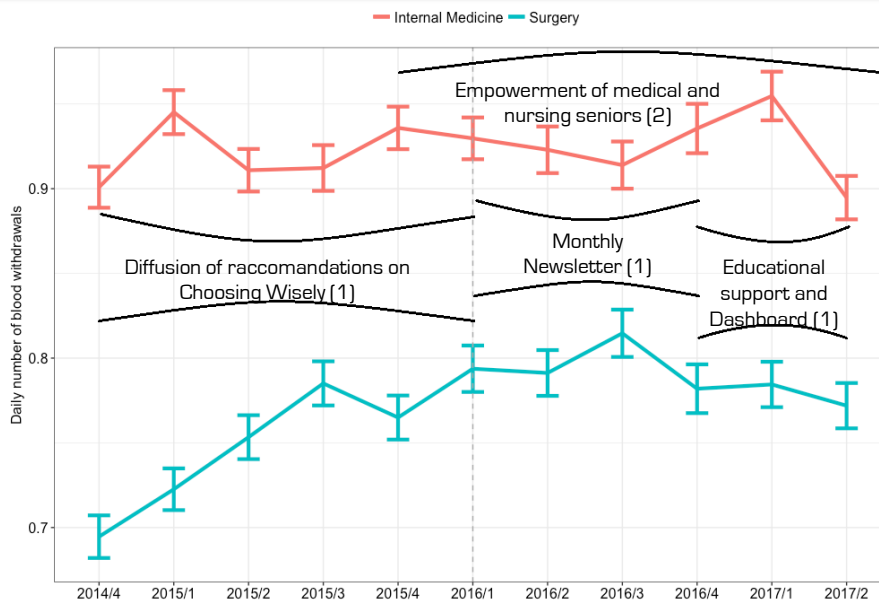
METHOD

Multicentre-prospective-observational study in Internal Medicine and Surgery Departments in a network of public hospitals. All patients admitted between July 1st 2014 and June 31st 2017 were analysed. A multi-level strategy, initially based on the diffusion of recommendations on Choosing Wisely, then on online continuous monitor benchmarking and educational support, was applied in the Internal Medicine Department.

RESULTS

The primary outcome was a significant reduction in the number of blood withdrawals performed per patient in the Internal Medicine Department. Secondary outcomes were a reduction in the number of daily blood withdrawals and in the volume of blood taken per patient during the hospital stay.

40'432 admission were analysed. In the Internal Medicine Department, comparing the 1st trimester of the study intervention (1st quarter 2016) with the last one (2nd quarter 2017) the number of blood withdrawals per patient and per day of hospitalization were respectively 7.5 vs 6.8 ($p < 0.01$) and 0.92 vs 0.88 ($p < 0.05$); in the Surgery Department, comparing the same periods, the number of blood withdrawals per patient and per day of hospitalization were respectively 5.3 vs 5.1 (NS) and 0.79 vs 0.77 (NS).



Daily number of blood withdrawals between 4^o quarter 2014 and 2^o quarter 2017 in the Internal Medicine and Surgery Departments

Legend:

- (1) Intervention in both Internal Medicine and Surgery Departments
- (2) Intervention in the Internal Medicine Department

DISCUSSION AND CONCLUSION

In view of the above, the Choosing Wisely recommendation alone does not seem to be effective. By comparing data between Internal Medicine and Surgery Departments, we believe that multifactorial and multidisciplinary interventions, based on the transparent dissemination of data along with a continuous awareness-raising promoted by key people within the organization, will lead to a better outcomes. A close follow-up is needed to verify if the strategy proposed confirms to be effective and if it will be able to ensure a lasting effect.