EUROPEAN EMERGENCY NUMBER 1-1-2 IN LIGURIA, ITALY: RESULTS OF THE FIRST YEAR OF ACTIVITY

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INTRODUCTION

On February 14, 2017, the Region of Liguria activated a first level public safety answering point (PSAP 1) that uses the universal European Emergency Number (EEN), 1-1-2. This implementation had 3 main purposes: immediate call pickup/ answering for all emergency calls; a fast call transfer to a secondary PSAP (PSAP 2) - either medical, police or fire; and filtering of inappropriate calls. This study reports on several performance indicators during the first year of system activity.

METHODS

The objective of this study was to report on several key performance indicators of the new system: average number of calls per day; average call wait time; percentage of times localization (automatic geo-localization system of the caller by mobile phone or the precise address of the landline phone); average call duration before sending to the secondary PSAP, and the percentage filtering of inappropriate calls for police, fire, and medical. All calls received by the ENN from February 14, 2017 to December 31, 2017 were used for the analyzes. The data are collected using the "Emma 112" software (Beta80Group) and archived on dedicated servers. The analyzes were performed using Microsoft Excel 2016 and IBM SPSS 24.
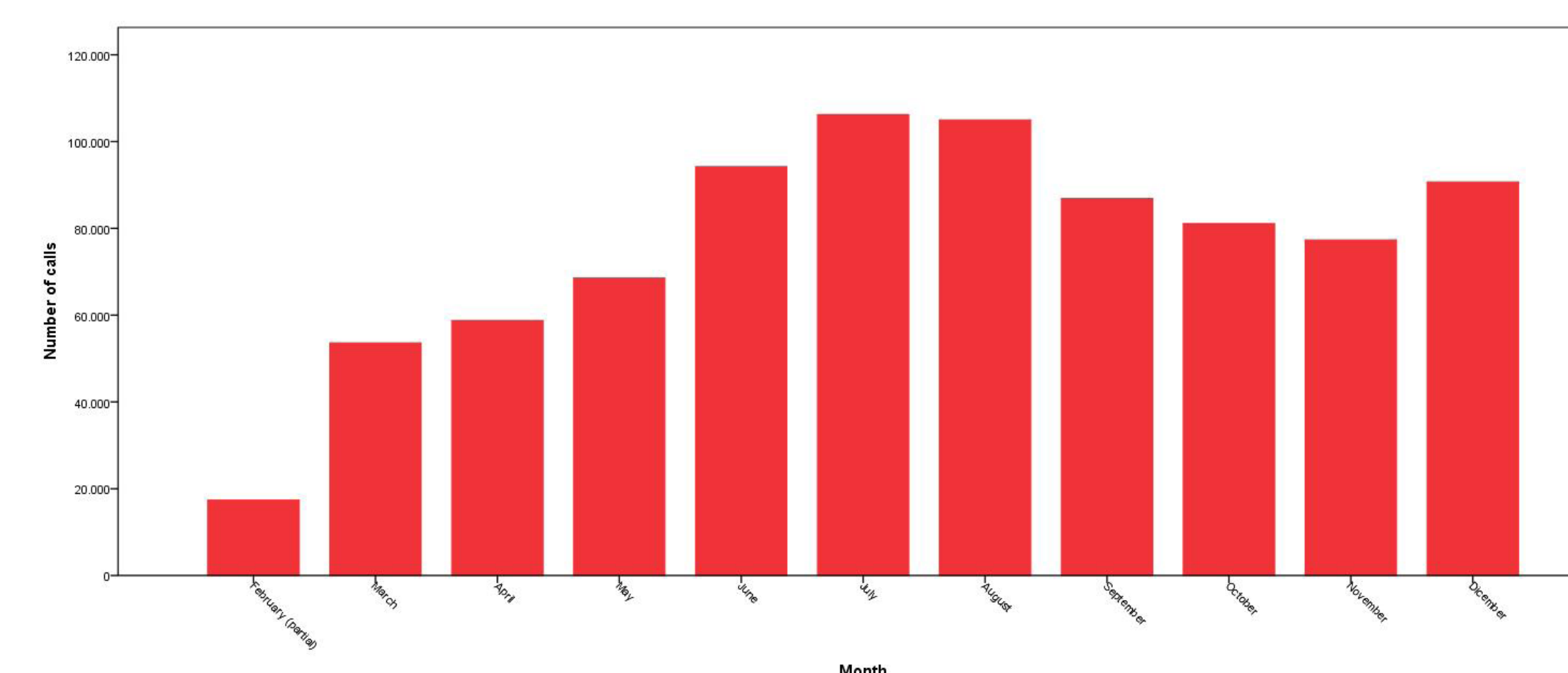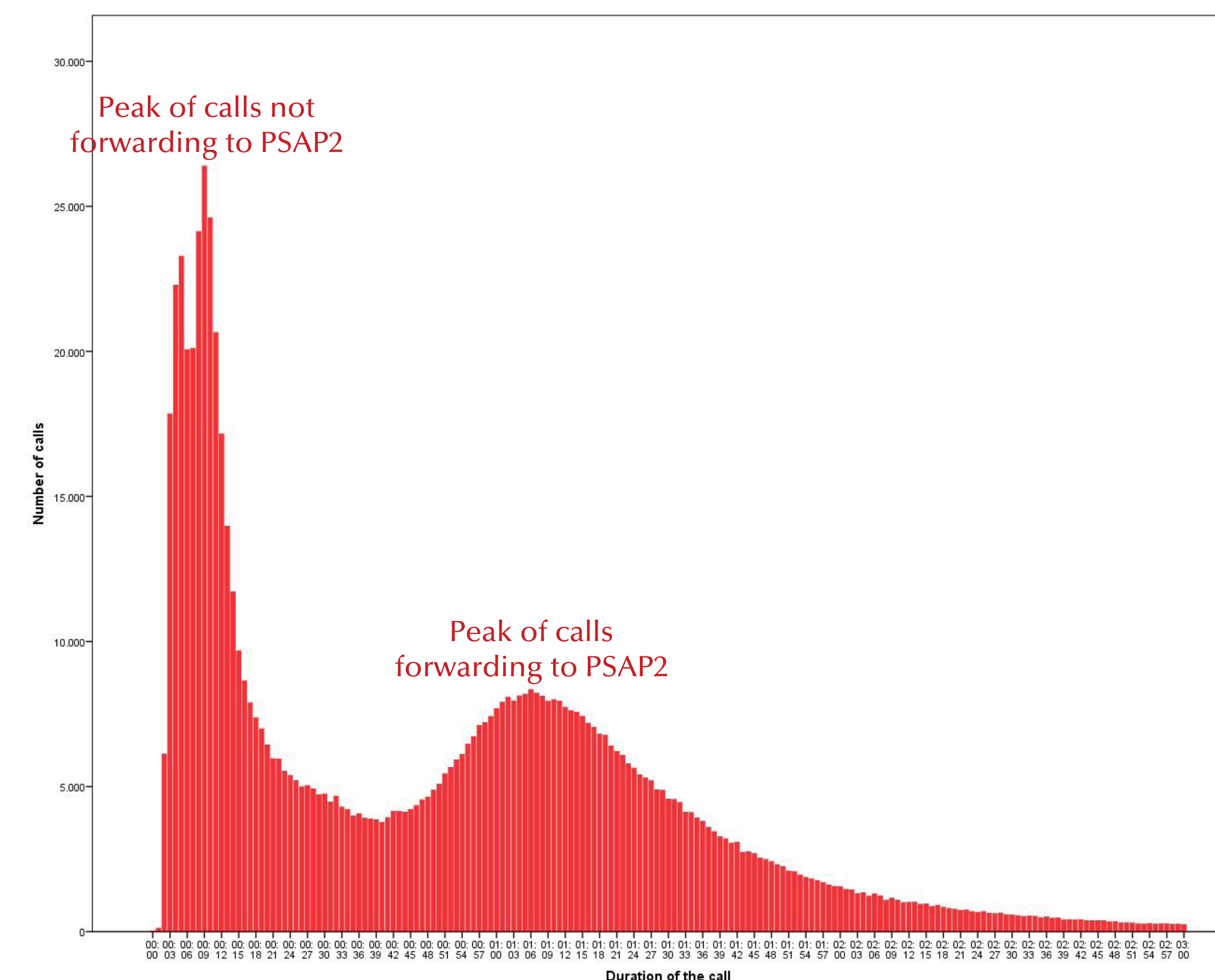
Figure 1

Peak of calls not forwarding to PSAP2

Peak of calls forwarding to PSAP2

Figure 2

Figure 3

Figure 4

RESULTS

In the period under analysis, 839,747 calls were studied. Liguria EEN managed a daily average of 2,600 calls, during the first year of activity (average in 2017: 2,624). The average caller wait time before operator call pickup was 4.4 seconds. The automatic localization was possible in the 95% of calls from mobile phone and in the 87% of calls from landline. The average call time was 80 seconds, including sending it to the PSAP2. Filtering inappropriate calls was 45.8%, shared as below: Medical 17%, Police 55%, Fire 30%. Figure 1 shows the call duration distribution. From the bimodal trend of the curve it is possible to highlight the two types of call: not forwarded (first peak) and forwarded to the PSAP 2 (second peak). Figure 2 describes the distribution of calls during the hours of the day (circadian), while Figure 3 describes the distribution over the months. Figure 4 describes the learning curve of the operators: approximately 1,500 cases per operator appear to be needed to achieve a 90-second process time, while to reach the current 80-second process time, 22,000 cases per operator were required. In our experience, this volume per operator was reached after 8 months of activity.
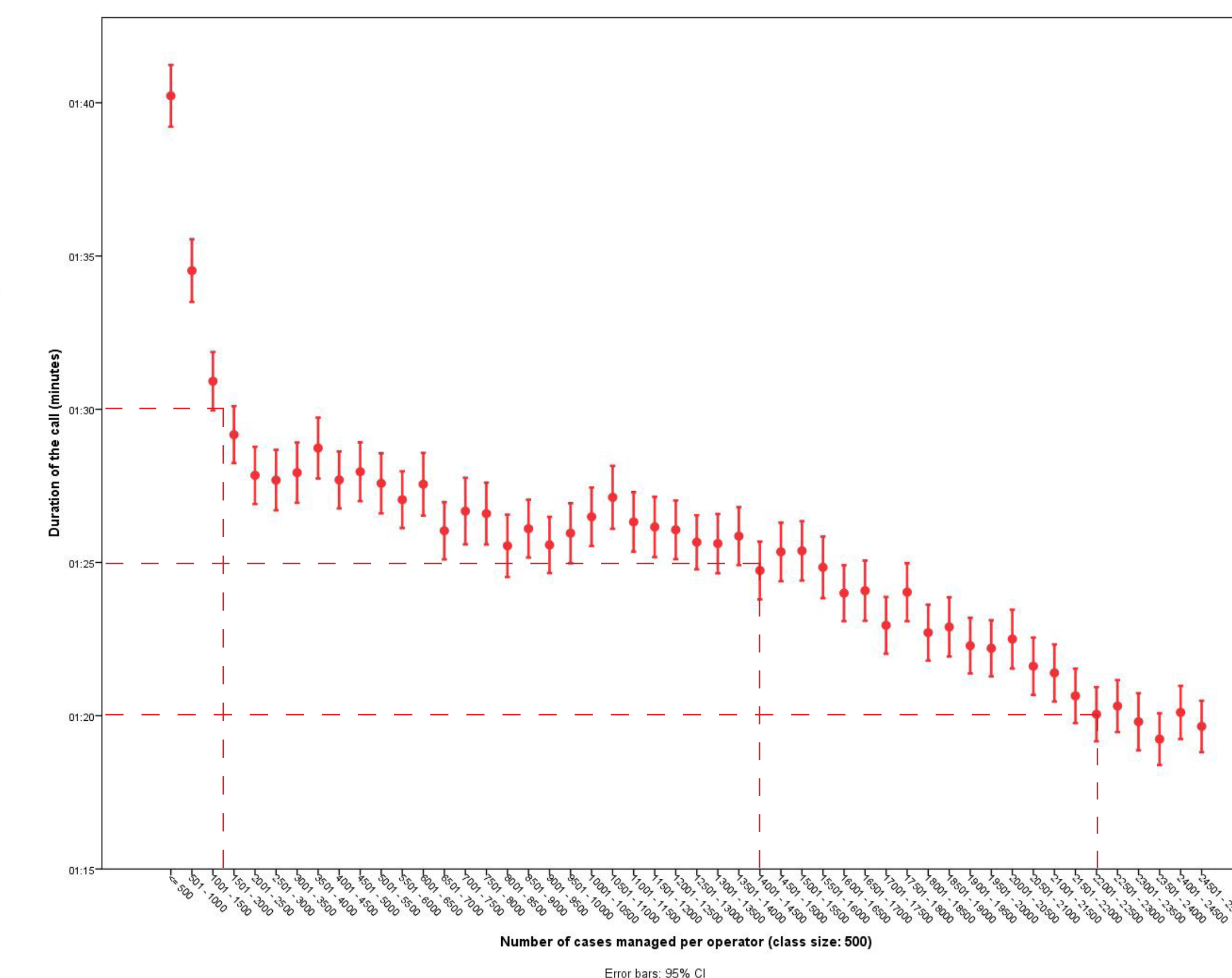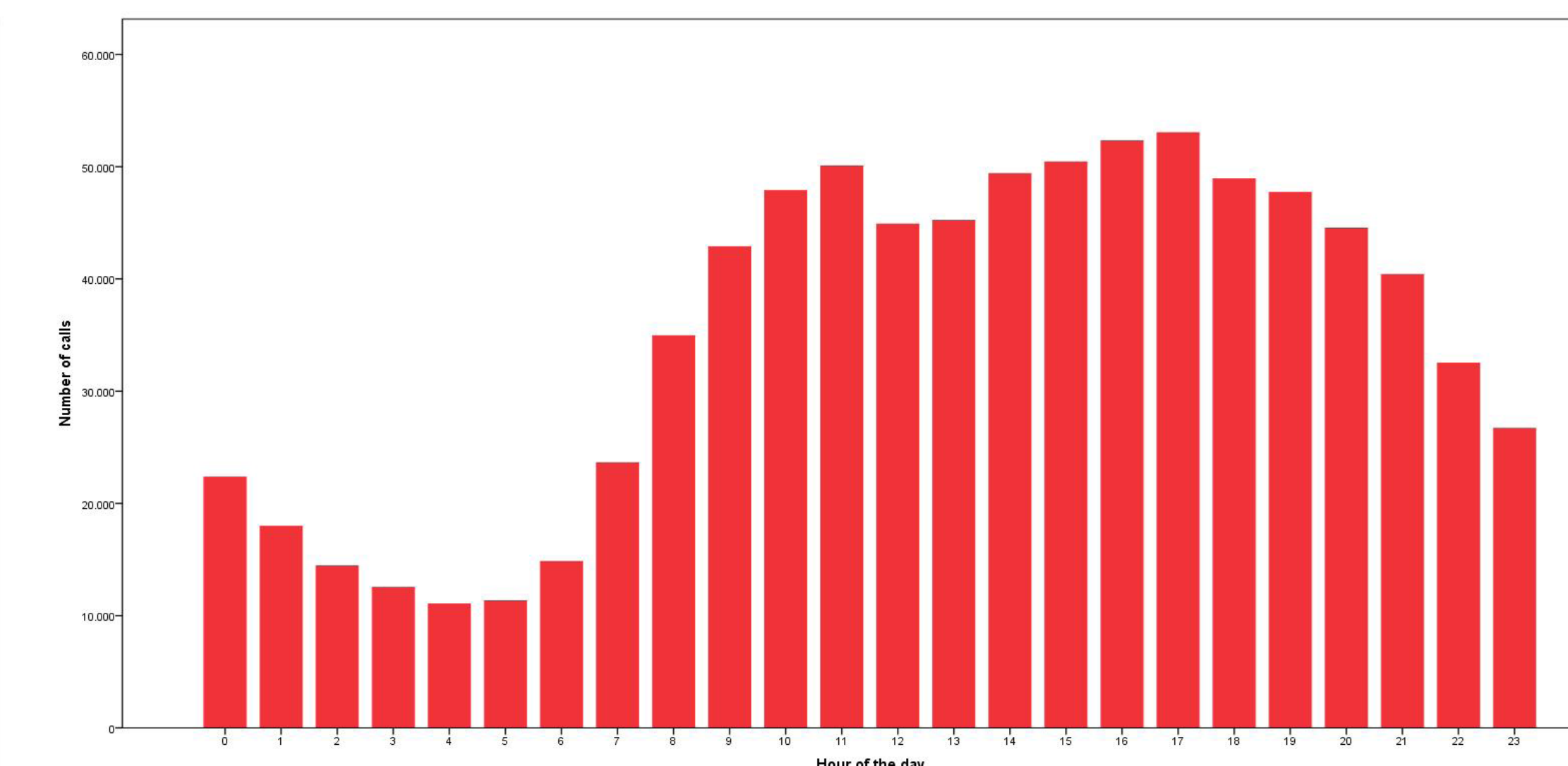
DISCUSSION

In view of the recent and partial establishment of the EEN in Italy, no other national results or standards have been published. A national monitoring system is being activated. The activation is scheduled for May 31, 2018. Documents not yet approved define that the average call time must be less than 90 seconds: currently our result is 80 seconds. Pending the definition of national standards, we believe that the results obtained are satisfactory: in particular the average waiting time (4.4sec). In consideration of the positive trend of the learning curve of the operators (Figure 4) we believe that the average call time can further improve.

CONCLUSION

Pending national standards, the results of the first year of activity can be considered satisfactory in every activity area of Liguria EEN.

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