Automated Monitoring Reports of the Activity of the French National Professional Suicide Prevention Helpline

Antoine LAMER[a,b,c,1], Chloé SAINT-DIZIER[a,b], Emile FARES[a], Christophe DEBIEN[a],
Elise CLEVA[a], Marielle WHATELET[a] and Charles-Edouard NOTREDAME[a]

[a]*F2RSM Psy - Fédération régionale de recherche en psychiatrie et santé mentale
Hauts-de-France, F-59350, Saint-André-Lez-Lille, France*
[b]*Univ. Lille, Faculté Ingénierie et Management de la Santé, F-59000, Lille, France*
[c]*Univ. Lille, CHU Lille, ULR 2694 - METRICS: Évaluation des Technologies de santé
et des Pratiques médicales, F-59000 Lille, France*

Abstract. The French Professional Suicidal Helpline 3114 was launched on October 1st, 2021. The objective of this study was to implement automated reports of the activity of the suicidal helpline. We developed automated reports and presentations with Rmarkdown. Two formats were developed, national reports to present for a funding agency and regional reports for each calling center. These reports fulfill a critical need to adjust call distribution patterns, identify problems, adjust communication across the territory and ensure that 3114 is delivering the service it is supposed to provide.

Keywords. Data visualization, visual analytics, suicide, psychiatry, helpline

1. Introduction

The 3114, a French National Suicide Prevention Helpline, has been launched on the 1st October, 2021. The 3114 is a professional, free and confidential hotline [1]. Health professionals in fifteen different regional centers handle the daily calls. Indicators about the number of calls received, the rates of answered calls, their durations and their distributions by center were needed to assess the activity of the helpline. In healthcare, dashboards and automated reports are implemented to improve the decision-making process [2]. The objective of this study was to generate automated reports of the activity of the suicidal helpline.

2. Methods

We developed automated reports and presentations with Rmarkdown (R packages knitr, version 1.39 and rmarkdown, version 2.14), a technology implemented with R

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[1] Corresponding Author, Antoine Lamer, F2RSM Psy, Lille University, 2 place de Verdun, F-59000, Lille, France; E-mail: antoine.lamer@f2rsmpsy.fr.

(version 4.1.3). Two reports formats were developed, a national report for presentation to the French Ministry of Health and Prevention and a regional for each calling center. They contain common indicators, such as the number of received calls, answered call and the response rates. The projection of expected activity for the next two months is performed with an ARIMA model (R package forecast, version 8.20). Reports could also contain specific studies on the impact of an event on the activity of the helpline.

3. Results

The hotline received 17,493 (15,436;20,659) calls by month between its launch and November 31st, 2022. 3114's activity is steadily increasing with approximately 871.6 additional calls per month. Most calls are made between 3:00 pm and 10:00 pm (40.0%). For answered calls, the median (Q1;Q3) conversation time was 9.0 (2.1;20.0) minutes. Three centers handle most of calls (39.0%) and 29.1% of calls were received during nights or weekends. The figure 1 displays the daily evolution of incoming calls.
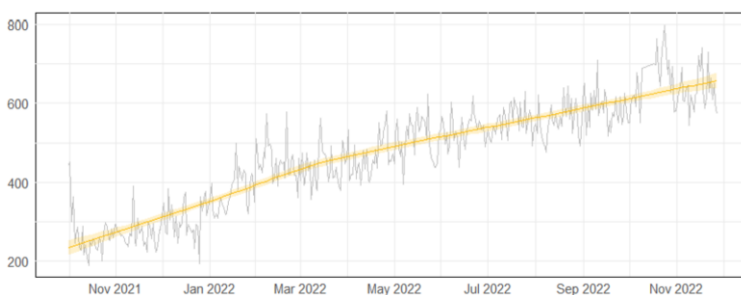
Figure 1. Daily evolution of incoming calls of the French Professional Suicidal Helpline 3114 since its launching on the October 1st, 2021.

4. Discussion and Conclusion

We implemented automated reports to support the monitoring of the activity of the French suicidal helpline, 3114. These reports fulfill a critical need to adjust call distribution patterns, communication across the territory and ensure that 3114 is delivering the service it is supposed to provide. They help improving the response rate by spreading more parsimoniously incoming calls in time and space and by more rationally allocating human resources.

References

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