



Letter to the Editor concerning “Encrypted smartphone text messaging between spine surgeons may reduce after-hours surgery” by Persad AR et al. (Eur Spine J; 2022: doi:10.1007/s00586-022-07423-4)

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Dear Editor,

We are writing to express our concerns about the paper entitled “Encrypted smartphone text messaging between spine surgeons may reduce after-hours surgery” by Amit R. Persad et al. published in the European Spine Journal [1]. While the study raises an interesting hypothesis, we have several concerns about the design and interpretation of the results that undermine the validity of the conclusions reached.

Firstly, the study's retrospective design introduces significant bias and limits the ability to draw strong conclusions. As the authors acknowledge, the reduction in after-hours surgeries may also be due to an increase in surgeon experience over time. It is also possible that there were other factors that could have influenced the results, such as changes in hospital policies or staffing, that are not accounted for in the study. It would have been more robust to have a prospective design, where the use of the cross-platform messaging system (CPMS) was prospectively implemented and compared to a control group.

Secondly, the study lacks sufficient sample size and generalizability. Only six surgeons participated in the study, and all were from a single center in Canada. It is unclear if the findings would hold true for a larger and more diverse group of surgeons.

Thirdly, the study lacks a clear and measurable definition of the “complexity” of the cases, which is used as a key outcome measure. The authors state that complexity refers to “number of levels, addition of instrumentation or

addition of further stages of surgery,” but do not provide any further details or a standardized method of measurement. This makes it difficult to interpret the observed changes in complexity and to accurately compare cases between time periods.

Fourthly, the study does not adequately address the issue of data security and confidentiality. While the authors mention that the CPMS used, WhatsApp, has end-to-end encryption, they do not address the potential risks of clinical data being stored on individual smartphones, which may not have the same level of security as a protected institutional server. There is also no mention of the proper anonymization of patient data or the deletion of data when it is no longer needed.

Moreover, the study does not address some important questions about the practicality or cost-effectiveness of the encrypted smartphone messaging system. For example, the authors do not report how much time the surgeons spent using the system or how much it cost to implement and maintain. These are important considerations that should be taken into account when evaluating the usefulness of the system.

Finally, the authors do not provide a clear explanation of the statistical analysis and do not report the results of multiple hypothesis testing, which raises concerns about the robustness of the findings.

Overall, while the use of CPMS for collaborative decision-making among surgeons may have potential benefits, this study does not provide strong evidence for its effectiveness in reducing after-hours surgery. Further research with a larger, diverse sample and a prospective design are needed to properly evaluate the impact of CPMS on surgical decision-making and patient outcomes.

Sincerely,
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Declarations

Conflict of interest The authors of this paper have no relevant conflicts of interest or competing interests to disclose.

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Reference

1. Persad AR, Rosalie MC, Spiess MS, Allan W, Zane T, Adam W, Luke H, Fourney DR (2022) Encrypted smartphone text messaging between spine surgeons may reduce after-hours surgery. *Eur Spine J* 31(12):3330–3336

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