

POTENCIAL RISKS

IN THREE EMERGENCY LABORATORIES

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Background

The information provided by the emergency laboratory has a direct impact on patient safety.

The aim of this study was to analyse the potential risks in three emergency laboratories in all processes: strategic, operational (pre-preanalytical, preanalytical, analytical, postanalytical and post-postanalytical) and support.

Another aim it was to value the impact of these risks in the patient safety.

An improvement in the safety of the various processes brings to light the potential failure modes in the laboratory



and try to solve them.

<u>Methods</u>

The study was conducted in three emergency laboratories during the year 2015. The potential risks were identified from the literature and a brainstorming conducted among a working groups of laboratory professionals. The method used to identification the potential risks is the Failure Analysis and Modal Effects (FMEA). It is a subjective method that allow us to calculate de Risk Priority Number (RPN). The calculation of the RPN (G*I*D) was made in each of the potential risks assessing the gravity (G), the incidence (I), and detection (D) from a table with predefined values ranging from 1 to 10. The results were grouped according to the processes of the Laboratory.

Results

101 potential risks are identified by FMEA. There are distributed as follow:

100,00%

90,00%

80,00% -



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Conclusions

FMEA allows us to know the potential risks with the greatest impact in terms of patient risk. A greater number of potential errors in the Preanalytical and Analytical processes in all three laboratories were detected. These results allowed identifying critical points in all laboratory processes and prioritize the control of these points. Furthermore, it helped to select preventive or corrective action that we should be incorporated in the laboratory improvement planning and risk management. Strategic and support processes contribute to patient risk rate much lower than the operative processes. Our result shows that the risks of strategic processes are much more elevated than those obtained by support processes. It is important to define corrective and preventive actions for improved the strategic processes.



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