DEVELOPMENT OF AN IT APPLICATION TO SUPPORT PROCESS AUTOMATION IN PREOPERATIVE ASSESSMENT ORIENTED TO SURGICAL PATIENT PREHABILITATION

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Perioperative medicine is cornerstone to assessing personal risks, such as frailty, and optimizing plans through tailored pre habilitation programs and enhance recovery surgery. Developments based on information technologies (IT) could lead the way.

Materials and Methods

A multidisciplinary team of anaesthesiologists, nurses and engineers reviewed current literature to comply with perioperative requirements and identify main clinical categories and subsequent risk items. A traffic light alert system and algorithms to personal perioperative recommendations were designed. The team embedded several risk scores, updated guidelines and an automatic clinical system to collect vital sings and clinical data.

Results and Discussion

The result was an IT support system which enhanced preoperative visit. It improved communication between the patient and the involved clinicians, assuring less interpersonal variation and better compliance of local protocols and pre habilitation programs, mainly achieved by a better identification of risky patients. Automatic algorithms reduced human errors and time visit, improving quality of the process.

The support system proved capable of achieving our primary goals, and of being positively accepted by our team.

Conclusions

Nowadays, artificial intelligence is present in the day to day of people so implementing it in the medical field is a necessity. The designed preoperative application processes structured and non-structured information to accomplish an “intelligent” pre anesthetic assessment. Also, there is a need for more multidisciplinary teams including biomedical engineers, who work together with physicians to give a new approach to medical issues by IT solutions.