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### Editorial

## The checklist: A standard of care<sup>☆</sup>

## La lista de chequeo: un estándar de cuidado

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Upon completing a number of studies supporting the impressive and significant results in lowering mortality from 1.5% to 0.8% ( $p=0.003$ ) in 8 large cities,<sup>1,2</sup> the World Health Organization (WHO) revealed in 2008 the use of the checklist as a strategy for the prevention of perioperative adverse events. Different government institutions, public and private hospitals and healthcare systems in various countries, have promoted campaigns to use this strategy under the Safe Surgery Saves Lives policy.<sup>1</sup> In 2010 the European Board of Anesthesiology (EBA) and the European Society of Anesthesiology signed the Helsinki Declaration on Patient Safety. Based on this initiative, Europe takes over the responsibility to work on four fundamental aspects with regard to perioperative safety: (1) the checklist, (2) the prevention of perioperative infections, (3) targeted fluids therapy and (4) perioperative nutrition.<sup>3</sup> Consistent with this approach, during the European Congress of Anesthesiology in 2011, S.C.A.R.E. and other Latin American countries, entered into this agreement, accepting the commitment to work on these strategies.

The Colombian Journal of Anesthesiology published a paper of the Hospital General de Medellín,<sup>4</sup> analyzing the institution's checklist from the patient's perspective. The confirmation of the checklist implementation was done asking patients during the postoperative period about their recall of the questions from the list they were involved with. The study shows very positive data on the staff's compliance with the list and the safety and confidence in the institution that this activity conveys. As additional measurement, a reduction

in the number of adverse events reported following the list implementation was shown.

Several studies published have shown positive results in terms of perioperative adverse events when the checklist is used.<sup>1,5-9</sup> Recently, Van Klei et al.,<sup>10</sup> in a cohort study with 25,513 patients, controlling the observer's bias (a criticism made in Hynes' original study) were able to show a considerable reduction in mortality from 3.13 to 2.85% at 30 days, when the complete checklist is used. With a view to compile the evidence on the results of the checklist, Ko et al.<sup>6</sup> published in 2011 a systematic review that failed to render significant results, but highlights the low quality and high risk of biases in several of the 9 trials included.

The systematic use of the checklist dates back to its application in aviation in the thirties, upon the attempt to introduce more complex aircrafts; after a catastrophe where human error was identified as the cause of the accident, the assumption was that flying this new model of aircrafts was more difficult than flying the old ones. The research showed that the pilot had been so busy that he forgot to activate the tail wheel steering mechanism. Presently, checklists are mandatory in the most complex industries, including finances.<sup>11</sup> History has taught us, but why is it so difficult to convince the health-care staff about its importance when most of the evidence has proven its usefulness? The clinical practice, particularly in the OR, has been characterized by the autonomy, self-sufficiency and leadership of the key players; each team member "pilots" its aircraft as best as possible and probably with a very

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comprehensive knowledge of the area, but not as a member of a high-performing team. A critical success factor in aviation may be that a catastrophe while flying entails placing at risk the life of the pilot himself and the entire crew. In clinical practice, the risk of becoming sick or dying is the patient's. Healthcare professionals accept the challenge of being part of a process of medical liability as a result of malpractice. Both situations, whether in isolation or combined, are catastrophic. Perioperative adverse events have been classified as preventable in almost 50% of the cases<sup>10</sup>; in addition to the devastating social and familiar consequences thereof, they demand large amounts of resources from the already deficient healthcare systems.<sup>12</sup> On the other hand, the legal consequences derived from established "human error" in medical practice, bring about major disruptions in the professional and social lives of those who have gone through this most painful experience.

Although various studies like the one recently published in the Colombian Journal of Anesthesiology<sup>4</sup> have shown very positive outcomes in terms of the patient's safety when the checklist is implemented, it is not an easy task and requires leadership, teamwork, flexibility and an adaptation to change on behalf of the healthcare institution and its professionals. Many institutions around the world currently report the use of the checklist<sup>12</sup>; however, it must be emphasized that better results are only possible through a comprehensive and systematic utilization of the checklist, within a safety culture framework.<sup>10</sup> There are no data on the systematic use of the checklist in developing countries. The challenge is to continue with its implementation where the checklist has not yet been implemented and use all the necessary tools for driving change in the safety culture of organizations. The use of management strategies such as the PDCA cycle – Plan, Do, Check and Act, educational strategies and coaching, motivational strategies for renowned leaders in the institutions, have all helped in moving from theory into practice.<sup>12,13</sup>

Government agencies are aware of this evidence and therefore in Colombia, the new enabling resolution 1141, 2013 of the Ministry of Social Protection, determines that any institution where surgical procedures are performed, even procedures of little complexity, must include the checklist as part of its priority procedures. The list shall include the three times proposed by WHO in its initial list: before the induction, prior to the incision and before the patient leaves the OR.

So scientific literature is available to support with a certain level of evidence the use of the checklist, in addition to the existence of government standards that govern the use of those checklists and research outcomes, such as those published in the Colombian Journal of Anesthesiology, evidencing the perception of enhanced safety and confidence of patients

with regard to the institution. What are we missing to make the checklist part of our routine?

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