Checklists: Reloaded

by Claude Oppikofer, MD

Have we been doing everything wrong?

For several years, we have been teaching our "lessons from aviation" in order to promote better safety in our operation rooms, insisting especially on the use of the surgical checklist. And now this! A few months ago, a study published in the *New England Journal of Medicine* seems to suggest that checklists are of no use in surgery. At least, this is how the article has been reported, particularly by those who now triumphantly see a scientific proof that checklists are just a hassle and a waste of time.

However, it seems that these people have not carefully read the paper and also the editorial by Lucian Leape that goes along with it. Therefore, it is worth a closer look.

The study looks at deaths and complications before and after introduction of a surgical checklist in Ontario and found no "significant reductions in operative mortality or complications." The periods observed were 3-months intervals, one ending 3 months before the introduction of a surgical checklist, and one starting 3 months after the introduction of the checklist. **You cannot expect a quick fix from a checklist!** It will take much longer than three months before the checklist and the cultural change that comes with it will show in hospital statistics, as highly relevant studies show.

The results of the Ontario study are based on 101 hospitals. Only nine of them used customized checklists. All others implemented a standard checklist. Moreover, they reported a checklist compliance of close to 100%, which is surprisingly high and suggests that the checklists were mainly introduced to meet regulations. A mandated checklist designed without active participation of the professionals who use it will rarely ever have a positive effect. **In order to have buy-in from surgical teams, checklists must be designed and customized by them according to their needs.** If not, they will be useless or even have a negative effect by giving a misleading sense of safety.

Finally, **checklists will not work without training on how to use them and teamwork training.** Neither of these seem to have been applied in the Ontario study. The authors do consider teamwork training to be essential, yet this was not taken into consideration in the study, where checklists were implemented without such training. This does not consider the human element, the fact that humans make mistakes. Only programs which do address these aspects and not only introduce a standard checklist can and will be successful. Or, as Leape says, "The key is recognizing that changing practice is not a technical problem that can be solved by ticking off boxes on a checklist but a social problem of human behavior and interaction."

For all these reasons, it can be said that the Ontario study is by far no evidence against the usefulness of checklists. On the contrary, it clearly identifies the risks of failure if checklists are not customized by the teams who use them and if they are introduced without extensive team training and cultural changes. Checklists have proven to be highly effective if used appropriately, and it is our responsibility as surgeons to make the necessary changes. Success will depend on our leadership and be essential for the benefit of our patients.

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Urbach et al., Introduction of Surgical Safety Checklists in Ontario, Canada. N Engl J Med. 2014 Mar 13;370(11):1029-38

Lucian L. Leape, The Checklist Conundrum, N Engl J Med. 2014 Mar 13;370(11):1063-4

Harden, S. Six things every plastic surgeon needs to know about teamwork training and checklists, Aesthet Surg J. 2013 Mar;33(3):443-8

Oppikofer C. Are the New Changes in Our Operating Rooms Really Making Us Safer and Better Surgeons?. Plast Reconstr Surg. 2014 Apr;133(4)