

Outcome	Checklist (n = 26)	No checklist (n = 26)	P value ^b
Score rating ^c			
6	24 (92)	14 (54)	.0039
< 6	2 (8)	12 (46)	
Median (interquartile range)	6 (6-6)	6 (5-6)	.0015
Median provider time in PACU (min, interquartile range)	6 (6-8)	5.5 (4-7.8)	.13
Handoff adequacy			
Yes	26 (100)	22 (85)	.11
No	0 (0)	4 (15)	
Need to clarify information/callback			
Yes	0 (0)	18 (69)	.0042
No	26 (100)	8 (31)	

Table. Results of Handoff Study at Yale-New Haven Hospital^a

^a Data are presented as median (interquartile range), or count (%).

^b Fisher exact test or Wilcoxon rank sum test.

^c A numerical score rating on a scale of 0-6, with 6 representing that all 6 key elements (see Figure 2) were correctly identified.

RN receiving the report. A callback was defined as the need to clarify with the anesthesia provider any information after the handoff process was completed. The RNs were instructed in staff meetings how to document yes or no for callbacks.

4) **Time:** At the end of each case, a chart review was completed for data collection regarding “Time In” to PACU and “Anesthesia End,” from which each provider’s time in the PACU was computed.

• **Statistical Analysis.** For the statistical analyses, a 2-sided P value of 5% was used to test for statistical significance and was performed using SAS version 9.3 software (SAS Institute). We calculated descriptive statistics (ie, median and interquartile range, number, and percentage) for all the available outcomes. The comparisons of the binary outcomes, including the rate of correctly recalling all 6 key elements in a report and handoff adequacy between the checklist and the nonchecklist group, were compared by using the Fisher exact test. The numerical rating score for the recall as well as providers’ time in the PACU were compared between both groups using the Wilcoxon rank sum test.

Results

Among 60 randomly assigned anesthesia providers (ie, 60 handoffs), 52 participants finished the study, and their data were included in our analyses (Table). Data from 8 participants were not available for analyses because the PACU RN was unable to fill out the questionnaire in the allotted time. A total of 24 of 26 RNs (92%) in the checklist group (median score = 6; interquartile range = 6-6) successfully recalled all 6 key elements of the report, whereas 14 of 26 RNs (54%) in the nonchecklist group (median score = 6; interquartile range = 5-6) successfully recalled all the elements ($P = .0039$, Figure 3, Table).

The use of the checklist by an anesthesia provider

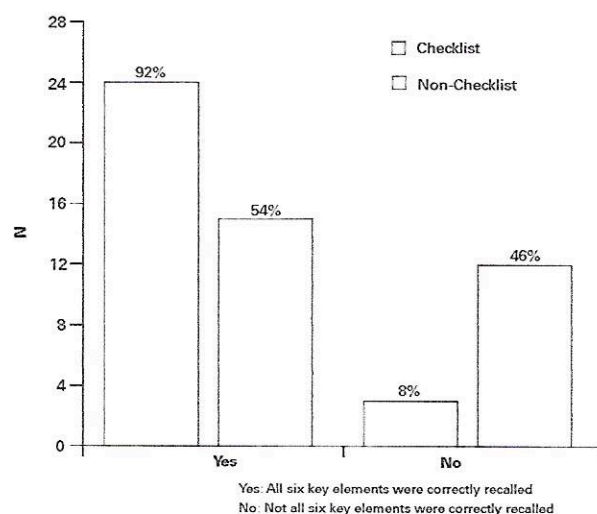


Figure 3. Participants Who Correctly Recalled All Six Key Elements versus Who Did Not (Checklist vs Nonchecklist Group)

lowered the rate of callbacks for information clarification for RNs by a degree that was statistically significant (0% vs 69%, $P = .0042$). The use of the checklist also led to a higher adequacy rating of the handoff by RNs than in the nonchecklist group; however, the difference was not statistically significant (100% vs 85%, $P = .11$). There was no statistically significant difference regarding the anesthesia providers’ time in the PACU between the checklist and nonchecklist group (median = 6 minutes vs 5.5 minutes; interquartile range = 6-8 vs 4-7.8; $P = .13$, see Table).

Discussion

In this study, we showed that the use of a checklist during a handoff could help providers correctly exchange information and increase the adequacy of the handoff for