Appendix Table C6a-Update. Study quality for VAP which control for secular trend or confounding from the update search

| **Study** | **Infection** | **followup 1 year or longer** | **adequate statistical analysis** | **adherence rates analyzed** | **infection rates analyzed** | **independent of other QI efforts** | **Overall Quality** | **Univar YN** | **Univar Model** | **Multivar YN** | **Multivar Model** | **Multivar Control** | **Comment** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Barrera, Colombia - 2011 | CAUTI, CLABSI, VAP | Yes | Yes | Yes | Yes | Uncertain | Lower | FALSE |  | TRUE | Poisson regression | intragroup correlation specified each hospital unit as a cluster, to control for different pt populations in each unit, temporary workers and nurse-to-patient ratio | simple before-after study that controlled for potential confounders |
| Cheema, United States – 2011 | VAP | Yes | No | No | Yes | Uncertain | Lower | TRUE | t-test | TRUE | u-chart, g-chart |  | Patient characteristics were not assessed. |
| Harris, United States - 2011 | CLABSI, VAP | Yes | Yes | No | Yes | Uncertain | Lower | FALSE |  | TRUE | infection: time series, regression; cost: GLM | age, gender, race, comorbidity, insurance coverage, APR-DRG score, provider specialty |  |
| Lilly, United States - 2011 | CLABSI, VAP | No | Yes | Yes | Yes | Uncertain | Medium | TRUE | Fisher exact or chi-sq | TRUE | logistic regression | ICU, ICU type, admission time, acuity score, operative status | This is an unblinded nonrandomized stepped wedge design. They took the same intervention, and implemented it in 7 different ICUs at different times. There was no progression of changes to the intervention. Only 3 of the 7 ICUs had followup one or more yrs |
| Morris, Scotland - 2011 | VAP | Yes | Yes | No | Yes | Uncertain | Lower | FALSE |  | TRUE | Poisson regression | gender, age, severity of illness | post-intervention adherence rates were reported, but no statistical analysis comparing pre and post measurements |
| Speroff, United States - 2011 | CLABSI, VAP | Yes | Yes | No | Yes | N/A | Higher | FALSE |  | TRUE | Hierarchical negative binomial regression | hospital, baseline covariates | Adherence rates were calculated by follow-up survey, no baseline data. Statistical analysis did only chi-square or t-test to compare groups, but study had cluster randomized design. Did binomal negative regression analysis. |

Was the followup period 1 year or longer?  
Was the statistical analysis adequate?  
Were the baseline and postintervention adherence rates reported and analyzed statistically?  
Were the baseline and postintervention infection rates reported and analyzed statistically?  
Was the intervention independent of other QI efforts implemented at the same time?