Additional file 3

Table S3: Quality assessment using the Quality Assessment Tool for Before-After (Pre-Post) Studies With No Control Group by the National Heart, Lung, and Blood Institute [31]

First author, year	1. Was the study question or objective clearly stated?	2. Were eligibility/ selection criteria for the study population pre-specified and clearly described?	3. Were the participants in the study representa-tive of those who would be eligible for the test/service/ intervention in the general or clinical population of interest?	4. Were all eligible participants that met the pre-specified entry criteria enrolled?	5. Was the sample size sufficiently large to provide confidence in the findings?	6. Was the test/service/ intervention clearly described and delivered consistently across the study population?	7. Were the outcome measures pre-specified, clearly defined, valid, reliable, and assessed consistently across all study participants?	8. Were the people assessing the outcomes blinded to the participants' exposures/ intervene-tions?	9. Was the loss to follow-up after baseline 20% or less? Were those lost to follow-up accounted for in the analysis?	10. Did the statistical methods examine changes in outcome measures from before to after the intervention? Were statistical tests done that provided p values for the pre-to-post changes?	11. Were outcome measures of interest taken multiple times before the intervention and multiple times after the intervention (i.e., did they use an interrupted time-series design)?	12. If the intervention was conducted at a group level (e.g., a whole hospital, a community, etc.) did the statistical analysis take into account the use of individual-level data to determine effects at the group level?	Total score (theoretical range: 0-12)
Bull, 2011 [34]	1	1	0	1	NR	0	1	0	NR	0	1	1	6
Cameron, 2015 [35]	1	1	0	CD	NR	1	1	NR	NR	1	0	1	6
Cima, 2013 [36]	1	1	0	1	NR	1	1	NR	NR	1	1	1	8
Connolly, 2016 [37]	1	1	0	1	NR	NR	1	NR	NR	1	0	1	6
Crolla, 2012 [38]	1	1	0	1	0	1	1	NR	NR	1	0	1	7
DeHaas, 2016 [39]	0	1	0	1	NR	NR	1	NR	NR	0	0	1	4
Elia-Guedea, 2017 [40]	1	1	0	1	NR	NR	1	NR	NR	1	0	1	6
Forbes, 2008 [41]	1	1	0	1	1	1	1	0	NR	1	0	1	8
Frenette, 2016 [42]	1	1	0	1	1	NR	1	0	NR	1	0	1	7
Garcell, 2017 [43]	1	1	0	1	NR	1	1	NR	NR	1	0	1	7
Geubbels, 2004 [44]	1	1	1	CD	NR	NR	1	NR	NR	0	0	1	5
Grant, 2018 (Epub 2017) [45]	1	1	0	1	NR	1	1	NR	NR	1	0	1	7
Hechenbleikner, 2015 [46]	1	1	0	1	NR	1	1	NR	NR	1	1	1	8
Hedrick, 2007 [47]	1	1	0	1	NR	1	1	NR	NR	1	0	1	7
Hedrick, 2007 [48]	1	1	0	1	NR	1	1	NR	NR	1	0	1	7
Hewitt, 2017 [49]	1	1	0	1	NR	NR	1	NR	NR	1	1	1	7
Kao, 2010 [50]	1	1	1	1	NR	0	1	NR	NR	1	0	1	7
Keenan, 2014 [51]	1	1	0	1	NR	1	1	NR	NR	1	0	1	7
Keenan, 2015 [52]	1	1	0	1	NR	1	1	NR	NR	1	0	1	7
Kilan, 2017 [53]	1	1	0	0	0	1	1	NR	NR	1	1	1	7
Knox, 2016 [54]	1	1	0	1	1	0	1	NR	1	1	0	1	8
Larochelle, 2011 [55]	1	1	0	1	NR	1	1	NR	NR	1	0	1	7
Lavu, 2012 [56]	1	1	0	CD	NR	1	1	NR	NR	1	0	1	6
Liau, 2010 [57]	1	1	0	1	1	1	1	NR	NR	1	0	1	8
Losh, 2017 [58]	1	1	0	1	NR	1	1	NR	1	0	0	1	7
Lutfiyya, 2012 [59]	1	1	0	1	0	NR	1	NR	NR	1	1	1	7
Mammo, 2016 [60]	1	1	0	1	NR	1	1	NR	NR	1	0	1	7
Misteli, 2012 [61]	1	1	0	1	1	0	0	NR	NR	1	0	1	6

First author, year	1. Was the study question or objective clearly stated?	2. Were eligibility/ selection criteria for the study population pre-specified and clearly described?	3. Were the participants in the study representa-tive of those who would be eligible for the test/service/ intervention in the general or clinical population of interest?	4. Were all eligible participants that met the pre-specified entry criteria enrolled?	5. Was the sample size sufficiently large to provide confidence in the findings?	6. Was the test/service/ intervention clearly described and delivered consistently across the study population?	7. Were the outcome measures pre-specified, clearly defined, valid, reliable, and assessed consistently across all study participants?	8. Were the people assessing the outcomes blinded to the participants' exposures/ intervene-tions?	9. Was the loss to follow-up after baseline 20% or less? Were those lost to follow-up accounted for in the analysis?	10. Did the statistical methods examine changes in outcome measures from before to after the intervention? Were statistical tests done that provided p values for the pre-to-post changes?	11. Were outcome measures of interest taken multiple times before the intervention and multiple times after the intervention (i.e., did they use an interrupted time-series design)?	12. If the intervention was conducted at a group level (e.g., a whole hospital, a community, etc.) did the statistical analysis take into account the use of individual-level data to determine effects at the group level?	Total score (theoretical range: 0-12)
Nordin, 2018 (Epub 2017) [62]	1	1	0	1	NR	1	1	NR	0	1	0	1	7
Pastor, 2010 [63]	1	1	0	1	NR	1	1	NR	NR	1	0	1	7
Pérez-Blanco, 2015 [64]	1	1	0	1	NR	1	1	NR	NR	1	0	1	7
Reames, 2015 [65]	1	1	1	1	1	NR	1	NR	NR	1	0	1	8
Tanner, 2016 [66]	1	1	1	1	NR	1	1	0	1	1	0	1	9
Tillman, 2013 [67]	1	1	0	CD	1	1	1	NR	NR	1	0	1	7
Vogel, 2010 [68]	1	1	0	1	NR	1	1	NR	NR	1	0	1	7
Vu, 2018 (Epub 2017) [69]	1	1	1	1	1	NR	1	NR	1	1	0	1	9
Waters, 2017 [70]	1	1	0	1	1	1	1	NR	NR	1	0	1	8
Wick, 2012 [71]	1	1	0	1	NR	1	1	NR	NR	1	1	1	8
Wick, 2015 [72]	1	1	0	1	NR	NR	1	NR	NR	1	0	1	6
Willis, 2016 [73]	1	1	0	1	0	1	1	NR	NR	1	0	1	7
Total	39	40	5	35	9	26	39	0	4	36	7	40	Mean: 7 SD: 0.96, 95%-confidence interval: [6.7 | 7.3]. range: 4-9)

Notes: Yes = 1; No = 0; CD = cannot determine; NA = not applicable; NR = not reported